UNITED STATES SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

Form 10-K

(Mark One)

☑ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended December 31, 2017

Or

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from to

Commission File Number 001-36198

Intercontinental Exchange, Inc.

(Exact name of registrant as specified in its charter)

Delaware	**46-2286804**
(State or other jurisdiction of incorporation or organization)	*(IRS Employer Identification Number)*
5660 New Northside Drive, Atlanta, Georgia	**30328**
(Address of principal executive offices)	*(Zip Code)*

(770) 857-4700
Registrant's telephone number, including area code

Securities registered pursuant to Section 12(b) of the Act:

Title of Each Class	**Name of Each Exchange on Which Registered**
Common Stock, $0.01 par value per share	New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Act:

None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☑ No ☐

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Exchange Act. Yes ☐ No ☑

Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Exchange Act during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☑ No ☐

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ☑ No ☐

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of the registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☑

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer ☑	Accelerated filer ☐
Non-accelerated filer ☐ (Do not check if a smaller reporting company)	Smaller reporting company ☐
	Emerging growth company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☑

The aggregate market value of the registrant's voting and non-voting common equity held by non-affiliates computed by reference to the price at which the common equity was last sold as of the last business day of the registrant's most recently completed second fiscal quarter was $38,484,678,440. As of February 5, 2018, the number of shares of the registrant's Common Stock outstanding was 582,294,307 shares.

DOCUMENTS INCORPORATED BY REFERENCE

Certain information contained in the registrant's Proxy Statement for the 2018 Annual Meeting of Stockholders is incorporated herein by reference in Part III of this Annual Report on Form 10-K. The Proxy Statement will be filed with the Securities and Exchange Commission within 120 days after the end of the registrant's fiscal year to which this report relates.

Intercontinental Exchange, Inc.

ANNUAL REPORT ON FORM 10-K
For the Fiscal Year Ended December 31, 2017

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PART I

In this Annual Report on Form 10-K, or Annual Report, and unless otherwise indicated, the terms "Intercontinental Exchange," "ICE," "we," "us," "our," "our company," and "our business" refer to Intercontinental Exchange, Inc. together with its consolidated subsidiaries. References to "ICE products" mean products listed on one or more of our markets.

The following discussion should be read in conjunction with our consolidated financial statements and related notes included elsewhere in this Annual Report. Due to rounding, figures in tables may not sum exactly. All references to "options" or "options contracts" in the context of our futures products refer to options on futures contracts.

Forward-Looking Statements

This Annual Report, including the sections entitled "Business," "Legal Proceedings," "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations," contains forward-looking statements that are based on our beliefs and assumptions and information currently available to us. You can identify these statements by terminology such as "may," "will," "should," "could," "would," "target," "goal," "expect," "intend," "plan," "anticipate," "believe," "estimate," "predict," "potential," "continue," or the antonyms of these terms or other comparable terminology.

Forward-looking statements relate to future events or our future financial performance and involve known and unknown risks, uncertainties and other factors that may cause our results, levels of activity, performance, cash flows, financial position or achievements to differ materially from those expressed or implied by these statements. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, levels of activity, performance or achievements. Accordingly, we caution you not to place undue reliance on any forward-looking statements we may make.

Factors that may affect our performance and the accuracy of any forward-looking statements include, but are not limited to, those listed below:

- conditions in global financial markets and domestic and international economic, political and social conditions;
- the impact of the introduction of or any changes in laws, regulations, rules or government policies with respect to financial markets, increased regulatory scrutiny or enforcement actions and our ability to comply with these requirements;
- volatility in commodity prices, equity prices, and price volatility of financial benchmarks and instruments such as interest rates, credit spreads, equity indices and foreign exchange rates;
- the business environment in which we operate and trends in our industry, including trading volumes, clearing, data services, fees, changing regulations, competition and consolidation;
- the success of our clearing houses and our ability to minimize the risks associated with operating clearing houses in multiple jurisdictions;
- the success of our equity and options exchanges and the exchanges' compliance with their respective regulatory and oversight responsibilities;
- the resilience of our electronic platforms and soundness of our business continuity and disaster recovery plans;
- continued high renewal rates of subscription-based data revenues;
- our ability to identify and effectively pursue, implement and integrate acquisitions and strategic alliances;
- our ability to complete and realize the synergies and benefits of our acquisitions within the expected time frame, and to integrate acquired operations with our business;
- our ability to effectively maintain our growth;
- the performance and reliability of our other technologies and those of third-party service providers, including our ability to keep pace with technological developments and to ensure that the technology we utilize is not vulnerable to security risks or other disruptive events;
- our ability to identify trends and adjust our business to benefit from such trends;
- the accuracy of our cost and other financial estimates and our belief that cash flows from operations will be sufficient to service our debt and to fund our operational and capital expenditure needs;

- our ability to maintain existing market participants and data customers, and to attract new ones, and to offer additional products and services, leverage our risk management capabilities and enhance our technology in a timely and cost-effective fashion;
- our ability to attract and retain key talent;
- our ability to protect our intellectual property rights and to operate our business without violating the intellectual property rights of others; and
- potential adverse results of threatened or pending litigation and regulatory actions and proceedings.

These risks and other factors include, among others, those set forth in Item 1(A) under the caption "Risk Factors" and elsewhere in this Annual Report, as well as in other filings we make with the Securities and Exchange Commission, or SEC. Due to the uncertain nature of these factors, management cannot assess the impact of each factor on the business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements.

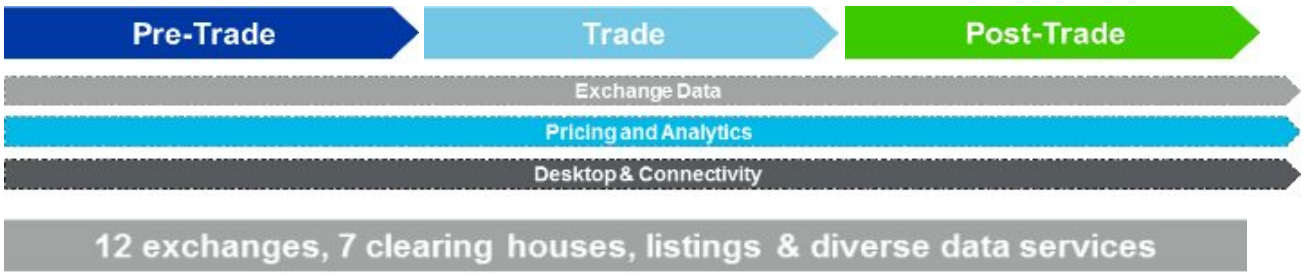
Any forward-looking statement speaks only as of the date on which such statement is made, and we undertake no obligation to update any of these statements to reflect events or circumstances occurring after the date of this Annual Report. New factors may emerge and it is not possible to predict all factors that may affect our business and prospects.

ITEM 1. *BUSINESS*

Introduction

We are a leading global operator of regulated exchanges, clearing houses and listings venues, and a provider of data services for commodity, fixed income and equity markets. We operate regulated marketplaces for listing, trading and clearing of a broad array of derivatives and securities contracts across major asset classes, including energy and agricultural commodities, interest rates, equities, equity derivatives, exchange traded funds, credit derivatives, bonds and currencies. We also offer end-to-end data services and solutions to support the trading, investment, risk management and connectivity needs of customers around the world across major asset classes.

Our Global Execution, Clearing and Data Businesses



Our business is currently conducted as two reportable business segments: our Trading and Clearing segment and our Data and Listings segment. The majority of our identifiable assets are located in the United States, or U.S., and the United Kingdom, or U.K. For a summary of our revenues, net assets and net property and equipment by geographic region, see note 17 to our consolidated financial statements included in this Annual Report.

Trading and Clearing Segment

Our Trading and Clearing segment includes revenues generated by our execution venues and our clearing services, as well as other revenues. Our exchanges include derivative exchanges in the U.S., U.K., European Union, or EU, Canada and Singapore, and cash equities, equity options and bond exchanges in the U.S. We also operate over-the-counter, or OTC, markets for physical energy and credit default swaps, or CDS, trade execution as well as two electronic fixed income alternative trading systems, or ATSs. To serve global derivatives markets, we operate central counterparty clearing houses in the U.S., U.K., EU, Canada and Singapore. Our Trading and Clearing segment generated revenues of $2.1 billion in 2017 and accounted for 46% of our consolidated revenues.

Derivatives Exchanges: Our regulated futures and options exchanges provide a means for trading and managing risks associated with price volatility, securing physical delivery of certain commodities, as well as enabling investment, asset allocation and diversification. Futures and options on futures contracts are cleared through one of our seven central clearing houses. We conduct our derivatives markets through the following regulated exchanges:

- **ICE Futures Europe** is a leading exchange for futures and options contracts based on energy and agricultural commodities, interest rates, equity derivatives and emissions. ICE Clear Europe clears contracts traded on ICE Futures Europe.
- **ICE Futures U.S.** is a leading exchange that lists futures and options contracts for agricultural and energy commodities, equity indices, currencies, credit and precious metals. ICE Clear Europe clears select energy contracts traded on ICE Futures U.S. and ICE Clear U.S. clears all other contracts traded on ICE Futures U.S.
- **ICE Futures Canada** is Canada's leading agricultural futures and options exchange. ICE Clear Canada clears contracts traded on ICE Futures Canada.
- **ICE Endex** is a leading continental European energy exchange providing regulated markets for natural gas and power derivatives, gas balancing markets and gas storage services and is based in Amsterdam, the Netherlands. ICE Clear Europe provides clearing for ICE Endex.

- **Natural Gas Exchange, Inc., or NGX,** is a Canadian exchange which provides electronic execution, clearing and data services to the North American natural gas, electricity and oil markets.

- **ICE Futures Singapore** lists futures contracts for energy, gold and foreign exchange commodities. ICE Clear Singapore provides clearing for ICE Futures Singapore.

- **NYSE American Options** , formerly known as NYSE Amex Options, is a U.S. equity options exchange that offers order execution through a hybrid model, with both electronic trading and open outcry on our floor adjoining the New York Stock Exchange, or the NYSE.

- **NYSE Arca Options** is also a U.S. equity options exchange that offers order execution through a hybrid model, with execution services conducted on our trading floor in San Francisco, California.

Some of the key products offered on our derivatives exchanges include:

- ***Energy Futures Contracts:*** We operate regulated markets for energy futures contracts and options on those contracts through our subsidiaries: ICE Futures Europe, ICE Futures U.S., NGX, and ICE Futures Singapore. Our core products include contracts based on crude and refined oil, natural gas, power, emissions, coal, freight, iron ore and natural gas liquids. In aggregate, we offer approximately 2,000 energy futures contracts in our markets. Our largest energy contract is the ICE Brent crude futures contract. The contract is a deliverable contract based on an Exchange for Physical, or EFP, delivery mechanism with an option to cash settle against the ICE Brent Index price on the last trading day of the futures contract. The Brent complex, which includes ICE Brent crude futures, is a group of related benchmarks used to price a range of traded oil products, including approximately two-thirds of the world's internationally-traded crude oil. The ICE Low Sulphur Gasoil futures contract is a European diesel oil contract that offers physical delivery and serves as a middle distillate pricing benchmark for refined oil products, particularly in Europe and Asia. We also operate the world's second largest market for trading in WTI crude oil futures, as measured by the volume of contracts traded in 2017 according to the Futures Industry Association. The WTI crude futures contract is the benchmark for pricing U.S. crude oil. ICE also operates markets for North American natural gas and power futures contracts, as well as global coal and European and U.K. natural gas, power and emissions contracts.

- ***Agricultural Futures Contracts:*** Our agricultural commodity contracts are offered on ICE Futures U.S., ICE Futures Europe and ICE Futures Canada. The prices for our agricultural contracts serve as global benchmarks for the physical commodity markets, including Sugar No. 11 ® (world raw sugar), white sugar, Coffee "C" ® (Arabica coffee), robusta coffee, Cotton No. 2 ® (cotton), U.S. and London cocoa and frozen concentrated orange juice. ICE Futures Canada is a regulated commodity futures exchange in Canada and it facilitates markets for futures and options on futures contracts for canola.

- ***Financial Futures Contracts:*** ICE Futures Europe provides markets for a range of financial futures and options on futures contracts, including interest rate, equity indices, and currency derivative products. Core products are short-term interest rate, or STIR, contracts, with ICE Futures Europe's STIR contracts principally-based on implied forward rates denominated in euro and pound sterling, such as Euribor, short-term Sterling, SONIA (based on the Sterling Overnight Index Average) and Gilt contracts, as well as U.S. rates including Eurodollar and GCF repo futures. ICE Futures U.S. offers financial futures and options on futures contracts in currency, equity index and credit index markets, including contracts on certain MSCI indices, most notably the Emerging Markets and EAFE indices and the benchmark U.S. Dollar Index (USDX®) futures contract.

- ***Equity Options:*** We provide markets for trading securities options. NYSE American Options trades options on more than 2,600 equity securities (including exchange traded funds, or ETFs) and NYSE Arca Options trades options on more than 2,200 equity securities.

OTC Markets: Our OTC markets include both regulated and unregulated platforms for the execution of cleared and bilateral, or non-cleared, CDS instruments and energy contracts. Through our brokerage services, including those offered through the recently acquired Shorcan Energy Brokers, Inc., or Shorcan Energy, we provide OTC brokerage services to the North American energy markets. And through ICE Swap Trade, which operates our swap execution facility, we provide execution services to the global credit default swap market. We are the leading venue for OTC clearing of CDS as measured by cleared notional value.

Key products offered on our OTC venues include:

- ***Credit Default Swaps:*** We offer electronic trade execution for CDS instruments through Creditex U.S. and U.K., and through ICE Swap Trade, the operator of our Commodity Futures Trading Commission, or CFTC, registered swap execution facility, or SEF. We offer clearing services for the CDS markets through ICE Clear Europe and ICE Clear Credit. Both CDS clearing houses are open-access and therefore accept qualifying trades for clearing that are executed on other venues or bilaterally.

We also operate ICE Link, which is an automated trade workflow and electronic connectivity platform for affirming credit derivatives transactions. It also provides connectivity between industry participants, facilitating straight-through processing between trading venues, trade repositories, swap data repositories or trade warehousing and legal confirmation platforms, or to a clearing house for CDS transactions that are clearing eligible.

- ***OTC Energy Products:*** Our OTC energy markets comprise bilaterally-traded energy contracts. We operate our financially settled bilateral energy markets through ICE Swap Trade and we offer electronic trading of contracts based on physically settled natural gas, power and refined oil contracts through ICE U.S. OTC Commodity Markets. As of December 31, 2017, approximately 1,000 OTC energy contracts were listed on our electronic trading platform for bilateral trading. A substantial portion of our OTC volume relates to approximately 70 contracts in North American natural gas and power, and global oil.

Alternative Trading Systems: Through Creditex Securities Corporation, we operate two ATSs, serving the fixed income markets. ICE Credit Trade, which is our dealer-to-dealer venue, offers electronic corporate bond trading solutions. BondPoint, which we acquired from Virtu Financial on January 2, 2018, offers dealer-to-client electronic execution services across an array of fixed income securities including corporate, municipal and government bonds.

Clearing Services: We operate seven clearing houses, each of which acts as a central counterparty that becomes the buyer to every seller and the seller to every buyer for its clearing members. Through this central counterparty function, the clearing houses provide financial security for each transaction for the duration of the position by limiting counterparty credit risk. Our clearing houses are responsible for providing clearing services to each of our futures exchanges and certain of our clearing houses clear contracts traded outside of our execution venues. Our clearing houses are:

- **ICE Clear Europe:** clears ICE Futures Europe and ICE Endex futures and options contracts for interest rates, equity indices, energy and agriculture contracts, as well as ICE Futures U.S. futures and options contracts for energy and OTC European CDS instruments;
- **ICE Clear U.S.:** clears ICE Futures U.S. soft commodity, currency, metals, credit and equity index futures contracts;
- **NGX:** offers electronic execution and clearing to the North American natural gas, electricity and oil markets;
- **ICE Clear Credit:** clears North American, European, Asian-Pacific and Emerging Market CDS instruments;
- **ICE Clear Canada:** clears ICE Futures Canada agricultural futures contracts;
- **ICE Clear Netherlands:** offers clearing for Dutch equity options; and
- **ICE Clear Singapore:** clears ICE Futures Singapore commodity and foreign exchange contracts, or FX.

Our clearing houses have never experienced an incident of a clearing member default which has required the use of the guaranty funds of non-defaulting clearing members or the assets of the clearing house. We have extensive risk management procedures and governance in place to ensure we protect the interests of our clearing members and clearing houses. Each of our clearing houses has instituted a multi-layered risk management system of rules, policies and procedures to protect itself in the event of a clearing member default, starting with membership criteria and continuing to powers of assessment (other than for NGX) in the event of a clearing member default, generally as follows:

To ensure performance, our clearing houses maintain extensive technology and quantitative risk management systems, as well as financial and operational requirements for clearing members and minimum margin requirements for our cleared products. Our clearing houses use software based on industry standard margining conventions and on our proprietary models uniquely

customized to our products to determine the appropriate margin requirements for each clearing member by simulating the possible gains and losses of complex portfolios based on price movements. Our clearing houses' margin methodologies are independently validated on an annual basis.

In the event of a payment default by a member, the default procedures specified in the rules of that clearing house would apply. In general, the clearing houses would first apply assets of the defaulting member to cover the obligation. These include original/initial margin, variation margin, positions held at the clearing house and, other than for NGX, guaranty fund deposits of the clearing member. In addition, the clearing houses could make a demand for payment pursuant to any available guaranty provided by the parent or affiliate of the defaulting clearing member. If that is not sufficient, the clearing houses would use any designated contributions held by the clearing house itself, as applicable, the guaranty fund contributions of other non-defaulting members and funds collected through an assessment against all other non-defaulting members, to satisfy the remaining deficit, if any. As part of the powers and procedures designed to backstop financial obligations in the event of a default, each of our clearing houses may levy assessments on all of its clearing members if there are insufficient funds available to cover a deficit following the depletion of all assets in the guaranty fund.

Our risk management framework that applies to the clearing services for the CDS markets through ICE Clear Credit and ICE Clear Europe is separate from that of our futures and options or non-CDS clearing operations. ICE Clear Credit only offers clearing services with respect to the CDS markets. With respect to the ICE Clear Europe CDS clearing offering, we have established separate CDS risk pools that feature a separate guaranty fund and separate margin accounts, meaning that the CDS positions are not combined with futures and options positions. The CDS clearing houses have risk management systems that are designed specifically for CDS instruments and have independent governance structures. Our CDS clearing houses are open-access, consistent with regulatory requirements, and we accept qualifying trades for clearing that are executed on other venues. As of December 31, 2017, our CDS clearing houses collectively clear 499 single name instruments and 145 CDS indexes.

Other than for NGX, which we acquired on December 14, 2017 and which provides electronic execution, clearing and data services to the North American natural gas, electricity and oil markets, our clearing houses require that each clearing member make deposits to the guaranty fund. The amounts in the guaranty fund serve to secure the obligations of the clearing members to the clearing house. The amounts in the guaranty fund are mutualized in that a clearing member's deposit serves to secure both its own obligation to the clearing house as well as the other clearing members' obligations to the clearing house.

In addition, we contribute a limited amount of our capital to the guaranty fund of each of our clearing houses. This capital contribution is commonly referred to as clearing house "Skin-In-The-Game". As of December 31, 2017 , we have made combined contributions to our clearing houses' guaranty funds of $254 million . ICE Clear Europe has contributed $100 million of its own cash as part of its futures and options guaranty fund as of December 31, 2017 and has also contributed $50 million of its own cash as part of its CDS guaranty fund as of December 31, 2017 . ICE Clear Credit has contributed $50 million of its own cash as part of its CDS guaranty fund as of December 31, 2017 and ICE Clear U.S. has contributed $50 million of its own cash as part of its futures and options guaranty fund as of December 31, 2017 . ICE Clear Canada, ICE Clear Netherlands and ICE Clear Singapore have each also contributed a combined $ 4 million in cash to their respective guaranty funds. Each of these amounts are reflected as long-term restricted cash in the consolidated balance sheet.

NGX maintains a guaranty fund utilizing a $100 million letter of credit that has been entered into with a major Canadian chartered bank and backed by a default insurance policy underwritten by Export Development Corporation, or EDC, a Canadian government agency. In the event of a participant default, where a participant's collateral becomes depleted, any remaining shortfall would be covered by a draw down on the letter of credit following which NGX would pay the first $15 million in losses per its deductible and recover additional losses under the insurance policy up to $100 million. We have provided a parent guaranty of $100 million in favor of the major Canadian chartered bank and we voluntarily reserved $100 million of our Amended Credit Facility (defined below) to backstop that parent guaranty.

To provide a tool to address the liquidity needs of our clearing houses and manage the liquidation of margin and guaranty fund deposits held in the form of cash and high quality sovereign debt, ICE Clear Europe, ICE Clear Credit and ICE Clear US have entered into Committed Repurchase Agreement Facilities, or Committed Repo. Additionally, ICE Clear Credit has entered into Committed FX Facilities to support these liquidity needs. As of December 31, 2017 the following facilities were in place:

ICE Clear Europe: $1.05 billion in Committed Repo to finance U.S. dollar, euro and pound sterling deposits.

ICE Clear Credit: $300 million in Committed Repo to finance U.S. dollar and euro deposits, €500 million in Committed Repo to finance euro deposits, and €1.9 billion in Committed FX Facilities to finance euro payment obligations.

ICE Clear US: $250 million in Committed Repo to finance U.S. dollar deposits.

Securities Exchanges: We currently operate three securities exchanges for cash equity securities, including ETFs as well as fixed income securities. One of the primary functions of these markets is to ensure that orders to purchase and sell securities are executed in a fair, orderly and efficient manner. In addition, through our listings operations, we offer corporate and ETF issuers access to the U.S. capital markets. We currently conduct our securities trading and listings business through the following exchanges and marketplaces:

- **The New York Stock Exchange** is a leading global cash equity exchange. It is the leading equity exchange for initial public offerings, or IPOs, globally, and enables companies seeking to raise capital to become publicly listed through the IPO process upon meeting exchange listing standards. In addition to common stocks, preferred stocks and warrants, the NYSE lists structured products, such as capital securities and mandatory convertible securities. In addition, NYSE operates NYSE Bonds, an electronic trading platform with transparent pricing for debt securities, including corporate bonds.

- **NYSE American** , formerly NYSE MKT, became part of NYSE Group, Inc., or NYSE Group, in 2008. NYSE American supports emerging growth companies by providing a listing venue for a broad range of companies that may not qualify for listing on the New York Stock Exchange.

- **NYSE Arca** lists approximately 1,500 securities, including listings on the NYSE, Nasdaq, Inc., or Nasdaq, and BATS Global Markets, Inc., or BATS. NYSE Arca is the leading listing and trading platform for ETFs and exchange traded notes. NYSE Arca also lists and trades securities options.

On January 31, 2017, we acquired 100% of National Stock Exchange, Inc., now named NYSE National. The acquisition gives the NYSE Group a fourth U.S. exchange license. NYSE National is distinct from NYSE Group's three listings exchanges because NYSE National will only be a trading venue and will not be a listings market. NYSE Group's three listings exchanges, NYSE, NYSE American and NYSE Arca, have unique market models designed for corporate and ETF issuers. After closing the transaction, NYSE National ceased operations on February 1, 2017. Subject to regulatory approvals, NYSE Group anticipates re-launching operations on NYSE National, Inc. in the second quarter of 2018.

Data and Listings Segment

Our Data and Listings segment includes a range of data services for global financial and commodity markets, including pricing and reference data, indices, exchange data, analytics, consolidated feeds, desktops and connectivity solutions as well as corporate and ETF listing services on our cash equity exchanges. Our Data and Listings segment generated revenues of $2.5 billion in 2017 and accounted for 54% of our consolidated revenues. Revenues in our Data and Listings segment are largely subscription-based and recurring in nature.

Data Services: ICE Data Services offers a broad range of data, analytics and connectivity solutions across global commodity, equity and fixed income markets. ICE Data Services provides our customers comprehensive, flexible information services and solutions to meet their operational, compliance and risk management needs. The diversity and quality of the data we distribute, together with our technology and connectivity services, are crucial to supporting liquidity, price discovery, trading and investing, risk management, compliance, reporting and other operational activities across global financial markets. We intend to continue to invest to expand our data distribution offerings across asset classes, data types and services to serve the evolving needs of our global customer base.

We have defined our data business in three main categories of services: Pricing and Analytics; Exchange Data; and Desktops and Connectivity.

- ***Pricing and Analytics:*** ICE Data Services' Pricing and Analytics service provides global securities evaluations, reference data, risk analytics, derivative pricing and other information designed to meet our customers' risk management, reporting and regulatory compliance needs. For example, we provide fixed income valuations including independent evaluated pricing services on over 2.7 million fixed income securities and other hard-to-value financial instruments. Our evaluated pricing spans approximately 145 countries and covers a wide range of financial instruments including sovereign, corporate and municipal bonds, structured products, leveraged loans, and our Fair Value Information Services for international equities, options, futures and fixed income products. Our reference data complements our evaluated pricing services by offering our clients a broad range of descriptive information, covering over 11 million financial instruments across 210 markets. This data is used by clients to enhance risk management, support compliance needs and improve operational efficiency. We also offer a range of multi-asset class analytics which provide valuation services for OTC derivatives and structured products, best execution, liquidity indicators and fixed income and equity portfolio analytics to help analyze risk and return exposures. These offerings are delivered over our secure technology platforms and are used by investment professionals to simulate various market environments to help forecast performance, construct portfolios, validate investment strategies, conduct stress testing, generate dynamic risk measures, analyze asset cash flows and support regulatory compliance requirements. ICE Data Services also

designs and distributes many of today's leading indices and benchmarks across equities, fixed income and derivatives markets. Following the acquisition of the Bank of America Merrill Lynch, or BofAML indices in October 2017, we are the second largest fixed income index provider with nearly $1 trillion of assets under management, or AUM, benchmarked to our indices. Our ETF Valuations and Index Construction offering provides clients with independent and objective operational outsourcing, including design, support, maintenance, calculation and distribution of indices across fixed income instruments, currencies, equities, and commodities. ICE Benchmark Administration, or IBA, is the regulated administrator of a range of benchmarks including LIBOR, the ICE Swap Rate, the LBMA Gold and Silver Price, and the ISDA SIMM Crowdsourcing Utility. IBA has implemented processes, governance, systems and technology that enhance the transparency and security of benchmarks and services relied upon globally.

- ***Exchange Data:*** Our exchange data business provides unique real-time and historical pricing, order book and transaction information related to our exchanges across global commodity and financial markets. We publish a broad range of prices and other transaction data and related content from our electronic futures trading platform. The data is disseminated directly and through data vendors to market participants. In addition, we develop unique equity market data solutions, which is known as proprietary data. We package this exchange proprietary market data as real-time products and as historical products, which are used for analysis by market participants and observers. These products are proprietary, and we do not share the revenues that they generate with other markets. Proprietary data that provides real-time quoting or trading information from our securities exchanges is filed with the SEC and the pricing for these market data products is subject to review by the SEC. Finally, we receive a share of revenue from the National Market System Plan, or NMS Plan, consolidated data products. All SEC-registered securities exchanges send their trades and top-of-book quotes in exchange listed securities to a central consolidator, which then distributes the data pursuant to SEC requirements. The majority of our market data revenue from consolidated data products is for trades and quotes in NYSE-listed, NYSE American-listed, and NYSE-Arca securities traded on our securities exchanges. We also receive a share of the consolidated market data revenues from trades and quotes in Nasdaq-listed securities.

- ***Desktops and Connectivity:*** Our Desktop and Connectivity business provides the connection to our exchanges, clearing houses and data centers and facilitates the distribution of our ICE Data Services data as well as data from a broad array of trading venues and news feeds through our consolidated feeds offering. Our Desktop service offers a range of products and services to support commodity and energy traders, financial advisors, wealth managers, Investor Relations Officers and Chief Financial Officers. These applications deliver real-time financial market information and decision-support tools to help clients analyze financial markets and make investment decisions. Similarly, our web-based financial information solutions consist of market data, decision-support tools and hosting services. Our robust instant messaging, or IM, system protects the privacy of clients' business information while allowing collaboration with other market participants in the industry through a secure, compliant channel. In 2017, we launched the ICE Connect Platform. ICE Connect provides integrated access to global markets and price discovery solutions. ICE Connect provides integrated access to trading, messaging, news, data and analytics, with single sign-on functionality to streamline workflow and leverage data.

We also offer connectivity solutions to access markets and data through highly secure, resilient and low latency network options, as well as global colocation services, and Direct Market Access to over 150 venues and 600 market data and news feeds. Our consolidated feeds solution provides cost-effective access to a range of real-time data sources to over 17 million instruments and over 1,000 entitlement options. Clients who have agreements with any of over 600 global exchanges, trading venues and data sources covering listed and OTC securities can receive consolidated real-time and/or delayed feeds of such financial data. Our Consolidated Feed service is complemented by our Tick History service, which provides access to tick and trade data for global securities to assist clients with "best execution" requirements, transaction cost analysis and advanced charting applications. Our connectivity solutions provide secure, purpose-built, private multi-participant connectivity to global exchanges and content service providers via dedicated data circuits with a design that ensures no single point of failure exists across the platform. We operate purpose-built data centers in Basildon and Essex in the U.K. and Mahwah, New Jersey, and we manage systems in a third-party data center in Illinois to meet the needs of a largely electronic customer base. We offer server colocation space at our data centers for market participants to house their servers and applications on equivalent terms. The acquisition of TMX Atrium and our announced partnership with Go West, once launched, will mean our Secure Financial Transaction Infrastructure, or SFTI, wireless networks will offer the most extensive ultra-low latency network connectivity solutions among the New York, Chicago, Toronto and Tokyo metro areas. We are already experiencing customer interest in our Go West partnership and expect to go live in the first half of 2018.

Listings: Through our listings services, we offer corporate and ETF issuers access to the U.S. capital markets. Our listing venues allow companies to list domestic and international equity securities, corporate structured products, convertible bonds, trackers and debt securities. In 2017, the NYSE was the global leader in capital raised for the seventh consecutive year, with $128 billion raised in total IPO proceeds and follow-on offerings from 454 transactions, almost twice the capital raised by any other exchange in the world.

Product Development

We leverage our customer relationships, global distribution, technology infrastructure and software development capabilities to diversify our products and services. New product development is an ongoing process, and we are continually developing, evaluating and testing new products for introduction into our markets to better serve our client base. The majority of our product development relates to evaluating new contracts or new markets based on customer demand. New contracts often must be reviewed and approved by relevant regulators. Outside of third-party licensing costs, we typically do not incur separate, material costs for the development of new products - such costs are embedded in our normal costs of operation.

While we have historically developed our products and services internally, we also periodically evaluate and enter into strategic partnerships and licensing arrangements to develop meaningful new products and services.

Technology

Technology is a key component of our business strategy, and we regard effective execution of our technology initiatives as crucial to our success. Where feasible, we design and build our software systems and believe that having control over our technology allows us to be more responsive to the needs of our customers, better support the dynamic nature of our business and deliver the highest quality markets and data. Our proprietary systems are built using state-of-the-art technology. A significant number of our employees work in technology, including product management, project management, system architecture, software development, network engineering, information security, performance, systems analysis, quality assurance, database administration and customer technical support.

ICE Trading Platform and Technology

The ICE trading platform supports trading in our cleared futures and options markets as well as our bilateral OTC markets. We also offer voice brokers a facility for submitting block trades for products that are eligible for clearing.

Speed, reliability, scalability and capacity are critical performance criteria for electronic trading platforms. Connectivity to our trading platform for our markets is available through our web-based front-end, as well as multiple independent software vendors, or ISVs, and application programming interfaces, or APIs.

NYSE Trading Platforms and Related Technology

The NYSE electronic trading platform features an open system architecture that allows users to access our system via one of the many front-end trading applications developed by ISVs. For equity options, we offer a hybrid model of electronic and open outcry trading through NYSE American Options and NYSE Arca Options. We have developed a new integrated trading platform and matching engine known as NYSE Pillar and have migrated NYSE Arca Equities and NYSE American to this platform. In the future, we will complete the migration for the remaining U.S. cash equities and equity options markets which currently operate on distinct platforms. The single specification will improve performance and reduce the cost and complexity of operating multiple equity and options trading systems.

ICE Data Services Technology

ICE Data Services technology supports solutions for mission-critical information, analytics and connectivity. Our technology centers on integrated platforms for the capture, maintenance and synthesis of information. This platform includes a single configurable data capture mechanism, a common data model and a flexible multi-format delivery capability. The platform enables real-time processing and delivery of information, accelerates new product development, improves production reliability, and yields operating and cost efficiencies as the pre-existing heterogeneous environment is retired. Our information is delivered via real-time messaging protocols, files, web services and other on-demand facilities and state-of-the-art front-ends.

Clearing Technology

A broad range of trade management and clearing services are offered through the integrated technology infrastructure that serves our clearing houses. ICE Clearing Systems encompass a number of integrated systems, including post-trade position management, risk management, settlement and treasury and reporting functions.

A core component of our derivatives clearing houses is the risk management of clearing firm members. Our extensive technology and rules-based risk system provide analytical tools to determine margin, to determine credit risk, and to monitor risk of the clearing members. The risk system also monitors trading activities of the clearing members.

Cybersecurity

Cybersecurity is critical to our operations. We employ a defense-in-depth strategy, with leading-edge security technology and processes including encryption, firewalls, virus prevention, intrusion prevention and detection systems and secured servers. Where our services are accessible via the Internet, we have implemented additional restrictions to limit access to specific approved networks. We also maintain insurance coverage that may, subject to the terms and conditions of the policy and payment of significant deductibles, cover certain aspects of cybersecurity issues. We monitor physical threats in addition to cyber threats and continuously review and update physical security and environmental controls to secure our office and data center locations.

Business Continuity Planning and Disaster Recovery

We maintain comprehensive business continuity and disaster recovery plans and facilities to provide nearly continuous availability of our markets in the event of a business disruption or disaster. We maintain incident and crisis management plans that address responses to disruptive events at any of our locations worldwide.

Intellectual Property

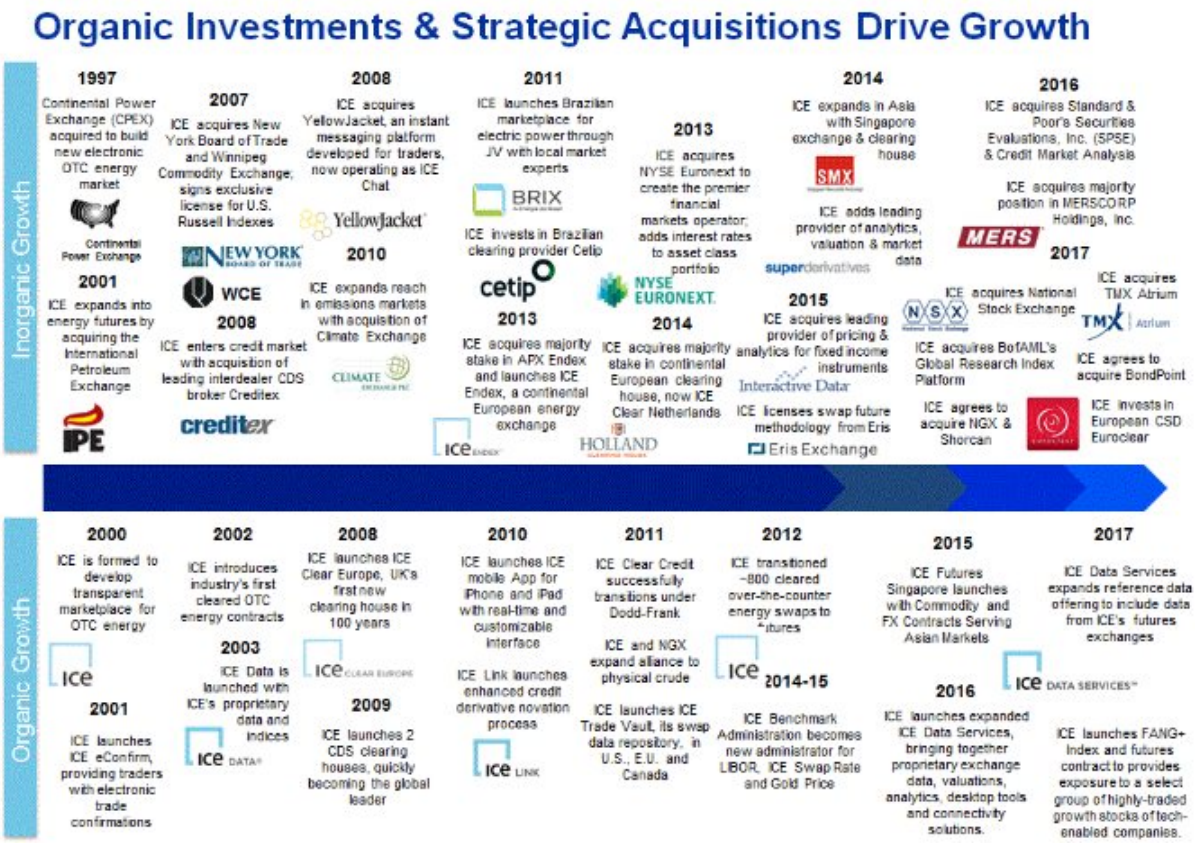
We rely on a wide range of intellectual property, both owned and licensed, for our electronic platforms. We own the rights to a large number of trademarks, service marks, domain names and trade names in the U.S., Europe and in other parts of the world. We have registered many of our trademarks in the U.S. and in certain other countries. We hold the rights to a number of patents and have made a number of patent applications in the U.S. and other countries. We also own the copyright to a variety of material. Those copyrights, some of which are registered, include software code, printed and online publications, websites, advertisements, educational material, graphic presentations and other literature, both textual and electronic. We attempt to protect our intellectual property rights by relying on trademarks, patents, copyrights, database rights, trade secrets, restrictions on disclosure and other methods.

This Annual Report also includes references to third party trademarks, trade names and service marks. Our use or display of any such trademarks, trade names or service marks is not an endorsement or sponsorship and does not indicate any relationship between us and the parties who own such marks and names.

Employees

As of December 31, 2017 , we had a total of 4,952 employees, with 1,627 employees in New York, 884 employees in Atlanta, 713 employees in the U.K. and a total of 1,728 employees across our other offices around the world. Of our total employee base, less than 1% is subject to collective bargaining arrangements, and such relations are considered to be good.

Our History



Our Competitive Strengths and Competition

Competitive Strengths

We operate global markets in the asset classes in which we compete, including futures, cash equities, equity options, fixed income and OTC markets. We believe our key strengths include our:

- diverse liquid, global derivatives, fixed income and equities markets across 12 regulated exchanges as well as OTC and ATS venues;
- secure central counterparty clearing and risk management for global derivatives markets through seven clearing houses in five jurisdictions;
- global data services including pricing and analytics, desktop and connectivity services across multiple asset classes serving commodity, fixed income and equity markets; and
- widely-distributed, leading edge technology for trading, clearing, data and trade processing.

We are a leading global operator of regulated exchanges, clearing houses and listings venues and a provider of data services for commodity, fixed income and equity markets. Our global data services business consists of unique information derived from our various execution venues and clearing houses, as well as analytics, valuation services, reference data, desktops, indices and connectivity solutions. Our acquisitions of the BofAML Indices, SuperDerivatives, Interactive Data, Securities Evaluations and Credit Market Analysis have served to expand our data services based on rising demand for independent, real-time information, which is being driven by regulation, market fragmentation, passive investing and indexation, and increased automation. We provide data to global financial institutions and asset managers, commercial hedgers, corporates, traders and consumers across virtually all asset classes. We believe our data services are relevant to our clients' business operations regardless of market volatility and price levels due to the need for continuous information and analysis.

Our regulated exchanges and our trading and clearing platforms offer qualified participants access to our markets and risk management services, covering a range of asset classes, including interest rates, equities, bonds, energy, agriculture, metals, equity indices, environmental, currencies, CDS and equity options. By operating several markets and offering thousands of products we provide our participants with flexibility to implement their trading and risk management strategies on a common technology with integrated clearing and data solutions.

Many of our futures contracts serve as global benchmarks for managing risk relating to exposure to price movements in the underlying products, including financial, energy and agricultural commodities. For example, we operate the leading market for ICE Brent crude oil futures, as measured by the volume of contracts traded in 2017 according to the Futures Industry Association. The ICE Brent Crude futures contract is the benchmark for pricing light, sweet crude oil produced and consumed outside of the U.S. It is part of the Brent complex, which forms the price reference for approximately two-thirds of the world's internationally-traded physical oil. Our oil complex has expanded since its inception in 1988 to include more than 500 contracts for hedging related oil products. In addition, we operate a leading market for short-term European interest rates contracts, with our principal contracts based on implied forward rates on European Money Markets Institute Euribor rates and a short-term Sterling contract based on the ICE LIBOR rate, as well as Gilts and the Sonia contract, based on the Sterling Overnight Index Average as published each business day. We also offer markets in soft commodity benchmark contracts, including sugar, cocoa, cotton, coffee and canola, which serve as global price benchmarks.

We offer a range of central clearing and related risk management services to promote the liquidity and security of our markets in jurisdictions around the world to meet local regulatory and operational needs in key financial market centers. The credit and performance assurance provided by our clearing houses to clearing members is designed to substantially reduce counterparty risk and is a critical component of our exchanges' identities as reliable and secure marketplaces for global transactions. We believe the range of products cleared and the risk management services offered by our clearing houses are a competitive advantage and attract market participants. Our clearing houses are designed to protect the financial integrity of our markets by maintaining strong governance and rules, managing collateral, facilitating payments and collections, enhancing capital efficiency and limiting counterparty credit risk.

We operate the leading global listings and trading exchanges for equities and ETFs, and offer our customers access to the U.S. capital markets. Our listing venues allow companies to list domestic and international equity securities, corporate structured products, convertible bonds, trackers and debt securities. In 2017, the NYSE was the global leader in capital raised for the seventh consecutive year, with $128 billion raised in total IPO proceeds and follow-on offerings.

Competition

The execution markets in which we operate are global and highly competitive. We face competition in all aspects of our business from a number of different enterprises, both domestic and international, including traditional exchanges, electronic trading platforms, data vendors and voice brokers. We believe we compete on the basis of a number of factors, including:

- depth and liquidity of markets;
- price transparency;
- reliability and speed of trade execution and processing;
- technological capabilities and innovation;
- breadth of products and services;
- rate and quality of new product developments;
- quality of services;
- stability of services;
- distribution and ease of connectivity;
- mid- and back-office service offerings, including differentiated and value-added services;
- transaction costs; and
- reputation.

We believe that we compete favorably with respect to these factors, and that our deep, liquid markets, breadth of product offerings, new product development, customer relationships and efficient, secure settlement, clearing and support services distinguish

us from our competitors. We believe that in order to maintain our competitive position, we must continue to develop new and innovative products and services, enhance our technology infrastructure, maintain liquidity and offer competitive costs.

In our derivatives markets, certain exchanges replicate our futures contracts. For example, CME Group lists our futures on agricultural and energy commodities, currency and equity index contracts. Nasdaq Futures, Inc., or NFX, an energy platform operated by Nasdaq has also listed certain of our energy contracts. We compete in European interest rates and equity derivatives with Eurex, which is the derivatives exchange operated by Deutsche Börse and Curve Global, a consortium of banks and exchanges that lists interest rate futures. In the European utilities markets, we compete with the European Energy Exchange.

In addition to venues that offer futures products, we also face competition from electronic trading systems, third-party clearing houses and technology firms. Additional ventures could form, or have been formed, to provide services that could potentially compete with certain services that we provide.

We compete with voice brokers active in the credit derivatives markets, other electronic trading platforms for derivatives, clearing houses and market data vendors. ICE Swap Trade and Creditex compete with other swap execution facilities and large inter-dealer brokers in the credit derivatives market.

We face significant competition with respect to equities trading, and this competition is expected to remain intense. Our current and prospective competitors include regulated markets, dark pools and other ATS, market makers and other execution venues. We also face competition from large brokers and customers that may assume the role of principal and act as counterparty to orders originating from retail customers, or by matching their respective order flows through bilateral trading arrangements, including through internalization of order flow.

Our principal competitor for listings in the U.S. is Nasdaq. For ETF listings, we compete with Nasdaq and CBOE Global Markets. We also face competition for foreign issuer listings from a number of stock exchanges outside the U.S., including the London Stock Exchange, Deutsche Börse, Euronext and stock exchanges in Hong Kong and Toronto. As other liquidity venues seek exchange status, we may face more competition for listings.

NYSE Arca and NYSE American Options face considerable competition in the equity options markets. Their principal U.S. competitors are the CBOE and Nasdaq.

Our fixed income trading venues, which include ICE Credit Trade, BondPoint and NYSE Bonds, compete with other electronic trading venues such as those offered by Bloomberg, TradeWeb and MarketAxess. Our platforms also compete for volume traded bilaterally or trading activity that is not done through an electronic venue.

ICE Data Services operates in a competitive environment for all of its constituent parts. Our Exchange Data products compete with similar offerings by other exchange groups. That competition and the competition for order flow among the exchange groups creates a competitive pricing environment for our proprietary data products. Pricing and Analytics competes with information obtained from informal industry relationships and sources, such as broker quotes. It, along with the Desktop and Connectivity business, competes with purchased third-party information and services from large global suppliers of financial market data, such as Bloomberg, Thomson Reuters Corporation and IHS Markit. One of the many offerings in our Connectivity business, SFTI competes with other extranet providers such as CenturyLink and Colt Technology Services. Our ICE Data Indices business competes with a number of other index providers with significant index offerings including Bloomberg, IHS Markit, MSCI, FTSE Russell, and Standard & Poor’s.

Our Growth Strategy

Throughout our history, we have expanded our core execution, clearing and data businesses both organically and through acquisitions, developed innovative new products for global markets, and provided services to a larger and more diverse participant base. In addition, we have completed a number of strategic alliances to leverage our core strengths and grow our business. We seek to advance our leadership position in our markets by focusing our efforts on the following key strategies for growth:

- expand our data offerings to address the rising demand for information;
- expand on our extensive trading, clearing and risk management capabilities;
- maintain leadership in our listing businesses;
- enhance our technology infrastructure and increase distribution; and
- pursue select acquisitions and strategic relationships that maximize customer and shareholder benefits.

The record consolidated revenues and trading volume we achieved in 2017 reflect our focus on the implementation and execution of our long-term growth strategy.

Expand our Data Offerings to Address the Rising Demand for Information

With the growth of our ICE derivatives markets and NYSE equity markets, we have strengthened and enhanced our data services due to demand for more data solutions. This has been driven by many factors, such as increased automation, regulation and demand for independent, secure, real-time information. To build on our exchange data and connectivity business, we have acquired multiple assets in the past two years, including Interactive Data, Securities Evaluations, Credit Market Analysis, TMX Atrium, and on October 20, 2017, BofAML's Global Research division's index business. The BofAML indices are the second largest group of fixed income indices as measured by AUM globally. The AUM benchmarked against our combined fixed income indices is nearly $1 trillion, and the indices have been re-branded as the ICE BofAML indices.

These assets are now part of ICE Data Services, supporting our growth strategy by expanding the markets we serve and adding new data, connectivity and valuation services to our platform. This allows us to serve the full trade life cycle from pre-trade, through-trading to post-trade activities through content such as more than 2.7 million fixed income evaluated prices and reference data on more than 11 million securities, which all help to power an array of multi-asset class analytics, indices and various reporting and performance tools. We also provide ultra-low latency network connectivity solutions. By bringing together a wide range of data and analytics as well as delivery mechanisms through our desktops and connectivity business, we offer customers a comprehensive and flexibile solution to address the need for more transparency, efficiency and information across their respective workflows.

We will continue to look for strategic opportunities to grow our data offerings and will also continue to pursue opportunities in markets we do not currently serve but where it expands the ways in which we can serve our customers. These new markets and demands have allowed us to grow using a balanced approach including new products and services, increased consumption, new customers, mergers and acquisitions, and pricing changes. This is supported by a general market growth in demand for these types of services including portfolio management and analytics, exchange data, real time and trading data, pricing, reference and valuation data.

Expand on our Extensive Trading, Clearing and Risk Management Capabilities

Our derivatives customer base has grown and diversified as a result of several drivers, including adding new markets and products, the move toward increased risk management and counterparty credit management, mark-to-market and margining services, and regulatory requirements. We continue to add new participants to our markets, which bring additional demand for new products and services. Our markets support price transparency and risk management, particularly in times of volatility and in many markets for products where there is less liquidity. In addition, the use of hedging, trading and risk management programs by commercial enterprises continues to rise based on the availability of technology to deliver more products, as well as the security and the capital efficiencies offered by clearing. We develop new products, but have also increased our capabilities through licenses and acquisitions of companies and intellectual property. Further, by acquiring, building and maintaining our own geographically diverse clearing operations, we are able to respond to market demand for central clearing and related risk management services across diverse geographic and regulatory jurisdictions. As new markets evolve, we intend to leverage our domain knowledge to meet additional demand for cleared products and related risk management solutions.

As requirements for regulatory compliance and capital efficiencies grow, the use of clearing, data and related post-trade services such as independent data providers and benchmark services also continues to grow. We intend to continue to expand our customer base by leveraging our existing relationships and our global sales and marketing team to promote participation in our markets, and by expanding our range of products and services.

On January 2, 2018, we acquired 100% of BondPoint from Virtu Financial, Inc. for $400 million in cash. BondPoint is a leading provider of electronic fixed income trading solutions for the buy-side and sell-side offering access to centralized liquidity and automated trade execution services through its ATS and provides trading services to more than 500 financial services firms.

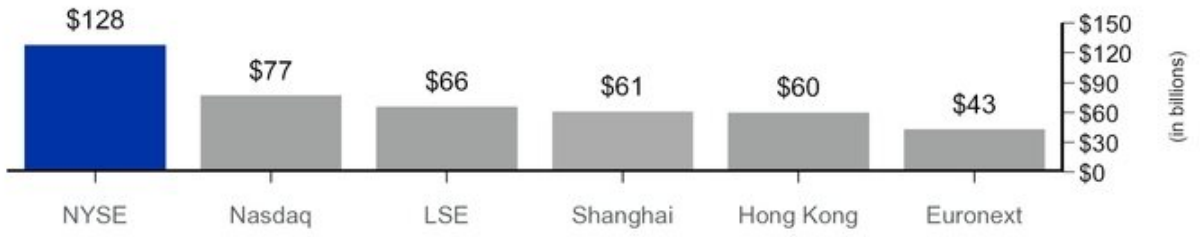
On October 24, 2017, we acquired a 4.7% stake in Euroclear for €275 million in cash ($327 million based on the euro/U.S. dollar exchange rate of 1.1903 as of October 24, 2017). During December 2017, we reached an agreement to buy an additional 5.1% stake in Euroclear for €243 million in cash ($292 million based on the euro/U.S. dollar exchange rate of 1.2003 as of December 31, 2017) and expect to receive necessary regulatory approval during the first quarter of 2018. Upon closing, we will own a 9.8% stake in Euroclear for a total investment of €518 million ($619 million based on the exchange rates above). Euroclear is a leading provider of post-trade services, including settlement, central securities depositories and related services for cross-border transactions across asset classes.

On December 14, 2017, we sold Trayport to TMX Group for £550 million ($733 million based on the pound sterling/U.S. dollar exchange rate of 1.3331 as of December 14, 2017). The proceeds of the sale included a combination of cash and our acquisitions of NGX and Shorcan Energy, both wholly-owned subsidiaries of TMX Group, for £200 million ($267 million). NGX, headquartered in Calgary, provides electronic execution, central counterparty clearing and data services to the North American natural gas, electricity and oil markets. Shorcan Energy offers brokerage services for the North American crude oil markets. We recognized a gain of $110

million upon the closing of this transaction, equal to the gross proceeds received from TMX Group, less the adjusted carrying value and the costs to sell Trayport.

Maintain Leadership in our Listing Businesses

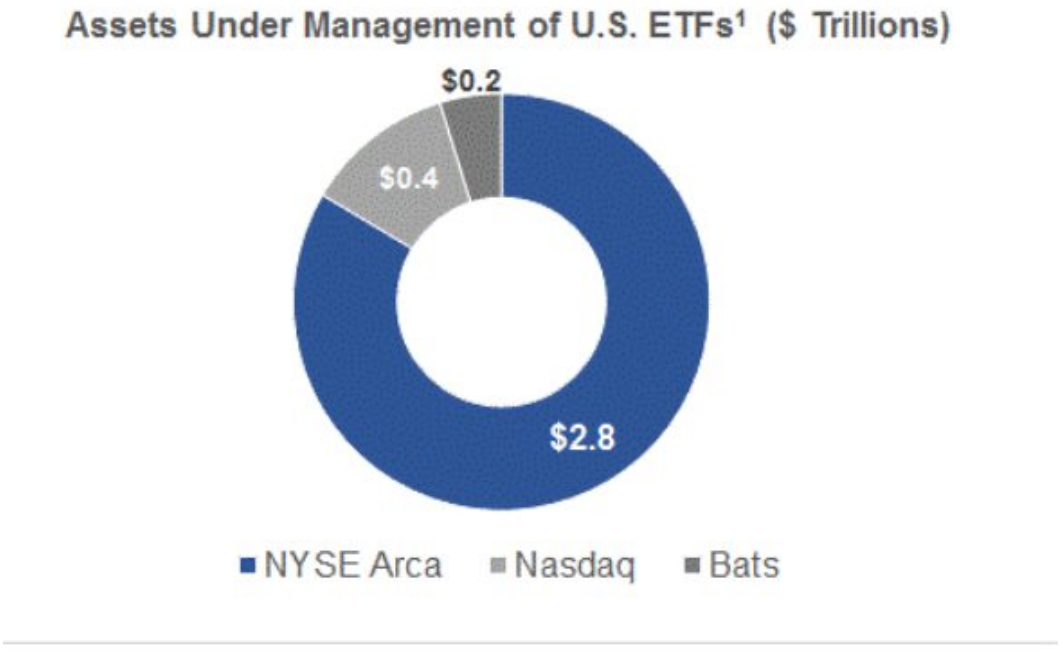
The following chart depicts 2017 global capital proceeds raised on various listings venues, in billions:



In our NYSE listings business, we will continue to focus on enhancing our product offerings and services to retain and attract companies of all sizes and industries to our listing venues. In 2017, demand for our listing services continued to be strong in terms of new listings and secondary offerings. A total of 464 new issuers listed on NYSE markets in 2017 and there are over 2,200 total companies listed on NYSE and NYSE American. NYSE was the leader in capital raised in 2017 with $128 billion raised in 454 transactions. NYSE listed 88 IPOs in 2017 raising total IPO proceeds of $31 billion, including the five largest U.S. IPOs of 2017. The NYSE has listed all 32 of the last 32 IPOs greater than $700 million in proceeds.

In ETFs, as of December 31, 2017, NYSE Arca's listed ETFs had over $2.8 trillion in AUM representing nearly 83% of all U.S. listed ETFs. We strive to maintain our leadership position by offering ETF issuers:

- guidance through the complete listings process, including expert consultations around regulatory and legal items;
- over a decade of experience in listing more than 2,700 ETFs across a wide range of asset classes and investment strategies;
- a focus on customer service from experienced ETF professionals;
- the highest liquidity of any exchange and some of the narrowest quoted bid / ask spreads; and
- Lead Market Maker, or LMM, and incentive programs.



[1] ETFs include all exchange traded products
Source: NYSE Internal Database and Consolidated Tape Statistics, December 31, 2017

Enhance Our Technology Infrastructure and Increase Distribution

We develop and maintain our own infrastructure, electronic trading platform, clearing systems and data and analytics platforms to ensure scalability and the delivery of technology that meets our expanding customer base's demands for price transparency, reliability, risk management and transaction efficiency. We intend to continue to increase ease of access and connectivity with our existing and prospective market participants. We develop and maintain our trading and clearing systems, as well as our data solutions and many post-trade systems such as ICE Link and ICE Trade Vault, among others. We have developed and have begun rolling out a new integrated trading platform and matching engine known as NYSE Pillar that will eventually serve each of our U.S. cash equities and equity options markets to improve performance and reduce the cost and complexity of operating multiple trading systems. We also own and operate two data centers and offer connectivity solutions to global exchanges and content service providers via dedicated data circuits.

On May 1, 2017, we acquired 100% of TMX Atrium, a global extranet and wireless services business, from TMX Group. TMX Atrium provides low-latency access to markets and market data across 12 countries, more than 30 major trading venues, and ultra-low latency wireless connectivity to access markets and market data in the Toronto, New Jersey and Chicago metro areas. The wireless assets consist of microwave and millimeter networks that transport market data and provide private bandwidth. TMX Atrium is now part of ICE Data Services and is being integrated with our connectivity services.

Pursue Select Acquisitions and Strategic Relationships that Maximize Customer and Shareholder Benefits

As an early consolidator in global markets to build out our markets and services for customers, we intend to continue to explore and pursue acquisitions and other strategic opportunities to strengthen our competitive position globally, broaden our product offerings and service, and support the growth of our company while maximizing shareholder value as measured by return on invested capital, earnings and cash flow growth. We may enter into business combinations, make acquisitions or enter into strategic partnerships, joint ventures or alliances, any of which may be material. In addition to growing our business, we may enter into these transactions for a variety of additional reasons, including leveraging our existing strengths to enter new markets, expanding our products and services, addressing underserved markets, advancing our technology, anticipating or responding to regulatory change or potential changes in our industry.

Our Customer Base

Executive Officers of the Registrant

Information relating to our executive officers is included under "Executive Officers" in Part III, Item 10, "Directors, Executive Officers and Corporate Governance" of this Annual Report.

Regulation

Our markets are primarily subject to the jurisdiction of regulatory agencies in the U.S., U.K., EU, Canada and Singapore. Failure to satisfy regulatory requirements can or may give rise to sanctions by the applicable regulator.

Regulation of our Derivatives Business

Our regulated derivatives markets and clearing houses are based primarily in the U.S., U.K., EU, Canada and Singapore. Our U.S. futures exchange is subject to extensive regulation by the CFTC under the Commodity Exchange Act, or CEA. The CEA generally requires that futures trading in the U.S. be conducted on a commodity exchange registered as a Designated Contract Market, or DCM. As a registered DCM, ICE Futures U.S. is a self-regulatory organization, or SRO, that has instituted rules and procedures to comply with the core principles applicable to it under the CEA. In the U.K., ICE Futures Europe is a Recognized Investment Exchange, or RIE, in accordance with the Financial Services and Markets Act 2000, or FSMA. Like U.S. regulated derivatives markets, RIEs are SROs with surveillance and compliance responsibilities. ICE Clear Credit, ICE Clear U.S. and NGX are regulated by the CFTC as Derivatives Clearing Organizations, or DCOs. DCOs are subject to extensive regulation by the CFTC under the CEA. ICE Clear Europe, which is primarily regulated in the U.K. by the Bank of England as a Recognized Clearing House, or RCH, is also subject to regulation by the CFTC as a DCO. Both ICE Clear Credit and ICE Clear Europe are also regulated by the SEC as clearing agencies because they clear security-based swaps.

The Financial Stability Oversight Council, or FSOC, has designated ICE Clear Credit as a systemically important financial market utility under Title VIII of the Dodd-Frank Wall Street Reform and Consumer Protection Act, or the Dodd-Frank Act. As such, ICE Clear Credit has access to the Federal Reserve System and holds deposits of $ 18.5 billion of its U.S. dollar cash in its cash accounts at the Federal Reserve as of December 31, 2017 .

Regulation of our Securities Business

In our cash equities and options markets, NYSE, NYSE Arca, NYSE American and NYSE National are national securities exchanges and, as such, are SROs and subject to oversight by the SEC. Accordingly, our U.S. securities exchanges are regulated by

the SEC and, in turn, are the regulators of their members. As national securities exchanges, NYSE, NYSE Arca, NYSE American and NYSE National must comply with, and enforce compliance by their members with, the Securities Exchange Act of 1934, or the Exchange Act.

In our fixed income markets, Creditex Securities Corporation, which also includes the recently acquired BondPoint business, is a broker-dealer and ATS operator, and, as such, is subject to oversight by the SEC. Creditex Securities Corporation is also a member of the Financial Industry Regulatory Authority, or FINRA, and is registered with the Municipal Securities Rulemaking Board, self-regulatory organizations that regulate broker-dealers in the U.S.

Regulation of our Data Business

As a result of our evaluated pricing operations, we have U.S. subsidiaries that are registered with the SEC under the Investment Advisers Act of 1940, or the Investment Advisers Act, for their evaluated pricing services. The Investment Advisers Act imposes numerous regulatory obligations on registered investment advisers, including those relating to products and services, record-keeping, compliance management, operational and marketing requirements, disclosure obligations and prohibitions on fraudulent activities. Investment advisers also are subject to certain state securities laws and regulations. Interactive Data (Australia) Pty. Ltd. is licensed by the Australian Securities and Investment Commission, or ASIC, and provides certain financial services in Australia. Interactive Data Desktop Solutions (Europe) Limited is regulated by the Financial Conduct Authority, or FCA, and provides certain financial services in the European Economic Area.

Regulatory Reform

Domestic and foreign policy makers have undertaken ongoing reviews of their legal frameworks governing financial markets following the 2009 financial crisis, and have either passed new laws and regulations, or are in the process of debating and/or enacting new laws and regulations that apply to our business and to our customers' businesses. Our key areas of focus on these evolving efforts are:

- The harmonization of regulations globally. Global regulations have not been fully harmonized and several of the Markets in Financial Instruments Directive II's, or MiFID II, regulations are inconsistent with U.S. rules. In addition, in 2017, the CFTC announced its new agenda calling for regulatory simplification and the reduction of regulatory burdens. The CFTC is looking to restructure its rules by moving back to a more principles-based approach. As a result, there is potential for further divergence between MiFID II and U.S. rules if the U.S. makes changes to financial regulations while the EU continues with MiFID implementation.

- The harmonization of regulations relating to trading venues in the U.S. and EU. In December 2017, the CFTC adopted an order exempting certain multilateral trading facilities, or MTFs, and organized trading facilities, or OTFs, authorized within the EU from the CFTC registration requirements as Swap Execution Facilities, or SEFs. The European Commission also announced in December 2017 an equivalence determination of CFTC-authorized trading venues including SEFs and DCMs. The equivalence decision allows transactions conducted on EU and U.S. trading venues to be recognized as equivalent.

- The proposed revisions to the regulatory structure of non-EU clearing houses. In June 2017, the European Commission published a proposal to revise the current regulatory structure for non-EU clearing houses. The nature and extent of the regulation would depend on the "impact" of a non-EU clearing house's business in the EU. Details on the classification of non-EU clearing will be established by the European Commission in cooperation with the European Securities and Markets Authority, or ESMA, and the European System of Central Banks. The proposal will undergo legislative review by the European Parliament and the EU Member States, and is subject to change. The proposal could have an impact on our non-EU clearing houses to the extent they are deemed to be doing business in Europe which might involve change to clearing house regulation and/or supervision.

- The non-discriminatory access provisions of MiFID II as currently drafted, would require our European exchanges and CCPs to offer access to third parties on commercially reasonable terms. In addition, MiFID II could require our European exchanges to allow participants to trade and/or clear at other venues, which may encourage competing venues to offer our products. In June 2016, the EU approved a twelve-month postponement of MiFID II implementation and compliance to January 1, 2018. On January 3, 2018, we received a deferral from the FCA and the Bank of England, which delays the non-discriminatory access provision of MiFID II for a period of 30 months.

- The implementation of capital charges in Basel III, particularly the Supplemental Leverage Ratio with respect to certain clearing members of central counterparties. These new standards may impose burdensome capital requirements on our clearing members and customers that may disincentivize clearing.

- The adoption and implementation of position limit rules in the U.S. and EU, which could have an impact on our commodities business if comparable trading venues in foreign jurisdictions are not subject to equivalent rules. P osition limits became effective in Europe beginning January 2018 under MiFID II. The FCA has published certain position limits for commodity

contracts. In certain cases, the position limits are lower than on U.S. trading venues and in certain cases position limits are higher than U.S. equivalent contracts. The FCA is actively reviewing the recently issued position limits. Conversely, in December 2016, the CFTC re-proposed the position limit rules as opposed to finalizing the rule.

- The proposed European financial transaction taxes are uncertain. Although a number of Member States participating in the financial transaction tax have reached a broad political agreement on instituting the tax, many details are left to be concluded, including how to assess the tax at a member state level. Implementation of a financial transaction tax could have a negative impact on our European operations if adopted.

- The EU Benchmark Regulation, or BMR, was adopted in June 2016 and applies from January 2018. Under the BMR, benchmarks provided by a third country benchmark administrator may be used by EU supervised entities provided that the European Commission has adopted an equivalence decision or the administrator has been recognized or endorsed and the benchmarks are listed on the register established by ESMA. The BMR provides for a transition period which applies from January 1, 2018, when the BMR enters into force, until January 1, 2020. During this period ICE Data Indices, LLC plans to apply to the UK FCA for recognition, and benchmarks provided by ICE Data Indices, LLC may continue to be used by supervised entities.

- Brexit timing and implications. In March 2017, the U.K. officially triggered Article 50 and notified the EU of its intention of leaving the EU following the U.K.'s June 2016 referendum vote to leave the EU (commonly known as Brexit). The triggering of Article 50 begins the process of withdrawal from the EU, which will last two years unless extended by the unanimous decision of member states. We are monitoring the impact to our business of the U.K. leaving the EU. The impact to our business and corresponding regulatory changes are uncertain at this time, and may not be known in the near future.

See the discussion below and Item 1(A) "- Risk Factors" in this Annual Report for additional description of regulatory and legislative risks and uncertainties.

Corporate Citizenship

We strive to create long-term value for our shareholders and maintain high ethical and business standards. We are active in the communities where we operate and support charitable organizations through a combination of financial resources and through employee participation. We also operate the ICE NYSE Foundation that has a commitment to supporting our communities, financial literacy and veterans' programs. We also host programs for our issuers on governance topics to provide a forum for advancing their efforts on environmental, social and governance matters. In 2018, we will engage in a survey of our employees to further monitor how as a company we are living up to our core values and to find additional ways to improve our employees' work experience.

We provide additional information in our Corporate Responsibility Report, which can be located in the Corporate Citizenship section of our website.

With regard to environmental markets, we own Climate Exchange PLC and are today the leading operator of global emissions and environmental products markets, which enabled us to expand and support the development of emissions markets. We have invested further to develop new environmental products on our exchanges, including carbon emissions, aviation allowances, renewable energy certificate contracts, California carbon allowance contracts and biofuel products related to renewable identification numbers.

Available Information

Our principal executive offices are located at 5660 New Northside Drive, 3rd Floor, Atlanta, Georgia 30328. Our main telephone number is 1-770-857-4700, and our website is www.intercontinentalexchange.com.

We are required to file reports and other information with the SEC. A copy of this Annual Report on Form 10-K, as well as any future Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and any amendments to such reports are available free of charge, on our website (www.theice.com) as soon as reasonably practicable after we file such reports with, or furnish such reports to, the SEC. A copy of these filings is also available at the SEC's website (www.sec.gov). The reference to our website address and to the SEC's website address do not constitute incorporation by reference of the information contained on the website and should not be considered part of this report. You may read and copy any documents filed by us at the SEC's Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information on the Public Reference Room.

In addition, we have posted on our website the charters for our (i) Audit Committee, (ii) Compensation Committee, (iii) Nominating and Corporate Governance Committee and (iv) Risk Committee, as well as our Code of Business Conduct and Ethics, which includes information regarding our whistleblower hotline information, Board of Directors Governance Principles and Board Communication Policy. We will provide a copy of these documents without charge to stockholders upon request.

ITEM 1(A). ***RISK FACTORS***

The risks and uncertainties described below are those that we currently believe may materially affect us. Other risks and uncertainties that we do not presently consider to be material or of which we are not presently aware may become important factors that affect us in the future. If any of the risks discussed below actually occur, our business, financial condition, operating results or cash flows could be materially adversely affected. Accordingly, you should carefully consider the following risk factors, as well as other information contained in or incorporated by reference in this Annual Report.

Global economic, political, financial market and social events or conditions may negatively impact our business.

Global economic conditions will impact our business. Adverse macroeconomic conditions, including recessions, inflation, high unemployment, currency fluctuations, actual or anticipated large-scale defaults or failures, or slowdown of global trade could decrease consumer and corporate confidence and reduce consumer, government and corporate spending. If our customers reduce spending, workforce, trading activity or demand for financial data as a result of challenges in the prevailing economic markets, our revenues will decline. Further, NYSE's revenue increases when more companies are willing to go public and stagnation or a decline in the IPO market could have an adverse effect on our revenues. A prolonged decrease in the number of IPOs could also negatively impact the growth of our transaction revenues since initial public offerings are typically actively traded following the offering date. The number of public companies in the U.S. has decreased significantly over the last twenty years.

A significant portion of our revenues are derived from fees for transactions executed and cleared in our markets. We derived 42%, 43% and 56% of our consolidated revenues, less transaction-based expenses, from our transaction-based business in 2017, 2016 and 2015, respectively. In particular, we derive a significant percentage of the consolidated revenues from our transaction-based business from trading in ICE Brent Crude futures and options contracts, North American natural gas futures and options contracts, sugar futures and options contracts, equity transactions and short-term interest rates contracts, including the Euribor and Short Sterling futures and options contracts. The trading volumes in our markets could decline substantially if our market participants reduce their level of trading activity for any reason, including:

- a reduction in the number of market participants that use our platform;
- a reduction in trading demand by customers or a decision to curtail or cease hedging or speculative trading;
- regulatory or legislative changes impacting our customers and financial markets;
- a prolonged decrease in volatility in the financial markets;
- heightened capital requirements or mandated reductions in leverage resulting from new regulation;
- defaults by clearing or exchange members or the inability of participants to pay out contractual obligations;
- changes to our contract specifications that are not viewed favorably by our market participants; or
- reduced access to or availability of capital required to fund trading activities.

A reduction in our overall trading volume could render our markets less attractive to market participants as a source of liquidity, which could result in further loss of trading volume and associated transaction-based revenues. A reduction in trading volumes could also result in a corresponding decrease in the demand for our market data, which would further reduce our overall revenue.

In addition, uncertainty in various markets throughout the world have resulted or may result in decreased revenues or growth rates. For example, the uncertainty surrounding the terms of the U.K.'s exit from the EU could negatively impact markets and cause weaker macroeconomic conditions that could continue for the foreseeable future. Such economic weakness and uncertainty may adversely affect demand for our products and services.

Our businesses and those of many of our clients have been and continue to be subject to increased legislation and regulatory scrutiny, and we face the risk of changes to this regulatory environment and business in the future.

We are and will continue to be subject to extensive regulation in many jurisdictions around the world, and in particular in the U.S. and the U.K. where the largest portions of our operations are conducted. We face the risk of significant actions by regulatory and taxing authorities in all jurisdictions in which we conduct our businesses and hold investments that may affect our business, the activity of our market participants, and as a consequence, our results. Among other things, as a result of regulators and tax authorities enforcing existing laws and regulations, we could be censured, fined, prohibited from engaging in some of our business activities, subjected to limitations or conditions on our business activities, including fair, reasonable and nondiscriminatory pricing restrictions, also known as FRAND, or subjected to new or substantially higher taxes or other governmental charges in connection

with the conduct of our business or with respect to our employees, including settlement payments, interest payments and penalty payments. In many cases, our activities may be subject to overlapping and divergent regulation in different jurisdictions.

There is also the risk that new laws or regulations or changes in enforcement practices applicable to our businesses or those of our clients could be imposed. This could adversely affect our ability to compete effectively with other institutions that are not affected in the same way or impact our clients' overall trading volume through our exchanges and demand for our market data and other services. In addition, regulation imposed on financial institutions or market participants generally, such as enhanced regulatory capital requirements, could adversely impact levels of market activity and price volatility more broadly, and thus impact our businesses. The U.S. government has indicated a goal of reforming many aspects of existing financial services regulations, however, it is unknown at this time to what extent new legislation will be passed into law or pending or new regulatory proposals will be adopted or modified, or the effect that such passage, adoption or modification will have, positively or negatively, on our industry or on us.

These developments could impact our profitability in the affected jurisdictions, or even make it uneconomical for us to continue to conduct all or certain of our businesses in such jurisdictions, or could cause us to incur significant costs associated with changing our business practices, restructuring our businesses, or moving all or certain of our businesses and our employees to other jurisdictions, including liquidating assets or raising capital in a manner that adversely increases our funding costs or otherwise adversely affects our stockholders and creditors. For example, the adoption and implementation of position limit rules in the U.S. and the EU could have an impact on our commodities business if comparable trading venues in foreign jurisdictions are not subject to equivalent rules. Position limits became effective in the EU beginning January 2018 and in certain cases the position limits are lower than U.S. equivalent contracts and in other cases position limits are higher than U.S. equivalent contracts. These divergent regulations may cause us to move products from one jurisdiction to another as a result of business risks and competitive challenges and could significantly increase the regulatory compliance costs for our customers, which could have a negative impact on our business.

U.S. and EU legal and regulatory developments in response to the global financial crisis, in particular the Dodd-Frank Act, EMIR, MiFID II and the benchmark regulation, have significantly altered and propose to further alter the regulatory framework within which we operate and may adversely affect our competitive position and profitability. The enacted and proposed legal and regulatory changes most likely to affect our businesses are: position limit rules in the U.S. and the EU, non-discriminatory access provisions of MiFID II, interoperability and margin rules in EMIR, enhanced regulatory capital liquidity and leverage rules in Basel III and Capital Requirements Directive IV, access rules under the benchmark regulation, the non-harmonization of margin requirements, implementation of a financial transaction tax, access to our benchmarks and maintaining our exchanges' abilities to operate as SROs with related immunity for the discharge of their regulatory functions. As the operator of global businesses, the lack of harmonization in international financial reform efforts could impact our business as our clearing houses and exchanges are subject to regulation in multiple jurisdictions.

The Dodd-Frank Act established enhanced regulatory requirements for non-bank financial institutions designated as "systemically important" by the FSOC. ICE Clear Credit has been designated as a systemically important financial market utility by the FSOC and as a result, is subject to additional oversight by the CFTC.

U.S. income tax reform efforts could have a material impact on our business. On December 22, 2017, the Tax Cuts and Jobs Act, or TCJA, was signed into law. The TCJA enacts broad changes to the existing U.S. federal income tax code, including reducing the federal corporate income tax rate from 35% to 21%, amongst many other complex provisions. The ultimate impact of such tax reforms may differ from our current estimates due to changes in interpretations and assumptions made by us as well as the issuance of any further regulations or guidance that may alter the operation of the U.S. federal income tax code. Various uncertainties also exist in terms of how U.S. states and any foreign countries within which we operate will react to these U.S. federal income tax reforms, which could have additional impacts on our business.

The European Commission has approved a data protection regulation, known as the General Data Protection Regulation, or GDPR, which has been finalized and comes into effect in May 2018. The GDPR will create a range of new compliance obligations for companies that receive or process personal data of residents of the EU that are different than the compliance obligations currently in place in the EU, and will include significant penalties for non-compliance.

Other enacted and proposed legal and regulatory changes not discussed above may also adversely affect our competitive position and profitability. See Item 1 "- Business - Regulation" above for additional information regarding the current and proposed laws and regulations that impact our business, including risks to our business associated with these laws and regulations.

Systems failures in the derivatives and securities trading industry could negatively impact us.

High-profile system failures in the derivatives and securities trading industry could negatively impact our business and result in regulatory investigations, fines and penalties. Further, regulators have imposed new requirements for trading platforms that have been costly for us to implement, or that could result in a decrease in demand for some of our services. In particular, the SEC's Regulation Systems Compliance and Integrity, or Regulation SCI, and the CFTC's system safeguards regulations subject portions of our securities and derivatives trading platforms and other technological systems related to our clearing houses, trade repositories and the U.S. Swap Execution Facility, or SEF, to more extensive regulation and oversight. Ensuring our compliance with the requirements of Regulation SCI and the CFTC's system safeguards regulations requires significant implementation costs as well as increased ongoing administrative expenses and burdens. If system failures in the industry continue to occur, it is also possible that investor confidence in the trading industry could diminish, leading to decreased trading volume and revenue. Whether or not any of our own systems experience material failures, any of these developments could adversely affect our business, financial condition and operating results.

Our business is subject to the impact of financial markets volatility, including the prices and interest rates underlying our derivative products, due to conditions that are beyond our control.

Trading volume in our markets and products is largely driven by the degree of volatility - the magnitude and frequency of fluctuations - in prices and levels of the underlying commodities, securities, indices, financial benchmarks or other instruments. Volatility increases the need to hedge price risk and creates opportunities for investment and speculative or arbitrage trading. Were there to be a sustained period of stability in the prices or levels of the underlying commodities, securities, indices, benchmarks or other instruments of our products, we could experience lower trading volumes, slower growth or declines in revenues.

Factors that are particularly likely to affect price and interest rate levels and volatility, and thus trading volumes, include:

- global and domestic economic, political and market conditions;
- concerns over inflation, deflation, legislative and regulatory changes, government fiscal and monetary policy - including actions by the Federal Reserve, other foreign monetary units governing bodies, and investor and consumer confidence levels;
- weather conditions including hurricanes and other significant events, natural and other unnatural disasters like large oil spills that impact the production of commodities, and, in the case of energy commodities, production, refining and distribution facilities for oil and natural gas;
- war, acts of terrorism and any unforeseen market closures or disruptions in trading;
- real and perceived changes in the supply and demand of commodities underlying our products, particularly energy and agricultural products, including changes as a result of technological improvements or the development of alternative energy sources; and
- credit quality of market participants, the availability of capital and the levels of assets under management.

Any one or more of these factors, which are beyond our control, may reduce trading activity, which could make our markets less attractive as a source of liquidity, and in turn could further discourage existing and potential market participants and thus accelerate a decline in the level of trading activity and potentially related services such as data or clearing. Further, lower market volatility could also result in more exchanges competing for trading volumes to maintain their growth. If any of these unfavorable conditions were to persist over a lengthy period of time and trading volumes were to decline substantially and for a long enough period, the critical mass of transaction volume necessary to support viable markets could be jeopardized. Because our cost structure is largely fixed, if demand for our current products and services decline for any reason, we may not be able to adjust our cost structure to counteract the associated decline in revenues, which would cause our net income to decline.

Owning clearing houses exposes us to risks, including risk related to defaults by clearing members, risks related to investing margin and guaranty funds, and the cost of operating the clearing houses.

There are risks inherent in operating a clearing house, including exposure to the market and counterparty risk of clearing members, market liquidity risks, defaults by clearing members and risks associated with custody and investing margin or guaranty fund assets provided by clearing members to our clearing houses, which could subject our business to substantial losses. For example, clearing members have transferred an aggregate amount of cash in ICE Clear Europe relating to margin and guaranty funds of $22.8 billion as of December 31, 2017 and a total of $50.5 billion for all of our clearing houses as of December 31, 2017 . ICE Clear Europe and ICE Clear U.S. use third party investment managers for investment of cash assets and may add or change the investment managers from time to time. To the extent available, ICE Clear Credit holds the U.S. dollar cash and U.S. Treasuries that clearing members transfer to satisfy their original margin and guaranty fund requirements at its account at the

Federal Reserve. With respect to other clearing member cash posted, ICE Clear Credit currently self-manages and uses external investment managers to invest such cash margin and guaranty fund deposits.

We have an obligation to return margin payments and guaranty fund contributions to clearing members to the extent that the relevant member's risk based on its open contracts to the clearing house is reduced. If a number of clearing members substantially reduce their open interest or default, the concentration of risks within our clearing houses will be spread among a smaller pool of clearing members, which would make it more difficult to absorb and manage risk in the event of a further clearing member's default. Further, following our acquisition of the BondPoint business in January 2018, Creditex Securities Corporation intends to seek regulatory approval to be a clearing firm so that it can clear trades in fixed income securities executed on the Creditex platforms. Self-clearing exposes our business to additional settlement and counterparty risk.

Although our clearing houses have policies and procedures to help ensure that clearing members can satisfy their obligations, such policies and procedures may not succeed in preventing losses after a member or a counterparty's default. In addition, although we believe that we have carefully analyzed the process for setting margins and our financial safeguards, it is a complex process and there is no guarantee that our procedures will adequately protect us from the risks of clearing these products. We cannot assure you that these measures and safeguards will be sufficient to protect us from a default or that we will not be materially and adversely affected in the event of a significant default. We have contributed our own capital to the guaranty fund of the clearing houses that could be used in the event of a default. Furthermore, the default of any one of the clearing members could subject our business to substantial losses and cause our customers to lose confidence in the guaranty of our clearing houses.

A decline in the value of securities held as margin or guaranty fund contributions by our clearing houses or default by a sovereign government issuer could pose additional risks of default by clearing members.

Our clearing houses hold a substantial amount of assets as margin or guaranty fund contributions, which comprise U.S. and other sovereign treasury securities. As of December 31, 2017 , our clearing houses held $39.5 billion of non-cash margin or guaranty fund contributions in U.S. and other sovereign treasury securities: $29.1 billion of this amount was comprised of U.S. Treasury securities, $1.7 billion of French Treasury securities, $1.5 billion of German Treasury securities, $1.3 billion of Italian Treasury securities, $1.2 billion of U.K. Treasury securities, and $4.6 billion of other European, Japanese and Tri-Party Treasury securities. Sovereign treasury securities have historically been viewed as one of the safest and most liquid securities for clearing houses to hold due to the perceived credit worthiness of major governments, although the markets for such securities have experienced significant volatility during the past decade and as of late due to on-going financial challenges in some of the major European countries and the U.S. government's negotiations regarding taxation, spending cuts and raising the debt ceiling, which is the maximum amount of debt that the U.S. government can legally incur. In addition, if there is a collapse of the euro, our clearing houses would face significant expenses in changing their systems and such an event could cause a credit contraction and major swings in asset prices and exchange rates. To mitigate this risk, our clearing houses currently apply a discount or "haircut" to the market values for all sovereign securities held as margin or guaranty fund contributions; however, market conditions could change more quickly than we adjust the amount of the haircuts and the haircuts could be insufficient in the event of a sudden market event.

Notwithstanding the current intraday margin and valuation checks conducted by our clearing houses and our policies and practices to limit exposures, our clearing houses will need to continue to monitor the volatility and value of sovereign treasury securities. If the value of these securities declines significantly, our clearing houses will need to collect additional margin or guaranty fund contributions from their clearing members, which may be difficult for the members to supply in a time of financial stress affected by an actual or threatened default by a sovereign government. In addition, our clearing houses may be required to impose a more significant discount on the value of sovereign treasury securities posted as margin or guaranty fund contributions if there is uncertainty regarding the future value of these securities, which would trigger the need for additional margin or guaranty fund contributions by the clearing members. If a clearing member cannot supply the additional margin or guaranty fund contributions, which may include cash in a currency acceptable to the clearing house, the clearing house would deem the clearing member in default. If any clearing members default as a result of the reduction in the value of margin or guaranty fund contributions, our clearing houses and trading business could suffer substantial losses as a result of the loss of any capital that has been contributed to the clearing house's guaranty funds and a loss of confidence by clearing members in the clearing house, resulting in a reduction in volumes of future cleared transactions.

Further, our clearing houses invest large sums through reverse repo transactions in connection with their clearing operations and may hold sovereign securities as security in connection with such investment transactions. Our clearing houses may also make time deposits with banks that are secured only to the value of FDIC insurance or other national deposit guarantee schemes, which is small, and therefore, the deposits may in significant part be lost in the event one of these banks becomes insolvent.

Owning and operating equity and options exchanges exposes us to additional risks, including the regulatory responsibilities to which these businesses are subject.

Owning and operating equity and options exchanges for which the revenues are primarily derived from market data, listing fees and trading activity, exposes us to additional risks. Adverse economic conditions and regulatory changes similar to those discussed above, including changes to the number of exchanges that are permitted to conduct closing auctions, could result in decreased trading volume on our exchanges, discourage market participants from listing on our equity and options exchanges or cause them to forgo new offerings. Any of these could reduce our revenues, including market data revenue.

Our exchanges are operated as for-profit businesses but have certain regulatory responsibilities that must be fulfilled. Specifically, our exchanges are responsible for enforcing listed company compliance with applicable listing standards, overseeing regulatory policy determinations, rule interpretation and regulation-related rule development, and conducting trading reviews. Any failure by one of our exchanges with self-regulatory responsibility to comply with, and enforce compliance by their members, with exchange rules and securities laws could significantly harm our reputation, prompt regulatory scrutiny, result in the payment of fines or penalties and adversely affect our business, financial condition and operating results.

We must allocate significant resources to fulfill our self-regulatory responsibilities. The for-profit exchanges' goal of maximizing stockholder value might contradict the exchanges' self-regulatory responsibilities. The listing of our common stock on the NYSE could potentially create a conflict between the exchange's regulatory responsibilities to vigorously oversee the listing and trading of securities, on the one hand, and our commercial and economic interest, on the other hand. While we have structural protections to minimize these potential conflicts, we cannot be sure that such measures will be successful.

Further, changes in the rules and operations of our securities markets must be reviewed and approved by the SEC. Approval of such changes by the SEC cannot be guaranteed and the SEC could delay either the approval process or the initiation of the public comment process. Any denial or delay in approving changes could have an adverse effect on our business, financial condition and operating results.

Our compliance and risk management methods, as well as our fulfillment of our regulatory obligations, might not be effective, which could lead to enforcement actions by our regulators.

Our ability to comply with complex and changing laws and rules is largely dependent on our establishment and maintenance of compliance, audit and reporting systems that can quickly adapt and respond, as well as our ability to attract and retain qualified compliance and other risk management personnel. While we have policies and procedures to identify, monitor and manage our risks and regulatory obligations, we cannot assure you that our policies and procedures will always be effective or that we will always be successful in monitoring or evaluating the risks to which we are or may be exposed. Regulators periodically review our exchanges' ability to self-regulate and our compliance with a variety of laws and regulations including self-regulatory standards. In particular, certain of our businesses acquired in the NYSE acquisition are subject to public notice procedures prior to making changes in operations, policies and procedures. If we fail to comply with any of these obligations, regulators could take a variety of actions that could impair our ability to conduct our business.

Our acquisitions expose us to new regulatory requirements. For example, as a result of our acquisitions of Interactive Data and Securities Evaluations, we operate two SEC registered investment advisers. Investment advisers are subject to significant regulatory obligations under the Investment Advisers Act. Prior to these acquisitions, none of our businesses were registered under the Investment Advisers Act. Compliance with the Investment Advisers Act and other regulatory requirements gives rise to costs and expenses that may be material. In addition, our acquisition of the BondPoint ATS in January 2018 exposes us to increased exposure to regulatory scrutiny from the SEC and FINRA.

Our regulators have broad enforcement powers to censure, fine, issue cease-and-desist orders or prohibit us from engaging in some of our businesses. For example, we paid a $5 million penalty to the SEC in 2014 and a $3 million penalty to the CFTC in 2015 as a result of enforcement actions brought by these regulators. In December 2015, NYSE received an inquiry from the enforcement staff of the SEC regarding a July 8, 2015 outage on the NYSE markets, during which trading was suspended for approximately 3.5 hours in all symbols. The investigation proceeded throughout 2016 and on December 29, 2016, NYSE received a Wells Notice stating that the staff made a preliminary determination to recommend that the SEC file an enforcement action in connection with how NYSE responded to the circumstances leading up to the suspension of trading. For this matter and other SEC investigations, we have recorded an aggregate of $14 million in expense accruals as of December 31, 2017. The specific results of the Wells Notice and these enforcement actions are unknown at this time.

We will continue to face the risk of significant intervention by regulatory authorities, including extensive examination and surveillance activity. Any such matters may result in material adverse consequences to our financial condition, operating results or

ability to conduct our business, including adverse judgments, settlements, fines, penalties, injunctions, restrictions on our business activities or other relief. Our involvement in any such matters, even if the matters are ultimately determined in our favor, could also cause significant harm to our reputation and divert management attention from the operation of our business. Further, any settlement, consent order or adverse judgment in connection with any formal or informal proceeding or investigation by government or regulatory agencies may result in additional litigation, investigations or proceedings as other litigants and government or regulatory agencies begin independent reviews of the same businesses or activities. Finally, the implementation of new legislation or regulations, or changes in or unfavorable interpretations of existing regulations by courts or regulatory bodies, could require us to incur significant compliance costs and impede our ability to remain competitive and grow our business.

We face intense competition.

We face intense competition in all aspects of our business and our competitors, both domestic and international, are numerous. We currently compete with:

- regulated, diversified futures exchanges globally that offer trading in a variety of asset classes similar to those offered by us, such as energy, agriculture, equity and equity index, credit, and interest rate derivatives markets and foreign exchange;
- exchanges offering listing and trading of cash equities, ETFs, closed-end funds and other structured products similar to those offered by us;
- market data and information vendors;
- interdealer brokers active in the global credit derivatives markets;
- existing and newly formed electronic trading platforms, service providers and other exchanges;
- other clearing houses; and
- consortiums of our customers, members or market participants that may pool their trading activity to establish new exchanges, trading platforms or clearing facilities.

Trends towards the globalization of capital markets have resulted in greater mobility of capital, greater international participation in markets and increased competition among markets in different geographical areas. Competition in the market for derivatives trading and clearing and in the market for cash equity listings, trading and execution have intensified as a result of consolidation, as the markets become more global in connection with the increase in electronic trading platforms and the desire by existing exchanges to diversify their product offerings. Finally, many of our competitors are our largest customers or are owned by our customers and may prioritize their internalization and ATS businesses ahead of their exchange-based market making business.

We also face pricing competition in many areas of our business. A decline in our fees due to competitive pressure, the inability to successfully launch new products or the loss of customers due to competition could lower our revenues, which would adversely affect our profitability. For example, Interactive Data's business has benefited from a high renewal rate in its subscription based business but we cannot assure you that this will continue. We also cannot assure you that we will be able to continue to expand our product offerings, or that we will be able to retain our current customers or attract new customers. If we are not able to compete successfully our business could be materially impacted, including our ability to remain as an operating entity.

In our listings business, the legal and regulatory environment in the U.S., and the market perceptions about that environment, may make it difficult for our U.S. equity exchanges to compete with non-U.S. equity exchanges for listings. For example, negative perceptions regarding compliance costs associated with adherence to corporate governance requirements and risks of litigation have and may continue to discourage listings on U.S. equity exchanges by both U.S. and foreign private issuers. Any failure by our exchanges to successfully compete for any reason could adversely impact our revenue derived from listing fees and the associated trading, execution and market data fees.

We may have difficulty maintaining our growth effectively.

We have achieved a tremendous amount of growth since becoming a public company in 2005. Our growth is highly dependent on customer demand for our core products and services, favorable economic conditions and our ability to invest in our personnel, facilities, infrastructure and financial and management systems and controls. Adverse economic conditions could reduce customer demand for our products and services, which may place a significant strain on our management and resources and could force us to defer existing or future planned opportunities. In addition, we may not be successful in executing on our strategies to support our growth organically or through acquisitions, other investments or strategic alliances.

Our systems and those of our third party service providers may be vulnerable to security risks, hacking and cyber-attacks, especially in light of our role in the global financial marketplace, which could result in wrongful use of our information or that of a third party, or which could make our participants reluctant to use our electronic platform.

The secure transmission of confidential information and the ability to reliably transact on our electronic platforms and provide financial data services are critical elements of our operations. Some of our products and services involve the storage and transmission of proprietary information and sensitive or confidential client data, including client portfolio information. If anyone gains improper access to our electronic platforms, networks or databases, they may be able to steal, publish, delete or modify our confidential information or that of a third party. Breaches of our cybersecurity measures or the accidental loss, inadvertent disclosure or unapproved dissemination of proprietary information or sensitive or confidential data about us, our clients or our customers, including the potential loss or disclosure of such information or data could expose us, our customers or the individuals affected to a risk of loss or misuse of this information, result in litigation, regulatory action and potential liability for us, damage our brand and reputation or otherwise harm our business. Our networks and those of our participants, third party service providers and external market infrastructures may be vulnerable to compromise, security technology failure, social engineering, denial of service attacks, or other security failures resulting in loss of data integrity, information disclosure, unavailability, or fraud. The financial services industry has been targeted for purposes of political protest, activism and fraud. Further, former employees of certain companies in the financial sector have misappropriated trade secrets or stolen source code in the past, and we could be a target for such illegal acts in the future. There also may be system or network disruptions if new or upgraded systems are defective or not tested and installed properly.

Although we have not been the victim of cyber-attacks or other cyber incidents that have had a material impact on our operations or financial condition, we have from time to time experienced cybersecurity events including distributed denial of service attacks, malware infections, phishing, web attacks and other information technology incidents that are typical for a financial services company of our size. For example, we experienced a distributed denial of service attack against our website in November 2016 that activated automated mitigation response and was reportable to regulatory authorities. While we operate an Information Security program that is designed to prevent, detect, track, and mitigate cyber incidents and that has detected and mitigated such incidents in the past, we cannot assure you that these measures will be sufficient to protect our business against attacks, losses or reduced trading volume in our markets as a result of any security breach, hacking or cyber-attack. Any such attacks could result in reputational damage, cause system failures or delays that could cause us to lose customers, cause us to experience lower current and future trading volumes or incur significant liabilities, or have a negative impact on our competitive position. In addition, given the increasing complexity and sophistication of the techniques used to obtain unauthorized access or disable or degrade systems, such intrusions may be difficult to detect for periods of time, we may not anticipate these acts or respond adequately or timely. Additionally, as threats continue to evolve and increase, and as the regulatory environment related to information security, data collection and use, and privacy becomes increasingly rigorous, including as a result of the European Commission's approval of GDPR, we may be required to devote significant additional resources to modify and enhance our security controls and to identify and remediate any security vulnerabilities, which could adversely impact our net income.

We may not be successful in offering new products or technologies or in identifying opportunities.

We intend to launch new products and continue to explore and pursue other opportunities to strengthen our business and grow our company. We may spend substantial time and money developing new product offerings or improving current product offerings. If these offerings are not successful, we may miss a potential market opportunity and not be able to recover the costs of such initiatives. Obtaining any required regulatory approval associated with these offerings may also result in delays or restrictions on our ability to fully benefit from these offerings. Further, we may enter into or increase our presence in markets that already possess established competitors who may enjoy the protection of high barriers to entry. Attracting customers in certain countries may also be subject to a number of risks, including currency exchange rate risk, difficulties in enforcing agreements or collecting receivables, longer payment cycles, compliance with the laws or regulations of these countries, and political and regulatory uncertainties.

In addition, in light of consolidation in the exchange, data services and clearing sectors and competition for opportunities, we may be unable to identify strategic opportunities or we may be unable to negotiate or finance any future acquisition successfully. Our competitors could merge, making it more difficult for us to find appropriate entities to acquire or merge with and making it more difficult to compete in our industry due to the increased resources of our merged competitors. Also, offering new products and pursuing acquisitions requires substantial time and attention of our management team, which could prevent them from successfully overseeing other initiatives that are necessary for our success.

We have made substantial progress toward developing and deploying new technology platforms to improve our equity exchange business and data services business. We may experience disruptions or encounter unexpected challenges in deploying these new systems. Further, the costs to complete the remaining work may exceed our current expectations. Any significant cost

increases or disruptions to product quality, sales effectiveness or client service or to our other business operations could have an adverse effect on our business, financial condition and operating results.

If we are unable to keep up with rapid changes in technology and client preferences, we may not be able to compete effectively.

To remain competitive, we must continue to enhance and improve the responsiveness, functionality, accessibility and reliability of our electronic platforms and our proprietary and acquired technology. The financial services industry is characterized by rapid technological change, change in use patterns, change in client preferences, frequent product and service introductions and the emergence of new industry standards and practices. These changes could render our existing proprietary technology uncompetitive or obsolete. We are in the process of implementing a new trading technology system at NYSE and if there are trading disruptions or if the new system has inadequate performance, we could suffer material losses, incur reputational damage or be subject to heightened regulatory scrutiny.

Further, we use some open-source software in our technology, most often as small components within a larger product or service, to augment algorithms, functionalities or libraries we create, and we may use more open-source software in the future. Open-source code is also contained in some third-party software we rely on. We could be subject to suits by parties claiming breach of the terms of the license for such open-source software. The terms of many open-source licenses are ambiguous and have not been interpreted by U.S. or other courts, and these licenses could be construed in a manner that imposes unanticipated conditions or restrictions on our ability to commercialize our products and services.

We cannot assure you that we will successfully implement new technologies or adapt our proprietary technology to our clients' requirements or emerging industry standards in a timely and cost-effective manner. Any failure to remain abreast of industry standards in technology and to be responsive to client preferences could cause our market share to decline and negatively impact our revenues.

Our business may be harmed by computer and communications systems failures and delays.

Our business depends on the integrity, reliability and security of our computer and communication systems. We support and maintain many of the systems that comprise our electronic platforms and our failure to monitor or maintain these systems, or to find replacements for defective components within a system in a timely and cost-effective manner when necessary, could have a material adverse effect on our ability to conduct our business. Our customers rely on us for the delivery of time-sensitive, up-to-date and high-quality financial market data, analytics, and related solutions. Our timely, reliable delivery of high-quality products and services is subject to an array of technical production processes that enable our delivery platforms to leverage an extensive range of content databases. Our redundant systems or disaster recovery plans may prove to be inadequate in the event of a systems failure or cybersecurity breach. Our systems, or those of our third party providers, may fail or be shut down or, due to capacity constraints, may operate slowly, causing one or more of the following:

- unanticipated disruption in service to our participants;
- slower response time and delays in our participants' trade execution and processing;
- failed settlement by participants to whom we provide trade confirmation or clearing services;
- incomplete or inaccurate accounting, recording or processing of trades;
- failure to complete the clearing house margin settlement process resulting in significant financial risk;
- distribution of inaccurate or untimely market data to participants who rely on this data in their trading activity; and
- financial loss.

We could experience system failures due to power or telecommunications failures, human error on our part or on the part of our vendors or participants, natural disasters, fire, sabotage, hardware or software malfunctions or defects, computer viruses, cyber-attacks, intentional acts of vandalism or terrorism and similar events. If any one or more of these situations were to arise, they could result in damage to our business reputation and participant dissatisfaction with our electronic platform, which could prompt participants to trade elsewhere or expose us to litigation or regulatory sanctions. As a consequence, our business, financial condition and operating results could suffer materially.

Our regulated business operations generally require that our trade execution and communications systems be able to handle anticipated present and future peak trading volume. Heavy use of computer systems during peak trading times or at times of unusual market volatility could cause those systems to operate slowly or even to fail for periods of time. However, we cannot

assure you that our estimates of future trading volume will be accurate or that our systems will always be able to accommodate actual trading volume without failure or degradation of performance.

Although many of our systems are designed to accommodate additional volume and products and services without redesign or replacement, we will need to continue to make significant investments in additional hardware and software and telecommunications infrastructure to accommodate the increases in volume of order and trading transaction traffic and to provide processing and clearing services to third parties. If we cannot increase the capacity and capabilities of our systems to accommodate an increasing volume of transactions and to execute our business strategy, our ability to maintain or expand our businesses would be adversely affected.

We currently have a substantial amount of outstanding indebtedness which could restrict our ability to engage in additional transactions or incur additional indebtedness.

As of December 31, 2017, we had $6.1 billion of outstanding debt. This level of indebtedness could have important consequences to our business, including making it more difficult to satisfy our debt obligations, increasing our vulnerability to general adverse economic and industry conditions, limiting our flexibility in planning for, or reacting to, changes in our business and the industry in which we operate and restricting us from pursuing certain business opportunities. As we use our available resources to reduce and refinance our consolidated debt, our flexibility in planning for, or reacting to, changes in our business and the industry in which we operate and our ability to pursue future business opportunities may be further restrained. In addition, the terms of our debt facilities contain affirmative and negative covenants, including a leverage ratio test and certain limitations on the incurrence of additional debt or the creation of liens and other matters. Further, a significant portion of our outstanding debt has been in commercial paper, which is subject to interest rate changes. Rising interest rates will result in an increase in our interest expense.

Our long-term debt is currently rated by Moody's Investor Services and Standard & Poor's. These ratings agencies regularly evaluate us and our credit ratings based on a number of quantitative and qualitative factors, including our financial strength and conditions affecting the financial services industry generally. Our credit ratings remain subject to change at any time, and it is possible that a ratings agency may take action to downgrade our credit ratings in the future. In particular, our inability to sustain reduced debt on a consolidated basis may result in a downgrade of our credit ratings. A significant downgrade of our credit ratings could impact customers' willingness to use our clearing houses, make parties less willing to do business with us, and could negatively impact our ability to access the capital markets and increase the cost of any future debt funding we may obtain.

Failure to evolve our benchmarks and indices in a manner that maintains the relevance of the benchmark or index, damage to our reputation resulting from our administration of LIBOR or other benchmarks and indices and the potential replacement of LIBOR could adversely affect our business.

We operate multiple global benchmark products and indices across our asset classes and a significant portion of our volume is based on these products. To ensure continued trading in our benchmark products and indices, we must be able to demonstrate that our products are not readily subject to manipulation and we must continue to evolve our products to maintain their relevance. Our subsidiary, IBA, is the administrator for various benchmarks, including LIBOR. IBA's administration of LIBOR is the result of the LIBOR scandal, which was a series of fraudulent actions taken by banks that were submitting false LIBOR rates to profit from trades, or to give the impression that the banks were more creditworthy than they were. Any failures or negative publicity resulting from our administration of LIBOR or other benchmarks could result in a loss of confidence in the administration of these benchmarks and could harm our business and our reputation.

In July 2017, the FCA announced the desire to phase out the use of LIBOR by the end of 2021. At this time, it is not possible to predict the effect of any such changes, any establishment of alternative references rates or any other reforms to LIBOR that may be enacted in the U.K. or elsewhere. The elimination of LIBOR or any other changes or reforms to the determination or supervision of LIBOR could have an adverse impact on our business, financial condition and operating results.

We may fail to complete or realize the anticipated cost savings, growth opportunities and synergies and other benefits anticipated from our recent acquisitions and future acquisitions, which could adversely affect the value of our common stock.

We have completed many acquisitions and plan to continue to pursue acquisitions and joint ventures. The success of our acquisitions will depend, in part, on our ability to integrate these businesses into our existing operations and realize anticipated cost savings, revenue synergies and growth opportunities. We generally set aggressive timelines for realizing savings, which assumes we successfully undertake a variety of actions (including, but not limited to, integrating technology, eliminating redundancies and effecting organizational restructurings) that are themselves subject to a variety of risks and may be subject to regulatory approvals

that we do not control. The process of integrating acquired companies is time consuming and could disrupt each company's ongoing businesses, produce unforeseen regulatory and operating difficulties (including inconsistencies in standards, controls, procedures and policies that adversely affect relationships with market participants, regulators and others), require substantial resources and expenditures, and divert the attention of management from the ongoing operation of the business.

There is a risk, however, that we may not integrate these acquired companies in a manner that permits our expected cost savings and revenue synergies to be fully realized in the time periods expected, or at all. In addition, a variety of factors, including but not limited to regulatory conditions, governmental competition approvals, currency fluctuations, and difficulty integrating technology platforms, may adversely affect our ability to complete our acquisitions or realize our anticipated cost savings and synergies. For example, the U.K. Competition and Markets Authority, or CMA, ordered a divestment of Trayport and such divestment was completed in December 2017.

We may also not realize anticipated growth opportunities and other benefits from strategic investments or strategic joint ventures or alliances that we have entered into or may enter into for a number of reasons, including regulatory or government approvals or changes, global market changes, contractual obligations, competing products and, in some instances, our lack of or limited control over the management of the business. Further, strategic initiatives that have historically been successful may not continue to be successful due to competitive threats, changing market conditions or the inability for the parties to extend the relationship into the future.

As a result of any future acquisition, we may issue additional shares of our common stock that dilute our stockholders' ownership interest, expend cash, incur debt, assume actual and contingent liabilities, inherit existing or pending litigation or create additional expenses related to amortizing intangible assets. Further, we cannot assure you that any such financing or equity investments will be available with terms that will be favorable to us, or available at all.

Fluctuations in foreign currency exchange rates may adversely affect our financial results.

Since we conduct operations in several different countries, including the U.S., U.K., EU and Canada, substantial portions of our revenues, expenses, assets and liabilities are denominated in U.S. dollars, pounds sterling, euros and Canadian dollars. Because our consolidated financial statements are presented in U.S. dollars, we must translate non-U.S. dollar denominated revenues, income and expenses, as well as assets and liabilities, into U.S. dollars at exchange rates in effect during or at the end of each reporting period. Therefore, increases or decreases in the value of the U.S. dollar against the other currencies may affect our net operating revenues, operating income and the value of balance sheet items denominated in foreign currencies.

External events such as Brexit, the negotiations regarding the terms of the U.K.'s exit from the EU, the outcome of the U.S. presidential election and the passage of U.S. taxation reform legislation each have caused, and may continue to cause, significant volatility in currency exchange rates, especially among the U.S. dollar, the British pound sterling and the euro. If global economic and market conditions, or economic conditions in the U.K., EU, the U.S. or other key markets remain uncertain or deteriorate further, the value of the pound sterling and euro and the global credit markets may further weaken. General financial instability in countries in the EU could have a contagion effect on the region and contribute to the general instability and uncertainty in the EU. Events that adversely affect our U.K. and EU clients and suppliers could in turn have a materially adverse effect on our international business results and our operating results.

For additional information on our foreign currency exchange rate risk, refer to "- Foreign Currency Exchange Rate Risk" in Item 7A "- Quantitative and Qualitative Disclosures About Market Risk, which is included in this Annual Report."

We may be required to recognize impairments of our goodwill, other intangible assets or investments.

The determination of the value of goodwill and other intangible assets requires the use of estimates and assumptions that affect our consolidated financial statements. As of December 31, 2017 , we had goodwill of $ 12.2 billion and net other intangible assets of $ 10.3 billion relating to our acquisitions and our purchase of trademarks and Internet domain names from various third parties. We recorded a $33 million impairment loss on our Creditex customer relationship intangible assets during 2016, primarily due to the sale of our Creditex U.S. voice broker operations and the discontinuance of our Creditex U.K. voice brokerage operations in 2016.

As of December 31, 2016 , we had $432 million in long-term investments relating to our equity security investment in Cetip, S.A., or Cetip. In 2017, we sold our equity security investment in Cetip and recognized a realized net investment gain of $167 million.

On October 24, 2017, we acquired a 4.7% stake in Euroclear for €275 million in cash ($327 million based on the euro/U.S. dollar exchange rate of 1.1903 as of October 24, 2017). During December 2017, we reached an agreement to buy an additional 5.1% stake in Euroclear for €243 million in cash ($292 million based on the euro/U.S. dollar exchange rate of 1.2003 as of December 31, 2017) and expect to receive necessary regulatory approval during the first quarter of 2018. Upon closing, we will own a 9.8% stake in Euroclear for a total investment of €518 million ($619 million based on the exchange rates above). Euroclear is a leading provider of post-trade services, including settlement, central securities depositories and related services for cross-border transactions across asset classes.

The Financial Accounting Standards Board, or FASB, has issued Accounting Standards Update, or ASU, No. 2016-01, which provides updated guidance for the recognition, measurement, presentation, and disclosure of certain financial assets and liabilities, including the requirement that equity investments (except those accounted for under the equity method of accounting or those that result in consolidation of the investee) are to be measured at fair value with changes in fair value recognized in net income. We were required to adopt ASU 2016-01 on January 1, 2018. Our cost method investments, including our investment in Euroclear and our 1.8% stake in Coinbase Global, Inc., among others, will be impacted by our adoption of ASU 2016-01 beginning in the first quarter of 2018. These companies do not currently have readily determinable fair market values as they are not publicly listed companies. Therefore, in accordance with ASU 2016-01, we will only adjust the fair value of these investments if and when there is an observable price change in an orderly transaction, and any change in the fair value will be recognized in net income.

We cannot assure you that we will not experience future events that may result in asset impairments. An impairment of the value of our existing goodwill, other intangible assets and other investments and assets could have a significant negative impact on our future operating results.

For additional information on our goodwill, other intangible assets and investments including the impairment and realized investment gain, refer to notes 3, 6 and 8 to our consolidated financial statements and "- Critical Accounting Policies - Goodwill and Other Identifiable Intangible Assets" in Item 7 "- Management's Discussion and Analysis of Financial Condition and Results of Operations," which are included in this Annual Report.

We may face liability for content contained in our data products and services.

We may be subject to claims for breach of contract, defamation, libel, copyright or trademark infringement, fraud or negligence, or based on other theories of liability, in each case relating to the data, articles, commentary, ratings, information or other content we distribute in our financial data services. If such data or other content or information that we distribute has errors, is delayed or has design defects, we could be subject to liability or our reputation could suffer. We could also be subject to claims based upon the content that is accessible from our corporate website or those websites that we own and operate through links to other websites. Use of our products and services as part of the investment process creates the risk that clients, or the parties whose assets are managed by our clients, may pursue claims against us for significant amounts. Any such claim, even if the outcome were ultimately favorable to us, could involve a significant commitment of our management, personnel, financial and other resources. Such claims and lawsuits could have a material adverse effect on our business, financial condition and operating results, and a negative impact on our reputation.

In addition, we license and redistribute data and content from various third parties and the terms of these licenses change frequently. Our third party data and content suppliers may audit our use of and our clients' use of and payment for data and content from time to time in the ordinary course of business, including audits currently underway. Such third party data and content suppliers may assert that we or our clients owe additional amounts under the terms of the applicable license agreements, that we inappropriately distributed the third party data or that we or our clients used the data or content in a manner that exceeded the scope of the applicable license agreement. We have and expect to continue to spend and allocate resources to develop and acquire the use of technology and other intellectual property rights to manage these risks and track third party data usage, but we cannot be assured that we will not incur liability. We may incur costs to investigate any allegations and may be required to pay damages to or make unexpected settlement payments to these data and content suppliers and these costs and payments could be material.

A failure to protect our intellectual property rights, or allegations that we have infringed the intellectual property rights of others, could adversely affect our business.

Our business is dependent on proprietary technology and other intellectual property that we own or license from third parties, including trademarks, service marks, trade names, trade secrets, copyrights and patents. We cannot assure you that the steps that we have taken or will take in the future will prevent misappropriation of our proprietary technology or intellectual property. Additionally, we may be unable to detect the misappropriation or unauthorized use of our proprietary technology and intellectual property. Our failure to adequately protect our proprietary technology and intellectual property could harm our reputation and

affect our ability to compete effectively. Further, we may need to resort to litigation to enforce our intellectual property rights, which may require significant financial and managerial resources. As a result, we may choose not to enforce our infringed intellectual property rights, depending on our strategic evaluation and judgment regarding the best use of our resources, the relative strength of our intellectual property portfolio and the recourse available to us.

In addition, our competitors, as well as other companies and individuals, may have obtained, and may be expected to obtain in the future, patent rights related to the types of products and services we offer or plan to offer. We cannot assure you that we are or will be aware of all patents that may pose a risk of infringement by our products and services. As a result, we may face allegations that we have infringed the intellectual property rights of third parties which may be costly for us to defend against. If one or more of our products or services is found to infringe patents held by others, we may be required to stop developing or marketing the products or services, obtain licenses to develop and market the products or services from the holders of the patents or redesign the products or services in such a way as to avoid infringing the patents. We also could be required to pay damages if we were found to infringe patents held by others, which could materially adversely affect our business, financial condition and operating results. We cannot assess the extent to which we may be required in the future to obtain licenses with respect to patents held by others, whether such licenses would be available or, if available, whether we would be able to obtain such licenses on commercially reasonable terms. If we were unable to obtain such licenses, we may not be able to redesign our products or services at a reasonable cost to avoid infringement, which could materially adversely affect our business, financial condition and operating results.

We rely on third party providers and other suppliers for a number of services that are important to our business. An interruption or cessation of an important service, data or content supplied by any third party, or the loss of an exclusive license, could have a material adverse effect on our business.

We depend on a number of suppliers, such as online service providers, hosting service and software providers, data processors, software and hardware vendors, banks, local and regional utility providers, and telecommunications companies, for elements of our trading, clearing, data services and other systems. We rely on access to certain data used in our business through licenses with third parties, and we rely on a large international telecommunications company for the provision of hosting services. We also depend on third-party suppliers for data and content, including data received from certain competitors, clients, various government and public record services and financial institutions, used in our products and services. Some of this data is exclusive to particular suppliers and may not be obtained from other suppliers. In addition, our data suppliers could enter into exclusive contracts with our competitors without our knowledge. The general trend toward industry consolidation may increase the risk that these services may not be available to us in the future. If these companies were to discontinue providing services to us for any reason or fail to provide the type of service agreed to, we would likely experience significant disruption to our business and may be subject to litigation by our clients or increased regulatory scrutiny or regulatory fines. Our third party data suppliers perform audits on us from time to time in the ordinary course of business to determine if data we license for redistribution has been properly accounted for in accordance with the terms of the applicable license agreement. As a result of these audits, we may incur additional expenses.

Many of our clients also rely on third parties to provide them with systems necessary to access our trading platform. If these companies were to discontinue providing services to our clients for any reason, we may experience a loss of revenue associated with our clients' inability to transact with our businesses. We hold exclusive licenses to list various index futures and contracts. In the future, litigation or regulatory action may limit the right of owners to grant exclusive licenses for index futures and contracts trading to a single exchange, and our competitors may succeed in providing economically similar products in a manner or jurisdiction not otherwise covered by our exclusive license. MiFID II introduced a harmonized approach to the licensing of services relating to commodity derivatives across Europe and the legislation requires open access to any benchmarks (a benchmark is an index or other measure used to determine the value of a financial instrument, for example, LIBOR or the S&P 500) used in Europe. If unlicensed trading of any index product where we hold an exclusive license were permitted, we could lose trading volume for these products which would adversely affect our revenues associated with the license and the related index products.

We are subject to significant litigation and liability risks.

Many aspects of our business, and the businesses of our participants, involve substantial risks of liability. These risks include, among others, potential liability from disputes over terms of a trade and the claim that a system failure or delay caused monetary loss to a participant or that an unauthorized trade occurred. For example, dissatisfied market participants that have traded on our electronic platform or those on whose behalf such participants have traded, may make claims regarding the quality of trade execution, or allege improperly confirmed or settled trades, abusive trading practices, security and confidentiality breaches, mismanagement or even fraud against us or our participants. In addition, because of the ease and speed with which sizable trades can be executed on our electronic platform, participants can lose substantial amounts by inadvertently entering trade orders or by

entering them inaccurately. A large number of significant error trades could result in participant dissatisfaction and a decline in participant willingness to trade in our electronic markets.

In addition, we are subject to on-going legal disputes that could result in the payment of fines, penalties or damages and could expose us to additional liability in the future. For example, on December 19, 2017, the U.S. Court of Appeals for the Second Circuit, or the Second Circuit, issued its decision in City of Providence v. BATS Global Markets et al. Two of our subsidiaries, New York Stock Exchange LLC and NYSE Arca, Inc., are defendants in this case. In vacating the district court's dismissal of this lawsuit and remanding for further proceedings, the Second Circuit concluded in part that the defendant securities exchanges are not immune from the claims in this case because absolute immunity is available to a self-regulatory organization, like the New York Stock Exchange LLC and NYSE Arca, Inc., only when they carry out regulatory functions. Although our exchanges will continue to have other defenses available to them in securities litigation cases (including in this matter), limitations on the doctrine of absolute immunity could result in an increased exposure to litigation, and to increased liability and/or other legal expenses.

Further, we could incur significant expenses defending claims, even those without merit, which could adversely affect our business, financial condition and operating results. An adverse resolution of any lawsuit or claim against us, including those we are involved with due to acquisition activity, may require us to pay substantial damages or impose restrictions on how we conduct business, either of which could adversely affect our business, financial condition and operating results. In addition, we may have to establish accruals for those matters in circumstances when a loss contingency is considered probable and the related amount is reasonably estimable. Any such accruals may be adjusted as circumstances change. See note 14 to our consolidated financial statements and related notes, which are included elsewhere in this Annual Report, for a summary of our legal proceedings and claims.

We may be at greater risk from terrorism than other companies.

Given our prominence in the global securities industry and the location of many of our properties and personnel in U.S. and European financial centers, including lower Manhattan, we may be more likely than other companies to be a direct target of, or an indirect casualty of, attacks by terrorists or terrorist organizations, or other extremist organizations that employ threatening or harassing means to achieve their social or political objectives.

It is impossible to predict the likelihood or impact of any terrorist attack on the securities industry generally or on our business. In the event of an attack or a threat of an attack, our security measures and contingency plans may be inadequate to prevent significant disruptions in our business, technology or access to the infrastructure necessary to maintain our business. Damage to our facilities due to terrorist attacks may be significantly in excess of insurance coverage, and we may not be able to insure against some damage at a reasonable price or at all. The threat of terrorist attacks may also negatively affect our ability to attract and retain employees. In addition, terrorist attacks may cause instability or decreased trading in the securities markets, including trading on exchanges. Any of these events could adversely affect our business, financial condition and operating results.

Damage to our reputation could damage our business.

Our business is highly competitive and our customers typically have options on where to conduct their business. Our management team and business operations benefit from being highly regarded in our industry. Maintaining our reputation is critical to attracting and retaining customers and investors and for maintaining our relationships with our regulators. Negative publicity regarding our company or actual, alleged or perceived issues regarding our products or services, operations, risk management, compliance with regulations or management team could give rise to reputational risk which could significantly harm our existing business and business prospects.

Owning and operating voice broker and electronic fixed income brokerage businesses exposes us to additional risk, and these businesses are largely dependent on general market conditions.

Our voice broker business provides brokerage services to clients in the form of agency transactions in commodity products. In agency transactions, customers pay transaction fees for trade execution services in which we connect buyers and sellers who settle their transactions directly. In connection with our fixed income business, our broker-dealers operate in both an agency and in a matched principal capacity (also known as "risk-less principal"). When trading as matched principal, we agree to buy instruments from one customer and sell them to another customer. The amount of the fee generally depends on the spread between the buy and sell price of the security that is brokered. With respect to matched principal transactions, a counterparty to a matched principal transaction may fail to fulfill its obligations, or we may face liability for an unmatched trade. We also face the risk of not being able to collect transaction or processing fees charged to customers for brokerage services and processing services we provide.

We are a holding company and depend on our subsidiaries for dividends, distributions and other payments.

We are a legal entity separate and distinct from our operating subsidiaries. Our principal source of cash flow, including cash flow to pay dividends to our stockholders and principal and interest on our outstanding debt, is dividends from our subsidiaries. There are statutory and regulatory limitations on the payment of dividends by certain of our subsidiaries to us. If our subsidiaries are unable to make dividend payments to us and sufficient cash or liquidity is not otherwise available, we may not be able to make dividend payments to our stockholders, principal and interest payments on our outstanding debt or repurchase shares of our common stock, which could have a material adverse effect on our business, financial condition and operating results.

Provisions of our organizational documents and Delaware law may delay or deter a change of control of ICE.

Our organizational documents contain provisions that may have the effect of discouraging, delaying or preventing a change of control of, or unsolicited acquisition proposals for, ICE. These provisions make a change of control less likely, which may be contrary to the desires of certain of our stockholders. Many of these provisions are required by relevant regulators in connection with our ownership and operation of U.S. and European equity exchanges. For example, our organizational documents include provisions that generally restrict any person (either alone or together with its related persons) from (i) voting or causing the voting of shares of stock representing more than 10% of our outstanding voting capital stock (including as a result of any agreement by any other persons not to vote shares of stock) or (ii) beneficially owning shares of stock representing more than 20% of the outstanding shares of any class or series of our capital stock. Further, our organizational documents generally limit the ability of stockholders to call special stockholders' meetings or act by written consent, and generally authorize our board of directors, without stockholder approval, to issue and fix the rights and preferences of one or more series of preferred stock. In addition, provisions of Delaware law may have a similar effect, such as provisions limiting the ability of certain interested stockholders, as defined under Delaware law, from causing the merger or acquisition of a corporation against the wishes of the board of directors.

ITEM 1 (B). *UNRESOLVED STAFF COMMENTS*

None.

ITEM 2. *PROPERTIES*

The net book value of our property was $ 1.2 billion as of December 31, 2017 . Our intellectual property is described under the heading in Item 1 "- Business -Technology." In addition to our intellectual property, our other primary assets include buildings, computer equipment, corporate aircraft, software, and internally developed software. We own an array of computers and related equipment.

Our headquarters and principal executive offices are located in Atlanta, Georgia and New York, New York. We currently occupy 270,000 square feet of office space in Atlanta in a building that we own that serves as our Atlanta headquarters. Our New York headquarters are located at 11 Wall Street, where we occupy 370,000 square feet of office space in a building we own. In total, we maintain 2.5 million square feet in offices primarily throughout the U.S., U.K., EU, Asia, Israel and Canada. Generally, our properties are not earmarked for use by a particular business segment. Our principal offices consist of the properties described below.

Location	Owned/Leased	Lease Expiration	Approximate Size
5660 New Northside Drive Atlanta, Georgia	Owned	N/A	270,000 sq. ft.
11 Wall Street New York, New York	Owned	N/A	370,000 sq. ft.
Basildon, U.K.	Owned	N/A	539,000 sq. ft.
Mahwah, New Jersey	Leased	2029	395,000 sq. ft.
60 Codman Hill Road Boxborough, Massachusetts	Leased	2018	100,000 sq. ft.
55 East 52 nd Street New York, New York	Leased	2028	93,000 sq. ft.
32 Crosby Drive Bedford, Massachusetts	Leased	2026	82,000 sq. ft.
Milton Gate London, U.K.	Leased	2024	70,000 sq. ft.
Fitzroy House London, U.K.	Leased	2025	65,000 sq. ft.
100 Church Street New York, New York	Leased	2024	65,000 sq. ft.
353 North Clark Street Chicago, Illinois	Leased	2027	57,000 sq. ft.

In addition to the above, we currently lease an aggregate of 367,000 square feet of administrative, sales and disaster preparedness facilities in various cities around the word. We believe that our facilities are adequate for our current operations and that we will be able to obtain additional space as and when it is needed.

ITEM 3. *LEGAL PROCEEDINGS*

We are subject to legal proceedings, claims and investigations that arise in the ordinary course of our business. We establish accruals for those matters in circumstances when a loss contingency is considered probable and the related amount is reasonably estimable. Any such accruals may be adjusted as circumstances change. Assessments of losses are inherently subjective and involve unpredictable factors. We do not believe that the resolution of these legal matters, including the matters described below, will have a material adverse effect on our consolidated financial condition, results of operations, or liquidity. It is possible, however, that future results of operations for any particular quarterly or annual period could be materially and adversely affected by any developments relating to the legal proceedings, claims and investigations. See note 14 to the consolidated financial statements in Part II, Item 8 of this Annual Report for a summary of our legal proceedings and claims.

ITEM 4. *MINE SAFETY DISCLOSURES*

Not applicable.

PART II

ITEM 5. *MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES*

Approximate Number of Holders of Common Stock

As of February 5, 2018, there were approximately 538 holders of record of our common stock.

Dividends

The declaration of dividends is subject to the discretion of our board of directors, and may be affected by various factors, including our future earnings, financial condition, capital requirements, share repurchase activity, levels of indebtedness, credit ratings and other considerations our board of directors deem relevant. Our board of directors has adopted a quarterly dividend declaration policy providing that the declaration of any dividends will be determined quarterly by the board or audit committee of the board of directors taking into account such factors as our evolving business model, prevailing business conditions and our financial results and capital requirements, without a predetermined annual net income payout ratio. During the year ended December 31, 2017 , we paid dividends of $0.80 per share of our common stock in the aggregate, including quarterly dividend for each quarter in 2017 of $0.20 per

share, for an aggregate payout of $476 million in 2017 . Refer to note 11 to our consolidated financial statements and related notes, which are included elsewhere in this Annual Report, for details on the amounts of our quarterly dividend payouts for the last three years. For the first quarter of 2018, we announced a $0.24 per share dividend, which is a 20% increase over the prior dividend, which is payable on March 29, 2018 to shareholders of record as of March 15, 2018.

As a holding company, we have no operations and rely upon dividends from our subsidiaries in order to provide liquidity necessary to service our debt obligations and make dividend payments to our shareholders. We and our subsidiaries are all required to comply with legal and regulatory restrictions, including restrictions contained in applicable general corporate laws, regarding the declaration and payment of dividends. These laws may limit our or our subsidiaries' ability to declare and pay dividends from time to time.

None of the indentures governing our and our subsidiaries' outstanding indebtedness contain specific covenants restricting our ability, or the ability of our subsidiaries, to pay dividends absent a default on such indebtedness. Our senior unsecured revolving credit facility in the aggregate amount of $3.4 billion , however, limits our ability to declare and make dividend payments, and other distributions of our cash, property or assets, if a default under the applicable facility has occurred and is continuing, or would occur as a result of our declaration and payment of any dividend or other distribution. Our senior unsecured revolving credit facility contains customary financial and operating covenants that place restrictions on our operations, including our maintenance of specified total leverage and interest coverage ratios, which could indirectly affect our ability to pay dividends. Refer to note 10 to our consolidated financial statements and related notes, which are included elsewhere in this Annual Report, for more information on our debt facilities.

Price Range of Common Stock

Our common stock trades on the New York Stock Exchange under the ticker symbol "ICE." On February 5, 2018, our common stock traded at a high of $74.47 per share and a low of $71.27 per share. The following table sets forth the quarterly high and low sale prices for the periods indicated for our common stock on the New York Stock Exchange.

	Common Stock Market Price	
	High	Low
Year Ended December 31, 2016		
First Quarter	$ 53.78	$ 45.79
Second Quarter	$ 54.39	$ 45.88
Third Quarter	$ 57.40	$ 50.18
Fourth Quarter	$ 59.86	$ 52.27
Year Ended December 31, 2017		
First Quarter	$ 61.98	$ 55.80
Second Quarter	$ 66.73	$ 57.91
Third Quarter	$ 68.88	$ 63.22
Fourth Quarter	$ 72.99	$ 64.91

Equity Compensation Plan Information

The following table provides information about our common stock that has been or may be issued under our equity compensation plans as of December 31, 2017 :

- Intercontinental Exchange, Inc. 2017 Omnibus Employee Incentive Plan
- Intercontinental Exchange, Inc. 2013 Omnibus Employee Incentive Plan
- Intercontinental Exchange, Inc. 2013 Omnibus Non-Employee Director Incentive Plan
- Intercontinental Exchange, Inc. 2009 Omnibus Incentive Plan
- Intercontinental Exchange, Inc. 2003 Restricted Stock Deferral Plan for Outside Directors
- Intercontinental Exchange, Inc. 2000 Stock Option Plan
- NYSE Omnibus Incentive Plan As Amended and Restated

The 2000 Stock Option Plan was retired on May 14, 2009 when our shareholders approved the 2009 Omnibus Incentive Plan. The 2009 Omnibus Incentive Plan was retired on May 17, 2013 when our shareholders approved the 2013 Omnibus Employee Incentive Plan. The 2013 Omnibus Employee Incentive Plan was retired on May 19, 2017 when our shareholders approved the 2017 Omnibus Employee Incentive Plan. No future grants will be made from the retired plans. No future grants will be made to legacy NYSE employees under the NYSE Omnibus Incentive Plan. All future grants to employees will be made under the Intercontinental Exchange, Inc. 2017 Omnibus Employee Incentive Plan and all future grants to directors will be made under the Intercontinental Exchange, Inc. 2013 Omnibus Non-Employee Director Incentive Plan.

Plan Category	Number of securities to be issued upon exercise of outstanding options and rights (a)		Weighted average exercise price of outstanding options (b)		Number of securities available for future issuance under equity compensation plans (excluding securities reflected in column (a)) (c)
Equity compensation plans approved by security holders [1]	10,650,500	(1)	$ 41.13	(1)	39,660,237
Equity compensation plans not approved by security holders [2]	88,930	(2)	—	(2)	—
TOTAL	10,739,430		$ 41.13		39,660,237

(1) The 2000 Stock Option Plan was approved by our stockholders in June 2000. The 2009 Omnibus Incentive Plan was approved by our stockholders on May 14, 2009. The 2013 Omnibus Employee Incentive Plan and the 2013 Omnibus Non-Employee Director Incentive Plan were approved by our stockholders in May 2013. The shareholders of NYSE approved the NYSE Amended and Restated Omnibus Incentive Plan on April 25, 2013. The 2017 Omnibus Employee Incentive Plan was approved by our shareholders on May 19, 2017. Of the 10,650,500 securities to be issued upon exercise of outstanding options and rights, 4,013,388 are options with a weighted average exercise price of $41.13 and the remaining 6,637,112 securities are restricted stock shares that do not have an exercise price. Of the 6,637,112 restricted stock shares to be issued, 106,105 shares were originally granted under the NYSE Amended and Restated Omnibus Incentive Plan.

(2) This category includes the 2003 Restricted Stock Deferral Plan for Outside Directors. All of the 88,930 securities to be issued are restricted stock shares that do not have an exercise price. For more information concerning these plans, see note 11 to our consolidated financial statements and related notes, which are included elsewhere in this Annual Report.

Stock Repurchases

The table below sets forth the information with respect to purchases made by or on behalf of ICE or any "affiliated purchaser" (as defined in Rule 10b-18(a)(3) under the Exchange Act) of our common stock during the three months ended December 31, 2017.

Period (2017)	Total number of shares purchased	Average price paid per share	Total number of shares purchased as part of publicly announced plans or programs(1)	Approximate dollar value of shares that may yet be purchased under the plans or programs (in millions)(1)
October 1 - October 31	1,227,656	$68.01	13,599,618	$158
November 1 - November 30	1,192,278	$67.39	14,791,896	$78
December 1 - December 31	1,077,640	$70.75	15,869,536	$1
Total	3,497,574	$68.62	15,869,536	$1

(1) In September 2017, our board of directors approved an aggregate of $1.2 billion for future repurchases of our common stock with no fixed expiration date that became effective on January 1, 2018. Refer to note 11 to our consolidated financial statements and related notes, which are included elsewhere in this Annual Report, for additional details on our stock repurchase plans.

ITEM 6. *SELECTED FINANCIAL DATA*

The following tables present our selected consolidated financial data as of and for the dates and periods indicated. We derived the selected consolidated financial data set forth below for the years ended December 31, 2017 , 2016 and 2015 and as of December 31, 2017 and 2016 from our audited consolidated financial statements, which are included elsewhere in this Annual Report. We derived the selected consolidated financial data set forth below for the years ended December 31, 2014 and 2013 and as of December 31, 2015, 2014 and 2013 from our audited consolidated financial statements, which are not included in this Annual Report. The selected consolidated financial data presented below is not indicative of our future results for any period. The selected consolidated financial data set forth below should be read in conjunction with our consolidated financial statements and related notes and Item 7, "- Management's Discussion and Analysis of Financial Condition and Results of Operations" included elsewhere in this Annual Report.

	Year Ended December 31,				
	2017	2016	2015	2014	2013
	(In millions, except for per share data)				
Consolidated Statement of Income Data [1]					
Revenues:					
Transaction and clearing, net [2]	$ 3,131	$ 3,384	$ 3,228	$ 3,144	$ 1,393
Data services	2,084	1,978	871	691	246
Listings	417	419	405	367	33
Other revenues	202	177	178	150	58
Total revenues	5,834	5,958	4,682	4,352	1,730
Transaction-based expenses [2]	1,205	1,459	1,344	1,260	132
Total revenues, less transaction-based expenses	4,629	4,499	3,338	3,092	1,598
Operating expenses:					
Compensation and benefits	937	945	611	592	302
Professional services	121	137	139	181	54
Acquisition-related transaction and integration costs [3]	36	80	88	129	143
Technology and communication	397	374	203	188	63
Rent and occupancy	69	70	57	78	39
Selling, general and administrative	155	116	116	143	51
Depreciation and amortization	535	610	374	333	156
Total operating expenses	2,250	2,332	1,588	1,644	808
Operating income	2,379	2,167	1,750	1,448	790
Other income (expense), net [4]	138	(138)	(97)	(41)	(286)
Income from continuing operations before income tax expense (benefit)	2,517	2,029	1,653	1,407	504
Income tax expense (benefit) [5]	(25)	580	358	402	184
Income from continuing operations	2,542	1,449	1,295	1,005	320
Income (loss) from discontinued operations, net of tax [6]	—	—	—	11	(50)
Net income	$ 2,542	$ 1,449	$ 1,295	$ 1,016	$ 270
Net income attributable to non-controlling interest	(28)	(27)	(21)	(35)	(16)
Net income attributable to ICE [7]	$ 2,514	$ 1,422	$ 1,274	$ 981	$ 254
Basic earnings (loss) per share attributable to ICE common shareholders:					
Continuing operations [7]	$ 4.27	$ 2.39	$ 2.29	$ 1.70	$ 0.78
Discontinued operations [6]	—	—	—	0.02	(0.13)
Basic earnings per share	$ 4.27	$ 2.39	$ 2.29	$ 1.72	$ 0.65
Basic weighted average common shares outstanding [8]	589	595	556	570	392
Diluted earnings (loss) per share attributable to ICE common shareholders:					
Continuing operations [7]	$ 4.23	$ 2.37	$ 2.28	$ 1.69	$ 0.77
Discontinued operations [6]	—	—	—	0.02	(0.13)
Diluted earnings per share	$ 4.23	$ 2.37	$ 2.28	$ 1.71	$ 0.64
Diluted weighted average common shares outstanding [8]	594	599	559	573	396
Dividend per share	$ 0.80	$ 0.68	$ 0.58	$ 0.52	$ 0.13

(1) We acquired several companies during the periods presented and have included the financial results of these companies in our consolidated financial statements effective from the respective acquisition dates. Refer to note 3 to our consolidated financial statements and related notes, which are included elsewhere in this Annual Report, for more information on these acquisitions.

(2) Our transaction and clearing fees are presented net of rebates paid to our customers. We also report transaction-based expenses relating to Section 31 fees and payments made for routing services and to certain U.S. equities liquidity providers. For a discussion of these rebates, see Item 7 "- Management's Discussion and Analysis of Financial Condition and Results of Operations - Segment Reporting - Trading and Clearing Segment" included elsewhere in this Annual Report.

(3) Acquisition-related transaction and integration costs relate to acquisitions and other strategic opportunities. The acquisition-related transaction costs include fees for investment banking advisors, lawyers, accountants, tax advisors and public relations firms, deal-related bonuses to certain of our employees, as well as costs associated with credit facilities and other external costs directly related to the transactions. We also incurred integration costs during the years ended December 31, 2017, 2016 and 2015 relating to our Interactive Data acquisition and during the years ended December 31, 2016, 2015, 2014 and 2013 relating to our NYSE acquisition, primarily related to employee termination costs, lease terminations costs, costs incurred relating to the IPO of Euronext, transaction-related bonuses and professional services costs incurred relating to the integrations.

(4) Other income (expense), net during the year ended December 31, 2017 includes a $167 million realized net investment gain in connection with our sale of Cetip and a $110 million net gain on our divestiture of Trayport, and other income (expense), net during the year ended December 31, 2013 includes a $190 million impairment loss on our Cetip investment and a $51 million expense relating to the early payoff of outstanding debt. Refer to notes 3 and 6 to our consolidated financial statements and related notes, which are included elsewhere in this Annual Report, for more information on the 2017 gains relating to the sales of Cetip and Trayport.

(5) The income tax benefit or lower income tax expense for the years ended December 31, 2017 and 2015 are primarily due to the deferred tax benefit associated with future U.S. income tax rate reductions of $764 million for the year ended December 31, 2017 and the deferred tax benefit associated with future U.K. income tax rate reductions along with certain favorable settlements with various taxing authorities of $75 million for the year ended December 31, 2015. See Item 7 "- Management's Discussion and Analysis of Financial Condition and Results of Operations - Consolidated Income Tax Provision" included elsewhere in this Annual Report for more information on these items.

(6) During the year ended December 31, 2014, we sold 100% of our wholly-owned subsidiary, Euronext, in connection with Euronext's IPO, and we sold our entire interest in three companies that comprised the former NYSE Technologies (NYFIX, Metabit and Wombat). We treated the sale of these entities as discontinued operations for all periods presented from their acquisition on November 13, 2013 to their dispositions.

(7) Our results include certain items that are not reflective of our cash operations and core business performance. Excluding these items, net of taxes, net income attributable to ICE for the year ended December 31, 2017 would have been $1.8 billion ; and, basic earnings per share and diluted earnings per share attributable to ICE common shareholders would have been $2.97 and $2.95 , respectively. See Item 7 "- Management's Discussion and Analysis of Financial Condition and Results of Operations - Non-GAAP Financial Measures" included elsewhere in this Annual Report for more information on these items and the Non-GAAP results for the other years.

(8) The weighted average common shares outstanding increased in 2016 primarily due to the stock issued for the Interactive Data and Trayport acquisitions and increased in 2014 primarily due to stock issued for the NYSE acquisition. We issued 211.9 million shares of our common stock to NYSE stockholders, 32.3 million shares of our common stock to Interactive Data stockholders and 12.6 million shares of our common stock to Trayport stockholders, weighted to show these additional shares outstanding for all periods after the respective acquisition dates.

	As of December 31,				
	2017	2016	2015	2014	2013
	(In millions)				
Consolidated Balance Sheet Data					
Cash and cash equivalents	$ 535	$ 407	$ 627	$ 652	$ 961
Margin deposits, guaranty funds and delivery contracts receivable [2]	51,222	55,150	51,169	47,458	42,216
Total current assets	53,562	57,133	53,313	50,232	44,269
Goodwill and other intangible assets, net [1]	22,485	22,711	22,837	16,315	18,512
Total assets	78,264	82,003	77,987	68,254	64,422
Margin deposits, guaranty funds and delivery contracts payable [2]	51,222	55,150	51,169	47,458	42,216
Total current liabilities	54,171	58,617	54,743	50,436	44,321
Short-term and long-term debt [1]	6,100	6,364	7,308	4,277	5,058
Equity [1]	16,952	15,754	14,840	12,392	12,381

(1) The increases in our equity, goodwill and other intangible assets, and debt as of December 31, 2015 primarily relates to our acquisition of Interactive Data. Refer to notes 3, 8 and 10 to our consolidated financial statements and related notes, which are included elsewhere in this Annual Report, for more information on these items.

(2) Clearing members of our clearing houses are required to deposit original margin and variation margin and for our clearing houses other than NGX, to make deposits to a guaranty fund. The cash deposits made to these margin accounts and to the guaranty fund are recorded in the consolidated balance sheet as current assets with corresponding current liabilities to the clearing members that deposited them. We also account for the physical delivery of our energy contracts for NGX following its acquisition in December 2017. Refer to note 13 to our consolidated financial statements and related notes, which are included elsewhere in this Annual Report, for more information on these items.

ITEM 7.*MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS*

The following discussion contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those anticipated in these forward-looking statements for many reasons. See the factors set forth under the heading " Forward Looking Statements" at the beginning of Part 1 of this Annual Report and in Item 1(A) under the heading "Risk Factors." The following discussion is qualified in its entirety by, and should be read in conjunction with, the more detailed information contained in Item 6 "Selected Financial Data" and our consolidated financial statements and related notes included elsewhere in this Annual Report.

Overview

We are a leading global operator of regulated exchanges, clearing houses and listings venues, and a provider of data services for commodity, fixed income and equity markets. We operate regulated marketplaces for listing, trading and clearing of a broad array of derivatives and securities contracts across major asset classes, including energy and agricultural commodities, interest rates, equities, equity derivatives, ETFs, credit derivatives, bonds and currencies. We also offer end-to-end data services and solutions to support the trading, investment, risk management and connectivity needs of customers around the world across all major asset classes.

Our exchanges include derivative exchanges in the U.S., U.K., EU, Canada and Singapore, and cash equities, equity options and bond exchanges in the U.S. We also operate OTC markets for physical energy and CDS trade execution. To serve global derivatives markets, we operate central counterparty clearing houses in the U.S., U.K., EU, Canada and Singapore. We offer a range of data services for global financial and commodity markets, including pricing and reference data, exchange data, analytics, feeds, desktops and connectivity solutions. Through our markets, clearing houses, listings and market data services, we provide end-to-end solutions for our customers through liquid markets, benchmark products, access to capital markets, and related services to support their ability to manage risk and raise capital. Our business is currently conducted as two reportable business segments, our Trading and Clearing segment and our Data and Listings segment, and the majority of our identifiable assets are located in the U.S. and U.K.

Recent Developments

U.S. Tax Cuts and Jobs Act

On December 22, 2017, the Tax Cuts and Jobs Act, or TCJA, was signed into law. The TCJA reduced the U.S. corporate income tax rate from 35% to 21% effective January 1, 2018. We are required to revalue our U.S. deferred tax assets and liabilities at the new federal corporate income tax rate as of the date of enactment of the TCJA and to include the rate change effect in the tax provision for the period ended December 31, 2017. As a result, we recognized a $764 million deferred tax benefit based on a reasonable estimate of the deferred tax assets and liabilities as of December 22, 2017. This significantly reduced the effective tax rate for the period ended December 31, 2017 in comparison to the effective tax rates for the last two comparable periods. As part of U.S. international tax reform, the TCJA imposes a transition tax on certain accumulated foreign earnings aggregated across all non-U.S. subsidiaries, net of foreign deficits. As we are in an aggregate net foreign deficit position for U.S. tax purposes, we are not liable for the transition tax. See "- Consolidated Income Tax Provision" below.

Divestiture of Trayport and the Acquisitions of NGX and Shorcan Energy

On December 11, 2015, we acquired 100% of Trayport in a stock transaction. The total purchase price was $620 million , comprised of 12.6 million shares of our common stock. Trayport is a software company that licenses its technology to serve exchanges, OTC brokers and traders to facilitate electronic and hybrid trade execution primarily in the energy markets.

The CMA undertook a review of our acquisition of Trayport under the merger control laws of the U.K. In October 2016, the CMA issued its findings and ordered a divestment of Trayport to remedy what the CMA determined to be a substantial lessening of competition. In November 2016, we filed an appeal with the U.K. Competition Appeal Tribunal, or the CAT, to challenge the CMA's decision. In March 2017, the CAT upheld the CMA decision that we should divest Trayport. Following the CAT's judgment, we asked for leave to appeal the CAT's decision at the U.K. Court of Appeals. In May 2017, the U.K. Court of Appeals denied our request for leave to appeal and we were obligated to sell Trayport by January 2018.

On December 14, 2017, we sold Trayport to TMX Group for £550 million ($733 million based on the pound sterling/U.S. dollar exchange rate of 1.3331 as of December 14, 2017). We recognized a net gain of $110 million on the divestiture of Trayport, which was recorded as other income within our Data and Listings segment in the consolidated statements of income for the year ended December 31, 2017 . The net gain is equal to the $733 million in gross proceeds received less the adjusted carrying value of Trayport's net assets of $607 million (which is equal to the $531 million carrying value of Trayport plus $76 million in accumulated other comprehensive loss from foreign currency translation) and less $16 million in costs to sell Trayport.

The gross proceeds included a combination of £350 million ($466 million) in cash and £200 million ($267 million) in value relating to our acquisitions of NGX and Shorcan Energy, both wholly-owned subsidiaries of TMX Group. Trayport was included in our Data and Listings segment and NGX and Shorcan Energy are included in our Trading and Clearing segment. NGX, headquartered in Calgary, provides electronic execution, central counterparty clearing and data services to the North American natural gas, electricity and oil markets. Shorcan Energy offers brokerage services for the North American crude oil markets.

The functional currency of Trayport was the pound sterling, as this was the currency in which Trayport operated. The $620 million in Trayport net assets were recorded on our December 11, 2015 opening balance sheet at a pound sterling/U.S. dollar exchange rate of 1.5218 (£407 million). Because our consolidated financial statements are presented in U.S. dollars, we translated the Trayport net assets into U.S. dollars at the exchange rates in effect at the end of each reporting period. Therefore, increases or decreases in the value of the U.S. dollar against the pound sterling affected the value of the Trayport balance sheet, with gains or losses included in the cumulative translation adjustment account, a component of equity. As a result of the decrease in the pound sterling/U.S. dollar exchange rate to 1.3331 as of December 14, 2017, the portion of our equity attributable to the Trayport net assets in accumulated other comprehensive loss from foreign currency translation was $76 million . In connection with the divestiture on December 14, 2017, the $76 million in the Trayport foreign currency translation loss was reclassified out of accumulated other comprehensive loss and recognized as part of the net gain on the divestiture as discussed above.

As of June 30, 2017, we classified Trayport as held for sale and ceased depreciation and amortization of the property and equipment and other intangible assets. Subsequent to its divestiture on December 14, 2017, there are no longer any Trayport assets and liabilities classified as held for sale.

Acquisition of BondPoint

On January 2, 2018, we acquired 100% of BondPoint from Virtu Financial, Inc. for $400 million in cash. BondPoint is a leading provider of electronic fixed income trading solutions for the buy-side and sell-side offering access to centralized liquidity and automated trade execution services through its ATS and provides trading services to more than 500 financial services firms.

Investment in Euroclear

On October 24, 2017, we acquired a 4.7% stake in Euroclear for €275 million in cash ($327 million based on the euro/U.S. dollar exchange rate of 1.1903 as of October 24, 2017). During December 2017, we reached an agreement to buy an additional 5.1% stake in Euroclear for €243 million in cash ($292 million based on the euro/U.S. dollar exchange rate of 1.2003 as of December 31, 2017) and expect to receive necessary regulatory approval during the first quarter of 2018. Upon closing, we will own a 9.8% stake in Euroclear for a total investment of €518 million ($619 million based on the exchange rates above). Euroclear is a leading provider of post-trade services, including settlement, central securities depositories and related services for cross-border transactions across asset classes.

Acquisition of Global Research Division ' s Index Business from BofAML

On October 20, 2017, we acquired BofAML's Global Research division's index business. BofAML indices are the second largest group of fixed income indices as measured by AUM globally. The AUM benchmarked against our combined fixed income indices is nearly $1 trillion , and the indices have been re-branded as the ICE BofAML indices.

Purchase of Minority Interests

During June 2017, we purchased both N.V. Nederlandse Gasunie's, or Gasunie, 21% minority ownership interest in ICE Endex and ABN AMRO Clearing Bank N.V.'s, or ABN AMRO Clearing, 25% minority ownership interest in ICE Clear Netherlands. Subsequent to these acquisitions, we own 100% of ICE Endex and ICE Clear Netherlands and will no longer include any non-controlling interest amounts for ICE Endex and ICE Clear Netherlands in our consolidated financial statements. During the year ended December 31, 2017, we purchased 12.6% of the net profit sharing interest in our CDS clearing subsidiaries from several non-ICE limited partners and the remaining non-ICE limited partners hold a 29.9% net profit sharing interest in our CDS clearing subsidiaries as of December 31, 2017. See "- Consolidated Non-Operating Income (Expense)" below.

Divestiture of NYSE Governance Services

On June 1, 2017, we sold NYSE Governance Services to Marlin Heritage, L.P. NYSE Governance Services provides governance and compliance analytics and education solutions for organizations and their boards of directors through dynamic learning solutions. We recognized a net loss of $6 million on the divestiture of NYSE Governance Services, which was recorded as amortization expense within our Data and Listings segment in the accompanying consolidated statements of income for the year ended December 31, 2017 .

Acquisition of TMX Atrium

On May 1, 2017, we acquired 100% of TMX Atrium, a global extranet and wireless services business, from TMX Group. TMX Atrium provides low-latency access to markets and market data across 12 countries, more than 30 major trading venues, and ultra-low latency wireless connectivity to access markets and market data in the Toronto, New Jersey and Chicago metro areas. The wireless assets consist of microwave and millimeter networks that transport market data and provide private bandwidth. TMX Atrium is now part of ICE Data Services and is being integrated with our connectivity services.

Divestiture of Interactive Data Managed Solutions

On March 31, 2017, we sold Interactive Data Managed Solutions, or IDMS, a unit of Interactive Data, to FactSet. IDMS is a managed solutions and portal provider for the global wealth management industry. There was no gain or loss recognized on the sale of IDMS.

Cetip Investment Gain

Until March 29, 2017, we held a 12% ownership interest in Cetip, which we classified as an available-for-sale long-term investment. On March 29, 2017, Cetip and BM&FBOVESPA S.A. finalized a merger agreement. BM&FBOVESPA S.A., which changed its name to B3 S.A. - Brasil, Bolsa, Balcao, or B3, following the merger with Cetip, is a stock exchange and operator of registration, clearing, custodial and settlement services for equities, financial securities, indices, rates, commodities and currencies and is located in São Paulo, Brazil. The merger valued our Cetip investment at $500 million. We received the proceeds in cash and in B3 common stock.

The cash component was valued at $319 million, which was subject to Brazilian capital gains tax of $28 million that was remitted to the Brazilian tax authorities in March 2017. We received net cash proceeds in April 2017 of $286 million, which is net of a foreign exchange loss of $6 million that was incurred in April 2017. We received 29,623,756 B3 common shares valued at their quoted market price of $181 million. In April 2017, we sold the B3 common shares for net proceeds of $152 million, which is net of a capital gain tax of $26 million that was remitted to the Brazilian tax authorities and further transaction expenses of $3 million that were incurred in April 2017. We used the $438 million in net cash and stock proceeds received from the merger and sale of B3 shares to pay down amounts outstanding under our U.S. dollar commercial paper program, or the Commercial Paper Program, and for share repurchases.

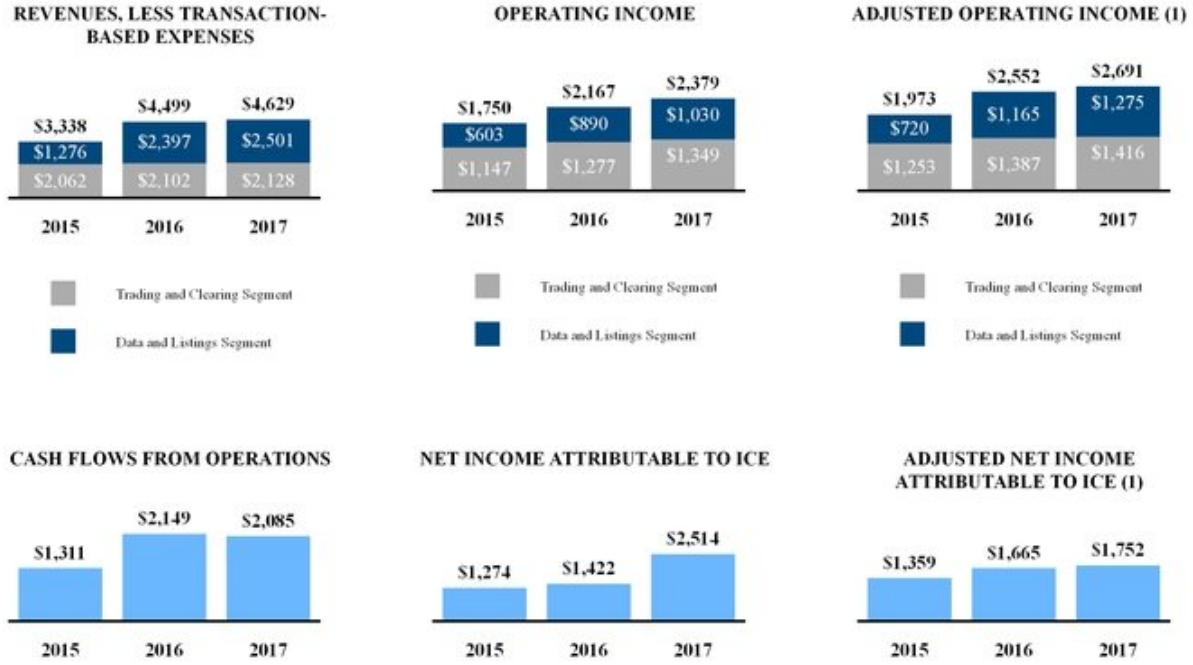
The $500 million fair value of our investment in Cetip included an accumulated unrealized gain of $176 million, based on the $324 million cost basis. In connection with the sale of our equity investment in Cetip, the $176 million accumulated unrealized gain was reclassified out of accumulated other comprehensive income and was recognized in other income as a realized investment gain in the consolidated statement of income for the year ended December 31, 2017. Refer to note 6 to our consolidated financial statements and related notes, which are included elsewhere in this Annual Report, for more information on the Cetip investment gain.

Acquisition of National Stock Exchange

On January 31, 2017, we acquired 100% of National Stock Exchange, Inc., now named NYSE National. The acquisition gives the NYSE Group a fourth U.S. exchange license. NYSE National is distinct from NYSE Group’s three listings exchanges because NYSE National will only be a trading venue and will not be a listings market. NYSE Group’s three listings exchanges, NYSE, NYSE American and NYSE Arca, have unique market models designed for corporate and ETF issuers. After closing the transaction, NYSE National ceased operations on February 1, 2017. Subject to regulatory approvals, NYSE Group anticipates re-launching operations on NYSE National, Inc. in the second quarter of 2018.

Consolidated Financial Highlights

The following charts and table summarize our results and significant changes in our consolidated financial performance for the periods presented (dollars in millions, except per share amounts):



	Year Ended December 31,			Year Ended December 31,		
	2017	2016	Change	2016	2015	Change
Revenues, less transaction-based expenses	$ 4,629	$ 4,499	3 %	$ 4,499	$ 3,338	35%
Operating expenses	$ 2,250	$ 2,332	(3)%	$ 2,332	$ 1,588	47%
Adjusted operating expenses (1)	$ 1,938	$ 1,947	— %	$ 1,947	$ 1,365	43%
Operating income	$ 2,379	$ 2,167	10 %	$ 2,167	$ 1,750	24%
Adjusted operating income (1)	$ 2,691	$ 2,552	5 %	$ 2,552	$ 1,973	29%
Operating margin	51 %	48%	3 pts	48%	52%	(4 pts)
Adjusted operating margin (1)	58 %	57%	1 pt	57%	59%	(2 pts)
Other income (expense), net	$ 138	(138)	n/a	(138)	(97)	42%
Income tax expense (benefit)	$ (25)	$ 580	n/a	$ 580	$ 358	62%
Effective tax rate	(1)%	29%	(30 pts)	29%	22%	7 pts
Net income attributable to ICE	$ 2,514	$ 1,422	77 %	$ 1,422	$ 1,274	12%
Adjusted net income attributable to ICE (1)	$ 1,752	$ 1,665	5 %	$ 1,665	1,359	23%
Diluted earnings per share attributable to ICE common shareholders	$ 4.23	$ 2.37	78 %	$ 2.37	$ 2.28	4%
Adjusted diluted earnings per share attributable to ICE common shareholders (1)	$ 2.95	$ 2.78	6 %	$ 2.78	$ 2.43	14%
Cash flows from operating activities	$ 2,085	$ 2,149	(3)%	$ 2,149	$ 1,311	64%

(1) The adjusted numbers in the charts and table above are calculated by excluding items that are not reflective of our cash operations and core business performance, and for adjusted net income attributable to ICE and adjusted diluted earnings per share attributable to ICE common shareholders, are presented net of taxes. As a result, these adjusted numbers are not calculated in accordance with GAAP. See "- Non-GAAP Financial Measures" below.

- Revenues, less transaction-based expenses, increased $130 million for the year ended December 31, 2017 , from the comparable period in 2016 . See "- Trading and Clearing Segment" and "Data and Listings Segment" below for a discussion of the significant changes in our revenues. The increase in revenues includes $22 million in unfavorable foreign exchange effects

arising from the strengthening U.S. dollar for the year ended December 31, 2017 , from the comparable period in 2016 . See Item 7(A) "- Quantitative and Qualitative Disclosures About Market Risk - Foreign Currency Exchange Rate Risk" below for additional information on the impact of currency fluctuations.

- Revenues, less transaction-based expenses, increased $1.2 billion for the year ended December 31, 2016, from the comparable period in 2015, primarily due to our acquisitions of Interactive Data, Trayport, Securities Evaluations and Credit Market Analysis, and to a lesser extent, revenue increases in our exchange-related data services and Brent crude and agricultural transaction and clearing. We recognized $1.1 billion in Interactive Data, Trayport, Securities Evaluations and Credit Market Analysis data services revenues for the year ended December 31, 2016, compared to $50 million in Interactive Data and Trayport data services revenues for the year ended December 31, 2015, subsequent to their acquisitions in December 2015. The increase in revenues includes $59 million in unfavorable foreign exchange effects arising from the strengthening U.S. dollar for the year ended December 31, 2016, from the comparable period in 2015.

- Operating expenses decreased $82 million for the year ended December 31, 2017 , from the comparable period in 2016 . During the year ended December 31, 2016 , we recorded a $33 million Creditex customer relationship intangible asset impairment. See "- Consolidated Operating Expenses" below for a discussion of the other significant changes in our operating expenses. The decrease in operating expenses includes $14 million in favorable foreign exchange effects arising from the strengthening U.S. dollar for the year ended December 31, 2017 , from the comparable period in 2016 .

- Operating expenses increased $744 million for the year ended December 31, 2016, from the comparable period in 2015 , primarily due to increased operating expenses relating to Interactive Data, Trayport, Securities Evaluations and Credit Market Analysis and $33 million relating to the Creditex customer relationship intangible asset impairment recorded in September 2016. Excluding acquisition-related transaction and integration costs, we recognized $812 million in Interactive Data, Trayport, Securities Evaluations and Credit Market Analysis operating expenses for the year ended December 31, 2016, compared to $39 million in Interactive Data and Trayport operating expenses for the year ended December 31, 2015, subsequent to their acquisitions in December 2015. These increases were partially offset by decreases in professional services expenses and selling, general and administrative expenses for the year ended December 31, 2016, from the comparable period in 2015. Also partially offsetting the operating expense increases were favorable foreign exchange effects of $40 million arising from the strengthening U.S. dollar for the year ended December 31, 2016, from the comparable period in 2015 .

- In connection with Cetip's merger with BM&FBOVESPA S.A., now B3, we recognized a $167 million net realized investment gain in other income, net for the year ended December 31, 2017 . We also recognized a net gain of $110 million in connection with our divestiture of Trayport in other income (expense), net for the year ended December 31, 2017 . See "- Recent Developments" above.

- The lower effective tax rates and income tax expense (benefit) for the years ended December 31, 2017 and 2015 are primarily due to the deferred tax benefit associated with future U.S. income tax rate reductions of $764 million for the year ended December 31, 2017 and the deferred tax benefit associated with future U.K. income tax rate reductions along with certain favorable settlements with various taxing authorities of $75 million for the year ended December 31, 2015. See "- Consolidated Income Tax Provision" below.

Business Environment and Market Trends

Our business environment has been characterized by industry consolidation and increasing competition among global markets for trading, clearing and listings; the globalization of exchanges, customers and competitors; market participants' rising demand for speed, data capacity and connectivity, which requires ongoing investment in technology; evolving and disparate regulation across multiple jurisdictions; and increasing focus on capital and cost efficiencies.

Price volatility increases the need to hedge risk and creates demand among market participants for the exchange of risk through trading and clearing. Market liquidity is one of the primary market attributes for attracting and maintaining customers and is an important indicator of a market's strength. In addition, the ability to evolve existing products to serve emerging needs, develop new products and respond to competitive dynamics in pricing, exclusivity and consolidation is important to our business. Changes in these and other factors could cause our revenues to fluctuate from period to period and these fluctuations may affect the reliability of period to period comparisons of our revenues and operating results. For additional information regarding the factors that affect our results of operations, see Item 1(A) "- Risk Factors" included elsewhere in this Annual Report.

The implementation of new laws or regulations or the uncertainty around potential changes may impact participation in our markets, or the demand for our clearing and data services either favorably or unfavorably. Many of the recent changes with regard to global financial reform have emphasized the importance of transparent markets, centralized clearing and access to data, all of which are important aspects of our product offering. However, some of the proposed rules have yet to be implemented and some rules that have already been partially implemented on January 3, 2018 are being reconsidered. In addition, some of the global regulations have

not been fully harmonized and several of the MiFID II regulations are inconsistent with U.S. rules. As this is established, legislative and regulatory actions may change the way we conduct our business and may create uncertainty for market participants, which could affect trading volumes or demand for market data. As a result, it is difficult to predict all of the effects that the legislation and its implementing regulations will have on us. As discussed more fully in Item 1 "- Business - Regulation" included elsewhere in this Annual Report, the implementation of MiFID II and other regulations may result in operational, regulatory and/or business risk.

In recent years, low interest rates and uncertainty in the financial markets continued to reflect the impact of a relatively slow or yet to occur global economic recovery. Lower growth in Asia and the EU may also continue to affect global financial markets. In addition, economic and regulatory uncertainty, coupled with periods of high market volatility around geopolitical events, low interest rates and low natural gas prices, has affected our clients' activities in recent years. The duration of these trends will determine the continued impact on our business across trading and listings. We have diversified our business so that we are not dependent on volatility or trading activity in any one asset class. In addition, we have increased our portion of non-transaction and clearing revenues from 21% in 2013 to 58% in 2017. This non-transaction revenue includes data services, listings and other revenues. We continue to focus on our strategy to grow each of our revenue streams, as well as on our company-wide expense reduction initiatives and our synergies in connection with our acquisitions in order to mitigate these uncertainties and to build on our growth opportunities by leveraging our proprietary data, clearing and markets.

Many of the data products and services we sell are required for our clients' business operations regardless of market volatility or shifts in business profitability levels. We anticipate that there will continue to be growth in the financial information services sector driven by a number of global trends, including the following: increasing global regulatory demands; greater use of fair value accounting standards and reliance on independent valuations; greater emphasis on risk management; market fragmentation driven by regulatory changes; the move to passive investing and indexation; ongoing growth in the size and diversity of financial markets; increased electronification of fixed income and other less automated markets; the development of new data products; the demand for greater data capacity and connectivity; new entrants; and increasing demand for outsourced services by financial institutions. We contract with clients through data fixed-fee subscriptions, variable fees based on usage or a combination of fixed-fee subscription and usage-based fees. In addition, some of our data services generate one-time or non-recurring revenue, such as one-time purchases of historical data, set-up services or implementation fees.

Segment Reporting

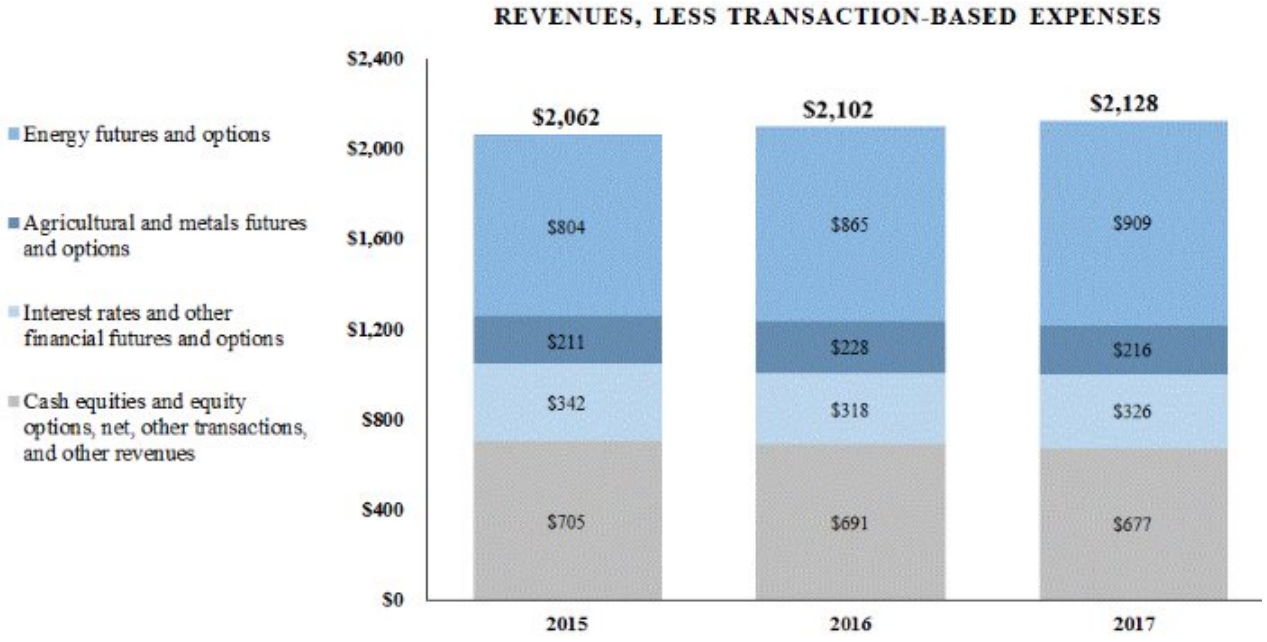
We operate two business segments: our Trading and Clearing segment and our Data and Listings segment. This presentation is reflective of how our chief operating decision maker reviews and operates our business. Our Trading and Clearing segment comprises our transaction-based execution and clearing businesses. Our Data and Listings segment comprises our subscription-based data services and securities listings businesses. Our chief operating decision maker does not review total assets, intersegment revenues/expenses or statements of income below operating income by segments; therefore, such information is not presented below.

While revenues are allocated directly to segments, a significant portion of our operating expenses are not solely related to a specific segment because the expenses serve functions that are necessary for the operation of both segments. Because these expenses do not relate to a single segment, we have employed a reasonable allocation method to allocate expenses between the segments for presentation purposes. We have elected to use a pro-rata revenue approach as the allocation method for the expenses that do not relate solely to one segment. Further, precise allocation of expenses to specific revenue streams within these segments is not reasonably possible. Accordingly, we did not allocate expenses to specific revenue streams within the segments.

Certain prior year's segment expenses for 2016 have been reclassified to conform to our current year's segment financial statement presentation. This reclassification increased the operating expenses for the Data and Listings segment by $55 million, while decreasing the operating expenses for the Trading and Clearing segment by the same amount.

Trading and Clearing Segment

The following charts and table present our selected statements of income data for our Trading and Clearing segment (dollars in millions):



(1) The adjusted numbers in the charts above are calculated by excluding items that are not reflective of our cash operations and core business performance. As a result, these adjusted numbers are not calculated in accordance with U.S. GAAP. See "- Non-GAAP Financial Measures" below.

	Year Ended December 31,			Year Ended December 31,		
	2017	2016	Change	2016	2015	Change
Revenues:						
Energy futures and options contracts	$ 909	$ 865	5 %	$ 865	$ 804	7 %
Agricultural and metals futures and options contracts	216	228	(5)	228	211	8
Interest rates and other financial futures and options contracts	326	318	2	318	342	(6)
Cash equities and equity options	1,491	1,780	(16)	1,780	1,676	6
Other transactions	189	193	(1)	193	195	(1)
Transaction and clearing, net	3,131	3,384	(7)	3,384	3,228	5
Other revenues	202	177	14	177	178	—
Revenues	3,333	3,561	(6)	3,561	3,406	5
Transaction-based expenses	1,205	1,459	(17)	1,459	1,344	9
Revenues, less transaction-based expenses	2,128	2,102	1 %	2,102	2,062	2 %
Other operating expenses	590	571	3 %	571	670	(15)%
Acquisition-related transaction and integration costs	2	10	(83)%	10	28	(64)%
Depreciation and amortization (including impairment)	187	244	(23)%	244	217	12 %
Operating expenses	779	825	(6)%	825	915	(10)%
Operating income	$ 1,349	$ 1,277	6 %	$ 1,277	$ 1,147	11 %

Transaction and Clearing Revenues

Overview

Our transaction and clearing revenues are reported on a net basis, except for the NYSE transaction-based expenses discussed below, and consist of fees collected from our derivatives, cash equities and equity options trading and derivatives clearing. In our derivatives markets, we earn transaction and clearing revenues from both counterparties to each contract that is traded and/or cleared, and in our equity and equity options markets, we receive trade execution fees as well as routing fees related to orders in our markets which are routed to other markets for execution.

Rates per-contract are driven by the number of contracts or securities traded and the fees charged per contract, net of certain rebates. Our per-contract transaction and clearing revenues will depend upon many factors, including, but not limited to, market conditions, transaction and clearing volume, product mix, pricing, applicable revenue sharing and market making agreements, and new product introductions. Because transaction and clearing revenues are generally assessed on a per-contract basis, revenues and profitability fluctuate with changes in contract volume and due to product mix.

For the years ended December 31, 2017 , 2016 and 2015 , 20%, 19% and 20%, respectively, of our Trading and Clearing segment revenues, less transaction-based expenses, were billed in pounds sterling or euros. As the pound sterling or euro exchange rate changes, the U.S. equivalent of revenues denominated in foreign currencies changes accordingly. Due to the weakening of the pound sterling and euro the last two years compared to the U.S. dollar, our Trading and Clearing segment revenues, less transaction-based expenses, were lower by $14 million for the year ended December 31, 2017 from the comparable period in 2016 , and were lower by $35 million for the year ended December 31, 2016 from the comparable period in 2015 . See Item 7(A) “- Quantitative and Qualitative Disclosures About Market Risk - Foreign Currency Exchange Rate Risk” below for additional information on the impact of currency fluctuations.

Our transaction and clearing fees are presented net of rebates. We recorded rebates of $749 million, $674 million and $563 million for the years ended December 31, 2017 , 2016 and 2015 , respectively. We offer rebates in certain of our markets primarily to support market liquidity and trading volume by providing qualified participants in those markets a discount to the applicable commission rate. Such rebates are calculated based on volumes traded. The increase in the rebates is due primarily to an increase in the number of participants in the rebate programs offered on various contracts, an increase in our traded volume and an increase in the number of rebate programs.

Commodities Markets

We operate global crude oil and refined oil futures markets, including the ICE Brent, ICE WTI and ICE Gasoil futures and options contracts, as well as over 500 refined oil futures products that relate to our benchmark futures contracts and other key price benchmarks. The ICE Brent crude contract is relied upon by a broad range of global market participants, including oil producing nations and multinational companies, to price and hedge their crude oil production and consumption. ICE Gasoil is a key refined

oil benchmark in Europe and Asia. Total oil volume and revenues increased 14% and 12%, respectively, for the year ended December 31, 2017 , from the comparable period in 2016 , and increased 12% and 10%, respectively, for the year ended December 31, 2016 , from the comparable period in 2015 . Crude oil revenues grew at a slightly lower rate due to customer and product mix.

In 2017 , ICE Brent crude futures and options contracts were traded at record levels for the twenty-first consecutive year. ICE Brent crude futures and options volume increased 15% for the year ended December 31, 2017 , from the comparable period in 2016 , and increased 15% for the year ended December 31, 2016 , from the comparable period in 2015 . ICE WTI crude futures and options volume increased 14% for the year ended December 31, 2017 , from the comparable period in 2016 , and increased 16% for the year ended December 31, 2016 , from the comparable period in 2015 . ICE Brent crude and ICE WTI crude futures and options volume increased primarily due to increased oil price volatility related to shifting supply and demand dynamics globally; broader market volatility in oil products, equities and foreign exchange rates; acts of central governments; outcomes of elections; and uncertainty around the Organization of Petroleum Exporting Countries, or OPEC, policy.

Our global natural gas futures and options volume declined 1% and revenues decreased 1% for the year ended December 31, 2017 , from the comparable period in 2016 , respectively, and volume declined 2% and revenues increased 4% for the year ended December 31, 2016 , from the comparable period in 2015 , respectively. Global natural gas revenues decreased in 2017 primarily due to the impact of foreign currency translation in our European natural gas products. Global natural gas volume declined in 2016 primarily due to lower price volatility related to high natural gas supplies but revenues increased due to geographic product mix.

Total volume and revenues in our agricultural and metals futures and options markets decreased 7% and 5%, respectively, for the year ended December 31, 2017 , from the comparable period in 2016 , and increased 11% and 8%, respectively, for the year ended December 31, 2016 , from the comparable period in 2015 . The decreases in agricultural volume in 2017 were primarily driven by the reduced price volatility in 2017 compared to the higher price volatility in 2016. The increases in agricultural volume in 2016 were primarily driven by increased price volatility due to changing supply and demand expectations largely related to weather and production levels.

Financial Markets

Interest rates and other financial futures and options volume and revenues increased 15% and 2%, respectively, for the year ended December 31, 2017 , from the comparable period in 2016 , and volume increased 10% and revenues decreased 6%, respectively, for the year ended December 31, 2016 , from the comparable period in 2015 . Interest rate futures and options volume increased in 2017 primarily due to expectations for heightened central bank activity during 2017, and volume increased in 2016 primarily due to uncertainty around central bank actions, economic data during 2016, and the U.K.'s decision to exit the EU. Interest rate futures and options revenues increased less than traded volumes in 2017 and in 2016 primarily due to the impact of foreign currency translation and increased market making rebates that apply at higher volume levels.

Cash equities handled volume decreased 17% for the year ended December 31, 2017 , from the comparable period in 2016 , primarily due to a reduction in U.S. equities market volatility during 2017 compared to the prior year. Cash equities handled volume increased 6% for the year ended December 31, 2016 , from the comparable period in 2015 , primarily due to increased market volatility throughout 2016. Cash equities revenues, net of transaction-based expenses, were $196 million, $223 million and $220 million for the years ended December 31, 2017 , 2016 and 2015 , respectively.

Equity options volume decreased 13% for the year ended December 31, 2017 , compared to the same period in 2016 , and decreased 5% for the year ended December 31, 2016 , from the comparable period in 2015 . Equity options revenues, net of transaction-based expenses, were $90 million, $98 million and $112 million for the years ended December 31, 2017 , 2016 and 2015 , respectively. Equity options volume and revenues decreased the last several years primarily due to lower U.S. equity market volatility in 2017 and the restructuring of the NYSE American Options business. While revenues declined the last several years, the overall financial contribution of equity options was consistent with the prior years due to the retention of a higher percentage of profits from NYSE American Options driven by our repurchase of the equity in the exchange from the minority shareholders.

CDS clearing revenues were $113 million, $107 million and $100 million for the years ended December 31, 2017 , 2016 and 2015 , respectively. The notional value of CDS cleared during the same periods were $11.5 trillion, $11.5 trillion and $11.9 trillion, respectively. Buy-side participation at our U.S. CDS clearing house, ICE Clear Credit, reached record levels in terms of number of participants and notional cleared due to increased participation from both U.S. and European buy-side customers due to greater regulatory certainty, the breadth of products offered, and cost efficient margining in the U.S. relative to Europe.

CDS trade execution revenues were $27 million, $36 million and $49 million for the years ended December 31, 2017 , 2016 and 2015 , respectively. CDS trading remains muted due to financial reform and lower volatility in corporate credit markets. The

decrease in the CDS trade execution revenues for the year ended December 31, 2017 is also impacted by the sale and discontinuance of our U.S. and U.K. CDS voice brokerage operations in the third quarter of 2016.

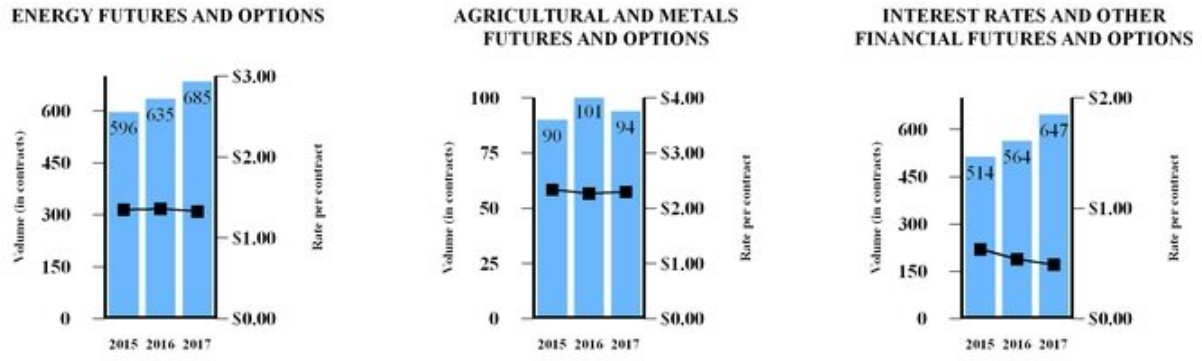
Other Revenues

Other revenues primarily include interest income on certain clearing margin deposits, regulatory penalties and fines, fees for use of our facilities, regulatory fees charged to member organizations of our U.S. securities exchanges, designated market maker service fees, exchange membership fees and agricultural grading and certification fees. The increase in other revenues for the year ended December 31, 2017 , from the comparable period in 2016, is primarily due to a $6 million breakup fee received in the third quarter of 2017 related to the termination of the derivatives clearing agreement with Euronext, under which ICE Clear Netherlands was to provide clearing of Euronext's financial and commodity derivatives.

Selected Operating Data

The following charts and table present trading activity in our futures and options markets by commodity type based on the total number of contracts traded, as well as futures and options rate per contract (in millions, except for percentages and rate per contract amounts):

Volume and Rate per Contract

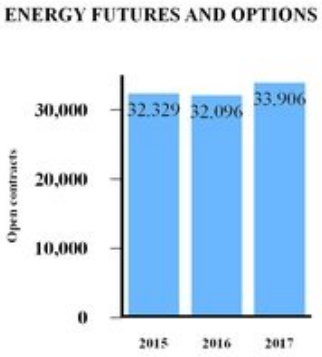


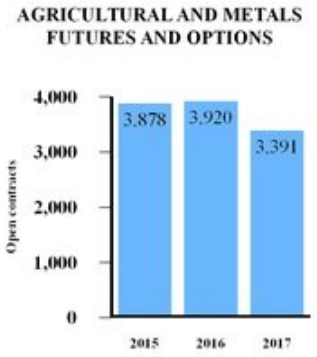
	Year Ended December 31,			Year Ended December 31,		
	2017	2016	Change	2016	2015	Change
Number of contracts traded:						
Energy futures and options	685	635	8 %	635	596	7 %
Agricultural and metals futures and options	94	101	(7)	101	90	11
Interest rates and other financial futures and options	647	564	15	564	514	10
Total	1,426	1,300	10 %	1,300	1,200	8 %
Rate per contract:						
Energy futures and options	$ 1.33	$ 1.36	(2)%	$ 1.36	$ 1.35	1 %
Agricultural and metals futures and options	$ 2.30	$ 2.27	1 %	$ 2.27	$ 2.34	(3)%
Interest rates and other financial futures and options	$ 0.49	$ 0.54	(10)%	$ 0.54	$ 0.63	(14)%

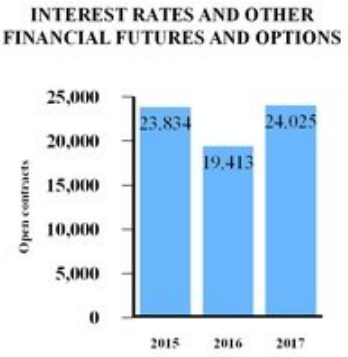
Open interest is the aggregate number of contracts (long or short) that clearing members hold either for their own account or on behalf of their clients. Open interest refers to the total number of contracts that are currently open — in other words, contracts that have been traded but not yet liquidated by either an offsetting trade, exercise, expiration or assignment. Open interest is also a measure of the future activity remaining to be closed out in terms of the number of contracts that members and their clients continue to hold in the particular contract and by the number of contracts held for each contract month listed by the exchange. The following charts and table presents our year-end open interest for our futures and options contracts (in thousands, except for

percentages).

Open Interest







	As of December 31,			As of December 31,		
	2017	2016	Change	2016	2015	Change
Open interest — in thousands of contracts:						
Energy futures and options	33,906	32,096	6 %	32,096	32,329	(1)%
Agricultural and metals futures and options	3,391	3,920	(14)%	3,920	3,878	1
Interest rates and other financial futures and options	24,025	19,413	24 %	19,413	23,834	(19)
Total	61,322	55,429	11 %	55,429	60,041	(8)%

The following charts and table present selected cash and equity options trading data. All trading volume below is presented as net daily trading volume and is single counted.

	Year Ended December 31,			Year Ended December 31,		
	2017	2016	Change	2016	2015	Change
Cash products (shares in millions):						
NYSE listed (Tape A) issues:						
Handled volume	1,086	1,269	(14)%	1,269	1,203	5 %
Matched volume	1,077	1,256	(14)%	1,256	1,185	6 %
Total NYSE listed consolidated volume	3,434	3,918	(12)%	3,918	3,685	6 %
Share of total matched consolidated volume	31.4%	32.1%	(0.7) pts	32.1%	32.2%	(0.1) pts
NYSE Arca, NYSE American and regional listed (Tape B) issues:						
Handled volume	289	372	(22)%	372	310	20 %
Matched volume	281	360	(22)%	360	296	22 %
Total NYSE Arca, NYSE American and regional listed consolidated volume	1,188	1,536	(23)%	1,536	1,355	13 %
Share of total matched consolidated volume	23.7%	23.4%	0.2 pts	23.4%	21.8%	1.6 pts
Nasdaq listed (Tape C) issues:						
Handled volume	145	186	(22)%	186	217	(14)%
Matched volume	136	177	(23)%	177	206	(14)%
Total Nasdaq listed consolidated volume	1,921	1,907	1 %	1,907	1,894	1 %
Share of total matched consolidated volume	7.1%	9.3%	(2.2) pts	9.3%	10.9%	(1.6) pts
Total cash volume handled	1,521	1,828	(17)%	1,828	1,730	6 %
Total cash market share matched	22.8%	24.4%	(1.5) pts	24.4%	24.3%	0.1 pts
Equity options (contracts in thousands):						
NYSE equity options	2,375	2,719	(13)%	2,719	2,867	(5)%
Total equity options volume	14,697	14,391	2 %	14,391	14,793	(3)%
NYSE share of total equity options	16.2%	18.9%	(2.7) pts	18.9%	19.4%	(0.5) pts
Revenue capture or rate per contract:						
Cash products revenue capture (per 100 shares)	$0.051	$0.049	6 %	$0.049	$0.050	(4)%
Equity options rate per contract	$0.151	$0.143	5 %	$0.143	$0.156	(8)%

Handled volume represents the total number of shares of equity securities, ETFs and crossing session activity internally matched on our exchanges or routed to and executed on an external market center. Matched volume represents the total number of shares of equity securities, ETFs and crossing session activity executed on our exchanges.

For NYSE cash equities, market share declined during 2017 due to historically low volatility driving more trading to off-exchange trading venues, particularly dark pools. For NYSE equity options, market share decreased due to a strategic focus on maximizing revenues in an extremely competitive environment.

Transaction-Based Expenses

Our equities and equity options markets pay fees to the SEC pursuant to Section 31 of the Exchange Act. Section 31 fees are recorded on a gross basis as a component of transaction and clearing fee revenue. These Section 31 fees are designed to recover the government's costs of supervising and regulating the securities markets and securities professionals. We, in turn, collect activity assessment fees, which are included in transaction and clearing revenues in our consolidated statements of income, from member organizations clearing or settling trades on the equities and options exchanges and recognize these amounts when invoiced. The activity assessment fees are designed so that they are equal to the Section 31 fees that are included in transaction-based expenses in our consolidated statements of income. As a result, activity assessment fees and the corresponding Section 31 fees do not have an impact on our net income. Activity assessment fees received are included in cash at the time of receipt and, as required by law, the amount due to the SEC is remitted semi-annually and recorded as an accrued liability until paid. As of December 31, 2017 , the accrued liability related to the un-remitted SEC Section 31 fees was $128 million.

We also incur liquidity payments made to cash and options trading customers and routing charges made to other exchanges that are included in transaction-based expenses. We incur routing charges when we do not have the best bid or offer in the market

for a security that a customer is trying to buy or sell on one of our securities exchanges. In that case, we route the customer's order to the external market center that displays the best bid or offer. The external market center charges us a fee per share (denominated in tenths of a cent per share) for routing to its system. We record routing charges on a gross basis as a component of transaction and clearing fee revenue.

Operating Expenses, Operating Income and Operating Margin

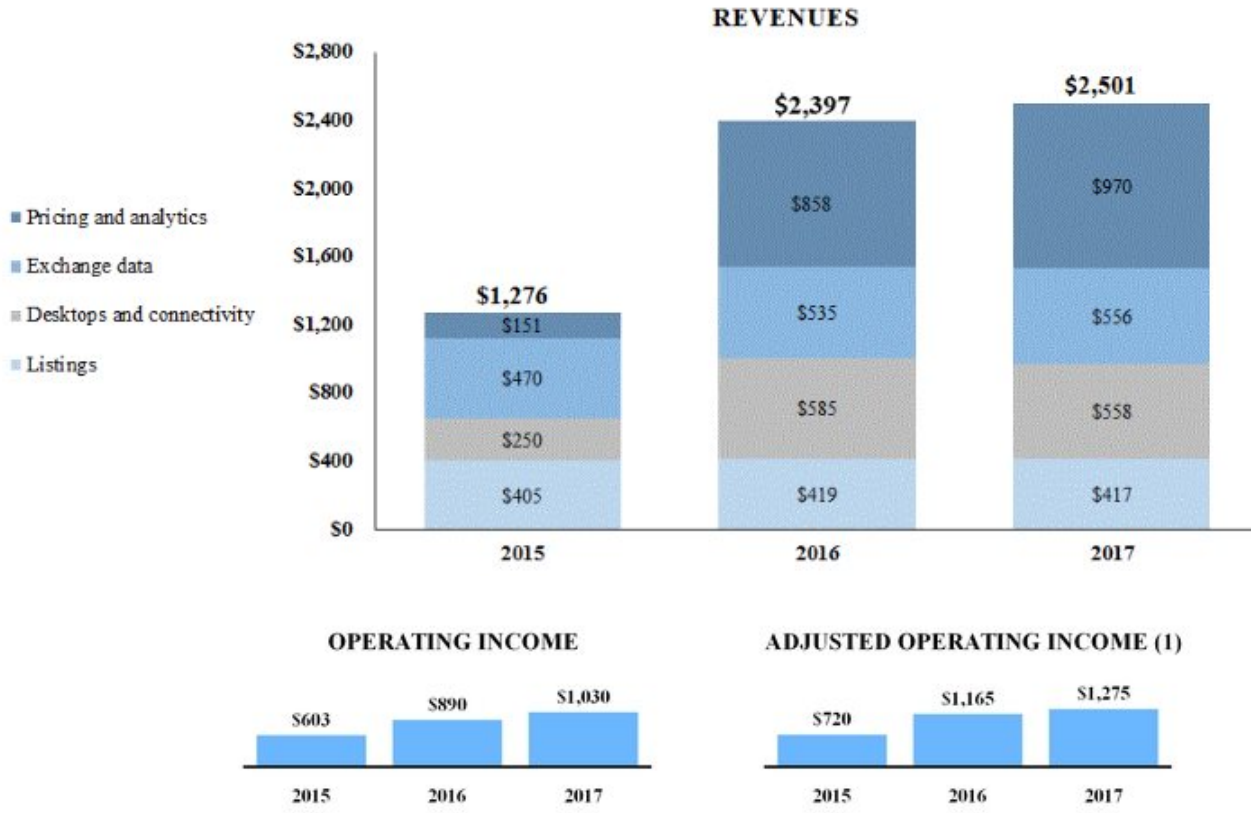
Our Trading and Clearing segment operating expenses decreased $46 million for the year ended December 31, 2017 , from the comparable period in 2016 , and decreased $90 million for the year ended December 31, 2016 , from the comparable period in 2015 (with the 2016 decrease being partially offset by the $33 million Creditex customer relationship intangible asset impairment expense recorded in September 2016). See "- Consolidated Operating Expenses" below for a discussion of the significant changes in our operating expenses.

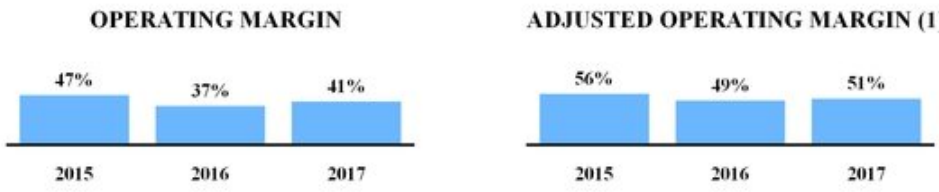
Our Trading and Clearing segment operating income increased $72 million for the year ended December 31, 2017 , from the comparable period in 2016 , and increased $130 million for the year ended December 31, 2016 , from the comparable period in 2015 . Trading and Clearing segment operating margins were 63% , 61% and 56% for the years ended December 31, 2017 , 2016 and 2015 , respectively. The operating income and operating margin increases the last two years were driven by the revenue increases discussed above and operating expense decreases discussed below.

Our Trading and Clearing segment adjusted operating expenses were $712 million , $715 million and $809 million for the years ended December 31, 2017 , 2016 and 2015 , respectively. Our Trading and Clearing segment adjusted operating income was $1.4 billion , $1.4 billion and $1.3 billion for the years for the years ended December 31, 2017 , 2016 and 2015 , respectively. Our Trading and Clearing segment adjusted operating margins were 67% , 66% and 61% for the years for the years ended December 31, 2017 , 2016 and 2015 , respectively. See "- Non-GAAP Financial Measures" below.

Data and Listings Segment

The following presents our selected statements of income data for our Data and Listings segment (dollars in millions):





(1) The adjusted numbers in the charts above are calculated by excluding items that are not reflective of our cash operations and core business performance. As a result, these adjusted numbers are not calculated in accordance with U.S. GAAP. See "- Non-GAAP Financial Measures" below.

	Year Ended December 31,			Year Ended December 31,		
	2017	2016	Change	2016	2015	Change
Revenues:						
Pricing and analytics	$ 970	$ 858	13 %	$ 858	$ 151	469%
Exchange data	556	535	4	535	470	14
Desktops and connectivity	558	585	(5)	585	250	134
Data services	2,084	1,978	5	1,978	871	127
Listings	417	419	—	419	405	4
Revenues	2,501	2,397	4	2,397	1,276	88
Other operating expenses	1,089	1,071	2	1,071	456	135
Acquisition-related transaction and integration costs	34	70	(52)	70	60	17
Depreciation and amortization	348	366	(5)	366	157	134
Operating expenses	1,471	1,507	(2)	1,507	673	124
Operating income	$ 1,030	$ 890	16 %	$ 890	$ 603	48%

The Data and Listings segment represents subscription-based, or recurring, revenues from data services and listings services offered across our trading and clearing businesses and ICE Data Services. Through ICE Data Services, we generate revenues from a range of market data services, including the dissemination of our exchange and evaluated pricing data and analytics, desktops, connectivity and market data. Through NYSE, NYSE American and NYSE Arca, we generate listings revenue related to the provision of listings services for public companies and ETFs, and related corporate actions for listed companies.

For the years ended December 31, 2017 , 2016 and 2015 , 10%, 12% and 4%, respectively, of our Data and Listings segment revenues were billed in pounds sterling or euros (all relating to our data services revenues). As the pound sterling or euro exchange rate changes, the U.S. equivalent of revenues denominated in foreign currencies changes accordingly. Due to the weakening of the pound sterling and euro the last two years compared to the U.S. dollar, our data services revenues were lower by $8 million for the year ended December 31, 2017 from the comparable period in 2016 , and were lower by $24 million for the year ended December 31, 2016 from the comparable period in 2015 .

Data Services Revenues

Our pricing and analytics services consist of an extensive set of independent evaluated pricing services focused primarily on fixed income and international equity securities, valuation services, reference data, market data, end of day pricing, fixed income, equity portfolio analytics and risk management analytics. We also serve as an administrator of regulated benchmarks. Our index services offer a range of products across fixed income, energy, equities, ETFs and other asset classes to provide the methodology, pricing and licensing of indices and benchmarks.

Our exchange data revenues primarily represent subscription fees for the provision of our market data that is created from activity on our exchanges, which is driven by the products and technology we develop to deliver real-time views of markets and related information. In our derivatives markets, exchange data revenues relate to subscription fees charged for customer and license access from third party data vendors, or quote vendors such as Thomson Reuters Corporation and Bloomberg, and from end users, as well as view-only data access, direct access services, terminal access, daily indices, forward curves, and end of day reports.

We also earn exchange data revenues relating to our cash equity and options markets, and related data services. We collect cash trading market data fees principally for consortium-based data products and, to a lesser extent, for NYSE proprietary data

products. Consortium-based data fees are determined by the securities industry plans and are charged to vendors based on their redistribution of data. Consortium-based data revenues (net of administrative costs) are distributed to participating securities markets on the basis of a formula set by the SEC under Regulation NMS. Last trade prices and quotes in NYSE-listed, NYSE American-listed, and NYSE Arca-listed securities are disseminated through "Tape A" and "Tape B," which constitute the majority of our revenues from consortium-based market data revenues.

Our desktop and connectivity services comprise technology-based information platforms, feeds and connectivity solutions. These include trading applications, desktop solutions, data feeds and infrastructure to support trading, voice brokers and investment functions. Our desktop and web-based applications deliver real-time market information, analytical and decision support tools to support trading and investment decisions. Through our consolidated feeds, clients receive market data from global exchanges, trading venues, news and data sources for exchange-traded and OTC markets. Our services offer clients a secure, resilient, private multi-participant network that provides access to global exchanges and content service providers. Our infrastructure managed services solution also offers colocation space, direct exchange access, proximity hosting and support services that enable access to real-time exchange data, and facilitates low latency, secure electronic market access.

Our data services revenues increased the last two years primarily due to the strong retention rate of existing customers, the addition of new customers, increased purchases by existing customers, the development of new and enhanced products serving the need for an expanded range of data, regulatory compliance and analytics solutions, and our acquisitions of Interactive Data and Trayport in December 2015 and of Securities Evaluations and Credit Market Analysis in October 2016. These increases were partially offset by the impact of foreign currency translation and the divestitures of IDMS and Trayport in our desktop and connectivity business. We recognized $1.1 billion in data services revenues for Interactive Data, Trayport, Securities Evaluations and Credit Market Analysis during the year ended December 31, 2016 , compared to $50 million in data services revenues for Interactive Data and Trayport from the comparable period in 2015 , subsequent to their acquisitions dates.

Organic Annual Subscription Value

Organic Annual Subscription Value, or ASV, represents, at a point in time, the data services revenues subscribed for the succeeding twelve months. ASV does not include new sales, contract terminations or price changes that may occur during that twelve-month period. ASV also does not include certain data services revenue streams that are not subscription-based. ASV is adjusted for material acquisitions, divestitures or discontinued businesses to provide an organic view of comparable performance on a year over year basis at a beginning of the quarter. Thus, while it is an indicative forward-looking metric, it does not provide a growth forecast of the next twelve months of data services revenues.

As of December 31, 2017 , ASV was $1.8 billion, a 6% increase compared to ASV of $1.7 billion as of December 31, 2016 . Underpinning this growth is strength in both our pricing and analytics business and our connectivity services.

Listings Revenues

We recognize listings revenues in our securities markets from fees applicable to companies listed on our cash equities exchanges - original listing fees and annual listing fees. Original listing fees consist of two components: initial listing fees and fees related to corporate actions. Initial listing fees, subject to a minimum and maximum amount, are based on the number of shares that a company initially lists. Initial listing fees are recognized as revenue on a straight-line basis over estimated service periods of nine years for NYSE and five years for NYSE Arca and NYSE American. U.S. companies pay annual fees based on the number of outstanding shares the company has and non-U.S. companies pay annual fees based on the number of outstanding shares the company has issued or held in the U.S. Annual fees are recognized as revenue on a pro rata basis over the calendar year, and generally received as cash in the first quarter of the year.

In addition, we earn corporate actions-related listing fees in connection with actions involving the issuance of new shares, such as stock splits, rights issues and sales of additional securities, as well as mergers and acquisitions. Corporate actions-related listing fees are recognized as revenue on a straight-line basis over estimated service periods of six years for NYSE and three years for NYSE Arca and NYSE American. Unamortized balances are recorded as deferred revenue in our consolidated balance sheet.

Operating Expenses, Operating Income and Operating Margin

Our Data and Listings segment operating expenses decreased $36 million for the year ended December 31, 2017 , from the comparable period in 2016 , and increased $834 million for the year ended December 31, 2016 , from the comparable period in 2015 . The increase in 2016 primarily relates to $812 million in operating expenses recognized relating to Interactive Data, Trayport, Securities Evaluations and Credit Market Analysis for the year ended December 31, 2016 , compared to $39 million in operating expenses recognized relating to Interactive Data, Trayport, Securities Evaluations and Credit Market Analysis for the comparable period in 2015 (both excluding acquisition-related transaction and integration costs). See "- Consolidated Operating

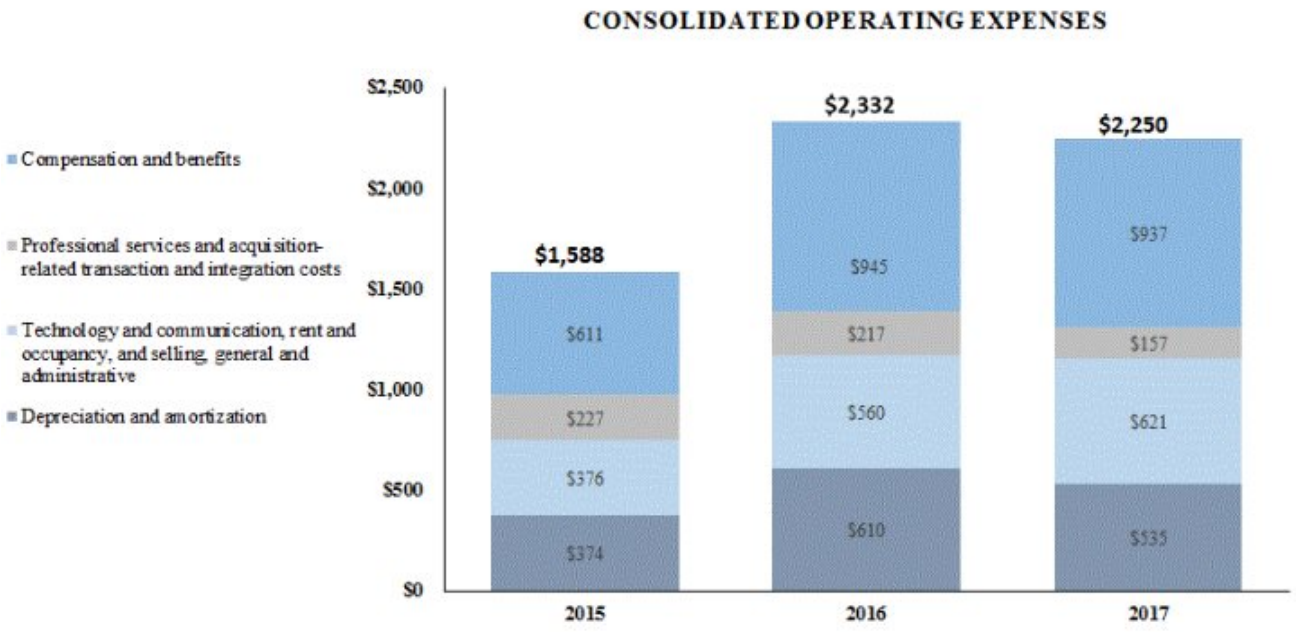
Expenses" below for further details on the Interactive Data, Trayport, Securities Evaluations and Credit Market Analysis operating expenses and for a discussion of the other significant changes in our operating expenses.

Our Data and Listings segment operating income increased $140 million for the year ended December 31, 2017 , from the comparable period in 2016 , and increased $287 million for the year ended December 31, 2016 , from the comparable period in 2015 . Data and Listings segment operating margins were 41% , 37% and 47% for the years ended December 31, 2017 , 2016 and 2015 , respectively. The operating income and operating margin increases in 2017 were driven by the revenue increases discussed above and operating expense decreases discussed below.

Our Data and Listings segment adjusted operating expenses were $1.2 billion , $1.2 billion and $556 million for the years ended December 31, 2017 , 2016 and 2015 , respectively. Our Data and Listings segment adjusted operating income was $1.3 billion , $1.2 billion and $720 million for the years ended December 31, 2017 , 2016 and 2015 , respectively. Our Data and Listings segment adjusted operating margins were 51% , 49% and 56% for the years for the years ended December 31, 2017 , 2016 and 2015 , respectively. See "- Non-GAAP Financial Measures" below.

Consolidated Operating Expenses

The majority of our operating expenses do not vary directly with changes in our volume and revenues, except for certain technology and communication expenses and a portion of our compensation expense that is tied directly to our data sales or overall financial performance, as discussed below. The following chart and table present our consolidated operating expenses (dollars in millions):



	Year Ended December 31,			Year Ended December 31,		
	2017	2016	Change	2016	2015	Change
Compensation and benefits	$ 937	$ 945	(1)%	$ 945	$ 611	55 %
Professional services	121	137	(12)	137	139	(1)
Acquisition-related transaction and integration costs	36	80	(56)	80	88	(9)
Technology and communication	397	374	6	374	203	84
Rent and occupancy	69	70	(1)	70	57	21
Selling, general and administrative	155	116	34	116	116	—
Depreciation and amortization	535	610	(12)	610	374	63
Total operating expenses	$ 2,250	$ 2,332	(3)%	$ 2,332	$ 1,588	47 %

We expect our operating expenses to increase in absolute terms in future periods in connection with our acquisitions and growth of our business, and to vary from year to year based on the type and level of our acquisitions, our integrations and other investments.

For the years ended December 31, 2017 , 2016 and 2015 , 14%, 18% and 12%, respectively, of our consolidated operating expenses were incurred in pounds sterling or euros. As the pound sterling or euro exchange rate changes, the U.S. equivalent of operating expenses denominated in foreign currencies changes accordingly. Due to the weakening of the pound sterling and euro the last two years compared to the U.S. dollar, our consolidated operating expenses were lower by $14 million for the year ended December 31, 2017 from the comparable period in 2016 , and were lower by $40 million for the year ended December 31, 2016 from the comparable period in 2015 . See Item 7(A) "- Quantitative and Qualitative Disclosures About Market Risk - Foreign Currency Exchange Rate Risk" below for additional information on the impact of currency fluctuations.

Compensation and Benefits Expenses

Compensation and benefits expense is our most significant operating expense and includes non-capitalized employee wages, bonuses, non-cash or stock compensation, certain severance costs, benefits and employer taxes. The bonus component of our compensation and benefits expense is based on both our financial performance and the individual employee performance and the performance-based restricted stock compensation expense is also based on our financial performance. Therefore, our compensation and benefits expense will vary year to year based on our financial performance and fluctuations in the number of employees.

As of December 31, 2017 we had 4,952 employees, compared to 5,631 employees as of December 31, 2016 and 5,549 employees as of December 31, 2015. Our employee headcount decreased as of December 31, 2017 primarily due to the divestitures in 2017 of IDMS, Trayport and NYSE Governance Services, and employee terminations in connection with our integration of Interactive Data, partially offset by the acquisitions of NGX and TMX Atrium in 2017. Our employee headcount increased as of December 31, 2016 and 2015 primarily due to acquisitions of Securities Evaluations, Credit Market Analysis, Interactive Data and Trayport during 2016 and 2015, converting contractor roles to employees at NYSE, and hiring for clearing, technology, regulation and compliance. See "- Recent Developments" above.

Compensation and benefits expenses increased for the year ended December 31, 2016 , from the comparable period in 2015, primarily due to the increases in our employee headcount. We recognized $342 million in compensation and benefits expenses relating to the Interactive Data, Trayport, Securities Evaluations and Credit Market Analysis acquisitions during the year ended December 31, 2016 , compared to $17 million in compensation and benefits expenses relating to the Interactive Data and Trayport acquisitions during the year ended December 31, 2015, subsequent to their acquisitions.

We recorded $17 million, $33 million and $20 million in NYSE and Interactive Data employee severance costs during the years ended December 31, 2017 , 2016 and 2015 , respectively, with such costs included in the acquisition-related transaction and integration costs discussed below and primarily related to executive departures. In addition, we incurred non-acquisition-related employee severance costs of $21 million, $10 million and $3 million for the years ended December 31, 2017 , 2016 and 2015 , respectively.

Non-cash compensation expenses recognized in our consolidated financial statements for employee stock options and restricted stock were $135 million, $123 million and $111 million for the years ended December 31, 2017 , 2016 and 2015 , respectively. The increase in non-cash compensation expenses in 2017 primarily relates to the integration of the Interactive Data employees into the ICE non-cash incentive plans, and the increase in 2016 primarily relates to a greater number of employees receiving non-cash awards due to the headcount increases discussed above.

Professional Services Expenses

This expense includes fees for consulting services received on strategic and technology initiatives, temporary labor, as well as regulatory, legal and accounting fees. This expense may fluctuate as a result of changes in consulting and technology services, temporary labor, and regulatory, accounting and legal proceedings.

Professional services expenses decreased the last two years primarily due to the continued reduction in professional services and contractors at NYSE. We eliminated or replaced certain contractor positions with full-time employees at NYSE in 2016 and 2015. In addition, during the year ended December 31, 2016 , we recorded a credit from a third party service provider related to fees charged during 2015, and we incurred lower legal fees during the year ended December 31, 2016 , from the comparable period in 2015. Legal fees, which are included in professional services expenses, primarily related to class action lawsuits in which NYSE is a defendant. These decreases were partially offset by professional services expenses incurred by Interactive Data, Trayport, Securities Evaluations and Credit Market Analysis following their acquisitions in 2016 and 2015.

Acquisition-Related Transaction and Integration Costs

We incurred $36 million in acquisition-related transaction and integration costs during the year ended December 31, 2017 , primarily relating to our integrations of Interactive Data, Securities Evaluations and Credit Market Analysis and our acquisitions of

BondPoint, TMX Atrium, BofAML indices and NYSE National. Of this amount, $11 million was primarily related to the acquisitions. We incurred $25 million for Interactive Data, Securities Evaluations and Credit Market Analysis integration costs during the year ended December 31, 2017 , primarily relating to employee and lease termination costs and professional services costs.

We incurred $80 million in acquisition-related transaction and integration costs during the year ended December 31, 2016, primarily relating to our integrations of Interactive Data and NYSE, legal and professional fees related to the Trayport CMA review, our investment in MERSCORP Holdings, Inc., owner of Mortgage Electronic Registrations Systems, Inc., or collectively MERS, our acquisitions of Securities Evaluations and Credit Market Analysis, and various other potential and discontinued acquisitions. Of this amount, $41 million was primarily related to the acquisitions and other transaction costs. We incurred $39 million for Interactive Data and NYSE integration costs during the year ended December 31, 2016, primarily relating to employee and lease termination costs and professional services costs. As of December 31, 2016, the integration of NYSE has been completed and we will no longer include any NYSE integration costs in the future.

We incurred $88 million in acquisition-related transaction and integration costs during the year ended December 31, 2015, primarily relating to our acquisitions of Interactive Data and Trayport and the integration of NYSE. Of this amount, $46 million was primarily related to the acquisition costs. We incurred $42 million for NYSE integration costs during the year ended December 31, 2015, primarily relating to employee and lease termination costs and professional services costs.

We expect to continue to explore and pursue various potential acquisitions and other strategic opportunities to strengthen our competitive position and support our growth. As a result, we may incur acquisition-related transaction costs in future periods. See "- Non-GAAP Financial Measures" below.

Technology and Communication Expenses

Technology support services consist of costs for running our wholly-owned data centers, hosting costs paid to third-party data centers, and maintenance of our computer hardware and software required to support our technology. These costs are driven by system capacity, functionality and redundancy requirements. Communication expenses consist of costs for network connection for our electronic platforms, telecommunications costs, and fees paid for access to external market data. This expense also includes licensing and other fee agreement expenses which may be impacted by growth in electronic contract volume, our capacity requirements, changes in the number of telecommunications hubs and connections with customers to access our electronic platforms directly.

Technology and communications expenses increased the last two years primarily due to technology expenses incurred by Interactive Data, Trayport, Securities Evaluations and Credit Market Analysis following their acquisitions in 2016 and 2015. In addition, during the last two years, we incurred increased hardware and software support costs related to our trading and clearing platforms and our data services.

Rent and Occupancy Expenses

This expense consists of costs related to leased and owned property including rent, maintenance, real estate taxes, utilities and other related costs. We have significant operations located in and around Atlanta, New York and London with smaller offices located throughout the world. See Item 2 "- Properties" above for additional information regarding our leased and owned property.

The increase in rent and occupancy expenses for the year ended December 31, 2016 , from the comparable period in 2015, is primarily due to rent and occupancy expenses relating to Interactive Data, Trayport, Securities Evaluations and Credit Market Analysis subsequent to their acquisitions. Excluding the impact of the acquisitions, rent and occupancy expenses decreased the last two years primarily due to reduced rent and occupancy costs realized due to the continued consolidation of our Atlanta, New York and London office locations.

Selling, General and Administrative Expenses

This expense relates to expenses from marketing, advertising, public relations, insurance, bank service charges, dues and subscriptions, travel and entertainment, non-income taxes and other general and administrative costs.

Selling, general and administrative expenses increased for the year ended December 31, 2017 , from the comparable period in 2016, primarily due to the acquisitions of Securities Evaluations and Credit Market Analysis and $14 million in accruals relating to ongoing investigations and inquiries during the year ended December 31, 2017 . Refer to note 14 to our consolidated financial statements and related notes, which are included elsewhere in this Annual Report, for more information on the ongoing investigations and inquiries. Selling, general and administrative expenses increased for the year ended December 31, 2016 , from the comparable period in 2015, primarily due to selling, general and administrative expenses incurred by Interactive Data, Trayport, Securities Evaluations and Credit Market Analysis following their acquisitions in 2016 and 2015. Excluding the impact of the acquisitions, selling, general and administrative expenses decreased the last two years primarily due to the release of non-income tax-related reserves and lower marketing expenses.

Depreciation and Amortization Expenses

Depreciation and amortization expense results from depreciation of long-lived assets such as buildings, leasehold improvements, planes, furniture, fixtures and equipment over their estimated useful lives. This expense includes amortization of intangible assets obtained in our acquisitions of businesses, as well as on various licensing agreements, over their estimated useful lives. Intangible assets subject to amortization consist primarily of customer relationships, trading products with finite lives and technology. This expense also includes amortization of internally developed and purchased software over their estimated useful lives.

We recorded amortization expenses on the intangible assets acquired as part of our acquisitions, as well as on the other intangible assets, of $272 million, $323 million and $160 million for the years ended December 31, 2017 , 2016 and 2015 , respectively. The decrease in the amortization expenses recorded on the intangible assets for the year ended December 31, 2017 , from the comparable period in 2016, is primarily due to a reduction in amortization expenses recorded on intangible assets which became fully amortized (primarily related to certain of the NYSE intangible assets) and the divestitures of Trayport and NYSE Governance Services, partially offset by amortization expenses recorded on the Securities Evaluations, Credit Market Analysis, NGX and TMX Atrium intangible assets. The increase in the amortization expenses recorded on the intangible assets for the year ended December 31, 2016 , from the comparable period in 2015, is primarily due to amortization expenses recorded on the Interactive Data, Trayport, Securities Evaluations and Credit Market Analysis intangible assets, following their acquisitions.

In addition, we recognized a net loss of $6 million on the sale of NYSE Governance Services, which was recorded in depreciation and amortization expenses for the year ended December 31, 2017 (see "- Recent Developments" above), and we recorded an impairment of the Creditex customer relationship intangible asset of $33 million, which was recorded in depreciation and amortization expenses for the year ended December 31, 2016. In August 2016, we sold certain of Creditex's U.S. voice brokerage operations to Tullett Prebon. During the third quarter of 2016, we discontinued Creditex's U.K. voice brokerage operations. We continue to operate Creditex's electronically traded markets and systems, post-trade connectivity platforms and intellectual property. In connection with the divestiture of the voice brokerage business, it was determined that the carrying value of the CDS Creditex customer relationship intangible asset was not fully recoverable and an impairment of the asset was recorded in September 2016 for $33 million.

We recorded depreciation expenses on our fixed assets of $257 million, $254 million and $213 million for the years ended December 31, 2017 , 2016 and 2015 , respectively, with the increase in 2016 primarily relating to our acquisitions of Interactive Data, Trayport, Securities Evaluations and Credit Market Analysis.

Consolidated Non-Operating Income (Expenses)

Income and expenses incurred through activities outside of our core operations are considered non-operating. The following tables present our non-operating income (expenses) (dollars in millions):

	Year Ended December 31,			Year Ended December 31,		
	2017	2016	Change	2016	2015	Change
Other income (expense):						
Interest expense	$ (187)	$ (178)	5%	$ (178)	$ (97)	83%
Other income, net	325	40	n/a	40	—	n/a
Total other income (expense), net	$ 138	$ (138)	n/a	$ (138)	$ (97)	42%
Net income attributable to non-controlling interest	$ (28)	$ (27)	5%	$ (27)	$ (21)	28%

Interest expense increased for the year ended December 31, 2017 , from the comparable period in 2016 , primarily due to interest expense that we recognized relating to the $1.0 billion in senior notes issued in August 2017, partially offset by the repayment of $850 million of the 2.00% senior unsecured fixed rate notes due in October 2017, or the NYSE Notes, in September 2017. Interest expense increased for the year ended December 31, 2016 , from the comparable period in 2015, primarily due to the interest expense we recognized on the additional debt incurred to finance the Interactive Data acquisition in December 2015. See "- Debt" below.

On December 14, 2017, we sold Trayport to TMX Group for £550 million ($733 million based on the pound sterling/U.S. dollar exchange rate of 1.3331 as of December 14, 2017). We recognized a net gain of $110 million on the divestiture of Trayport, which was recorded as other income for the year ended December 31, 2017 . See "- Recent Developments - Divestiture of Trayport and the Acquisitions of NGX and Shorcan Energy" above.

In connection with Cetip's merger with BM&FBOVESPA S.A., now B3, and its subsequent sale, we recognized a $176 million realized investment gain in other income for the year ended December 31, 2017 and we recognized $9 million in foreign exchange losses and transaction expenses in other expense for the year ended December 31, 2017 . See "- Recent Developments - Cetip

Investment Gain" above. We recognized dividend income received relating to our investment in Cetip in other income, which was $5 million, $17 million and $16 million for the years ended December 31, 2017 , 2016 and 2015 , respectively. We no longer receive any dividends from Cetip subsequent to its sale in the first quarter of 2017.

We account for our investments in MERS and The Options Clearing Corporation, or OCC, as equity method investments. We recognized $36 million, $25 million and $6 million in equity income related to these investments during the years ended December 31, 2017 , 2016 and 2015 , respectively, as other income.

We incurred foreign currency transaction losses of $4 million, $1 million and $14 million for the years ended December 31, 2017 , 2016 and 2015 , respectively. This was primarily attributable to the fluctuations of the pound sterling and euro relative to the U.S. dollar. Foreign currency gains and losses are recorded in other income (expense) and relate to the settlement of foreign currency assets, liabilities and payables that occur through our foreign operations that are received in non-functional currencies due to the increase or decrease in the period-end foreign currency exchange rates between periods. See Item 7A "- Quantitative and Qualitative Disclosures About Market Risk - Foreign Currency Exchange Rate Risk" included elsewhere in this Annual Report for more information on these items.

We recognized interest income on our investments of $8 million, $3 million and $6 million during the years ended December 31, 2017 , 2016 and 2015 , respectively, which were recorded as other income. During the year ended December 31, 2015 , we incurred $15 million in settlements and accruals for various outstanding legal matters (net of insurance proceeds), which was recorded in other expense.

For consolidated subsidiaries in which our ownership is less than 100%, and for which we have control over the assets, liabilities and management of the entity, the outside stockholders' interests are shown as non-controlling interest in our consolidated financial statements. As of December 31, 2016, non-controlling interest included those related to the operating results of our CDS clearing subsidiaries in which non-ICE limited partners held a 42.5% net profit sharing interest; ICE Endex in which Gasunie held a 21% ownership interest; and ICE Clear Netherlands in which ABN AMRO Clearing held a 25% ownership interest. For both ICE Endex and ICE Clear Netherlands, in addition to the non-controlling interest reported in the consolidated statements of income, we reported redeemable non-controlling interest in the consolidated balance sheets which represents the minority interest redemption fair value for each company.

During June 2017, we purchased both Gasunie's 21% minority ownership interest in ICE Endex and ABN AMRO Clearing's 25% minority ownership interest in ICE Clear Netherlands. Subsequent to these acquisitions, we own 100% of ICE Endex and ICE Clear Netherlands and will no longer include any non-controlling interest amounts for ICE Endex and ICE Clear Netherlands in our consolidated financial statements. During the year ended December 31, 2017, we purchased 12.6% of the net profit sharing interest in our CDS clearing subsidiaries from several non-ICE limited partners and the remaining non-ICE limited partners hold a 29.9% net profit sharing interest in our CDS clearing subsidiaries as of December 31, 2017.

Consolidated Income Tax Provision

Consolidated income tax expense (benefit) was $(25) million , $580 million and $358 million for the years ended December 31, 2017 , 2016 and 2015 , respectively. The change in consolidated income tax expense (benefit) between years is primarily due to the tax impact of changes in our pre-tax income and the changes in our effective tax rate each year. Our effective tax rate was (1)% , 29% and 22% for the years ended December 31, 2017 , 2016 and 2015 , respectively. The effective tax rates for the years ended December 31, 2017 , 2016 and 2015 are lower than the federal statutory rate primarily due to favorable U.S. and U.K. tax law changes and favorable foreign income tax rate differentials, partially offset by state income taxes. Favorable foreign income tax rate differentials result primarily from lower income tax rates in the U.K. and various other lower tax jurisdictions as compared to the historical income tax rates in the U.S.

During the fourth quarter of 2015, the U.K. reduced their corporate income tax rate from 20% to 19% effective April 1, 2017 and to 18% effective April 1, 2020. During the third quarter of 2016, the U.K. further reduced their corporate income tax rate from 18% to 17% effective April 1, 2020. During December 2017, the TCJA reduced the U.S. corporate income tax rate from 35% to 21% effective January 1, 2018. See "- Recent Developments" above. The reduction in U.S. and U.K. corporate income tax rates resulted in deferred tax benefits in the respective periods of enactment. The impact of the deferred tax benefits for the U.S. and U.K. corporate income tax rate reductions for the years ended December 31, 2017 , 2016 and 2015 lowered the effective tax rates by 30% , 2% and 4% , respectively, and resulted in deferred tax benefits of $764 million , $34 million and $60 million , respectively.

The decrease in the effective tax rate for the year ended December 31, 2017 , from the comparable period in 2016 , is primarily due to the deferred tax benefit associated with the future U.S. income tax rate reduction and tax benefits associated with a divestiture in the second quarter of 2017, partially offset by the deferred tax benefit from the U.K. corporate income tax reduction in the third quarter of 2016, additional tax expense from an Illinois corporate income tax rate increase enacted in the third quarter of 2017, and an income tax expense increase due to a relatively higher U.S. mix of income in 2017. The increase in the effective tax rate for the year ended December 31, 2016 , from the comparable period in 2015 , is primarily due to the tax impact of foreign versus U.S. based pre-tax income, lower deferred tax benefits associated with the future U.K. income tax rate reductions, and greater favorable settlements with

various taxing authorities in 2015, partially offset by a tax benefit from the early adoption of ASU 2016-09 in 2016. See note 12 to our consolidated financial statements and related notes, which are included elsewhere is this Annual Report, for additional information on these tax items.

Quarterly Results of Operations

The following quarterly unaudited consolidated statements of income data has been prepared on substantially the same basis as our audited consolidated financial statements and includes all adjustments, consisting only of normal recurring adjustments, necessary for the fair presentation of our consolidated results of operations for the quarters presented. The historical results for any quarter do not necessarily indicate the results expected for any future period. This unaudited condensed consolidated quarterly data should be read together with our consolidated financial statements and related notes included elsewhere in this Annual Report. The following table sets forth quarterly consolidated statements of income data (in millions):

	Three Months Ended,							
	December 31, 2017	September 30, 2017	June 30, 2017	March 31, 2017	December 31, 2016	September 30, 2016	June 30, 2016	March 31, 2016
Revenues:								
Energy futures and options contracts	$ 227	$ 223	$ 231	$ 228	$ 224	$ 199	$ 212	$ 230
Agricultural and metals futures and options contracts	49	49	62	56	47	52	67	62
Interest rates and other financial futures and options contracts	72	82	89	83	74	70	80	94
Cash equities and equity options	365	355	390	381	426	410	454	490
Other transactions	45	49	45	50	47	46	47	53
Total transaction and clearing, net	758	758	817	798	818	777	860	929
Pricing and analytics	248	242	242	238	234	209	211	204
Exchange data	140	136	142	138	132	136	139	128
Desktops and connectivity	137	140	137	144	149	144	147	145
Total data services	525	518	521	520	515	489	497	477
Listings	102	102	107	106	105	106	105	103
Other revenues	54	54	49	45	46	44	42	45
Total revenues	1,439	1,432	1,494	1,469	1,484	1,416	1,504	1,554
Transaction-based expenses	295	289	316	305	346	338	375	400
Total revenues, less transaction-based expenses	1,144	1,143	1,178	1,164	1,138	1,078	1,129	1,154
Compensation and benefits	227	231	234	245	237	236	236	236
Professional services	27	30	32	32	36	32	37	32
Acquisition-related transaction and integration costs	9	4	9	14	19	14	20	27
Technology and communication	103	99	97	98	97	93	92	92
Rent and occupancy	17	17	17	18	18	17	17	18
Selling, general and administrative	38	38	38	41	33	31	30	22
Depreciation and amortization [1]	131	128	142	134	140	181	146	143
Total operating expenses	552	547	569	582	580	604	578	570
Operating income	592	596	609	582	558	474	551	584
Other income (expense), net [2]	77	(36)	(44)	141	(28)	(31)	(35)	(44)
Income tax expense (benefit) [3]	(562)	185	139	213	171	93	153	163
Net income	$ 1,231	$ 375	$ 426	$ 510	$ 359	$ 350	$ 363	$ 377
Net income attributable to non-controlling interest	(6)	(6)	(8)	(8)	(7)	(6)	(6)	(8)
Net income attributable to ICE	$ 1,225	$ 369	$ 418	$ 502	$ 352	$ 344	$ 357	$ 369

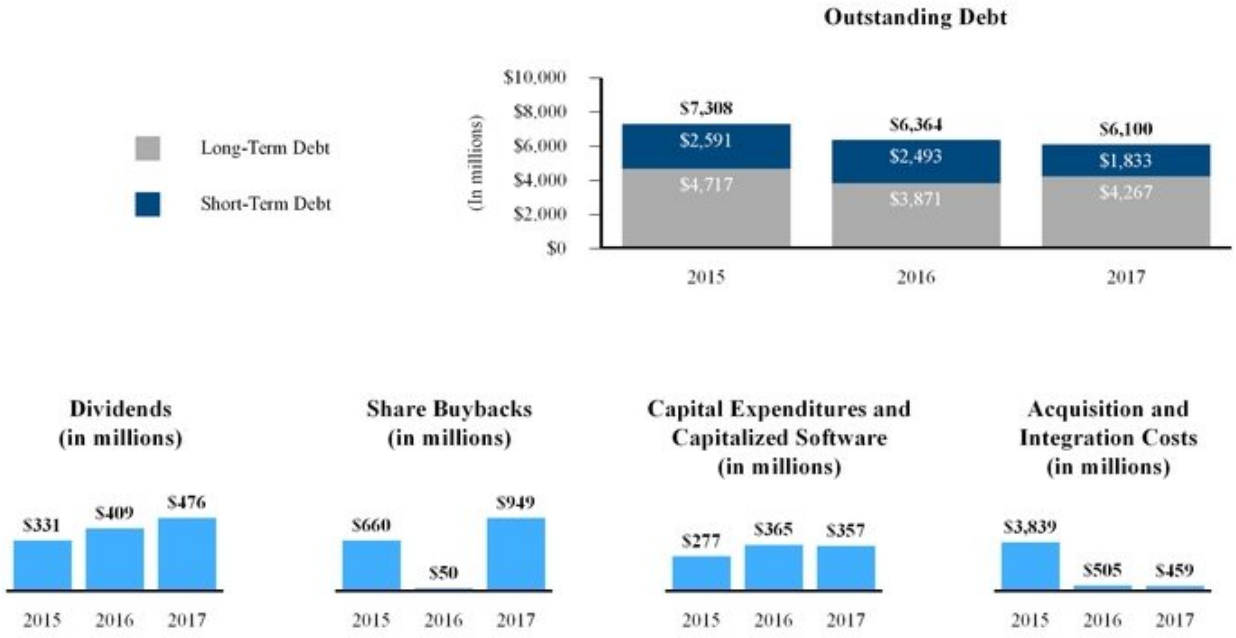
[1] The increase in the depreciation and amortization expenses for the three months ended September 30, 2016 is primarily due to the $33 million Creditex customer relationship intangible asset impairment. See "- Consolidated Operating Expenses" above.

[2] Other income (expense), net for the three months ended December 31, 2017 includes a $110 million gain on our sale of Trayport, and for the three months ended March 31, 2017, includes a $176 million realized investment gain in connection with the sale of our investment in Cetip. See "- Recent Developments" above.

[3] The decrease in the income tax expenses for the three months ended December 31, 2017 is primarily due to a $764 million deferred tax benefit associated with future U.S. income tax reductions, the decrease for the three months ended June 30, 2017 is primarily due to the tax benefit associated with a divestiture, and the decrease for the three months ended September 30, 2016 is primarily due to a deferred tax benefit associated with future U.K. income tax rate reductions. See "- Consolidated Income Tax Provision" above.

Liquidity and Capital Resources

Below are charts that reflect our capital allocation. The acquisition and integration costs in the chart below includes both the net cash paid for the acquisitions and the acquisition-related transaction and integration costs in each year.



We have financed our operations, growth and cash needs primarily through income from operations and borrowings under our various debt facilities. Our principal capital requirements have been to fund capital expenditures, working capital, strategic acquisitions and investments, stock repurchases, dividends to our shareholders and the continued development of our technology platforms that support our businesses. We believe that our cash on hand and cash flows from operations will be sufficient to repay our outstanding debt as it matures. In the future, we may need to incur additional debt or issue additional equity securities, which we may be unable to do or to do on favorable terms. See "- Future Capital Requirements" below.

Our Commercial Paper Program enables us to borrow efficiently at reasonable short-term interest rates and provides us with the flexibility to de-lever using our strong annual cash flows from operating activities whenever our leverage becomes elevated as a result of investment or acquisition activities. We reduced our outstanding commercial paper during the year ended December 31, 2017 by $409 million, primarily using net cash proceeds received from the sale of our investment in Cetip, the sale of Trayport and cash flows from operations, partially offset by acquisitions and investments we made in 2017. See "- Debt" below.

See "- Recent Developments" above for a discussion of the acquisitions and investments that we made during the year ended December 31, 2017 . These cash acquisitions and investments were funded from borrowing under our Commercial Paper Program, cash flows from operations and a portion of the proceeds received from our divestitures during the year ended December 31, 2017 .

Upon maturity of old issuances of commercial paper and to the extent old issuances are not repaid by cash on hand, we are exposed to the rollover risk of not being able to issue new commercial paper. To mitigate the rollover risk, we maintain an undrawn back-stop bank revolving credit facility for an aggregate amount equaling at any time the amount issued under our Commercial Paper Program. If we were not able to issue new commercial paper, we have the option of drawing on the back-stop revolving facility, however electing to do so would result in higher interest expense. See "- Debt" below.

Consolidated cash and cash equivalents were $535 million and $407 million as of December 31, 2017 and 2016 , respectively. We had $1.0 billion and $943 million in short-term and long-term restricted cash and cash equivalents as of December 31, 2017 and 2016 , respectively and $432 million in long-term investments as of December 31, 2016 (relating to our investment in Cetip, which was sold in 2017). We consider all short-term, highly-liquid investments with original maturity dates of three months or less to be cash equivalents. We classify all investments with original maturity dates in excess of three months but less than one year as short-term investments and all investments that we intend to hold for more than one year as long-term investments. Cash and investments that are

not available for general use, either due to regulatory requirements or through restrictions in specific agreements, are classified as restricted cash and investments.

As of December 31, 2017 , the amount of unrestricted cash held by our non-U.S. subsidiaries was $325 million. While we consider our non-U.S. earnings to be indefinitely reinvested overseas, if these cash balances are needed for our operations in the U.S., any repatriation by way of dividend may be subject to both U.S. federal and state income taxes, as adjusted for any non-U.S. tax credits. Such dividends may not be subject to U.S. federal tax under the TCJA and we will continue to monitor both federal and state interpretations, guidance and regulations concerning U.S. tax reform. However, we do not have any current needs or foreseeable future needs or other plans to repatriate cash by way of dividends from our non-U.S. subsidiaries. We will continue to evaluate our indefinite reinvestment assertion in light of any further U.S. tax reform developments.

Our cash and cash equivalents and financial investments are managed as a global treasury portfolio of non-speculative financial instruments that are readily convertible into cash, such as overnight deposits, term deposits, money market funds, mutual funds for treasury investments, short duration fixed income investments and other money market instruments, thus ensuring high liquidity of financial assets. We may invest a portion of our cash in excess of short-term operating needs in investment-grade marketable debt securities, including government or government-sponsored agencies and corporate debt securities.

Certain of these investments, with an original maturity of greater than three months, will be classified as available-for-sale in accordance with relevant accounting standards. Available-for-sale investments are carried at their fair values with unrealized gains and losses, reported as a component of accumulated other comprehensive income. Realized gains and losses, and declines in value deemed to be other-than-temporary on available-for-sale investments, are recognized currently in earnings. We do not have any investments classified as held-to-maturity or trading.

During the years ended December 31, 2017 , 2016 and 2015 , we repurchased 14,966,616 shares, 902,920 shares and 14,343,845 shares, respectively, of our outstanding common stock at a cost of $949 million , $50 million and $660 million , respectively. The shares repurchased are held in treasury stock. These repurchases were completed on the open market and under our Rule 10b5-1 trading plan. In connection with our acquisition of Interactive Data during the fourth quarter of 2015, we suspended our stock repurchase plan for a period of time. The timing and extent of future repurchases that are not made pursuant to a Rule 10b5-1 trading plan will be at our discretion and will depend upon many conditions. Our management periodically reviews whether or not to be active in repurchasing our stock. In making a determination regarding any stock repurchases, we consider multiple factors. The factors may include: overall stock market conditions, our common stock price movements, the remaining amount authorized for repurchases by our board of directors, the potential impact of a stock repurchase program on our corporate debt ratings, our expected free cash flow and working capital needs, our current and future planned strategic growth initiatives, and other potential uses of our cash and capital resources.

In August 2016, our board of directors approved an aggregate of $1.0 billion for future repurchases of our common stock with no fixed expiration date. In September 2017, our board of directors approved an aggregate of $1.2 billion for future repurchases of our common stock with no fixed expiration date that becomes effective as of January 1, 2018. We expect funding for any share repurchases to come from our operating cash flow or borrowings under our debt facilities or our Commercial Paper Program.

Repurchases may be made from time to time on the open market, through established trading plans, in privately-negotiated transactions or otherwise, in accordance with all applicable securities laws, rules and regulations. We have entered into a Rule 10b5-1 trading plan, as authorized by our board of directors, to govern some or all of the repurchases of our shares of common stock. We may discontinue the stock repurchases at any time and may amend or terminate the Rule 10b5-1 trading plan at any time. The approval of our board of directors for the share repurchases does not obligate us to acquire any particular amount of our common stock. In addition, our board of directors may increase or decrease the amount of capacity we have for repurchases from time to time.

Cash Flow

The following presents the major components of net increases (decreases) in cash, cash equivalents, and restricted cash and cash equivalents (in millions):

	Year Ended December 31,		
	2017	2016	2015
Net cash provided by (used in):			
Operating activities	$ 2,085	$ 2,149	$ 1,311
Investing activities	92	(860)	(3,004)
Financing activities	(1,971)	(1,462)	1,976
Effect of exchange rate changes	12	(24)	(14)
Net increase (decrease) in cash, cash equivalents, and restricted cash and cash equivalents	$ 218	$ (197)	$ 269

The FASB has issued ASU 2016-18, *Statement of Cash Flows: Restricted Cash,* that requires entities to show the changes in the total of cash, cash equivalents, restricted cash and cash equivalents in the statement of cash flows. As a result, entities will no longer present transfers between cash and cash equivalents and restricted cash and cash equivalents in the statement of cash flows. In the fourth quarter of 2017, we adopted ASU 2016-18 and reclassified changes in restricted cash from cash flow provided by (used in) investing activities to the total change in beginning-of-year and end-of-year total amounts shown on the consolidated statements of cash flows for the years ended December 31, 2017, 2016 and 2015. This new standard is a change in cash flow statement presentation only. Refer to note 2 to our consolidated financial statements and related notes, which are included elsewhere in this Annual Report, for more information on the impact of the adoption of ASU 2016-18.

Operating Activities

Net cash provided by operating activities primarily consists of net income adjusted for certain non-cash items, including depreciation and amortization and the effects of changes in working capital. Fluctuations in net cash provided by operating activities are primarily attributable to increases and decreases in our net income between periods and due to fluctuations in working capital.

The $64 million decrease in net cash provided by operating activities for the year ended December 31, 2017 , from the comparable period in 2016 , is primarily due to a $136 million contribution that was made to our pension plan in September 2017, compared to a $10 million contribution that was made to our pension plan in September 2016. The pension contribution in September 2017 allowed us to reach 99% funding of our pension obligation and allowed us to immunize the liability against future market fluctuations. For additional information on our pension plan, refer to note 15 to our consolidated financial statements and related notes, which are included elsewhere in this Annual Report.

The $838 million increase in net cash provided by operating activities for the year ended December 31, 2016 , from the comparable period in 2015 , is primarily due to $393 million in cash provided by operating activities for Interactive Data, Trayport, Securities Evaluations and Credit Market Analysis for the year ended December 31, 2016 , increase in the net income of our historical income statement excluding the acquisitions, and other fluctuations in working capital (including the impact of the increase in cash paid for income taxes in 2015).

Investing Activities

Consolidated net cash provided by (used in) investing activities for the years ended December 31, 2017 , 2016 and 2015 primarily relates to cash paid for acquisitions, cash received from divestitures, net cash received from the sale of our investment in Cetip, purchases of cost and equity method investments, proceeds from term deposits, and changes in the capital expenditures and capitalized software development costs.

We paid cash for acquisitions, net of cash acquired, of $423 million, $425 million and $3.8 billion, respectively, for the years ended December 31, 2017 , 2016 and 2015 , primarily relating to the NGX, Shorcan Energy, BofAML indices and TMX Atrium acquisitions during the year ended December 31, 2017 , the Securities Evaluations and Credit Market Analysis acquisitions during the year ended December 31, 2016, and the Interactive Data acquisition during the year ended December 31, 2015. We received cash from our divestitures of $761 million during the year ended December 31, 2017 , relating to the sales of Trayport, IDMS and NYSE Governance Services. We received net cash proceeds from the sale of our investment in Cetip of $438 million. We made purchases of cost and equity method investments of $327 million, $70 million and $60 million during the years ended December 31, 2017 , 2016 and 2015 , respectively, relating to our investments in Euroclear, MERS and OCC. See "- Recent Developments" above for more details on these acquisitions, divestitures and investments. We received proceeds from term deposits of $1.1 billion during the year ended December 31, 2015 relating to the repayments of outstanding debt.

Capital expenditures were $220 million, $250 million and $190 million for the years ended December 31, 2017 , 2016 and 2015 , respectively, and we had capitalized software development expenditures of $137 million, $115 million and $87 million for the years ended December 31, 2017 , 2016 and 2015 , respectively. The capital expenditures primarily relate to hardware purchases to continue the development and expansion of our electronic platforms, data services and clearing houses and leasehold improvements associated

with the new and renovated office spaces in Atlanta, New York and London. The software development expenditures primarily relate to the continued development and expansion of our electronic trading platforms, data services and clearing houses.

Financing Activities

Consolidated net cash used in financing activities for the year ended December 31, 2017 primarily relates to $984 million in net proceeds from the 2022 Senior Notes and 2027 Senior Notes offerings, $850 million in repayments of the NYSE Notes, $409 million in net repayments under our Commercial Paper Program, $949 million in repurchases of common stock, $476 million in dividend payments to our shareholders, $174 million in acquisitions of non-controlling interest and redeemable non-controlling interest and $88 million in cash payments related to treasury shares received for restricted stock tax payments and stock options exercises. See "- Recent Developments" above and "- Debt" below.

Consolidated net cash used in financing activities for the year ended December 31, 2016 primarily relates to $949 million in net repayments under our Commercial Paper Program, $409 million in dividend payments to our shareholders, $54 million in cash payments related to treasury shares received for restricted stock tax payments and stock options exercises and $50 million in repurchases of common stock.

Consolidated net cash provided by financing activities for the year ended December 31, 2015 primarily relates to $2.5 billion in net proceeds received in connection with the offering of new senior notes and $1.7 billion in net borrowings under our commercial paper program, partially offset by $1.0 billion in net repayments under our debt facilities, $660 million in repurchases of common stock, $331 million in dividend payments to our shareholders, $128 million for the purchase of subsidiary shares from non-controlling interest holders and $45 million in cash payments related to treasury shares received for restricted stock tax payments and stock options exercises.

Debt

Our total debt, including short-term and long-term debt, consisted of the following as of December 31, 2017 and 2016 (in millions):

	As of December 31,	
	2017	2016
Debt:		
Short-term debt:		
Commercial Paper	$ 1,233	$ 1,642
2018 Senior Notes (2.50% senior unsecured notes due October 15, 2018)	600	—
NYSE Notes (2.00% senior unsecured notes due October 5, 2017)	—	851
Total short-term debt	1,833	2,493
Long-term debt:		
2018 Senior Notes (2.50% senior unsecured notes due October 15, 2018)	—	598
2020 Senior Notes (2.75% senior unsecured notes due December 1, 2020)	1,244	1,242
2022 Senior Notes (2.35% senior unsecured notes due September 15, 2022)	495	—
2023 Senior Notes (4.00% senior unsecured notes due October 15, 2023)	791	790
2025 Senior Notes (3.75% senior unsecured notes due December 1, 2025)	1,242	1,241
2027 Senior Notes (3.10% senior unsecured notes due September 15, 2027)	495	—
Total long-term debt	4,267	3,871
Total debt	$ 6,100	$ 6,364

Amended Credit Facility

We had previously entered into a $ 3.4 billion senior unsecured revolving credit facility, or the Credit Facility, with a maturity date of November 13, 2020, pursuant to a credit agreement with Wells Fargo Bank, N.A., or Wells Fargo, as administrative agent, issuing lender and swing-line lender, Bank of America, N.A., as syndication agent, backup administrative agent and swing-line lender, and the lenders party thereto. On August 18, 2017, we agreed with the lenders to, amongst other items, extend the maturity date to August 18, 2022, herein referred to as the Amended Credit Facility. The Amended Credit Facility includes an option for us to propose an increase in the aggregate amount available for borrowing by up to $ 975 million , subject to the consent of the lenders funding the increase and certain other conditions.

Other amendments within the Amended Credit Facility include, but are not limited to, (i) eliminating the step-up in the commitment fee ratings-based grid that was scheduled to take effect in April 2019, (ii) removing ICE Europe Parent Limited as a party to the credit agreement, (iii) removing the guaranty by ICE in respect of ICE Europe Parent Limited, (iv) increasing the maximum leverage ratio to 3.50 :1.00, and (v) up to two times, increasing the maximum leverage ratio from 3.50 :1.00 to 4.00 :1.00 for a period of one year following a material acquisition.

No amounts were outstanding under the Amended Credit Facility as of December 31, 2017 . Amounts borrowed under the Amended Credit Facility may be prepaid at any time without premium or penalty. The Amended Credit Facility provides for a $3.4 billion multi-currency revolving facility, with sub-limits for non-dollar borrowings and letters of credit and with a swing-line facility available on a same-day basis. Of the $3.4 billion that is currently available for borrowing under the Amended Credit Facility, $ 1.2 billion is required to back-stop the amount outstanding under our Commercial Paper Program as of December 31, 2017 and $100 million is required to support certain subsidiary clearing house commitments. The amount required to back-stop the amounts outstanding under the Commercial Paper Program will fluctuate as we increase or decrease our commercial paper borrowings. The remaining $ 2.1 billion available under the Amended Credit Facility as of December 31, 2017 is available to us to use for working capital and general corporate purposes including, but not limited to, acting as a back-stop to future increases in the amounts outstanding under the Commercial Paper Program.

Borrowings under the Amended Credit Facility will bear interest on the principal amount outstanding at either (a) LIBOR plus an applicable margin rate or (b) a “base rate” plus an applicable margin rate; provided, however, that all loans denominated in a foreign currency will bear interest at LIBOR plus an applicable margin rate. The “base rate” equals the higher of (i) Wells Fargo’s prime rate, (ii) the federal funds rate plus 0.50% , or (iii) the one-month LIBOR rate plus 1.00% . The applicable margin rate is based upon our public long-term debt ratings and ranges from 0.875% to 1.50% on LIBOR borrowings and from 0.00% to 0.50% on base rate borrowings.

The Amended Credit Facility includes an unutilized revolving credit commitment fee that is equal to the unused maximum revolver amount, multiplied by an applicable commitment fee rate and is payable in arrears on a quarterly basis. The applicable commitment fee rate ranges from 0.08% to 0.20% and is determined based on our long-term debt rating. As of December 31, 2017 , the applicable commitment fee rate was 0.125% based on our current long-term debt ratings.

Senior Notes

On August 17, 2017, we issued $1.0 billion in aggregate senior notes, including $500 million principal amount of 2.35% senior unsecured fixed rate notes due September 2022, or the 2022 Senior Notes, and $500 million principal amount of 3.10% senior unsecured fixed rate notes due September 2027, or the 2027 Senior Notes. We used the majority of the net proceeds from the 2022 Senior Notes and 2027 Senior Notes offering to fund the redemption of the NYSE Notes.

In November 2015, we issued $2.5 billion in aggregate senior notes, including $1.25 billion principal amount of 2.75% senior unsecured fixed rate notes due November 2020, or the 2020 Senior Notes, and $1.25 billion principal amount of 3.75% senior unsecured fixed rate notes due November 2025, or the 2025 Senior Notes. We used the net proceeds from the 2020 Senior Notes and 2025 Senior Notes offering, together with $1.6 billion of borrowings under our Commercial Paper Program, to finance the $4.1 billion cash portion of the purchase price of the acquisition of Interactive Data.

Commercial Paper Program

We have entered into our Commercial Paper Program, which is currently backed by the borrowing capacity available under the Amended Credit Facility, equal to the amount of the commercial paper that is issued and outstanding at any given point in time. The effective interest rate of commercial paper issuances does not materially differ from short-term interest rates (such as USD LIBOR). The fluctuation of these rates due to market conditions may impact our interest expense.

We repaid $409 million of net notes outstanding under the Commercial Paper Program during the year ended December 31, 2017 primarily using net cash proceeds received from the sale of our investment in Cetip and the sale of Trayport. These repayments were partially offset by notes issued under the Commercial Paper Program during the year ended December 31, 2017 for the cash acquisitions and investments and to repurchase our common stock. We used net proceeds from notes issued under the Commercial Paper Program during the year ended December 31, 2016 to finance part of the cash purchase price of the Securities Evaluations and Credit Market Analysis acquisitions and for general corporate purposes. We used net proceeds from notes issued under the Commercial Paper Program during the year ended December 31, 2015 to finance part of the cash portion of the purchase price of the Interactive Data acquisition and to pay related fees and expenses, to repurchase our common stock, and for general corporate purposes. We repaid a portion of the amounts outstanding under the Commercial Paper Program during the years ended December 31, 2017, 2016 and 2015 with cash flows from operations.

Commercial paper notes of $ 1.2 billion with original maturities ranging from two to 64 days were outstanding as of December 31, 2017 under our Commercial Paper Program. As of December 31, 2017 , the weighted average interest rate on the $ 1.2 billion outstanding under our Commercial Paper Program was 1.49% per annum, with a weighted average maturity of 18 days.

Commercial paper notes of $1.6 billion with original maturities ranging from three to 68 days were outstanding as of December 31, 2016 under the Commercial Paper Program. As of December 31, 2016, the weighted average interest rate on the $1.6 billion outstanding under the Commercial Paper Program was 0.74% per annum, with a weighted average maturity of 18 days.

NYSE Notes

The $ 850 million , 2.00% senior unsecured fixed rate NYSE Notes were due in October 2017. We redeemed the NYSE Notes in full in September 2017 using the majority of the proceeds from the 2022 Senior Notes and 2027 Senior Notes offering.

Refer to note 10 to our consolidated financial statements and related notes, which are included elsewhere in this Annual Report, for additional information on our debt and debt facilities.

Future Capital Requirements

Our future capital requirements will depend on many factors, including the rate of growth across our Trading and Clearing and Data and Listings segments, strategic plans and acquisitions, available sources for financing activities, required technology and clearing initiatives, regulatory requirements, the timing and introduction of new products and enhancements to existing products, the geographic mix of our business, potential stock repurchases, and the continuing market acceptance of our electronic trading and clearing platforms. We currently expect to make aggregate capital expenditures (including operational and real estate capital expenditures) and to incur capitalized software development costs ranging between $300 million and $330 million for the year ended December 31, 2018, which we believe will support the enhancement of our technology, business integration and the continued growth of our businesses.

Our board of directors has adopted a quarterly dividend declaration policy providing that the declaration of any dividends will be determined quarterly by the board of directors or the audit committee of the board of directors taking into account such factors as our evolving business model, prevailing business conditions and our financial results and capital requirements, without a predetermined annual net income payout ratio. During the year ended December 31, 2017 , we paid cash dividends of $0.80 per share of our common stock in the aggregate, including 2017 quarterly dividends of $0.20 per share, for an aggregate payout of $476 million in 2017 , which includes the payment of dividend equivalents on unvested employee restricted stock units. Refer to note 11 to our consolidated financial statements and related notes, which are included elsewhere in this Annual Report, for details on the amounts of our quarterly dividend payouts for the last three years. For the first quarter of 2018, we announced a $0.24 per share dividend, which is a 20% increase over the prior dividend, which is payable on March 29, 2018 to shareholders of record as of March 15, 2018.

As of December 31, 2017 , we had $6.1 billion in outstanding debt. We currently have a $ 3.4 billion Amended Credit Facility. After factoring in the $ 1.2 billion required to back-stop the Commercial Paper Program as of December 31, 2017 and $100 million that is required to support certain subsidiary clearing house commitments, $ 2.1 billion of our Amended Credit Facility is currently available for general corporate purposes. The Amended Credit Facility and our Commercial Paper Program are currently the only significant agreements or arrangements that we have with third parties for liquidity and capital resources. In the event of any strategic acquisitions, mergers or investments, or if we are required to raise capital for any reason or desire to return capital to our stockholders, we may incur additional debt, issue additional equity to raise necessary funds, repurchase additional shares of our common stock or pay a dividend. However, we cannot provide assurance that such financing or transactions will be available or successful, or that the terms of such financing or transactions will be favorable to us. See “- Debt” above.

Non-GAAP Financial Measures

We use non-GAAP measures internally to evaluate our performance and in making financial and operational decisions. When viewed in conjunction with our GAAP results and the accompanying reconciliation, we believe that our presentation of these measures provides investors with greater transparency and a greater understanding of factors affecting our financial condition and results of operations than GAAP measures alone. In addition, we believe the presentation of these measures is useful to investors for period-to-period comparison of results because the items described below as adjustments to GAAP are not reflective of our core business performance. These financial measures are not in accordance with, or an alternative to, GAAP financial measures and may be different from non-GAAP measures used by other companies. We use these adjusted results because we believe they more clearly highlight trends in our business that may not otherwise be apparent when relying solely on GAAP financial measures, since these measures eliminate from our results specific financial items that have less bearing on our core operating performance. We strongly recommend that investors review the GAAP financial measures included in this Annual Report, including our consolidated financial statements and the notes thereto.

Adjusted operating expenses, adjusted operating income, adjusted operating margin, adjusted net income attributable to ICE common shareholders and adjusted earnings per share for the periods presented below are calculated by adding or subtracting the adjustments described below, which are not reflective of our cash operations and core business performance, and their related income tax effect and other tax adjustments (in millions, except for percentages and per share amounts):

	Trading and Clearing Segment			Data and Listings Segment			Consolidated		
	Year Ended December 31,			Year Ended December 31,			Year Ended December 31,		
	2017	2016	2015	2017	2016	2015	2017	2016	2015
Total revenues, less transaction-based expenses	$ 2,128	$ 2,102	$ 2,062	$ 2,501	$ 2,397	$ 1,276	$ 4,629	$ 4,499	$ 3,338
Operating expenses	779	825	915	1,471	1,507	673	2,250	2,332	1,588
Less: Interactive Data and NYSE transaction and integration costs and acquisition-related success fees	—	1	24	31	45	59	31	46	83
Less: Impairment on divestiture of NYSE Governance Services	—	—	—	6	—	—	6	—	—
Less: Accruals relating to ongoing investigations and inquiries	14	—	—	—	—	—	14	—	—
Less: Employee severance costs related to Creditex U.K. brokerage operations	—	4	—	—	—	—	—	4	—
Less: Creditex customer relationship intangible asset impairment	—	33	—	—	—	—	—	33	—
Less: Amortization of acquisition-related intangibles	53	72	82	208	230	58	261	302	140
Adjusted operating expenses	$ 712	$ 715	$ 809	$ 1,226	$ 1,232	$ 556	$ 1,938	$ 1,947	$ 1,365
Operating income	$ 1,349	$ 1,277	$ 1,147	$ 1,030	$ 890	$ 603	$ 2,379	$ 2,167	$ 1,750
Adjusted operating income	$ 1,416	$ 1,387	$ 1,253	$ 1,275	$ 1,165	$ 720	$ 2,691	$ 2,552	$ 1,973
Operating margin	63%	61%	56%	41%	37%	47%	51%	48%	52%
Adjusted operating margin	67%	66%	61%	51%	49%	56%	58%	57%	59%
Net income attributable to ICE							$ 2,514	$ 1,422	$ 1,274
Add: Interactive Data and NYSE transaction and integration costs and acquisition-related success fees							31	46	83
Add: Impairment on divestiture of NYSE Governance Services							6	—	—
Add: Accruals relating to ongoing investigations and inquiries							14	—	—
Add: Employee severance costs related to Creditex U.K. brokerage operations							—	4	—
Add: Creditex customer relationship intangible asset impairment							—	33	—
Add: Amortization of acquisition-related intangibles							261	302	140
Add: Litigation settlements and accruals, net							—	—	15
Add: Pre-acquisition interest expense on debt issued for Interactive Data acquisition							—	—	5
Less: Gain on divestiture of Trayport, net							(110)	—	—
Less: Cetip investment gain, net							(167)	—	—
Less: Income tax effect related to the items above							(43)	(143)	(83)
Less: Tax adjustments on U.S. tax reform							(764)	—	—
Add/(Less): Deferred tax adjustments on acquisition-related intangibles							10	(22)	(82)
Add: Other tax adjustments							—	23	7
Adjusted net income attributable to ICE							$ 1,752	$ 1,665	$ 1,359
Basic earnings per share							$ 4.27	$ 2.39	$ 2.29
Diluted earnings per share							$ 4.23	$ 2.37	$ 2.28
Adjusted basic earnings per share							$ 2.97	$ 2.80	$ 2.44
Adjusted diluted earnings per share							$ 2.95	$ 2.78	$ 2.43
Basic weighted average common shares outstanding							589	595	556
Diluted weighted average common shares outstanding							594	599	559

Acquisition-related transaction costs are included as part of our core business expenses, except for those that are directly related to the announcement, closing, financing or termination of a transaction. However, the acquisition-related transaction and integration costs relating to Interactive Data and NYSE are included in non-GAAP adjustments given the sizes of these acquisitions. As of June 30, 2016, the integration of NYSE has been completed and we will no longer include any NYSE integration costs as non-GAAP

adjustments following this date. Amortization of acquisition-related intangibles are included in non-GAAP adjustments as excluding these non-cash expenses provides greater clarity regarding our financial strength and stability of cash operating results.

During the year ended December 31, 2017, we include as non-GAAP adjustments the Cetip realized investment gain and the foreign exchange loss and transaction expenses on the sale of our investment in Cetip, as the sale of our investment in Cetip is not part of our core business operations. During the year ended December 31, 2017, we include as non-GAAP adjustments the net gain on the divestiture of Trayport, the accruals relating to ongoing investigations and inquiries, and the NYSE Governance Services net loss on its divestiture, as they are non-recurring items. During the year ended December 31, 2016, we include as non-GAAP adjustments the Creditex U.K. voice brokerage severance costs related to its discontinuance and the Creditex customer relationship intangible asset impairment expense, as they are non-recurring items. During the year ended December 31, 2015, we include as non-GAAP adjustments various litigation settlements and accruals and the interest expense on the senior notes and commercial paper we issued for the Interactive Data acquisition (from the issuance date of the new senior notes on November 24, 2015 and on the issuance dates of the commercial paper in early December 2015 to the acquisition date of Interactive Data on December 14, 2015), as they are not part of our core business operations or represent non-recurring items.

The income tax effects relating to the items above are included in non-GAAP adjustments as well as deferred tax adjustments on acquisition-related intangibles and other tax adjustments. The tax items in non-GAAP adjustments are either the tax impacts of the pre-tax non-GAAP adjustments or are tax items as described below that are not in the normal course of business and are not indicative of our core business performance.

The income tax effects of the pre-tax non-GAAP adjustments for the year ended December 31, 2017 include tax benefits associated with the divestiture of NYSE Governance Services. The tax adjustments on U.S. tax reform mainly include the $764 million deferred tax benefit as a result of the enactment of TCJA in the last quarter of 2017, which reduces the corporate income tax rate from 35% to 21%. Deferred tax adjustments on acquisition-related intangibles include the impact of U.S. state tax law and apportionment changes which resulted in deferred tax expense of $10 million, deferred tax expense of $12 million, and deferred tax benefits of $22 million for the years ended December 31, 2017, 2016, and 2015, respectively. In addition, deferred tax adjustments on acquisition-related intangibles include $34 million and $60 million deferred tax benefits due to U.K. corporate income tax rate reductions for the years ended December 31, 2016 and 2015, respectively. Other tax adjustments for the year ended December 31, 2016 relate to a $15 million valuation allowance on Singapore pre-acquisition net operating losses and other deferred tax assets and an $8 million deferred tax adjustment with respect to our OCC equity method investment. Other tax adjustments for the year ended December 31, 2015 represents a $7 million uncertain tax position relating to a retrospective foreign tax law change for a pre-acquisition period.

For additional information on these items, refer to our consolidated financial statements and related notes, which are included elsewhere in this Annual Report and "- Recent Developments," "- Consolidated Operating Expenses", "- Consolidated Non-Operating Income (Expenses)" and "- Consolidated Income Tax Provision" above.

Off-Balance Sheet Arrangements

Except for certain clearing house collateral that is reported off-balance sheet, we do not have any relationships with unconsolidated entities or financial partnerships, often referred to as structured finance or special purpose entities, which have been established for the purpose of facilitating off-balance sheet arrangements or other contractually narrow or limited purposes. Refer to note 13 to our consolidated financial statements and related notes, which are included elsewhere in this Annual Report, for more information on our clearing houses' collateral.

Contractual Obligations and Commercial Commitments

The following table presents, for the periods indicated, our contractual obligations (which we intend to fund from our existing cash as well as cash flow from operations) and commercial commitments as of December 31, 2017 (in millions):

	Payments Due by Period				
	Total	Less Than 1 Year	1-3 Years	4-5 Years	After 5 Years
Contractual Obligations:					
Short-term and long-term debt and interest	$ 7,036	$ 1,993	$ 1,637	$ 1,500	$ 1,906
Operating lease obligations	521	78	218	63	162
Purchase obligations	188	101	76	11	—
Total contractual cash obligations	$ 7,745	$ 2,172	$ 1,931	$ 1,574	$ 2,068

Purchase obligations include our estimate of the minimum outstanding obligations under agreements to purchase goods or services that we believe are enforceable and legally binding and that specify all significant terms, including: fixed or minimum

quantities to be purchased; fixed, minimum or variable price provisions; and the approximate timing of the transaction. Purchase obligations exclude agreements that are cancellable at any time without penalty.

We have excluded from the contractual obligations and commercial commitments table above $51.2 billion in cash margin deposits, guaranty funds and delivery contracts payable. Clearing members of our clearing houses are required to deposit original margin and variation margin and to make deposits to a guaranty fund. The cash deposits made to these margin accounts and to the guaranty fund are recorded in the consolidated balance sheet as current assets with corresponding current liabilities to the clearing members that deposited them. NGX administers the physical delivery of energy trading contracts. It has an equal and offsetting claim to and from their respective participants on opposite sides of the physically settled contract. This balance is reflected as a delivery contract receivable with an offsetting delivery contract payable. See note 13 to our consolidated financial statements and related notes that are included elsewhere in this Annual Report for additional information on our clearing houses and the margin deposits, guaranty funds and delivery contracts payable.

We have also excluded unrecognized tax benefits, or UTBs, from the contractual obligations and commercial commitments table above. As of December 31, 2017 , our cumulative UTBs were $115 million. Interest and penalties related to UTBs were $35 million as of December 31, 2017 . We are under examination by various tax authorities. We are unable to make a reasonable estimate of the periods of cash settlement because it is not possible to reasonably predict the amount of tax, interest and penalties, if any, that might be assessed by a tax authority or the timing of an assessment or payment. It is also not possible to reasonably predict whether or not the applicable statutes of limitations might expire without us being examined by any particular tax authority. See note 12 to our consolidated financial statements and related notes that are included elsewhere in this Annual Report for additional information on our UTBs.

As of December 31, 2017 , in connection with our acquisition of NYSE, we have obligations related to our pension and other benefit programs. The date of payment under these obligations cannot be determined and have been excluded from the table above. See note 15 to our consolidated financial statements and related notes that are included elsewhere in this Annual Report for additional information on our pension and other benefit programs.

We have a 40% ownership in OCC. Under the OCC's capital plan, the OCC shareholders have committed to contribute up to $200 million in equity capital if certain capital thresholds are breached, including up to $80 million to be contributed by NYSE, which has also been excluded from the table above.

New and Recently Adopted Accounting Pronouncements

Refer to Note 2 to our consolidated financial statements and related notes included elsewhere in this Annual Report for information on the new and recently adopted accounting pronouncements that are applicable to us.

Critical Accounting Policies

We have identified the policies below as critical to our business operations and the understanding of our results of operations. The impact of, and any associated risks related to, these policies on our business operations is discussed throughout "- Management's Discussion and Analysis of Financial Condition and Results of Operations." For a detailed discussion on the application of these and other accounting policies, see note 2 to our consolidated financial statements and related notes included elsewhere in this Annual Report. Our discussion and analysis of our financial condition and results of operations are based upon our consolidated financial statements, which have been prepared in accordance with U.S. GAAP. The preparation of financial statements in conformity with these accounting principles requires us to make estimates and assumptions that affect the reported amount of assets and liabilities, and the disclosure of contingent assets and liabilities, at the date of our financial statements and the reported amounts of revenues and expenses during the reporting period.

We evaluate our estimates and judgments on an ongoing basis, including those related to the accounting matters described below. We base our estimates and judgments on our historical experience and other factors that we believe to be reasonable under the circumstances when we make these estimates and judgments. Based on these factors, we make estimates and judgments about, among other things, the carrying values of assets and liabilities that are not readily apparent from market prices or other independent sources and about the recognition and characterization of our revenues and expenses. The values and results based on these estimates and judgments could differ significantly under different assumptions or conditions and could change materially in the future.

We believe that the following critical accounting policies, among others, affect our more significant judgments and estimates used in the preparation of our consolidated financial statements and could materially increase or decrease our reported results, assets and liabilities.

Goodwill and Other Identifiable Intangible Assets

We have significant intangible assets related to goodwill and other acquired intangible assets. In connection with our acquisitions, assets acquired and liabilities assumed are recorded at their estimated fair values. Goodwill represents the excess of the purchase price of our acquisitions over the fair value of identifiable net assets acquired, including other identified intangible assets. We recognize specifically identifiable intangibles when a specific right or contract is acquired. Our determination of the fair value of the intangible assets and whether or not these assets are impaired requires us to make significant judgments and requires us to use significant estimates and assumptions regarding estimated future cash flows. If we change our strategy or if market conditions shift, our judgments may change, which may result in adjustments to recorded asset balances. As of December 31, 2017 , we had goodwill of $12.2 billion and net other intangible assets of $10.3 billion relating to our acquisitions and our purchase of trademarks and Internet domain names from various third parties. We do not amortize goodwill or other intangible assets with indefinite useful lives. Intangible assets with finite useful lives are amortized over their estimated useful lives.

In performing the purchase price allocation, we consider, among other factors, the intended future use of acquired assets, analysis of historical financial performance and estimates of future performance of the acquired business. At the acquisition date, a preliminary allocation of the purchase price is recorded based upon a preliminary valuation. We continue to review and validate estimates, assumptions and valuation methodologies underlying the preliminary valuation during the measurement period. Accordingly, these estimates and assumptions are subject to change, which could have a material impact on our consolidated financial statements. The measurement period ends as soon as we receive the information about facts and circumstances that existed as of the acquisition date or we learn that more information is not obtainable, which usually does not exceed one year from the date of acquisition.

Our goodwill and other indefinite-lived intangible assets are evaluated for impairment annually in our fiscal fourth quarter or more frequently if conditions exist that indicate that the value may be impaired. We test our goodwill for impairment at the reporting unit level. These impairment evaluations are performed by comparing the carrying value of the goodwill of the reporting unit or other indefinite-lived intangibles to its estimated fair value. We allocate goodwill to reporting units based on the reporting unit expected to benefit from the business combination. We have identified four reporting units: our Futures reporting unit, our Data and Listings reporting unit, our Cash Equities reporting unit, and our CDS reporting unit.

Goodwill impairment testing consists of a two-step methodology. The initial step requires us to determine the fair value of each reporting unit and compare it to the carrying value, including goodwill and other intangible assets, of such reporting unit. If the fair value exceeds the carrying value, no impairment loss is recognized and the second step, which is a calculation of the impairment, is not performed. However, if the carrying value of the reporting unit exceeds its fair value, an impairment charge is recorded equal to the extent that the carrying amount of goodwill exceeds its implied fair value. For annual goodwill impairment testing, we have the option to first perform a qualitative assessment to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount, including goodwill and other intangible assets. If we conclude that this is the case, we must perform the two-step methodology described above. Otherwise, we can skip the two-step methodology and do not need to perform any further testing. For annual indefinite-lived intangible asset impairment testing, we also have the option to first perform a qualitative assessment to determine whether it is more likely than not that the fair value of the indefinite-lived intangible assets is less than its carrying amount.

Application of the impairment test requires judgment, including the identification of reporting units, assignment of assets and liabilities to reporting units, assignment of goodwill to reporting units, and determination of the fair value of each reporting unit. We have historically determined the fair value of our reporting units based on various valuation techniques, including discounted cash flow analysis and a multiple of earnings approach. In assessing whether goodwill and other intangible assets are impaired, we must make estimates and assumptions regarding future cash flows, long-term growth rates of our business, operating margins, discount rates, weighted average cost of capital and other factors to determine the fair value of our assets. These estimates and assumptions require management's judgment, and changes to these estimates and assumptions, as a result of changing economic and competitive conditions, could materially affect the determination of fair value and/or impairment. The cash flows employed in the discounted cash flow analysis are based on our most recent budgets and business plans and, when applicable, various growth rates have been assumed for years beyond the current business plan period. Future events could cause us to conclude that indicators of impairment exist for goodwill or other intangible assets. Impairment may result from, among other things, deterioration in the performance of our business, adverse market conditions, adverse changes in applicable laws and regulations, competition, or the sale or disposition of a reporting unit. Any resulting impairment loss could have a material adverse impact on our financial condition and results of operations. Our impairment analysis has not resulted in any impairment of goodwill through December 31, 2017 .

We are also required to evaluate other finite-lived intangible assets and property and equipment for impairment by first determining whether events or changes in circumstances indicate that the carrying value of these assets to be held and used may not be recoverable. If impairment indicators are present, then an estimate of undiscounted future cash flows produced by these long-lived assets is compared to the carrying value of those assets to determine if the asset is recoverable. If an asset is not recoverable, the loss is measured as the difference between fair value and carrying value of the impaired asset. Fair value of these assets is based on various valuation techniques, including discounted cash flow analysis.

In August 2016, we sold certain of Creditex's U.S. voice brokerage operations to Tullett Prebon. During the third quarter of 2016, we discontinued Creditex's U.K. voice brokerage operations. We continue to operate Creditex's electronically traded markets and systems, post-trade connectivity platforms and intellectual property. After the sale and the discontinuance of the voice brokerage operations, it was determined that the carrying value of the CDS Creditex customer relationship intangible asset was not fully recoverable and an impairment of the asset was recorded in September 2016 for $33 million. The impairment was recorded as amortization expense in the consolidated statements of income for the year ended December 31, 2016.

Income Taxes

We are subject to income taxes in the U.S., U.K. and other foreign jurisdictions where we operate. The determination of our provision for income taxes and related accruals, deferred tax assets and liabilities requires significant judgment, the use of estimates, and the interpretation and application of complex tax laws. We recognize a current tax liability or tax asset for the estimated taxes payable or refundable on tax returns for the current year. We recognize deferred tax assets and liabilities for the expected future tax consequences of temporary differences between the financial statement carrying amounts and the tax bases of our assets and liabilities. We establish valuation allowances if we believe that it is more likely than not that some or all of our deferred tax assets will not be realized. Deferred tax assets and liabilities are measured using current enacted tax rates in effect for the years in which those temporary differences and carryforwards are expected to reverse.

SEC Staff Accounting Bulletin No. 118, or SAB 118, has provided guidance for companies that have not completed their accounting for the income tax effects of the TCJA in the period of enactment, allowing for a measurement period of up to one year after the enactment date to finalize the recording of the related tax impacts. As of December 31, 2017, we have not completed our accounting for the tax effects of the enactment of the TCJA, however, we have made a reasonable estimate of the effects on our deferred tax balances and in relation to the transition tax. In other cases, we have not been able to make a reasonable estimate and will continue to analyze the TCJA in order to finalize any related impacts within the measurement period. The FASB Staff also provided additional guidance to address the accounting for the effects of the provisions related to the taxation of Global Intangible Low-Taxed Income, or GILTI, noting that companies should make an accounting policy election to recognize deferred taxes for temporary basis differences expected to reverse as GILTI in future years or to include the tax expense in the year it is incurred. We have not completed our analysis of the effects of the GILTI provisions and will further consider the accounting policy election within the measurement period as provided for under SAB 118.

We do not recognize a tax benefit unless we conclude that it is more likely than not that the benefit will be sustained on audit by the taxing authority based solely on the technical merits of the associated tax position. If the recognition threshold is met, we recognize a tax benefit measured at the largest amount of the tax benefit that, in our judgment, is greater than 50 percent likely to be realized. We recognize accrued interest and penalties related to uncertain income tax positions as income tax expense in the consolidated statements of income.

We operate within multiple domestic and foreign taxing jurisdictions and are subject to audit in these jurisdictions by domestic and foreign tax authorities. These audits include questions regarding our tax filing positions, including the timing and amount of deductions taken and the allocation of income among various tax jurisdictions. We record accruals for the estimated outcomes of these audits, and the accruals may change in the future due to new developments in each matter. At any point in time, many tax years are subject to or in the process of being audited by various taxing authorities. To the extent our estimates of settlements change or the final tax outcome of these matters is different from the amounts recorded, such differences will impact the income tax provision in the period in which such determinations are made. Our income tax expense includes changes in our estimated liability for exposures associated with our various tax filing positions. Determining the income tax expense for these potential assessments requires management to make assumptions that are subject to factors such as proposed assessments by tax authorities, changes in facts and circumstances, issuance of new regulations, and resolution of tax audits.

We believe the judgments and estimates discussed above are reasonable. However, if actual results are not consistent with our estimates or assumptions, we may be exposed to losses or gains that could be material.

ITEM 7 (A). *QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK*

As a result of our operating and financing activities, we are exposed to market risks such as interest rate risk, foreign currency exchange rate risk and credit risk. We have implemented policies and procedures designed to measure, manage, monitor and report risk exposures, which are regularly reviewed by the appropriate management and supervisory bodies.

Interest Rate Risk

We have exposure to market risk for changes in interest rates relating to our cash and cash equivalents, short-term investments, short-term and long-term restricted cash and investments, and indebtedness. As of December 31, 2017 and 2016 , our cash and cash equivalents, short-term investments and short-term and long-term restricted cash and cash equivalents were $1.6 billion and $1.4 billion, respectively, of which $293 million and $272 million, respectively, were denominated in pounds sterling, euros or Canadian

dollars. The remaining cash and cash equivalents, short-term investments and short-term and long-term restricted cash and cash equivalents are denominated in U.S. dollars. We do not use our investment portfolio for trading or other speculative purposes. A hypothetical decrease in long-term interest rates to zero basis points would decrease annual pre-tax earnings by $8 million as of December 31, 2017 , assuming no change in the amount or composition of our cash and cash equivalents, short-term investments and short-term and long-term restricted cash and cash equivalents.

As of December 31, 2017 , we had $6.1 billion in outstanding debt, of which $4.9 billion relates to our senior notes, which bear interest at fixed interest rates. The remaining amount outstanding of $1.2 billion relates to the Commercial Paper Program, which bears interest at fluctuating rates and, therefore, subjects us to interest rate risk. A hypothetical 100 basis point increase in long-term interest rates relating to the amounts outstanding under the Commercial Paper Program as of December 31, 2017 would decrease annual pre-tax earnings by $12 million, assuming no change in the volume or composition of our outstanding indebtedness and no hedging activity. See Item 7 "- Management's Discussion and Analysis of Financial Condition and Results of Operations - Debt" included elsewhere in this Annual Report.

The interest rates on our Commercial Paper Program are currently evaluated based upon current maturities and market conditions. The weighted average interest rate on our Commercial Paper Program increased from 0.74% as of December 31, 2016 to 1.49% as of December 31, 2017. The increase in the Commercial Paper Program weighted average interest rate was primarily due to the decisions by the U.S. Federal Reserve in March 2017, in June 2017 and in December 2017 to increase the federal funds short-term interest rate by an aggregate 75 basis points to 1.50%. The Federal Reserve also signaled that they intend to continue to increase the federal fund short-term interest rate over the next several years, and if this occurs, this will continue to increase the weighted average interest rate on our Commercial Paper Program.

Foreign Currency Exchange Rate Risk

As an international business, we are subject to foreign currency exchange rate risk. We may experience gains or losses from foreign currency transactions in the future given that a significant part of our assets, liabilities, revenues and expenses are recorded in pounds sterling or euros. Certain assets, liabilities, revenues and expenses of foreign subsidiaries are denominated in the local functional currency of such subsidiaries. Our exposure to foreign denominated earnings for the years ended December 31, 2017 and 2016 is presented by primary foreign currency in the following table (dollars in millions, except exchange rates):

	Year Ended December 31, 2017		Year Ended December 31, 2016	
	Pound Sterling	Euro	Pound Sterling	Euro
Average exchange rate to the U.S. dollar	$ 1.2890	$ 1.1297	$ 1.3603	$ 1.1075
Average exchange rate to the U.S. dollar for the prior year	$ 1.3603	$ 1.1075	$ 1.5292	$ 1.1117
Average exchange rate change from prior year	(5)%	2%	(11)%	—%
Foreign denominated percentage of:				
Revenues, less transaction-based expenses	10 %	4%	10 %	5%
Operating expenses	12 %	3%	14 %	4%
Operating income	9 %	6%	7 %	7%
Impact of the currency fluctuations [(1)] on:				
Revenues, less transaction-based expenses	$ (26)	$ 4	$ (58)	$ (1)
Operating expenses	$ (14)	$ 1	$ (40)	$ —
Operating income	$ (12)	$ 3	$ (18)	$ (1)

(1) Represents the impact of currency fluctuation for the year compared to the same period in the prior year.

We have a significant part of our assets, liabilities, revenues and expenses recorded in pounds sterling or euros. For the years ended December 31, 2017 , 2016 and 2015, 15%, 15% and 15%, respectively, of our consolidated revenues, less transaction-based expenses, were denominated in pounds sterling or euros, and 14%, 18%, and 12%, respectively, of our consolidated operating expenses were denominated in pounds sterling or euros. As the pound sterling or euro exchange rate changes, the U.S. equivalent of revenues and expenses denominated in foreign currencies changes accordingly.

We have foreign currency transaction risk related to the settlement of foreign currency denominated assets, liabilities and payables that occur through our operations, which are received in or paid in pounds sterling or euros, due to the increase or decrease in the foreign currency exchange rates between periods. We had foreign currency transaction losses of $4 million, $1 million and $14 million for the years ended December 31, 2017 , 2016 and 2015 , respectively. The foreign currency transactions losses were primarily attributable to the fluctuations of the pound sterling and euro relative to the U.S. dollar. A 10% adverse change in the underlying foreign currency exchange rates as of December 31, 2017 would result in a foreign currency transaction loss of $3 million, assuming no change in the composition of the foreign currency denominated assets, liabilities and payables and assuming no hedging activity.

We entered into foreign currency hedging transactions during years ended December 31, 2017 , 2016 and 2015 as economic hedges to help mitigate a portion of our foreign exchange risk exposure and may enter into additional hedging transactions in the future to help mitigate our foreign exchange risk exposure. Although we may enter into additional hedging transactions in the future to help mitigate our foreign exchange risk exposure, these hedging arrangements may not be effective, particularly in the event of imprecise forecasts of the levels of our non-U.S. denominated assets and liabilities.

We have foreign currency translation risk equal to our net investment in our foreign subsidiaries. The financial statements of these subsidiaries are translated into U.S. dollars using a current rate of exchange, with gains or losses included in the cumulative translation adjustment account, a component of equity. Our exposure to the net investment in foreign currencies is presented by primary foreign currencies in the table below (in millions):

	As of December 31, 2017					
	Position in pounds sterling		Position in Canadian dollars		Position in euros	
Assets	£	829	C$	1,654	€	145
of which goodwill represents		268		162		43
Liabilities		96		1,026		42
Net currency position	£	733	C$	628	€	103
Impact on consolidated equity of a 10% decrease in foreign currency exchange rates	$	99	$	50	$	12

As of December 31, 2017 and 2016 , the portion of our equity attributable to accumulated other comprehensive loss from foreign currency translation was $136 million and $345 million, respectively. As of December 31, 2017 , we had net exposure of pounds sterling, Canadian dollars and euros of £733 million ($990 million), C$628 million ($500 million), and €103 million ($124 million), respectively. Based on these December 31, 2017 net currency positions, a hypothetical 10% decrease of pound sterling against U.S. dollar would negatively impact our equity by $99 million, a hypothetical 10% decrease of Canadian dollar against U.S. dollar would negatively impact our equity by $50 million, and a hypothetical 10% decrease of euro against U.S. dollar would negatively impact our equity by $12 million. For the years ended December 31, 2017 , 2016 and 2015 , currency exchange rate differences had a positive/(negative) impact of $209 million, ($300 million) and ($58 million), respectively, on our consolidated equity. The increase for the year ended December 31, 2017 is primarily due to the increase in the pound sterling/U.S. dollar exchange rate to 1.3510 as of December 31, 2017 (from 1.2336 as of December 31, 2016) due to the strengthening pound sterling. The decrease for the year ended December 31, 2016 is primarily due to the decrease in the pound sterling/U.S. dollar exchange rate to 1.2336 as of December 31, 2016 (from 1.4868 as of December 31, 2015) due to the weakening pound sterling. The pound sterling decreased starting in June 2016 following the U.K. referendum that resulted in a vote for the U.K. to leave the EU. The future impact on our business relating to the U.K. leaving the EU and the corresponding regulatory changes are uncertain at this time, including future impacts on currency exchange rates.

Credit Risk

We are exposed to credit risk in our operations in the event of a counterparty default. We limit our exposure to credit risk by rigorously selecting the counterparties with which we make our investments and execute agreements.

Clearing House Cash Deposit Risks

Our clearing houses hold material amounts of clearing member cash deposits which are held or invested primarily to provide security of capital while minimizing credit, market and liquidity risks. Refer to note 13 to our consolidated financial statements, which are included elsewhere in this Annual Report, for more information about clearing house cash deposits and delivery contracts, which were $51.2 billion as of December 31, 2017 . While we seek to achieve a reasonable rate of return which may generate interest income for our clearing members, we are primarily concerned with preservation of capital and managing the risks associated with these deposits. As the clearing houses may pass on interest revenues (minus costs) to the members, this could include negative or reduced yield due to market conditions. The following is a summary of the risks associated with these deposits and how these risks are mitigated.

Credit Risk

When a clearing house has the ability to hold cash collateral at a central bank, the clearing house utilizes its access to the central bank system to minimize credit risk exposures. Credit risk is monitored by using exposure limits reflecting a number of factors including ratings assigned by rating agencies, CDS spreads and internal ratings, as well as the nature and maturity of transactions. We seek to substantially mitigate credit risk associated with investments by ensuring financial assets are placed with governments, well-capitalized financial institutions and other creditworthy counterparties.

An ongoing review is performed to evaluate changes in the financial status of counterparties. In addition to the intrinsic creditworthiness of counterparties, our policies require diversification of counterparties (banks, financial institutions, bond issuers and funds) to avoid a concentration of risk.

Liquidity Risk

Liquidity risk is the risk a clearing house may not be able to meet its payment obligations in the right currency, in the right place and the right time. To mitigate this risk, the clearing houses monitor liquidity requirements closely and maintain funds and assets in a manner which minimizes the risk of loss or delay in the access by the clearing house to such funds and assets. For example, holding funds with a central bank where possible or making only short term investments such as overnight reverse repurchase agreements serves to reduce liquidity risks.

Interest Rate Risk

Interest rate risk is the risk that interest rates rise causing the value of purchased securities to decline. If we were required to sell securities prior to maturity, and interest rates had risen, the sale of the securities might be made at a loss relative to the latest market price. Our clearing houses seek to manage this risk by making short term investments of cash deposits. For example, where possible and in accordance with regulatory requirements, the clearing houses invest cash pursuant to overnight reverse repurchase agreements or term reverse repurchase agreements with short dated maturities. In addition, the clearing house investment guidelines allow for direct purchases of high quality sovereign debt (for example, U.S. Treasury securities) and supranational debt instruments (Euro cash deposits only) with short dated maturities.

Security Issuer Risk

Security issuer risk is the risk that an issuer of a security defaults on its payment when the security matures. This risk is mitigated by limiting allowable investments under the reverse repurchase agreements to high quality sovereign or government agency debt and limiting any direct investments to high quality sovereign debt instruments.

Investment Counterparty Risk

Investment counterparty risk is the risk that a reverse repurchase agreement counterparty might become insolvent and, thus, fail to meet its obligations to our clearing houses. We mitigate this risk by only engaging in transactions with high credit quality reverse repurchase agreement counterparties and by limiting the acceptable collateral under the repurchase agreement to high quality issuers. When engaging in reverse repurchase agreements, our clearing houses take delivery of the underlying reverse repurchase securities in custody accounts under clearing house control. Additionally, the securities purchased subject to reverse repurchase have a market value greater than the reverse repurchase amount. The typical haircut received for high quality sovereign debt is 2% of the reverse repurchase amount. Thus, in the event that a reverse repurchase counterparty defaults on its obligation to repurchase the underlying reverse repurchase securities, our clearing house will have possession of a security with a value potentially greater than the reverse repurchase counterparty's obligation to the clearing house.

Our clearing houses may use third party investment advisors who make investments subject to the guidelines provided to them by the clearing house. Such investment advisors do not hold clearing member cash deposits or the underlying investments. Clearing house property is held in custody accounts under clearing house control. Clearing house property is held with credit worthy custodians including JPMorgan Chase Bank N.A., Citibank N.A., BNY Mellon, BMO Harris N.A. and Euroclear Bank Brussels (for non-U.S. dollar deposits). Each clearing house employs (or may employ) multiple investment advisors and custodians to ensure that in the event a single investment advisor or custodian is unable to fulfill its role, additional investment advisors or custodians are available as alternatives.

Cross-Currency Margin Deposit Risk

Each of our clearing houses, pursuant to their rules, may permit posting of cross-currency collateral to satisfy margin requirements (for example, accepting margin deposits denominated in U.S. dollars to secure a Euro margin obligation). The clearing houses mitigate the risk of a decline in currency value by applying a "haircut" to the currency posted as margin at a level sufficient to provide financial protection during periods of high currency volatility. Cross-currency balances are marked-to-market on a daily basis. Should the currency posted to satisfy margin requirements decline in value, the clearing member is required to increase its margin deposit on a same-day basis.

Impact of Inflation

We have not been adversely affected by inflation as technological advances and competition have generally caused prices for the hardware and software that we use for our electronic platforms to remain constant. In the event of inflation, we believe that we will be able to pass on any price increases to our participants, as the prices that we charge are not governed by long-term contracts.

ITEM 8. ***FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA***

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

REPORT OF MANAGEMENT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

Our management is responsible for the preparation and integrity of the consolidated financial statements appearing in our Annual Report on Form 10-K. The financial statements were prepared in conformity with generally accepted accounting principles appropriate in the circumstances and, accordingly, include certain amounts based on our best judgments and estimates.

Our management is responsible for establishing and maintaining adequate internal control over financial reporting as such term is defined in Rule 13a-15(f) and 15d-a5(f) under the Securities Exchange Act of 1934 ("Exchange Act"). Our internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of the consolidated financial statements. Our internal control over financial reporting is supported by a program of internal audits and appropriate reviews by management, written policies and guidelines, careful selection and training of qualified personnel and a written Global Code of Business Conduct adopted by our Board of Directors, applicable to all of our directors and all officers and all of our employees.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements and even when determined to be effective, can only provide reasonable assurance with respect to financial statement preparation and presentation. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Management assessed the effectiveness of our internal control over financial reporting as of December 31, 2017. In making this assessment, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO") in Internal Control - Integrated Framework (2013 framework). Based on our assessment, management believes that we maintained effective internal control over financial reporting as of December 31, 2017.

As permitted by SEC regulations, our management has excluded Natural Gas Exchange Inc. from its assessment of internal control over financial reporting as of December 31, 2017 since Natural Gas Exchange Inc. was acquired in a purchase business combination on December 14, 2017. Natural Gas Exchange Inc. is a wholly-owned subsidiary and had total and net assets not subject to our assessment of internal controls of $1.1 billion and $301 million, respectively, as of December 31, 2017.

Our independent auditors, Ernst & Young LLP, a registered public accounting firm, are appointed by the Audit Committee, subject to ratification by our shareholders. Ernst & Young LLP has audited and reported on our consolidated financial statements and the effectiveness of our internal control over financial reporting. The reports of our independent registered public accounting firm are contained in this Annual Report.

/s/ Jeffrey C. Sprecher	/s/ Scott A. Hill
Jeffrey C. Sprecher	Scott A. Hill
Chairman of the Board and	Chief Financial Officer
Chief Executive Officer	
February 7, 2018	February 7, 2018

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM ON INTERNAL CONTROL OVER FINANCIAL REPORTING

To the Shareholders and the Board of Directors of Intercontinental Exchange, Inc.

Opinion on Internal Control Over Financial Reporting

We have audited Intercontinental Exchange, Inc. and Subsidiaries' internal control over financial reporting as of December 31, 2017, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). In our opinion, Intercontinental Exchange, Inc. and Subsidiaries' (the Company) maintained, in all material respects, effective internal control over financial reporting as of December 31, 2017, based on the COSO criteria.

As indicated in the accompanying "Report of Management on Internal Control over Financial Reporting", management's assessment of and conclusion on the effectiveness of internal control over financial reporting did not include the internal controls of Natural Gas Exchange Inc., which is included in the 2017 consolidated financial statements of the Company and constituted $1.1 billion and $301 million of total and net assets, respectively, as of December 31, 2017. Our audit of internal control over financial reporting of the Company also did not include an evaluation of the internal control over financial reporting of Natural Gas Exchange Inc.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of Intercontinental Exchange, Inc. and Subsidiaries as of December 31, 2017 and 2016, and the related consolidated statements of income, comprehensive income, changes in equity, accumulated other comprehensive income (loss) and redeemable non-controlling interest, and cash flows for each of the three years in the period ended December 31, 2017 of the Company, and our report dated February 7, 2018 expressed an unqualified opinion thereon.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying "Report of Management on Internal Control Over Financial Reporting". Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects.

Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ Ernst & Young LLP

Atlanta, Georgia
February 7, 2018

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM ON FINANCIAL STATEMENTS

To the Shareholders and the Board of Directors of Intercontinental Exchange, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Intercontinental Exchange, Inc. and Subsidiaries (the Company) as of December 31, 2017 and 2016, and the related consolidated statements of income, comprehensive income, changes in equity, accumulated other comprehensive income (loss) and redeemable non-controlling interest, and cash flows for each of the three years in the period ended December 31, 2017, and the related notes (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the consolidated financial position of the Company at December 31, 2017 and 2016, and the consolidated results of its operations and its cash flows for each of the three years in the period ended December 31, 2017, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2017, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 Framework), and our report dated February 7, 2018 expressed an unqualified opinion thereon.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ Ernst & Young LLP

We have served as the Company's auditor since 2002.

Atlanta, Georgia
February 7, 2018

Intercontinental Exchange, Inc. and Subsidiaries
Consolidated Balance Sheets
(In millions, except per share amounts)

	As of December 31,	
	2017	**2016**
Assets:		
Current assets:		
Cash and cash equivalents	$ 535	$ 407
Short-term restricted cash and cash equivalents	769	679
Short-term investments	16	23
Customer accounts receivable, net of allowance for doubtful accounts of $6 and $7 at December 31, 2017 and 2016, respectively	903	777
Margin deposits, guaranty funds and delivery contracts receivable	51,222	55,150
Prepaid expenses and other current assets	117	97
Total current assets	53,562	57,133
Property and equipment, net	1,246	1,129
Other non-current assets:		
Goodwill	12,216	12,291
Other intangible assets, net	10,269	10,420
Long-term restricted cash and cash equivalents	264	264
Long-term investments	—	432
Other non-current assets	707	334
Total other non-current assets	23,456	23,741
Total assets	$ 78,264	$ 82,003
Liabilities and Equity:		
Current liabilities:		
Accounts payable and accrued liabilities	$ 462	$ 388
Section 31 fees payable	128	131
Accrued salaries and benefits	227	230
Deferred revenue	121	114
Short-term debt	1,833	2,493
Margin deposits, guaranty funds and delivery contracts payable	51,222	55,150
Other current liabilities	178	111
Total current liabilities	54,171	58,617
Non-current liabilities:		
Non-current deferred tax liability, net	2,283	2,958
Long-term debt	4,267	3,871
Accrued employee benefits	243	430
Other non-current liabilities	348	337
Total non-current liabilities	7,141	7,596
Total liabilities	61,312	66,213
Commitments and contingencies		
Redeemable non-controlling interest	—	36
Equity:		
Intercontinental Exchange, Inc. shareholders' equity:		
Preferred stock, $0.01 par value; 100 shares authorized; no shares issued or outstanding at December 31, 2017 and 2016	—	—
Common stock, $0.01 par value; 1,500 shares authorized; 600 and 583 shares issued and outstanding at December 31, 2017, respectively, and 596 and 595 shares issued and outstanding at December 31, 2016, respectively	6	6
Treasury stock, at cost; 17 and 1 shares at December 31, 2017 and 2016, respectively	(1,076)	(40)
Additional paid-in capital	11,392	11,306
Retained earnings	6,825	4,789
Accumulated other comprehensive loss	(223)	(344)
Total Intercontinental Exchange, Inc. shareholders' equity	16,924	15,717
Non-controlling interest in consolidated subsidiaries	28	37

Total equity	16,952	15,754
Total liabilities and equity	$ 78,264	$ 82,003

See accompanying notes.

Intercontinental Exchange, Inc. and Subsidiaries
Consolidated Statements of Income
(In millions, except per share amounts)

	Year Ended December 31,		
	2017	**2016**	**2015**
Revenues:			
Transaction and clearing, net	$ 3,131	$ 3,384	$ 3,228
Data services	2,084	1,978	871
Listings	417	419	405
Other revenues	202	177	178
Total revenues	5,834	5,958	4,682
Transaction-based expenses:			
Section 31 fees	372	389	349
Cash liquidity payments, routing and clearing	833	1,070	995
Total revenues, less transaction-based expenses	4,629	4,499	3,338
Operating expenses:			
Compensation and benefits	937	945	611
Professional services	121	137	139
Acquisition-related transaction and integration costs	36	80	88
Technology and communication	397	374	203
Rent and occupancy	69	70	57
Selling, general and administrative	155	116	116
Depreciation and amortization	535	610	374
Total operating expenses	2,250	2,332	1,588
Operating income	2,379	2,167	1,750
Other income (expense):			
Interest expense	(187)	(178)	(97)
Other income, net	325	40	—
Other income (expense), net	138	(138)	(97)
Income before income tax expense (benefit)	2,517	2,029	1,653
Income tax expense (benefit)	(25)	580	358
Net income	$ 2,542	$ 1,449	$ 1,295
Net income attributable to non-controlling interest	(28)	(27)	(21)
Net income attributable to Intercontinental Exchange, Inc.	$ 2,514	$ 1,422	$ 1,274
Earnings per share attributable to Intercontinental Exchange, Inc. common shareholders:			
Basic	$ 4.27	$ 2.39	$ 2.29
Diluted	$ 4.23	$ 2.37	$ 2.28
Weighted average common shares outstanding:			
Basic	589	595	556
Diluted	594	599	559
Dividend per share	$ 0.80	$ 0.68	$ 0.58

See accompanying notes.

Intercontinental Exchange, Inc. and Subsidiaries
Consolidated Statements of Comprehensive Income
(In millions)

	Year Ended December 31,		
	2017	**2016**	**2015**
Net income	$ 2,542	$ 1,449	$ 1,295
Other comprehensive income (loss):			
Foreign currency translation adjustments, net of tax benefit of ($6), ($22) and ($4) for the years ended December 31, 2017, 2016 and 2015, respectively	133	(300)	(58)
Change in fair value of available-for-sale securities	68	134	(81)
Reclassification of realized gain on available-for-sale investment to other income	(176)	—	—
Reclassification of foreign currency translation loss on sale of Trayport to other expense	76	—	—
Comprehensive income from equity method investment	—	—	2
Employee benefit plan net gains (losses), net of tax expense of $8 and $7 for the years ended December 31, 2017 and 2016, respectively	20	10	(5)
Other comprehensive income (loss)	121	(156)	(142)
Comprehensive income	$ 2,663	$ 1,293	$ 1,153
Comprehensive income attributable to non-controlling interest	(28)	(27)	(21)
Comprehensive income attributable to Intercontinental Exchange, Inc.	$ 2,635	$ 1,266	$ 1,132

See accompanying notes.

Intercontinental Exchange, Inc. and Subsidiaries
Consolidated Statements of Changes in Equity, Accumulated Other Comprehensive Income (Loss) and Redeemable Non-Controlling Interest
(In millions)

	Intercontinental Exchange, Inc. Shareholders' Equity									
	Common Stock		Treasury Stock		Additional Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Non-Controlling Interest in Consolidated Subsidiaries	Total Equity	Redeemable Non-controlling Interest
	Shares	Value	Shares	Value						
Balance, as of January 1, 2015	579	$ 6	(19)	$ (743)	$ 9,933	$ 3,210	$ (46)	$ 32	$ 12,392	$ 165
Other comprehensive loss	—	—	—	—	—	—	(142)	—	(142)	—
Stock consideration issued for Interactive Data and Trayport acquisitions	45	—	—	—	2,197	—	—	—	2,197	—
Exercise of common stock options	—	—	—	—	19	—	—	—	19	—
Repurchases of common stock	—	—	(14)	(660)	—	—	—	—	(660)	—
Payments relating to treasury shares	—	—	(1)	(45)	—	—	—	—	(45)	—
Stock-based compensation	—	—	—	—	122	—	—	—	122	—
Issuance of restricted stock	4	—	—	—	—	—	—	—	—	—
Tax benefits from stock option plans	—	—	—	—	19	—	—	—	19	—
Adjustment to redemption value	—	—	—	—	—	(5)	—	—	(5)	4
Distributions of profits	—	—	—	—	—	—	—	(16)	(16)	(11)
Dividends paid to shareholders	—	—	—	—	—	(331)	—	—	(331)	—
Purchase of subsidiary shares	—	—	—	—	—	—	—	—	—	(128)
Net income attributable to non-controlling interest	—	—	—	—	—	(21)	—	16	(5)	5
Net income	—	—	—	—	—	1,295	—	—	1,295	—
Balance, as of December 31, 2015	628	6	(34)	(1,448)	12,290	4,148	(188)	32	14,840	35
Other comprehensive loss	—	—	—	—	—	—	(156)	—	(156)	—
Exercise of common stock options	1	—	—	—	22	—	—	—	22	—
Treasury shares retired in connection with stock split	(35)	—	35	1,512	(1,142)	(370)	—	—	—	—
Repurchases of common stock	—	—	(1)	(50)	—	—	—	—	(50)	—
Payments relating to treasury shares	—	—	(1)	(54)	—	—	—	—	(54)	—
Stock-based compensation	—	—	—	—	136	—	—	—	136	—
Issuance of restricted stock	2	—	—	—	—	—	—	—	—	—
Adjustment to redemption value	—	—	—	—	—	(2)	—	—	(2)	1
Distributions of profits	—	—	—	—	—	—	—	(19)	(19)	(3)
Dividends paid to shareholders	—	—	—	—	—	(409)	—	—	(409)	—
Net income attributable to non-controlling interest	—	—	—	—	—	(27)	—	24	(3)	3
Net income	—	—	—	—	—	1,449	—	—	1,449	—
Balance, as of December 31, 2016	596	6	(1)	(40)	11,306	4,789	(344)	37	15,754	36
Other comprehensive income	—	—	—	—	—	—	121	—	121	—
Exercise of common stock options	—	—	—	—	17	—	—	—	17	—
Repurchases of common stock	—	—	(15)	(949)	—	—	—	—	(949)	—
Payments relating to treasury shares	—	—	(1)	(88)	—	—	—	—	(88)	—
Stock-based compensation	—	—	—	—	152	—	—	—	152	—
Issuance of restricted stock	4	—	—	1	(1)	—	—	—	—	—
Acquisition of non-controlling interest	—	—	—	—	(82)	—	—	(10)	(92)	—
Distributions of profits	—	—	—	—	—	—	—	(26)	(26)	—
Dividends paid to shareholders	—	—	—	—	—	(476)	—	—	(476)	—
Acquisition of redeemable non-controlling interest	—	—	—	—	—	(2)	—	—	(2)	(37)
Net income attributable to non-controlling interest	—	—	—	—	—	(28)	—	27	(1)	1
Net income	—	—	—	—	—	2,542	—	—	2,542	—
Balance, as of December 31, 2017	600	$ 6	(17)	$ (1,076)	$ 11,392	$ 6,825	$ (223)	$ 28	$ 16,952	$ —

See accompanying notes.

Intercontinental Exchange, Inc. and Subsidiaries
Consolidated Statements of Changes in Equity, Accumulated Other Comprehensive Income (Loss)
and Redeemable Non-Controlling Interest — (Continued)
(In millions)

	As of December 31,		
	2017	**2016**	**2015**
Accumulated other comprehensive income (loss) was as follows:			
Foreign currency translation adjustments	$ (136)	$ (345)	$ (45)
Fair value of available-for-sale securities	—	108	(26)
Comprehensive income from equity method investment	2	2	2
Employee benefit plans adjustments	(89)	(109)	(119)
Accumulated other comprehensive loss	$ (223)	$ (344)	$ (188)

See accompanying notes.

Intercontinental Exchange, Inc. and Subsidiaries
Consolidated Statements of Cash Flows
(In millions)

	Year Ended December 31,		
	2017	**2016**	**2015**
Operating activities			
Net income	$ 2,542	$ 1,449	$ 1,295
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	535	610	374
Stock-based compensation	135	124	111
Deferred taxes	(651)	114	(108)
Cetip realized investment gain, net	(114)	—	—
Trayport gain, net	(110)	—	—
Amortization of fair market value premium on NYSE Notes	—	—	(23)
Other	(22)	(6)	(17)
Changes in assets and liabilities:			
Customer accounts receivable	(135)	(65)	(45)
Other current and non-current assets	(24)	7	(5)
Section 31 fees payable	(2)	14	(21)
Deferred revenue	17	42	27
Other current and non-current liabilities	(86)	(140)	(277)
Total adjustments	(457)	700	16
Net cash provided by operating activities	2,085	2,149	1,311
Investing activities			
Capital expenditures	(220)	(250)	(190)
Capitalized software development costs	(137)	(115)	(87)
Proceeds from sale of Cetip, net	438	—	—
Cash paid for acquisitions, net of cash acquired	(423)	(425)	(3,751)
Cash received from divestitures	761	—	—
Purchases of cost and equity method investments	(327)	(70)	(60)
Proceeds from term deposits	—	—	1,089
Other	—	—	(5)
Net cash provided by (used in) investing activities	92	(860)	(3,004)
Financing activities			
Proceeds from debt facilities, net	984	—	2,472
Repayments of debt facilities	(850)	—	(1,028)
Proceeds from (repayments of) commercial paper, net	(409)	(949)	1,686
Dividends to shareholders	(476)	(409)	(331)
Repurchases of common stock	(949)	(50)	(660)
Payments relating to treasury shares received for restricted stock tax payments and stock option exercises	(88)	(54)	(45)
Acquisition of non-controlling interest and redeemable non-controlling interest	(174)	—	—
Purchase of subsidiary shares from non-controlling interest	—	—	(128)
Other	(9)	—	10
Net cash provided by (used in) financing activities	(1,971)	(1,462)	1,976
Effect of exchange rate changes on cash, cash equivalents, and restricted cash and cash equivalents	12	(24)	(14)
Net increase (decrease) in cash, cash equivalents, and restricted cash and cash equivalents	218	(197)	269
Cash, cash equivalents, and restricted cash and cash equivalents at beginning of year	1,350	1,547	1,278
Cash, cash equivalents, and restricted cash and cash equivalents at end of year	$ 1,568	$ 1,350	$ 1,547
Supplemental cash flow disclosure			
Cash paid for income taxes	$ 594	$ 460	$ 542
Cash paid for interest	$ 171	$ 170	$ 123
Supplemental non-cash investing and financing activities			

Common stock and vested stock options issued for acquisitions	$ —	$ —	$ 2,197
Treasury stock retirement	$ —	$ 1,512	$ —

See accompanying notes.

1. Description of Business

Nature of Business and Organization

We are a leading global operator of regulated exchanges, clearing houses and listings venues, and a provider of data services for commodity, fixed income and equity markets. We operate regulated marketplaces for listing, trading and clearing of a broad array of derivatives and securities contracts across major asset classes, including energy and agricultural commodities, interest rates, equities, equity derivatives, exchange traded funds, credit derivatives, bonds and currencies. We also offer end-to-end data services and solutions to support the trading, investment, risk management and connectivity needs of customers around the world across all major asset classes.

Our exchanges include derivative exchanges in the United States, or U.S., United Kingdom, or U.K., European Union or EU, Canada and Singapore, and cash equities, equity options and bond exchanges in the U.S. We also operate over-the-counter, or OTC, markets for physical energy and credit default swaps, or CDS, trade execution. To serve global derivatives markets, we operate central counterparty clearing houses in the U.S., U.K., EU, Canada and Singapore (Note 13). We offer a range of data services for global financial and commodity markets, including pricing and reference data, exchange data, analytics, feeds, desktops and connectivity solutions. Through our markets, clearing houses, listings and market data services, we provide end-to-end solutions for our customers through liquid markets, benchmark products, access to capital markets, and related services to support their ability to manage risk and raise capital.

2. Summary of Significant Accounting Policies

Basis of Presentation

The accompanying consolidated financial statements are presented in accordance with U.S. generally accepted accounting principles, or U.S. GAAP. The consolidated financial statements include our wholly-owned and controlled subsidiaries. All intercompany balances and transactions between our wholly-owned and controlled subsidiaries have been eliminated in consolidation. As discussed in Note 3, we completed several acquisitions during the years ended December 31, 2017 , 2016 and 2015 and have included the financial results of these companies in the consolidated financial statements effective from the respective acquisition dates. Also as discussed in Note 3, we completed the dispositions of several companies during the year ended December 31, 2017 and have included the financial results of these companies in the consolidated financial statements up to the respective disposition dates.

Use of Estimates

The preparation of financial statements in conformity with U.S. GAAP requires our management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements. Estimates also affect the reported amounts of revenues and expenses during the reporting period. Actual amounts could differ from those estimates.

Comprehensive Income

Other comprehensive income includes changes in unrealized gains and losses on financial instruments classified as available-for-sale, changes in fair value of net investment hedges, foreign currency translation adjustments, comprehensive income from equity method investments, and amortization of the difference in the projected benefit obligation and the accumulated benefit obligation associated with benefit plan liabilities, net of tax.

Non-controlling Interest

For consolidated subsidiaries in which our ownership is less than 100% and for which we have control over the assets and liabilities and the management of the entity, the outside stockholders' interests are shown as non-controlling interests. For instances where outside stockholders' hold an option to require us to repurchase the outside stockholders' interest, these interests are shown as redeemable non-controlling interests.

Segment and Geographic Information

We operate two business segments: our Trading and Clearing segment and our Data and Listings segment. This presentation is reflective of how our chief operating decision maker reviews and operates our business. Our Trading and Clearing segment comprises our transaction-based execution and clearing businesses. Our Data and Listings segment comprises our subscription-based data services and securities listings businesses. The majority of our identifiable assets are located in the U.S. and U.K.

Cash and Cash Equivalents

We consider all short-term, highly liquid investments with original maturities at the purchase date of three months or less to be cash equivalents.

Short-Term and Long-Term Restricted Cash and Cash Equivalents

We classify all cash and cash equivalents and investments that are not available for immediate or general business use by us as restricted in the accompanying consolidated balance sheets (Note 5). The restricted cash includes cash set aside due to regulatory requirements, earmarked for specific purposes, or restricted by specific agreements.

Short-Term and Long-Term Investments

We periodically invest a portion of our cash in excess of short-term operating needs in term deposits and investment-grade marketable debt securities, including government or government sponsored agencies and corporate debt securities (Note 6). These investments are classified as available-for-sale in accordance with U.S. GAAP. We do not have any investments classified as held-to-maturity or trading. Additionally, we classify equity and fixed income mutual funds, held for the purpose of providing future payments for the supplemental executive savings plan and a component of the supplemental executive retirement plan, as available-for-sale securities. Available-for-sale investments are carried at their fair value using primarily quoted prices in active markets for identical securities, with unrealized gains and losses, net of deferred income taxes, reported as a component of accumulated other comprehensive income. Realized gains and losses, and declines in value deemed to be other-than-temporary on available-for-sale investments, are recognized in earnings. The cost of securities sold is based on the specific identification method. Investments that we intend to hold for more than one year are classified as long-term investments in the accompanying consolidated balance sheets.

Cost and Equity Method Investments

We use the cost method to account for a non-marketable equity investment in an entity that we do not control and for which we do not have the ability to exercise significant influence over the entity's operating and financial policies. When we do not have a controlling financial interest in an entity but exercise significant influence over the entity's operating and financial policies, such investment is accounted for using the equity method. We account for our investments in MERSCORP Holdings, Inc., owner of Mortgage Electronic Registrations Systems, Inc., or collectively MERS, and Options Clearing Corporation, or OCC, as equity method investments. We recognized $36 million , $25 million and $6 million in equity income related to these investments during the years ended December 31, 2017 , 2016 and 2015 , respectively, as other income. We recognize dividend income when declared as a reduction in the carrying value of our equity method investments. Cost and equity method investments were $563 million and $208 million as of December 31, 2017 and 2016 , respectively, and are classified as other non-current assets in the accompanying consolidated balance sheets. The increase in the cost and equity method investments during the year ended December 31, 2017 is primarily due to our investment in Euroclear plc, or Euroclear, and during the year ended December 31, 2016 is primarily due to our investment in MERS (Note 3). See "Recently Adopted and New Accounting Pronouncements" below for the new financial instruments accounting standard and its impact on the accounting for our investments.

Margin Deposits, Guaranty Funds and Delivery Contracts Receivable and Payable

Original margin, variation margin and, with the exception of Natural Gas Exchange Inc., or NGX, guaranty funds held by our clearing houses for clearing members may be in the form of cash, government obligations, certain agency and corporate debt, letters of credit or gold (Note 13). Government, agency and corporate securities held for margin purposes are recorded at an amount that approximates fair value. Cash original margin, variation margin and guaranty fund deposits are reflected in the accompanying consolidated balance sheets as current assets and current liabilities. The amount of margin deposits on hand will fluctuate over time as a result of, among other things, the extent of open positions held at any point in time by market participants in contracts and the margin rates then in effect for such contracts. Changes in our margin accounts are not reflected in our consolidated statements of cash flows. Non-cash original margin and guaranty fund deposits are not reflected in the accompanying consolidated balance sheets as the risks and rewards of these assets remain with the clearing members unless the clearing houses have sold or re-pledged the assets or in the event of a clearing member default, where the clearing member is no longer entitled to redeem the assets. Any income, gain or loss accrues to the clearing members.

NGX, which we acquired in December 2017, owns a clearing house which administers the physical delivery of energy trading contracts. NGX serves as an intermediary counter-party to both the buyer and seller. When physical delivery has occurred and/or settlement amounts have been determined, an asset is recorded as a delivery contract receivable for the fair value of the contract due from the buying participant, and an equal and offsetting delivery contract payable is recorded for the amount owed to

the selling participant. Amounts recorded at period end represent receivables and payables for deliveries that have occurred but for which payment has not been received or made. There is no impact on our consolidated statements of income as an equal amount is recognized as both an asset and a liability. NGX also records unsettled variation margin equal to the fair value of open energy trading contracts as of the balance sheet date.

Property and Equipment

Property and equipment is recorded at cost, reduced by accumulated depreciation (Note 7). Depreciation and amortization expense related to property and equipment is computed using the straight-line method based on estimated useful lives of the assets, or in the case of leasehold improvements, the shorter of the initial lease term or the estimated useful life of the improvement. We review the remaining estimated useful lives of our property and equipment at each balance sheet date and will make adjustments to the estimated remaining useful lives whenever events or changes in circumstances indicate that the remaining useful lives have changed. Gains on disposals of property and equipment are included in other income and losses on disposals of property and equipment are included in depreciation expense. Maintenance and repair costs are expensed as incurred.

Allowance for Doubtful Accounts

The allowance for doubtful accounts is maintained at a level that we believe to be sufficient to absorb probable losses in our accounts receivable portfolio. The allowance is based on several factors, including a continuous assessment of the collectability of each account. In circumstances where a specific customer's inability to meet its financial obligations is known, we record a specific provision for bad debts against amounts due to reduce the receivable to the amount we reasonably believe will be collected. Accounts receivable are written off against the allowance for doubtful accounts when collection efforts cease. A reconciliation of the beginning and ending amount of allowance for doubtful accounts is as follows for the years ended December 31, 2017 , 2016 and 2015 (in millions):

	Year Ended December 31,		
	2017	2016	2015
Beginning balance of allowance for doubtful accounts	$ 7	$ 2	$ 1
Bad debt expense	4	5	2
Charge-offs	(5)	—	(1)
Ending balance of allowance for doubtful accounts	$ 6	$ 7	$ 2

Bad debt expense in the table above is based on our historical collection experiences and our assessment of the collectability of specific accounts. Charge-offs in the table above represent the write-off of uncollectible receivables, net of recoveries. These amounts also include the impact of foreign currency translation adjustments.

Software Development Costs

We capitalize costs, both internal and external direct and incremental costs, related to software developed or obtained for internal use in accordance with U.S. GAAP . Software development costs incurred during the preliminary or maintenance project stages are expensed as incurred, while costs incurred during the application development stage are capitalized and are amortized using the straight-line method over the useful life of the software, not to exceed three years (except for Interactive Data's and NYSE's new platforms, which have eight year useful lives). Amortization of these capitalized costs begins only when the software becomes ready for its intended use. General and administrative costs related to developing or obtaining such software are expensed as incurred.

Accrued Employee Benefits

We have a defined benefit pension plan and other postretirement benefit plans, or collectively the "benefit plans," covering certain of our U.S. operations. The benefit accrual for the pension plan is frozen. We recognize the funded status of the benefit plans in the consolidated balance sheets, measure the fair value of plan assets and benefit obligations as of the date of our fiscal year-end, and provide additional disclosures in the footnotes to the consolidated financial statements (Note 15).

Benefit plan costs and liabilities are dependent on assumptions used in calculating such amounts. These assumptions include discount rates, health care cost trend rates, benefits earned, interest cost, expected return on assets, mortality rates and other factors. Actual results that differ from the assumptions are accumulated and amortized over future periods and, therefore, generally affect recognized expense and the recorded obligation in future periods. We immediately recognize in the consolidated statements of income certain of these unrecognized amounts when triggering events occur, such as when a settlement of pension obligations in

excess of total interest and service costs occurs. While we believe that the assumptions used are appropriate, differences in actual experience or changes in assumptions may affect our pension and other post-retirement obligations and future expense recognized.

Goodwill and Indefinite-Lived Intangible Assets

Goodwill represents the excess of the purchase price of our acquisitions over the fair value of identifiable net assets acquired, including other identified intangible assets (Note 8). We recognize specifically identifiable intangibles when a specific right or contract is acquired. Goodwill has been allocated to reporting units for purposes of impairment testing based on the portion of synergy, cost savings and other expected future cash flows expected to benefit the reporting units at the time of the acquisition. We test our goodwill for impairment at the reporting unit level. The reporting units identified for our goodwill testing are the Futures, Data and Listings, Cash Equities and Credit Default Swap reporting units. Goodwill impairment testing is performed annually in the fiscal fourth quarter or more frequently if conditions exist that indicate that the asset may be impaired.

We also evaluate indefinite-lived intangible assets for impairment annually in our fiscal fourth quarter or more frequently if conditions exist that indicate that the asset may be impaired. Such evaluation includes either applying the optional qualitative screen to determine if it is not more likely than not that the fair value of the asset continues to exceed its carrying value or determining the fair value of the asset and comparing the fair value of the asset to its carrying value. If the fair value of the indefinite-lived intangible asset is less than its carrying value, an impairment loss is recognized in earnings in an amount equal to the difference.

For both goodwill and indefinite lived impairment testing, we have the option to first perform a qualitative assessment to determine whether it is more likely than not that the fair value of a reporting unit or indefinite lived intangible asset is less than its carrying amount. If we conclude that this is the case, we must perform additional testing of the asset or reporting unit. Otherwise, no further testing is necessary.

Other than for the divestiture of NYSE Governance Services as discussed in Note 3, we did not record an impairment charge related to goodwill or indefinite lived intangible assets during the years ended December 31, 2017 , 2016 or 2015 .

Impairment of Long-Lived Assets and Finite-Lived Intangible Assets

We review our property and equipment and finite-lived intangible assets for impairment whenever events or changes in circumstances indicate that the carrying amount may not be fully recoverable. To analyze recoverability, we project undiscounted net future cash flows over the remaining life of such assets. If these projected cash flows are less than the carrying amount, an impairment indicator would exist. The impairment loss is measured based upon the difference between the carrying amount and the fair value of the assets. Finite-lived intangible assets are generally amortized on a straight-line basis or using an accelerated method over the lesser of their contractual or estimated useful lives.

During the third quarter of 2016, we discontinued Creditex's U.K. voice brokerage operations and an impairment of the asset was recorded as amortization expense in September 2016 for $33 million (Note 8).

Derivatives and Hedging Activity

We may use derivative instruments to limit exposure to changes in foreign currency exchange rates. All derivatives are required to be recorded at fair value in the accompanying consolidated balance sheets. Changes in the fair value of such derivative financial instruments are recognized in net income as they are not designated as hedges under U.S. GAAP.

From time to time, we may hedge the foreign currency translation of certain net investments by designating all or a portion of certain financial liabilities denominated in the same currency in accordance with U.S. GAAP. We entered into foreign currency hedging transactions during years ended December 31, 2017 , 2016 and 2015 as economic hedges to help mitigate a portion of our foreign exchange risk exposure.

Intellectual Property

All costs related to internally developed patents and trademarks are expensed as incurred. All costs related to purchased patents, trademarks and internet domain names are recorded as other intangible assets and are amortized on a straight-line basis over their estimated useful lives. All costs related to licensed patents are capitalized and amortized on a straight-line basis over the term of the license.

Income Taxes

We recognize income taxes under the liability method. We recognize a current tax liability or tax asset for the estimated taxes payable or refundable on tax returns for the current year. We recognize deferred tax assets and liabilities for the expected future tax consequences of temporary differences between the financial statement carrying amounts and the tax bases of assets and liabilities. We establish valuation allowances if we believe that it is more likely than not that some or all of our deferred tax assets will not be realized. Deferred tax assets and liabilities are measured using current enacted tax rates in effect.

SEC Staff Accounting Bulletin No. 118, or SAB 118, has provided guidance for companies that have not completed their accounting for the income tax effects of the Tax Cuts and Jobs Act, or TCJA, in the period of enactment, allowing for a measurement period of up to one year after the enactment date to finalize the recording of the related tax impacts. As of December 31, 2017, we have not completed our accounting for the tax effects of the enactment of the TCJA, however, we have made a reasonable estimate of the effects on our deferred tax balances and in relation to the transition tax. In other cases, we have not been able to make a reasonable estimate and will continue to analyze the TCJA in order to finalize any related impacts within the measurement period. The Financial Accounting Standards Board, or FASB, Staff also provided additional guidance to address the accounting for the effects of the provisions related to the taxation of Global Intangible Low-Taxed Income, or GILTI, noting that companies should make an accounting policy election to recognize deferred taxes for temporary basis differences expected to reverse as GILTI in future years or to include the tax expense in the year it is incurred. We have not completed our analysis of the effects of the GILTI provisions and will further consider the accounting policy election within the measurement period as provided for under SAB 118.

We do not recognize a tax benefit unless we conclude that it is more likely than not that the benefit will be sustained on audit by the taxing authority based solely on the technical merits of the associated tax position. If the recognition threshold is met, we recognize a tax benefit measured at the largest amount of the tax benefit that, in our judgment, is greater than 50 percent likely to be realized. We recognize accrued interest and penalties related to uncertain tax positions as a component of income tax expense.

We are subject to tax in numerous domestic and foreign jurisdictions primarily based on our operations in these jurisdictions. Significant judgment is required in assessing the future tax consequences of events that have been recognized in our financial statements or tax returns. Fluctuations in the actual outcome of these future tax consequences could have a material impact on our financial position or results of operations.

Revenue Recognition

We recognize revenue when persuasive evidence of an arrangement exists, delivery has occurred, the sale price is fixed or determinable and collectability is reasonably assured. Our revenues primarily consist of transaction and clearing fee revenues for transactions executed and/or cleared through our global electronic derivatives trading and clearing platforms and cash equities trading and revenues related to our data services fees and listing fees. We also evaluate all contracts in order to determine appropriate gross versus net revenue reporting.

Derivatives trading and clearing revenues are recognized over the period in which the services are provided, which is typically the date the transactions are executed or are cleared, except for a portion of clearing revenues related to cleared contracts which have an ongoing clearing obligation that extends beyond the execution date. The transaction and clearing fee revenues are determined on the basis of the transaction and clearing fee charged for each contract traded on the exchanges. Derivatives transaction and clearing fees are recorded net of rebates of $749 million , $674 million and $563 million for the years ended December 31, 2017 , 2016 and 2015 , respectively. We offer rebates in certain of our markets primarily to support market liquidity and trading volume by providing qualified participants in those markets a discount to the applicable commission rate. Such rebates are calculated based on volumes traded. The increase in the rebates is due primarily to an increase in the number of participants in the rebate programs offered on various contracts, an increase in our traded volume and an increase in the number of rebate programs.

Cash trading fee revenues are paid by organizations based on their trading activity. Fees are assessed on a per share basis for trading in equity securities. The fees are applicable to all transactions that take place on any of our equity trading venues, and the fees vary based on the size and type of trade that is consummated and trading venue. The equity trading venues earn transaction fees for customer orders of equity securities matched internally, as well as for customer orders routed to other exchanges. Cash trading fees are recognized as earned, which is generally upon execution of the trade. Cash trading fees are recorded gross of liquidity rebates and routing charges. Liquidity payments made to cash and options trading customers and routing charges made to other exchanges are included in transaction-based expenses in the consolidated statements of income.

Listings revenues consist of original listing fees paid by issuers to list the initial securities on the various cash markets, other listing fees related to other corporate actions (including stock splits, sales of additional securities and merger and acquisitions), annual listing fees paid by companies whose financial instruments are listed on the cash markets, and other services provided to our listed companies and other companies. Original listing fees are assessed primarily based on the number of shares that the issuer

initially lists. Original listing fees are recognized as revenue on a straight-line basis over the estimated service periods of 5 years for NYSE Arca and NYSE American and 9 years for NYSE. Other corporate action listing fees are recognized as revenue on a straight-line basis over the estimated service periods of 3 years for NYSE Arca and NYSE American and 6 years for NYSE. The service periods are determined separately for each of our listing venues (Note 9). Annual listing fees are billed at the beginning of the year and are recognized on a pro rata basis over the calendar year.

Data services revenues include market data access fees charged to customers that trade on the electronic platform. The market data access amount for each company is based on the number of users at each company trading on the electronic platform. For our bilateral OTC data services, monthly trading commissions are recognized as transaction and clearing fee revenues. Any customer's market data access fees in excess of that customer's commissions on trading activity are recognized as market data access revenues. Data services revenues in our derivatives markets also include terminal and license fees received from data vendors in exchange for the provision of real-time futures price information and market data access fees. Market data fees are charged to data vendors on a monthly basis based on the number and type of terminals they have providing futures data. Some of our data vendors also pay an annual license fee, which is deferred and recognized as revenue ratably over the period of the annual license.

We collect market data revenues from our cash equity and options consortium-based data products and, to a lesser extent, for New York Stock Exchange proprietary data products. Consortium-based data fees are determined by securities industry plans. Consortium-based data revenues that coordinated market data distribution generates (net of administration costs) are distributed to participating markets on the basis of the Regulation NMS formula. We collect fees from vendors for the right to distribute market data to third parties and a service fee from vendors for direct connection to market data. These fees are recognized as revenue as services are rendered.

We also charge customers for accessing our data services through Secure Financial Transaction Infrastructure, or SFTI, and colocation services. SFTI is a physical network infrastructure that connects our markets and other major market centers with market participants and allows those participants to receive data feeds. We also offer data analytics services which include a number of products such as forward curves, index and valuation services.

Revenue for subscription based contracts is recognized ratably over the life of the contract and revenue for usage based contracts is recognized in the month that the products/services are provided. Certain of our businesses collect fees for installation/set-up services which, if deemed a separate deliverable with standalone value, are recognized upon delivery as long as the remaining criteria for recognition of revenue have been achieved. Revenue for installation/set-up services, that do not meet the criteria for separation, is recognized ratably either over the contractual term or the expected client relationship life. Revenue for professional services is recognized as the services are provided. Revenue for hardware is recognized when installation is completed and the related services go-live.

Other revenues primarily consist of various fees for services provided to our customers, including interest income on certain clearing margin deposits, regulatory penalties and fines, fees for use of our facilities, regulatory fees charged to member organizations of our U.S. securities exchanges, designated market maker service fees, exchange membership fees and agricultural grading and certification fees. These fees are recognized as revenue as services are rendered.

On January 1, 2018, we were required to adopt ASC 606, *Revenue from Contracts with Customers,* and ASC 340-40, *Other Assets and Deferred Costs-Contracts with Customers* . The new guidance requires enhanced disclosures, including revenue recognition policies to identify performance obligations to customers and significant judgments in measurement and recognition. See "Recently Adopted and New Accounting Pronouncements," and Note 4 where discussed further.

Activity Assessment Fees and Section 31 Fees

We pay the Securities and Exchange Commission, or SEC, fees pursuant to Section 31 of the Securities Exchange Act of 1934 for transactions executed on our U.S. equities and options exchanges. These Section 31 fees are designed to recover the costs to the government for supervising and regulating the securities markets and securities professionals. We (or the OCC on our behalf), in turn, collect activity assessment fees, which are included in transaction and clearing fees in the accompanying consolidated statements of income, from member organizations clearing or settling trades on the U.S. equities and options exchanges and recognize these amounts as revenue when invoiced. Fees received are included in cash at the time of receipt and, as required by law, the amount due to the SEC is remitted semi-annually and recorded as an accrued liability until paid. The activity assessment fees are designed so that they are equal to the Section 31 fees paid by us to the SEC. As a result, Section 31 fees do not have an impact on our net income.

Stock-Based Compensation

We currently sponsor employee and director stock option and restricted stock plans (Note 11). U.S. GAAP requires the measurement and recognition of compensation expenses for all share-based payment awards made to employees and directors, including employee stock options and restricted stock, based on estimated fair values. U.S. GAAP requires companies to estimate the fair value of stock option awards on the date of grant using an option-pricing model. The value of the portion of the award that is ultimately expected to vest is recognized as stock-based compensation expense over the requisite service period in our consolidated financial statements.

We use the Black-Scholes option pricing model for purposes of valuing stock option awards. Our determination of fair value of stock option awards on the date of grant using the Black-Scholes option pricing model is affected by our stock price as well as assumptions regarding a number of subjective variables. These variables include interest rates, our expected dividend yield, our expected share price volatility over the term of the awards and actual and projected employee stock option exercise behavior.

Treasury Stock

We record treasury stock activities under the cost method whereby the cost of the acquired stock is recorded as treasury stock (Note 11). We retired all of our outstanding treasury shares effective October 27, 2016, the record date of our 5-for-1 stock split (which has already been reflected in our results retroactively). Our accounting policy upon the formal retirement of treasury stock is to deduct the par value from common stock and to reflect any excess of cost over par value as a deduction from additional paid-in capital (to the extent created by previous issuances of the shares) and retained earnings.

Credit Risk and Significant Customers

Our clearing houses have credit risk for maintaining certain of the clearing member cash deposits at various financial institutions (Note 13). Cash deposit accounts are established at larger money center banks and structured to restrict the rights of offset or liens by the banks. Our clearing houses monitor the cash deposits and mitigate credit risk by keeping such deposits in several financial institutions, ensuring that its overall credit risk exposure to any individual financial institution remains within acceptable concentration limits, and by ensuring that the financial institutions have high investment grade ratings. We also limit our risk of loss by holding the majority of the cash deposits in cash accounts at the Federal Reserve Bank of Chicago, high quality short-term sovereign debt reverse repurchase agreements with several different counterparty banks or direct investments in short-term high quality sovereign and supranational debt issues. While we seek to achieve a reasonable rate of return which may generate interest income for our clearing members, we are primarily concerned with preservation of capital and managing the risks associated with these deposits. As the clearing houses may pass on interest revenues, minus costs, to the members, this could include negative or reduced yield due to market conditions.

When engaging in reverse repurchase agreements, our clearing houses take delivery of the underlying securities in custody accounts under clearing house control. Additionally, the securities purchased subject to reverse repurchase have a market value greater than the reverse repurchase amount. The typical haircut received for high quality sovereign debt is 2% of the reverse repurchase amount. Thus, in the event that a reverse repurchase counterparty defaults on its obligation to repurchase the underlying reverse repurchase securities, our clearing house will have possession of securities with a value potentially greater than the reverse repurchase counterparty's obligation to the clearing house.

ICE Clear Credit, a systemically important financial market utility as designated by the Financial Stability Oversight Council, held $18.5 billion of its U.S. dollar cash margin in cash accounts at the Federal Reserve Bank of Chicago as of December 31, 2017. ICE Clear Europe has established a Euro-denominated account at the De Nederlandsche Bank, or DNB, the central bank of the Netherlands. This account provides the flexibility for ICE Clear Europe to place Euro-denominated cash margin securely at a national bank, in particular during periods when liquidity in the Euro repo markets may temporarily become contracted, such as over a quarter or year end. As of December 31, 2017, ICE Clear Europe held €3.3 billion ($4.0 billion based on the euro/U.S. dollar exchange rate of 1.2003 as of December 31, 2017) at DNB. Such accounts are intended to decrease ICE Clear Credit and ICE Clear Europe's custodial, liquidity and operational risk as compared to alternative custodial and investment arrangements.

Our futures businesses have minimal credit risk as the majority of their transaction revenues are currently cleared through our clearing houses. Our accounts receivable related to market data revenues, cash trading, listing revenues, technology revenues, CDS transaction revenues and bilateral over-the-counter energy transaction revenues subjects us to credit risk, as we do not require these customers to post collateral. We limit our risk of loss by terminating access to trade to entities with delinquent accounts. The concentration of risk on accounts receivable is also mitigated by the large number of entities comprising our customer base.

Our accounts receivable are stated at cost. Excluding clearing members, there were no individual accounts receivable balances greater than 10% of total consolidated accounts receivable as of December 31, 2017 or December 31, 2016 . No single

customer accounted for more than 10% of total consolidated revenues during any of the years ended December 31, 2017 , 2016 or 2015 .

Leases

We expense rent from non-cancellable operating leases, net of sublease income, on a straight-line basis based on future minimum lease payments. The net costs are included in rent and occupancy expenses and technology and communication expenses in the accompanying consolidated statements of income (Note 14).

Acquisition-Related Transaction and Integration Costs

We incurred incremental direct acquisition-related transaction costs relating to various completed and potential acquisitions and other strategic opportunities to strengthen our competitive position and support growth. The acquisition-related transaction costs include fees for investment banking advisors, lawyers, accountants, tax advisors and public relations firms, deal-related bonuses to certain of our employees, as well as costs associated with credit facilities and other external costs directly related to the proposed or closed transactions. We also incurred integration costs during the years ended December 31, 2017 and 2016 relating to our integration of Interactive Data and during the years ended December 31, 2016 and 2015 relating to our integration of NYSE. Integration costs primarily related to employee termination costs, deal related bonuses, lease termination costs and professional services costs incurred relating to the integrations. As of June 30, 2016, the integration of NYSE has been completed.

The acquisition-related transaction and integration costs incurred during the year ended December 31, 2017 primarily relate to costs incurred for our Interactive Data integration, legal and professional fees related to the Trayport CMA review, and various other costs incurred for our other acquisitions that closed during 2017. The acquisition-related transaction and integration costs incurred during the year ended December 31, 2016 primarily relate to costs incurred for our Interactive Data and NYSE integrations, legal and professional fees related to the Trayport CMA review, our investment in MERS, our acquisition of Securities Evaluations and Credit Market Analysis, and various other potential and discontinued acquisitions. The acquisition-related transaction and integration costs incurred during the year ended December 31, 2015 primarily relate to the integration costs incurred for our NYSE integration and the acquisition-related transaction costs related to our Interactive Data and Trayport acquisitions. See Note 3 for additional information on our acquisitions.

Fair Value of Financial Instruments

We apply fair value accounting for all financial assets and liabilities and non-financial assets and liabilities that are recognized or disclosed at fair value in the financial statements on a recurring basis (Note 16). Fair value is the price that would be received from selling an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants at the measurement date. Our financial instruments consist primarily of cash and cash equivalents, short-term and long-term restricted cash and investments, short-term and long-term investments, customer accounts receivable, margin deposits and guaranty funds, short-term and long-term debt and other short-term assets and liabilities.

Foreign Currency Translation Adjustments and Foreign Currency Transaction Gains and Losses

Our functional and reporting currency is the U.S. dollar. We have foreign currency translation risk equal to our net investment in certain U.K., continental European, Asian and Canadian subsidiaries. The revenues, expenses and financial results of these subsidiaries are recorded in the functional currency of the countries that these subsidiaries are located in, which are primarily pounds sterling and euros. The financial statements of these subsidiaries are translated into U.S. dollars using a current rate of exchange, with gains or losses, net of tax as applicable, included in the cumulative translation adjustment account, a component of equity. As of December 31, 2017 and 2016 , the portion of our equity attributable to accumulated other comprehensive loss from foreign currency translation adjustments was $136 million and $345 million , respectively.

We have foreign currency transaction gains and losses related to the settlement of foreign currency denominated assets, liabilities and payables that occur through our operations. The transaction gain and losses are due to the increase or decrease in the foreign currency exchange rates between periods. Forward contracts on foreign currencies are entered into to manage the foreign currency exchange rate risk. Gains and losses from foreign currency transactions are included in other income (expense) in the accompanying consolidated statements of income and resulted in net losses of $4 million , $1 million and $14 million for the years ended December 31, 2017 , 2016 and 2015 , respectively.

Earnings Per Common Share

Basic earnings per common share is calculated using the weighted average common shares outstanding during the year. Common equivalent shares from stock options and restricted stock awards, using the treasury stock method, are included in the diluted per share calculations unless the effect of inclusion would be antidilutive (Note 18).

Recently Adopted and New Accounting Pronouncements

ASC 606 provides guidance outlining a single comprehensive model for entities to use in accounting for revenue arising from contracts with customers that supersedes most current revenue recognition guidance. This guidance requires us to recognize revenue when we transfer promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. The new guidance requires enhanced disclosures, including revenue recognition policies to identify performance obligations to customers and significant judgments in measurement and recognition. The new guidance may be applied retrospectively to each prior period presented or retrospectively with the cumulative effect recognized as of the date of adoption. We will apply the guidance retrospectively to each prior period presented, and provide the relevant disclosures beginning in the first interim period (March 31, 2018 quarterly results) and annual period (December 31, 2018 annual results) in which we adopt the guidance.

The adoption accelerated the timing of recognition of a portion of original listing fees related to our New York Stock Exchange, or NYSE, businesses, which prior to adoption have been deferred over an estimated customer life of up to nine years. Revenue recognition related to our trading, clearing and data businesses remains substantially unchanged.

Adoption of the standard related to ASC 606 will impact our reported results as follows, driven primarily by the accelerated recognition of listings fee revenue in our NYSE business (in millions, except earnings per share):

	As Reported	New Revenue Standard Adjustment	As Adjusted*
Year ended December 31, 2017			
Total revenues	$ 5,834	$ 10	$ 5,844
Total revenues, less transaction-based expenses	4,629	10	4,639
Income tax benefit**	(25)	(2)	(27)
Net income attributable to Intercontinental Exchange, Inc.	2,514	12	2,526
Diluted earnings per share	$ 4.23	$ 0.02	$ 4.25

	As Reported	New Revenue Standard Adjustment	As Adjusted*
Year ended December 31, 2016			
Total revenues	$ 5,958	$ 12	$ 5,970
Total revenues, less transaction-based expenses	4,499	12	4,511
Income tax expense	580	5	585
Net income attributable to Intercontinental Exchange, Inc.	1,422	7	1,429
Diluted earnings per share	$ 2.37	$ 0.01	$ 2.38

	As Reported	New Revenue Standard Adjustment	As Adjusted*
Year ended December 31, 2015			
Total revenues	$ 4,682	$ 19	$ 4,701
Total revenues, less transaction-based expenses	3,338	19	3,357
Income tax expense	358	8	366
Net income attributable to Intercontinental Exchange, Inc.	1,274	11	1,285
Diluted earnings per share	$ 2.28	$ 0.02	$ 2.30

	As Reported	New Revenue Standard Adjustment	As Adjusted*
As of December 31, 2017			
Deferred revenue, current	$ 121	$ (2)	$ 119
Deferred revenue, non-current	143	(45)	98
Net deferred tax liabilities	2,280	13	2,293
Retained earnings	6,825	34	6,859

	As Reported	New Revenue Standard Adjustment	As Adjusted*
As of December 31, 2016			
Deferred revenue, current	$ 114	$ 1	$ 115
Deferred revenue, non-current	123	(38)	85
Net deferred tax liabilities	2,954	15	2,969
Retained earnings	4,789	22	4,811

*We were required to adopt ASC 606 on January 1, 2018. Adjusted figures in the tables above do not impact the 2017 financial results included in this report. The adjustments will be retrospectively reflected in the financial results beginning with the quarter ending March 31, 2018.

**The 2017 income tax benefit adjustment in the table above includes a $6 million deferred tax benefit resulting from the U.S. corporate income tax reduction as part of the TCJA enactment in the fourth quarter of 2017.

Additional disclosures related to our future adoption of ASC 606 are disclosed in Note 4.

The FASB has issued Accounting Standards Update No. 2016-01, *Financial Instruments - Overall (Subtopic 825-10): Recognition and Measurement of Financial Assets and Financial Liabilities,* or ASU 2016-01. ASU 2016-01 provides updated guidance for the recognition, measurement, presentation, and disclosure of certain financial assets and liabilities, including the requirement that equity investments (except those accounted for under the equity method of accounting or those that result in consolidation of the investee) are to be measured at fair value with changes in fair value recognized in net income. We were required to adopt ASU 2016-01 on January 1, 2018. Our cost method investments, including our investment in Euroclear (Note 3) and our 1.8% stake in Coinbase Global, Inc., among others, will be impacted by our adoption of ASU 2016-01 beginning in the first quarter of 2018. These companies do not currently have readily determinable fair market values as they are not publicly listed companies. Therefore, in accordance with ASU 2016-01, we will only adjust the fair value of these investments if and when there is an observable price change in an orderly transaction, and any change in the fair value will be recognized in net income.

The FASB has issued Accounting Standards Update No. 2016-02, *Leases,* or ASU 2016-02. ASU 2016-02 requires an entity to recognize both assets and liabilities arising from financing and operating leases, along with additional qualitative and quantitative disclosures. A lessee should recognize in its balance sheet a liability to make lease payments (the lease liability) and a right-of-use asset representing its right to use the underlying asset for the lease term. In transition, lessees and lessors are required to recognize and measure leases at the beginning of the earliest period presented using a modified retrospective approach. ASU 2016-02 is required to be adopted at the beginning of our first quarter of fiscal 2019, with early adoption permitted. We will not adopt ASU 2016-02 early, but we are currently evaluating this guidance to determine the potential impact on our consolidated financial statements.

The FASB has issued Accounting Standards Update No. 2016-18, *Statement of Cash Flows: Restricted Cash* , or ASU 2016-18, that requires entities to show the changes in the total of cash, cash equivalents, restricted cash and restricted cash equivalents in the statement of cash flows. As a result, entities will no longer present transfers between cash and cash equivalents and restricted cash and restricted cash equivalents in the statement of cash flows. When cash, cash equivalents, restricted cash and restricted cash equivalents are presented in more than one line item on the balance sheet, the new guidance requires a reconciliation of the totals in the statement of cash flows to the related captions in the balance sheet. This reconciliation can be presented either on the face of the statement of cash flows or in the notes to the financial statements. Entities also have to disclose the nature of their restricted cash and restricted cash equivalent balances. ASU 2016-18 is required to be adopted at the beginning of our first quarter of fiscal 2018, with early adoption permitted. The standard is required to be applied retrospectively when adopted, and to provide the relevant disclosures in the first interim and annual periods in which we adopt the guidance. In the fourth quarter of 2017, we early adopted ASU 2016-18 and reclassified changes in restricted cash from cash flow provided by (used in) investing activities to the total change in beginning-of-year and end-of-year total amounts shown on the consolidated

statements of cash flows for the years ended December 31, 2017, 2016 and 2015. The impact of adopting this new standard only resulted in a change in cash flow statement presentation and related disclosures. See Note 5 for additional details on our restricted cash balances. The following table provides a reconciliation of cash and cash equivalents, short-term restricted cash and cash equivalents, and long-term restricted cash and cash equivalents reported within our consolidated balance sheets that sum to the total of the same such amounts shown in our consolidated statements of cash flows (in millions).

	As of December 31,		
	2017	2016	2015
Cash and cash equivalents	$ 535	$ 407	$ 627
Short-term restricted cash and cash equivalents	769	679	657
Long-term restricted cash and cash equivalents	264	264	263
Total cash, cash equivalents and restricted cash and cash equivalents shown in our statements of cash flows	$ 1,568	$ 1,350	$ 1,547

The FASB has issued Accounting Standards Update No. 2017-07, *Compensation-Retirement Benefits (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost,* or ASU 2017-07. The amendments in this update require that an employer disaggregate the service cost component from the other components of net benefit cost. The amendments also provide explicit guidance on how to present the service cost component in the same line item as other related compensation costs, and the other components of net benefit cost in the income statement outside of operating income. The guidance only allows the service cost component of net benefit cost to be eligible for capitalization. We were required to adopt ASU 2017-07 on January 1, 2018. We will apply the guidance retrospectively to each prior period presented when adopted, and provide the relevant disclosures in the first interim period (March 31, 2018 quarterly results) and annual period (December 31, 2018 annual results) in which we adopt the guidance. We have a pension plan, a U.S. nonqualified supplemental executive retirement plan, and post-retirement defined benefit plans that are all impacted by the guidance. Each of the plans are frozen and do not have a service cost component, which means the expense or benefit recognized under each plan represents other components of net benefit cost as defined in the guidance. The combined net periodic benefit of these plans are $9 million and $8 million for the years ended December 31, 2017 and 2016, respectively, and are reported as a reduction to compensation and benefits expenses in the accompanying consolidated statements of income. These amounts will be reported as other income, net in the consolidated statements of income when applying the guidance retroactively. See Note 15 for further discussion of our pension and other benefit programs.

3. Acquisitions, Investments and Divestitures

Divestiture of Trayport and the Acquisitions of Natural Gas Exchange Inc. and Shorcan Energy Brokers Inc.

On December 11, 2015, we acquired 100% of Trayport in a stock transaction. The total purchase price was $620 million , comprised of 12.6 million shares of our common stock. Trayport is a software company that licenses its technology to serve exchanges, OTC brokers and traders to facilitate electronic and hybrid trade execution primarily in the energy markets.

The U.K. Competition and Markets Authority, or the CMA, undertook a review of our acquisition of Trayport under the merger control laws of the U.K. In October 2016, the CMA issued its findings and ordered a divestment of Trayport to remedy what the CMA determined to be a substantial lessening of competition. In November 2016, we filed an appeal with the Competition Appeal Tribunal, or the CAT, to challenge the CMA's decision. In March 2017, the CAT upheld the CMA decision that we should divest Trayport. Following the CAT's judgment, we asked for leave to appeal the CAT's decision at the U.K. Court of Appeals. In May 2017, the U.K. Court of Appeals denied our request for leave to appeal and we were obligated to sell Trayport by January 2018.

On December 14, 2017, we sold Trayport to TMX Group for £550 million ($733 million based on the pound sterling/U.S. dollar exchange rate of 1.3331 as of December 14, 2017). We recognized a net gain of $110 million on the divestiture of Trayport, which was recorded as other income within our Data and Listings segment in the accompanying consolidated statements of income for the year ended December 31, 2017 . The net gain is equal to the $733 million in gross proceeds received less the adjusted carrying value of Trayport's net assets of $607 million (which is equal to the $531 million carrying value of Trayport plus $76 million in accumulated other comprehensive loss from foreign currency translation) and less $16 million in costs to sell Trayport. See Note 8 for information on the Trayport goodwill and other intangibles assets.

The gross proceeds included a combination of £350 million ($466 million) in cash and £200 million ($267 million) in value relating to our acquisitions of Natural Gas Exchange, Inc., or NGX, and Shorcan Energy Brokers Inc., or Shorcan Energy, both wholly-owned subsidiaries of TMX Group. Trayport was included in our Data and Listings segment and NGX and Shorcan Energy are included in our Trading and Clearing segment. NGX, headquartered in Calgary, provides electronic execution, central counterparty

clearing and data services to the North American natural gas, electricity and oil markets. Shorcan Energy offers brokerage services for the North American crude oil markets.

The NGX and Shorcan Energy purchase price was allocated to the preliminary net tangible and identifiable intangible assets and liabilities based on their estimated fair values as of December 14, 2017. The preliminary identifiable intangible assets acquired were $202 million , including exchange registrations and licenses for $143 million , which have been assigned an indefinite useful life, and customer relationship intangible assets for $53 million , which have been assigned useful lives of 20 years. The excess of the purchase price over the preliminary net tangible and identifiable intangible assets was $121 million and was recorded as goodwill. See Note 13 for discussion of NGX margin and delivery contracts receivables and payables. We have not yet obtained all of the information related to the fair value of the acquired assets and liabilities related to the acquisition to finalize the purchase price allocation. The primary areas of the preliminary purchase price allocation that are not yet finalized relate to the valuation of the identifiable intangible assets, income taxes and certain other tangible assets and liabilities.

The functional currency of Trayport was the pound sterling, as this was the currency in which Trayport operated. The $620 million in Trayport net assets were recorded on our December 11, 2015 opening balance sheet at a pound sterling/U.S. dollar exchange rate of 1.5218 (£407 million). Because our consolidated financial statements are presented in U.S. dollars, we translated the Trayport net assets into U.S. dollars at the exchange rates in effect at the end of each reporting period. Therefore, increases or decreases in the value of the U.S. dollar against the pound sterling affected the value of the Trayport balance sheet, with gains or losses included in the cumulative translation adjustment account, a component of equity. As a result of the decrease in the pound sterling/U.S. dollar exchange rate to 1.3331 as of December 14, 2017, the portion of our equity attributable to the Trayport net assets in accumulated other comprehensive loss from foreign currency translation was $76 million . In connection with the divestiture on December 14, 2017, the $76 million in the Trayport foreign currency translation loss was reclassified out of accumulated other comprehensive loss and recognized as part of the net gain on the divestiture as discussed above.

As of June 30, 2017, we classified Trayport as held for sale and ceased depreciation and amortization of the property and equipment and other intangible assets. Subsequent to its divestiture on December 14, 2017, there are no longer any Trayport assets and liabilities classified as held for sale.

Acquisition of Interactive Data

On December 14, 2015, we acquired 100% of Interactive Data in a stock and cash transaction. The total purchase price was $5.6 billion comprised of cash consideration of $4.1 billion and 32.3 million shares of our common stock. The cash consideration is gross of $301 million of cash held by Interactive Data on the date of the acquisition. The fair value of the shares issued was $1.6 billion based on the average share price of our common stock of $48.90 per share on December 14, 2015. The cash consideration was funded from $2.5 billion of net proceeds received on November 24, 2015 in connection with the offering of new senior notes and $1.6 billion of borrowing under our commercial paper program. The Interactive Data acquisition was included in our Data and Listings segment.

The financial information in the table below summarizes the combined results of operations of ICE and Interactive Data, on a pro forma basis, as though the companies had been combined as of the beginning of the period presented. The pro forma financial information combines the historical results for us and Interactive Data for the year ended December 31, 2015 in the following table (in millions, except per share amounts).

	Year Ended December 31, 2015
Total revenues, less transaction-based expenses	$ 4,231
Operating income	1,977
Net income attributable to Intercontinental Exchange, Inc.	1,364
Earnings per share attributable to Intercontinental Exchange, Inc. common shareholders:	
Basic	$ 2.41
Diluted	$ 2.39

Other Acquisitions

On January 2, 2018, we acquired 100% of BondPoint from Virtu Financial, Inc. for $400 million in cash. BondPoint is a leading provider of electronic fixed income trading solutions for the buy-side and sell-side offering access to centralized liquidity and automated trade execution services through its alternative trading system, or ATS, and provides trading services to more than 500 financial services firms. The BondPoint acquisition will be included in our Trading and Clearing segment starting in the first quarter of 2018.

On October 20, 2017, we acquired Bank of America Merrill Lynch, or BofAML's, Global Research division's index business. BofAML indices are the second largest group of fixed income indices as measured by assets under management, or AUM, globally. The AUM benchmarked against our combined fixed income indices is nearly $1 trillion , and the indices have been re-branded as the ICE BofAML indices. The BofAML acquisition was included in our Data and Listings segment.

On May 1, 2017, we acquired 100% of TMX Atrium, a global extranet and wireless services business, from TMX Group. TMX Atrium provides low-latency access to markets and market data across 12 countries, more than 30 major trading venues, and ultra-low latency wireless connectivity to access markets and market data in the Toronto, New Jersey and Chicago metro areas. The wireless assets consist of microwave and millimeter networks that transport market data and provide private bandwidth. The TMX Atrium acquisition was included in our Data and Listings segment.

On January 31, 2017, we acquired 100% of National Stock Exchange, Inc., now named NYSE National. The acquisition gives the NYSE Group a fourth U.S. exchange license. NYSE National is distinct from NYSE Group's three listings exchanges because NYSE National will only be a trading venue and will not be a listings market. NYSE Group's three listings exchanges, NYSE, NYSE American and NYSE Arca, have unique market models designed for corporate and exchange traded fund, or ETF, issuers. After closing the transaction, NYSE National ceased operations on February 1, 2017. Subject to regulatory approvals, NYSE Group anticipates re-launching operations on NYSE National, Inc. in the second quarter of 2018. The NYSE National acquisition was included in our Trading and Clearing segment.

On October 3, 2016, we acquired from S&P Global 100% of Standard & Poor's Securities Evaluations, Inc., or SPSE, and 100% of Credit Market Analysis for $431 million in cash. The cash consideration was funded from borrowings under our commercial paper program. SPSE, which has been renamed Securities Evaluations, is a provider of fixed income evaluated pricing and Credit Market Analysis is a provider of independent data for the OTC markets, including credit derivatives and bonds. The SPSE and Credit Market Analysis purchase price was allocated to the net tangible and identifiable intangible assets and liabilities based on their estimated fair values as of October 3, 2016. The identifiable intangible assets acquired were $171 million , including customer relationship intangible assets for $135 million , which have been assigned useful lives of 15 to 20 years, and data/databases intangible assets for $29 million , which have been assigned useful lives of 5 to 10 years. The excess of the purchase price over the net tangible and identifiable intangible assets was $312 million and was recorded as goodwill and was recorded in our Data and Listings segment.

Investments and Divestitures

On October 24, 2017, we acquired a 4.7% stake in Euroclear for €275 million in cash ($327 million based on the euro/U.S. dollar exchange rate of 1.1903 as of October 24, 2017). During December 2017, we reached an agreement to buy an additional 5.1% stake in Euroclear for €243 million in cash ($292 million based on the euro/U.S. dollar exchange rate of 1.2003 as of December 31, 2017) and expect to receive necessary regulatory approval during the first quarter of 2018. Upon closing, we will own a 9.8% stake in Euroclear for a total investment of €518 million ($619 million based on the exchange rates above). Euroclear is a leading provider of post-trade services, including settlement, central securities depositories and related services for cross-border transactions across asset classes. We account for our investment in Euroclear as a cost method investment and we classify it as an other non-current asset in the accompanying consolidated balance sheet as of December 31, 2017. As discussed in Note 2, subsequent to the adoption of ASU 2016-01 on January 1, 2018, we would only adjust the fair value of our investment in Euroclear if there is an observable price change in an orderly Euroclear transaction and any change in the fair value will be recognized in net income.

For consolidated subsidiaries in which our ownership is less than 100% and for which we have control over the assets, liabilities and management of the entity, the outside stockholders' interests are shown as non-controlling interest in our consolidated financial statements. As of December 31, 2016, non-controlling interest included those related to the operating results of our CDS clearing subsidiaries in which non-ICE limited partners held a 42.5% net profit sharing interest; ICE Endex in which Gasunie held a 21% ownership interest; and ICE Clear Netherlands in which ABN AMRO Clearing Bank N.V. held a 25% ownership interest. For both ICE Endex and ICE Clear Netherlands, in addition to the non-controlling interest reported in the consolidated statements of income, we reported redeemable non-controlling interest in the consolidated balance sheets which represents the minority interest redemption fair value for each company.

During June 2017, we purchased both Gasunie's 21% minority ownership interest in ICE Endex and ABN AMRO Clearing Bank N.V.'s 25% minority ownership interest in ICE Clear Netherlands. Subsequent to these acquisitions, we own 100% of ICE Endex and ICE Clear Netherlands and will no longer include any non-controlling interest amounts for ICE Endex and ICE Clear Netherlands in our consolidated financial statements. During the year ended December 31, 2017, we purchased 12.6% of the net profit sharing interest in our CDS clearing subsidiaries from several non-ICE limited partners and the remaining non-ICE limited partners hold a 29.9% net profit sharing interest in our CDS clearing subsidiaries as of December 31, 2017.

On June 1, 2017, we sold NYSE Governance Services to Marlin Heritage, L.P. NYSE Governance Services provides governance and compliance analytics and education solutions for organizations and their boards of directors through dynamic learning solutions.

We recognized a net loss of $6 million on the divestiture of NYSE Governance Services, which was recorded as amortization expense within our Data and Listings segment in the accompanying consolidated statements of income for the year ended December 31, 2017 .

On March 31, 2017, we sold Interactive Data Managed Solutions, or IDMS, a unit of Interactive Data, to FactSet. IDMS is a managed solutions and portal provider for the global wealth management industry. There was no gain or loss recognized on the sale of IDMS.

On June 30, 2016, we acquired a majority equity position in MERS. MERS is a privately held, member-based organization that owns and manages the MERS® System and is made up of thousands of lenders, servicers, sub-servicers, investors and government institutions. In addition, we have entered into a software development agreement to rebuild the MERS® System to benefit the U.S. residential mortgage finance market. The MERS® System is a national electronic registry that tracks the changes in servicing rights and beneficial ownership interests in U.S.-based mortgage loans. The terms of the MERS acquisition include a right for us to purchase all of the remaining equity interests of MERS after we satisfy our deliverables under the software development agreement. In addition, the MERS equity holders may exercise a put option to require us to purchase all of the remaining equity interests of MERS. Each of these terms is subject to certain price provisions. Because we do not have the ability to control MERS' operations, we have recorded the purchase as an equity method investment and our ratable share of net income (loss) in MERS in future periods will be recorded in our consolidated statements of income as equity earnings of our unconsolidated subsidiaries, below operating income in other income (loss).

4. Revenue Recognition (Disclosures related to the adoption of ASC 606 on January 1, 2018)

In Note 2, we disclose the accounting policies associated with our material revenue streams that are applied in our consolidated financial statements. On January 1, 2018, we were required to adopt ASC 606 on a full retrospective basis and beginning in the first quarter of 2018 will restate each prior reporting period presented as if ASC 606 had always been applied. The adoption of ASC 606 does not have a material impact on the measurement or recognition of revenue in any prior or current reporting periods; however, additional disclosures required by ASC 606 are provided below for comparability purposes. Our adoption of ASC 606 was subject to the same internal controls over financial reporting that we apply to our consolidated financial statements. Terms as used below relate to how they are defined in ASC 606.

Substantially all of our revenues are considered to be revenues from contracts with customers. The related accounts receivable balances are recorded in our balance sheets as customer accounts receivable. We do not have obligations for warranties, returns or refunds to customers, other than the rebates discussed further below, which are settled each period and therefore do not result in variable consideration. We do not have significant revenue recognized from performance obligations that were satisfied in prior periods, and we do not have any transaction price allocated to unsatisfied performance obligations other than in our deferred revenue. Deferred revenue represents our contract liabilities related to our annual, original and other listings revenues as well as certain data services, clearing services and other revenues. Deferred revenue is the only significant contract asset or liability impacted by our adoption of ASC 606. See Note 9 for our discussion on deferred revenue balances, activity, and expected timing of recognition. We have elected not to provide disclosures about transaction price allocated to unsatisfied performance obligations if contract durations are less than one-year, or if we are not required to estimate the transaction price. For all of our contracts with customers, except for listings and certain data and clearing services, our performance obligations are short term in nature and there is no significant variable consideration. See below for further descriptions of our revenue contracts. In addition, we have elected the practical expedient of excluding sales taxes from transaction prices. We have assessed the costs incurred to obtain or fulfill a contract with a customer and determined them to be immaterial.

Certain judgments and estimates were used in the identification and timing of satisfaction of performance obligations and the related allocation of transaction price. We believe that these represent a faithful depiction of the transfer of services to our customers.

Our primary revenue contract classifications are described below. Though we discuss additional revenue details in our "Management Discussion and Analysis of Financial Condition and Results of Operations," the categories below best represent those that depict similar economic characteristics of the nature, amount, timing and uncertainty of our revenues and cash flows.

- *Transaction and clearing, net* - Transaction and clearing revenues represent fees charged for the performance obligations of derivatives trading and clearing, and from our cash trading and equity options exchanges. The derivatives trading and clearing fees contain two performance obligations: 1) trade execution/clearing novation and 2) risk management of open interest. We allocate the transaction price between these two performance obligations; however both of these generally occur almost simultaneously, therefore, no significant deferral results as we have no further obligation to the customer at that time. Cash trading and equity options fees contain one performance obligation related to trade execution. Trade execution occurs instantaneously, therefore, there is no need to allocate the transaction price and no deferral results as we have no further obligation to the customer at that time. Our transaction and clearing revenues are reported net of rebates, except for the NYSE transaction-based expenses. Transaction and clearing fees can be variable based on trade volume discounts used in the determination of rebates, however virtually all volume discounts are calculated and recorded on a monthly basis. Transaction

and clearing fees, as well as any volume discounts rebated to our customers, are calculated and billed monthly in accordance with our published fee schedules. We make liquidity payments to certain customers in our NYSE business and recognize those payments as a cost of revenue. In addition, we pay NYSE regulatory oversight fees to the SEC and collect equal amounts from our customers. These are also considered a cost of revenue, and both of these NYSE-related fees are included in transaction-based expenses. Transaction and clearing revenues and the related transaction-based expenses are all recognized in our Trading and Clearing segment.

- *Data services* - Data service revenues represent the following:
    - Pricing and analytics services consisting of an extensive set of independent evaluated pricing services focused primarily on fixed income and international equity securities, valuation services, reference data, market data, end of day pricing, fixed income equity portfolio analytics and risk management analytics.
    - Desktop and connectivity services which comprise technology-based information platforms, feeds and connectivity. These include trading applications, desktop solutions and data feeds to support trading, voice brokers and investment functions.
    - Exchange data services which represent subscription fees for the provision of our market data that is created from activity in our Trading and Clearing segment.

  The nature and timing of each contract type for the data services above are similar in nature. Data services revenues are primarily subscription-based, billed monthly, quarterly or annually in advance and recognized ratably over time as our performance obligations of data delivery are met consistently throughout the period. Considering these contracts primarily consist of single performance obligations with fixed prices, there is no variable consideration and no need to allocate the transaction price. In certain of our data contracts, where third parties are involved, we arrange for the third party to transfer the services to our customers; in these arrangements we are acting as an agent and revenue is recorded net. All data services fees are included in our Data and Listings segment.

- *Listings* - Listing revenues include original, annual, and other corporate action fees. Under ASC 606, each distinct listing fee is allocated to multiple performance obligations including original and incremental listing and investor relations services, as well as a customer's material right to renew the option to list on our exchanges. In performing this allocation, the standalone selling price of the listing services is based on the original and annual listing fees and the standalone selling price of the investor relation services is based on its market value. All listings fees are billed upfront and the identified performance obligations are satisfied over time. Upon our adoption of the ASC 606 framework, the amount of revenue related to the investor relations performance obligation is recognized ratably over a two -year period, with the remaining revenue recognized ratably over time as customers continue to list on our exchanges, which is generally estimated to be over a period of up to 9 years for NYSE and 5 years for NYSE Arca and NYSE American. Listings fees related to other corporate actions are considered contract modifications of our listing contracts and are recognized ratably over time as customers continue to list on our exchanges, which is generally estimated to be a period of 6 years for NYSE and 3 years for NYSE Arca and NYSE American. All listings fees are recognized in our Data & Listings segment.

- *Other revenues* - Other revenue primarily includes interest income on certain clearing margin deposits, regulatory penalties and fines, fees for use of our facilities, regulatory fees charged to member organizations of our U.S. securities exchanges, designated market maker service fees, exchange membership fees and agricultural grading and certification fees. Other revenues are recognized either in our Trading and Clearing segment or Data and Listings segment based on the nature of the revenue. Generally, fees for other revenues contain one performance obligation. Services for other revenues are primarily satisfied at a point in time, therefore, there is no need to allocate the fee and no deferral results as we have no further obligation to the customer at that time.

The following table depicts the disaggregation of our revenue according to business line and segment (in millions) prior to our adoption of ASC 606; as such, the segment totals here are consistent with the segment totals in Note 17:

	Trading & Clearing Segment	Data & Listings Segment	Total Consolidated
Year ended December 31, 2017			
Transaction and clearing, net	$ 3,131	$ —	$ 3,131
Data services	—	2,084	2,084
Listings	—	417	417
Other revenues	202	—	202
Total revenues	3,333	2,501	5,834
Transaction-based expenses	1,205	—	1,205
Total revenues, less transaction-based expenses	$ 2,128	$ 2,501	$ 4,629
Timing of Revenue Recognition			
Services transferred at a point in time	$ 1,897	$ —	$ 1,897
Services transferred over time	231	2,501	2,732
Total revenues, less transaction-based expenses	$ 2,128	$ 2,501	$ 4,629

	Trading & Clearing Segment	Data & Listings Segment	Total Consolidated
Year ended December 31, 2016			
Transaction and clearing, net	$ 3,384	$ —	$ 3,384
Data services	—	1,978	1,978
Listings	—	419	419
Other revenues	177	—	177
Total revenues	3,561	2,397	5,958
Transaction-based expenses	1,459	—	1,459
Total revenues, less transaction-based expenses	$ 2,102	$ 2,397	$ 4,499
Timing of Revenue Recognition			
Services transferred at a point in time	$ 1,874	$ —	$ 1,874
Services transferred over time	228	2,397	2,625
Total revenues, less transaction-based expenses	$ 2,102	$ 2,397	$ 4,499

	Trading & Clearing Segment	Data & Listings Segment	Total Consolidated
Year ended December 31, 2015			
Transaction and clearing, net	$ 3,228	$ —	$ 3,228
Data services	—	871	871
Listings	—	405	405
Other revenues	178	—	178
Total revenues	3,406	1,276	4,682
Transaction-based expenses	1,344	—	1,344
Total revenues, less transaction-based expenses	$ 2,062	$ 1,276	$ 3,338
Timing of Revenue Recognition			
Services transferred at a point in time	$ 1,841	$ —	$ 1,841
Services transferred over time	221	1,276	1,497
Total revenues, less transaction-based expenses	$ 2,062	$ 1,276	$ 3,338

5. Short-Term and Long-Term Restricted Cash and Cash Equivalents

We own ICE Futures Europe, which operates as a U.K. Recognized Investment Exchange. As a U.K. Recognized Investment Exchange, ICE Futures Europe is required by the Financial Conduct Authority in the U.K. to restrict the use of the equivalent of six months of operating expenditures, subject to certain deductions, in cash or cash equivalents or investments at all times. As of both

December 31, 2017 and 2016 , this amount for ICE Futures Europe was $77 million . Such amounts are reflected as short-term restricted cash and cash equivalents in the accompanying consolidated balance sheets.

As a U.K. Recognized Clearing House, ICE Clear Europe is required by the Bank of England and the European Market Infrastructure Regulation, or EMIR, to restrict as cash, cash equivalents or investments an amount to reflect an estimate of the capital required to wind down or restructure the activities of the clearing house, cover operational, legal and business risks and to reserve capital to meet credit, counterparty and market risks not covered by the members margin and guaranty funds. As such, it is calculated taking into account the operating expenditures, revenues and credit exposures associated with the assets and investments. As of December 31, 2017 and 2016 , the regulatory capital restricted cash for ICE Clear Europe was $423 million and $352 million , respectively, and was reflected as short-term restricted cash and cash equivalents in the accompanying consolidated balance sheets. The increase in the regulatory capital restricted cash at ICE Clear Europe as of December 31, 2017 was primarily due to additional costs incurred due to the growth of our clearing businesses and the consequential additional regulatory capital buffers required by the Bank of England. ICE Clear Europe, in addition to being regulated by the Bank of England, is also regulated by the Commodity Futures Trading Commission, or CFTC, as a U.S. Derivatives Clearing Organizations, or DCO. The regulatory capital available to ICE Clear Europe, as described above, exceeds the CFTC requirements.

Our CFTC regulated U.S. Designated Contract Market, or DCM, ICE Futures U.S., our CFTC regulated U.S. DCOs, ICE Clear U.S. and ICE Clear Credit, our CFTC regulated U.S. Swap Data Repository, or SDR, ICE Trade Vault, and our U.S. Swap Execution Facility, or SEF, ICE Swap Trade, are required to maintain financial resources with a value at least equal to the amount that would cover certain operating costs for a one -year period, including maintaining cash or a committed line of credit, subject to certain deductions, to satisfy at least six months of such operating costs at all times. As of December 31, 2017 and 2016 , the financial resources reserved necessary to satisfy CFTC financial resource requirements for the DCM, U.S. DCOs, SDR and SEF were $193 million and $192 million , respectively, and was reflected as short-term restricted cash and cash equivalents in the accompanying consolidated balance sheets. For our U.S. DCOs, ICE Clear U.S. and ICE Clear Credit, these amounts include voluntarily-held additional reserves consistent with the EMIR requirements to cover operational, legal and business risks and to reserve capital to meet credit, counterparty and market risks not covered by the member margin and guaranty funds.

Our clearing houses, other than NGX, require that each clearing member make deposits to a fund known as the guaranty fund. The amounts in the guaranty fund will serve to secure the obligations of a clearing member to our clearing houses and may be used to cover losses in excess of the margin and clearing firm accounts sustained by our clearing houses in the event of a default of a clearing member. As of December 31, 2017 and 2016 ; ICE Clear Europe has contributed $100 million of its own cash as part of its futures and options guaranty fund; ICE Clear Europe has contributed $50 million as part of its CDS guaranty fund; ICE Clear Credit has contributed $50 million as part of its CDS guaranty fund; ICE Clear U.S. has contributed $50 million as part of its futures and options guaranty fund; and ICE Clear Canada, ICE Clear Netherlands and ICE Clear Singapore have each also contributed a combined $4 million in cash to their respective guaranty funds. These cash contributions to the guaranty funds are reflected as long-term restricted cash and cash equivalents in the accompanying consolidated balance sheets as of December 31, 2017 and 2016 . See Note 13 for additional information on the guaranty funds and our contributions of cash to our clearing houses guaranty funds.

As of December 31, 2017 and 2016 , there is $64 million and $44 million , respectively, of additional combined cash reflected as short-term restricted cash and cash equivalents in the accompanying consolidated balance sheets related to other regulated entities and exchanges, including ICE Benchmark Administration, ICE Clear Netherlands, ICE Clear Canada, ICE Trade Vault U.K., ICE Endex, ICE Clear Singapore and NGX. The increase in the regulatory capital restricted cash as of December 31, 2017 was primarily due to additional costs incurred due to the growth of these businesses and the acquisition of NGX in December 2017 (Note 3).

As of December 31, 2017 and 2016 , there is $22 million and $24 million , respectively, of additional restricted cash, primarily related to escrow for recent acquisitions and was reflected as short-term or long-term restricted cash and cash equivalents in the accompanying consolidated balance sheets.

6. Short-Term and Long-Term Investments

As of December 31, 2017 , our short-term investments consist of available-for-sale securities as follows (in millions):

	Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
Mutual funds	$ 16	$ —	$ —	$ 16

As of December 31, 2016 , our short-term and long-term investments consist of available-for-sale securities as follows (in millions):

	Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
Cetip equity securities	$ 324	$ 108	$ —	$ 432
Mutual funds	23	—	—	23
Total available-for-sale securities	$ 347	$ 108	$ —	$ 455

Until March 29, 2017, we held a 12% ownership interest in Cetip, S.A., or Cetip, which we classified as an available-for-sale long-term investment. Cetip was recorded at its fair value using its quoted market price. Changes in the fair value of available-for-sale securities are reflected in accumulated other comprehensive income, and include the effects of both stock price and foreign currency translation fluctuations. The unrealized holding gains and losses are excluded from earnings and reported in other comprehensive income until realized. Realized gains and losses, and declines in value deemed to be other-than-temporary, are recognized in earnings.

We acquired the common stock of Cetip for an aggregate consideration of $514 million in cash in July 2011. During the year ended December 31, 2013, we recognized an impairment loss on our Cetip investment of $190 million , primarily due to unfavorable foreign exchange rate changes, which was equal to the difference between the $324 million fair value as of December 31, 2013 and the original investment cost of $514 million . The $324 million fair value of the Cetip investment as of December 31, 2013 became our new cost basis. The long-term investment in equity securities as of December 31, 2016 represents our investment in Cetip, which was valued at $432 million , including a $108 million accumulated unrealized gain.

On March 29, 2017, Cetip and BM&FBOVESPA S.A. finalized a merger agreement. BM&FBOVESPA S.A., which changed its name to B3 S.A. - Brasil, Bolsa, Balcao, or B3, following the merger with Cetip, is a stock exchange and operator of registration, clearing, custodial and settlement services for equities, financial securities, indices, rates, commodities and currencies and is located in São Paulo, Brazil. The merger valued our Cetip investment at $500 million . We received the proceeds in cash and in B3 common stock.

The cash component was valued at $319 million , which was subject to Brazilian capital gains tax of $28 million that was remitted to the Brazilian tax authorities in March 2017. We received net cash proceeds in April 2017 of $286 million , which is net of a foreign exchange loss of $6 million that was incurred in April 2017. We received 29,623,756 B3 common shares valued at their quoted market price of $181 million . In April 2017, we sold the B3 common shares for net proceeds of $152 million , which is net of a capital gain tax of $26 million that was remitted to the Brazilian tax authorities and further transaction expenses of $3 million that were incurred in April 2017. We used the $438 million in net cash and stock proceeds received from the merger and sale of B3 shares to pay down amounts outstanding under our Commercial Paper Program and for share repurchases.

The $500 million fair value of our investment in Cetip included an accumulated unrealized gain of $176 million , based on the $324 million cost basis. In connection with the sale of our equity investment in Cetip, the $176 million , accumulated unrealized gain was reclassified out of accumulated other comprehensive income and was recognized in other income as a realized investment gain in the accompanying consolidated statement of income for the year ended December 31, 2017.

Equity and fixed income mutual funds are held for the purpose of providing future payments for the supplemental executive savings plan and the supplemental executive retirement plan (Note 15) and are classified as available-for-sale securities.

7. Property and Equipment

Property and equipment consisted of the following as of December 31, 2017 and 2016 (in millions, except years):

	As of December 31,		Depreciation Period (Years)
	2017	2016	
Software and internally developed software	$ 766	$ 600	1 to 8
Computer and network equipment	575	483	1 to 5
Land	137	136	N/A
Buildings and building improvements	289	259	2.5 to 40
Leasehold improvements	234	216	1 to 17
Equipment, aircraft and office furniture	275	242	1 to 12
	2,276	1,936	
Less accumulated depreciation and amortization	(1,030)	(807)	
Property and equipment, net	$ 1,246	$ 1,129	

For the years ended December 31, 2017 , 2016 and 2015 , amortization of software and internally developed software was $135 million , $113 million and $89 million , respectively, and depreciation of all other property and equipment was $122 million , $142 million and $124 million , respectively. The unamortized software and internally developed software balances were $269 million and $207 million as of December 31, 2017 and 2016 , respectively.

8. Goodwill and Other Intangible Assets

The following is a summary of the activity in the goodwill balance for the years ended December 31, 2017 and 2016 (in millions):

Goodwill balance at January 1, 2016	$	12,079
Acquisitions		307
Foreign currency translation		(135)
Other activity, net		40
Goodwill balance at December 31, 2016		12,291
Acquisitions		211
Divestitures		(344)
Foreign currency translation		63
Other activity, net		(5)
Goodwill balance at December 31, 2017	$	12,216

The following is a summary of the activity in the other intangible assets balance for the years ended December 31, 2017 and 2016 (in millions):

Other intangible assets balance at January 1, 2016	$	10,758
Acquisitions		180
Foreign currency translation		(155)
Creditex customer relationship intangible asset impairment		(33)
Amortization of other intangible assets		(323)
Other activity, net		(7)
Other intangible assets balance at December 31, 2016		10,420
Acquisitions		274
Divestitures		(216)
Foreign currency translation		69
Amortization of other intangible assets		(272)
Other activity, net		(6)
Other intangible assets balance at December 31, 2017	$	10,269

We completed the acquisitions of NGX, Shorcan Energy, the BofAML indices, TMX Atrium and NYSE National and sold Trayport, NYSE Governance Services and IDMS during the year ended December 31, 2017 and completed the acquisitions of Securities Evaluations and Credit Market Analysis during the year ended December 31, 2016 (Note 3). The changes in other activity, net in the tables above primarily relate to adjustments to the fair value of the net tangible and identifiable intangible assets and liabilities relating to the acquisitions, with a corresponding adjustment to goodwill.

The foreign currency translation adjustments in the tables above resulted from a portion of our goodwill and other intangible assets being held at our U.K., EU and Canadian subsidiaries, some of whose functional currencies are not the U.S. dollar. The foreign currency translation decrease for the year ended December 31, 2016 is primarily due to certain of our goodwill and intangible assets being recorded in pound sterling, which decreased in value due to the weakening pound sterling exchange rate following the U.K. referendum vote in June 2016 to leave the EU.

In 2016, we sold certain of Creditex's U.S. voice brokerage operations to Tullett Prebon and we discontinued Creditex's U.K. voice brokerage operations. We continue to operate Creditex's electronically traded markets and systems, post-trade connectivity platforms and intellectual property. Based on an analysis of these factors, it was determined that the carrying value of the Creditex customer relationship intangible asset was not fully recoverable and an impairment of the asset was recorded in September 2016 for $33 million based on a discounted cash flow calculation. The impairment was recorded as amortization expense within our Trading and Clearing segment in the accompanying consolidated statement of income for the year ended December 31, 2016 .

Other intangible assets and the related accumulated amortization consisted of the following as of December 31, 2017 and 2016 (in millions, except years):

	As of December 31,		Useful Life (Years)
	2017	2016	
Customer relationships	$ 3,923	$ 4,063	3 to 25
Technology	461	438	2.5 to 11
Trading products with finite lives	237	237	20
Russell licensing rights	—	184	10
Data/databases	150	145	4 to 10
Market data provider relationships	11	11	20
Non-compete agreements	38	38	1 to 5
Other	33	31	1 to 5
	4,853	5,147	
Less accumulated amortization	(1,200)	(1,220)	
Total finite-lived intangible assets, net	3,653	3,927	
Exchange registrations, licenses and contracts with indefinite lives	6,243	6,083	
Trade names and trademarks with indefinite lives	280	294	
In-process research and development	85	108	
Other	8	8	
Total indefinite-lived intangible assets	6,616	6,493	
Total other intangible assets, net	$ 10,269	$ 10,420	

We previously held an exclusive license arrangement to list futures and options contracts on the Russell indexes, including the Russell 2000®, Russell 1000® and other related indexes. That license terminated during 2017 and the related intangible asset for Russell licensing rights was fully amortized.

For the years ended December 31, 2017 , 2016 and 2015 , amortization of other intangible assets was $272 million , $323 million and $160 million , respectively. Collectively, the remaining weighted average useful lives of the finite-lived intangible assets is 19.1 years as of December 31, 2017 . We expect future amortization expense from the finite-lived intangible assets as of December 31, 2017 to be as follows (in millions):

2018	$ 260
2019	254
2020	216
2021	205
2022	200
Thereafter	2,518
	$ 3,653

9. Deferred Revenue

Deferred revenue represents cash received that is yet to be recognized as revenue. Total deferred revenue was $264 million as of December 31, 2017 , including $121 million in current deferred revenue and $143 million in non-current deferred revenue. Total deferred revenue was $237 million as of December 31, 2016 , including $114 million in current deferred revenue and $123 million in non-current deferred revenue. See Note 2 for a description of our annual listing, original listing, other listings and data services revenues and the revenue recognition policy for each of these revenue streams. The changes in our deferred revenue during the years

ended December 31, 2017 and 2016 are as follows (in millions):

	Annual Listing Revenue	Original Listing Revenues	Other Listing Revenues	Data Services and Other Revenues	Total
Deferred revenue balance at January 1, 2016	$ —	$ 50	$ 59	$ 81	$ 190
Additions	363	25	71	467	926
Amortization	(363)	(9)	(47)	(460)	(879)
Deferred revenue balance at December 31, 2016	—	66	83	88	237
Additions	368	22	54	421	865
Amortization	(368)	(11)	(39)	(421)	(839)
Acquisitions, net of divestitures (Note 3)	—	—	—	1	1
Deferred revenue balance at December 31, 2017	$ —	$ 77	$ 98	$ 89	$ 264

Included in the amortization recognized in 2017, $114 million relates to the deferred revenue balance as of January 1, 2017. Included in the amortization recognized in 2016, $98 million relates to the deferred revenue balance as of January 1, 2016. As of December 31, 2017 , we estimate that our deferred revenue will be recognized in the following years (in millions):

	Original Listing Revenues	Other Listing Revenues	Data Services and Other Revenues	Total
2018	$ 14	$ 24	$ 83	$ 121
2019	12	28	5	45
2020	12	21	1	34
2021	11	14	—	25
2022	10	9	—	19
Thereafter	18	2	—	20
Total	$ 77	$ 98	$ 89	$ 264

10. Debt

Our total debt, including short-term and long-term debt, consisted of the following as of December 31, 2017 and 2016 (in millions):

	As of December 31,	
	2017	2016
Debt:		
Short-term debt:		
Commercial Paper	$ 1,233	$ 1,642
2018 Senior Notes (2.50% senior unsecured notes due October 15, 2018)	600	—
NYSE Notes (2.00% senior unsecured notes due October 5, 2017)	—	851
Total short-term debt	1,833	2,493
Long-term debt:		
2018 Senior Notes (2.50% senior unsecured notes due October 15, 2018)	—	598
2020 Senior Notes (2.75% senior unsecured notes due December 1, 2020)	1,244	1,242
2022 Senior Notes (2.35% senior unsecured notes due September 15, 2022)	495	—
2023 Senior Notes (4.00% senior unsecured notes due October 15, 2023)	791	790
2025 Senior Notes (3.75% senior unsecured notes due December 1, 2025)	1,242	1,241
2027 Senior Notes (3.10% senior unsecured notes due September 15, 2027)	495	—
Total long-term debt	4,267	3,871
Total debt	$ 6,100	$ 6,364

Amended Credit Facility

We had previously entered into a $ 3.4 billion senior unsecured revolving credit facility, or the Credit Facility, with a maturity date of November 13, 2020, pursuant to a credit agreement with Wells Fargo Bank, N.A., or Wells Fargo, as administrative agent,

issuing lender and swing-line lender, Bank of America, N.A., as syndication agent, backup administrative agent and swing-line lender, and the lenders party thereto. On August 18, 2017, we agreed with the lenders to, amongst other items, extend the maturity date to August 18, 2022, herein referred to as the Amended Credit Facility. The Amended Credit Facility includes an option for us to propose an increase in the aggregate amount available for borrowing by up to $ 975 million , subject to the consent of the lenders funding the increase and certain other conditions.

Other amendments within the Amended Credit Facility include, but are not limited to, (i) eliminating the step-up in the commitment fee ratings-based grid that was scheduled to take effect in April 2019, (ii) removing ICE Europe Parent Limited as a party to the credit agreement, (iii) removing the guaranty by ICE in respect of ICE Europe Parent Limited, (iv) increasing the maximum leverage ratio to 3.50 :1.00, and (v) up to two times, increasing the maximum leverage ratio from 3.50 :1.00 to 4.00 :1.00 for a period of one year following a material acquisition.

No amounts were outstanding under the Amended Credit Facility as of December 31, 2017 . We incurred debt issuance costs of $5 million relating to the Amended Credit Facility and they are presented in the accompanying consolidated balance sheet as other non-current assets and will be amortized over the life of the Amended Credit Facility.

Amounts borrowed under the Amended Credit Facility may be prepaid at any time without premium or penalty. The Amended Credit Facility provides for a $3.4 billion multi-currency revolving facility, with sub-limits for non-dollar borrowings and letters of credit and with a swing-line facility available on a same-day basis. Of the $3.4 billion that is currently available for borrowing under the Amended Credit Facility, $ 1.2 billion is required to back-stop the amount outstanding under our Commercial Paper Program as of December 31, 2017 and $100 million is required to support certain subsidiary clearing house commitments (Note 13). The amount required to back-stop the amounts outstanding under the Commercial Paper Program will fluctuate as we increase or decrease our commercial paper borrowings. The remaining $ 2.1 billion available under the Amended Credit Facility as of December 31, 2017 is available to us to use for working capital and general corporate purposes including, but not limited to, acting as a back-stop to future increases in the amounts outstanding under the Commercial Paper Program.

Borrowings under the Amended Credit Facility will bear interest on the principal amount outstanding at either (a) LIBOR plus an applicable margin rate or (b) a “base rate” plus an applicable margin rate; provided, however, that all loans denominated in a foreign currency will bear interest at LIBOR plus an applicable margin rate. The “base rate” equals the higher of (i) Wells Fargo’s prime rate, (ii) the federal funds rate plus 0.50% , or (iii) the one-month LIBOR rate plus 1.00% . The applicable margin rate is based upon our public long-term debt ratings and ranges from 0.875% to 1.50% on LIBOR borrowings and from 0.00% to 0.50% on base rate borrowings.

The Amended Credit Facility includes an unutilized revolving credit commitment fee that is equal to the unused maximum revolver amount, multiplied by an applicable commitment fee rate and is payable in arrears on a quarterly basis. The applicable commitment fee rate ranges from 0.08% to 0.20% and is determined based on our long-term debt rating. As of December 31, 2017 , the applicable commitment fee rate was 0.125% based on our current long-term debt ratings.

The Amended Credit Facility contains customary representations and warranties, covenants and events of default, including a leverage ratio, as well as limitations on liens on our assets, indebtedness of non-obligor subsidiaries, the sale of all or substantially all of our assets, and other matters.

Senior Notes

On August 17, 2017, we issued $1.0 billion in aggregate senior notes, including $500 million principal amount of 2.35% senior unsecured fixed rate notes due September 2022, or the 2022 Senior Notes, and $500 million principal amount of 3.10% senior unsecured fixed rate notes due September 2027, or the 2027 Senior Notes. We used the majority of the net proceeds from the 2022 Senior Notes and 2027 Senior Notes offering to fund the redemption of the NYSE Notes.

We incurred debt issuance costs of $8 million relating to the issuance of the 2022 Senior Notes and the 2027 Senior Notes and they are presented in the accompanying consolidated balance sheet as a deduction from the carrying amount of the related debt liability and will be amortized over the life of the 2022 Senior Notes and the 2027 Senior Notes. The 2022 Senior Notes and 2027 Senior Notes contain affirmative and negative covenants, including, but not limited to, certain redemption rights, limitations on liens and indebtedness and limitations on certain mergers, sales, dispositions and lease-back transactions.

In November 2015, we issued $2.5 billion in aggregate senior notes, including $1.25 billion principal amount of 2.75% senior unsecured fixed rate notes due November 2020, or the 2020 Senior Notes, and $1.25 billion principal amount of 3.75% senior unsecured fixed rate notes due November 2025, or the 2025 Senior Notes. We used the net proceeds from the 2020 Senior Notes and 2025 Senior Notes offering, together with $1.6 billion of borrowings under our Commercial Paper Program, to finance the $4.1 billion cash portion of the purchase price of the acquisition of Interactive Data. The 2020 Senior Notes and 2025 Senior Notes contain affirmative and negative covenants, including, but not limited to, certain redemption rights, limitations on liens and indebtedness, limitations on certain mergers, sales, dispositions and lease-back transactions.

Commercial Paper Program

We have entered into a U.S. dollar commercial paper program, or the Commercial Paper Program. Our Commercial Paper Program is currently backed by the borrowing capacity available under the Amended Credit Facility, equal to the amount of the commercial paper that is issued and outstanding at any given point in time. The effective interest rate of commercial paper issuances does not materially differ from short-term interest rates (such as USD LIBOR). The fluctuation of these rates due to market conditions may impact our interest expense.

We repaid $409 million of net notes outstanding under the Commercial Paper Program during the year ended December 31, 2017 primarily using net cash proceeds received from the sale of our investment in Cetip and the sale of Trayport. These repayments were partially offset by notes issued under the Commercial Paper Program during the year ended December 31, 2017 for the cash acquisitions and investments and to repurchase our common stock. See Note 3 for a discussion of our 2017 acquisitions, investments and divestitures. We used net proceeds from notes issued under the Commercial Paper Program during the year ended December 31, 2016 to finance part of the cash purchase price of the Securities Evaluations and Credit Market Analysis acquisitions and for general corporate purposes. We used net proceeds from notes issued under the Commercial Paper Program during the year ended December 31, 2015 to finance part of the cash portion of the purchase price of the Interactive Data acquisition and to pay related fees and expenses, to repurchase our common stock, and for general corporate purposes. We repaid a portion of the amounts outstanding under the Commercial Paper Program during the years ended December 31, 2017, 2016 and 2015 with cash flows from operations.

Commercial paper notes of $ 1.2 billion with original maturities ranging from two to 64 days were outstanding as of December 31, 2017 under our Commercial Paper Program. As of December 31, 2017 , the weighted average interest rate on the $ 1.2 billion outstanding under our Commercial Paper Program was 1.49% per annum, with a weighted average maturity of 18 days. Commercial paper notes of $1.6 billion with original maturities ranging from three to 68 days were outstanding as of December 31, 2016 under the Commercial Paper Program. As of December 31, 2016, the weighted average interest rate on the $1.6 billion outstanding under the Commercial Paper Program was 0.74% per annum, with a weighted average maturity of 18 days.

NYSE Notes

The $ 850 million , 2.00% senior unsecured fixed rate NYSE Notes were due in October 2017. We redeemed the NYSE Notes in full in September 2017 using the majority of the proceeds from the 2022 Senior Notes and 2027 Senior Notes offering.

We previously provided condensed consolidating financial statements for Intercontinental Exchange, Inc., or ICE (Parent), NYSE Holdings LLC and the subsidiary non-guarantors in a footnote to our consolidated financial statements. However, in connection with the NYSE Notes being redeemed in full in September 2017, all guarantees between ICE and NYSE Holdings LLC were terminated and we are no longer required to include a condensed consolidating financial statements footnote in our quarterly and annual filings.

Debt Repayment Schedule

As of December 31, 2017 , the outstanding debt repayment schedule is as follows (in millions):

2018	$	1,835
2019		—
2020		1,250
2021		—
2022		500
Thereafter		2,550
Principal amounts repayable		6,135
Debt issuance costs		(27)
Unamortized balance of fair value adjustments and discounts on bonds, net		(8)
Total debt outstanding	$	6,100

11. Equity

We currently sponsor employee and director stock option and restricted stock plans. Employee and director stock-based compensation expenses recognized for both stock options and restricted stock in the accompanying consolidated statements of income was $135 million , $123 million and $111 million for the years ended December 31, 2017 , 2016 and 2015 , respectively. The amount expensed for the years ended December 31, 2017 , 2016 and 2015 is net of $18 million , $13 million and $11 million , respectively, of stock-based compensation that was capitalized as software development costs.

In March 2016, we early adopted Accounting Standards Update No. 2016-09, Stock Compensation *(Topic 718) - Improvements to Employee Share-Based Payment Accounting* , or ASU 2016-09, on a prospective basis. Under the requirements of ASU 2016-09, we recognized $15 million in excess tax benefits for tax deductions in excess of cumulative compensation expenses for financial reporting purposes for the year ended December 31, 2016 through our consolidated statement of income. For the year ended December 31, 2015, we recognized excess tax benefits of $19 million as an increase to the additional paid-in capital balance.

As of December 31, 2017 , we had 39.7 million shares in total under various equity plans that are available for future issuance as stock option and restricted stock awards.

Stock Option Plans

Stock options are granted at the discretion of the compensation committee of the board of directors. All stock options are granted at an exercise price equal to the fair value of the common stock on the date of grant. The grant date fair value is based on the closing stock price on the date of grant as well as certain other assumptions. The fair value of the stock options on the date of grant is recognized as expense ratably over the vesting period, net of estimated forfeitures. We may grant, under provisions of the plans, both incentive stock options and nonqualified stock options. The options generally vest over three years, but can vest at different intervals based on the compensation committee's determination and the terms of the equity plans. Generally, options may be exercised up to ten years after the date of grant, but expire either 14 or 60 days after termination of employment unless an employee's employment agreement specifies otherwise. The shares of common stock issued under our stock option plans are made available from authorized and unissued common stock or treasury shares. The following is a summary of stock options for the years ended December 31, 2017 , 2016 and 2015 :

	Number of Options	Weighted Average Exercise Price per Option
Outstanding at January 1, 2015	3,814,335	$ 27.21
Granted	882,335	41.59
Exercised	(823,915)	20.40
Outstanding at December 31, 2015	3,872,755	31.93
Granted	751,615	50.01
Exercised	(745,665)	28.73
Outstanding at December 31, 2016	3,878,705	36.05
Granted	730,913	57.34
Exercised	(596,230)	27.97
Outstanding at December 31, 2017	4,013,388	41.13

Details of stock options outstanding as of December 31, 2017 are as follows:

	Number of Options	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life (Years)	Aggregate Intrinsic Value (In millions)
Vested or expected to vest	4,013,388	$ 41.13	6.6	$ 118
Exercisable	2,989,950	$ 36.36	5.8	$ 102

The total intrinsic value of stock options exercised during the years ended December 31, 2017 , 2016 and 2015 was $22 million , $18 million and $22 million , respectively. As of December 31, 2017 , there was $8 million in total unrecognized compensation costs related to stock options. These costs are expected to be recognized over a weighted average period of 1.7 years as the stock options vest.

Of the options outstanding at December 31, 2017 , 2,989,950 were exercisable at a weighted-average exercise price of $36.36 . Of the options outstanding at December 31, 2016 , 2,787,525 were exercisable at a weighted-average exercise price of $31.61 . Of the options outstanding at December 31, 2015 , 2,699,865 were exercisable at a weighted-average exercise price of $27.87 .

We use the Black-Scholes option pricing model for purposes of valuing stock option awards. During the years ended December 31, 2017 , 2016 and 2015 , we used the assumptions in the table below to compute the value of all options for shares of common stock granted to employees:

Assumptions	Year Ended December 31, 2017	2016	2015
Risk-free interest rate	1.84 %	1.51 %	1.08 %
Expected life in years	5.0	5.0	5.0
Expected volatility	21 %	24 %	24 %
Expected dividend yield	1.40 %	1.36 %	1.25 %
Estimated fair value of options granted per share	$ 10.50	$ 9.88	$ 8.19

The risk-free interest rate is based on the zero-coupon U.S. Treasury yield curve in effect at the time of grant. The expected life computation is derived from historical exercise patterns and anticipated future patterns. Expected volatilities are based on historical volatility of our stock.

Restricted Stock Plans

Restricted stock units are granted at the discretion of the compensation committee of the board of directors. We granted 3,274,358 , 3,251,017 and 3,457,590 time-based and performance-based restricted stock units during the years ended December 31, 2017 , 2016 and 2015 , respectively, including 2,364,288 , 2,325,985 and 1,871,785 time-based restricted stock units during the years ended December 31, 2017 , 2016 and 2015 , respectively. The grant date fair value of each award is based on the closing stock price at the date of grant. The fair value of the time-based restricted stock units on the date of grant is recognized as expense ratably over the vesting period, which is typically three years, net of forfeitures. Granted but unvested shares are generally forfeited upon termination of employment. When restricted stock is forfeited, compensation costs previously recognized for unvested shares are reversed. Until the shares vest and are issued, the participants have no voting or dividend rights and the shares may not be sold, assigned, transferred, pledged or otherwise encumbered. Unvested restricted stock earns dividend equivalents which are paid in cash on the vesting date.

We recognize compensation costs, net of forfeitures, using an accelerated attribution method over the vesting period for awards with performance conditions. Compensation costs for such awards are recognized only if it is probable that the condition will be satisfied. If we initially determine that it is not probable that the performance condition will be satisfied and later determine that it is probable that the performance condition will be satisfied, or vice versa, the effect of the change in estimate is accounted for in the period of change by recording a cumulative catch-up adjustment to retroactively apply the new estimate. We recognize the remaining compensation costs over the remaining vesting period. Our compensation committee, pursuant to the terms of the equity plans and the authority delegated to it by our board of directors, can make equitable adjustments to the performance condition in recognition of unusual or non-recurring events.

In January 2017 , we reserved a maximum of 1,534,218 restricted shares for potential issuance as performance-based restricted shares for certain of our employees. These restricted shares were subject to a market condition that could have reduced the number of shares that were awarded if our 2017 total shareholder return fell below that of the 2017 return of the S&P 500 Index and if we achieved above target financial performance level. Our total shareholder return for the year ended December 31, 2017 was higher than the 2017 return of the S&P 500 Index. Therefore, no share reduction was required. Based on our actual 2017 financial performance as compared to the 2017 financial performance level thresholds, 767,109 restricted shares were awarded, which resulted in $43 million in compensation expenses that will be expensed over the three -year accelerated vesting period, including $26 million that was expensed during the year ended December 31, 2017 .

The grant date fair values of the awards with a market condition were estimated based on our stock price on the grant date, the valuation of historical awards with market conditions, the relatively low likelihood that the market condition will affect the number of shares granted (as the market condition only affects shares granted in excess of certain financial performance targets), and our expectation of achieving the financial performance targets. The grant date fair value of the awards, when considering the impact of the market condition on fair value, was determined to not be materially different from our stock price on the respective grant dates.

Restricted shares are used as an incentive to attract and retain qualified employees and to increase shareholder returns with actual performance linked to both short and long-term shareholder return. Our equity plans include a change in control provision that may accelerate vesting on both the time-based and performance-based restricted shares if the awards are not assumed by an acquirer in the case of a change in control. The following is a summary of the nonvested restricted shares under all plans discussed above for the years ended December 31, 2017 , 2016 and 2015 :

	Number of Restricted Stock Shares	Weighted Average Grant-Date Fair Value per Share
Nonvested at January 1, 2015	5,354,975	$ 35.36
Granted	3,457,590	42.09
Vested	(2,182,805)	31.98
Forfeited	(358,585)	33.90
Nonvested at December 31, 2015	6,271,175	39.99
Granted	3,251,017	50.06
Vested	(2,640,640)	38.05
Forfeited	(445,681)	45.51
Nonvested at December 31, 2016	6,435,871	45.86
Granted	3,274,358	57.61
Vested	(3,508,814)	44.64
Forfeited	(448,211)	52.38
Nonvested at December 31, 2017	5,753,204	52.78

Restricted stock shares granted in the table above include both time-based and performance-based grants. Performance-based shares have been presented to reflect the actual shares to be issued based on the achievement of past performance targets, also considering the impact of any market conditions. Non-vested performance-based restricted shares granted are presented in the table above at the maximum number of restricted shares that would vest if the maximum performance targets are met. As of December 31, 2017 , there were $142 million in total unrecognized compensation costs related to the time-based restricted stock and the performance-based restricted stock. These costs are expected to be recognized over a weighted-average period of 1.3 years as the restricted stock vests. During the years ended December 31, 2017 , 2016 and 2015 , the total fair value of restricted stock vested under all restricted stock plans was $206 million , $130 million and $96 million , respectively.

Treasury Stock

During the years ended December 31, 2017 , 2016 and 2015 , we received 1,503,453 shares, 1,074,162 shares and 979,295 shares, respectively, of common stock from certain of our employees related to tax withholdings made by us on our employee's behalf for restricted stock and stock option exercises. We recorded the receipt of the shares as treasury stock. Treasury stock activity is presented in the accompanying consolidated statements of changes in equity, accumulated other comprehensive income (loss) and redeemable non-controlling interest.

In connection with the record date for a 5 -for-1 stock split on October 27, 2016, all shares of common stock held by us as treasury shares were canceled and extinguished. Therefore, as of the close of market on October 27, 2016, all 35,273,515 outstanding treasury stock shares were retired. In connection with the retirement, of the $1.5 billion value assigned to the treasury stock shares, $1.1 billion was allocated to additional paid-in capital and $370 million was allocated to retained earnings. The amount allocated to additional paid-in capital was determined based on the paid-in capital per share generated from the historical issuances of these treasury shares.

Stock Repurchase Program

During the years ended December 31, 2017 , 2016 and 2015 , we repurchased 14,966,616 shares, 902,920 shares and 14,343,845 shares, respectively, of our outstanding common stock at a cost of $949 million , $50 million and $660 million , respectively. The shares repurchased are held in treasury stock. These repurchases were completed on the open market and under our 10b5-1 trading plan. In connection with our acquisition of Interactive Data during the fourth quarter of 2015, we suspended our stock repurchase plan for a period of time. The timing and extent of future repurchases that are not made pursuant to a Rule 10b5-1 trading plan will be at our discretion and will depend upon many conditions. Our management periodically reviews whether or not to be active in repurchasing our stock. In making a determination regarding any stock repurchases, we consider multiple factors. The factors may include: overall stock market conditions, our common stock price movements, the remaining amount authorized for repurchases by our board of directors, the potential impact of a stock repurchase program on our corporate debt ratings, our expected free cash flow and working capital needs, our current and future planned strategic growth initiatives, and other potential uses of our cash and capital resources.

In August 2016, our board of directors approved an aggregate of $1.0 billion for future repurchases of our common stock with no fixed expiration date. In September 2017, our board of directors approved an aggregate of $1.2 billion for future repurchases of our common stock with no fixed expiration date that became effective on January 1, 2018. We expect funding for any share repurchases to come from our operating cash flow or borrowings under our debt facilities or commercial paper program.

Repurchases may be made from time to time on the open market, through established trading plans, in privately-negotiated transactions or otherwise, in accordance with all applicable securities laws, rules and regulations. We have entered into a Rule 10b5-1 trading plan, as authorized by our board of directors, to govern some or all of the repurchases of our shares of common stock. We may discontinue the stock repurchases at any time and may amend or terminate the Rule 10b5-1 trading plan at any time. The approval of our board of directors for the share repurchases does not obligate us to acquire any particular amount of our common stock. In addition, our board of directors may increase or decrease the amount of capacity we have for repurchases from time to time. We repurchased shares of our common stock in the open market during the periods presented as follows:

	Number of Shares	Average Repurchase Price Per Share	Amount (in millions)
2017			
Fourth quarter	3,497,574	$ 68.62	$ 240
Third quarter	3,641,529	65.90	240
Second quarter	3,916,487	61.28	240
First quarter	3,911,026	58.49	229
Total open market common stock repurchases	14,966,616		$ 949
2016			
Fourth quarter	902,920	$ 55.42	$ 50
Third quarter	—	—	—
Second quarter	—	—	—
First quarter	—	—	—
Total open market common stock repurchases	902,920		$ 50
2015			
Fourth quarter	1,163,975	$ 47.14	$ 56
Third quarter	4,455,675	46.27	206
Second quarter	4,362,695	46.44	202
First quarter	4,361,500	45.06	196
Total open market common stock repurchases	14,343,845		$ 660

Dividends

The declaration of dividends is subject to the discretion of our board of directors, and may be affected by various factors, including our future earnings, financial condition, capital requirements, levels of indebtedness, credit ratings and other considerations our board of directors deem relevant. Our board of directors has adopted a quarterly dividend declaration policy providing that the declaration of any dividends will be determined quarterly by the board or audit committee of the board of directors taking into account such factors as our evolving business model, prevailing business conditions and our financial results and capital requirements, without a predetermined annual net income payout ratio. We declared and paid cash dividends per share during the periods presented as follows:

	Dividends Per Share	Amount (in millions)
2017		
Fourth quarter	$ 0.20	$ 118
Third quarter	0.20	119
Second quarter	0.20	119
First quarter	0.20	120
Total cash dividends declared and paid	0.80	$ 476
2016		
Fourth quarter	$ 0.17	$ 102
Third quarter	0.17	102
Second quarter	0.17	103
First quarter	0.17	102
Total cash dividends declared and paid	$ 0.68	$ 409
2015		
Fourth quarter	$ 0.15	$ 90
Third quarter	0.15	83
Second quarter	0.15	85
First quarter	0.13	73
Total cash dividends declared and paid	$ 0.58	$ 331

12. Income Taxes

Income before income taxes and the income tax provision consisted of the following for the years ended December 31, 2017 , 2016 and 2015 (in millions):

	Year Ended December 31,		
	2017	2016	2015
Income before income taxes			
Domestic	$ 1,299	$ 1,043	$ 824
Foreign	1,218	986	829
	$ 2,517	$ 2,029	$ 1,653
Income tax provision			
Current tax expense:			
Federal	$ 266	$ 258	$ 250
State	92	5	46
Foreign	268	203	170
	$ 626	$ 466	$ 466
Deferred tax expense (benefit):			
Federal	$ (674)	$ 65	$ (7)
State	33	76	(40)
Foreign	(10)	(27)	(61)
	$ (651)	$ 114	$ (108)
Total income tax expense (benefit)	$ (25)	$ 580	$ 358

A reconciliation of the statutory U.S. federal income tax rate to our effective income tax rate for the years ended December 31, 2017 , 2016 and 2015 is as follows:

	Year Ended December 31,		
	2017	2016	2015
Statutory federal income tax rate	35 %	35 %	35 %
State and local income taxes, net of federal benefit	3	3	2
Foreign tax rate differential	(7)	(7)	(7)
Deferred tax benefit due to tax law changes	(30)	(2)	(4)
Uncertain tax positions	—	—	(3)
Other	(2)	—	(1)
Total provision for income taxes	(1)%	29 %	22 %

The effective tax rates for the years ended December 31, 2017 , 2016 and 2015 are lower than the federal statutory rate primarily due to favorable U.S. and U.K. tax law changes and favorable foreign income tax rate differentials, partially offset by state income taxes. Favorable foreign income tax rate differentials result primarily from lower income tax rates in the U.K. and various other lower tax jurisdictions as compared to the historical income tax rates in the U.S.

On December 22, 2017, the TCJA was signed into law (Note 2). The TCJA reduced the U.S. corporate income tax rate from 35% to 21% effective January 1, 2018. We are required to revalue our U.S. deferred tax assets and liabilities at the new federal corporate income tax rate as of the date of enactment of the TCJA and to include the rate change effect in the tax provision for the period ended December 31, 2017. As a result, we recognized a $764 million deferred tax benefit based on a reasonable estimate of the deferred tax assets and liabilities as of December 22, 2017. This significantly reduced the effective tax rate for the period ended December 31, 2017 in comparison to the effective tax rates for the last two comparable periods.

During the fourth quarter of 2015, the U.K. reduced the corporate income tax rate from 20% to 19% effective April 1, 2017 and to 18% effective April 1, 2020. During the third quarter of 2016, the U.K. further reduced their corporate income tax rate from 18% to 17% effective April 1, 2020. The reduction in the future U.S. and U.K. corporate income tax rates resulted in deferred tax benefits. The impact of the deferred tax benefits for the U.S. and U.K. corporate income tax rate reductions for the years ended December 31, 2017 , 2016 and 2015 collectively lowered the effective tax rates by 30% , 2% and 4% , respectively, and resulted in deferred tax benefits of $764 million , $34 million and $60 million , respectively.

The decrease in the effective tax rate for the year ended December 31, 2017 , from the comparable period in 2016 , is primarily due to the deferred tax benefit associated with the TCJA and tax benefits associated with a divestiture in the second quarter of 2017, partially offset by the deferred tax benefit from the U.K. corporate income tax reduction in the third quarter of 2016, additional tax expense from an Illinois corporate income tax rate increase enacted in the third quarter of 2017, and an income tax expense increase due to a relatively higher U.S. mix of income in 2017. The increase in the effective tax rate for the year ended December 31, 2016 , from the comparable period in 2015 , is primarily due to the tax impact of foreign versus U.S. based pre-tax income, lower deferred tax benefits associated with the future U.K. income tax rate reductions, and greater favorable settlements with various taxing authorities in 2015, partially offset by a tax benefit from the early adoption of ASU 2016-09 in 2016.

Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. As a result of the enactment of TCJA on December 22, 2017, we revalued the U.S. deferred tax assets and liabilities at the new federal corporate income tax rate of 21%, for the period ended December 31, 2017. Therefore, the ending balance of the net deferred tax liability for that period is significantly lower compared to the prior periods' balances. The following table summarizes the significant components of our deferred tax liabilities and assets as of December 31, 2017 and 2016 (in millions):

	December 31,	
	2017	2016
Deferred tax assets:		
Deferred and stock-based compensation	$ 105	$ 166
Pension	16	89
Liability reserve	37	52
Tax credits	12	64
Loss carryforward	147	127
Deferred revenue	39	38
Other	42	47
Total	398	583
Valuation allowance	(126)	(122)
Total deferred tax assets, net of valuation allowance	$ 272	$ 461
Deferred tax liabilities:		
Property and equipment	$ (99)	$ (113)
Acquired intangibles	(2,453)	(3,302)
Total deferred tax liabilities	$ (2,552)	$ (3,415)
Net deferred tax liabilities	$ (2,280)	$ (2,954)
Reported as:		
Net non-current deferred tax assets	$ 3	$ 4
Net non-current deferred tax liabilities	(2,283)	(2,958)
Net deferred tax liabilities	$ (2,280)	$ (2,954)

A reconciliation of the beginning and ending amount of deferred income tax valuation allowance is as follows for the years ended December 31, 2017 , 2016 and 2015 (in millions):

	Year Ended December 31,		
	2017	2016	2015
Beginning balance of deferred income tax valuation allowance	$ 122	$ 72	$ 75
Increases charged to income tax expense	—	28	1
Charges against goodwill	15	22	1
Decreases	(11)	—	(5)
Ending balance of deferred income tax valuation allowance	$ 126	$ 122	$ 72

We recognize valuation allowances on deferred tax assets if, based on the weight of the evidence, we believe that it is more likely than not that some or all of the deferred tax assets will not be realized. We recorded a valuation allowance for deferred tax assets of $126 million and $122 million as of December 31, 2017 and 2016 , respectively. Increases charged to income tax expense primarily relate to deferred tax assets on foreign net operating and capital losses that we do not expect to be realizable in future periods. Increases charged against goodwill primarily relate to deferred tax assets arising on the 2017 acquisition of National Stock Exchange and the 2016 acquisition of a foreign branch that we do not expect to be realizable in future periods. Decreases for the year ended December 31, 2017 relate to the U.S. corporate income tax rate reduction from 35% to 21% and the net impact from divestitures of Trayport and IDMS. Decreases for the year ended December 31, 2015 relate to net operating loss carryforwards that we determined would be available to offset income in future periods.

As part of U.S. tax reform, the TCJA imposes a transition tax on certain accumulated foreign earnings aggregated across all non-U.S. subsidiaries, net of foreign deficits, as computed under U.S. tax principles. As we are in an aggregate net foreign deficit position for U.S. tax purposes, we are not liable for the transition tax.

Our non-U.S. subsidiaries had $4.5 billion in cumulative undistributed earnings as of December 31, 2017 . This amount represents the post-income tax earnings under U.S. GAAP principles. The earnings from our non-U.S. subsidiaries are considered to be indefinitely reinvested. Accordingly, no provision for U.S. federal and state income taxes has been made in the accompanying consolidated financial statements. Further, a determination of the unrecognized deferred tax liability is not practicable.

Any future distribution by way of dividend of these non-U.S. earnings may subject us to both U.S. federal and state income taxes, as adjusted for non-U.S. tax credits, and withholding taxes payable to various non-U.S. countries. Such dividends may not be

subject to U.S. federal tax under the TCJA and we will continue to monitor both federal and state interpretations, guidance and regulations concerning U.S. tax reform. We will continue to evaluate our indefinite reinvestment assertion in light of any further developments.

SAB 118 has provided guidance for companies that have not completed their accounting for the income tax effects of the TCJA in the period of enactment, allowing for a measurement period of up to one year after the enactment date to finalize the recording of the related tax impacts. As of December 31, 2017, we have not completed our accounting for the tax effects of the enactment of the TCJA, however, we have made a reasonable estimate of the effects on our deferred tax balances and in relation to the transition tax. In other cases, we have not been able to make a reasonable estimate and will continue to analyze the TCJA in order to finalize any related impacts within the measurement period. The FASB Staff also provided additional guidance to address the accounting for the effects of the provisions related to the taxation of GILTI, noting that companies should make an accounting policy election to recognize deferred taxes for temporary basis differences expected to reverse as GILTI in future years or to include the tax expense in the year it is incurred. We have not completed our analysis of the effects of the GILTI provisions and will further consider the accounting policy election within the measurement period as provided for under SAB 118 (Note 2).

As of December 31, 2017 and 2016 , we have gross U.S. federal net operating loss carryforwards of $89 million and $59 million , respectively, and gross state and local net operating loss carryforwards of $353 million and $293 million , respectively. The increases for U.S federal and state and local net operating loss carryforwards is primarily due to acquisitions during 2017. The majority of the new additions are not expected to be realizable in future periods and have related valuation allowance. The remaining carryforwards are available to offset future taxable income until they begin to expire in 2019. In addition, as of December 31, 2017 and 2016 , we have gross foreign net operating loss carryforwards of $253 million and $116 million , respectively. The majority of gross foreign net operating losses are not expected to be realizable in future periods and have related valuation allowances.

A reconciliation of the beginning and ending amount of unrecognized tax benefits is as follows for the years ended December 31, 2017 , 2016 and 2015 (in millions):

	Year Ended December 31,		
	2017	2016	2015
Beginning balance of unrecognized tax benefits	$ 112	$ 107	$ 145
Additions related to acquisitions	—	22	7
Additions based on tax positions taken in current year	10	9	9
Additions based on tax positions taken in prior years	9	—	34
Reductions based on tax positions taken in prior years	—	(1)	(51)
Reductions resulting from statute of limitation lapses	(8)	(3)	(12)
Reductions related to settlements with taxing authorities	(8)	(22)	(25)
Ending balance of unrecognized tax benefits	$ 115	$ 112	$ 107

As of December 31, 2017 and 2016 , the balance of unrecognized tax benefits which would, if recognized, affect our effective tax rate was $77 million and $76 million , respectively. It is reasonably possible, as a result of settlements of ongoing audits or statute of limitations expirations, unrecognized tax benefits could increase as much as $10 million and decrease as much as $39 million within the next twelve months. Of the $115 million in unrecognized tax benefits as of December 31, 2017 , $69 million is recorded as other non-current liabilities and $47 million is recorded as other current liabilities in the accompanying consolidated balance sheet.

We recognize interest accrued on income tax uncertainties and accrued penalties as a component of income tax expense. For the years ended December 31, 2017 , 2016 and 2015 , we recognized $1 million , $1 million and $12 million , respectively, of income tax benefit for interest and penalties. Accrued interest and penalties were $35 million as of both December 31, 2017 and 2016 . Of the $35 million in accrued interest and penalties as of December 31, 2017 , $25 million is recorded as other non-current liabilities and $10 million is recorded as other current liabilities in the accompanying consolidated balance sheet.

We or one of our subsidiaries files income tax returns in the U.S. federal jurisdiction and various state and foreign jurisdictions. The following table summarizes open tax years by major jurisdiction:

Jurisdiction	Open Tax Years
U.S. Federal	2014 - 2017
U.S. States	2007 - 2017
U.K.	2015 - 2017
Netherlands	2012 - 2017

Although the outcome of tax audits is always uncertain, we believe that adequate amounts of tax, including interest and penalties, have been provided for any adjustments expected to result from open tax years.

13. Clearing Organizations

We operate regulated central counterparty clearing houses for the settlement and clearance of derivative contracts. The clearing houses include ICE Clear Europe, ICE Clear Credit, ICE Clear U.S., ICE Clear Canada, ICE Clear Netherlands, ICE Clear Singapore and NGX (referred to herein collectively as the "ICE Clearing Houses").

- ICE Clear Europe performs the clearing and settlement for all futures and options contracts traded through ICE Futures Europe and ICE Endex, for energy futures and options contracts trading through ICE Futures U.S., and for CDS contracts submitted for clearing in Europe.
- ICE Clear Credit performs the clearing and settlement for CDS contracts submitted for clearing in North America.
- ICE Clear U.S. performs the clearing and settlement of agricultural, metals, currencies and financial futures and options contracts traded through ICE Futures U.S.
- ICE Clear Canada performs the clearing and settlement for all futures and options contracts traded through ICE Futures Canada.
- ICE Clear Netherlands offers clearing for Dutch equity options.
- ICE Clear Singapore performs the clearing and settlement for all futures and options contracts traded through ICE Futures Singapore.
- NGX performs clearing and settlement for North American natural gas, electricity and oil markets and was acquired in December 2017 (Note 3).

Each of the ICE Clearing Houses requires all clearing members or participants to maintain cash on deposit or pledge certain assets, which may include government obligations, non-government obligations, letters of credit or gold to guarantee performance of the clearing members' or participants' open positions. Such amounts in total are known as "original margin." The ICE Clearing Houses may make intraday original margin calls in circumstances where market conditions require additional protection. The daily profits and losses from and to the ICE Clearing Houses due to the marking-to-market of open contracts is known as "variation margin." With the exception of NGX's physical natural gas and physical power products, the ICE Clearing Houses mark all outstanding contracts to market, and therefore pay and collect variation margin, at least once daily, and in some cases multiple times throughout the day. For NGX's physical natural gas and power products, NGX marks all outstanding contracts to market daily, but only collects variation margin when a participant's open position falls outside a specified percentage of its pledged collateral. Marking-to-market allows the ICE Clearing Houses to identify any clearing members or participants that may be unable to satisfy the financial obligations resulting from changes in the prices of their open contracts before those financial obligations become exceptionally large and jeopardize the ability of the ICE Clearing Houses to ensure financial performance of clearing members' or participants' open positions.

With the exception of NGX, each of the ICE Clearing Houses requires that each clearing member make deposits into a fund known as a "guaranty fund," which is maintained by the relevant ICE Clearing House. These amounts serve to secure the obligations of a clearing member to the ICE Clearing House to which it has made the guaranty fund deposit and may be used to cover losses sustained by the respective ICE Clearing House in the event of a default of a clearing member. NGX maintains a guaranty fund utilizing a $100 million letter of credit that has been entered into with a major Canadian chartered bank and backed by a default insurance policy underwritten by Export Development Corporation, or EDC, a Canadian government agency. In event of a participant default, where a participant's collateral becomes depleted, any remaining shortfall would be covered by a draw down on the letter of credit following which NGX would pay the first $15 million in losses per its deductible and recover additional losses under the insurance policy up to $100 million . We have provided a parent guaranty of $100 million in favor of the major Canadian chartered bank and we voluntarily reserved $100 million of our Amended Credit Facility to backstop that parent guaranty (Note 11).

We have contributed cash of $150 million , $50 million and $50 million to the guaranty funds of ICE Clear Europe, ICE Clear Credit and ICE Clear US, respectively, as of December 31, 2017 , and such amounts are at risk and could be used in the event of a clearing member default where the amount of the defaulting clearing member's original margin and guaranty fund deposits are insufficient. We have also contributed $4 million in cash in total to the guaranty funds of ICE Clear Canada, ICE Clear Netherlands and ICE Clear Singapore. The $254 million combined contributions to the guaranty funds as of December 31, 2017 and 2016 are included in long-term restricted cash and cash equivalents in the accompanying consolidated balance sheets (Note 5).

For ICE Clear Europe, if a futures and options clearing member's deposits are depleted and a default occurs, then a $100 million contribution made by us to the ICE Clear Europe guaranty fund would be utilized after the available funds of the defaulting clearing member but before all other amounts within the guaranty fund. The $100 million is solely available in the event of an ICE Clear Europe futures and options clearing member default. We have contributed $50 million to the ICE Clear Europe CDS guaranty fund and it would be utilized after the available funds of the defaulting CDS clearing member but before all other amounts within the CDS guaranty fund. The $50 million contribution to the ICE Clear U.S. guaranty fund and the $50 million contribution to the ICE Clear Credit guaranty fund would be utilized after the available funds of the defaulting clearing member but before all other amounts within the guaranty fund.

Each of the ICE Clearing Houses has equal and offsetting claims to and from their respective clearing members or participants on opposite sides of each cleared contract. This arrangement allows the ICE Clearing Houses to serve as the central financial counterparty on every cleared contract. Each ICE Clearing House bears financial counterparty credit risk in the event that market movements create conditions that lead to its clearing members or participants failing to meet their financial obligations to that ICE Clearing House. Accordingly, the ICE Clearing Houses account for this central counterparty guarantee as a performance guarantee. Given that each contract is margined and marked-to-market or settled at least once daily for each clearing member, or in the case of NGX, collateralized for each participant, the ICE Clearing Houses' maximum estimated exposure for this guarantee, excluding the effects of original and variation margin requirements and mandatory deposits to the applicable guaranty fund by clearing members and collateral from its participants, is $78.3 billion as of December 31, 2017 , which represents the maximum estimated value by the ICE Clearing Houses of a hypothetical one day movement in pricing of the underlying unsettled contracts. This amount is based on calculations determined using proprietary risk management software that simulates gains and losses based on historical market prices, volatility and other factors present at that point in time for those particular unsettled contracts. Future actual market price volatility could result in the exposure being significantly different than the amount estimated by the ICE Clearing Houses. The net notional value of unsettled contracts was $2.6 trillion as of December 31, 2017 . We performed calculations to determine the fair value of our counterparty performance guarantee taking into consideration factors such as daily settlement of contracts, margining and collateral requirements, other elements of our risk management program, historical evidence of default payments, and estimated probability of potential default payouts by the ICE Clearing Houses. Based on these analyses, the estimated counterparty performance guaranty liability was determined to be nominal and no liability was recorded as of December 31, 2017 and 2016 .

The ICE Clearing Houses seek to reduce their exposure through a risk management program that includes initial and ongoing financial standards for clearing member and participant admission and continued membership, original and variation margin and collateral requirements, and mandatory deposits to the guaranty fund. The amounts that the clearing members and participants are required to maintain in the original margin, guaranty fund and collateral accounts are determined by standardized parameters established by the risk management departments and reviewed by the risk committees and the boards of directors of each of the ICE Clearing Houses and may fluctuate over time. As of December 31, 2017 and 2016 , the ICE Clearing Houses have received or have been pledged $92.6 billion and $95.7 billion , respectively, in cash and non-cash collateral in original margin and guaranty fund deposits to cover price movements of underlying contracts for both periods. With the exception of NGX, the ICE Clearing Houses also have powers of assessment that provide the ability to collect additional funds from their clearing members to cover a defaulting member's remaining obligations up to the limits established under the respective rules of each ICE Clearing House.

Should a particular clearing member or participant fail to deposit original margin, provide collateral, or fail to make a variation margin payment, when and as required, the relevant ICE Clearing House may liquidate or hedge the clearing member's or participant's open positions and use their original margin and guaranty fund deposits to make up any amount owed. In the event that those deposits are not sufficient to pay the amount owed in full, the ICE Clearing Houses may utilize the respective guaranty fund deposits of their respective clearing members on a pro-rata basis for that purpose.

NGX administers the physical delivery of energy trading contracts. It has an equal and offsetting claim to and from their respective participants on opposite sides of the physically settled contract. The balance related to delivered but unpaid contracts is reflected as a delivery contract net receivable with an offsetting delivery contract net payable in the accompanying consolidated balance sheet as of December 31, 2017 . NGX also records unsettled variation margin equal to the fair value of open energy trading contracts as of the balance sheet date. Fair value is determined based on the difference between the trade price when the contract was entered into and the settlement price and is considered a Level 2 fair value measurement. There is no impact to the consolidated statements of income for either delivery contracts receivable/payable and unsettled variation margin, as an equivalent amount is recognized in both the assets and liabilities.

In connection with the NGX physical delivery of the energy trading contracts, we maintain a daylight liquidity facility with a major Canadian chartered bank in the amount of C$300 million . This facility may be used on settlement day to effect payments through the settlement accounts and it is intended to cover any intra-day shortfalls due to timing of payments and receipts. In the event that amounts drawn on settlement day do not clear to zero by the end of the day, we must repay the deficiency on the following business day. In addition, a C$20 million overdraft facility is in place with the same major Canadian chartered bank and is available to repay the daylight liquidity facility on the business day following a settlement day.

As of December 31, 2017 , our cash margin deposits, unsettled variation margin, guaranty fund and delivery contracts receivable/payable are as follows for the ICE Clearing Houses (in millions):

	ICE Clear Europe	ICE Clear Credit	ICE Clear U.S.	NGX	Other ICE Clearing Houses	Total
Original margin	$ 19,792	$ 20,703	$ 3,898	$ —	$ 126	$ 44,519
Unsettled variation margin, net	—	—	—	227	1	228
Guaranty fund	3,037	2,607	299	—	23	5,966
Delivery contracts receivable/payable, net	—	—	—	509	—	509
Total	$ 22,829	$ 23,310	$ 4,197	$ 736	$ 150	$ 51,222

As of December 31, 2016 , our cash margin deposits and guaranty fund are as follows for the ICE Clearing Houses (in millions):

	ICE Clear Europe	ICE Clear Credit	ICE Clear U.S.	Other ICE Clearing Houses	Total
Original margin	$ 27,046	$ 16,833	$ 6,184	$ 107	$ 50,170
Guaranty fund	2,444	2,135	316	85	4,980
Total	$ 29,490	$ 18,968	$ 6,500	$ 192	$ 55,150

We have recorded these cash deposits and amounts due in the accompanying consolidated balance sheets as current assets with corresponding current liabilities to the clearing members of the relevant ICE Clearing House. All cash, securities and amounts due are available only to meet the financial obligations of that clearing member to the relevant ICE Clearing House. ICE Clear Europe, ICE Clear Credit, ICE Clear US, ICE Clear Canada, ICE Clear Netherlands, ICE Clear Singapore and NGX are separate legal entities and are not subject to the liabilities of the other ICE Clearing Houses or the obligations of the members of the other ICE Clearing Houses. The amount of these cash deposits and amounts due may fluctuate due to the types of margin collateral choices available to clearing members and the change in the amount of deposits required. As a result, these assets and corresponding liabilities may vary significantly over time.

Of the cash held by the ICE Clearing Houses, as of December 31, 2017 , $24.7 billion is secured in reverse repurchase agreements with primarily overnight maturities or direct investment in government securities. ICE Clear Credit, as a systemically important financial market utility as designated by the Financial Stability Oversight Council, held $18.5 billion of its U.S. dollar cash in the guaranty fund and in original margin in cash accounts at the Federal Reserve Bank of Chicago as of December 31, 2017 . During the quarter ended September 30, 2017, ICE Clear Europe established a Euro-denominated account at the De Nederlandsche Bank, or DNB, the central bank of the Netherlands. This account provides the flexibility for ICE Clear Europe to place Euro-denominated cash margin securely at a national bank, in particular during periods when liquidity in the Euro repo markets may temporarily become contracted, such as over a quarter or year end. As of December 31, 2017 , ICE Clear Europe held €3.3 billion ($4.0 billion based on the euro/U.S. dollar exchange rate of 1.2003 as of December 31, 2017) at DNB. The remaining cash deposits at the ICE Clearing Houses are held in demand deposit accounts at large, highly rated financial institutions and direct investments primarily in U.S. Treasury securities with original maturities of less than three months, plus certain U.S. Treasury Securities that extend beyond 12-months which we consider to be Level 1 securities. The carrying value of these securities approximates their fair value due to the short-term nature of the instruments and repurchase agreements.

Of the $22.8 billion of ICE Clear Europe cash deposits as of December 31, 2017 , which are primarily held in U.S. dollars, euros and pounds sterling, $18.5 billion relates to futures and options products and $4.3 billion relates to cleared OTC European CDS instruments. ICE Clear Europe offers a separate clearing platform, risk model and risk pool for futures and options products that is distinct from those associated with cleared OTC European CDS instruments.

In addition to the cash deposits for original margin and the guaranty fund, the ICE Clearing Houses have also received other assets from clearing members, which include government obligations, and may include other non-cash collateral such as certain agency and corporate debt, letters of credit or gold to mitigate credit risk. These assets are not reflected in the accompanying consolidated balance sheets as the risks and rewards of these assets remain with the clearing members unless the ICE Clearing Houses have sold or re-pledged the assets or in the event of a clearing member default, where the clearing member is no longer entitled to redeem the assets. Any income, gain or loss accrues to the clearing member. For certain non-cash deposits, the ICE Clearing Houses may impose discount or “haircut” rates to ensure adequate collateral levels to account for fluctuations in the market value of these deposits.

NGX requires participants to maintain cash or letters of credit to serve as collateral in the event of a participant default. The cash is maintained in a segregated bank account which is subject to a collateral agreement between the bank, the participant and NGX. Per the agreement, NGX serves in the capacity of a trustee. The cash is held by NGX in trust for and on behalf of the participant; however, the cash remains the property of the participant and may only be accessed by NGX if there is evidence of default. The rules governing when the cash can be accessed by NGX are listed in the Contracting Party Agreement, a standardized agreement signed by each

participant that also allows for netting of positive and negative exposure. Since the cash is held in trust and remains the property of the participant, it is not included in the accompanying consolidated balance sheet.

As of December 31, 2017 and 2016 , the assets pledged by the clearing members as original margin, which includes cash deposits held in trust at NGX, and guaranty fund deposits for each of the ICE Clearing Houses are detailed below (in millions):

	As of December 31, 2017					As of December 31, 2016			
	ICE Clear Europe	ICE Clear Credit	ICE Clear U.S.	NGX	Other ICE Clearing Houses	ICE Clear Europe	ICE Clear Credit	ICE Clear U.S.	Other ICE Clearing Houses
Original margin:									
Government securities at face value	$ 23,496	$ 5,699	$ 9,581	$ —	$ 18	$ 22,961	$ 6,013	$ 10,542	$ 37
Letters of credit	—	—	—	1,663	—	—	—	—	—
NGX cash deposits	—	—	—	233	—	—	—	—	—
Other	—	—	—	—	—	—	—	—	368
Total	$ 23,496	$ 5,699	$ 9,581	$ 1,896	$ 18	$ 22,961	$ 6,013	$ 10,542	$ 405
Guaranty fund:									
Government securities at face value	$ 323	$ 176	$ 169	$ —	$ 2	$ 217	$ 178	$ 147	$ 40

14. Commitments and Contingencies

Leases

We lease office space, equipment facilities and certain computer equipment under lease agreements that expire at various dates through 2028. Our leases typically contain terms which may include renewal options, rent escalations, rent holidays and leasehold improvement incentives. We had no capital leases as of December 31, 2017 and 2016 . Rental expense under these leases, included in the accompanying consolidated statements of income in rent and occupancy and technology and communication expenses, totaled $65 million , $65 million and $53 million for the years ended December 31, 2017 , 2016 , and 2015 , respectively. As of December 31, 2017 , future minimum lease payments under these non-cancelable operating agreements are as follows (in millions):

2018	$ 78
2019	75
2020	72
2021	71
2022	63
Thereafter	162
Total	$ 521

Redeemable Non-controlling Interest

As part of the ICE Endex purchase agreement, Gasunie had a put option to sell to us, and we had a call option to purchase from Gasunie, Gasunie's entire 21% remaining ownership in ICE Endex at fair market value. As part of the ICE Clear Netherlands acquisition, ABN AMRO Clearing Bank N.V. had a put option to sell to us, and we had a call option to purchase from ABN AMRO, ABN AMRO's entire remaining 25% ownership in ICE Clear Netherlands at fair market value. Since the likelihood of us acquiring both of the non-controlling interests in the future was probable, we recorded the full redemption fair value of $36 million as of December 31, 2016 relating to ICE Endex and ICE Clear Netherlands as mezzanine equity and classified the related balance as "redeemable non-controlling interest" in our accompanying consolidated balance sheet and the proportionate share of profits was recorded as net income attributable to non-controlling interest in our consolidated statements of income. Changes in the redemption value of the non-controlling interest are recorded to the redeemable non-controlling interest balance in full as they occur. During June 2017, we purchased both Gasunie's 21% minority ownership interest in ICE Endex and ABN AMRO Clearing Bank N.V.'s 25% minority ownership interest in ICE Clear Netherlands. Subsequent to these acquisitions, we own 100% of ICE Endex and ICE Clear Netherlands and will no longer include any non-controlling interest amounts for ICE Endex and ICE Clear Netherlands in our consolidated financial statements.

Prior to the our acquisition of NYSE, NYSE completed the sale of a significant equity interest in NYSE American Options, one of our two U.S. options exchanges, to seven external investors. Under the terms of the sale, the external investors had the option to require us to repurchase a portion of the equity interest on an annual basis. In June 2015 we repurchased the remaining 16% of the interest for $128 million in cash. Effective from July 1, 2015, all of the profits from NYSE American Options are retained by us as we now own 100% of NYSE American Options.

Legal Proceedings

We are subject to legal proceedings, claims and investigations that arise in the ordinary course of our business. We establish accruals for those matters in circumstances when a loss contingency is considered probable and the related amount is reasonably estimable. Any such accruals may be adjusted as circumstances change. Assessments of losses are inherently subjective and involve unpredictable factors. We do not believe that the resolution of these legal matters, including the matters described below, will have a material adverse effect on our consolidated financial condition, results of operations, or liquidity. It is possible, however, that future results of operations for any particular quarterly or annual period could be materially and adversely affected by any developments relating to the legal proceedings, claims and investigations. The matters described below all relate to our operation of NYSE. A range of possible losses related to the cases below cannot be reasonably estimated at this time, except as otherwise disclosed below.

In April 2014, New York Stock Exchange LLC and NYSE Arca, Inc., two of our subsidiaries, were among more than 40 financial institutions and exchanges named as defendants in four purported class action lawsuits filed in the U.S. District Court for the Southern District of New York, or the Southern District, by the City of Providence, Rhode Island, and other plaintiffs. In subsequent consolidated amended complaints, the plaintiffs asserted claims against the exchange defendants and Barclays PLC, or Barclays, a subsidiary of which operates an alternative trading system known as Barclays LX, on behalf of a class of "all public investors" who bought or sold stock from April 18, 2009 to the present on the U.S.-based equity exchanges operated by the exchange defendants or on Barclays LX.

In August 2015, the court issued an opinion and order granting the defendants' motions to dismiss and dismissing the second amended complaint in its entirety with prejudice. The court held that the plaintiffs had failed to sufficiently state a claim against the defendants under Sections 10(b) and 6(b) of the Exchange Act, and additionally that some of the claims against the exchanges were barred by the doctrine of self-regulatory organization immunity. In September 2015, the plaintiffs filed a notice of appeal of the dismissal of the lawsuit to the U.S. Court of Appeals for the Second Circuit, or the Second Circuit. The appeal was briefed and argued during 2016.

On December 19, 2017, the Second Circuit issued a decision vacating the dismissal and remanding the case to the district court for further proceedings. The Second Circuit held that the claims against the exchanges were not barred by the doctrine of self-regulatory organization immunity because (according to the Second Circuit) the exchanges were not carrying out regulatory functions while operating their markets and engaging in the challenged conduct at issue, and that the plaintiffs had adequately pleaded claims against the defendants under Section 10(b) of the Exchange Act. The Second Circuit directed that, on remand, the district court should address and rule upon various other defenses raised by the exchanges in their motion to dismiss (which the district court did not address in its prior opinion and order). The exchanges disagree with various aspects of the Second Circuit's decision, and on January 31, 2018, filed a petition for rehearing and/or rehearing *en banc* .

In May 2014, three purported class action lawsuits were filed (and later amended) in the Southern District by Harold Lanier against the securities exchanges that are participants in each of the three national market system data distribution plans - the Consolidated Tape Association/Consolidated Quotation Plan, the Nasdaq UTP Plan, and the Options Price Reporting Authority, or the Plans, - which are established under the Exchange Act and regulated by the SEC. New York Stock Exchange LLC, NYSE Arca, Inc. and NYSE American (NYSE American was formerly known as NYSE MKT), which are our subsidiaries, were among the defendants named in one or more of the suits, in which Lanier claimed to sue on behalf of himself and all other similarly situated subscribers to the market data disseminated by the Plans. Lanier's allegations included that the exchange participants in the Plans breached agreements with subscribers by disseminating market data in a discriminatory manner in that other "preferred" customers allegedly received their data faster than the proposed class. In September 2014, the defendants moved to dismiss the amended complaints, and in April 2015, the court issued an opinion and order granting the motion and dismissing the three lawsuits with prejudice. In September 2016, the Second Circuit entered an order affirming the dismissal of the lawsuits. In November 2016, the Second Circuit denied a petition filed by Lanier, relating only to the lawsuit involving the Options Price Reporting Authority plan, seeking a rehearing by the panel of judges that decided the appeal or, in the alternative, for review by the full Second Circuit. Lanier has not sought review of these matters by the U.S. Supreme Court and we consider this matter closed.

In December 2015, our subsidiaries New York Stock Exchange LLC and NYSE American received an inquiry from the Enforcement staff of the New York regional office, or the Staff, of the SEC regarding a July 8, 2015 outage on the NYSE markets, during which trading was suspended for approximately 3.5 hours in all symbols. The Staff's investigation proceeded throughout 2016. On December 29, 2016, NYSE received a Wells Notice stating that the Staff have made a preliminary determination to recommend that the SEC file an enforcement action in connection with how NYSE responded on July 8, 2015 to the circumstances leading into the suspension of trading that day. NYSE disputes the appropriateness of the proposed charges, believes there are substantial defenses, and has made a written submission to the Staff in response to the Wells Notice setting forth such points. If the Staff determines to maintain its recommendation contained in the Wells Notice, the Commissioners of the SEC will need to determine whether to authorize the filing of an enforcement action. For this matter and other SEC investigative matters, we have recorded an aggregate of $14 million in expense accruals during the year ended December 31, 2017.

Tax Audits

We are engaged in ongoing discussions and audits with taxing authorities on various tax matters, the resolutions of which are uncertain. Currently, there are matters that may lead to assessments involving us or one of our subsidiaries, some of which may not be resolved for several years. Based on currently available information, we believe we have adequately provided for any assessments that could result from those proceedings where it is more likely than not that we will be assessed. We continuously review our positions as these matters progress.

15. Pension and Other Benefit Programs

Defined Benefit Pension Plan

We have a pension plan covering certain of our U.S. operations. The benefit accrual for the pension plan is frozen. Retirement benefits are derived from a formula, which is based on length of service and compensation. Based on this calculation, we may contribute to our pension plan to the extent such contributions may be deducted for income tax purposes.

During the year ended December 31, 2017 , in connection with our de-risking strategy, we contributed $136 million to our pension plan. At the same time, we changed the plan's target allocation from 65% equity securities and 35% fixed income securities, to 5% equity securities and 95% fixed income securities. The fixed income allocation includes corporate bonds of companies from diversified industries and U.S. government bonds. As a result of this contribution and change in investment policy, we anticipate that there will be less need for pension contributions in future years, and the pension plan will not be required to pay the Pension Benefit Guaranty Corporation variable rate premiums. Income is expected to be lower than it was in prior periods because the expected return on plan assets is lower.

During the years ended December 31, 2016 and 2015 , we contributed $10 million each year to our pension plan. During the year ended December 31, 2018, we do not expect to make contributions to the pension plan. We will continue to monitor the plan's funded status, and we will consider modifying the plan's investment policy based on the actuarial and funding characteristics of the retirement plan, the demographic profile of plan participants, and our business objectives. Our long-term objective is to keep the plan at or near full funding, while minimizing the risk inherent in pension plans.

Based on the valuation techniques described in Note 16, the fair values of our pension plan assets as of December 31, 2017 , by asset category, are as follows (in millions):

	Fair Value Measurements			
Asset Category	**Quoted Prices in Active Markets for Identical Assets (Level 1)**	**Significant Observable Inputs (Level 2)**	**Significant Unobservable Inputs (Level 3)**	**Total**
Cash	$ 164	$ —	$ —	$ 164
Equity securities:				
U.S. large-cap	—	30	—	30
U.S. small-cap	—	8	—	8
International	—	15	—	15
Fixed income securities	335	314	3	652
Total	$ 499	$ 367	$ 3	$ 869

The fair values of our pension plan assets as of December 31, 2016 , by asset category, are as follows (in millions):

	Fair Value Measurements			
Asset Category	**Quoted Prices in Active Markets for Identical Assets (Level 1)**	**Significant Observable Inputs (Level 2)**	**Significant Unobservable Inputs (Level 3)**	**Total**
Cash	$ 21	$ —	$ —	$ 21
Equity securities:				
U.S. large-cap	—	247	—	247
U.S. small-cap	—	68	—	68
International	—	134	—	134
Fixed income securities	106	102	3	211
Total	$ 127	$ 551	$ 3	$ 681

The measurement dates for the pension plan are December 31, 2017 and 2016 . The following table provides a summary of the changes in the pension plan's benefit obligations and the fair value of assets as of December 31, 2017 and 2016 and a statement of funded status of the pension plan as of December 31, 2017 and 2016 (in millions):

	As of December 31,	
	2017	2016
Change in benefit obligation:		
Benefit obligation at beginning of year	$ 853	$ 861
Interest cost	27	27
Actuarial loss	44	14
Benefits paid	(49)	(49)
Benefit obligation at year end	$ 875	$ 853
Change in plan assets:		
Fair value of plan assets at beginning of year	$ 681	$ 666
Actual return on plan assets	101	54
Contributions	136	10
Benefits paid	(49)	(49)
Fair value of plan assets at end of year	$ 869	$ 681
Funded status	$ (6)	$ (172)
Accumulated benefit obligation	$ 875	$ 853
Amounts recognized in the accompanying consolidated balance sheets:		
Accrued employee benefits	$ (6)	$ (172)

The components of the pension plan expense (benefit) in the accompanying consolidated statements of income are set forth below for the years ended December 31, 2017 , 2016 and 2015 (in millions):

	Year Ended December 31,		
	2017	2016	2015
Interest cost	$ 27	$ 27	$ 34
Estimated return on plan assets	(44)	(44)	(46)
Amortization of loss	2	1	2
Aggregate pension benefit	$ (15)	$ (16)	$ (10)

We use a market-related value of plan assets when determining the estimated return on plan assets. Gains/losses on plan assets are amortized over a four year period and accumulate in other comprehensive income. We recognize deferred gains and losses in future net income based on a "corridor" approach, where the corridor is equal to 10% of the greater of the benefit obligation or the market-related value of plan assets at the beginning of the year.

The following table shows the projected payments for the pension plan based on actuarial assumptions (in millions):

2018	$ 50
2019	50
2020	49
2021	49
2022	49
Next 5 years	247

Supplemental Executive Retirement Plan

We have a U.S. nonqualified supplemental executive retirement plan, or SERP, which provides supplemental retirement benefits for certain employees. The future benefit accrual of the SERP plan is frozen. To provide for the future payments of these benefits, we have purchased insurance on the lives of certain of the participants through company-owned policies. As of December 31, 2017 and 2016 , the cash surrender value of such policies was $55 million and $53 million , respectively, and is included in other non-current assets in the accompanying consolidated balance sheets. We also acquired a SERP through the NGX acquisition. The following table provides a summary of the changes in the SERP benefit obligations (in millions):

	As of December 31,	
	2017	2016
Change in benefit obligation:		
Benefit obligation at beginning of year	$ 54	$ 61
Interest cost	1	1
Actuarial loss	2	1
Benefits paid	(8)	(9)
Benefit obligation at year end	$ 49	$ 54
Funded status	$ (49)	$ (54)
Amounts recognized in the accompanying consolidated balance sheets:		
Other current liabilities	$ (7)	$ (8)
Accrued employee benefits	(42)	(46)

SERP plan expense in the accompanying consolidated statements of income was $1 million , $1 million and $2 million for the years ended December 31, 2017 , 2016 and 2015 , respectively, and primarily consisted of interest cost. The following table shows the projected payments for the SERP plan based on the actuarial assumptions (in millions):

Projected SERP Plan Payments	
2018	$ 7
2019	5
2020	5
2021	5
2022	5
Next 5 years	15

Pension and SERP Plans Assumptions

The weighted-average assumptions used to develop the actuarial present value of the projected benefit obligation and net periodic pension/SERP costs for years ended December 31, 2017 , 2016 and 2015 are set forth below:

	Year Ended December 31,		
	2017	2016	2015
Weighted-average discount rate for determining benefit obligations (pension/SERP plans)	3.4%/3.1%	3.9%/3.4%	4.0%/3.4%
Weighted-average discount rate for determining interest costs (pension/SERP plans)	3.2%/2.6%	3.3%/2.5%	3.8%/3.2%
Expected long-term rate of return on plan assets (pension/SERP plans)	6.5%/N/A	6.5%/N/A	6.5%/N/A
Rate of compensation increase	N/A	N/A	N/A

The assumed discount rate reflects the market rates for high-quality corporate bonds currently available. The discount rate was determined by considering the average of pension yield curves constructed on a large population of high quality corporate bonds. The resulting discount rates reflect the matching of plan liability cash flows to yield curves. To develop the expected long-term rate of return on assets assumption, we considered the historical returns and the future expectations for returns for each asset class as well as the target asset allocation of the pension portfolio.

The determination of the interest cost component utilizes a full yield curve approach by applying the specific spot rates along the yield curve used in the determination of the benefit obligation to each year’s discounted cash flow.

Post-retirement Benefit Plans

Our defined benefit plans provide certain health care and life insurance benefits for certain eligible retired NYSE U.S. employees. These post-retirement benefit plans, which may be modified in accordance with their terms, are fully frozen. The net periodic post-retirement benefit costs were $5 million , $7 million and $8 million for the years ended December 31, 2017 , 2016 and 2015 , respectively. The defined benefit plans are unfunded and we currently do not expect to fund the post-retirement benefit plans. The weighted-average discount rate for determining the benefit obligation as of December 31, 2017 and 2016 is 3.4% and 3.9% , respectively. The weighted-average discount rate for determining the interest cost as of December 31, 2017 and 2016 is 3.2% and 3.3% , respectively. The following table shows the actuarial determined benefit obligation, interest costs, employee contributions, actuarial (gain) loss, benefits paid during the periods and the accrued employee benefits (in millions):

	As of December 31,	
	2017	2016
Benefit obligation at the end of year	$ 179	$ 200
Interest cost	5	7
Actuarial gain	(16)	(20)
Employee contributions	3	3
Benefits paid	(14)	(14)
Amounts recognized in the accompanying consolidated balance sheets:		
Other current liabilities	$ (11)	$ (11)
Accrued employee benefits	(168)	(189)

The following table shows the payments projected for our post-retirement benefit plans (net of expected Medicare subsidy receipts of $10 million in aggregate over the next ten fiscal years) based on actuarial assumptions (in millions):

2018	$ 11
2019	11
2020	11
2021	11
2022	11
Next 5 years	54

For measurement purposes, we assumed a 7.7% annual rate of increase in the per capita cost of covered health care benefits in 2017 which will decrease on a graduated basis to 4.5% in the year 2038 and thereafter. The following table shows the effect of a one -percentage-point increase and decrease in assumed health care cost trend rates (in millions):

Assumed Health Care Cost Trend Rate	1% Increase	1% Decrease
Effect of post-retirement benefit obligation	$ 20	$ (17)
Effect on total of service and interest cost components	1	(1)

Accumulated Other Comprehensive Loss

The accumulated other comprehensive loss, after tax, as of December 31, 2017 , consisted of the following amounts that have not yet been recognized in net periodic benefit cost (in millions):

	Pension Plans	SERP Plans	Post-retirement Benefit Plans	Total
Unrecognized net actuarial losses (gains), after tax	$ 93	$ 4	$ (8)	$ 89

The amount of prior actuarial loss included in accumulated other comprehensive income related to the pension, SERP and postretirement plans as of December 31, 2017 , which are expected to be recognized in net periodic benefit cost in the coming year, is estimated to be (in millions):

	Pension Plans	SERP Plans	Post-retirement Benefit Plans	Total
Loss recognition	$ 4	$ —	$ —	$ 4

Other Benefit Plans and Defined Contribution Plans

Our U.S. employees are eligible to participate in 401(k) and profit sharing plans and our non-U.S. employees are eligible to participate in defined contribution pension plans. Total contributions under the 401(k), profit sharing and defined contribution pension plans were $38 million , $31 million and $21 million for the years ended December 31, 2017 , 2016 and 2015 , respectively. No discretionary or profit sharing contributions were made during the years ended December 31, 2017 , 2016 or 2015 .

16. Fair Value Measurements

Our financial instruments consist primarily of cash and cash equivalents, short-term and long-term restricted cash and cash equivalents, short-term and long-term investments, customer accounts receivable, margin deposits and guaranty funds, cost and equity method investments, short-term and long-term debt and certain other short-term assets and liabilities. The fair value of our financial instruments are measured based on a three-level hierarchy:

- Level 1 inputs — quoted prices for identical assets or liabilities in active markets.
- Level 2 inputs — observable inputs other than Level 1 inputs such as quoted prices for similar assets and liabilities in active markets or inputs other than quoted prices that are directly observable.
- Level 3 inputs — unobservable inputs supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

We use Level 1 inputs to determine fair value. The Level 1 assets consist of U.S. Treasury and other foreign government securities, equity and other securities listed in active markets, and investments in publicly traded mutual funds held for the purpose of providing future payments of the SERP and SESP plans.

Financial assets and liabilities recorded in the accompanying consolidated balance sheets as of December 31, 2017 and 2016 are classified in their entirety based on the lowest level of input that is significant to the asset or liability's fair value measurement. Financial instruments measured at fair value on a recurring basis as of December 31, 2017 are as follows (in millions):

	Level 1	Level 2	Level 3	Total
Assets at fair value:				
U.S. Treasury and Other Foreign Government Securities	$ 734	$ —	$ —	$ 734
Mutual Funds	16	—	—	16
Total assets at fair value	$ 750	$ —	$ —	$ 750

Financial instruments measured at fair value on a recurring basis as of December 31, 2016 are as follows (in millions):

	Level 1	Level 2	Level 3	Total
Assets at fair value:				
Long-term Investment in Equity Securities	$ 432	$ —	$ —	$ 432
U.S. Treasury and Other Foreign Government Securities	500	—	—	500
Mutual Funds	23	—	—	23
Total assets at fair value	$ 955	$ —	$ —	$ 955

As of December 31, 2017 , we held $734 million in U.S. Treasury and other foreign government securities which are considered cash equivalents. Of these securities, $534 million were recorded as short-term restricted cash and cash equivalents and $200 million were recorded as long-term restricted cash and cash equivalents in the accompanying consolidated balance sheet as of December 31, 2017 . As of December 31, 2016 , we held $500 million in U.S. Treasury and other foreign government securities. Of these securities, $ 350 million were recorded as short-term restricted cash and cash equivalents and $ 150 million were recorded as long-term restricted cash and cash equivalents in the accompanying consolidated balance sheet as of December 31, 2016 . We account for the U.S. Treasury securities held using the available-for-sale method.

The long-term investment in equity securities as of December 31, 2016 represents our investment in Cetip, recorded at its fair value using its quoted market price. Cetip was sold in March 2017 (Note 6). Mutual funds represent equity and fixed income mutual funds held for the purpose of providing future payments for the SERP and SESP and are classified as available-for-sale securities (Note 15).

We did not use Level 3 inputs to determine the fair value of assets or liabilities measured at fair value on a recurring basis as of December 31, 2017 and 2016 . We measure certain assets, such as intangible assets and cost and equity method investments, at fair value on a non-recurring basis. These assets are recognized at fair value if they are deemed to be impaired. As of December 31, 2017 and 2016 , none of these assets were required to be recorded at fair value since no impairments were recorded. See Note 13 for the fair value considerations related to our margin deposits, guaranty funds and delivery contracts receivable.

As of December 31, 2017 , the fair value of our $495 million 2027 Senior Notes was $500 million , the fair value of our $1.24 billion 2025 Senior Notes was $1.32 billion , the fair value of our $791 million 2023 Senior notes was $842 million , the fair value of our $495 million 2022 Senior Notes was $495 million , the fair value of our $1.24 billion 2020 Senior Notes was $1.26 billion , and the fair value of our $600 million 2018 Senior Notes was $601 million . The fair values of these fixed rate notes were estimated using quoted market prices for these instruments. The fair value of our commercial paper approximates the carrying value since the rates of

interest on this short-term debt approximate market rates as of December 31, 2017 . Excluding our cost and equity method investments, all other financial instruments are determined to approximate carrying value due to the short period of time to their maturities.

17. Segment Reporting

We operate two business segments: our Trading and Clearing segment and our Data and Listings segment. This presentation is reflective of how our chief operating decision maker reviews and operates our business. Our Trading and Clearing segment comprises our transaction-based execution and clearing businesses. Our Data and Listings segment comprises our subscription-based data services and securities listings businesses. Our chief operating decision maker does not review total assets or statements of income below operating income by segments; therefore, such information is not presented below. Our two segments do not engage in intersegment transactions.

Certain prior year's segment expenses for the year ended December 31, 2016 have been reclassified to conform to our current year's segment financial statement presentation. This reclassification increased the operating expenses for the Data and Listings segment by $55 million , while decreasing the operating expenses for the Trading and Clearing segment by the same amount.

Financial data for our business segments is as follows for the years ended December 31, 2017 , 2016 and 2015 (in millions):

	Trading and Clearing Segment	Data and Listings Segment	Consolidated
Year Ended December 31, 2017			
Revenues, less transaction-based expenses	$ 2,128	$ 2,501	$ 4,629
Operating expenses	779	1,471	2,250
Operating income	1,349	1,030	2,379
Year Ended December 31, 2016			
Revenues, less transaction-based expenses	$ 2,102	$ 2,397	$ 4,499
Operating expenses	825	1,507	2,332
Operating income	1,277	890	2,167
Year Ended December 31, 2015			
Revenues, less transaction-based expenses	$ 2,062	$ 1,276	$ 3,338
Operating expenses	915	673	1,588
Operating income	1,147	603	1,750

Revenue from two clearing members of the Trading and Clearing segment comprised a combined $477 million or 22% of our Trading and Clearing revenues for the year ended December 31, 2017 and revenue from one clearing member of the Trading and Clearing segment comprised $221 million or 11% of our Trading and Clearing revenues for the year ended December 31, 2016 . Clearing members are primarily intermediaries and represent a broad range of principal trading firms. If a clearing member ceased its operations, we believe that the trading firms would continue to conduct transactions and would clear those transactions through another clearing member firm. No additional customers or clearing members accounted for more than 10% of our segment revenues or consolidated revenues for the years ended December 31, 2017 , 2016 and 2015 .

Geographical Information

The following represents our revenues, less transaction-based expenses, net assets and net property and equipment based on the geographic location (in millions):

	United States	Foreign Countries	Total
Revenues, less transaction-based expenses:			
Year ended December 31, 2017	$ 2,794	$ 1,835	$ 4,629
Year ended December 31, 2016	$ 2,744	$ 1,755	$ 4,499
Year ended December 31, 2015	$ 1,973	$ 1,365	$ 3,338
Net assets:			
As of December 31, 2017	$ 9,124	$ 7,828	$ 16,952
As of December 31, 2016	$ 7,877	$ 7,913	$ 15,790
Property and equipment, net:			
As of December 31, 2017	$ 1,134	$ 112	$ 1,246
As of December 31, 2016	$ 1,009	$ 120	$ 1,129

The foreign countries category above primarily relates to the U.K. and to a lesser extent, EU, Israel, Canada and Singapore.

18. Earnings Per Common Share

The following is a reconciliation of the numerators and denominators of the basic and diluted earnings per common share computations for the years ended December 31, 2017 , 2016 and 2015 (in millions, except per share amounts):

	Year Ended December 31,		
	2017	2016	2015
Basic:			
Net income attributable to Intercontinental Exchange, Inc.	$ 2,514	$ 1,422	$ 1,274
Weighted average common shares outstanding	589	595	556
Basic earnings per common share	$ 4.27	$ 2.39	$ 2.29
Diluted:			
Weighted average common shares outstanding	589	595	556
Effect of dilutive securities - stock options and restricted stock	5	4	3
Diluted weighted average common shares outstanding	594	599	559
Diluted earnings per common share	$ 4.23	$ 2.37	$ 2.28

Basic earnings per common share is calculated using the weighted average common shares outstanding during the periods. The weighted average common shares outstanding decreased for the year ended December 31, 2017 , from the prior year period, primarily due to stock repurchases during 2017 (Note 11). The weighted average common shares outstanding increased for the year ended December 31, 2016 , over the prior year period, primarily due to stock issued for the Interactive Data and Trayport acquisitions, partially offset by stock repurchases. We issued 32.3 million shares of our common stock to Interactive Data stockholders and 12.6 million shares of our common stock to Trayport stockholders, which are weighted to show these additional shares outstanding for periods after the respective acquisition dates (Note 3).

Common equivalent shares from stock options and restricted stock awards, using the treasury stock method, are included in the diluted per share calculations unless the effect of their inclusion would be antidilutive. During the years ended December 31, 2017 , 2016 and 2015, 694,343 , 724,918 and 836,405 outstanding stock options, respectively, were not included in the computation of diluted earnings per common share, because to do so would have had an antidilutive effect. As of December 31, 2017 and 2016 , there were 88,930 and 110,265 restricted stock units, respectively, that were vested but have not been issued that are included in the computation of basic and diluted earnings per share. Certain figures in the table above may not recalculate due to rounding.

19. Quarterly Financial Data (Unaudited)

The following table has been prepared from our financial records and reflects all adjustments that are necessary for a fair presentation of the results of operations for the interim periods presented (in millions, except per share amounts):

	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr
Year Ended December 31, 2017				
Revenues, less transaction-based expenses	$ 1,164	$ 1,178	$ 1,143	$ 1,144
Operating income	582	609	596	592
Net income attributable to Intercontinental Exchange, Inc. [(a)]	502	418	369	1,225
Earnings per common share [(b)]:				
Basic	$ 0.84	$ 0.71	$ 0.63	$ 2.10
Diluted	$ 0.84	$ 0.70	$ 0.62	$ 2.08
Year Ended December 31, 2016				
Revenues, less transaction-based expenses	$ 1,154	$ 1,129	$ 1,078	$ 1,138
Operating income	584	551	474	558
Net income attributable to Intercontinental Exchange, Inc.	369	357	344	352
Earnings per common share [(b)]:				
Basic	$ 0.62	$ 0.60	$ 0.58	$ 0.59
Diluted	$ 0.62	$ 0.60	$ 0.57	$ 0.59

(a) We recognized a $176 million realized investment gain on our sale of Cetip in other income for the three months ended March 31, 2017 (Note 6), we recognized a $764 million gain relating to the deferred tax benefit associated with future U.S. income tax rate reductions for the three months ended December 31, 2017 (Note 12), and we recognized a $110 million gain on our sale of Trayport in other income for the three months ended December 31, 2017 (Note 3).
(b) The annual earnings per common share may not equal the sum of the individual quarter's earnings per common share due to rounding.

20. Subsequent Events

We have evaluated subsequent events and determined that no events or transactions met the definition of a subsequent event for purposes of recognition or disclosure in the accompanying consolidated financial statements except those events disclosed in Note 3.

ITEM 9. ***CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE***

None.

ITEM 9 (A). ***CONTROLS AND PROCEDURES***

(a) *Evaluation of Disclosure Controls and Procedures.* As of the end of the period covered by this report, an evaluation was carried out by our management, with the participation of our Chief Executive Officer and Chief Financial Officer, of the effectiveness of our disclosure controls and procedures (as defined in Rule 13a-15(e) under the Securities Exchange Act of 1934). Based upon that evaluation, our Chief Executive Officer and Chief Financial Officer concluded that these disclosure controls and procedures were effective as of the end of the period covered by this report.

(b) *Management's Annual Report on Internal Control over Financial Reporting and the Attestation Report of the Independent Registered Public Accounting Firm.* Management's report on its assessment of the effectiveness of our internal control over financial reporting as of December 31, 2017 and the attestation report of Ernst & Young LLP on our internal control over financial reporting are set forth in Part II, Item 8 of this Annual Report.

(c) *Changes in Internal Controls over Financial Reporting.* Except as described below, there were no changes in our internal controls over financial reporting that occurred during our most recent fiscal quarter that have materially affected, or are reasonably likely to materially affect, our internal controls over financial reporting. As a result, no corrective actions were taken. During the quarter ended December 31, 2017, we acquired NGX and are in the process of integrating the acquired business into our overall internal control over financial reporting process. As permitted under applicable regulations, we have excluded NGX from the assessment of internal control over financial reporting as of December 31, 2017.

ITEM 9 (B). ***OTHER INFORMATION***

Not applicable.

PART III

ITEM 10. ***DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE***

Information relating to our Board of Directors set forth under the caption "Item 1 — Election of Directors — Nominees for Election as Directors at the 2017 Annual Meeting" in our Proxy Statement for our 2018 Annual Meeting of Stockholders ("2018 Proxy Statement") is incorporated herein by reference. Information relating to our executive officers is, pursuant to Instruction 3 of Item 401(b) of Regulation S-K and General Instruction G(3) of Form 10-K, set forth below under the caption "Executive Officers." Information regarding compliance by our directors and executive officers and owners of more than ten percent of our Common Stock with the reporting requirements of Section 16(a) of the Exchange Act (Item 405 of Regulation S-K), set forth under the caption "Section 16(a) of the Securities Exchange Act Beneficial Ownership Reporting Compliance" in the 2018 Proxy Statement is incorporated herein by reference. Information relating to our financial expert serving on our Audit Committee (Item 407(d)(5) of Regulation S-K), our Nominating and Corporate Governance Committee (Item 407(c)(3) of Regulation S-K), and our Audit Committee (Item 407(d)(4) of Regulation S-K) is set forth under the caption "Meetings and Committees of the Board of Directors" in our 2018 Proxy Statement and is incorporated herein by reference.

Executive Officers

Set forth below, in accordance with General Instruction G(3) of Form 10-K and Instruction 3 to Item 401(b) of Regulation S-K, is information regarding our executive officers:

Name	Age	Title
Jeffrey C. Sprecher	62	Chairman of the Board and Chief Executive Officer
Charles A. Vice	54	Vice Chairman
Scott A. Hill	50	Chief Financial Officer
Benjamin R. Jackson	45	President
David S. Goone	57	Chief Strategy Officer
Johnathan H. Short	52	General Counsel and Corporate Secretary
Mark P. Wassersug	48	Chief Operating Officer
Thomas W. Farley	42	President of NYSE

Jeffrey C. Sprecher. Mr. Sprecher has been a director and our Chief Executive Officer since our inception and has served as Chairman of our Board of Directors since November 2002. As our Chief Executive Officer, he is responsible for our strategic direction, operational and financial performance. Mr. Sprecher acquired Continental Power Exchange, or CPEX, our predecessor company, in 1997. Prior to acquiring CPEX, Mr. Sprecher held a number of positions, including President, over a fourteen-year period with Western Power Group, Inc., a developer, owner and operator of large central-station power plants. While with Western Power, he was responsible for a number of significant financings. Mr. Sprecher holds a B.S. degree in Chemical Engineering from the University of Wisconsin and an MBA from Pepperdine University.

Charles A. Vice. Mr. Vice has served as Vice Chairman since November 2017. Previously, he served as Chief Operating Officer from July 2001 to November 2017 and President from October 2005 to November 2017. As Vice Chairman, Mr. Vice oversees global technology, information security and operations. For over 25 years, he has been a leader in the application of information technology in the energy and financial services industries. Prior to the founding of ICE in 2000, Mr. Vice was a Director at CPEX, an electronic market for trading electric power. Before joining the CPEX startup in 1994, he was a Principal at Energy Management Associates, where he provided consulting services to the electric power and natural gas industries. Mr. Vice earned a BS degree in Mechanical Engineering from the University of Alabama and an MBA from the Owen Graduate School of Management at Vanderbilt University. He serves on the Board of Visitors at the Owen School and the Leadership Board of the University of Alabama College of Engineering where he is a Distinguished Engineering Fellow.

Scott A. Hill. Mr. Hill has served as Chief Financial Officer since May 2007. As our Chief Financial Officer, he is responsible for overseeing all aspects of our finance and accounting functions, including treasury, tax, cash management and investor relations. In addition, Mr. Hill oversees our global clearing operations. Prior to joining us, Mr. Hill spent 16 years as an international finance executive for IBM. He oversaw IBM's worldwide financial forecasts and measurements from 2006 through 2007, working alongside the Chief Financial Officer of IBM and with all of the company's global business units. Prior to that, Mr. Hill was Vice President and Controller of IBM Japan's multi-billion dollar business operation from 2003 through 2005. He currently serves on the Board of Directors of VVC Exploration Corporation and serves on the Audit Committee. Mr. Hill earned his BBA in Finance from the University of Texas at Austin and his MBA from New York University.

Benjamin R. Jackson. Mr. Jackson has served as President since November 2017. Mr. Jackson is responsible for coordinating our global futures and OTC trading businesses. Additionally, he leads the integration planning and execution of our acquisitions and joint ventures. He also serves on the Commodity Futures Trading Commission Energy and Environmental Markets Advisory Committee. Mr. Jackson previously served as Chief Commercial Officer, and prior to that President and Chief Operating Officer of ICE Futures U.S. Mr. Jackson joined us in July 2011 from SunGard, a leading software and technology provider to commodity market participants. At SunGard, he led the company's energy and commodities business segment as Senior Executive Vice President. Prior to that, Mr. Jackson served as President of SunGard's Kiodex commodity risk management platform. Mr. Jackson earned a Bachelor of Science degree in economics from John Carroll University with supporting studies at the London School of Economics and Political Science.

David S. Goone. Mr. Goone has served as Chief Strategy Officer since March 2001. He is responsible for all aspects of our product line, including futures products and capabilities for ICE's electronic platform. Mr. Goone is a Director of Maroon Holding LLC, the governing Board of MERSCORP Holdings, Inc., where we have a majority ownership. Mr. Goone also represents us on industry boards including the Options Clearing Corporation, National Futures Association and the Depository Trust & Clearing Corporation. Prior to joining us, Mr. Goone served as the Managing Director and Head of Product Development and Sales at the Chicago Mercantile Exchange where he worked for nine years. From 1989 through 1992, Mr. Goone was Vice President at Indosuez Carr Futures, where he developed institutional and corporate business. Prior to joining Indosuez, Mr. Goone worked at Chase Manhattan Bank, where he developed and managed their exchange-traded foreign currency options operation at the Chicago Mercantile Exchange. Mr. Goone holds a B.S. degree in Accountancy from the University of Illinois at Urbana-Champaign.

Johnathan H. Short . Mr. Short has served as General Counsel and Corporate Secretary since June 2004. In his role as General Counsel, he is responsible for managing our legal, regulatory and government affairs. As Corporate Secretary, he is also responsible for a variety of our corporate governance matters. Prior to joining us, Mr. Short was a partner at McKenna Long & Aldridge LLP, a national law firm now known as Dentons. Mr. Short practiced in the corporate law group of McKenna, Long & Aldridge from November 1994 until he joined us in June 2004. From April 1991 until October 1994, he practiced in the commercial litigation department of the law firm. Mr. Short holds a J.D. degree from the University of Florida, College of Law, and a B.S. in Accounting from the University of Florida, Fisher School of Accounting.

Mark P. Wassersug. Mr. Wassersug has served as Chief Operating Officer since November 2017. Mr. Wassersug leads operations, including IT infrastructure, data networks, data centers and engineering. Previously Mr. Wassersug was SVP, Operations. Prior to joining us in 2001, Mr. Wassersug worked as a strategic planning and technology consultant in Internet infrastructure and ecommerce for Exodus Communication. Mr. Wassersug earned a Bachelor of Science degree in Civil Engineering from Lehigh University and completed a Master of Business Administration at the Goizueta Business School at Emory University.

Thomas W. Farley. Mr. Farley has served as President of the NYSE since May 2014. He joined the NYSE as Chief Operating Officer following the closing of the NYSE Euronext acquisition in November 2013. Prior to this role, Mr. Farley served as our Senior Vice President of Financial Markets from June 2012 to November 2013 where he oversaw the development of initiatives within our OTC financial markets. Mr. Farley joined Intercontinental Exchange, Inc. in February 2007 as President of ICE Futures U.S., a position that he held until June 2012. Mr. Farley also represents us on the Options Clearing Corporation Board of Directors. From July 2006 to January 2007, Mr. Farley was President of SunGard Kiodex, a risk management technology provider to the commodity derivatives markets. From October 2000 to July 2006, Mr. Farley served as Kiodex's Chief Financial Officer and he also served as Kiodex's Chief Operating Officer from January 2003 to July 2006. Prior to Kiodex, Mr. Farley held positions in investment banking and private equity. Mr. Farley holds a B.A. in Political Science from Georgetown University and is a Chartered Financial Analyst.

Code of Ethics

We have adopted a Global Code of Business Conduct that applies to all of our employees, officers and directors. Our Global Code of Business Conduct meets the requirements of a "code of ethics" as defined by Item 406 of Regulation S-K, and applies to our Chief Executive Officer and Chief Financial Officer (who is the principal financial officer), as well as all other employees, as indicated above. Our Global Code of Business Conduct also meets the requirements of a code of ethics and business conduct under the New York Stock Exchange listing standards. Our Global Code of Business Conduct is available on our website at *www.theice.com* under the heading "About ICE," "Investors" then "Governance." We will also provide a copy of the Global Code of Business Conduct to stockholders at no charge upon written request.

ITEM 11. *EXECUTIVE COMPENSATION*

Information relating to executive compensation set forth under the captions "Item 1 — Election of Directors — Non-Employee Directors Compensation," "Compensation Discussion & Analysis," "Compensation Committee Report," and "Compensation Committee Interlocks and Insider Participation" in our 2018 Proxy Statement is incorporated herein by reference.

ITEM 12. *SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS*

Information regarding ownership of our common stock by certain persons as set forth under the caption "Security Ownership of Certain Beneficial Owners and Management" in our 2018 Proxy Statement is incorporated herein by reference. In addition, information in tabular form relating to securities authorized for issuance under our equity compensation plans is set forth under the caption "Equity Compensation Plan Information" in this Annual Report and "Equity" and "Pension and Other Benefit Programs" as described in Notes 11 and 15 to our consolidated financial statements in this Annual Report.

ITEM 13. *CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE*

Information regarding certain relationships and transactions between our company and certain of our affiliates as set forth under the caption "Certain Relationships and Related Transactions" in our 2018 Proxy Statement is incorporated herein by reference. In addition, information regarding our directors' independence (Item 407(a) of Regulation S-K) as set forth under the caption "Item 1 — Election of Directors — Nominees for Election as Directors at the 2018 Annual Meeting" in our 2018 Proxy Statement is incorporated herein by reference.

ITEM 14. *PRINCIPAL ACCOUNTANT FEES AND SERVICES*

Information regarding principal accountant fees and services of our independent registered public accounting firm, Ernst & Young LLP, is set forth under the caption "Information About the Company's Independent Registered Public Accounting Firm Fees and Services" in our 2018 Proxy Statement and is incorporated herein by reference.

PART IV

ITEM 15. *EXHIBITS, FINANCIAL STATEMENT SCHEDULES*

(a) *Documents Filed as Part of this Report.*

(1) *Financial Statements*

Our consolidated financial statements and the related reports of management and our independent registered public accounting firm which are required to be filed as part of this Report are included in this Annual Report on Form 10-K. These consolidated financial statements are as follows:

- Consolidated Balance Sheets as of December 31, 2017 and 2016.
- Consolidated Statements of Income for the years ended December 31, 2017, 2016 and 2015.
- Consolidated Statements of Comprehensive Income for the years ended December 31, 2017, 2016 and 2015.
- Consolidated Statements of Changes in Equity, Accumulated Other Comprehensive Income (Loss) and Redeemable Non-Controlling Interest for the years ended December 31, 2017, 2016 and 2015.
- Consolidated Statements of Cash Flows for the years ended December 31, 2017, 2016 and 2015.
- Notes to Consolidated Financial Statements.

(2) *Financial Statement Schedules*

Schedules have been omitted because they are not applicable or the required information is included in the consolidated financial statements or notes, thereto.

(3) *Exhibits*

See (b) below.

(b) *Exhibits*

The exhibits listed below under "Index to Exhibits" are filed with or incorporated by reference in this Report. Where such filing is made by incorporation by reference to a previously filed registration statement or report, such registration statement or report is identified in parentheses. We will furnish any exhibit upon request to Investor Relations, 5660 New Northside Drive, Atlanta, Georgia 30328.

ITEM 16. *FORM 10-K SUMMARY*

Not applicable.

INDEX TO EXHIBITS

The following exhibits are filed with this Report. We will furnish any exhibit upon request to Intercontinental Exchange, Inc., Investor Relations, 5660 New Northside Drive, Third Floor, Atlanta, Georgia 30328.

Exhibit Number		Description of Document
2.1	—	Stock Purchase Agreement, dated as of October 27, 2017 and amended as of December 13, 2017, by and among IntercontinentalExchange International, Inc., TMX Group Limited, TMX Group US Inc. and, solely for the purposes set forth in the preamble thereto, Intercontinental Exchange, Inc.*
2.2		Stock Purchase Agreement, dated as of October 27, 2017 and amended as of December 13, 2017, by and among Intercontinental Exchange, Inc., TMX Group Inc., Shorcan Brokers Limited and, solely for the purposes set forth in the preamble thereto, TMX Group Limited.*
3.1	—	Fourth Amended and Restated Certificate of Incorporation of Intercontinental Exchange, Inc. effective May 25, 2017 (incorporated by reference to Exhibit 3.1 to Intercontinental Exchange, Inc.'s Current Report on Form 8-K filed with the SEC on May 26, 2017, File No. 001-36198).
3.2	—	Eighth Amended and Restated Bylaws of Intercontinental Exchange, Inc. effective May 25, 2017 (incorporated by reference to Exhibit 3.2 to Intercontinental Exchange, Inc.'s Current Report on Form 8-K filed with the SEC on May 26, 2017, File No. 001-36198).
4.1	—	Indenture dated as of October 8, 2013 among Intercontinental Exchange, Inc., as issuer, IntercontinentalExchange Inc. and Baseball Merger Sub, LLC, as guarantors, and Wells Fargo Bank, National Association, as trustee (incorporated by reference to Exhibit 4.1 to Intercontinental Exchange, Inc.'s Current Report on Form 8-K filed with the SEC on October 8, 2013, File No. 333-187402).

4.2	—	First Supplemental Indenture dated as of October 8, 2013 among Intercontinental Exchange, Inc., as issuer, Intercontinental Exchange Holdings, Inc. and Baseball Merger Sub, LLC, as guarantors, and Wells Fargo Bank, National Association, as trustee (incorporated by reference to Exhibit 4.2 to Intercontinental Exchange, Inc.'s Current Report on Form 8-K filed with the SEC on October 8, 2013, File No. 333-187402).
4.3	—	Form of 2.50% Senior Notes due 2018 (included as an exhibit to the First Supplemental Indenture dated as of October 8, 2013) (incorporated by reference to Exhibit 4.3 to Intercontinental Exchange, Inc.'s Current Report on Form 8-K filed with the SEC on October 8, 2013, File No. 333-187402).
4.4	—	Form of 4.00% Senior Notes due 2023 (included as an exhibit to the First Supplemental Indenture dated as of October 8, 2013) (incorporated by reference to Exhibit 4.4 to Intercontinental Exchange, Inc.'s Current Report on Form 8-K filed with the SEC on October 8, 2013, File No. 333-187402).
4.5	—	Indenture dated as of November 24, 2015 among Intercontinental Exchange, Inc., as issuer, NYSE Holdings LLC, as guarantor, and Wells Fargo Bank, National Association, as trustee (incorporated by reference to Exhibit 4.1 to Intercontinental Exchange, Inc.'s Current Report on Form 8-K filed with the SEC on November 24, 2015, File No. 001-36198).
4.6	—	First Supplemental Indenture dated as of November 24, 2015 among Intercontinental Exchange, Inc., as issuer, NYSE Holdings LLC, as guarantor, and Wells Fargo Bank, National Association, as trustee (incorporated by reference to Exhibit 4.2 to Intercontinental Exchange, Inc.'s Current Report on Form 8-K filed with the SEC on November 24, 2015, File No. 001-36198).
4.7	—	Form of 2.75% Senior Notes due 2020 (included as an exhibit to the First Supplemental Indenture dated as of November 24, 2015) (incorporated by reference to Exhibit 4.3 to Intercontinental Exchange, Inc.'s Current Report on Form 8-K filed with the SEC on November 24, 2015, File No. 001-36198).
4.8	—	Form of 3.75% Senior Notes due 2025 (included as an exhibit to the First Supplemental Indenture dated as of November 24, 2015) (incorporated by reference to Exhibit 4.4 to Intercontinental Exchange, Inc.'s Current Report on Form 8-K filed with the SEC on November 24, 2015, File No. 001-36198).
4.9	—	Second Supplemental Indenture dated as of August 17, 2017 among Intercontinental Exchange, Inc., as issuer, NYSE Holdings LLC, as guarantor, and Wells Fargo Bank, National Association, as trustee (incorporated by reference to Exhibit 4.1 to Intercontinental Exchange, Inc.'s Current Report on Form 8-K filed with the SEC on August 17, 2017, File No. 001-36198).
4.10	—	Form of 2.350% Senior Notes due 2022 (included as an exhibit to the Second Supplemental Indenture dated as of August 17, 2017) (incorporated by reference to Exhibit 4.2 to Intercontinental Exchange, Inc.'s Current Report on Form 8-K filed with the SEC on August 17, 2017, File No. 001-36198).
4.11	—	Form of 3.100% Senior Notes due 2027 (included as an exhibit to the Second Supplemental Indenture dated as of August 17, 2017) (incorporated by reference to Exhibit 4.3 to Intercontinental Exchange, Inc.'s Current Report on Form 8-K filed with the SEC on August 17, 2017, File No. 001-36198).
10.1	—	Employment Agreement dated February 24, 2012 between Intercontinental Exchange Holdings, Inc. and Jeffrey C. Sprecher (incorporated by reference to Exhibit 10.1 to Intercontinental Exchange Holdings, Inc.'s Current Report on Form 8-K filed with the SEC on February 24, 2012, File No. 001-32671).
10.2	—	Employment Agreement dated February 24, 2012 between Intercontinental Exchange Holdings, Inc. and Charles A. Vice (incorporated by reference to Exhibit 10.2 to Intercontinental Exchange Holdings, Inc.'s Current Report on Form 8-K filed with the SEC on February 24, 2012, File No. 001-32671).
10.3	—	Employment Agreement dated February 24, 2012 between Intercontinental Exchange Holdings, Inc. and David S. Goone (incorporated by reference to Exhibit 10.3 to Intercontinental Exchange Holdings, Inc.'s Current Report on Form 8-K filed with the SEC on February 24, 2012, File No. 001-32671).
10.4	—	Employment Agreement dated February 24, 2012 between Intercontinental Exchange Holdings, Inc. and Scott A. Hill (incorporated by reference to Exhibit 10.5 to Intercontinental Exchange Holdings, Inc.'s Current Report on Form 8-K filed with the SEC on February 24, 2012, File No. 001-32671).
10.5	—	Employment Agreement dated June 18, 2012 between Intercontinental Exchange Holdings, Inc. and Thomas W. Farley (incorporated by reference to Exhibit 10.6 to Intercontinental Exchange Holdings, Inc.'s Annual Report on Form 10-K filed with the SEC on February 6, 2013, File No. 001-32671).
10.6	—	Employment Agreement dated August 1, 2016 between Intercontinental Exchange Holdings, Inc. and Benjamin Jackson.
10.7	—	Form of Employment Agreement between Intercontinental Exchange Holdings, Inc. and the other U.S. officers (incorporated by reference to Exhibit 10.6 to Intercontinental Exchange Holdings, Inc.'s Current Report on Form 8-K filed with the SEC on February 24, 2012, File No. 001-32671).
10.8	—	Intercontinental Exchange Holdings, Inc. 2000 Stock Option Plan, as amended effective December 31, 2008 (incorporated by reference to Exhibit 10.6 to Intercontinental Exchange Holdings, Inc.'s Annual Report on Form 10-K filed with the SEC on February 11, 2009, File No. 001-32671).
10.9	—	Intercontinental Exchange Holdings, Inc. 2003 Restricted Stock Deferral Plan for Outside Directors, as amended effective December 31, 2008 (incorporated by reference to Exhibit 10.7 to Intercontinental Exchange Holdings, Inc.'s Annual Report on Form 10-K filed with the SEC on February 11, 2009, File No. 001-32671).

10.10	—	Intercontinental Exchange Holdings, Inc. Executive Bonus Plan (incorporated by reference to Exhibit 10.1 to Intercontinental Exchange Holdings, Inc.'s Quarterly Report on Form 10-Q filed with the SEC on August 5, 2009, File No. 001-32671).
10.11	—	Intercontinental Exchange Holdings, Inc. 2009 Omnibus Incentive Plan (incorporated by reference to Exhibit 10.2 to Intercontinental Exchange Holdings, Inc.'s Quarterly Report on Form 10-Q filed with the SEC on August 5, 2009, File No. 001-32671).
10.12	—	Intercontinental Exchange Holdings, Inc. 2013 Omnibus Employee Incentive Plan (incorporated by reference to Exhibit 4.1 to Intercontinental Exchange Holdings, Inc.'s Registration Statement on Form S-8, filed with the SEC on May 24, 2013, File No. 333-188815).
10.13	—	Intercontinental Exchange Holdings, Inc. 2013 Omnibus Non-Employee Director Incentive Plan (incorporated by reference to Exhibit 4.2 to Intercontinental Exchange Holdings, Inc.'s Registration Statement on Form S-8, filed with the SEC on May 24, 2013, File No. 333-188815).
10.14		Amendment No. 1 to the Intercontinental Exchange Holdings, Inc. 2013 Omnibus Non-Employee Director Incentive Plan (incorporated by reference to Exhibit 10.2 to Intercontinental Exchange, Inc.'s Quarterly Report on Form 10-Q filed with the SEC on August 3, 2017, File No. 001-36198).
10.15	—	Intercontinental Exchange, Inc. 2017 Omnibus Employee Incentive Plan (incorporated by reference to Exhibit 4.1 to Intercontinental Exchange, Inc.'s Form S-8 filed with the SEC on May 22, 2017, File No. 333-218619).
10.16	—	NYSE Amended and Restated Omnibus Incentive Plan (as amended and restated effective October 27, 2010) (incorporated by reference to Exhibit 10.33 to NYSE Euronext's Annual Report on Form 10-K filed with the SEC on February 28, 2011, File No. 001-33392).
10.17	—	Form of Performance-Based Restricted Stock Unit Award Agreement (EBITDA and TSR) used with respect to grants of performance-based restricted stock units by the Company under the Intercontinental Exchange, Inc. 2017 Omnibus Employee Incentive Plan.
10.18	—	Form of Performance-Based Restricted Stock Unit Award Agreement (Relative 3-Year TSR) used with respect to grants of performance-based restricted stock units by the Company under the Intercontinental Exchange, Inc. 2017 Omnibus Employee Incentive Plan.
10.19	—	Contribution and Asset Transfer Agreement, dated as of May 11, 2000, by and between IntercontinentalExchange, LLC, Continental Power Exchange, Inc., and Jeffrey C. Sprecher (incorporated by reference to Exhibit 10.31 to Intercontinental Exchange Holdings, Inc.'s Registration Statement on Form S-1 filed with the SEC on October 25, 2005, File No. 333-123500).
10.20	—	First Amendment to Contribution and Asset Transfer Agreement, dated as of May 17, 2000, by and among IntercontinentalExchange, LLC, Continental Power Exchange, Inc., and Jeffrey C. Sprecher (incorporated by reference to Exhibit 10.32 to Intercontinental Exchange Holdings, Inc.'s Registration Statement on Form S-1 filed with the SEC on October 25, 2005, File No. 333-123500).
10.21	—	Second Amendment to Contribution and Asset Transfer Agreement, dated as of October 24, 2005, by and among Intercontinental Exchange Holdings, Inc., Continental Power Exchange, Inc., and Jeffrey C. Sprecher (incorporated by reference to Exhibit 10.33 to Intercontinental Exchange Holdings, Inc.'s Registration Statement on Form S-1 filed with the SEC on October 25, 2005, File No. 333-123500).
10.22	—	Aircraft Time Sharing Agreement dated as of February 6, 2012 between Intercontinental Exchange Holdings, Inc. and Jeffrey C. Sprecher (incorporated by reference to Exhibit 10.37 to Intercontinental Exchange Holdings, Inc.'s Annual Report on Form 10-K filed with the SEC on February 8, 2012, File No. 001-32671).
10.23	—	Aircraft Time Sharing Agreement dated as of February 6, 2012 between Intercontinental Exchange Holdings, Inc. and Charles A. Vice (incorporated by reference to Exhibit 10.38 to Intercontinental Exchange Holdings, Inc.'s Annual Report on Form 10-K filed with the SEC on February 8, 2012, File No. 001-32671).
10.24	—	Credit Agreement dated as of April 3, 2014 among Intercontinental Exchange, Inc. and ICE Europe Parent Limited, as borrowers, Wells Fargo Bank, National Association, as administrative agent, issuing lender and swingline lender, Bank of America, N.A., as syndication agent, and each of the lenders party thereto for an aggregate $3.0 billion five-year senior unsecured revolving credit facility (incorporated by reference to Exhibit 10.1 to Intercontinental Exchange, Inc.'s Current Report on Form 8-K filed with the SEC on April 7, 2014).
10.25	—	First Amendment to Credit Agreement dated as of May 15, 2015 amending Credit Agreement originally dated April 3, 2014 among Intercontinental Exchange, Inc. (formerly known as IntercontinentalExchange Group, Inc.) and ICE Europe Parent Limited, as borrowers, Wells Fargo Bank, National Association, as administrative agent, issuing lender and swingline lender, Bank of America N.A., as syndication agent, and each of the lenders party thereto for an aggregate $3.0 billion five-year senior unsecured revolving credit facility (incorporated by reference to Exhibit 10.1 to Intercontinental Exchange, Inc.'s Current Report on Form 8-K filed with the SEC on May 19, 2015, File No. 001-36198).
10.26	—	Second Amendment to Credit Agreement dated as of November 9, 2015 among Intercontinental Exchange, Inc. and ICE Europe Parent Limited, as borrowers, the lenders party thereto and Wells Fargo Bank, National Association, as administrative agent, amending that certain Credit Agreement, dated April 3, 2014 (as amended by the First Amendment to Credit Agreement, dated as of May 15, 2015) among Intercontinental Exchange, Inc. and ICE Europe Parent Limited, as borrowers, the lenders party thereto and Wells Fargo Bank, National Association, as administrative agent, (incorporated by reference to Exhibit 10.1 to Intercontinental Exchange, Inc.'s Current Report on Form 8-K filed with the SEC on November 13, 2015, File No. 001-36198).

10.27	—	Third Amendment to Credit Agreement dated as of November 13, 2015 among Intercontinental Exchange, Inc. and ICE Europe Parent Limited, as borrowers, the lenders party thereto and Wells Fargo Bank, National Association, as administrative agent, amending that certain Credit Agreement, dated as of April 3, 2014 (as amended by the First Amendment to Credit Agreement, dated as of May 15, 2015 and the Second Amendment to Credit Agreement, dated as of November 9, 2015) among Intercontinental Exchange, Inc. and ICE Europe Parent Limited, as borrowers, the lenders party thereto and Wells Fargo Bank, National Association, as administrative agent, (incorporated by reference to Exhibit 10.2 to Intercontinental Exchange, Inc.'s Current Report on Form 8-K filed with the SEC on November 13, 2015, File No. 001-36198).
10.28	—	The Fourth Amendment to Credit Agreement, dated as of August 18, 2017 among Intercontinental Exchange, Inc. as borrower, NYSE Holdings LLC as guarantor, the lenders party thereto and Wells Fargo Bank, National Association, as administrative agent, amending that certain Credit Agreement, dated as of April 3, 2014 among Intercontinental Exchange, Inc. and ICE Europe Parent Limited, as borrowers, the lenders party thereto and Wells Fargo Bank, National Association, as administrative agent (as amended by the First Amendment to Credit Agreement, dated as of May 15, 2015, the Second Amendment to Credit Agreement, dated as of November 9, 2015, and the Third Amendment to Credit Agreement, dated as of November 13, 2015) (incorporated by reference to Exhibit 10.1 to Intercontinental Exchange, Inc.'s Current Report on Form 8-K filed with the SEC on August 21, 2017, File No. 001-36198).
10.29	—	The Fifth Amendment to Credit Agreement, dated as of August 18, 2017 among Intercontinental Exchange, Inc. as borrower, NYSE Holdings LLC as guarantor, the lenders party thereto and Wells Fargo Bank, National Association, as administrative agent, amending that certain Credit Agreement, dated as of April 3, 2014 among Intercontinental Exchange, Inc. and ICE Europe Parent Limited, as borrowers, the lenders party thereto and Wells Fargo Bank, National Association, as administrative agent (as amended by the First Amendment to Credit Agreement, dated as of May 15, 2015, the Second Amendment to Credit Agreement, dated as of November 9, 2015, the Third Amendment to Credit Agreement, dated as of November 13, 2015 and the Fourth Amendment to Credit Agreement, dated as of August 18, 2017) (incorporated by reference to Exhibit 10.2 to Intercontinental Exchange, Inc.'s Current Report on Form 8-K filed with the SEC on August 21, 2017, File No. 001-36198).
10.30	—	Form of Agreement Relating to Noncompetition and Other Covenants signed by each of the non-employee directors and by Intercontinental Exchange, Inc. (incorporated by reference to Exhibit 10.1 to Intercontinental Exchange, Inc.'s Current Report on Form 8-K filed with the SEC on May 17, 2016, File No. 001-36198).
12.1	—	Computation of Ratio of Earnings to Fixed Charges.
21.1	—	Subsidiaries of Intercontinental Exchange, Inc.
23.1	—	Consent of Ernst & Young LLP, Independent Registered Public Accounting Firm.
24.1	—	Power of Attorney (included with signature page hereto).
31.1	—	Rule 13a -14(a)/15d -14(a) Certification of Chief Executive Officer.
31.2	—	Rule 13a -14(a)/15d -14(a) Certification of Chief Financial Officer.
32.1	—	Section 1350 Certification of Chief Executive Officer.
32.2	—	Section 1350 Certification of Chief Financial Officer.
101	—	The following materials from Intercontinental Exchange, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2017 formatted in XBRL (Extensible Business Reporting Language): (i) the Consolidated Balance Sheets, (ii) the Consolidated Statements of Income, (iii) the Consolidated Statements of Changes in Equity, Accumulated Other Comprehensive Income (Loss) and Redeemable Non-Controlling Interest, (iv) the Consolidated Statements of Comprehensive Income, (v) Consolidated Statements of Cash Flows and (vi) Notes to Consolidated Financial Statements, tagged as blocks of text.**

* Certain exhibits and similar attachments to this agreement have been omitted in accordance with Item 601(b)(2) of Regulation S-K. A copy of any omitted exhibit or other attachment will be furnished supplementally to the Securities and Exchange Commission upon request.

** As provided in Rule 406T of Regulation S-T, this information is "furnished" and not "filed" for purposes of Sections 11 and 12 of the Securities Act of 1933 and Section 18 of the Securities Exchange Act of 1934. Such exhibit will not be deemed to be incorporated by reference into any filing under the Securities Act of 1933 or the Securities Exchange Act of 1934 unless Intercontinental Exchange, Inc. specifically incorporates it by reference.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this Report to be signed on its behalf by the undersigned, thereunto duly authorized.

Intercontinental Exchange, Inc.
(Registrant)

Date: February 7, 2018

By: /s/ Jeffrey C. Sprecher
Jeffrey C. Sprecher
Chief Executive Officer

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Jeffrey C. Sprecher and Scott A. Hill, and each of them his or her true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments to this Annual Report for the calendar year ended December 31, 2017 and to file the same, with all exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite or necessary to be done, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents or any of them, or their or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, this Report has been signed below by the following persons on behalf of the Registrant and in the capacities indicated as of the date indicated.

Signatures	Title	Date
/s/ Jeffrey C. Sprecher Jeffrey C. Sprecher	Chairman of the Board and Chief Executive Officer (principal executive officer)	February 7, 2018
/s/ Scott A. Hill Scott A. Hill	Chief Financial Officer (principal financial officer)	February 7, 2018
/s/ Dean S. Mathison Dean S. Mathison	Chief Accounting Officer and Corporate Controller (principal accounting officer)	February 7, 2018
/s/ Sharon Y. Bowen /s/ Sharon Y. Bowen	Director	February 7, 2018
/s/ Ann M. Cairns Ann M. Cairns	Director	February 7, 2018
/s/ Charles R. Crisp Charles R. Crisp	Director	February 7, 2018
/s/ Duriya M. Farooqui Duriya M. Farooqui	Director	February 7, 2018
/s/ Jean-Marc Forneri Jean-Marc Forneri	Director	February 7, 2018
/s/ Fredrick W. Hatfield Fredrick W. Hatfield	Director	February 7, 2018

/s/ Lord Hague of Richmond	Director	February 7, 2018
The Rt. Hon. the Lord Hague of Richmond		
/s/ Thomas E. Noonan	Director	February 7, 2018
Thomas E. Noonan		
/s/ Frederic V. Salerno	Director	February 7, 2018
Frederic V. Salerno		
/s/ Judith A. Sprieser	Director	February 7, 2018
Judith A. Sprieser		
/s/ Vincent Tese	Director	February 7, 2018
Vincent Tese		

EXHIBT 2.1

CONFORMED VERSION

STOCK PURCHASE AGREEMENT

BY AND AMONG

INTERCONTINENTALEXCHANGE INTERNATIONAL, INC.

TMX GROUP LIMITED

TMX GROUP US INC.

AND,

solely for the purposes set forth in the preamble,

INTERCONTINENTAL EXCHANGE, INC.

DATED AS OF October 27, 2017

AND AMENDED AS OF December 13, 2017

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STOCK PURCHASE AGREEMENT

This **STOCK PURCHASE AGREEMENT** (this " Agreement ") is entered into as of October 27, 2017 by and among IntercontinentalExchange International, Inc., a Delaware corporation (" Seller "), TMX Group Limited, a corporation organized under the Business Corporations Act (Ontario) (" TMX Group Limited "), TMX Group US Inc., a Delaware corporation (" TMX Group US ", and together with TMX Group Limited, " Purchasers " and each, a " Purchaser ") and, solely for the purposes set forth in Article X , Intercontinental Exchange, Inc., a Delaware corporation (" Guarantor ") (Seller, together with Purchasers, and, solely for the purposes set forth in this preamble, Guarantor collectively, the " Parties ," and each, individually, a " Party ").

RECITALS

WHEREAS , pursuant to a stock purchase agreement dated November 15, 2015 (the " 2015 SPA "), by and among: (i) GFINet, Inc., (ii) GFI TP Holdings Pte Ltd., (iii) Intercontinental Exchange, Inc., and solely for the purposes set forth in the preamble thereto, (iv) GFI Group, Inc., and (v) BGC Partners, Inc., GFINet, Inc. agreed to sell all of the outstanding shares of common stock of Trayport, Inc., a Delaware corporation, and GFI TP Holdings Pte Ltd. agreed to sell all of the outstanding ordinary shares of Trayport Holdings Limited (formerly GFI TP Ltd.), a private limited company registered in England and Wales (together with Trayport, Inc., the " Trayport Entities ");

WHEREAS , pursuant to an assignment and assumption agreement dated December 4, 2015, between Intercontinental Exchange, Inc. and Seller, Intercontinental Exchange, Inc. assigned to Seller, and Seller assumed from Intercontinental Exchange, Inc., among other things, the right to acquire the equity interests in the Trayport Entities;

WHEREAS , Seller acquired the equity interests in the Trayport Entities pursuant to the 2015 SPA on December 11, 2015;

WHEREAS , on January 11, 2016 the Competition and Markets Authority (the " CMA ") issued an initial enforcement order (the " Initial Enforcement Order ") requiring Intercontinental Exchange, Inc. not to take any action which might prejudice a reference under section 22 of the Enterprise Act 2002 and which Initial Enforcement Order remained in force until, on January 5, 2017 the CMA ordered Intercontinental Exchange, Inc., Seller and Trayport Holdings Limited to divest all shares in Trayport Limited and Trayport, Inc. to a purchaser approved by the CMA and pursuant to an agreement approved by the CMA (the " Second CMA Order "), which Second CMA Order was superseded by the Intercontinental Exchange, Inc. and Trayport Merger Inquiry Order 2017, No 2, issued on July 21, 2017 (the " Final CMA Order " and together with the Initial Enforcement Order and the Second CMA Order, the " CMA Orders "), and this Agreement is being entered into to comply with the Final CMA Order and the CMA has approved this Agreement;

WHEREAS , on the terms and subject to the conditions set forth herein, Seller shall sell, transfer and convey to Purchasers, and Purchasers shall purchase and acquire from Seller, one hundred percent (100%) of the equity interests in the Trayport Entities; and

WHEREAS , simultaneously with the execution of this Agreement, Guarantor and Affiliates of Purchasers have entered into the NGX Agreement.

NOW THEREFORE , in consideration of the mutual promises and covenants set forth below and for other good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, and intending to be legally bound, the Parties hereby agree as follows:

ARTICLE I

DEFINITIONS

SECTION 1.1 Certain Defined Terms . For the purposes of this Agreement, unless the context requires otherwise, the following terms shall have the following meanings:

" 2015 Closing " shall mean December 11, 2015.

" 2015 Signing " shall mean November 15, 2015.

" Accounting Principles " shall mean (i) the rules, principles and sample calculation of Working Capital set forth in Annex A and (ii) the accounting principles, policies and procedures used in preparing the Business Financial Information to the extent compliant with Applicable Accounting Standards; provided , however , that in the event of any conflict among clauses (i) and (ii) of this definition, then clause (i) shall take precedence.

" Adjustment Amount " shall mean the amount (which may be a positive or negative number) equal to (i) the Closing Working Capital *minus* (ii) the Working Capital Target.

" Affiliate " shall mean with respect to any Person, any other Person that directly or indirectly, through one or more intermediaries, controls, is controlled by or is under common control with such first Person. The term "control" (including its correlative meanings "controlled by" and "under common control with") shall mean possession, directly or indirectly, of power to direct or cause the direction of management or policies (whether through ownership of securities or partnership or other ownership interests, by contract or otherwise); it being agreed that, for purposes of this Agreement, (A) the Trayport Companies shall be Affiliates of Seller prior to the Closing, but shall cease to be Affiliates of Seller as of and after the Closing, and (B) the Trayport Companies shall not be Affiliates of Purchasers prior to the Closing, but shall be Affiliates of Purchasers as of and after the Closing.

" Applicable Accounting Standards " shall mean: (i) with respect to Trayport, Inc., U.S. GAAP; (ii) with respect to Trayport Holdings Limited, Trayport Limited and Trayport Contigo, U.K. GAAP; and (iii) with respect to Trayport PTE Ltd., SFRS.

" Assignment Agreement " shall mean the Assignment Agreement substantially in the form attached hereto as Exhibit B .

" Business " shall mean the business of providing software (and related support, hosting and maintenance) to manage energy trading and energy related risk and to operate trading networks connecting brokers, traders and/or exchanges for the power, natural gas, coal, emissions, freight, oil and iron ore markets, in each case, as conducted as of the date hereof by the Trayport Companies.

" Business Day " shall mean any day other than a Saturday, Sunday or day on which banking institutions in New York or Toronto, Canada are authorized or obligated by Law or executive order to be closed.

" Business Employee " shall mean each of the individuals who, as of the Closing, is employed by any Trayport Company, including any employees on a Leave of Absence.

" Business Material Adverse Effect " shall mean any event, occurrence, change, fact, condition, development or effect that, individually or in the aggregate, (a) has been, or would reasonably be expected to be, materially adverse to the business, financial condition or results of operations of the Trayport Companies, taken as a whole, or (b) would reasonably be expected to prevent or materially impair or materially delay the ability of Seller or its Affiliates to consummate the Sale on the terms and conditions set forth in this Agreement and otherwise comply with and perform their obligations hereunder and under the Related Agreements, except in the case of clause (a) to the extent that such event, occurrence, change, fact, condition, development or effect results from (i) changes in general economic, political, legal or regulatory conditions, (ii) changes in financial, security, commodity or commodity futures market conditions, (iii) changes in or events generally affecting the industries or markets in which the Trayport Companies operate, (iv) changes in Applicable Accounting Standards, as applicable, or Law or accounting principles or interpretations thereof, (v) the announcement of this Agreement or the Sale or the identity of Purchasers, including the impact thereof on relationships, contractual or otherwise, with agents, customers, suppliers, vendors, licensors, licensees, lenders, partners, employees or regulators, (vi) any failure by the Trayport Companies to meet any estimates or outlook of revenues or earnings or other financial projections (provided that this clause (vi) shall not prevent a determination that any events, occurrences, facts, conditions, changes, developments or effects underlying any such failure have resulted in a Business Material Adverse Effect unless such events, occurrences, facts, conditions, changes, developments or effects are otherwise excepted by this definition), (vii) natural disasters, including earthquakes, hurricanes, tsunamis, typhoons, blizzards, tornadoes, droughts, floods, cyclones, arctic frosts, mudslides, wildfires and other force majeure events, (viii) changes in national or international political conditions, including any engagement in hostilities, whether or not pursuant to

the declaration of a national emergency or war, or the occurrence of any military or terrorist attack occurring after the date hereof, (ix) any action taken at the written request of Purchasers or (x) any matter set forth on Section 1.1-A of the Seller Disclosure Letter, except, in the case of clauses (i), (ii), (iii), (iv), (vii) and (viii) above, to the extent the Trayport Companies, taken as a whole, are disproportionately affected thereby as compared with other similarly situated businesses in the industries or markets in which the Trayport Companies operate.

" Cash and Cash Equivalents " shall mean, with respect to any Person as of any time, (i) all cash and (ii) all cash equivalents (including deposits, restricted cash, amounts held in escrow, marketable securities and short-term investments) of such Person as of such time, in each case, without duplication, and as determined in a manner consistent with the Accounting Principles. Cash and Cash Equivalents shall (A) be reduced by issued but uncleared checks and drafts of such Person as of such time and (B) be increased by checks and drafts deposited for the account of such Person as of such time.

" Change of Control Payment " shall mean any bonus, severance or other payment that becomes payable by any Trayport Company to any present or former director, officer, employee or consultant thereof as a result of the execution of this Agreement or the consummation of the transactions contemplated hereby, including pursuant to any employment agreement, benefit plan or any other Contract, including any employment and payroll taxes and any national insurance or social security contributions with respect to any such payment, other than any payment (a) that is triggered by a termination of employment which occurs following the Closing, (b) that is payable only upon the continued employment of an employee for at least six (6) months following the Closing or (c) for which Purchasers shall have provided consent.

" Closing Cash " shall mean the aggregate amount of all Cash and Cash Equivalents of the Trayport Companies as of 11:59 p.m., Eastern Time, on the day prior to the Closing Date; provided , however , that "Closing Cash" shall not include (a) any amounts included in the calculation of Closing Working Capital or (b) any amounts used to repay Indebtedness, pay Trayport Transaction Expenses, make distributions or intercompany payments on the Closing Date.

" Closing Consideration " shall mean the Closing Purchase Price together with either (a) the NGX/Shorcan Equity Interests or (b) if the NGX Sale is not consummated in accordance with the NGX Agreement prior to or contemporaneously with the Closing, the NGX Base Value.

" Closing Indebtedness " shall mean all Indebtedness of the Trayport Companies as of 11:59 p.m., Eastern Time, on the day prior to the Closing Date; provided , however , that "Closing Indebtedness" shall not include any amounts included in the calculation of Closing Working Capital.

" Closing Purchase Price " shall be equal to (i) three hundred fifty million British pounds sterling (£350,000,000) in immediately available funds *plus* (ii) the Estimated

Adjustment Amount *plus* (iii) the Estimated Closing Cash *minus* (iv) the Estimated Closing Indebtedness *minus* (v) the Trayport Transaction Expenses (if any), with any components of the Closing Purchase Price that are not in British pounds sterling being translated into British pounds sterling as provided in Section 1.2(d).

"Closing Working Capital" shall mean the aggregate amount of all Working Capital of the Trayport Companies as of 11:59 p.m., Eastern Time, on the day prior to the Closing Date; provided, however, that "Closing Working Capital" shall not include any amounts with respect to (i) any deferred Tax assets and any deferred Tax liabilities, (ii) any fees, expenses or liabilities arising from any financing by Purchasers and their Affiliates in connection with the Sale, or (iii) any intercompany accounts and transactions between or among any Trayport Companies. For purposes of this definition, including the calculation of current assets and current liabilities, the Parties shall disregard any adjustments arising from purchase accounting or otherwise arising out of the Sale.

"Code" shall mean the Internal Revenue Code of 1986, as amended.

"Company Benefit Plan" shall mean each deferred compensation and each bonus or other incentive compensation, equity compensation plan, "welfare" plan, fund or program (within the meaning of Section 3(1) of ERISA); "pension" plan, fund, scheme (including a qualifying pension scheme under the UK Pensions Act 2008) or program (within the meaning of Section 3(2) of ERISA or Section 1 of the UK Pension Schemes Act 1993); and each other employee benefit plan, fund, program, agreement or arrangement, in each case, that is sponsored, maintained or contributed to or required to be contributed to by any Trayport Company, or to which any Trayport Company is a party or has any liability, in each such case for the benefit of any Business Employee or any former employee who was employed by any Trayport Company, or as to which any Trayport Company has or may incur any actual or contingent liability based on its affiliation (including as an ERISA Affiliate) with any other entity (excluding any such fund, arrangement, program or arrangement that is maintained by a Governmental Authority or mandated by applicable Law).

"Contract" shall mean, with respect to any Person, any agreement, undertaking, contract, lease, obligation, promise, indenture, deed of trust or other instrument, document or agreement by which that Person, or any of its properties or assets, is bound or subject.

"Damages" shall mean all losses, Liabilities, damages, deficiencies, bonds, dues, assessments, fines, penalties, fees, costs (including cost of investigation, defense and enforcement), amounts paid in settlement and expenses incurred or suffered (and reasonable attorneys' fees, costs and expenses associated therewith).

"Disclosure Letters" shall mean the Seller Disclosure Letter and the Purchasers Disclosure Letter.

" Environmental Laws " shall mean all federal, state, local and foreign laws and regulations relating to pollution or protection of the environment, including laws relating to Releases or threatened Releases of Hazardous Materials or otherwise relating to the manufacture, processing, distribution, use, treatment, storage, Release, transport or handling of Hazardous Materials.

" ERISA " shall mean the Employee Retirement Income Security Act of 1974, as amended.

" ERISA Affiliate " shall mean any trade or business, whether or not incorporated, that together with any Trayport Entity would be deemed a "single employer" within the meaning of Section 4001(b) of ERISA.

" Excluded Taxes " shall mean any (a) Taxes imposed on or payable with respect to the Trayport Companies (including any Taxes imposed as a transferee or successor or by Contract) in respect of any Pre-Closing Period or the portion of any Straddle Period ending on the Closing Date; (b) Taxes of Seller or any of its Affiliates (other than the Trayport Companies) for which the Trayport Companies may be liable under Treasury Regulation Section 1.1502-6(a) or any similar provision of state, local or foreign law; and (c) Taxes arising from any breach by Seller of the representations contained in Section 4.18(f) and (i); provided , however , that Excluded Taxes shall not include (i) any Transfer Taxes borne by Purchasers pursuant Section 8.10 , or (ii) any liability for Taxes resulting from voluntary transactions or voluntary action taken by Purchasers or any Trayport Company on or after the Closing that are outside the Ordinary Course of business (except as permitted or contemplated under Article VIII), or (iii) any liability for Taxes arising out of or resulting from the breach of an agreement or covenant made by Purchasers in this Agreement. For purposes of this Agreement, in the case of any Straddle Period, (I) in the case of net income and similar Taxes of the Trayport Companies, employment or similar Taxes and any Taxes that are imposed in connection with any sale or other transfer or assignment of property (real or personal, tangible or intangible) (other than Transfer Taxes imposed pursuant to this Agreement, the allocation of which is provided for under Section 8.10 , and any Taxes included in the definition of Change of Control Payment), the amount of such Taxes that are allocable to the Pre-Closing Period shall be computed as if such taxable period ended as of the close of business on the Closing Date (and for such purpose, the taxable period of any partnership or other pass-through entity or any "controlled foreign corporation" will be deemed to terminate at such time), provided , however , that any item determined on an annual or periodic basis (such as deductions for depreciation or real estate Taxes) shall be apportioned on a daily basis and (II) all Taxes not described in clause (I) of this sentence for the Pre-Closing Period shall be computed by including the amount of such Taxes for the entire Straddle Period multiplied by a fraction, the numerator of which is the number of days in the Pre-Closing Period and the denominator of which is the number of days in such Straddle Period.

" Federal Funds Rate " shall mean the offered rate as reported in *The Wall Street Journal* in the "Money Rates" section for reserves traded among commercial banks for overnight use in amounts of one million dollars or more on the Business Day immediately prior to the day on which a payment is due hereunder.

" Governmental Authority " shall mean any national, supranational, federal, state, provincial, local, foreign or other judicial, legislative, executive, regulatory or administrative authority, agency, commission, board, bureau, court or any Self-Regulatory Organization (solely in its capacity, and to the extent of its authority, as such) or arbitrator.

" Hazardous Materials " shall mean any material, substance, chemical or waste (or combination thereof) that is listed, defined, designated, regulated or classified as hazardous, toxic, radioactive, dangerous, a pollutant, a contaminant, petroleum, oil or words of similar meaning or effect under any Law relating to pollution, waste or the environment.

" Indebtedness " shall mean, with respect to any Person as of any time, the sum of (i) the principal amount, plus any related accrued and unpaid interest, fees and prepayment premiums or penalties, breakage costs, or other unpaid similar costs, fees or expenses (if any) required to fully discharge such Person's obligations under (A) indebtedness for borrowed money, including overdrafts, of such Person as of such time and (B) indebtedness evidenced by notes, debentures or similar instruments of such Person as of such time, (ii) indebtedness for the deferred purchase price of property or services (including earn-outs and similar obligations to the extent payable on their terms but excluding current liabilities and accrued expenses incurred in the Ordinary Course), (iii) capitalized lease obligations of such Person as of such time, (iv) all letters of credit issued as of such time for the account of such Person to the extent drawn, (v) reimbursement and other obligations of such Person as of such time with respect to bankers' acceptances, surety bonds, other financial guarantees that have been drawn or funded, (vi) all obligations relating to interest rate protection, swap agreements, collar agreements and factoring agreements, in each case, to the extent payable if the applicable contract is terminated at such time (without duplication of other indebtedness supported or guaranteed thereby), (vii) all obligations in respect of dividends declared but not yet paid or other distributions payable, in each case, that are payable to a Person other than a Trayport Company, (viii) all Liabilities arising from any transactions related to the assignment or securitization of receivables for financing purposes to any third party, including all Liabilities under factoring agreements and similar Contracts executed for the purpose of obtaining financing; and (ix) all guarantees (other than product warranties made in the Ordinary Course of business), including guarantees of any Indebtedness of any other person referred to in clauses (i) through (viii), but excluding any guarantees of performance under Contracts in the Ordinary Course of business, in each case, without duplication, and as determined in a manner consistent with the Accounting Principles.

" Information Technology " shall mean any hardware, networks, platforms, servers, and related telecommunications systems used by any of the Trayport Companies.

" Intellectual Property " shall mean all intellectual property rights of every kind and nature, however denominated, throughout the world, including all: (i) copyrights and moral rights, and all registrations and applications for registration thereof; (ii) Patents; (iii) Marks; (iv) common law and statutory trade secrets and inventions, whether or not patentable, and whether or not reduced to practice; (v) know-how, methodologies, processes and techniques, research and development information, and technical data; and (vi) intellectual property rights in Software.

" IRS " shall mean the Internal Revenue Service.

" Knowledge " shall mean, with respect to Seller, the actual knowledge of the individuals set forth in Section 1.1-B of the Seller Disclosure Letter after due inquiry, and, with respect to Purchasers, shall mean the actual knowledge of the individuals set forth in Section 1.1-B of the Purchasers Disclosure Letter after due inquiry.

" Law " shall mean any law (including common law), ordinance, judgment, order, decree, injunction, statute, treaty, rule or regulation enacted or promulgated by any Governmental Authority.

" Leased Real Property " shall mean all leasehold or subleasehold estates and other rights to use or occupy any land, buildings, structures, fixtures or other interest in real property.

" Leases " shall mean all leases, subleases, licenses or other agreements, including all amendments, extensions, renewals, guaranties or other agreements with respect thereto, pursuant to which the Leased Real Property is held or used.

" Leave of Absence " shall mean a leave from active employment that is expected to continue following the Closing or that (a) was granted in accordance with the applicable policies and procedures (including any policy or procedures implemented to comply with the U.S. Uniformed Services Employment and Reemployment Rights Act, the U.S. Family Medical Leave Act, or similar state laws or with the CBAs) of any Trayport Company or (b) arose due to an illness or injury that results in the individual being eligible for short-term disability benefits, company or statutory sick pay, accident benefits, or workers' compensation under the applicable short-term disability or accident plan or state law. Any employee who is not at work on the Closing Date due to vacation, sickness, or accident that has not qualified the individual for short-term disability or accident benefits, company or statutory sick pay, workers' compensation, or other temporary absence, but whose employment continues in accordance with Seller's or applicable Trayport Company's employment policies (such as due to the use of personal days or by virtue or taking maternity or other family related leave) or by Law, shall be considered to be actively at work on the Closing Date (and not on a Leave of Absence).

" Liability " shall mean, with respect to any Person, any liability or obligation of such Person whether known or unknown, whether asserted or unasserted, whether determined, determinable or otherwise, whether absolute or contingent, whether accrued or unaccrued, whether liquidated or unliquidated, whether directly or indirectly incurred, whether due or to become due and whether or not required under Applicable Accounting Standards, to be accrued on the financial statements of such Person.

" Lien " shall mean, with respect to any property, asset or equity interest, any lien, license, security interest, mortgage, pledge, hypothecation, assignment, charge, claim, option, limitation on voting rights, right of pre-emption, right to acquire or trust arrangement for the purpose of providing security, restriction or encumbrance or other interest relating to that property, asset or equity interest, of any nature whatsoever, whether consensual, statutory or otherwise; provided , however , that "Liens" shall not include restrictions under applicable Laws relating to the transfer of Securities or, with respect to Seller and its Affiliates, any restrictions under the applicable organizational documents of the Trayport Entities in respect of future transfers of the Trayport Equity Interests.

" Marks " shall mean any trademark, service mark, trade dress, trade name, business name, brand name, slogan, logo, Internet domain name, or other indicia of origin, whether or not registered, including all common law rights therein, and registrations and applications for registrations thereof, and all goodwill connected with the use of and symbolized by any of the foregoing.

" NGX Agreement " shall mean the Stock Purchase Agreement, dated as of the date hereof, by and among TMX Group Inc., Shorcan Brokers Limited, Guarantor and, solely for the purposes set forth in the preamble thereto, TMX Group Limited, pursuant to which TMX Group Inc. and Shorcan Brokers Limited shall sell to Guarantor all of the equity interest in Natural Gas Exchange Inc. and Shorcan Energy Brokers Inc.

" NGX Base Value " shall mean two hundred million British pounds sterling (£200,000,000).

" NGX Long Stop Date " shall mean the earlier of (i) the date falling forty-five (45) days after the date of this Agreement and (ii) the date on which the NGX Agreement is terminated in accordance with its terms.

" NGX Sale " shall have the meaning ascribed to the term "Sale" in Section 2.1 of the NGX Agreement.

" NGX/Shorcan Equity Interests " shall have the meaning ascribed to such term in the NGX Agreement.

" Open Source Software " shall mean Software that is licensed or distributed as "free software," "freeware," "open source software" or under a "copyleft" agreement, or is otherwise subject to the terms or conditions of any license, which impose any

requirement that such Software (i) be disclosed or distributed in source code form, (ii) be licensed for the purpose of making derivative works or (iii) be redistributed at no or minimal charge.

" Order " shall mean any statute, rule, regulation, judgment, decree, injunction or other order or decision (whether temporary, preliminary or permanent) that a Governmental Authority of competent jurisdiction shall have enacted, issued, promulgated, enforced or entered.

" Patents " shall mean any patents, patent applications and provisional applications, including reissues, divisions, continuations, continuations-in-part, extensions and reexaminations thereof, and all patents granted thereon.

" Permits " shall mean permits, licenses, variances, exemptions, certificates, consents, Orders, approvals, permissions, registrations or other authorizations from any Governmental Authorities.

" Permitted Lien " shall mean the following Liens: (i) statutory Liens for Taxes, assessments or other governmental charges or levies that are not yet due or payable or that are being contested in good faith by appropriate proceedings and for which an adequate reserve has been established and reflected on the latest balance sheet included in the Business Financial Information; (ii) statutory Liens of landlords and Liens of carriers, warehousemen, mechanics, materialmen, workmen, repairmen and other similar Liens imposed by Law in the Ordinary Course with respect to liabilities (other than Indebtedness) that are not yet due or payable or that are being contested in good faith by appropriate proceedings and for which an adequate reserve has been established and reflected on the latest balance sheet included in the Business Financial Information; (iii) Liens incurred or deposits made in the Ordinary Course in connection with workers' compensation, unemployment insurance or other types of social security; (iv) Liens securing obligations or liabilities that are not material to the Trayport Companies; (v) with respect to real property (A) defects or imperfections of title, (B) easements, declarations, covenants, rights-of-way, restrictions and other charges, instruments or encumbrances affecting title to real estate; (C) zoning ordinances, variances, conditional use permits and similar regulations, permits, approvals and conditions which are not violated in any material respect by the current use and operation of the real estate; and (D) Liens not created by Seller or any Trayport Company or any of their Affiliates that affect the underlying fee interest of any leased real property, including master leases or ground leases and any set of facts that an accurate up-to-date survey would show; provided , however , that (with respect to this clause (v) only) any such item does not, individually or in the aggregate with other such items, materially interfere with the ordinary conduct of the business of the Trayport Companies or materially impair the continued use and operation of such real property; (vi) Liens deemed to be created by this Agreement or any Related Agreement; and (vii) with respect to Intellectual Property, non-exclusive licenses.

" Person " shall mean any individual, corporation, business trust, partnership, association, limited liability company, unincorporated organization or similar organization, any Governmental Authority or other entity of any kind.

" Post-Closing Period " shall mean any taxable period (or portion thereof) beginning after the Closing Date.

" Pre-Closing Period " shall mean any taxable period (or portion thereof) ending on or prior to the Closing Date.

" Proceeding " shall mean any action, suit, claim, litigation, proceeding, arbitration, inquiry, audit or controversy (whether at law or in equity, in contract, tort, statute or otherwise, and whether civil, criminal, administrative or otherwise) before or by any Governmental Authority.

" Purchasers Disclosure Letter " shall mean the letter delivered by Purchasers to Seller concurrently with the execution of this Agreement.

" Purchaser Material Adverse Effect " shall mean any event, occurrence, change, fact, condition, development or effect that, individually or in the aggregate, would reasonably be expected to prevent or materially impair or materially delay the ability of Purchasers or their Affiliates to consummate the Sale on the terms and conditions set forth in this Agreement and otherwise comply with and perform their obligations hereunder and under the Related Agreements.

" Related Agreements " shall mean the Transition Services Agreement and the Assignment Agreement.

" Release " shall mean any release, spill, emission, discharge, leaking, pumping, injection, deposit, disposal, dispersal, leaching or migration into the indoor or outdoor environment (including ambient air, surface water, groundwater and surface or subsurface strata) or into or out of any property, including the movement of Hazardous Materials through or in the air, soil, surface water, groundwater or property.

" Securities " shall mean, with respect to any Person, any common stock or preferred stock (or any series thereof), any ordinary shares or preferred shares and any other equity securities, capital stock, partnership, membership or similar interest of such Person, and any securities that are directly or indirectly convertible, exchangeable or exercisable into any such stock or interests, including any right that would entitle any other Person to directly or indirectly acquire any such interest in such Person or otherwise entitle any other Person to share in the equity, profits, earnings, losses or gains of such Person (including stock appreciation, phantom stock, profit participation or other similar rights), however described and whether voting or non-voting.

" Securities Act " shall mean the U.S. Securities Act of 1933, as amended.

" Self-Regulatory Organization " shall mean any U.S. or foreign commission, board, agency or body charged with regulating its own members through the adoption and enforcement of financial, sales practice and other requirements for brokers, dealers, securities underwriting or trading, stock exchanges, swap execution facilities, commodity exchanges, commodity intermediaries, electronic communications networks, insurance companies or agents, investment companies or investment advisors.

" Seller Disclosure Letter " shall mean the letter delivered by Seller to Purchasers concurrently with the execution of this Agreement.

" Seller Group " shall mean (a) the "affiliated group" as defined in Section 1504(a) of the Code of which Seller is a member and, (b) with respect to each state, local or non-U.S. jurisdiction in which a Seller files a consolidated, combined, or unitary Tax Return and in which any of the Trayport Companies is subject to Tax, the group with respect to which such Tax Return is filed.

" SFRS " shall mean Singapore Financial Reporting Standards.

" Software " shall mean computer software, including all programs, applications, middleware, firmware, embedded versions thereof and operating systems (each whether in object code, source code or other form).

" Straddle Period " shall mean any taxable period beginning on or prior to and ending after the Closing Date.

" Subsidiary " shall mean, with respect to any Person, any other Person of which such first Person (either alone or through or together with any other Subsidiary) owns, directly or indirectly, a majority of the outstanding equity securities or securities carrying a majority of the voting power in the election of the board of directors or other governing body of such Person.

" Tax " (and, with correlative meaning, " Taxes ") shall mean any federal, state, local or foreign income, gross receipts, profits, property, sales, use, license, excise, franchise, employment, payroll, withholding, alternative or add-on minimum, ad valorem, value added, transfer or excise tax, stamp duty or any other tax, custom, duty, governmental fee or other like assessment or charge of any kind whatsoever, together with any interest or penalty, imposed by any Governmental Authority.

" Tax Claim " shall mean any claim with respect to Taxes made by any Taxing Authority that, if pursued successfully, would reasonably be expected to serve as the basis for a claim for indemnification against Seller under this Agreement.

" Tax Item " shall mean any item of income, gain, loss, deduction, credit, recapture of credit or any other item which increases or decreases Taxes paid or payable.

" Tax Return " shall mean any return, report or similar statement filed or required to be filed with respect to any Tax (including any attachments or schedules), including any information return, claim for refund, amended return or declaration of estimated Tax.

" Taxing Authority " shall mean any governmental agency, board, bureau, body, department or authority of any United States federal, state or local jurisdiction or any non-U.S. jurisdiction, having or purporting to exercise jurisdiction with respect to any Tax.

" Transition Services Agreement " shall mean a transition services agreement substantially in the form attached hereto as Exhibit A .

" Trayport Transaction Expenses " shall mean, to the extent not paid prior to the Closing Date: (a) all costs, fees and expenses incurred in connection with or in anticipation of the negotiation, execution and delivery of this Agreement and the Related Agreements or the consummation of the Sale or in connection with or in anticipation of any alternative transactions considered by Seller to the extent any of such costs, fees and expenses are payable or reimbursable by any of the Trayport Companies, including any brokerage fees, commissions, finders' fees or financial advisory fees so incurred and any fees and expenses of legal counsel, accountants, consultants or other experts or advisors so incurred and (b) all Change of Control Payments.

" U.K. GAAP " shall mean U.K. generally accepted accounting principles.

" U.S. GAAP " shall mean U.S. generally accepted accounting principles as in effect from time to time.

" Working Capital " shall mean, with respect to any Person as of any time, (i) the current assets of such Person as of such time that are included in the line item categories of current assets specifically identified on Annex A , reduced by (ii) the current liabilities of such Person as of such time that are included in the line item categories of current liabilities specifically identified on Annex A , in each case, without duplication, and as determined in a manner consistent with the Accounting Principles. For illustrative purposes, an example calculation of the Working Capital of the Trayport Companies is set forth in Annex A .

" Working Capital Target " shall mean £3,640,000.

SECTION 1.2 Construction; Absence of Presumption .

(a) For the purposes of this Agreement: (i) words (including capitalized terms defined herein) in the singular shall be deemed to include the plural and vice versa and words (including capitalized terms defined herein) of one gender shall be deemed to include the other gender as the context requires; (ii) the terms "hereof," "herein," "hereby" and "herewith" and words of similar import shall, unless otherwise stated, be construed to refer to this Agreement as a whole (including all of the Exhibits and Annexes) and not to any particular provision of this

Agreement, and Article, Section, paragraph, Exhibit and Annex references are to the Articles, Sections, paragraphs, Exhibits and Annexes of or to this Agreement unless otherwise specified; (iii) the word "including" and words of similar import when used in this Agreement shall mean "including without limitation" unless otherwise specified; (iv) all references to any period of days shall be deemed to be to the relevant number of calendar days unless otherwise specified; (v) the word "extent" in the phrase "to the extent" shall mean the degree to which a subject or other thing extends, and such phrase shall not mean simply "if"; (vi) the use of "or" is not intended to be exclusive unless expressly indicated otherwise; and (vii) references to a particular statute or regulation include all rules and regulations thereunder and any successor statute, rule or regulation, in each case as amended or otherwise modified from time to time.

(b) The Parties acknowledge that each Party and its counsel have reviewed and revised this Agreement and that no rule of construction to the effect that any ambiguities are to be resolved against the drafting Party shall be employed in the interpretation of this Agreement (including all of the Exhibits and Annexes) or any amendments hereto.

(c) The Parties acknowledge and agree that to the extent that there is a conflict between any (i) general provision of this Agreement and (ii) provision specifically relating to Tax matters, the terms of the specific Tax provision shall control.

(d) All references to "British pounds sterling" or "£" in this Agreement refer to the lawful currency from time to time of England and all references to "dollars" or "$" in this Agreement refer to the lawful currency from time to time of the United States. Unless mutually agreed otherwise by Seller and Purchasers at least three (3) Business Days prior to the date of any payment to be made pursuant to this Agreement, any amount payable under this Agreement shall be payable in British pounds sterling. ~~If Seller and Purchasers agree to make any payment due under this Agreement in a currency other than British pounds sterling (such as United States dollars), unless~~ Unless mutually agreed otherwise by Seller and Purchasers at least three (3) Business Days prior to the applicable date of payment, ~~such payment~~ if any amount payable under this Agreement (or any component of such amount) is not already denominated in the agreed currency for payment (as determined pursuant to the immediately preceding sentence), such amount (or component of such amount) shall be converted ~~from British pounds sterling~~ to such ~~other~~ agreed currency for payment using the arithmetic average of the relevant exchange rate as in effect at 5:00 p.m. London Time (as published on Bloomberg.com) over the five (5) Business Days beginning on the ~~seventh~~ eighth trading day immediately preceding such date of payment and concluding on the ~~third~~ fourth trading day immediately preceding such date of payment.

SECTION 1.3 Headings; Definitions. The Article and Section headings contained in this Agreement are inserted for convenience of reference only and shall not affect the meaning or interpretation of this Agreement.

ARTICLE II

PURCHASE AND SALE

SECTION 2.1 Sale and Purchase of Trayport Equity Interests. Subject to the terms and conditions of this Agreement, at the Closing, Seller agrees to sell, assign and transfer to (a) TMX Group US, and TMX Group US agrees to purchase from Seller, one hundred percent (100%) of the equity interest in Trayport, Inc. (the "U.S. Equity Interests") and (b) TMX Group Limited, and TMX Group Limited agrees to purchase from Seller, one hundred percent (100%) of the equity interest in Trayport Holdings Limited (the "U.K. Equity Interests" and together with the U.S. Equity Interests, the "Trayport Equity Interests"), free and clear of all Liens (the "Sale").

ARTICLE III

THE CLOSING AND POST-CLOSING ADJUSTMENTS

SECTION 3.1 Closing. The closing of the transactions provided for in this Agreement (the "Closing") shall take place (i) at the offices of Shearman & Sterling LLP, 599 Lexington Avenue, New York, New York 10022 at ~~10:00~~ 8:00 a.m., New York City time, three (3) Business Days following the date the last of the conditions required to be satisfied pursuant to Article VII is either satisfied (other than those conditions that by their nature are to be satisfied at the Closing) or waived (if permissible) (including, if applicable, after giving effect to the provisions in Section 7.1(b) with effect from receipt of written notice by Purchasers from Seller or by Seller from Purchasers at any time from and including the NGX Long Stop Date), or (ii) at such other place, time or date as the Parties shall agree upon in writing. The date on which the Closing is to occur is referred to herein as the "Closing Date."

SECTION 3.2 Preliminary Information. At least three (3) Business Days prior to the Closing Date, Seller shall deliver to Purchasers a statement of Seller's good-faith estimate of the Adjustment Amount (the "Estimated Adjustment Amount"), a good-faith estimate of the Closing Cash (the "Estimated Closing Cash"), a good-faith estimate of the Closing Date Indebtedness (the "Estimated Closing Indebtedness") and a good-faith estimate of any Trayport Transaction Expenses (the "Estimated Trayport Transaction Expenses" and collectively, as the same may be adjusted, in Seller's sole discretion, in response to any comments of Purchasers and their authorized representatives provided prior to the Closing, the "Estimated Closing Statement"), together with such reasonably detailed data appropriate to support such Estimated Closing Statement. The Estimated Closing Statement shall be prepared in accordance with the Accounting Principles and this Agreement.

SECTION 3.3 Agreed Value. The Closing Consideration (and any adjustments thereto contemplated by this Agreement) shall be allocated as between the U.S. Equity Interests and the U.K. Equity Interests as provided on Section 3.3 of the Seller Disclosure Letter.

SECTION 3.4 Seller's Deliveries at Closing . At the Closing, Seller shall deliver or cause to be delivered to Purchasers:

(a) (i) an instruction from Seller, duly executed by Seller, directing the transfer of Seller's U.S. Equity Interests to TMX Group US or its permitted assignee and (ii) duly executed transfers in respect of the U.K. Equity Interests in favor of TMX Group Limited or its permitted assignee and share certificates for the U.K. Equity Interests in the name of the relevant transferors and any duly executed power of attorney or other authorities under which any such transfer is executed on behalf of Seller and/or its Affiliates;

(b) the Transition Services Agreement, duly executed by Seller;

(c) the officer's certificate required pursuant to Section 7.2(c) ;

(d) a resignation letter from each officer and director (or their equivalents) of each of the Trayport Companies set forth in Section 3.4(d) of the Purchasers Disclosure Letter (or other evidence of their removal);

(e) the Assignment Agreement, duly executed by Seller and Trayport Holdings Limited; and

(f) in respect of the shares of Trayport, Inc., a certification of the non-foreign status of Seller as set forth in Section 1.1445-2(b)(2) of the U.S. Treasury regulations.

SECTION 3.5 Purchasers' Deliveries at Closing . At the Closing, Purchasers shall deliver to Seller:

(a) an amount equal to the Closing Purchase Price by wire transfer of immediately available funds to the Seller's Bank Account;

(b) if the NGX Sale has not been consummated in accordance with the NGX Agreement prior to, or shall not be consummated contemporaneously with, the Closing, an amount equal to the NGX Base Value by wire transfer of immediately available funds to the Seller's Bank Account;

(c) the Transition Services Agreement, duly executed by Purchasers; and

(d) the officer's certificate required pursuant to Section 7.3(c) .

SECTION 3.6 Proceedings at Closing . All proceedings to be taken and all documents to be executed and delivered by the Parties at the Closing shall be deemed to have been taken and executed and delivered simultaneously, and, except as permitted hereunder, no proceedings shall be deemed taken nor any documents executed or delivered until all have been taken, executed and delivered.

SECTION 3.7 Post-Closing Adjustment .

(a) Not later than ninety (90) days after the Closing Date or such other time as is mutually agreed by the Parties, Purchasers shall prepare or cause to be prepared, and deliver to Seller a revised statement (the " Revised Statement ") of the Adjustment Amount (the " Revised Adjustment Amount "), the Closing Cash (the " Revised Closing Cash "), the Closing Indebtedness (the " Revised Closing Indebtedness ") and any Trayport Transaction Expenses (the " Revised Trayport Transaction Expenses "), together with such reasonably detailed data appropriate to support such Revised Adjustment Amount, Revised Closing Cash, Revised Closing Indebtedness and Revised Trayport Transaction Expenses. The Revised Statement shall be prepared in accordance with the Accounting Principles and this Agreement, with all amounts reflected therein being converted to British pounds sterling in accordance with Section 1.2(d) .

(b) For thirty (30) days following the delivery of the Revised Statement, Purchasers shall provide Seller and its Affiliates and their authorized representatives with reasonable access to the relevant books, records, employees and representatives of Purchasers reasonably requested by Seller to evaluate and assess the calculation of the Revised Adjustment Amount, Revised Closing Cash, Revised Closing Indebtedness and Revised Trayport Transaction Expenses, including using reasonable best efforts to cause Purchasers' accountants to cooperate and assist Seller, its Affiliates and representatives in evaluating the calculation of the Revised Adjustment Amount, Revised Closing Cash, Revised Closing Indebtedness and Revised Trayport Transaction Expenses.

(c) Within thirty (30) days following receipt of the Revised Statement, Seller shall deliver to Purchasers in writing either their (i) agreement as to the calculation of the Revised Adjustment Amount, Revised Closing Cash, Revised Closing Indebtedness and Revised Trayport Transaction Expenses or (ii) notice of dispute thereof, specifying in reasonable detail (A) the nature of such dispute, (B) each item of the Revised Statement with which Seller disagrees, (C) the bases for each such disagreement and (D) Seller's calculation of the proper amount of each such disputed item (a " Dispute Notice "). During the thirty (30) days after the delivery of such dispute notice to Purchasers, Purchasers and Seller shall attempt in good faith to resolve any such dispute and finally determine the final Adjustment Amount, Revised Closing Cash, Revised Closing Indebtedness and Revised Trayport Transaction Expenses (if any). If, at the end of such thirty (30)-day period, Purchasers and Seller have failed to reach an agreement with respect to the final Adjustment Amount, the matter shall be submitted to PricewaterhouseCoopers, which shall act as arbitrator solely with respect to determining the disputed items. If PricewaterhouseCoopers is unable to serve, Purchasers and Seller shall jointly select another nationally recognized accounting firm that is not the independent auditor for either Seller or Purchasers and is otherwise neutral and impartial to act as such arbitrator; provided , however , that if Seller and Purchasers are unable to select such other accounting firm within thirty (30) days after delivery of a Dispute Notice, each of Purchaser and Seller shall cause its respective selected nationally recognized accounting firm to select another firm meeting the requirements set forth above or a neutral and impartial certified public accountant with significant relevant experience to act as such arbitrator. The accounting firm or accountant so selected shall be referred to herein as the " Accountant ." The Accountant shall determine the

final Adjustment Amount, final Closing Cash, final Closing Indebtedness and final Trayport Transaction Expenses (if any) in accordance with the terms and conditions of this Agreement. In making its determinations, the Accountant shall not assign a value to any disputed item that is greater than the highest value attributed to such item, or that is less than the lowest value attributed to such disputed item, in the Revised Statement and the Dispute Notice, respectively. The Accountant shall deliver to Seller and Purchasers, as promptly as practicable and in any event within thirty (30) days after its appointment, a written report setting forth the resolution of the final Adjustment Amount, final Closing Cash, final Closing Indebtedness and final Trayport Transaction Expenses (if any). Such report shall be final and binding upon the Parties to the fullest extent permitted by applicable Law and may be enforced in any court having jurisdiction. Each of Purchaser and Seller shall bear all the fees and costs incurred by it in connection with this arbitration, except that all fees and expenses relating to the foregoing work by the Accountant shall be borne by Purchasers, on the one hand, and Seller, on the other hand, in inverse proportion as they may prevail on the matters resolved by the Accountant, which proportionate allocation will also be determined by the Accountant and be included in the Accountant's written report.

(d) On the fifth (5th) Business Day after Purchasers and Seller agree to the final Adjustment Amount, final Closing Cash, final Closing Indebtedness and final Trayport Transaction Expenses (if any) (or after Purchasers and Seller receive notice of any final determination of the final Adjustment Amount, final Closing Cash, final Closing Indebtedness and final Trayport Transaction Expenses (if any) pursuant to the procedures set forth in Section 3.7(c)), then:

(i) (A) if the final Adjustment Amount shall exceed the Estimated Adjustment Amount, then Purchasers shall pay to Seller an amount of cash in British pounds sterling equal to such excess and (B) if the Estimated Adjustment Amount shall exceed the final Adjustment Amount, then Seller shall pay to Purchasers an amount of cash in British pounds sterling equal to such excess;

(ii) (A) if the final Closing Cash shall exceed the Estimated Closing Cash, then Purchasers shall pay to Seller an amount of cash in British pounds sterling equal to such excess and (B) if the Estimated Closing Cash shall exceed the final Closing Cash, then Seller shall pay to Purchasers an amount of cash in British pounds sterling equal to such excess;

(iii) (A) if the Estimated Closing Indebtedness shall exceed the final Closing Indebtedness, then Purchasers shall pay to Seller an amount of cash in British pounds sterling equal to such excess and (B) if the final Closing Indebtedness shall exceed the Estimated Closing Indebtedness, then Seller shall pay to Purchasers an amount of cash equal to such excess;

(iv) (A) if the Estimated Trayport Transaction Expenses shall exceed the final Trayport Transaction Expenses, then Purchasers shall pay to Seller an amount of cash in British pounds sterling equal to such excess and (B) if the final Trayport Transaction Expenses shall exceed the Estimated Trayport Transaction Expenses, then

Seller shall pay to Purchasers an amount of cash in British pounds sterling equal to such excess; and

in each of cases (i), (ii), (iii) and (iv), plus interest on such amount from the Closing Date up to but excluding the date on which such payment is made at a rate per annum equal to the Federal Funds Rate as of the Closing Date, calculated on the basis of a year of three-hundred sixty (360) days and the actual number of days elapsed. Any such payment shall be made by wire transfer of immediately available British pounds sterling (with amounts denominated in currencies other than British pounds sterling being converted to British pounds sterling in accordance with Section 1.2(d)) to the account(s) of the Party entitled to receive such payment, which account(s) shall be identified by Purchasers to Seller or by Seller to Purchasers, as the case may be, not less than two (2) Business Days prior to the date such payment would be due.

SECTION 3.8 Withholding . Purchasers will be entitled to deduct and withhold, or cause to be deducted and withheld, from any amounts payable pursuant to or as contemplated by this Agreement any withholding Taxes or other amounts required under the Code or any applicable Law to be deducted and withheld. Purchasers and Seller hereby acknowledge that, absent a change in applicable Law after the date hereof, Purchasers shall not deduct or withhold any Taxes from the payment of the Closing Purchase Price under Section 3.5(a) of this Agreement. In any case where such withholding or deduction is required, Purchasers shall use reasonable efforts to provide notice to Seller at least ten (10) Business Days prior to withholding any amount pursuant to this Section 3.8 , and the Parties shall use reasonable efforts to reduce or avoid such withholding where possible. To the extent that any such amounts are so deducted or withheld, such amounts will be treated for all purposes of this Agreement as having been paid to the Person in respect of which such deduction and withholding was made. Seller and Purchasers shall cooperate in completing any procedural formalities necessary for Purchasers to obtain authorization to make payments under this Agreement without any withholding or deduction for or on account of Tax. Notwithstanding anything to the contrary in this Agreement, any compensatory amounts subject to payroll reporting and withholding payable pursuant to or as contemplated by this Agreement shall be payable in accordance with the payroll procedures of the applicable Trayport Company.

ARTICLE IV

REPRESENTATIONS AND WARRANTIES OF SELLER

Except as disclosed in the Seller Disclosure Letter (it being understood that information disclosed in any section of the Seller Disclosure Letter shall be deemed to be disclosed with respect to any other section of the Seller Disclosure Letter to which such disclosure would reasonably pertain or if its relevance to such other section is reasonably apparent on the face of such disclosure), Seller hereby represents and warrants to Purchasers as of the date hereof and as of the Closing Date (except for representations and warranties which are made as of a specified time which are made only as of such specified time) as follows:

SECTION 4.1 Organization and Good Standing .

(a) Seller is a legal entity duly organized, validly existing and in good standing under the laws of the jurisdiction of its organization. Seller has all requisite corporate (or other) power and authority to own or lease the assets owned or leased by it and to carry on its business, as currently conducted, except where the failure to have such power or authority would not be material to the Business.

(b) Seller is duly qualified to do business and is in good standing as a foreign entity in each jurisdiction where the ownership, lease or operation of the applicable assets or the conduct of its business requires such qualification, except where the failure to be so qualified or in good standing would not be material to the Business.

SECTION 4.2 Trayport Entities and Trayport Subsidiaries .

(a) Section 4.2(a) of the Seller Disclosure Letter sets forth (i) each Trayport Entity and each Subsidiary of the Trayport Entities (individually, a " Trayport Subsidiary " and collectively, the " Trayport Subsidiaries ," and together with the Trayport Entities, the " Trayport Companies ," and individually, a " Trayport Company "), (ii) the number of authorized, allotted, issued and outstanding Securities of each Trayport Company and the record owners thereof, and (iii) each Trayport Company's jurisdiction of incorporation or organization.

(b) Each Trayport Company is an entity duly incorporated or organized and is validly existing and, to the extent such concept or a similar concept exists in the relevant jurisdiction, in good standing under the laws of the jurisdiction of its incorporation or organization, as the case may be, and has all requisite corporate or other power and authority, as the case may be, to own, lease and operate its properties and assets and to carry on its business in all material respects as currently conducted.

(c) Each Trayport Company is qualified or licensed to do business and, to the extent such concept or a similar concept exists in the relevant jurisdiction, is in good standing in each jurisdiction where the ownership, leasing or operation of its properties or assets requires such qualification or license, except where any failure to be so qualified or licensed and in good standing would not be material to the Business.

(d) Seller has delivered or made available to Purchasers true, correct and complete copies of the organizational documents of each Trayport Company, as amended and in effect on the date of this Agreement.

SECTION 4.3 Title; Capitalization of the Trayport Companies .

(a) Seller has good and valid title to the Trayport Equity Interests, free and clear of all Liens (other than restrictions under securities Laws). The Trayport Equity Interests have been duly authorized, validly issued, fully paid and, where applicable, are non-assessable. Other than the Trayport Equity Interests, there are no other Securities of the Trayport Entities outstanding or issued.

(b) All of the outstanding Securities of each Trayport Subsidiary (the " Trayport Subsidiary Interests ") are owned by a Trayport Entity or a Trayport Subsidiary that is a wholly owned Subsidiary of a Trayport Entity, and each respective Trayport Entity or Trayport Subsidiary has good and valid title to such Trayport Subsidiary Interests, free and clear of all Liens (other than restrictions under securities Laws). All of such Trayport Subsidiary Interests have been duly authorized, validly issued, and are fully paid and, where applicable, are non-assessable.

(c) No Trayport Company (i) owns (beneficially or of record), directly or indirectly, any Securities in any other Person or (ii) is subject to any obligation to make any investment (in the form of a loan, capital contribution or otherwise) in any other Person.

SECTION 4.4 Authorization; Binding Obligations . Seller has all necessary corporate or other power and authority to make, execute and deliver this Agreement and the Related Agreements to which it is a party, or will be a party at Closing, and to perform all of the obligations to be performed by it hereunder and thereunder. The making, execution, delivery and performance of this Agreement and the Related Agreements and the consummation by Seller of the transactions contemplated hereby and thereby have been duly and validly authorized by all necessary corporate (or other) action on the part of Seller, and no other corporate (or other) proceedings on the part of Seller is necessary to authorize the execution, delivery and performance by Seller of this Agreement or the Related Agreements or the transactions contemplated hereby or thereby. This Agreement has been and, upon their execution, the Related Agreements will be, duly and validly executed and delivered by Seller, and assuming the due authorization, execution and delivery by Purchasers, each of this Agreement and the Related Agreements will constitute the valid, legal and binding obligation of Seller, enforceable against it in accordance with its terms, except as may be limited by bankruptcy, insolvency, fraudulent transfer, moratorium, reorganization, preference or similar Laws of general applicability relating to or affecting the rights of creditors generally and subject to general principles of equity (regardless of whether enforcement is sought in equity or at law) (collectively, the " Enforceability Exceptions ").

SECTION 4.5 No Conflicts; Consents and Approvals .

(a) The execution and delivery of this Agreement and the Related Agreements by Seller does not, and the consummation by Seller of the Sale will not: (i) conflict with any provisions of the organizational documents of Seller or the Trayport Companies; (ii) violate any applicable Law (assuming compliance with the matters set forth in Section 4.5(b) of the Seller Disclosure Letter); (iii) result, after the giving of notice, with lapse of time or otherwise, in any violation, default or loss of a benefit under, or permit the acceleration or termination of any obligation under or require any consent under or require any offer to purchase or prepayment of any Indebtedness or Liability under, any mortgage, indenture, lease, agreement or other instrument, permit, concession, grant, franchise, license or other Contract to which any Trayport Company is a party or by which any Trayport Company or any of their respective assets or properties may be bound; (iv) result in the creation or imposition of any Lien (other than Permitted Liens) upon any properties or assets of any Trayport Company; or (v) cause the

suspension or revocation of any Trayport Permit (assuming compliance with the matters set forth in Section 4.5(b) of the Seller Disclosure Letter); except, in the case of clauses (ii), (iii), (iv) and (v), as would not be material to the Business.

(b) No clearance, consent, approval, order, license or authorization of, or declaration, registration or filing with, or notice to, or permit issued by, any Governmental Authority is required to be made or obtained by Seller or any Trayport Company in connection with the execution or delivery of this Agreement or any Related Agreement by Seller or the consummation by Seller of the Sale, except for (i) any clearance, consent, approval, order, license, authorization, declaration, registration, filing, notice or permit set forth in Section 4.5(b) of the Seller Disclosure Letter; and (ii) any such clearance, consent, approval, order, license, authorization, declaration, registration, filing, notice or permit, the failure of which to make or obtain would not be material to the Business.

SECTION 4.6 Litigation . (a) There is no Proceeding pending or threatened in writing, or, to the Knowledge of Seller, threatened against any Trayport Company, or their respective properties, assets or rights or any of their respective current or former directors, officers, employees or contractors (in their capacities as such or relating to their services or relationship to the Trayport Companies) that is material to the Business, (b) there is no Order outstanding against any Trayport Company or that is specifically applicable to its respective properties, assets or rights, that is material to the Business, and (c) there is no Proceeding pending or, to the Knowledge of Seller, threatened against any Trayport Company which seeks to, or would reasonably be expected to, restrain, enjoin or delay the consummation of the Sale or which seeks damages in connection therewith, and no such injunction of any type has been entered or issued. As of the date hereof, there is no material Proceeding which a Trayport Company presently intends to initiate.

SECTION 4.7 Compliance with Law .

(a) Except as would not be material to the Business, (i) each of the Trayport Companies hold all material Permits that are necessary or required for the lawful conduct of their respective businesses or ownership and operation of their respective assets and properties (the " Trayport Permits "), (ii) all Trayport Permits are in full force and effect and none of the Trayport Permits have been withdrawn, revoked, suspended or cancelled nor is any such withdrawal, revocation, suspension or cancellation pending or, to the Knowledge of Seller, threatened, (iii) each of the Trayport Companies is, and since January 1, 2013, has been, in compliance with the terms of the Trayport Permits, and (iv) to the Knowledge of Seller, no basis exists that would constitute a material breach, violation or default under any Trayport Permit or give any Governmental Authority grounds to suspend, revoke or terminate any Trayport Permits.

(b) None of the Trayport Companies is, or has been at any time since January 1, 2013, in violation of and, no written notice has been given of any violation of any applicable Law, except for any violations that would not be material to the Business. None of Seller, the Trayport Companies or any of their Affiliates is or has been in violation of, or has received written notice of any violation of, the CMA Orders.

(c) Except as would not be material to the Business, none of the Trayport Companies is or since January 1, 2013 has been party to any Proceeding by or on behalf of any Governmental Authority in respect of any violation of Law (each a " Regulatory Proceeding "), nor has any of them received since January 1, 2013 any written notice of any Regulatory Proceeding and, to the Knowledge of Seller, nor has any Regulatory Proceeding been threatened in writing. To the Knowledge of Seller, there are no ongoing investigations currently being undertaken by any Governmental Authority in respect of the Trayport Companies.

SECTION 4.8 Transactions with Affiliates . Neither Seller nor any of its Affiliates (other than the Trayport Companies), other than in the Ordinary Course or under the agreements set forth in Section 4.8-A of the Seller Disclosure Letter, (a) has engaged in any transaction with any Trayport Company (including any acquisition of any material asset, right or property therefrom) since December 11, 2015, other than the receipt of cash dividends, (b) owns any material property or right, tangible or intangible, which is used in the Business, (c) has, to the Knowledge of Seller, any claim or cause of action against any Trayport Company or (d) owes any money to, or is owed any money by, any Trayport Company. Other than this Agreement, any Related Agreement, and the agreements set forth in Section 4.8-A of the Seller Disclosure Letter, as of immediately after the Closing, neither Seller nor any of its Affiliates (other than the Trayport Companies) shall be a party to any transaction, agreement, understanding or arrangement (written or oral) with the Trayport Companies. Section 4.8-B of the Seller Disclosure Letter sets forth all Contracts between or among a Trayport Company, on the one hand, and another Trayport Company, on the other hand.

SECTION 4.9 Financial Statements .

(a) Seller has provided to Purchasers true and complete copies of (i) the audited balance sheet as of, and related audited statements for the year then ended on, December 31, 2014, December 31, 2015 and December 31, 2016 for each of Trayport Holdings Limited, Trayport Limited, Trayport Contigo Limited and Trayport PTE Ltd. (collectively, the " Audited Financial Statements ") and (ii) the unaudited balance sheet as of, and related unaudited statements of income for the year then ended on, December 31, 2014, December 31, 2015 and December 31, 2016 for Trayport, Inc., and the unaudited balance sheet as of, and related unaudited statements for the six months then ended on, June 30, 2017 for each Trayport Company (collectively, the " Unaudited Financial Statements " and, together with the Audited Financial Statements, the " Business Financial Information ").

(b) The Business Financial Information has been prepared from the books and records of the Trayport Companies. Subject to the absence of footnotes and other presentation items and normal year-end and other adjustments (which other adjustments are not material to the Business) with respect to the Unaudited Financial Statements, the Business Financial Information, except as otherwise indicated therein, has been prepared in accordance with the Applicable Accounting Standards, consistently applied within the applicable period, and (i) with respect to the Unaudited Financial Statements of Trayport, Inc., fairly presents, in all material respects, the financial condition and the results of operations of Trayport, Inc. as at the respective dates and for the periods covered by such Unaudited Financial Statements; (ii) with respect to the

Audited Financial Statements of Trayport Holdings Limited, Trayport Limited and Trayport Contigo Limited, gives a true and fair view of the state of affairs of such applicable Trayport Company, and its respective assets and liabilities as at the respective dates and for the periods covered by such Audited Financial Statements; and (iii) with respect to the Audited Financial Statements of Trayport PTE Ltd., gives a true and fair view of the state of affairs of Trayport PTE Ltd. as at the respective dates and for the periods covered by such Audited Financial Statements.

(c) No Trayport Company has any Liabilities other than (i) Liabilities reflected or reserved in the Business Financial Information, (ii) Liabilities incurred in the Ordinary Course after December 31, 2016, (iii) Liabilities incurred in connection with this Agreement or the Related Agreements or the transactions contemplated hereby or thereby, (iv) Liabilities that arise under Contracts to which a Trayport Company is a party as of the date hereof (excluding Liabilities for breach, non-performance or default), and (v) Liabilities that, in the aggregate, are not material to the Business.

SECTION 4.10 Employee Benefit Plans .

(a) Section 4.10(a)-1 of the Seller Disclosure Letter lists each Company Benefit Plan. Section 4.10(a)-2 of the Seller Disclosure Letter lists each collective bargaining, work rules or similar agreements to which any of the Trayport Companies are party with any labor organization, trade union, labor union or works council representing any of the Business Employees (" CBAs ").

(b) With respect to each material Company Benefit Plan, Seller has heretofore delivered or made available to Purchasers true and complete copies of the Company Benefit Plan and any material amendments thereto, together with any material documents relating to such Company Benefit Plan, including any related trust or other funding vehicle, any reports or summaries required under ERISA or the Code or other Law and the most recent determination or opinion letter received from the IRS with respect to each Company Benefit Plan intended to qualify under Section 401 of the Code.

(c) Each of the Company Benefit Plans has been operated and administered in all material respects in accordance with its terms, any applicable CBAs and all applicable Laws, including ERISA and the Code. In the past six years, no Trayport Company has maintained or contributed to or was required to contribute to any plan or arrangement or had any actual or contingent liability as a result of its affiliation (including as an ERISA Affiliate) with any other entity that is or was (i) subject to Section 412 of the Code or Section 302 of Title IV of ERISA, (ii) a multiple employer welfare arrangement within the meaning of Section 3(40) of ERISA, or (iii) a multiemployer plan within the meaning of Section 3(37) or 4001(a)(3) of ERISA.

(d) Neither the execution of this Agreement nor the consummation of the Sale will (either alone or together with any other event) (i) cause any payment (whether for notice of termination, pay in lieu of notice, severance pay or otherwise) to become due to any Business Employee or former employee or current or former director of any Trayport Company, (ii) cause an increase in the amount of compensation or benefits or the acceleration of the vesting or timing

of payment of any compensation or benefits payable to or in respect of any Business Employee or former employee or current or former director of any Trayport Company, (iii) cause any individual to accrue or receive additional benefits, services or accelerated rights to payment of benefits under any Company Benefit Plan, (iv) provide for payments that could subject any person to liability for tax under Section 4999 of the Code or (v) result in payments under any of the Company Benefit Plans which would not be deductible under Section 280G of the Code.

(e) Seller has previously made available to Purchasers the following information as of the most recent practicable date with respect to each Business Employee as of the date this representation is made: (i) date of hire and effective service date, (ii) job title or position held, (iii) city and state of employment, (iv) base salary or current wages, (v) employment status (*i.e.* , active or on leave and full-time or part-time) and (vi) the length of notice or pay in lieu of notice or severance pay to be given (by both the employing entity and the employee) pursuant to an applicable employment agreement to terminate employment without cause (if known or applicable).

(f) Each Company Benefit Plan intended to be "qualified" within the meaning of Section 401(a) of the Code has received a favorable determination or opinion letter from the IRS as to its qualification and, to the Knowledge of Seller, no event has occurred that could reasonably be expected to result in disqualification of such Company Benefit Plan.

(g) Except as would not reasonably be expected to result in a liability to Purchasers or any Trayport Company, there are no pending or, to the Knowledge of Seller, threatened claims (other than claims for benefits in the Ordinary Course), investigations by a Governmental Authority, lawsuits or arbitrations which have been asserted or instituted, and to the Knowledge of Seller, no set of circumstances exists which may reasonably give rise to a claim, investigation or lawsuit under any employment Law or against the Company Benefit Plans, any fiduciaries thereof with respect to their duties to the Company Benefit Plans or the assets of any of the trusts under any of the Company Benefit Plans which could reasonably be expected to result in any material liability of Purchasers or any Trayport Company to the Pension Benefit Guaranty Corporation, the Department of Treasury, the Department of Labor, any Governmental Authority, any multi-employer plan, any Company Benefit Plan, any participant in a Company Benefit Plan, or any other Person.

(h) With respect to each Company Benefit Plan established or maintained outside of the United States primarily for the benefit of Business Employees residing outside of the United States (a " Foreign Company Benefit Plan "): (i) all material employer and Business Employee contributions to each Foreign Company Benefit Plan required by Law or by the terms of such Foreign Company Benefit Plan have been made, or, if applicable, accrued, in accordance with normal accounting practices; (ii) the fair market value of the assets of each funded Foreign Company Benefit Plan and the liability of each insurer for any Foreign Company Benefit Plan funded through insurance or the book reserve established for any Foreign Company Benefit Plan, together with any accrued contributions, is not materially less than the accrued benefit obligations with respect to all current and former participants in such plan according to the actuarial assumptions and valuations most recently used to determine employer contributions to

such Foreign Company Benefit Plan; (iii) each Foreign Company Benefit Plan required to be registered has been registered and has been maintained in good standing with applicable regulatory authorities (including tax authorities); and (iv) each of the Foreign Company Benefit Plans has been operated and administered in all material respects in accordance with its terms and all applicable Laws. Section 4.10(h) of the Seller Disclosure Letter separately identifies each Foreign Company Benefit Plan that is a defined benefit pension plan.

(i) No Trayport Company has been an "associate" of or "connected" with an "employer" (within the meaning of the Pensions Act 2004) of an "occupational pension scheme" which is not a "money purchase scheme" (as such terms are defined in the Pension Schemes Act 1993), and no Trayport Company has been such an employer, or participated in or had any liability in relation to a defined benefit pension scheme in any jurisdiction, and there are no facts or circumstances likely to give rise to the issuance of a "contribution notice", "financial support direction" or "restoration order" (within the meaning of the Pensions Act 2004) in which any Trayport Company is named.

(j) No Business Employee in the U.K., and no former Business Employee in the U.K., of any Trayport Company has any right (whether actual or contingent) to retirement or redundancy benefits arising as a result of a transfer of his or her employment to any Trayport Company under either the Transfer of Undertakings (Protection of Employment) Regulations 1981 (as amended), or the Transfer of Undertakings (Protection of Employment) Regulations 2006 (as amended).

SECTION 4.11 Labor Matters .

(a) No Trayport Company is party to, bound by, or in the process of negotiating a collective bargaining agreement, other labor-related agreement or understanding or work rules with any labor union, labor organization, staff association or works council, nor to the Knowledge of Seller, has any Trayport Company communicated or represented, whether to any current or former employee, former worker or current or former director of, or consultant to, any Trayport Company or any labor union, labor organization, staff association or works council, that it will recognize any labor union, labor organization, staff association or works council.

(b) None of the current or former employees, former workers or current or former directors of, or consultants to, any Trayport Company is represented by a labor union, other labor organization, staff association or works council in respect of any Trayport Company and, (i) to the Knowledge of Seller, there is no effort currently being made or threatened by or on behalf of any Business Employees, labor union, trade union, works council, labor organization or staff association to organize any employees, workers or directors of, or consultants to, any Trayport Company, and there are currently no activities related to the establishment of a labor union, labor organization, staff association or works council representing employees, workers or directors of, or consultants to, any Trayport Company, (ii) no demand for recognition of any employees, workers or directors of, or consultants to, any Trayport Company has been made by or on behalf of any labor union, staff association, works council, trade union or labor organization in the past two (2) years, and (iii) no petition has been filed, nor has any proceeding been instituted by any current or former employee or current or former director of, or consultant

to, any Trayport Company or group of current or former employees, workers or current or former directors of, or consultants to, any Trayport Company with any labor relations board or commission or the central arbitration committee seeking recognition of a collective bargaining or works council representative in respect of any Trayport Company in the past two (2) years.

(c) There is no pending, actual or, to the Knowledge of Seller, threatened (i) strike, lockout, work stoppage, slowdown, picketing or labor dispute, other industrial action or dispute with respect to or involving any current or former employee, worker or current or former director of, or consultant to, any Trayport Company, and there has been no such action or event in the past three (3) years; (ii) material arbitration, grievance, claim, enquiry, investigation or dispute against any Trayport Company involving current or former employees, workers, current or former directors, consultants or any of their representatives concerning their employment or engagement, its termination or otherwise; or (iii) discipline or suspension involving any current or former employee, worker or current or former director of any Trayport Company.

(d) Each Trayport Company is in compliance and has been in compliance since January 1, 2013 in all material respects with all (i) Laws respecting employment and employment practices, terms and conditions of employment, labor relations, human rights, accessibility, occupational health and safety, former employees, collective bargaining, disability, immigration, layoffs, health and safety, wages, hours and benefits, employment standards, plant closings and layoffs, including classification of employees, workers, consultants and independent contractors and classification of employees, workers and consultants for overtime eligibility, non-discrimination in employment, data protection, workers' compensation and the collection and payment of withholding and/or payroll taxes and similar Taxes; (ii) obligations of any Trayport Company under any employment agreement, agreement for the provision of personal services, notice of termination, termination or severance agreement, Order or CBA; and (iii) all awards and declarations made by the Central Arbitration Committee. No Trayport Company has implemented any plant closings or employee layoffs in the past two years that triggered a notice requirement under the Worker Adjustment and Retraining Notification Act of 1988, as amended, or any similar or related Law which was not satisfied.

(e) To the Knowledge of Seller, no Trayport Company is involved in negotiations (whether with employees, workers, directors, consultants or any trade union or other representatives thereof) to vary materially the terms and conditions of employment or engagement of any of its employees, workers, directors or consultants, nor, to the Knowledge of Seller, are there any outstanding agreements, promises or offers made by any Trayport Company to any of its employees, workers, directors or consultants or to any trade union or other representatives thereof concerning or affecting the terms and conditions of employment or engagement of any of its employees, workers, directors or consultants, and no Trayport Company is under any contractual or other obligation to change the terms of service of any employee, director or consultant.

(f) No offer of employment or engagement has been made and is currently outstanding by any Trayport Company to any individual whose aggregate annual cash

compensation would exceed $200,000 and no notice of termination has been given to or received from any Business Employee whose aggregate annual cash compensation exceeds $200,000.

(g) In the 12 months preceding the date of this Agreement, no Trayport Company has: (i) given notice of redundancies to the relevant UK Secretary of State or started consultations with a trade union or materially failed to comply with its obligations under any Law relating to the implementation of redundancies in the UK; or (ii) been a party to a relevant transfer (as defined in the Transfer of Undertakings (Protection of Employment) Regulations 2006 or the equivalent legislation derived from the Acquired Rights Directive (Directive 2001/23/EC) or materially failed to comply with an obligation imposed by those regulations. No Trayport Company operates any custom, policy or practice or has any agreement pursuant to which employees by reason of the termination of their employment receive or would be entitled to a payment or other entitlement in excess of their statutory entitlements on termination by reason of redundancy.

(h) There are no outstanding loans nor notional loans to any director or Business Employee made by any Trayport Company where the amount outstanding on the loan exceeds $10,000.

SECTION 4.12 No Brokers or Finders . Except for Citigroup Global Markets Inc., no broker, finder or investment banker is entitled to any brokerage, finder's or other fee or commission in connection with the Sale based upon arrangements made by or on behalf of Seller or the Trayport Companies or their Affiliates. Seller is solely responsible for all fees and expenses of Citigroup Global Markets Inc.

SECTION 4.13 Real Property .

(a) None of the Trayport Companies owns any real property. Section 4.13(a) of Seller Disclosure Letter sets forth the address or other description of each parcel of real property leased or subleased by any of the Trayport Companies (the " Trayport Leased Real Property ") and such information is true and accurate in all material respects. No eminent domain or condemnation Proceeding is pending or, to the Knowledge of Seller, threatened in writing, that would preclude or materially impair the use of any Trayport Leased Real Property.

(b) Except as would not be material to the Business, all buildings, structures, fixtures and improvements included within the Trayport Leased Real Property (the " Trayport Improvements ") are in good repair and operating condition, and are adequate and suitable for the purposes for which they are presently being used or held for use, and to the Knowledge of Seller, there are no facts or conditions affecting any of the Trayport Improvements that, in the aggregate, would reasonably be expected to materially interfere with the current use, occupancy or operation thereof. Except as would not be material to the Business, no portion of such Trayport Leased Real Property has suffered any damage by fire or other casualty loss which has not heretofore been completely repaired and restored to its original condition (ordinary wear and tear excepted).

SECTION 4.14 Absence of Certain Changes . Since December 31, 2016 through the date of this Agreement:

(a) the Business has been conducted in the ordinary course of business taking into account the CMA Orders and any derogations therefrom granted by the CMA (" Ordinary Course ") in all material respects;

(b) there has not been a Business Material Adverse Effect; and

(c) none of Seller or any Affiliate of Seller, nor the Trayport Companies has taken any action or omitted to take any action that if taken or omitted to be taken after the date of this Agreement would constitute a violation of Section 6.1(c)(v) , Section 6.1(c)(vi) , Section 6.1(c)(ix) , Section 6.1(c)(x) or Section 6.1(c)(xvi) .

SECTION 4.15 Material Contracts .

(a) Section 4.15(a) of the Seller Disclosure Letter (which is arranged in subsections to correspond to the subsections of this Section 4.15(a)) sets forth the following Contracts as of the date hereof (other than any such Contract solely by or among the Trayport Companies) to which any Trayport Company is a party or by which it is bound or to which its assets or properties is subject (collectively, the " Material Contracts "):

(i) any Contract for Indebtedness;

(ii) any Contracts under which any Trayport Company has advanced or loaned any Person any amounts in excess of $500,000;

(iii) any joint venture, partnership, limited liability company, shareholder, or other similar Contract or arrangements relating to the formation, creation, operation, management or control of any partnership, strategic alliance or joint venture with a third party;

(iv) any Contract or series of related Contracts, including any option agreement, entered into in the past three years relating to the acquisition or disposition by a Trayport Company of any business or asset (whether by merger, sale of stock, sale of assets or otherwise) for aggregate consideration in excess of $2,000,000;

(v) any Contract for the voting of Securities of any Trayport Company;

(vi) any Contract (including any exclusivity agreement) that purports to limit or restrict in any material respect either the type of business in which any Trayport Company may engage or the manner or locations in which any of them may so engage in any business or would require the disposition of any assets or any line of business of any Trayport Company;

(vii) any Contract with a non-solicitation or non-compete provision that purports to limit or restrict in any respect any Trayport Company;

(viii) any Contract with a "most-favored-nations" pricing provision or that purports to limit or restrict in any material respect any Trayport Company;

(ix) any Contract, other than such Contracts entered into in the Ordinary Course, under which (A) any Person (other than any Trayport Company) has directly or indirectly guaranteed or provided an indemnity in respect of any liabilities, obligations or commitments of any Trayport Company or (B) any Trayport Company has directly or indirectly guaranteed or provided an indemnity in respect of liabilities, obligations or commitments of any other Person (other than any Trayport Company) (in each case other than endorsements for the purpose of collection in a commercially reasonable manner consistent with industry practice), unless such guarantor or indemnity obligation is less than $1,000,000;

(x) any Contract under which any Trayport Company has granted any Person registration rights (including demand and piggy-back registration rights);

(xi) other than commercially available "off-the-shelf" Software and any other Software that is readily substitutable (without causing material disruption or materially increased cost) in the operation of the Business, any material Contract under which (A) any Trayport Company has granted any license, sublicense or other permission to any Person to use any Acquired Intellectual Property, except that non-exclusive licenses to customers of the Trayport Companies in the Ordinary Course are not required to be scheduled in subsection (xi) of Section 4.15(a) of the Seller Disclosure Letter but are nevertheless included in the definition of Material Contracts herein; or (B) any Person has granted any license, sublicense or other permission to any Trayport Company to use any Intellectual Property other than Owned Intellectual Property;

(xii) any Contract that involves or would reasonably be expected to involve expenditures of, or receipts by, any Trayport Company in excess of $3,000,000 in the aggregate per any calendar year;

(xiii) any material Contract with any Governmental Authority;

(xiv) any Contract between or among a Trayport Company, on the one hand, and Seller (or Affiliate thereof), on the other hand;

(xv) any Lease for a Trayport Leased Real Property, and any other Contract that relates in any way to the occupancy or use of any of the Trayport Leased Real Property;

(xvi) any employment agreement or outstanding offer letter that provides for annual compensation in excess of $200,000;

(xvii) any Contract under which a Trayport Company has permitted any material asset to become subject to a Lien (other than a Permitted Lien);

(xviii) any outstanding general or special powers of attorney executed by or on behalf of a Trayport Company;

(xix) (A) any customer Contract with a customer listed in Section 4.23 of the Seller Disclosure Letter and (B) any supplier Contract with a supplier listed in Section 4.23 of the Seller Disclosure Letter; and

(xx) any Contract the termination or breach of which or the failure to obtain consent in respect of which would have a Business Material Adverse Effect.

(b) (i) No Trayport Company is and, to the Knowledge of Seller, no other party is, in breach or violation of, or in default under, any Material Contract, except as would not be material to the Business, (ii) each Material Contract is a valid and binding agreement of the Trayport Companies, as the case may be, enforceable in accordance with its terms, except for the Enforceability Exceptions, (iii) to the Knowledge of Seller, no event has occurred or been threatened in writing which would result in a breach or violation of, or a default under, any Material Contract (in each case, with or without notice or lapse of time or both), except as would not be material to the Business, and (iv) each Material Contract (including all modifications and amendments thereto and waivers thereunder) is in full force and effect with respect to the Trayport Companies, as applicable, and, to the Knowledge of Seller, with respect to the other parties thereto, and an accurate and complete copy of which has been delivered or made available to Purchasers.

SECTION 4.16 Intellectual Property .

(a) All Intellectual Property that is currently used in the conduct of the Business by any Trayport Company is either (a) owned by the Trayport Companies (such Intellectual Property, " Owned Intellectual Property ") or (b) licensed by the Trayport Companies (together with the Owned Intellectual Property, the " Acquired Intellectual Property "), except, in each case, where a failure to so own or license such Intellectual Property would not be material to the Business or the Trayport Companies taken as a whole. Section 4.16(a) of the Seller Disclosure Letter lists, in each case, as of the date hereof, with respect to the Acquired Intellectual Property, all: (i) registrations and applications for registration of Marks; (ii) Patents; (iii) registered copyrights and applications for registration of copyrights; and (iv) material Software. All material Acquired Intellectual Property is valid, subsisting and enforceable, and the Trayport Companies are the sole and exclusive owner of the Owned Intellectual Property free and clear of all Liens (other than Permitted Liens).

(b) In each case except as would not be material to the Business or the Trayport Companies taken as a whole, neither the operations of the Business nor any of the Trayport Companies: (i) has infringed upon, misappropriated or otherwise violated any Intellectual Property of any Person; or (ii) has received any charge, complaint, claim, demand, or notice alleging infringement, misappropriation or violation of the Intellectual Property of any Person (including any invitation to license or request or demand to refrain from using any Intellectual Property of any Person).

(c) To the Knowledge of Seller: (i) there is no interference, infringement, dilution, misappropriation or other violation of any Acquired Intellectual Property by any Person; (ii) none of the Acquired Intellectual Property is subject to any outstanding judgment, injunction, writ, order, decree or agreement prohibiting or restricting the use thereof by the Trayport Companies or their customers; and (iii) no Acquired Intellectual Property is the subject of any re-examination, opposition, cancellation or invalidation proceeding before any Governmental Authority.

(d) Seller and the Trayport Companies have taken commercially reasonable measures to protect the confidentiality of trade secrets and other confidential information owned by the Trayport Companies, except as would not be material to the Business or the Trayport Companies taken as a whole. Except as would not be material to the Business or the Trayport Companies taken as a whole, each current and, within the last three (3) years, former consultant and individual that has delivered, developed, contributed to, modified or improved Owned Intellectual Property has executed an agreement with a Trayport Company regarding confidentiality and proprietary information and an agreement assigning to a Trayport Company all of such consultant's and individual's rights in such development, contribution, modification or improvement and, as applicable, waiving such consultant's and individual's moral rights therein.

SECTION 4.17 Software and Other Information Technology .

(a) Except as would not be material to the Business or the Trayport Companies taken as a whole, (i) the Trayport Companies have implemented commercially reasonable measures designed to reasonably protect all Information Technology owned or held by any Trayport Company and used in the conduct of the Business from loss and unauthorized intrusion, access and modification and (ii) all Information Technology owned or held by any Trayport Company and used in the conduct of the Business is free from material defects and material deficiencies.

(b) Except as would not be material to the Business or the Trayport Companies taken as a whole, the Software included in the Acquired Intellectual Property does not contain any undocumented code, disabling mechanism or protection feature designed to prevent its use, including any undocumented clock, timer, counter, computer virus, worm, software lock, drop dead device, Trojan-horse routine, trap door, back door (including capabilities that permit non-administrative users to gain unrestricted access or administrative rights to Software or that otherwise bypasses security or audit controls), time bomb or any other codes or instructions that may be used to access, modify, replicate, distort, delete, damage, or disable Owned Software or data, other software operating systems, computers or equipment with which the Software interacts. Except as would not be material to the Business or the Trayport Companies taken as a whole, in the past four (4) years, there has been no failure or other substandard performance of any Information Technology or Software which has caused any disruption to the Business or any Trayport Company.

(c) No portion of any source code for any Software included within the Owned Intellectual Property (" Owned Software ") has currently been or is obligated to be

delivered, licensed or made available to any escrow agent (other than in the Ordinary Course), and the consummation of the transactions contemplated by this Agreement will not provide any such escrow agent with the right to deliver, release or make available any source code included within the Owned Software to any Person.

(d) Section 4.17(d) of the Seller Disclosure Letter sets forth a complete and accurate list of (i) all material Open Source Software used by any Trayport Company as of the date hereof in its products and (ii) the license agreement that governs such Person's use of such Open Source Software. Except as would not be material to the Business or the Trayport Companies taken as a whole, no Trayport Company has used, modified or distributed any Open Source Software in its products or services in a manner that would impose a requirement as described in subparts (i) through (iii) under the definition of Open Source Software. No Owned Software is being or was developed pursuant to participation in any industry standards body or consortium.

SECTION 4.18 Taxes .

(a) (i) The Trayport Companies, and, to the extent directly in respect of the Business, Seller have filed all material Tax Returns required to have been filed on or before the date hereof and all such Tax Returns were true, correct and complete in all material respects; (ii) all material Taxes due by the Trayport Companies or with respect to the Business (whether or not shown on any Tax Return) have been timely paid.

(b) None of the Trayport Companies has waived in writing any statute of limitations in respect of a material amount of Taxes which waiver is currently in effect, has received or requested, in each case in writing, any extension of time to file a material Tax Return that remains unfiled or has granted any currently effective power of attorney with respect to Tax matters.

(c) No Taxing Authority is presently conducting or has conducted within the previous three (3) years, any material dispute, claim, audit, action, suit, proceeding, examination or investigation in relation to the Trayport Companies or any other member of a Seller Group to which the Trayport Companies belong, and no material issues that have been raised in writing by the relevant Taxing Authority in connection with the examination of the Tax Returns referred to in Section 4.18(a)(i) are currently pending.

(d) No material liens for Taxes have been filed with respect to the Business (other than Taxes for which payment is not yet due), and all material deficiencies asserted in writing or material assessments made in writing as a result of any examination of the Tax Returns referred to in Section 4.18(a)(i) by a Taxing Authority have been paid in full.

(e) The Trayport Companies have not been a member of any Seller Group or any other group for Tax purposes other than any Seller Group comprising solely current or former Affiliates of Seller. The Trayport Companies are not bound by any material Tax sharing agreement, indemnity obligation or similar contract, practice or legal requirement.

(f) No Trayport Company will be required to recognize more than $1,000,000 of income in the aggregate during a taxable period concluding after the Closing Date as a result of any deferred intercompany transaction or excess loss account (described in U.S. Treasury regulations under Section 1502 of the Code or similar provisions of state, local or foreign law) existing on or before the Closing Date, any installment sale or open transaction concluded on or before the Closing Date, any change in accounting method, practice or period or any amount prepaid on or before the Closing Date or any settlement or agreement with a Taxing Authority concluded on or before the Closing Date except, in each case, to the extent Taxes arising from such items do not exceed the amounts specifically identified as having been provided for them in the Working Capital.

(g) No Trayport Company nor any other member of a Seller Group to which a Trayport Company belongs has engaged or agreed to engage in a listed transaction within the meaning of Treasury Regulation Section 1.6011-4(b)(2) that could affect its Tax liability for any taxable period as to which the period for audit and assessment has not expired.

(h) All material Taxes that any of the Trayport Companies were or are required by Law to withhold or collect in connection with amounts paid or owing to any employee, independent contractor, creditor, stockholder, member or other Person have been duly withheld and paid over to the appropriate Taxing Authority, and the Trayport Companies have complied in all material respects with all related recordkeeping and reporting requirements.

(i) Each of Trayport Holdings Limited and its current Subsidiaries is classified as a disregarded entity for U.S. federal income tax purposes.

(j) All material documents in the enforcement of which any Trayport Company may be interested have been duly stamped.

(k) Notwithstanding anything to the contrary in this Agreement, nothing in this Section 4.18 shall cause Seller to be liable for any Taxes for which Seller is not expressly liable pursuant to Article VIII , and this Section 4.18 , Section 4.9 , Section 4.10 and Section 4.11 contain the exclusive representations and warranties by Seller with respect to Taxes.

SECTION 4.19 Environmental Matters . Except as would not be material to the Business, since December 31, 2013: (a) the Trayport Companies have complied with and are currently in compliance with all Environmental Law applicable to them, (b) the Trayport Companies are not subject to any Liabilities, including corrective, investigatory or remedial obligations arising under Environmental Laws, and (c) none of Seller or the Trayport Companies have received any written notice, report or information regarding any Liabilities, including corrective, investigatory or remedial obligations arising under Law, with respect to the Trayport Companies.

SECTION 4.20 Assets .

(a) Ownership of Assets . Each Trayport Company has good and marketable title to, or, in the case of property held under a lease or other Contract, a valid leasehold interest

in, or adequate rights to use, all of the material properties, rights and assets, whether real or personal and whether tangible or intangible, used by it in the conduct of the Business, including all material assets reflected in each of the balance sheets as of June 30, 2017, included in the Business Financial Information, except for such assets that have been sold or otherwise disposed of since June 30, 2017 in the Ordinary Course (collectively, the " Assets "). None of the Assets is subject to any Lien other than a Permitted Lien and none of the Assets is held under a lease or other Contract with an Affiliate of Seller (other than Assets held by the Trayport Companies). Each of the fixtures, fittings and hardware used or held for use by the Trayport Companies in the conduct of the Business is free from defects, has been maintained in accordance with normal industry practice, is in good operating condition and repair (subject to normal wear and tear) and is suitable for the purposes for which it presently is used, in each case, in all material respects.

(b) Sufficiency of Assets . The Trayport Companies and the Assets, together with the rights of Purchasers and their Affiliates under this Agreement and the Related Agreements, constitute all of the assets, properties, rights and interests that are used or held for use in or necessary to conduct the Business as currently conducted, in all material respects, by the Trayport Companies.

(c) No Other Business Activities . None of the Trayport Companies conducts any material business activities other than activities related to or incidental to the Business and none of the Trayport Companies conducts any brokerage of transactions as a broker.

SECTION 4.21 Foreign Corrupt Practices Act and International Trade Sanction . None of the Trayport Companies, nor any of their respective directors, officers, agents, employees or, to the Knowledge of Seller, any other Persons acting on their behalf has, in connection with the operation of the Business, (a) used any corporate or other funds, directly or indirectly, for unlawful contributions, payments, gifts or entertainment, (b) made any unlawful expenditures relating to political activity to government officials, candidates or members of political parties or organizations, or any other Person, or (c) established or maintained any unlawful or unrecorded funds in material violation of the Foreign Corrupt Practices Act of 1977, as amended, or any other similar applicable Law (including the United Kingdom Bribery Act 2010, any anti-money laundering law or any laws enacted pursuant to the OECD Convention on Combating Bribery of Foreign Public Officials). None of the Trayport Companies, nor any of their respective directors, officers, agents, employees or, to the Knowledge of Seller, any other Persons acting on their behalf has, in connection with the operation of the Business, violated or operated in noncompliance, directly or indirectly, in any material respect, with any export restrictions or other economic sanctions laws, anti-boycott regulations, embargo regulations or other applicable domestic or foreign Laws, including the regulations enacted by the U.S. Treasury Department's Office of Foreign Assets Control (" OFAC "), which prohibit transactions involving parties located in countries subject to comprehensive economic sanctions by OFAC or parties identified on OFAC's Specially Designated Nationals and Blocked Persons List.

SECTION 4.22 Indebtedness . Section 4.22 of the Seller Disclosure Letter sets forth a list that is correct and complete in all material respects of all Indebtedness of the Trayport Companies as of the date hereof.

SECTION 4.23 Customers and Suppliers . Section 4.23 of the Seller Disclosure Letter sets forth a list, which is complete and accurate in all material respects, of (a) each of the fifteen largest trader customers, the fifteen largest broker customers and the ten largest exchange customers of the Trayport Companies (measured by aggregate revenue) during the fiscal year ended on December 31, 2016 and during the six months ended June 30, 2017 and (b) the ten largest suppliers of materials, products or services to the Trayport Companies (measured by the aggregate amount spent by the Trayport Companies) during the fiscal year ended on December 31, 2016 and during the six months ended June 30, 2017. Except as disclosed in Section 4.23 of the Seller Disclosure Letter, none of such customers or suppliers has cancelled, terminated or otherwise materially adversely altered (including any material reduction in the rate or amount of sales or purchases or material increase in the prices charged or paid, as the case may be) or notified a Trayport Company in writing of any intention to do any of the foregoing.

SECTION 4.24 Insurance . All insurance policies of or with respect to any of the Trayport Companies are in full force and effect and were in full force and effect during the periods of time such insurance policies are purported to be in effect, except for such failures to be in full force and effect that would not be material to the Business. No Trayport Company is in breach of or default under, and, to the Knowledge of Seller, no event has occurred which, with notice or the lapse of time, would constitute such a breach of or default under, or permit termination under, any policy, in each case, except as would not otherwise be material to the Business.

ARTICLE V

REPRESENTATIONS AND WARRANTIES OF PURCHASERS

Except as set forth in the Purchasers Disclosure Letter (it being understood that information disclosed in any section of the Purchasers Disclosure Letter shall be deemed to be disclosed with respect to any other section of the Purchasers Disclosure Letter to which such disclosure would reasonably pertain or if its relevance to such other section is reasonably apparent on the face of such disclosure), Purchasers hereby represent and warrant to Seller as of the date hereof and as of the Closing Date (except for representations and warranties which are made as of a specified time which are made only as of such specified time) as follows:

SECTION 5.1 Organization and Good Standing .

(a) TMX Group Limited is a corporation duly organized, validly existing and in good standing under the laws of Ontario. TMX Group US is a corporation duly organized, validly existing and in good standing under the laws of Delaware. Each Purchaser has all requisite corporate power and authority to own the Trayport Companies. Each Purchaser has all requisite corporate power and authority to own or lease the assets owned or leased by it and to carry on its business, as currently conducted, except where the failure to have such power or authority would not have a Purchaser Material Adverse Effect.

(b) Each Purchaser is duly qualified to do business and is in good standing as a foreign entity in each jurisdiction where the ownership, lease or operation of the applicable assets or the conduct of its business requires such qualification, except where the failure to be so qualified or in good standing would not have a Purchaser Material Adverse Effect.

SECTION 5.2 Authorization; Binding Obligations. Each Purchaser has all necessary corporate power and authority to make, execute and deliver this Agreement and the Related Agreements and to perform all of the obligations to be performed by it hereunder and thereunder. The making, execution, delivery and performance of this Agreement and the Related Agreements and the consummation by Purchasers of the transactions contemplated hereby and thereby have been duly and validly authorized by all necessary corporate action on the part of each Purchaser and no other corporate proceedings on the part of Purchasers are necessary to authorize the execution, delivery and performance by Purchasers of this Agreement or the Related Agreements or the transactions contemplated hereby or thereby. This Agreement has been, and, upon their execution, the Related Agreements will be, duly and validly executed and delivered by Purchasers, and assuming the due authorization, execution and delivery by Seller, each of this Agreement and the Related Agreements will constitute the valid, legal and binding obligation of Purchasers, enforceable against it in accordance with its terms, except as may be limited by the Enforceability Exceptions.

SECTION 5.3 No Conflicts; Consents and Approvals.

(a) The execution and delivery of this Agreement and the Related Agreements by Purchasers do not, and the consummation by Purchasers of the Sale will not: (i) conflict with any provisions of the organizational documents of Purchasers; (ii) violate any applicable Law (assuming compliance with the matters set forth in Section 5.3(b) of the Purchasers Disclosure Letter); (iii) result, after the giving of notice, with lapse of time or otherwise, in any violation, default or loss of a benefit under, or permit the acceleration or termination of any obligation under or require any consent under or require any offer to purchase or prepayment of any Indebtedness or Liability under, any mortgage, indenture, lease, agreement or other instrument, permit, concession, grant, franchise, license or other Contract to which Purchasers are a party or by which Purchasers or their Subsidiaries or any of their assets or properties may be bound; (iv) result in the creation or imposition of any Lien (other than Permitted Liens) upon any properties or assets of Purchasers or their Subsidiaries; or (v) cause the suspension or revocation of any material Permit of Purchasers or their Subsidiaries; except in the case of clauses (ii), (iii), (iv) and (v), as would not have a Purchaser Material Adverse Effect.

(b) No clearance, consent, approval, order, license or authorization of, or declaration, registration or filing with, or notice to, or permit issued by, any Governmental Authority is required to be made or obtained by Purchasers in connection with the execution or delivery of this Agreement or any Related Agreement by Purchasers or the consummation by Purchasers of the Sale, except for (i) any clearance, consent, approval, order, license, authorization, declaration, registration, filing, notice or permit set forth in Section 5.3(b) of the Purchasers Disclosure Letter and (ii) any such clearance, consent, approval, order, license,

authorization, declaration, registration, filing, notice or permit, the failure of which to make or obtain would not have a Purchaser Material Adverse Effect.

SECTION 5.4 Litigation . As of the date hereof, there is no Proceeding pending or, to the Knowledge of Purchasers, threatened against Purchasers, which seeks to, or would reasonably be expected to, restrain, enjoin or delay the consummation of the Sale or which seeks damages in connection therewith, and no injunction of any type has been entered or issued.

SECTION 5.5 Financial Ability; Financing.

(a) Assuming the performance by Seller of its obligations under this Agreement and the satisfaction or waiver (if permissible) of the conditions set forth in Section 7.1 (including, if applicable, after giving effect to the provisions in Section 7.1(b) with effect from receipt of written notice by Purchasers from Seller or by Seller from Purchasers at any time from and including the NGX Long Stop Date) and Section 7.2 (and that the Acquisition Financing is funded in accordance with the terms of the Commitment Letter or the New Commitment Letter, as the case may be), Purchasers have, or will have at Closing, all funds necessary to pay and satisfy in full the obligations pursuant to this Agreement, including to pay any amounts due pursuant to Section 3.7 .

(b) TMX Group Limited has delivered to Seller a true and complete copy of the commitment letter dated the date hereof with National Bank Financial Inc. and National Bank of Canada, together with (A) all exhibits, schedules, annexes and amendments to such letter (other than any fee letter), and (B) any associated fee letters in redacted form (collectively, the " Commitment Letter "), pursuant to which the lenders parties thereto (the " Lenders ") have agreed, subject to the terms and conditions set forth therein, to provide financing for the purchase by Purchasers of the Trayport Equity Interests contemplated in this Agreement (the " Acquisition Financing "). Purchasers have fully paid any and all commitment fees or other fees required by the Commitment Letter to be paid on or before the date of this Agreement. As of the date of this Agreement, the Commitment Letter is in full force and effect and the legal, valid and binding obligation of TMX Group Limited and, to Purchasers' Knowledge, the other parties thereto, enforceable against such parties in accordance with its terms, except as may be limited by the Enforceability Exceptions. The obligations of the Lenders to fund the commitments under the Commitment Letter will remain outstanding until the Closing, and are not subject to any conditions other than as set forth in the Commitment Letter. As of the date of this Agreement, no event has occurred that (with or without notice, lapse of time, or both) would constitute a breach or default under the Commitment Letter by Purchasers. As of the date of this Agreement, assuming the performance by Seller of its obligations under this Agreement and the satisfaction or waiver (if permissible) of the conditions set forth in Section 7.1 (including, if applicable, after giving effect to the provisions in Section 7.1(b) with effect from receipt of written notice by Purchasers from Seller or by Seller from Purchasers at any time from and including the NGX Long Stop Date) and Section 7.2 , to the Knowledge of Purchasers, there are no facts or circumstances that are reasonably likely to result in (i) any of the conditions set forth in the Commitment Letter not being satisfied or (ii) the Acquisition Financing not being made available

to Purchasers on a timely basis in order to consummate the purchase by Purchasers of the Trayport Equity Interests contemplated in this Agreement. Prior to the date of this Agreement, (x) the Commitment Letter has not been amended or modified and (y) none of the commitments of the Lenders contained in the Commitment Letter have been withdrawn, modified or rescinded in any respect.

SECTION 5.6 Acquisition of Shares for Investment. Purchasers have such knowledge and experience in financial and business matters, and are capable of evaluating the merits and risks of their purchase of the Trayport Entities. Without limiting the other provisions hereof, Purchasers confirm that Seller and its Affiliates have made available to Purchasers and Purchasers' agents the opportunity to ask questions of the officers and management employees of Seller and its Affiliates, and of the Trayport Companies, as well as access to the documents, information and records of Seller and the Trayport Companies, and to acquire additional information about the Business and the financial condition of the Trayport Companies, and Purchasers confirm that they have made an independent investigation, analysis and evaluation of the Trayport Companies and their properties, assets, business, financial condition, prospects, documents, information and records. Purchasers are acquiring the shares of the Trayport Entities for investment and not with a view toward or for sale in connection with any distribution thereof, or with any present intention of distributing or selling the shares of the Trayport Entities. Purchasers acknowledge that the shares of the Trayport Entities have not been registered under the Securities Act, or any state securities Laws, and agrees that the shares of the Trayport Entities may not be sold, transferred, offered for sale, pledged, hypothecated or otherwise disposed of without registration under the Securities Act, except pursuant to an exemption from such registration available under the Securities Act, and without compliance with foreign securities Laws, in each case, to the extent applicable.

SECTION 5.7 No Brokers or Finders. Except for Barclays Capital Canada Inc., no broker, finder or investment banker is entitled to any brokerage, finder's or other fee or commission in connection with the Sale based upon arrangements made by or on behalf of Purchasers. Purchasers are solely responsible for all fees and expenses of Barclays Capital Canada Inc.

SECTION 5.8 No Additional Representations.

(a) Purchasers acknowledge that neither Seller nor any of its Affiliates makes any representation or warranty as to any matter whatsoever except as expressly set forth in Article IV, in Article V of the NGX Agreement or in any Related Agreement, and specifically (but without limiting the generality of the foregoing) that neither Seller nor any of its Affiliates makes any representation or warranty with respect to (i) any projections, estimates or budgets delivered or made available to Purchasers (or any of their respective Affiliates, officers, directors, employees or representatives) of future revenues, results of operations (or any component thereof), cash flows or financial condition (or any component thereof) of the Trayport Companies or (ii) the future business and operations of the Trayport Companies, and Purchasers

have not relied on such information or any other representation or warranty not set forth in Article IV , in Article V of the NGX Agreement or in any such Related Agreement. Purchasers acknowledge that Seller's and its Affiliates' access to the business operations and management of the Trayport Companies has been limited by the terms of the CMA Orders and any derogations therefrom that Seller and its Affiliates have obtained for the purposes of preparing for, and effecting, the transactions contemplated by this Agreement and the Related Agreements.

(b) Purchasers have conducted their own independent review and analysis of the business, operations, assets, liabilities, results of operations, financial condition and prospects of the Trayport Companies and acknowledges that Purchasers have been provided access for such purposes. Purchasers have not relied upon any representations, warranties or statements, whether express or implied, made by Seller, or any of its Affiliates, stockholders, controlling persons or representatives that are not expressly set forth in Article IV , in Article V of the NGX Agreement or in any Related Agreement, whether or not such representations and warranties were made in writing or orally. Purchasers acknowledge and agree that, except for the representations, warranties or statements expressly set forth in Article IV , in Article V of the NGX Agreement or in the Related Agreements, (i) neither Seller nor any of its Affiliates makes, or has made, any representations or warranties relating to itself, its Subsidiaries, the Trayport Companies or otherwise in connection with the transactions contemplated hereby and Purchasers are not relying on any representation or warranty except for those expressly set forth in this Agreement, the NGX Agreement or the Related Agreements, as applicable, (ii) no Person has been authorized by Seller or any of its Affiliates to make any representation or warranty relating to themselves or their business or otherwise in connection with the transactions contemplated hereby, and if made, such representation or warranty must not be relied upon by Purchasers as having been authorized by such party, and (iii) any estimates, projections, predictions, data, financial information, memoranda, presentations or any other materials or information provided or addressed to Purchasers or any of their representatives are not and shall not be deemed to be or include representations or warranties unless any such materials or information are the subject of any express representation or warranty set forth in Article IV , in Article V of the NGX Agreement or in the Related Agreements, as applicable.

ARTICLE VI

COVENANTS

SECTION 6.1 Conduct of Business . From the date of this Agreement until the earlier of the Closing Date and the termination of this Agreement in accordance with its terms, except as (w) contemplated or required by this Agreement, (x) required by applicable Law or the regulations or requirements of any stock exchange or regulatory organization applicable to Seller or any of its Affiliates, (y) as may be agreed in writing by Purchasers (which consent shall not be unreasonably withheld, delayed or conditioned), or (z) as set forth in Section 6.1 of the Seller Disclosure Letter, Seller agrees to:

(a) comply with the Final CMA Order (and any derogations therefrom granted by the CMA);

(b) do nothing to prevent the Trayport Companies from (i) conducting their business in the Ordinary Course, and (ii) preserving substantially intact the business organizations and relationships with all Governmental Authorities, customers, suppliers, business associates, and others having material business dealings with the Trayport Companies, in each case, in the Ordinary Course; provided , however , that no action by Seller or any of its Subsidiaries with respect to matters specifically addressed by any provision of Section 6.1(c) shall be deemed a breach of this sentence unless such action would constitute a breach of such other provision; and

(c) not, and not take any action that would cause the Trayport Companies to (in each case so far as Seller is able pursuant to the terms of the Final CMA Order):

(i) authorize or effect any amendment to or change the organizational documents of the Trayport Companies;

(ii) issue or authorize the issuance of any Securities of the Trayport Companies or grant any options, warrants, or other rights to purchase or obtain any of the Securities of the Trayport Companies or issue, sell or otherwise dispose of any of the Securities of the Trayport Companies or redeem, repurchase or otherwise acquire any Securities of the Trayport Companies (other than to another Trayport Company);

(iii) declare, authorize, make or pay any dividend or other distribution with respect to the Securities of any Trayport Company, other than (A) in the Ordinary Course or (B) cash dividend paid prior to the Closing Date;

(iv) effect any recapitalization, reclassification or similar change in the capitalization of the Trayport Companies;

(v) have the Trayport Companies assume or incur any Indebtedness in excess of $10,000,000 except (A) Indebtedness incurred in the Ordinary Course or (B) guarantees by any Trayport Company of Indebtedness of any other Trayport Company;

(vi) have the Trayport Companies make or commit to make any capital expenditure other than (A) capital expenditures that will have been fully paid prior to the Closing Date, (B) capital expenditures made in the Ordinary Course or (C) as set forth in the Trayport Entities' capital budget, a copy of which is attached as Section 6.1(c)(vi) of the Seller Disclosure Letter;

(vii) other than in the Ordinary Course and except for renewals or expirations in accordance with the existing terms of any Material Contract, (A) terminate, modify or amend on terms materially adverse to any of the Trayport Companies any

Material Contract, or (B) enter into any new Contract that would have been considered a Material Contract if it were entered into at or prior to the date hereof;

(viii) enter into, renew, extend or amend any Contracts or arrangements that limit or restrict any of the Trayport Companies from engaging or competing in any line of business or in any geographic area;

(ix) sell, lease, license, transfer or otherwise dispose of, either to a third party or otherwise, any assets, property or rights owned or held by the Trayport Companies (including Securities of the Trayport Subsidiaries), except (A) in the Ordinary Course, (B) pursuant to the terms of a Contract as of the date of this Agreement or (C) to third parties on arms' length terms in an amount not in excess of $5,000,000 in the aggregate;

(x) have the Trayport Companies merge with, enter into a consolidation with any Person or acquire a substantial portion of the assets or business of any Person or any division or line of business thereof with a value in excess of $100,000 individually or $500,000 in the aggregate, or otherwise acquire, other than in the Ordinary Course, any assets with a value in excess of $100,000 individually or $500,000 in the aggregate;

(xi) other than in the Ordinary Course, (A) materially amend or otherwise materially modify benefits under any Company Benefit Plan, including with respect to any employment agreements with any officer, employee, worker or consultant of the Trayport Companies, (B) accelerate the payment or vesting of benefits or amounts payable or to become payable under any Company Benefit Plan as currently in effect on the date hereof, (C) fail to make any required contribution to any Company Benefit Plan, (D) merge or transfer any Company Benefit Plan or the assets or liabilities of any Company Benefit Plan, (E) change the sponsor of any Company Benefit Plan or (F) terminate or establish any Company Benefit Plan, except, in each case, with respect to agreements for new hires (other than new hires into executive management positions);

(xii) terminate the employment or contractual relationship of any officer, director, consultant or employee of the Trayport Companies, other than terminations of employees or consultants (other than employees in executive management positions) in the Ordinary Course and existing policies and/or terminations for cause;

(xiii) negotiate, enter into, amend or extend any Contract with a labor union, works council or other employee representative body;

(xiv) (A) make, revoke or amend any material election relating to Taxes, (B) make a request for a written ruling of a Taxing Authority relating to material Taxes, (C) enter into a Contract with a Taxing Authority relating to material Taxes, (D) materially change any of its methods, policies or practices of reporting income or deductions for U.S. federal income tax purposes from those employed in the preparation

of its U.S. federal income tax returns for the taxable year ended December 31, 2015, or (E) settle or compromise any material Tax claim, audit, or assessment or (F) take any action that could materially increase the Tax liability or materially decrease any Tax attribute of any of the Trayport Companies for any period ending after the Closing, in the case of clause (F), other than in the Ordinary Course or consistent with past practice;

(xv) terminate or cancel, or amend or modify in any material respect, any material insurance policies covering the Trayport Companies or their respective properties, directors, officers or employees which is not replaced by a comparable amount of insurance coverage, other than in the Ordinary Course;

(xvi) transfer, abandon, allow to lapse, or otherwise dispose of any rights to, or obtain or grant any right to any material Acquired Intellectual Property or disclose any material confidential information, including trade secrets, of any Trayport Company to any Person, in each case, other than in the Ordinary Course;

(xvii) other than changes required by Applicable Accounting Standards or by a Governmental Authority, change any method of financial accounting or financial accounting practice or policy of the Trayport Companies;

(xviii) permit any of its material Assets to become subject to a Lien (other than any Lien that will be released prior to Closing and other than any Permitted Lien), the existence of which materially interferes with, or is reasonably likely to materially interfere with, the operation of the Business;

(xix) cancel, permanently waive or forgive any Indebtedness or claims or rights with a value in excess of $100,000 individually or $500,000 in the aggregate without consideration therefor;

(xx) enter into a settlement, an agreement to settle, a waiver or another compromise regarding any pending or threatened material Proceedings primarily relating to the Business (A) with a value in excess of $100,000 individually or $500,000 in the aggregate, (B) which imposes any affirmative obligation other than payment or which imposes any obligation that restricts the operation of the business of any Trayport Company or (C) which does not provide for a full release with regard to the matter that is settled; or

(xxi) agree, or commit to do, any of the foregoing.

SECTION 6.2 Cash and Cash Equivalents; No Purchaser Control. Notwithstanding anything in this Agreement to the contrary, (a) Seller shall have the right (so far as Seller is able pursuant to the terms of the Final CMA Order) to remove from any Trayport Company all Cash and Cash Equivalents in the manner as determined by Seller (including by means of dividend, the creation or repayment of intercompany debt or otherwise) prior to the Closing Date and (b) nothing contained in this Agreement shall give Purchasers, directly or

indirectly, the right to control or direct the operations of Seller or the Trayport Companies prior to the Closing.

SECTION 6.3 Access and Confidentiality .

(a) From the date hereof until the earlier of the Closing and termination of this Agreement in accordance with its terms, subject to applicable Law and insofar as Seller is able pursuant to the terms of the Final CMA Order, (i) Seller shall, and shall direct the Trayport Companies to, permit Purchasers and their agents and representatives to have reasonable access, during regular business hours and upon reasonable advance notice for purposes reasonably consistent with this Agreement, to the properties, premises, facilities, employees and representatives and books and records of the Trayport Companies (and the Seller, to the extent related to the Sale), and (ii) Seller shall, and shall direct the Trayport Companies to, direct their respective employees, agents and representatives to cooperate fully with Purchasers and their agents and representatives to the extent related to the Sale; provided , however , that nothing herein shall obligate Seller or its Affiliates to take any actions that would (A) unreasonably interrupt the normal course of their businesses or (B) result in any waiver of attorney-client privilege or violate any Laws or the terms of any Contract to which Seller or its Affiliates is a party or to which any of their respective assets are subject; provided , however , that Seller shall give notice to Purchasers of the fact that it is withholding information or documents pursuant to this clause (B) and Seller shall use its commercially reasonable efforts to cause such information or documents to be provided in a manner that would not reasonably be expected to waive such privilege or result in such a violation. Purchasers shall comply, and shall cause its representatives to comply, with all safety, health and security rules applicable to the premises being visited. In each case, Purchasers and their agents and representatives shall comply with the confidentiality obligations contained herein.

(b) After the Closing Date, each Party shall preserve and keep all books and records and all information relating to the accounting, business and financial affairs that are retained by Seller or its Affiliates or obtained by Purchasers hereunder, as the case may be, which information relates to the Trayport Companies prior to the Closing, for five (5) years after the Closing Date, or for any longer period as may be (i) required by any Governmental Authority or (ii) reasonably necessary with respect to the prosecution or defense of any legal action that is then pending or threatened or audit and with respect to which the requesting Party has notified the other Party as to the need to retain such books, records or information. Notwithstanding the foregoing provisions of this Section 6.3(b) , the provisions of Article VIII shall govern the preservation, retention and sharing of Tax Returns and Tax work papers. After the Closing Date, Purchasers, on the one hand, and Seller, on the other hand, shall, and shall cause their Affiliates, including in the case of Purchasers, the Trayport Companies, to permit the other Party, its Affiliates and their representatives to have reasonable access to, and to inspect and copy, all materials referred to in this Section 6.3(b) and to meet with officers and employees of such other Parties on a mutually convenient basis during normal business hours to obtain explanations with respect to such materials and to obtain additional information in connection with the preparation of any financial statements or Tax Returns of such other Party or its Affiliates. Purchasers

acknowledge and agree that Seller and its Affiliates have limited information due to the constraints imposed on Seller and its Affiliates by the CMA Orders and that Seller and its Affiliates shall only be required to preserve, or provide access to, such materials referred to in this Section 6.3(b) as it was permitted to receive under the CMA Orders and any derogations therefrom granted by the CMA.

(c) *Confidentiality* .

(i) All information provided or obtained in connection with the Sale will be held by Purchasers in accordance with the Non-Disclosure Agreement, dated June 26, 2017, between TMX Group Limited and Guarantor (the " Non-Disclosure Agreement "). In the event of a conflict or inconsistency between the terms of this Agreement and the Non-Disclosure Agreement, the terms of this Agreement will govern. Seller hereby assigns in part, effective as of Closing, to Purchasers or the Trayport Companies, as specified by Purchasers, the rights that Seller or its Affiliates may have under any other confidentiality agreements entered into with respect to any potential alternative transaction similar to the Sale, to the extent assignment is permitted thereby only to the extent that such rights relate to (i) the confidentiality obligations of the counterparty to such agreements with respect to the Trayport Companies and/or (ii) the non-solicitation and/or non-hire obligations of the counterparty to such agreements with respect to the Trayport Companies.

(ii) Seller acknowledges that the success of the Trayport Companies and the Business after the Closing depends upon the continued preservation of the confidentiality of certain information possessed by such Persons and their Affiliates, that the preservation of the confidentiality of such information by such Persons and their Affiliates is an essential premise of the bargain between Seller and Purchasers, and that Purchasers would be unwilling to enter into this Agreement in the absence of this Section 6.3(c)(ii) . Accordingly, Seller shall not, and shall procure that its representatives, Affiliates and Affiliates' representatives will not, directly or indirectly, without the prior written consent of Purchasers, disclose to a third party, any information involving or relating to the Business or any Trayport Company; provided , that the information subject to this Section 6.3(c)(ii) will not include any information that (A) is or becomes generally available to the public other than as a result of a disclosure in violation hereof; (B) is or becomes available to such Person on a non-confidential basis from a source so long as such Person does not know or have reason to believe that the source was prohibited by a contractual, legal, or fiduciary obligation to any Trayport Company from disclosing such information; (C) is independently developed, conceived, or discovered by such Person; provided , further , that the provisions of this Section 6.3(c)(ii) will not prohibit any retention of copies of records or disclosure (I) required by any applicable Law so long as prior notice, when reasonably practicable, is given to Purchasers of such disclosure and a reasonable opportunity is afforded Purchasers to contest the same at Purchasers' sole cost and expense (it being agreed that the disclosure of financial or other information regarding the Trayport Companies as required by Seller and its Affiliates' public reporting obligations, shall not require any prior notice or right of Purchasers to contest);

provided that if, in the absence of a protective order, Seller and its Affiliates and their Affiliate's representatives, as applicable, is, in the opinion of counsel (which may be internal counsel), compelled as a matter of law to disclose such information, such Person may disclose only that part of the information as required to be disclosed, (II) made in connection with the defense of any claim or enforcement of any right or remedy relating to this Agreement or the Sale, or (III) if requested by any Governmental Authority having jurisdiction over such Person or (D) relates to Seller's or any of its Affiliates' status as a customer of the Business or becomes available to Seller or any of its Affiliates in such person's capacity as a customer of the Business.

SECTION 6.4 Efforts; Filings .

(a) Subject to the terms and conditions of this Agreement, each of Seller and Purchasers shall use their reasonable best efforts to take, agree to take, or cause to be taken, any and all actions and to do, or cause to be done, any and all things necessary, proper or advisable under applicable Law or otherwise so as to consummate the Sale, and each shall, and shall cause its respective Affiliates to, cooperate fully to that end. Subject to Section 6.3 and the Non-Disclosure Agreement, and to the extent not prohibited by Law or the applicable Governmental Authority, each Party shall (i) permit the other Parties to review and discuss in advance, and consider in good faith the views of the other Parties in connection with, any proposed written (or any material proposed oral) communication with any Governmental Authority (excluding, in the case of communication by Seller and its Affiliates, the CMA to the extent that such communications are not directly in relation to any of this Agreement, the NGX Agreement or Purchasers or their Affiliates) regarding the Sale and (ii) promptly inform the other Parties (and if in writing, provide the other Parties or their counsel with copies) of all correspondence, filings and communications between the Party and any Governmental Authority (excluding, in the case of communication by Seller and its Affiliates, the CMA to the extent that such communications are not directly in relation to any of this Agreement, the NGX Agreement or Purchasers or their Affiliates) regarding the Sale. The Parties may, as each deems advisable and necessary, reasonably designate any competitively sensitive material provided to the other Parties under this Section 6.4 as "outside counsel only." Such materials and the information contained therein shall be given only to the outside legal counsel of the recipient and will not be disclosed by such outside counsel to employees, officers or directors of the recipient unless express permission is obtained in advance from the source of the materials (Purchasers or Seller, as the case may be) or its legal counsel; provided , however , that materials provided pursuant to this Section 6.4 may be redacted (A) to remove references concerning the valuation of the Trayport Companies, (B) as necessary to comply with contractual arrangements, or (C) as necessary to address reasonable legal privilege concerns.

(b) No Party shall participate in any meeting with any Governmental Authority in connection with this Agreement (or make oral submissions at meetings or in telephone or other conversations) unless it consults with the other Parties in advance and, to the extent not prohibited by such Governmental Authority, gives the other Parties the opportunity to attend and participate thereat; provided , however , that: (i) only Purchasers and their

representatives shall attend and participate in Purchasers' initial communications with, and all telephone calls from, Canadian securities regulators in connection with the sale of the NGX/Shorcan Equity Interests pursuant to the NGX Agreement and (ii) this Section 6.4(b) shall not apply to meetings or telephone or other conversations which Seller or its Affiliates alone may have with the CMA in relation to the CMA Orders unless such meeting or telephone or other conversation is directly in relation to any of this Agreement, the NGX Agreement or Purchasers or their Affiliates. If Seller or its Affiliates has any material substantive discussions with the CMA regarding any of this Agreement, the NGX Agreement or Purchasers or their Affiliates, Seller shall promptly inform Purchasers of such discussions and the nature and substance thereof (to the extent permitted by the CMA and applicable Law).

(c) Each of Seller and Purchasers agree to, and to cause their respective Affiliates to, use their respective reasonable best efforts to prepare all documentation, to effect all filings and to obtain all permits, consents, clearances, approvals and authorizations of all Governmental Authorities and other Persons necessary to consummate the Sale (or permit the Business to be operated in the same manner following the Sale) as promptly as practicable, in particular, each Party shall, and shall procure that its Subsidiaries and Affiliates (including the Trayport Companies) will, as promptly as practicable, provide the other Parties all such assistance and information as may reasonably be required. If either or both of the Parties receive any request for information or documentary materials from any Governmental Authority (including in relation to the Trayport Companies' compliance with the CMA Orders), each of the Parties will use their respective reasonable best efforts to respond to and provide reasonably required information in respect of such request to such Governmental Authority as promptly as possible and counsel for the Parties will reasonably cooperate during the entirety of any such process.

SECTION 6.5 Financing .

(a) Purchasers shall use their reasonable best efforts to take, or cause to be taken, all actions and to do, or cause to be done, all things necessary, proper or advisable to obtain the Acquisition Financing on the terms and conditions described in the Commitment Letter and, prior to the Closing, shall not permit any amendment or modification to be made to, or any waiver of any provision or remedy under, the Commitment Letter or the definitive agreements with respect thereto, if such amendment, modification or waiver (A) reduces the aggregate amount of the Acquisition Financing, or (B) imposes new or additional conditions or other terms or otherwise expands, amends or modifies any of the conditions to the receipt of the Acquisition Financing or other terms in a manner that would reasonably be expected to (x) make, in any material respect, the timely funding of the Acquisition Financing or satisfaction of the conditions to obtaining the Acquisition Financing less likely to occur or (y) adversely impact, in any material respect, the ability of Purchasers to enforce its rights against other parties to the Commitment Letter or to draw upon and consummate the Acquisition Financing; provided , however , that Purchasers may amend, replace or otherwise modify the Commitment Letter or any definitive agreement with respect thereto to add arrangers, bookrunners, agents, lenders or similar entities who had not executed the Commitment Letter as of the date of this Agreement or

to reassign titles to such parties who had executed the Commitment Letter as of the date of this Agreement; provided , in each case, such amendment, replacement or modification does not, without the prior written consent of Seller: (i) make, in any material respect, the timely funding of the Acquisition Financing or satisfaction of the conditions to obtaining the Acquisition Financing less likely to occur or (ii) adversely impact, in any material respect, the ability of Purchasers to enforce its rights against other parties to the Commitment Letter or to draw upon and consummate the Acquisition Financing.

(b) Purchasers shall use their reasonable best efforts to (i) subject to Section 6.5(c) , maintain in effect and satisfy on a timely basis all terms, covenants and conditions set forth in the Commitment Letter within Purchasers' reasonable control in accordance with the terms and subject to the conditions thereof, (ii) negotiate and enter into definitive agreements with respect to the financing contemplated by the Commitment Letter on the terms and conditions contained in the Commitment Letter, (iii) satisfy all conditions to such definitive agreements that are applicable to Purchasers that are within Purchasers' control, (iv) if the NGX Sale is not consummated in accordance with the NGX Agreement prior to or contemporaneously with the Closing, draw upon and consummate the Acquisition Financing at or prior to the Closing and (v) if the NGX Sale is not consummated in accordance with the NGX Agreement prior to or contemporaneously with the Closing, fully enforce its rights under the Commitment Letter to draw upon and consummate the Acquisition Financing, subject to the terms and conditions of the Commitment Letter. Purchasers shall keep Seller informed on a reasonably current basis and in reasonable detail with respect to all material activity concerning the status of its efforts to arrange the Acquisition Financing.

(c) If any portion of the Acquisition Financing becomes unavailable on the terms and conditions contemplated in the Commitment Letter or the Commitment Letter becomes terminated or modified in a manner materially adverse to Purchasers for any reason, Purchasers shall use their reasonable best efforts to arrange and obtain alternative financing from alternative sources with conditions to obtaining such alternative financing no less favorable, in the aggregate, to Purchasers than those contained in the Commitment Letter and in an amount at least equal to the Acquisition Financing or such unavailable portion thereof, as the case may be (the " Alternate Financing "), and to obtain a new financing commitment letter with respect to such Alternate Financing (the " New Commitment Letter ") which shall replace the existing Commitment Letter, a copy of which shall be promptly provided to Seller. In the event any New Commitment Letter is obtained, any reference in this Agreement to the "Acquisition Financing" shall mean the financing contemplated by the New Commitment Letter.

(d) For the avoidance of doubt, neither the availability of nor the funding of the Acquisition Financing shall be a condition to the obligation of Purchasers to consummate the Sale.

(e) From the date of this Agreement until the earlier of the Closing Date and the termination of this Agreement in accordance with its terms, subject in all respects to the CMA Orders, Seller shall, and shall cause its Subsidiaries to, use commercially reasonable efforts to provide such assistance and cooperation (and to use commercially reasonable efforts to

cause its and their respective representatives to provide such assistance and cooperation) with respect to any Acquisition Financing as is reasonably requested by Purchasers, including using commercially reasonable efforts with respect to: (i) cooperating reasonably with each Lender's due diligence; and (ii) providing financial information relating only to the Business or the Trayport Companies as may reasonably be requested by a Purchaser; provided that nothing in this Section 6.5(e) shall require Seller, any of its Subsidiaries (including any Trayport Company) or any of its or their respective representatives to prepare any new financial statements or projections that are not prepared in the ordinary course of business and past practice of the Business. Notwithstanding any other provision set forth herein or in any other agreement between Seller and a Purchaser (or its Affiliates), Seller agrees that Purchasers and their Affiliates may share customary projections with respect to the Business or the Trayport Companies with the Lenders identified in the Commitment Letters and to any existing lenders of Purchasers, and that Purchasers, their Affiliates and such Lenders may share such information with potential Lenders in connection with any marketing efforts in connection with the Acquisition Financing, provided that the recipients of such information are subject to customary confidentiality arrangements between Purchasers and such parties (which need not include Seller). None of Seller, any of its Subsidiaries or any of its or their respective directors or officers or other personnel or representatives shall be required by this Section 6.5(e) to take any action or provide any assistance that unreasonably interferes with the ongoing operations of Seller and its Subsidiaries.

(f) Purchasers shall indemnify and hold harmless Seller, its Subsidiaries and its and their respective representatives from and against any and all losses, damages, claims and out-of-pocket costs or expenses, actually suffered or incurred by them in connection with any Acquisition Financing (including any action taken in accordance with this Section 6.5) and any information utilized in connection therewith (other than untrue information provided by Seller or its Subsidiaries or their respective representatives in writing for use in the Acquisition Financing documents), in any case, except to the extent suffered or incurred as a result of the gross negligence, willful misconduct, fraud or intentional breach by or of Seller or its Subsidiaries or their respective representatives. In addition, Purchasers shall, promptly upon request by Seller, reimburse Seller for all reasonable and documented out-of-pocket costs incurred by Seller or its Subsidiaries in connection with the performance of Seller's obligations under this Section 6.5 .

SECTION 6.6 No Solicitation . Except as provided by Law, during the period commencing on the Closing Date and ending on the second anniversary of the Closing Date, neither Seller nor its Affiliates shall directly or indirectly solicit any person who was an employee or subcontractor of any of the Trayport Companies or the Business on the date hereof or the Closing Date (a " Restricted Person ") to terminate his or her employment with, or otherwise cease his or her relationship with, any of the Trayport Companies or the Business or to become an employee of Seller or any of its Affiliates; provided that nothing in this Section 6.6 shall prohibit Seller or any of its Affiliates from (A) engaging in general solicitations to the public or general advertising not targeted at any Restricted Person, (B) soliciting any Restricted Person whose employment or engagement has been terminated by any Trayport Company following the Closing other than as a response to any inducement or encouragement by the Seller

or any of its Affiliates or (C) soliciting any Restricted Person whose employment or engagement with any Trayport Company has been terminated by the Restricted Person following the Closing other than as a response to any inducement or encouragement by the Seller or any of its Affiliates (but only after at least ninety (90) days have passed since the date of termination of employment or engagement).

SECTION 6.7 Further Assurances . After the Closing Date, each of Seller and Purchasers shall use their commercially reasonable efforts from time to time to do, make, execute and deliver, or cause to be done, made, executed and delivered, at the reasonable request of the other Party, such further acts, assurances, additional documents and instruments (including any assignments, bills of sale, assumption agreements, consents and other similar instruments in addition to those required by this Agreement) as may be reasonably required to give effect to this Agreement and the transactions contemplated hereby, and to provide whatever documents or other evidence of ownership as may be reasonably requested by Purchasers to confirm Purchasers' ownership of the Trayport Companies.

SECTION 6.8 Intercompany Agreements; Intercompany Accounts .

(a) Except as set forth in Section 6.8 of the Seller Disclosure Letter or as otherwise expressly set forth in this Agreement or the Related Agreements, Seller shall, and shall cause its Affiliates to, immediately prior to the Closing, execute and deliver such releases, termination agreements and discharges (in forms reasonably acceptable to Purchasers) as are necessary to release and discharge each Trayport Company from any and all Liabilities owed to Seller or any of its Affiliates (other than any Trayport Company). In addition, Seller shall, and shall cause its Affiliates to, immediately prior to the Closing, execute and deliver such releases, termination agreements and discharges (in a form reasonably acceptable to Purchasers) as are necessary to (i) release and discharge Seller and each of its Affiliates (other than the Trayport Companies) from any and all obligations owed to any Trayport Company and (ii) terminate all arrangements, commitments, contracts and understandings among Seller and any of its Affiliates, on the one hand, and any Trayport Company, on the other hand, in each case other than those set forth on Section 6.8 of the Seller Disclosure Letter or as otherwise expressly set forth in this Agreement or the Related Agreements.

(b) On or prior to the Closing Date, all intercompany accounts between Seller and/or any of its Subsidiaries (other than any Trayport Company), on the one hand, and any Trayport Company, on the other hand, shall be settled or otherwise eliminated (other than intercompany accounts that arise out of services performed pursuant to Contracts identified in Section 4.15(a)(xiv) of the Seller Disclosure Letter, which shall remain outstanding in accordance with their terms). Intercompany accounts between and among the Trayport Companies shall not be affected by this provision.

SECTION 6.9 Employee Matters .

(a) For the one year period following the Closing Date, Purchasers will provide, or cause one of their Affiliates to provide, each Business Employee who is employed as of the Closing (each a " Continuing Employee "), for so long as he/she remains employed with Purchasers or one of their Affiliates (including any Trayport Company) during such one year period, with (A) base salary at least equal to the base salary provided to the Continuing Employees immediately prior to the Closing and (B) benefits (other than equity compensation or defined benefit pension benefits) that, taken as a whole, are comparable in the aggregate to those provided to Continuing Employees immediately prior to the Closing. For the 2017 fiscal year, Purchasers will provide, or cause one of their Affiliates to provide, on aggregate, a bonus pool that is comparable to, and distributed in a comparable discretionary manner as, the aggregate bonus pool for the Trayport Companies for the 2016 fiscal year.

(b) Except to the extent necessary to avoid the duplication of benefits, Purchasers shall recognize the service of each Continuing Employee with any Trayport Company before the Closing Date as if such service had been performed with Purchasers or their Affiliates (i) for all purposes under the Company Benefit Plans maintained by Purchasers or their Affiliates after the Closing Date (to the extent such plans, programs, or agreements are delivered to Continuing Employees), (ii) for purposes of eligibility and vesting under any employee benefit plans and programs of Purchasers or their Affiliates other than the Company Benefit Plans (the " New Benefit Plans ") in which the Continuing Employee participates after the Closing Date, and (iii) for benefit accrual purposes under any New Benefit Plan that is a vacation or severance plan in which the Continuing Employee participates after the Closing Date.

(c) With respect to any welfare plan (or their equivalent outside the United States) maintained by Purchasers or their Affiliates in which Continuing Employees are eligible to participate after the Closing, Purchasers and their Affiliates shall use commercially reasonable efforts to (i) waive all limitations as to preexisting conditions and exclusions with respect to participation and coverage requirements applicable to such employees to the extent such conditions and exclusions were satisfied or did not apply to such employees under the welfare plans maintained by the Trayport Companies prior to the Closing and (ii) to the extent applicable under any such plan, provide each Continuing Employee with credit for any co-payments and deductibles paid prior to the Closing in satisfying any analogous deductible or out-of-pocket requirements.

(d) Notwithstanding anything in this Section 6.9 to the contrary, nothing contained herein, whether express or implied, shall be treated as an amendment or other modification of any Company Benefit Plan or any employee benefit plan of Purchasers or their Affiliates, or shall limit the right of Purchasers or their Affiliates to amend, terminate or otherwise modify any such Company Benefit Plan or employee benefit plan of Purchasers or their Affiliates following the Closing in accordance with the terms and conditions of such plans. If (i) a party other than the Parties makes a claim or takes other action to enforce any provision in this Agreement as an amendment to any such plan, and (ii) such provision is deemed to be an amendment to such plan even though not explicitly designated as such in this Agreement, then,

solely with respect to such plan, such provision shall lapse retroactively and shall have no amendatory effect with respect thereto. The Parties acknowledge and agree that all provisions contained in this Section 6.9 are included for the sole benefit of the Parties, and that nothing in this Agreement, whether express or implied, shall create any third-party beneficiary or other rights (A) in any other Person, including, without limitation, any Continuing Employee, any participant in any Company Benefit Plan or any employee benefit plan of Purchasers or their Affiliates, or any dependent or beneficiary thereof, or (B) to continued employment with Purchasers or any of their Affiliates.

SECTION 6.10 Directors' and Officers' Indemnification .

(a) For a period of six (6) years from and after the Closing, Purchasers shall cause the Trayport Companies to indemnify and hold harmless, and provide advancement of expenses to, all past and present directors and officers of any Trayport Company as of the date hereof (and as of the date of the 2015 Signing and the 2015 Closing) and anyone who becomes a director or officer of any Trayport Company during the period from the date of this Agreement through the Closing (in such capacities) (the " D&O Indemnified Persons ") for all acts and omissions occurring at or prior to the Closing to the same extent such D&O Indemnified Persons are indemnified or have the right to advancement of expenses as of the date of this Agreement by the Trayport Companies pursuant to the organizational documents of any applicable Trayport Company as in existence on the date hereof, in each case, to the fullest extent that such indemnification and advancement is permitted by applicable Law. Purchasers shall cause the organizational documents of the Trayport Companies to contain provisions with respect to indemnification, advancement of expenses and limitation of director and officer liability that are no less favorable to the D&O Indemnified Persons with respect to acts or omission occurring at or prior to the Closing than those set forth in the organizational documents of the Trayport Companies as of the date of this Agreement, which provisions thereafter shall, subject to applicable Law, not be amended, repealed or otherwise modified in any manner that would adversely affect the rights thereunder of any D&O Indemnified Persons for a period of six (6) years from and after the Closing. From and after the Closing, Purchasers shall cause the Trayport Companies to honor, in accordance with their respective terms, each of the covenants contained in this Section 6.10 .

(b) If Purchasers, the Trayport Companies or any of their or their successors or assigns (i) shall consolidate with or merge into any other Person and shall not be the continuing or surviving corporation or other entity of such consolidation or merger or (ii) shall transfer all or substantially all of its properties and assets to any Person, then, in each such case, proper provisions shall be made so that the successors and assigns of Purchasers or the Trayport Companies, as the case may be, shall assume all of the obligations set forth in this Section 6.10 .

(c) The obligations of Purchasers, the Trayport Companies and any successors thereto under this Section 6.10 shall not be terminated or modified in such a manner as to adversely affect any D&O Indemnified Person to whom this Section 6.10 applies without the consent of such affected D&O Indemnified Person (it being expressly agreed that the D&O

Indemnified Persons to whom this Section 6.10 applies shall be third-party beneficiaries of this Section 6.10).

SECTION 6.11 Guarantees; Commitments . Purchasers shall use their commercially reasonable efforts to substitute itself or have one of its Affiliates to be substituted for Seller and any of its Affiliates, and for Seller and any of its Affiliates to be released, effective as of the Closing, in respect of all obligations of Seller and any of its Affiliates under each of the agreements set forth on Section 6.11 of the Seller Disclosure Letter (the " London Lease Agreements "). If, as of the Closing, Purchasers or one of their Affiliates shall not have substituted itself for Seller and any of its Affiliates under, and caused Seller and its Affiliates to be released from, any London Lease Agreement, (i) Purchasers shall continue to use commercially reasonable efforts to cause itself or one of its Affiliates to be substituted for Seller and any of its Affiliates, and for Sellers and any of its Affiliates to be released, in respect of all obligations of Seller and any of its Affiliates under each London Lease Agreement and (ii) Purchasers shall indemnify and hold harmless Seller and its Affiliates against any Damages that Seller or any of its Affiliates suffer, incur or are liable for by reason of or arising out of or in consequence of the London Lease Agreements.

SECTION 6.12 Preservation of Privilege . Recognizing that Shearman & Sterling LLP (" Shearman ") has acted as legal counsel to Seller and its Affiliates (including the Trayport Companies) in connection with the negotiation, execution and delivery of this Agreement and the consummation of the Sale (the " Pre-Closing Representation "), and that Shearman intends to or may continue to act as legal counsel to Seller and its Affiliates after the Closing (which Affiliates shall not include the Trayport Companies after the Closing), the Parties hereby agree that after the Closing any attorney-client privilege attaching to communications between Seller, Seller's Affiliates or the Trayport Companies, on the one hand, and Shearman, on the other hand, to the extent such communications relate to the Pre-Closing Representation, shall belong to and be controlled by Seller, and following the Closing, none of Purchasers nor their Affiliates (which Affiliates shall include the Trayport Companies after the Closing) shall knowingly access any such privileged communications.

SECTION 6.13 Exclusivity . From the date of this Agreement until the earlier of (i) the Closing and (ii) the termination of this Agreement in accordance with its terms, Seller shall not, and Seller shall procure that its representatives, Affiliates (including the Trayport Companies) and Affiliates' representatives will not, directly or indirectly: (A) solicit, initiate, or encourage the submission of any proposal or offer from any Person relating to, or enter into or consummate any transaction relating to, the acquisition of any Securities in the Trayport Companies or any merger, recapitalization, share exchange, sale of all or substantially all of the Trayport Companies' assets (other than sales of inventory in the Ordinary Course) or any similar transaction or any other alternative to the Sale or (B) participate in any substantive discussions or negotiations regarding, furnish any information with respect to, assist or participate in, or facilitate in any other manner, any effort or attempt by any Person to do or seek any of the foregoing. Seller shall, and shall cause its Affiliates and its and their Affiliates' representatives

to, immediately discontinue any conduct that would if continued after the date hereof violate any aspect of the immediately preceding sentence.

SECTION 6.14 U.K. Equity Interests. Effective as of and conditioned upon the Closing, except as otherwise expressly set forth herein, Seller hereby waives, and agrees not to exercise or assert, (a) any and all rights such Seller has attached or accruing to the U.K. Equity Interests, including the right to receive all dividends, distributions or any return of capital declared, paid or made by Trayport Holdings Limited on or after the Closing, and (b) any and all rights of pre-emption over any of the U.K. Equity Interests conferred upon it by the articles of association of Trayport Holdings Limited.

SECTION 6.15 Notification of Certain Matters. From the date of this Agreement until the earlier of the Closing Date and the termination of this Agreement in accordance with its terms, Seller shall promptly deliver to Purchasers notice (including a reasonably detailed description) of any fact, circumstance or development that constitutes (or would reasonably be expected to constitute or result in) any breach of any representation, warranty or covenant set forth herein that would result in the non-satisfaction of any condition set forth in Article VII. No such notice shall be deemed to avoid or cure any breach of representation, warranty or covenant or constitute an amendment of any representation, warranty, covenant or condition in this Agreement or the Seller Disclosure Letter.

SECTION 6.16 Assignment of Rights Under 2015 SPA.

(a) Effective as of immediately prior to the Closing, Seller shall assign (or cause to be assigned) to Trayport Holdings Limited all of Seller's and Seller's Affiliates' rights under Section 6.2(c) of the 2015 SPA pursuant to the Assignment Agreement.

(b) Purchasers acknowledge that, notwithstanding entry into the Assignment Agreement pursuant to Section 6.16(a), neither Seller nor any of its Affiliates makes (or shall be deemed to have made) any representation, warranty or assurance regarding the validity, legality or enforceability of the Assignment Agreement or the ability of Trayport Holdings Limited to enforce any of Seller's or its Affiliates' rights under the 2015 SPA.

ARTICLE VII

CONDITIONS PRECEDENT

SECTION 7.1 Conditions of All Parties to Closing. The respective obligations of each Party hereunder to consummate the Sale shall be subject to the fulfillment (or, if legally permissible, mutual waiver by Seller and Purchasers), prior to or at the Closing, of each of the following conditions:

(a) No Injunction . No Order that prohibits the consummation of the Sale shall have been entered and shall continue to be in effect.

(b) NGX Agreement . All conditions required to be satisfied pursuant to Article VII of the NGX Agreement shall have been either satisfied (other than those conditions that by their nature are to be satisfied at the Closing (as defined in the NGX Agreement)) or waived (if permissible); provided that, if the foregoing condition described in this Section 7.1(b) has not been satisfied or waived prior to the NGX Long Stop Date, then, upon written notice of Seller to Purchasers or of Purchasers to Seller at any time from and including the NGX Long Stop Date, such condition shall be deemed to be deleted from this Section 7.1 with effect from receipt of such notice by Purchasers or Seller, as the case may be.

SECTION 7.2 Conditions to Obligations of Purchasers to Close . Purchasers' obligation to effect the Sale is subject to the satisfaction (or waiver by Purchasers in their sole discretion), prior to or at the Closing, of each of the following conditions:

(a) (i) The representations and warranties of Seller contained in Section 4.3(a) shall be true and correct except for any *de minimis* inaccuracies as of the date hereof and as of the Closing Date as though made on and as of the Closing Date, (ii) the representations and warranties of Seller contained in Section 4.1(a) , Section 4.3(b) , Section 4.3(c) and Section 4.4 (without giving effect to any limitation as to "materiality," "Material Adverse Effect" or similar materiality qualifiers set forth therein) shall be true and correct in all material respects as of the date hereof and as of the Closing Date as though made on and as of the Closing Date and (iii) the other representations and warranties of Seller contained in Article IV shall be true and correct (without giving effect to any limitation as to "materiality," "Material Adverse Effect" or similar materiality qualifiers set forth therein) as of the date hereof and as of the Closing Date as though made on and as of the Closing Date (except that those representations and warranties which address matters only as of a particular date shall be true and correct only as of such particular date), except in the case of this clause (iii), where the failure to be so true and correct would not have, and would not reasonably be expected to have, a Business Material Adverse Effect.

(b) The covenants and agreements of Seller to be complied with on or prior to the Closing pursuant to the terms of this Agreement shall have been complied with in all material respects.

(c) Purchasers shall have received at the Closing a certificate dated the Closing Date and validly executed on behalf of Seller by an appropriate executive officer of Seller certifying that the conditions specified in Section 7.2(a) and Section 7.2(b) have been satisfied.

(d) Purchasers shall have received at the Closing all of the items listed in Section 3.4 .

(e) Since the date of this Agreement, there has not been a Business Material Adverse Effect.

SECTION 7.3 Conditions to Obligations of Seller to Close . The obligation of Seller to effect the Sale is subject to the satisfaction (or waiver by Seller in its sole discretion), prior to or at the Closing, of each of the following conditions:

(a) (i) The representations and warranties of Purchasers contained in Section 5.1(a) and Section 5.2 (without giving effect to any limitation as to "materiality," "Material Adverse Effect" or similar materiality qualifiers set forth therein) shall be true and correct in all material respects as of the date hereof and as of the Closing Date as though made on and as of the Closing Date and (ii) the other representations and warranties of Purchasers contained in this Agreement shall be true and correct (without giving effect to any limitation as to "materiality," "Material Adverse Effect" or similar materiality qualifiers set forth therein) as of the date hereof and as of the Closing Date as though made on and as of the Closing Date (except that those representations and warranties which address matters only as of a particular date shall be true and correct as of such particular date) , except in the case of this clause (ii), where the failure to be so true and correct would not have, and would not reasonably be expected to have, a Purchaser Material Adverse Effect.

(b) The covenants and agreements of Purchasers to be complied with on or prior to Closing pursuant to the terms of this Agreement shall have been complied with in all material respects.

(c) Seller shall have received at the Closing a certificate dated the Closing Date and validly executed on behalf of Purchasers by an appropriate executive officer of Purchasers certifying that the conditions specified in Section 7.3(a) and Section 7.3(b) have been satisfied.

(d) Seller shall have received at the Closing all of the items listed in Section 3.5 .

(e) Since the date of this Agreement, there has not been a Purchaser Material Adverse Effect.

ARTICLE VIII

TAX MATTERS

SECTION 8.1 Tax Indemnification .

(a) Except to the extent specifically reflected as a Tax liability in the determination of the Closing Working Capital, Seller covenants to pay or cause to be paid an amount equal to, or shall be liable for, and shall indemnify, defend and hold Purchasers and their Affiliates (including the Trayport Companies after the Closing Date) harmless from and against (i) any liability for Excluded Taxes, including any reasonable out-of-pocket fees, costs and expenses of any outside attorneys, accountants or other external tax advisors with respect to any Excluded Taxes, and (ii) any and all Damages incurred by Purchasers or any of their Affiliates to

the extent arising out of or resulting from the breach of an agreement or covenant made in this Article VIII by Seller.

(b) Purchasers covenant to pay or cause to be paid an amount equal to, or shall be liable for, and shall indemnify, defend and hold Seller and its Affiliates harmless from and against (i) any and all liabilities for Taxes with respect to the Trayport Companies other than Excluded Taxes that are the responsibility of Seller under Section 8.1(a), including any reasonable out-of-pocket fees, costs and expenses of any outside attorneys, accountants or other external tax advisors with respect thereto, and (ii) any and all Damages incurred by Seller or any of its Affiliates to the extent arising out of or resulting from the breach of an agreement or covenant made in this Article VIII by Purchasers.

(c) Payment in full of any amount due from Seller or Purchasers under this Section 8.1 shall be made to the affected party in immediately available funds within fifteen (15) days after written demand is made for such payment; provided, however, that no such amounts due are required to be paid prior to three (3) Business Days before such amounts are required to be paid to the relevant Taxing Authority.

SECTION 8.2 Preparation and Filing of Tax Returns.

(a) Seller shall timely prepare or shall cause to be timely prepared (i) any combined, consolidated or unitary Tax Return that includes Seller or any of its Affiliates and (ii) any Tax Return of any Trayport Company for any taxable period that ends on or before the Closing Date. Subject to Section 8.5, Seller shall deliver to Purchasers for their review, comment and approval (which approval shall not be unreasonably withheld) a copy of such proposed Tax Return (x) in the case of Tax Returns prepared less frequently than on a quarterly basis, at least ten (10) Business Days prior to the due date (giving effect to any validly obtained extension thereof) and (y) in the case of Tax Returns prepared on a quarterly or more frequent basis, at least five (5) Business Days prior to the due date thereof (giving effect to any validly obtained extension thereof). Seller shall timely file or shall cause to be timely filed any Tax Return described in clause (i) of the first sentence of this Section 8.2(a) and shall deliver to Purchasers, and Purchasers shall timely file or cause to be timely filed in the manner prepared by Seller, any Tax Returns described in clause (ii) of the first sentence of this Section 8.2(a). Except to the extent specifically reflected as a Tax liability in the determination of the Closing Working Capital, Seller shall pay, or cause to be paid, to the appropriate Taxing Authority any amounts shown as due on the Tax Returns described in this Section 8.2(a).

(b) Purchasers shall, except to the extent that such Tax Returns are the responsibility of Seller under Section 8.2(a), timely prepare and file or shall cause to be timely prepared and filed all Tax Returns with respect to any Trayport Company.

(c) For any Straddle Period Tax Return of any Trayport Company that is the responsibility of Purchasers under Section 8.2(b), (1) such Straddle Period Tax Returns shall be prepared consistent with the past practice of the Trayport Companies immediately prior to the Closing Date, and (2) Purchasers shall deliver to Seller for its review, comment and approval (which approval shall not be unreasonably withheld) a copy of such proposed Tax Return

(accompanied by an allocation between the Pre-Closing Period and the Post-Closing Period of the Taxes shown to be due on such Tax Return) (i) in the case of Tax Returns prepared less frequently than on a quarterly basis, at least ten (10) Business Days prior to the due date (giving effect to any validly obtained extension thereof) and (ii) in the case of Tax Returns prepared on a quarterly or more frequent basis, at least five (5) Business Days prior to the due date thereof (giving effect to any validly obtained extension thereof). Seller shall pay to Purchasers the amount of Taxes shown as due on such Tax Returns that are Excluded Taxes within three (3) Business Days of the due date of such Tax Returns.

(d) Except to the extent required by applicable Law, Purchasers shall not, and shall cause its Subsidiaries not to, amend any Tax Return of any Trayport Company for any Pre-Closing Period or for any Straddle Period without the consent of Seller, which consent shall not be unreasonably withheld, conditioned or delayed.

SECTION 8.3 Refunds, Credits and Carrybacks .

(a) Subject to Section 8.3(c) , Seller shall be entitled to any refunds or credits of or against any Excluded Taxes actually received by Purchasers or the Trayport Companies, net of any Taxes or other reasonable out-of-pocket fees, costs and expenses of any outside attorneys, accountants or external other tax advisors with respect to any such refunds or credits, except to the extent such refund or credit is reflected in the determination of Closing Working Capital. Any such Tax refunds or credits for a Straddle Period shall be apportioned between the Pre-Closing Period and the Post-Closing Period pursuant to the principles described in the definition of Excluded Taxes for allocating Taxes with respect to a Straddle Period. Purchasers shall be entitled to any refunds or credits of or against any Taxes other than refunds or credits of or against Excluded Taxes that are described in the first sentence of this Section 8.3(a) .

(b) Purchasers shall, and shall cause the Trayport Companies to, promptly forward to Seller or to reimburse Seller for any refunds or credits due Seller (pursuant to the terms of this Article VIII) after receipt thereof, and Seller shall promptly forward to Purchasers or reimburse Purchasers for any refunds or credits due Purchasers (pursuant to the terms of this Article VIII) after receipt thereof.

(c) Purchasers agree that, to the extent permitted by law, none of the Trayport Companies shall elect to carry back any item of loss, deduction or credit which arises in any taxable period ending after the Closing Date (" Subsequent Loss ") into any taxable period ending on or before the Closing Date. If a Subsequent Loss is carried back into any taxable period ending on or before the Closing Date, (i) Seller shall be entitled to any refund of Taxes realized as a result thereof to the extent such Subsequent Loss relates to or affects any Excluded Taxes or that is carried back to a Seller Group Tax Return and (ii) Purchasers shall be entitled to any other refund of Taxes resulting from such Subsequent Loss.

Section 8.4 Tax Contests .

(a) If any Taxing Authority asserts a Tax Claim, then the Party first receiving notice of such Tax Claim promptly shall provide written notice thereof to the other Parties;

provided, however, that the failure of such Party to give such prompt notice shall not relieve the other Party of any of its obligations under this Article VIII , except to the extent that the other Party is actually prejudiced thereby. Such notice shall specify in reasonable detail the basis for such Tax Claim and shall include a copy of the relevant portion of any correspondence received from the Taxing Authority.

(b) Seller shall have the right to control, at its own expense, any audit, examination, contest, litigation or other proceeding by or against any Taxing Authority (a " Tax Proceeding ") in respect of any Trayport Company that relates solely to a taxable period that ends on or before the Closing Date; provided , however , that (i) Seller shall provide Purchasers with a timely and reasonably detailed account of each stage of such Tax Proceeding, (ii) Seller shall consult with Purchasers and offer Purchasers an opportunity to comment before submitting any written materials prepared or furnished in connection with such Tax Proceeding, (iii) Seller shall defend such Tax Proceeding diligently and in good faith as if they were the only party in interest in connection with such Tax Proceeding, (iv) Purchasers shall be entitled to participate, at its own expense, in such Tax Proceeding and receive copies of any written materials relating to such Tax Proceeding received from the relevant Taxing Authority, and (v) Seller shall not settle, compromise or abandon any such Tax Proceeding without obtaining the prior written consent of Purchasers, which consent shall not be unreasonably withheld.

(c) In the case of a Tax Proceeding for a Straddle Period of any Trayport Company, the Controlling Party shall have the right to control, at its own expense, such Tax Proceeding; provided , however , that (i) the Controlling Party shall provide the Non-controlling Party with a timely and reasonably detailed account of each stage of such Tax Proceeding, (ii) the Controlling Party shall consult with the Non-controlling Party and offer the Non-controlling Party an opportunity to comment before submitting any written materials prepared or furnished in connection with such Tax Proceeding, (iii) the Controlling Party shall defend such Tax Proceeding diligently and in good faith as if it were the only party in interest in connection with such Tax Proceeding, (iv) the Non-controlling Party shall be entitled to participate in such Tax Proceeding, at its own expense, if such Tax Proceeding could have an adverse impact on the Non-controlling Party or any of its Affiliates, and (v) the Controlling Party shall not settle, compromise or abandon any such Tax Proceeding without obtaining the prior written consent, which consent shall not be unreasonably withheld, of the Non-controlling Party if such settlement, compromise or abandonment could have an adverse impact on the Non-controlling Party or any of its Affiliates. " Controlling Party " shall mean whichever of Seller (on the one hand) or Purchasers (on the other hand) are reasonably expected to bear the greater Tax liability in connection with a Straddle Period Tax Proceeding, and " Non-controlling Party " shall mean whichever of Seller (on the one hand) or Purchasers (on the other hand) are not the Controlling Party with respect to such Straddle Period Tax Proceeding.

(d) Purchasers shall have the right to control, at their own expense, any Tax Proceeding involving any Trayport Company (other than any Tax Proceeding described in Section 8.4(b) or Section 8.4(c)).

(e) Purchasers shall not make any voluntary disclosure or initiate any discussions or examinations with any Taxing Authority, in each case with respect to Taxes of any Trayport Company for any taxable period that ends on or before the Closing Date without the prior written consent of Seller.

Section 8.5 Seller Consolidated Returns. Notwithstanding any other provision of this Agreement, (a) Seller shall, subject to this Section 8.5, be entitled to control in all respects, and neither Purchasers nor any of their Affiliates shall be entitled to participate in, any Tax Proceeding with respect to any consolidated, combined or unitary Tax Return that includes Seller and (b) Seller shall not be required to provide any Person with any consolidated, combined or unitary Tax Return or copy thereof that includes Seller; provided, however, that to the extent that such Tax Returns would be required to be delivered to Purchasers and would be subject to Purchasers' review and approval pursuant to this Agreement but for this Section 8.5, the Person that would be required to deliver such Tax Returns shall instead deliver pro forma Tax Returns relating solely to the relevant Trayport Company and allow Purchasers to review and approve such pro forma Tax Returns (such approval not to be unreasonably withheld), and Seller shall reflect Purchasers' reasonable comments to such pro forma Tax Returns on the Tax Returns actually filed with Taxing Authorities.

Section 8.6 Cooperation. Each Party shall, and shall cause its Affiliates to, provide to the other Party such cooperation, documentation and information as either of them reasonably may request in (a) filing any Tax Return, amended Tax Return or claim for refund, (b) determining a liability for Taxes or an indemnity obligation under this Article VIII or a right to refund of Taxes, (c) conducting any Tax Proceeding, or (d) determining an allocation of Taxes between a Pre-Closing Period and Post-Closing Period. Such cooperation and information shall include providing copies of all relevant portions of relevant Tax Returns, together with all relevant portions of relevant accompanying schedules and relevant work papers, relevant documents relating to rulings or other determinations by Taxing Authorities and relevant records concerning the ownership and Tax basis of property and other information, which any such Party may possess. Each Party will retain all Tax Returns, schedules and work papers, and all material records and other documents relating to Tax matters, of the relevant entities for their respective Tax periods ending on or prior to the Closing Date until the later of (A) the expiration of the statute of limitations for the Tax periods to which the Tax Returns and other documents relate or (B) ten years following the due date (without extension) for such Tax Returns. Thereafter, the Party holding such Tax Returns or other documents may dispose of them after offering the other Party reasonable notice and opportunity to take possession of such Tax Returns and other documents at such other Party's own expense. Each Party shall make its employees reasonably available on a mutually convenient basis at its cost to provide explanation of any documents or information so provided.

Section 8.7 Tax Sharing Agreements. Anything in this Agreement or any other agreement to the contrary notwithstanding, all liabilities and obligations (a) between Seller or any of its Affiliates (other than the Trayport Companies) on the one hand and the Trayport Companies on the other hand, or (b) at the request of Purchasers, between any of the Trayport

Companies under any Tax allocation or Tax sharing agreement in effect prior to the Closing Date (other than this Agreement) shall cease and terminate as of the Closing Date as to all past, present and future taxable periods, and the Trayport Companies shall thereafter not be bound thereby or have any liability thereunder and all powers of attorney of the Trayport Companies with respect to Taxes shall be terminated as of the Closing Date and shall be of no further force of effect.

Section 8.8 Timing Differences.

(a) Purchasers agree that if (i) there is an audit adjustment (or adjustment in any other Tax Proceeding) made with respect to any Tax Item by any Taxing Authority with respect to Taxes for which Seller is liable or responsible (and which liability is actually satisfied by Seller), and (ii) as a result of such adjustment, Purchasers, the Trayport Companies or any of their respective Subsidiaries or Affiliates receives in a Post-Closing Period an actual reduction in cash Tax liability or any Tax refund in cash, in each case, in or prior to the taxable year in which the audit or other Tax Proceeding is concluded or in the succeeding two taxable years, then Purchasers shall pay to Seller the amount of such reduction or refund within fifteen (15) days of filing the Tax Return in which such reduction or refund is actually realized, except to the extent such reduction or refund is reflected in the determination of Closing Working Capital.

(b) If Purchasers, the Trayport Companies or any of their respective Subsidiaries or Affiliates receives in a Post-Closing Period an actual reduction in cash Tax liability or any Tax refund in cash arising from any deduction arising in respect of any Trayport Transaction Expenses that are borne or paid by Seller, Purchasers acknowledge and agree that they will pay Seller the amount of any such reduction or refund that results from such deduction on a Tax Return of Purchasers or any of their Affiliates (including the Trayport Companies) in or prior to the taxable year in which the applicable Trayport Transaction Expense is paid or in the succeeding two taxable years, which amount shall be paid to Seller within fifteen (15) days of filing the Tax Return in which such reduction or refund is actually realized, except to the extent such reduction or refund is reflected in the computation of Closing Working Capital and increases the Closing Purchase Price.

Section 8.9 Tax Treatment of Payments. Seller, Purchasers and their respective Affiliates shall treat any and all payments under this Agreement (including for breach of warranty or representation) as an adjustment to the Closing Purchase Price for Tax purposes unless they are required to treat such payments otherwise by applicable Tax Laws. Accordingly, any reference in this Agreement to an indemnity in respect of a liability for the Trayport Entities (or their Subsidiaries) or any obligation of the Parties to make a payment in respect of the Trayport Entities (or their Subsidiaries) shall be construed as a reference to a covenant by Seller (for itself and on behalf of its Affiliates) to pay Purchasers (for itself and on behalf of its Affiliates) an amount equal to such liability or payment.

Section 8.10 Sales and Transfer Taxes. Purchasers shall pay and be responsible for all sales, use, value-added, business, goods and services, transfer, stamp duty (including UK stamp duty), documentary, conveyancing or similar taxes or expenses that may be imposed as a result of the Sale, together with any and all penalties, interest and additions to tax

with respect thereto (" Transfer Taxes "), and Seller and Purchasers shall cooperate in timely making all filings, returns, reports and forms as may be required to comply with the provisions of such Tax Laws.

ARTICLE IX

TERMINATION

Section 9.1 Termination . This Agreement may be terminated and the transactions contemplated hereby may be abandoned at any time prior to the Closing:

(a) by the mutual written consent of Purchasers and Seller;

(b) (i) by either Purchasers or Seller, upon written notification to the non-terminating Party by the terminating Party, if any Order permanently prohibiting consummation of the Sale shall have been issued and shall have become final and non-appealable or (ii) by Seller, upon written notification to Purchasers by Seller, if a Governmental Authority issues an Order that prohibits the consummation of the Sale (other than where such Order is of an interim or temporary nature), and Purchasers do not seek to overturn such Order within thirty (30) days of its issuance; provided , however , that a Party shall not have the right to terminate this Agreement pursuant to this Section 9.1(b) if the failure by such Party or of any of its Affiliates to perform any of its material covenants or obligation under this Agreement has been the cause of, or has resulted in, such Order;

(c) by either Purchaser or Seller, if the Closing has not occurred by December 31, 2017 (the " Outside Date "); provided , however , that neither Purchaser nor Seller shall have the right to terminate this Agreement pursuant to this Section 9.1(c) if its failure to perform or breach of any of its material covenants, representations, warranties or obligations under this Agreement has been the cause of, or has resulted in, the failure of the Sale to occur on or before such date;

(d) by Seller, if Purchasers shall have breached any of its representations, warranties, covenants or agreements contained in this Agreement that would give rise to the failure of a condition set forth in Section 7.3(a) or Section 7.3(b) , which breach cannot be or has not been cured within thirty (30) Business Days after the giving of written notice by Seller to Purchasers specifying such breach (provided that in no event shall such 30 Business Day period extend beyond the Outside Date and provided that Seller is not then in material breach of any of its representations, warranties, covenants or agreements contained in this Agreement);

(e) by Purchasers, if Seller shall have breached any of its representations, warranties, covenants or agreements contained in this Agreement that would give rise to the failure of a condition set forth in Section 7.2(a) or Section 7.2(b) , which breach cannot be or has not been cured within thirty (30) Business Days after the giving of written notice by Purchasers to Seller specifying such breach (provided that in no event shall such 30 Business Day period

extend beyond the Outside Date and provided that Purchasers are not then in material breach of any of its representations, warranties, covenants or agreements contained in this Agreement); or

(f) by Seller, if the Closing has not occurred on or prior to the fifth (5th) Business Day following the date that the Closing should have occurred pursuant to Section 3.1 other than as a result of the failure of Seller to deliver any of the closing deliveries specified in Section 3.4.

Section 9.2 Effect of Termination. If this Agreement is terminated, no Party (or any of its Affiliates, directors, officers, representatives or agents) will have any liability to any other Party to this Agreement, except for any liability arising out of any knowing or willful breach of this Agreement (which shall in all circumstances include a Party's failure to consummate the Closing on the date that the Closing should have occurred pursuant to Section 3.1) prior to such termination and except for the obligations set forth in Section 6.3(c)(i), this Section 9.2 and Article X, which shall survive termination. For the avoidance of doubt, in the event of any breach of Purchasers' obligation to consummate the Closing, Purchasers' liability will include any Damages (including any diminution in value of the Trayport Companies) suffered by Seller and its Affiliates as a result of the failure of the Closing to occur or any resulting violation of the Final CMA Order.

ARTICLE X

MISCELLANEOUS

Section 10.1 Payments. Any payments to be made under this Agreement shall be made by wire transfer in British pounds sterling (with amounts denominated in currencies other than British pounds sterling being converted to British pounds sterling in accordance with Section 1.2(d)) on the relevant due date with value on that date in immediately available funds and without deducting costs. Payments to Seller shall be made to the bank account or accounts hereafter designated by Seller to Purchasers (such account or accounts, the "Seller's Bank Account") and payments to Purchasers shall be made to such bank account or accounts hereafter designated by Purchasers to Seller.

Section 10.2 Notices. All notices, demands, and other communications required or permitted to be given to any Party under this Agreement shall be in writing and any such notice, demand or other communication shall be deemed to have been duly given when delivered by hand, courier or overnight delivery service or, if mailed, two (2) Business Days after deposit in the mail, certified or registered mail, return receipt requested and with first-class postage prepaid, or, if sent by electronic mail, when sent if confirmed by reply electronic mail that is not automated, or, in the case of facsimile notice, when sent and transmission is confirmed, and, regardless of method, addressed to the Party at its address or facsimile number set forth below (or at such other address or facsimile number as the Party shall furnish the other Parties in accordance with this Section 10.2):

(a) If to Seller or Guarantor:

IntercontinentalExchange International, Inc.
5560 New Northside Drive
Atlanta, GA 30328
Attn: General Counsel
Email: legal-notices@theice.com

With a copy (which shall not constitute notice) to:

Shearman & Sterling LLP
599 Lexington Avenue
New York, New York 10022
Attn: Rory O'Halloran
Email: Rory.O'Halloran@Shearman.com
Facsimile: (212) 848-7179

(b) If to Purchasers:

TMX Group Limited
The Exchange Tower
130 King Street West
Toronto, Ontario, M5X 1J2
CANADA
Attn: Legal, Risk and Government Affairs
Email: legal@tmx.com
Facsimile: (416) 947-4461

With a copy (which shall not constitute notice) to:

Wilmer Cutler Pickering Hale and Dorr LLP
1875 Pennsylvania Avenue, NW
Washington, DC 20006
Attn: Stephanie C. Evans
Email: Stephanie.Evans@wilmerhale.com
Facsimile: (202) 663-6363

Section 10.3 Survival of Representations and Warranties and Covenants .

(a) The representations and warranties set forth in Article IV and Article V shall terminate effective as of the Closing and shall not survive the Closing for any purpose, and thereafter there shall be no liability on the part of, nor shall any claim (whether predicated on breach of contract, warranty, tortious conduct, common law, statute, strict liability or otherwise) be made by, any Party or any of their respective Affiliates in respect thereof or (except as provided for in the last sentence of Section 10.3(b) regarding covenants and agreements

contemplating action (or inaction) following the Closing) otherwise in respect of or in connection with this Agreement or transactions contemplated hereby.

(b) After the Closing, there shall be no liability on the part of, nor shall any claim be made by, any Party or any of their respective Affiliates in respect of any covenant or agreement to be performed prior to the Closing. The covenants and agreements that contemplate actions (or inaction) to be taken (or not taken) after the Closing shall survive in accordance with their terms.

(c) For the avoidance of doubt, this Section 10.3 shall not in any way limit Purchasers' rights to indemnification under Article VIII .

Section 10.4 Governing Law . This Agreement shall be governed by and construed in accordance with the laws of the State of New York applicable to agreements made and to be performed entirely within such State, without regard to the conflict of laws principles of such State (other than §§ 5-1401 and 5-1402 of the New York General Obligations Law).

Section 10.5 Jurisdiction; Venue; Consent to Service of Process .

(a) Each Party hereby irrevocably and unconditionally submits, for itself and its property, to the exclusive jurisdiction of courts of the State of New York, County of New York, including the federal courts located therein, should federal jurisdiction requirements exist for any action arising out of or relating to this Agreement. Each of the Parties consents to the jurisdiction of such courts (and of the appropriate appellate courts) in any such action or proceeding and waives any objection to venue laid therein. In addition, each of the Parties irrevocably and unconditionally waives and agrees not to assert by way of motion, as a defense or otherwise (i) any claim that it is not subject to the jurisdiction of the above courts, (ii) that its property is exempt or immune from attachment or execution in any such action or proceeding in the above-named courts, (iii) that such action or proceeding is brought in an inconvenient forum, and (iv) that such action or proceeding should be transferred or removed to any court other than one of the above-named courts, or should be stayed by reason of the pendency of some other proceeding in any other court other than one of the above-named courts, or that this Agreement or the subject matter hereof may not be enforced in or by such courts. Each of the Parties hereby agrees not to commence any such action or proceeding other than before one of the above-named courts. Each of the Parties also hereby agrees that any final and non-appealable judgment against a Party in connection with any such action or proceeding shall be conclusive and binding on such Party and that such judgment may be enforced in any court of competent jurisdiction, either within or outside of the United States. A certified or exemplified copy of such award or judgment shall be conclusive evidence of the fact and amount of such award or judgment. The foregoing consent to jurisdiction shall not (A) constitute submission to jurisdiction or general consent to service of process in the State of New York, County of New York, for any purpose except with respect to any action or proceeding resulting from, relating to or arising out of this Agreement or (B) be deemed to confer rights on any Person other than the respective Parties to this Agreement.

(b) To the extent that any Party has or hereafter may acquire any immunity from jurisdiction of any court or from any legal process (whether through service or notice, attachment prior to judgment, attachment in aid of execution, execution or otherwise) with respect to itself or its property, each of such Seller or Purchaser hereby irrevocably waives such immunity in respect of its obligations with respect to this Agreement.

(c) Each Party irrevocably consents to service of process in the manner provided for the giving of notices pursuant to Section 10.2 of this Agreement. Nothing in this Section 10.5 shall affect the right of any Party to serve process in any other manner permitted by Law.

Section 10.6 Counterparts . This Agreement may be executed in two or more counterparts, each of which shall be an original, with the same effect as if the signatures thereto and hereto were upon the same instrument, and shall become effective when one or more counterparts have been signed by each of the Parties and delivered (by telecopy, electronic delivery or otherwise) to the other Parties. Signatures to this Agreement transmitted by facsimile transmission, by electronic mail in "portable document format" (".pdf") form, or by any other electronic means intended to preserve the original graphic and pictorial appearance of a document, will have the same effect as physical delivery of the paper document bearing the original signature.

Section 10.7 Entire Agreement . This Agreement, together with the NGX Agreement, the Related Agreements, the Disclosure Letters and the Non-Disclosure Agreement and all annexes and exhibits hereto and thereto, embody the entire agreement of the Parties with respect to the subject matter hereof and supersede all prior agreements with respect thereto.

Section 10.8 Amendment, Modification and Waiver . No amendment to this Agreement shall be effective unless it shall be in writing and signed by each Party. Any failure of a Party to comply with any obligation, covenant, agreement or condition contained in this Agreement may be waived by the Party entitled to the benefits thereof only by a written instrument duly executed and delivered by the Party granting such waiver, but such waiver or failure to insist upon strict compliance with such obligation, covenant, agreement or condition shall not operate as a waiver of, or estoppel with respect to, any prior, subsequent or other failure of compliance.

Section 10.9 Severability . If any provision of this Agreement or the application of any such provision is invalid, illegal or unenforceable in any jurisdiction, such invalidity, illegality or unenforceability shall not affect any other provision of this Agreement or invalidate or render unenforceable such provision in any other jurisdiction. In the event that any provision hereof would be invalid, illegal or unenforceable, to the extent permitted by applicable Law, the Parties intend that such provision will be construed by modifying or limiting it so as to be valid and enforceable to the maximum extent compatible with, and possible under, applicable Law, and the Parties agree, to the extent lawful and practicable, to use their reasonable efforts to enter into arrangements to reinstate the intended benefits, net of the intended burdens, of any such provision held invalid, illegal or unenforceable.

Section 10.10 Successors and Assigns; No Third-Party Beneficiaries . This Agreement and all its provisions shall be binding solely upon and inure solely to the benefit of the Parties and their respective permitted successors and assigns, each of which such successors and permitted assigns will be deemed to be a party hereto for all purposes hereof. Nothing in this Agreement, whether expressed or implied, will confer on any Person, other than the Parties or their respective permitted successors and assigns, any rights, remedies or Liabilities; provided , that (a) the provisions of Section 6.10 will inure to the benefit of the D&O Indemnified Persons and (b) the provisions of Section 6.10(a) will inure to the benefit of Seller's Affiliates. No Party may assign its rights or obligations under this Agreement without the prior written consent of the other Parties and any purported assignment without such consent shall be void; provided , that each Purchaser may, without the consent of Seller, assign any or all of its rights or obligations hereunder to any of its Subsidiaries that is wholly owned by such Purchaser (although no such assignment shall relieve Purchasers of their obligations to Seller). For the avoidance of doubt, the amalgamation or merger (whether forward or reverse) of any Party to this Agreement with one or more Affiliates of such Party shall not constitute an assignment for purposes of this Section 10.10 .

Section 10.11 Publicity . With respect to any information in respect of the transactions contemplated hereby which shall not have been previously issued or disclosed, except as required by Law (including the rules and regulations of any applicable stock exchange), each of Seller and Purchasers agree that neither it nor any of its Affiliates will issue a press release or make any other public statement or release any public communication with respect thereto without the prior consultation with the other Party. Purchasers and Seller agree, to the extent possible and legally permissible, to notify, cooperate and consult with, the other Party prior to issuing or making any such public statement (and be provided a reasonable opportunity to comment on such public statement).

Section 10.12 WAIVER OF JURY TRIAL . TO THE FULLEST EXTENT PERMITTED BY LAW, EACH OF THE PARTIES IRREVOCABLY WAIVES ALL RIGHT TO TRIAL BY JURY IN ANY ACTION, SUIT, PROCEEDING OR COUNTERCLAIM ARISING OUT OF, IN WHOLE OR IN PART, OR RELATING TO THIS AGREEMENT OR ANY OF THE SALE.

Section 10.13 Expenses . Except as otherwise expressly stated in this Agreement, any costs, expenses, or charges incurred by any of the Parties shall be borne by the Party incurring such cost, expense or charge, in each case, whether or not the transactions contemplated hereby shall be consummated. Except as otherwise provided herein, if the Sale is consummated, all costs, expenses and charges incurred and payable by any of the Trayport Companies in connection with the negotiation, preparation, execution and delivery of this Agreement and the Related Agreements and the consummation of the Sale will be Trayport Transaction Expenses.

Section 10.14 Specific Performance and Other Equitable Relief . The Parties hereby expressly recognize and acknowledge that immediate, extensive and irreparable damage would result, no adequate remedy at law would exist and damages would be difficult to

determine if any provision of this Agreement is not performed in accordance with its specific terms or is otherwise breached. Each Party further acknowledges that a breach or violation of this Agreement cannot be sufficiently remedied by money damages alone and, accordingly, each Party shall be entitled, without the need to post a bond or other security, in addition to damages and any other remedies provided at law or in equity, to specific performance, injunctive and other equitable relief to enforce or prevent any violation. Each Party agrees not to oppose the granting of such equitable relief, and to waive, and to cause its representatives to waive, any requirement for the securing or posting of any bond in connection with such remedy.

Section 10.15 Guarantee .

(a) As a material inducement to Purchasers to enter into this Agreement and in recognition of substantial direct and indirect benefits to Guarantor therefrom, Guarantor hereby absolutely, irrevocably and unconditionally guarantees to Purchasers the due and punctual performance by Seller of all of Seller's obligations and liabilities under or in respect of this Agreement including all of Seller's payment obligations hereunder and any obligations or liabilities of Seller arising from any breach of this Agreement. Guarantor's liabilities hereunder are absolute, unconditional, irrevocable and continuing irrespective of any modification, amendment or waiver of or any consent to departure from the terms and conditions of this Agreement that may be agreed to by Seller hereto in accordance with the terms of this Agreement. Guarantor agrees that its obligations hereunder shall not be released or discharged, in whole or in part, or otherwise affected by (i) the failure or delay on the part of Purchasers to assert any claim or demand or to enforce any right or remedy against Seller or (ii) any insolvency, bankruptcy, reorganization or other similar proceeding instituted by or against Seller. Notwithstanding anything to the contrary contained in this Section 10.15 or otherwise, Purchasers hereby agree that Guarantor shall have all defenses to its obligations under this guarantee that would be available to Seller in respect of this Agreement whether pursuant to the terms of this Agreement or pursuant to any applicable Law in connection therewith.

(b) As a material inducement to Seller to enter into this Agreement and in recognition of substantial direct and indirect benefits to TMX Group Limited therefrom, TMX Group Limited hereby absolutely, irrevocably and unconditionally guarantees to Seller the due and punctual performance by TMX Group US of all of TMX Group US's obligations and liabilities under or in respect of this Agreement including all of TMX Group US's payment obligations hereunder and any obligations or liabilities of TMX Group US arising from any breach of this Agreement. TMX Group Limited's liabilities hereunder are absolute, unconditional, irrevocable and continuing irrespective of any modification, amendment or waiver of or any consent to departure from the terms and conditions of this Agreement that may be agreed to by TMX Group US hereto in accordance with the terms of this Agreement. TMX Group Limited agrees that its obligations hereunder shall not be released or discharged, in whole or in part, or otherwise affected by (i) the failure or delay on the part of Seller to assert any claim or demand or to enforce any right or remedy against TMX Group US or (ii) any insolvency, bankruptcy, reorganization or other similar proceeding instituted by or against TMX Group US. Notwithstanding anything to the contrary contained in this Section 10.15 or otherwise, Seller hereby agrees that TMX Group Limited shall have all defenses to its obligations under this

guarantee that would be available to TMX Group US in respect of this Agreement whether pursuant to the terms of this Agreement or pursuant to any applicable Law in connection therewith.

Section 10.16 Joint and Several Liability of Purchasers . Purchasers shall be jointly and severally liable for all obligations of each Purchaser under this Agreement and the Transition Services Agreement.

[*Signature Pages Follow*]

IN WITNESS WHEREOF, each Party has caused this Stock Purchase Agreement to be duly executed on its behalf as of the day and year first above written.

INTERCONTINENTALEXCHANGE INTERNATIONAL, INC.

By: /s/ Scott A. Hill
Name: Scott A. Hill
Title: President

TMX GROUP LIMITED

By: /s/ Louis V. Eccleston
Name: Louis V. Eccleston
Title:

TMX GROUP US INC.

By: /s/ Jean Desgagné
Name: Jean Desgagné
Title: President

INTERCONTINENTAL EXCHANGE, INC.

By: /s/ Benjamin R. Jackson
Name: Benjamin R. Jackson
Title: Chief Commercial Officer

EXHIBIT 2.2

CONFORMED VERSION

STOCK PURCHASE AGREEMENT

BY AND AMONG

INTERCONTINENTAL EXCHANGE, INC.,

TMX GROUP INC.,

SHORCAN BROKERS LIMITED

AND,

solely for the purposes set forth in the preamble,

TMX GROUP LIMITED

DATED AS OF October 27, 2017

AND AMENDED AS OF December 13, 2017

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STOCK PURCHASE AGREEMENT

This **STOCK PURCHASE AGREEMENT** (this " Agreement ") is entered into as of October 27, 2017 by and among Intercontinental Exchange, Inc., a Delaware corporation (" Purchaser "), TMX Group Inc., a corporation organized under the Business Corporations Act (Ontario) (" TMX Group "), Shorcan Brokers Limited, a corporation organized under the Business Corporations Act (Ontario) (" Shorcan Brokers " and together with TMX Group, " Sellers " and each, a " Seller "), and, solely for the purposes set forth in Article X , TMX Group Limited, a corporation organized under the Business Corporations Act (Ontario) (" Guarantor ") (Sellers, together with Purchaser, and, solely for the purposes set forth in this preamble, Guarantor collectively, the " Parties, " and each, individually, a " Party ").

RECITALS

WHEREAS , on the terms and subject to the conditions set forth herein, Sellers shall sell, transfer and convey to Purchaser, and Purchaser shall purchase and acquire from Sellers, one hundred percent (100%) of the equity interests in (i) Natural Gas Exchange Inc., a corporation organized under the Business Corporations Act (Canada) (" NGX "), and (ii) Shorcan Energy Brokers Inc., a corporation organized under the Business Corporations Act (Ontario) (" Shorcan Energy Brokers " and, together with NGX, the " NGX/Shorcan Entities "); and

WHEREAS , simultaneously with the execution of this Agreement, Guarantor, TMX Group US Inc., IntercontinentalExchange International, Inc. and, solely for the purposes set forth in the preamble thereto, Purchaser have entered into that certain Stock Purchase Agreement (the " Trayport Agreement ") relating to the sale and purchase of the Trayport Equity Interests (as defined below).

NOW THEREFORE , in consideration of the mutual promises and covenants set forth below and for other good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, and intending to be legally bound, the Parties hereby agree as follows:

ARTICLE I

DEFINITIONS

SECTION 1.1 Certain Defined Terms . For the purposes of this Agreement, unless the context requires otherwise, the following terms shall have the following meanings:

" Accounting Principles " shall mean (i) the rules, principles and sample calculation of Working Capital set forth in Annex A and (ii) the accounting principles, policies and procedures used in preparing the Business Financial Information to the extent compliant with IFRS; provided , however , that in the event of any conflict among clauses (i) and (ii) of this definition, then clause (i) shall take precedence.

" Adjustment Amount " shall mean the amount (which may be a positive or negative number) equal to (i) the Closing Working Capital *minus* (ii) the Working Capital Target.

" Affiliate " shall mean with respect to any Person, any other Person that directly or indirectly, through one or more intermediaries, controls, is controlled by or is under common control with such first Person. The term "control" (including its correlative meanings "controlled by" and "under common control with") shall mean possession, directly or indirectly, of power to direct or cause the direction of management or policies (whether through ownership of securities or partnership or other ownership interests, by contract or otherwise); it being agreed that, for purposes of this Agreement, (A) the NGX/Shorcan Companies shall be Affiliates of Sellers prior to the Closing, but shall cease to be Affiliates of Sellers as of and after the Closing, and (B) the NGX/Shorcan Companies shall not be Affiliates of Purchaser prior to the Closing, but shall be Affiliates of Purchaser as of and after the Closing.

" ASC " shall mean the Alberta Securities Commission.

" Business " shall mean (a) in the case of NGX, the business of providing (i) electronic trading as an exchange recognized by the ASC and a CFTC-registered Foreign Board of Trade, (ii) central counterparty clearing services, as a clearing agency recognized by the ASC and a U.S.-registered derivatives clearing organization, both for such products and contracts in North American natural gas, crude oil and electricity as are listed on and cleared by NGX as provided in Schedule "D" of the NGX Contracting Party Agreement as of the date hereof, (iii) related scheduling of physical deliveries and (iv) related data services; (b) in the case of Shorcan Energy Brokers, the business of providing brokerage services to facilitate trading of crude oil products in North America; and (c) in the case of NGX and Shorcan Energy Brokers, the business of calculating and distributing indices and ownership of all corresponding oil, North American natural gas, power, electricity and any other energy indices, in each case, as conducted as of the date hereof.

" Business Day " shall mean any day other than a Saturday, Sunday or day on which banking institutions in New York or Toronto, Canada are authorized or obligated by Law or executive order to be closed.

" Business Employee " shall mean each of the individuals who, as of the Closing, is employed by any NGX/Shorcan Company, including any employees on a Leave of Absence.

" Business Material Adverse Effect " shall mean any event, occurrence, change, fact, condition, development or effect that, individually or in the aggregate, (a) has been, or would reasonably be expected to be, materially adverse to the business, financial condition or results of operations of the NGX/Shorcan Companies, taken as a whole, or (b) would reasonably be expected to prevent or materially impair or materially delay the ability of Sellers or their Affiliates to consummate the Sale on the terms and conditions

set forth in this Agreement and otherwise comply with and perform their obligations hereunder and under the Related Agreements, except in the case of clause (a) to the extent that such event, occurrence, change, fact, condition, development or effect results from (i) changes in general economic, political, legal or regulatory conditions, (ii) changes in financial, security, commodity or commodity futures market conditions, (iii) changes in or events generally affecting the industries or markets in which the NGX/Shorcan Companies operate, (iv) changes in IFRS or Law or accounting principles or interpretations thereof, (v) the announcement of this Agreement or the Sale or the identity of Purchaser, including the impact thereof on relationships, contractual or otherwise, with agents, customers, suppliers, vendors, licensors, licensees, lenders, partners, employees or regulators, (vi) any failure by the NGX/Shorcan Companies to meet any estimates or outlook of revenues or earnings or other financial projections (provided that this clause (vi) shall not prevent a determination that any events, occurrences, facts, conditions, changes, developments or effects underlying any such failure have resulted in a Business Material Adverse Effect unless such events, occurrences, facts, conditions, changes, developments or effects are otherwise excepted by this definition), (vii) natural disasters, including earthquakes, hurricanes, tsunamis, typhoons, blizzards, tornadoes, droughts, floods, cyclones, arctic frosts, mudslides, wildfires and other force majeure events, (viii) changes in national or international political conditions, including any engagement in hostilities, whether or not pursuant to the declaration of a national emergency or war, or the occurrence of any military or terrorist attack occurring after the date hereof, (ix) any action taken at the written request of Purchaser or (x) any matter set forth on Section 1.1-A of the Sellers Disclosure Letter, except, in the case of clauses (i), (ii), (iii), (iv), (vii) and (viii) above, to the extent the NGX/Shorcan Companies, taken as a whole, are disproportionately affected thereby as compared with other similarly situated businesses in the industries or markets in which the NGX/Shorcan Companies operate.

" Canadian Defined Benefit Plan " means any Company Benefit Plan that is a "registered pension plan" as defined in subsection 248(1) of the Income Tax Act (Canada) and which contains a "defined benefit provision" as defined in subsection 147.1(1) of the Income Tax Act (Canada), excluding any Canadian Multi-Employer Plans.

" Canadian Multi-Employer Plan " means any Company Benefit Plan to which any NGX/Shorcan Company is required to contribute pursuant to a collective agreement, participation agreement, or any other agreement and which is not maintained or administered by any NGX/Shorcan Companies or any of their Affiliates.

" Cash and Cash Equivalents " shall mean, with respect to any Person as of any time, (i) all cash and (ii) all cash equivalents (including deposits, restricted cash, amounts held in escrow, marketable securities and short-term investments) of such Person as of such time, in each case, without duplication, and as determined in a manner consistent with the Accounting Principles; provided , however , that "Cash and Cash Equivalents" shall not include Remaining Cash. Cash and Cash Equivalents shall (A) be reduced by issued but uncleared checks and drafts of such Person as of such time and (B) be increased by checks and drafts deposited for the account of such Person as of such time.

" Change of Control Payment " shall mean any bonus, severance or other payment that becomes payable by any NGX/Shorcan Company to any present or former director, officer, employee or consultant thereof as a result of the execution of this Agreement or the consummation of the transactions contemplated hereby, including pursuant to any employment agreement, benefit plan or any other Contract, including any employment and payroll taxes and any employment insurance premiums, Canada Pension Plan contributions, social insurance, national insurance or social security contributions with respect to any such payment, other than any payment (a) that is triggered by a termination of employment which occurs following the Closing, (b) that is payable only upon the continued employment of an employee for at least six (6) months following the Closing or (c) for which Purchaser shall have provided consent.

" Closing Cash " shall mean the aggregate amount of all Cash and Cash Equivalents of the NGX/Shorcan Companies as of 11:59 p.m., Eastern Time, on the day prior to the Closing Date; provided , however , that "Closing Cash" shall not include (a) any amounts included in the calculation of Closing Working Capital or (b) any amounts used to repay Indebtedness, pay Transaction Expenses, make distributions or intercompany payments on the Closing Date.

" Closing Consideration " shall mean the NGX Base Value plus the Closing Purchase Price.

" Closing Indebtedness " shall mean all Indebtedness of the NGX/Shorcan Companies as of 11:59 p.m., Eastern Time, on the day prior to the Closing Date; provided , however , that "Closing Indebtedness" shall not include any amounts included in the calculation of Closing Working Capital.

" Closing Purchase Price " shall be equal to (i) the Estimated Adjustment Amount *plus* (ii) the Estimated Closing Cash *minus* (iii) the Estimated Closing Indebtedness *minus* (iv) the Transaction Expenses (if any), with any components of the Closing Purchase Price that are not in Canadian dollars being translated into Canadian dollars as provided in Section 1.2(d) .

" Closing Working Capital " shall mean the aggregate amount of all Working Capital of the NGX/Shorcan Companies as of 11:59 p.m., Eastern Time, on the day prior to the Closing Date; provided , however , that "Closing Working Capital" shall not include any amounts with respect to (i) any deferred Tax assets and any deferred Tax liabilities, (ii) any fees, expenses or liabilities arising from any financing by Purchaser and its Affiliates in connection with the Sale, or (iii) any intercompany accounts and transactions between or among any NGX/Shorcan Companies. For purposes of this definition, including the calculation of current assets and current liabilities, the Parties shall disregard any adjustments arising from purchase accounting or otherwise arising out of the Sale.

" CMA " shall mean the Competition and Markets Authority.

" CMA Orders " shall have the meaning ascribed to it in the Trayport Agreement.

" Code " shall mean the Internal Revenue Code of 1986, as amended.

" Company Benefit Plan " shall mean each deferred compensation and each bonus or other incentive compensation, equity compensation plan, "welfare" plan, fund or program (within the meaning of Section 3(1) of ERISA, whether or not subject to ERISA); "pension" plan, fund, scheme or program (within the meaning of Section 3(2) of ERISA, whether or not subject to ERISA); and each other employee benefit plan, fund, program, agreement or arrangement, in each case, that is sponsored, maintained or contributed to or required to be contributed to by any NGX/Shorcan Company, or to which any NGX/Shorcan Company is a party or has any liability, in each such case for the benefit of any Business Employee or any former employee who was employed by any NGX/Shorcan Company, or as to which any NGX/Shorcan Company has or may incur any actual or contingent liability based on its affiliation (including as an ERISA Affiliate) with any other entity (excluding any such fund, arrangement, program or arrangement that is maintained by a Governmental Authority or mandated by applicable Law).

" Competition Act " shall mean the Competition Act (Canada), as amended.

" Contract " shall mean, with respect to any Person, any agreement, undertaking, contract, lease, obligation, promise, indenture, deed of trust or other instrument, document or agreement by which that Person, or any of its properties or assets, is bound or subject.

" Damages " shall mean all losses, Liabilities, damages, deficiencies, bonds, dues, assessments, fines, penalties, fees, costs (including cost of investigation, defense and enforcement), amounts paid in settlement and expenses incurred or suffered (and reasonable attorneys' fees, costs and expenses associated therewith).

" Disclosure Letters " shall mean the Sellers Disclosure Letter and the Purchaser Disclosure Letter.

" Environmental Laws " shall mean all federal, state, local and foreign laws and regulations relating to pollution or protection of the environment, including laws relating to Releases or threatened Releases of Hazardous Materials or otherwise relating to the manufacture, processing, distribution, use, treatment, storage, Release, transport or handling of Hazardous Materials.

" ERISA " shall mean the Employee Retirement Income Security Act of 1974, as amended.

" ERISA Affiliate " shall mean any trade or business, whether or not incorporated, that together with any NGX/Shorcan Entity would be deemed a "single employer" within the meaning of Section 4001(b) of ERISA.

" Excluded Taxes " shall mean any (a) Taxes imposed on or payable with respect to the NGX/Shorcan Companies (including any Taxes imposed as a transferee or successor or by Contract) in respect of any Pre-Closing Period or the portion of any Straddle Period ending on the Closing Date; (b) Taxes of either Seller or any of their Affiliates (other than the NGX/Shorcan Companies) for which the NGX/Shorcan Companies may be liable under Treasury Regulation Section 1.1502-6(a) or any similar provision of state, provincial, local or foreign law; and (c) Taxes arising from any breach by a Seller of the representations contained in Section 4.18(f) and (i); provided , however , that Excluded Taxes shall not include (i) any Transfer Taxes borne by Purchaser pursuant Section 8.10 , or (ii) any liability for Taxes resulting from voluntary transactions or voluntary action taken by Purchaser or any NGX/Shorcan Company on or after the Closing that are outside the Ordinary Course of business (except as permitted or contemplated under Article VIII), or (iii) any liability for Taxes arising out of or resulting from the breach of an agreement or covenant made by Purchaser in this Agreement. For purposes of this Agreement, in the case of any Straddle Period, (I) in the case of net income and similar Taxes of the NGX/Shorcan Companies, employment or similar Taxes and any Taxes that are imposed in connection with any sale or other transfer or assignment of property (real or personal, tangible or intangible) (other than Transfer Taxes imposed pursuant to this Agreement, the allocation of which is provided for under Section 8.10 , and any Taxes included in the definition of Change of Control Payment), the amount of such Taxes that are allocable to the Pre-Closing Period shall be computed as if such taxable period ended as of the close of business on the Closing Date (and for such purpose, the taxable period of any partnership or other pass-through entity or any "controlled foreign corporation" will be deemed to terminate at such time), provided , however , that any item determined on an annual or periodic basis (such as deductions for depreciation or real estate Taxes) shall be apportioned on a daily basis and (II) all Taxes not described in clause (I) of this sentence for the Pre-Closing Period shall be computed by including the amount of such Taxes for the entire Straddle Period multiplied by a fraction, the numerator of which is the number of days in the Pre-Closing Period and the denominator of which is the number of days in such Straddle Period.

" Federal Funds Rate " shall mean the offered rate as reported in *The Wall Street Journal* in the "Money Rates" section for reserves traded among commercial banks for overnight use in amounts of one million dollars or more on the Business Day immediately prior to the day on which a payment is due hereunder.

" Governmental Authority " shall mean any national, supranational, federal, state, provincial, local, foreign or other judicial, legislative, executive, regulatory or administrative authority, agency, commission, board, bureau, tribunal, court or any Self-Regulatory Organization (solely in its capacity, and to the extent of its authority, as such) or arbitrator.

" Hazardous Materials " shall mean any material, substance, chemical or waste (or combination thereof) that is listed, defined, designated, regulated or classified as hazardous, toxic, radioactive, dangerous, a pollutant, a contaminant, petroleum, oil or

words of similar meaning or effect under any Law relating to pollution, waste or the environment.

" IFRS " shall mean International Financial Reporting Standards.

" Indebtedness " shall mean, with respect to any Person as of any time, the sum of (i) the principal amount, plus any related accrued and unpaid interest, fees and prepayment premiums or penalties, breakage costs, or other unpaid similar costs, fees or expenses (if any) required to fully discharge such Person's obligations under (A) indebtedness for borrowed money, including overdrafts, of such Person as of such time and (B) indebtedness evidenced by notes, debentures or similar instruments of such Person as of such time, (ii) indebtedness for the deferred purchase price of property or services (including earn-outs and similar obligations to the extent payable on their terms but excluding current liabilities and accrued expenses incurred in the Ordinary Course), (iii) capitalized lease obligations of such Person as of such time, (iv) all letters of credit issued as of such time for the account of such Person to the extent drawn, (v) reimbursement and other obligations of such Person as of such time with respect to bankers' acceptances, surety bonds, other financial guarantees that have been drawn or funded, (vi) all obligations relating to interest rate protection, swap agreements, collar agreements and factoring agreements, in each case, to the extent payable if the applicable contract is terminated at such time (without duplication of other indebtedness supported or guaranteed thereby), (vii) all obligations in respect of dividends declared but not yet paid or other distributions payable, in each case, that are payable to a Person other than an NGX/Shorcan Company, (viii) all Liabilities arising from any transactions related to the assignment or securitization of receivables for financing purposes to any third party, including all Liabilities under factoring agreements and similar Contracts executed for the purpose of obtaining financing; and (ix) all guarantees (other than product warranties made in the Ordinary Course of business), including guarantees of any Indebtedness of any other person referred to in clauses (i) through (viii), but excluding any guarantees of performance under Contracts in the Ordinary Course of business, in each case, without duplication, and as determined in a manner consistent with the Accounting Principles.

" Information Technology " shall mean any hardware, networks, platforms, servers, and related telecommunications systems used by any of the NGX/Shorcan Companies.

" Intellectual Property " shall mean all intellectual property rights of every kind and nature, however denominated, throughout the world, including all: (i) copyrights and moral rights, and all registrations and applications for registration thereof; (ii) Patents; (iii) Marks; (iv) common law and statutory trade secrets and inventions, whether or not patentable, and whether or not reduced to practice; (v) know-how, methodologies, processes and techniques, research and development information, and technical data; and (vi) intellectual property rights in Software.

" Intellectual Property License Agreement " shall mean the Intellectual Property License Agreement substantially in the form attached hereto as Exhibit B .

" IRS " shall mean the Internal Revenue Service.

" Knowledge " shall mean, with respect to Sellers, the actual knowledge of the individuals set forth in Section 1.1-B of the Sellers Disclosure Letter after due inquiry, and, with respect to Purchaser, shall mean the actual knowledge of the individuals set forth in Section 1.1-B of the Purchaser Disclosure Letter after due inquiry.

" Law " shall mean any law (including common law), ordinance, judgment, order, decree, injunction, statute, treaty, rule or regulation enacted or promulgated by any Governmental Authority.

" Leased Real Property " shall mean all leasehold or subleasehold estates and other rights to use or occupy any land, buildings, structures, fixtures or other interest in real property.

" Leases " shall mean all leases, subleases, licenses or other agreements, including all amendments, extensions, renewals, guaranties or other agreements with respect thereto, pursuant to which the Leased Real Property is held or used.

" Leave of Absence " shall mean a leave from active employment that is expected to continue following the Closing or that (a) was granted in accordance with the applicable policies and procedures (including any policy or procedures implemented to comply with the U.S. Uniformed Services Employment and Reemployment Rights Act, the U.S. Family Medical Leave Act, or similar state or provincial Laws or with the CBAs) of any NGX/Shorcan Company or (b) arose due to an illness or injury that results in the individual being eligible for short-term disability benefits, company or statutory sick pay, accident benefits, or workers' compensation under the applicable short-term disability or accident plan or state or provincial Law. Any employee who is not at work on the Closing Date due to vacation, sickness, or accident that has not qualified the individual for short-term disability or accident benefits, company or statutory sick pay, workers' compensation, or other temporary absence, but whose employment continues in accordance with Sellers' or applicable NGX/Shorcan Company's employment policies (such as due to the use of personal days or by virtue or taking maternity or other family related leave) or by Law, shall be considered to be actively at work on the Closing Date (and not on a Leave of Absence).

" Liability " shall mean, with respect to any Person, any liability or obligation of such Person whether known or unknown, whether asserted or unasserted, whether determined, determinable or otherwise, whether absolute or contingent, whether accrued or unaccrued, whether liquidated or unliquidated, whether directly or indirectly incurred, whether due or to become due and whether or not required under IFRS, to be accrued on the financial statements of such Person.

" Lien " shall mean, with respect to any property, asset or equity interest, any lien, license, security interest, mortgage, pledge, hypothecation, assignment, charge, claim, option, limitation on voting rights, right of pre-emption, right to acquire or trust

arrangement for the purpose of providing security, restriction or encumbrance or other interest relating to that property, asset or equity interest, of any nature whatsoever, whether consensual, statutory or otherwise; provided , however , that "Liens" shall not include restrictions under applicable Laws relating to the transfer of Securities or, with respect to Sellers and their Affiliates, any restrictions under the applicable organizational documents of the NGX/Shorcan Entities in respect of future transfers of the NGX/Shorcan Equity Interests.

" Marks " shall mean any trademark, service mark, trade dress, trade name, business name, brand name, slogan, logo, Internet domain name, or other indicia of origin, whether or not registered, including all common law rights therein, and registrations and applications for registrations thereof, and all goodwill connected with the use of and symbolized by any of the foregoing.

" NGX Base Value " shall have the meaning ascribed to it in the Trayport Agreement.

" Open Source Software " shall mean Software that is licensed or distributed as "free software," "freeware," "open source software" or under a "copyleft" agreement, or is otherwise subject to the terms or conditions of any license, which impose any requirement that such Software (i) be disclosed or distributed in source code form, (ii) be licensed for the purpose of making derivative works or (iii) be redistributed at no or minimal charge.

" Order " shall mean any statute, rule, regulation, judgment, decree, injunction or other order or decision (whether temporary, preliminary or permanent) that a Governmental Authority of competent jurisdiction shall have enacted, issued, promulgated, enforced or entered.

" Patents " shall mean any patents, patent applications and provisional applications, including reissues, divisions, continuations, continuations-in-part, extensions and reexaminations thereof, and all patents granted thereon.

" Permits " shall mean permits, licenses, variances, exemptions, certificates, consents, Orders, approvals, permissions, registrations or other authorizations from any Governmental Authorities.

" Permitted Lien " shall mean the following Liens: (i) statutory Liens for Taxes, assessments or other governmental charges or levies that are not yet due or payable or that are being contested in good faith by appropriate proceedings and for which an adequate reserve has been established and reflected on the latest balance sheet included in the Business Financial Information; (ii) statutory Liens of landlords and Liens of carriers, warehousemen, mechanics, materialmen, workmen, repairmen and other similar Liens imposed by Law in the Ordinary Course with respect to liabilities (other than Indebtedness) that are not yet due or payable or that are being contested in good faith by appropriate proceedings and for which an adequate reserve has been established and

reflected on the latest balance sheet included in the Business Financial Information; (iii) Liens incurred or deposits made in the Ordinary Course in connection with workers' compensation, unemployment insurance or other types of social security; (iv) Liens securing obligations or liabilities that are not material to the NGX/Shorcan Companies; (v) with respect to real property (A) defects or imperfections of title, (B) easements, declarations, covenants, rights-of-way, restrictions and other charges, instruments or encumbrances affecting title to real estate; (C) zoning ordinances, variances, conditional use permits and similar regulations, permits, approvals and conditions which are not violated in any material respect by the current use and operation of the real estate; and (D) Liens not created by any Seller or any NGX/Shorcan Company or any of their Affiliates that affect the underlying fee interest of any leased real property, including master leases or ground leases and any set of facts that an accurate up-to-date survey would show; provided , however , that (with respect to this clause (v) only) any such item does not, individually or in the aggregate with other such items, materially interfere with the ordinary conduct of the business of the NGX/Shorcan Companies or materially impair the continued use and operation of such real property; (vi) Liens deemed to be created by this Agreement or any Related Agreement; and (vii) with respect to Intellectual Property, non-exclusive licenses.

" Person " shall mean any individual, corporation, business trust, partnership, association, limited liability company, unincorporated organization or similar organization, any Governmental Authority or other entity of any kind.

" Post-Closing Period " shall mean any taxable period (or portion thereof) beginning after the Closing Date.

" Pre-Closing Period " shall mean any taxable period (or portion thereof) ending on or prior to the Closing Date.

" Proceeding " shall mean any action, suit, claim, litigation, proceeding, arbitration, application, inquiry, audit or controversy (whether at law or in equity, in contract, tort, statute or otherwise, and whether civil, criminal, administrative or otherwise) before or by any Governmental Authority.

" Purchaser Disclosure Letter " shall mean the letter delivered by Purchaser to Sellers concurrently with the execution of this Agreement.

" Purchaser Material Adverse Effect " shall mean any event, occurrence, change, fact, condition, development or effect that, individually or in the aggregate, would reasonably be expected to prevent or materially impair or materially delay the ability of Purchaser or its Affiliates to consummate the Sale on the terms and conditions set forth in this Agreement and otherwise comply with and perform their obligations hereunder and under the Related Agreements.

" Related Agreements " shall mean the Transition Services Agreement and the Intellectual Property License Agreement.

" Release " shall mean any release, spill, emission, discharge, leaking, pumping, injection, deposit, disposal, dispersal, leaching or migration into the indoor or outdoor environment (including ambient air, surface water, groundwater and surface or subsurface strata) or into or out of any property, including the movement of Hazardous Materials through or in the air, soil, surface water, groundwater or property.

" Remaining Cash " shall mean C$9,000,000 (nine million Canadian dollars).

" Securities " shall mean, with respect to any Person, any common stock or preferred stock (or any series thereof), any ordinary shares or preferred shares and any other equity securities, capital stock, partnership, membership or similar interest of such Person, and any securities that are directly or indirectly convertible, exchangeable or exercisable into any such stock or interests, including any right that would entitle any other Person to directly or indirectly acquire any such interest in such Person or otherwise entitle any other Person to share in the equity, profits, earnings, losses or gains of such Person (including stock appreciation, phantom stock, profit participation or other similar rights), however described and whether voting or non-voting.

" Securities Act " shall mean the U.S. Securities Act of 1933, as amended.

" Self-Regulatory Organization " shall mean any U.S., Canadian or foreign commission, board, agency or body charged with regulating its own members through the adoption and enforcement of financial, sales practice and other requirements for brokers, dealers, securities underwriting or trading, stock exchanges, swap execution facilities, commodity exchanges, commodity intermediaries, electronic communications networks, insurance companies or agents, investment companies or investment advisors.

" Seller Group " shall mean (a) the "affiliated group" as defined in Section 1504(a) of the Code of which one or more Sellers is a member and, (b) with respect to each state, local or non-U.S. jurisdiction in which a Seller files a consolidated, combined, or unitary Tax Return and in which any of the NGX/Shorcan Companies is subject to Tax, the group with respect to which such Tax Return is filed.

" Sellers Disclosure Letter " shall mean the letter delivered by Sellers to Purchaser concurrently with the execution of this Agreement.

" Software " shall mean computer software, including all programs, applications, middleware, firmware, embedded versions thereof and operating systems (each whether in object code, source code or other form).

" Straddle Period " shall mean any taxable period beginning on or prior to and ending after the Closing Date.

" Subsidiary " shall mean, with respect to any Person, any other Person of which such first Person (either alone or through or together with any other Subsidiary) owns, directly or indirectly, a majority of the outstanding equity securities or securities carrying a majority of the voting power in the election of the board of directors or other governing body of such Person.

" Tax " (and, with correlative meaning, " Taxes ") shall mean any federal, state, provincial, local or foreign income, gross receipts, profits, property, sales, use, license, excise, franchise, employment, payroll, withholding, alternative or add-on minimum, ad valorem, value added, transfer or excise tax, stamp duty or any other tax, custom, duty, governmental fee or other like assessment or charge of any kind whatsoever, together with any interest or penalty, imposed by any Governmental Authority.

" Tax Claim " shall mean any claim with respect to Taxes made by any Taxing Authority that, if pursued successfully, would reasonably be expected to serve as the basis for a claim for indemnification against Sellers under this Agreement.

" Tax Item " shall mean any item of income, gain, loss, deduction, credit, recapture of credit or any other item which increases or decreases Taxes paid or payable.

" Tax Return " shall mean any return, report or similar statement filed or required to be filed with respect to any Tax (including any attachments or schedules), including any information return, claim for refund, amended return or declaration of estimated Tax.

" Taxing Authority " shall mean any governmental agency, board, bureau, body, department or authority of any United States or Canadian federal, state, provincial or local jurisdiction or any other foreign jurisdiction, having or purporting to exercise jurisdiction with respect to any Tax.

" Transaction " shall have the meaning ascribed to it in the Current Terms and Conditions.

" Transaction Expenses " shall mean, to the extent not paid prior to the Closing Date: (a) all costs, fees and expenses incurred in connection with or in anticipation of the negotiation, execution and delivery of this Agreement and the Related Agreements or the consummation of the Sale or in connection with or in anticipation of any alternative transactions considered by any Seller to the extent any of such costs, fees and expenses are payable or reimbursable by any of the NGX/Shorcan Companies, including any brokerage fees, commissions, finders' fees or financial advisory fees so incurred and any fees and expenses of legal counsel, accountants, consultants or other experts or advisors so incurred and (b) all Change of Control Payments.

" Transition Services Agreement " shall mean a transition services agreement substantially in the form attached hereto as Exhibit A .

" Trayport Equity Interests " shall have the meaning ascribed to it in the Trayport Agreement.

" Trayport Sale " shall have the meaning ascribed to the term "Sale" in Section 2.1 of the Trayport Agreement.

" Working Capital " shall mean, with respect to any Person as of any time, (i) the current assets of such Person as of such time that are included in the line item categories of current assets specifically identified on Annex A , reduced by (ii) the current liabilities of such Person as of such time that are included in the line item categories of current liabilities specifically identified on Annex A , in each case, without duplication, and as determined in a manner consistent with the Accounting Principles. For illustrative purposes, an example calculation of the Working Capital of the NGX/Shorcan Companies is set forth in Annex A .

" Working Capital Target " shall mean C$(5,600,000) (negative five million six hundred thousand Canadian dollars).

SECTION 1.2 Construction; Absence of Presumption .

(a) For the purposes of this Agreement: (i) words (including capitalized terms defined herein) in the singular shall be deemed to include the plural and vice versa and words (including capitalized terms defined herein) of one gender shall be deemed to include the other gender as the context requires; (ii) the terms "hereof," "herein," "hereby" and "herewith" and words of similar import shall, unless otherwise stated, be construed to refer to this Agreement as a whole (including all of the Exhibits and Annexes) and not to any particular provision of this Agreement, and Article, Section, paragraph, Exhibit and Annex references are to the Articles, Sections, paragraphs, Exhibits and Annexes of or to this Agreement unless otherwise specified; (iii) the word "including" and words of similar import when used in this Agreement shall mean "including without limitation" unless otherwise specified; (iv) all references to any period of days shall be deemed to be to the relevant number of calendar days unless otherwise specified; (v) the word "extent" in the phrase "to the extent" shall mean the degree to which a subject or other thing extends, and such phrase shall not mean simply "if"; (vi) the use of "or" is not intended to be exclusive unless expressly indicated otherwise; and (vii) references to a particular statute or regulation include all rules and regulations thereunder and any successor statute, rule or regulation, in each case as amended or otherwise modified from time to time.

(b) The Parties acknowledge that each Party and its counsel have reviewed and revised this Agreement and that no rule of construction to the effect that any ambiguities are to be resolved against the drafting Party shall be employed in the interpretation of this Agreement (including all of the Exhibits and Annexes) or any amendments hereto.

(c) The Parties acknowledge and agree that to the extent that there is a conflict between any (i) general provision of this Agreement and (ii) provision specifically relating to Tax matters, the terms of the specific Tax provision shall control.

(d) All references to "dollars" or "$" in this Agreement refer to the lawful currency from time to time of the United States and all references to "Canadian dollars" and "C$" in this Agreement refer to the lawful currency from time to time of Canada. Unless mutually agreed otherwise by Sellers and Purchaser at least three (3) Business Days prior to the date of any payment to be made pursuant to this Agreement, any amount payable under this Agreement shall be payable in ~~dollars. If Sellers and Purchaser agree to make any payment due under this Agreement in a currency other than dollars (such as~~ Canadian dollars ~~), unless~~ . Unless mutually agreed otherwise by Sellers and Purchaser at least three (3) Business Days prior to the applicable date of payment, ~~such payment~~ if any amount payable under this Agreement (or any component of such amount) is not already denominated in the agreed currency for payment (as determined pursuant to the immediately preceding sentence), such amount (or component of such amount) shall be converted ~~from dollars~~ to such ~~other~~ agreed currency for payment using the arithmetic average of the relevant exchange rate as in effect at 5:00 p.m. New York Time (as published on Bloomberg.com) over the five (5) Business Days beginning on the ~~seventh~~ eighth trading day immediately preceding such date of payment and concluding on the ~~third~~ fourth trading day immediately preceding such date of payment.

SECTION 1.3 Headings; Definitions . The Article and Section headings contained in this Agreement are inserted for convenience of reference only and shall not affect the meaning or interpretation of this Agreement.

ARTICLE II

PURCHASE AND SALE

SECTION 2.1 Sale and Purchase of NGX/Shorcan Equity Interests . Subject to the terms and conditions of this Agreement, at the Closing, (a) TMX Group agrees to sell, assign and transfer to Purchaser, and Purchaser agrees to purchase from TMX Group, one hundred percent (100%) of the equity interest in NGX (the " NGX Equity Interests ") and (b) Shorcan Brokers agrees to sell, assign and transfer to Purchaser, and Purchaser agrees to purchase from Shorcan Brokers, one hundred percent (100%) of the equity interest in Shorcan Energy Brokers (the " Shorcan Equity Interests " and, together with the NGX Equity Interests, the " NGX/Shorcan Equity Interests "), in each case, free and clear of all Liens (the " Sale ").

ARTICLE III

THE CLOSING AND POST-CLOSING ADJUSTMENTS

SECTION 3.1 Closing . The closing of the transactions provided for in this Agreement (the " Closing ") shall take place (i) at the offices of Shearman & Sterling LLP, 599 Lexington Avenue, New York, New York 10022 at ~~10:00~~ 8:00 a.m., New York City time, three (3) Business Days following the date the last of the conditions required to be satisfied pursuant to Article VII is either satisfied (other than those conditions that by their nature are to be satisfied at the Closing) or waived (if permissible), or (ii) at such other place, time or date as the Parties shall

agree upon in writing. The date on which the Closing is to occur is referred to herein as the " Closing Date ."

SECTION 3.2 Preliminary Information . At least three (3) Business Days prior to the Closing Date, Sellers shall deliver to Purchaser a statement of Sellers' good-faith estimate of the Adjustment Amount (the " Estimated Adjustment Amount "), a good-faith estimate of the Closing Cash (the " Estimated Closing Cash "), a good-faith estimate of the Closing Date Indebtedness (the " Estimated Closing Indebtedness ") and a good-faith estimate of any Transaction Expenses (the " Estimated Transaction Expenses " and collectively, as the same may be adjusted, in Sellers' sole discretion, in response to any comments of Purchaser and its authorized representatives provided prior to the Closing, the " Estimated Closing Statement "), together with such reasonably detailed data appropriate to support such Estimated Closing Statement. The Estimated Closing Statement shall be prepared in accordance with the Accounting Principles and this Agreement.

SECTION 3.3 Agreed Value . The Closing Consideration (and any adjustments thereto contemplated by this Agreement) shall be allocated as between the NGX Equity Interests and the Shorcan Equity Interests as provided on Section 3.3 of the Sellers Disclosure Letter.

SECTION 3.4 Sellers' Deliveries at Closing . At the Closing, Sellers shall deliver or cause to be delivered to Purchaser:

(a) duly executed transfers in respect of the NGX/Shorcan Equity Interests in favor of Purchaser or its permitted assignee and share certificates for the NGX/Shorcan Equity Interests in the name of the relevant transferors and any duly executed power of attorney or other authorities under which any such transfer is executed on behalf of the relevant Seller and/or its Affiliates;

(b) if the Closing Purchase Price is a negative number, an amount equal to the Closing Purchase Price by wire transfer of funds immediately available to a bank account designated by Sellers at least three (3) Business Days prior to the Closing;

(c) the Transition Services Agreement, duly executed by Seller;

(d) the officer's certificate required pursuant to Section 7.2(c) ;

(e) a resignation letter from each officer and director (or their equivalents) of each of the NGX/Shorcan Companies set forth in Section 3.4(e) of the Purchaser Disclosure Letter (or other evidence of their removal);

(f) a certificate from NGX U.S., Inc., in form and substance as prescribed by Treasury Regulations promulgated under Code Section 1445, stating that the stock of NGX U.S., Inc. is not a "United States real property interest" within the meaning of Section 897(c) of the Code, together with a notice to the IRS in accordance with the Treasury Regulations promulgated

under Code Sections 897 and 1445 (which shall be timely filed by Purchaser with the IRS following the Closing); and

(g) the Intellectual Property License Agreement, duly executed by Seller.

SECTION 3.5 Purchaser's Deliveries at Closing . At the Closing, Purchaser shall deliver to Sellers:

(a) if the Closing Purchase Price is a positive number, an amount equal to the Closing Purchase Price by wire transfer of immediately available funds to the Sellers' Bank Account;

(b) if the Trayport Sale has already been consummated prior to the Closing, an amount equal to the NGX Base Value by wire transfer of immediately available funds to the Sellers' Bank Account;

(c) the Transition Services Agreement, duly executed by Purchaser;

(d) the officer's certificate required pursuant to Section 7.3(c) ; and

(e) the Intellectual Property License Agreement, duly executed by Purchaser.

SECTION 3.6 Proceedings at Closing . All proceedings to be taken and all documents to be executed and delivered by the Parties at the Closing shall be deemed to have been taken and executed and delivered simultaneously, and, except as permitted hereunder, no proceedings shall be deemed taken nor any documents executed or delivered until all have been taken, executed and delivered.

SECTION 3.7 Post-Closing Adjustment .

(a) Not later than ninety (90) days after the Closing Date or such other time as is mutually agreed by the Parties, Purchaser shall prepare or cause to be prepared, and deliver to Sellers a revised statement (the " Revised Statement ") of the Adjustment Amount (the " Revised Adjustment Amount "), the Closing Cash (the " Revised Closing Cash "), the Closing Indebtedness (the " Revised Closing Indebtedness ") and any Transaction Expenses (the " Revised Transaction Expenses "), together with such reasonably detailed data appropriate to support such Revised Adjustment Amount, Revised Closing Cash, Revised Closing Indebtedness and Revised Transaction Expenses. The Revised Statement shall be prepared in accordance with the Accounting Principles and this Agreement, with all amounts reflected therein being converted to Canadian dollars in accordance with Section 1.2(d) .

(b) For thirty (30) days following the delivery of the Revised Statement, Purchaser shall provide Sellers and their Affiliates and their authorized representatives with reasonable access to the relevant books, records, employees and representatives of Purchaser reasonably requested by Sellers to evaluate and assess the calculation of the Revised Adjustment Amount, Revised Closing Cash, Revised Closing Indebtedness and Revised Transaction

Expenses, including using reasonable best efforts to cause Purchaser's accountants to cooperate and assist Sellers, their Affiliates and representatives in evaluating the calculation of the Revised Adjustment Amount, Revised Closing Cash, Revised Closing Indebtedness and Revised Transaction Expenses.

(c) Within thirty (30) days following receipt of the Revised Statement, Sellers shall deliver to Purchaser in writing either their (i) agreement as to the calculation of the Revised Adjustment Amount, Revised Closing Cash, Revised Closing Indebtedness and Revised Transaction Expenses or (ii) notice of dispute thereof, specifying in reasonable detail (A) the nature of such dispute, (B) each item of the Revised Statement with which Sellers disagree, (C) the bases for each such disagreement and (D) Sellers' calculation of the proper amount of each such disputed item (a " Dispute Notice "). During the thirty (30) days after the delivery of such dispute notice to Purchaser, Purchaser and Sellers shall attempt in good faith to resolve any such dispute and finally determine the final Adjustment Amount, Revised Closing Cash, Revised Closing Indebtedness and Revised Transaction Expenses (if any). If, at the end of such thirty (30)-day period, Purchaser and Sellers have failed to reach an agreement with respect to the final Adjustment Amount, the matter shall be submitted to PricewaterhouseCoopers, which shall act as arbitrator solely with respect to determining the disputed items. If PricewaterhouseCoopers is unable to serve, Purchaser and Sellers shall jointly select another nationally recognized accounting firm that is not the independent auditor for either Sellers or Purchaser and is otherwise neutral and impartial to act as such arbitrator; provided , however , that if Sellers and Purchaser are unable to select such other accounting firm within thirty (30) days after delivery of a Dispute Notice, each of Purchaser and Sellers shall cause their respective selected nationally recognized accounting firm to select another firm meeting the requirements set forth above or a neutral and impartial certified public accountant with significant relevant experience to act as such arbitrator. The accounting firm or accountant so selected shall be referred to herein as the " Accountant ." The Accountant shall determine the final Adjustment Amount, final Closing Cash, final Closing Indebtedness and final Transaction Expenses (if any) in accordance with the terms and conditions of this Agreement. In making its determinations, the Accountant shall not assign a value to any disputed item that is greater than the highest value attributed to such item, or that is less than the lowest value attributed to such disputed item, in the Revised Statement and the Dispute Notice, respectively. The Accountant shall deliver to Sellers and Purchaser, as promptly as practicable and in any event within thirty (30) days after its appointment, a written report setting forth the resolution of the final Adjustment Amount, final Closing Cash, final Closing Indebtedness and final Transaction Expenses (if any). Such report shall be final and binding upon the Parties to the fullest extent permitted by applicable Law and may be enforced in any court having jurisdiction. Each of Purchaser and Sellers shall bear all the fees and costs incurred by it in connection with this arbitration, except that all fees and expenses relating to the foregoing work by the Accountant shall be borne by Purchaser, on the one hand, and Sellers, on the other hand, in inverse proportion as they may prevail on the matters resolved by the Accountant, which proportionate allocation will also be determined by the Accountant and be included in the Accountant's written report.

(d) On the fifth (5th) Business Day after Purchaser and Sellers agree to the final Adjustment Amount, final Closing Cash, final Closing Indebtedness and final Transaction

Expenses (if any) (or after Purchaser and Sellers receive notice of any final determination of the final Adjustment Amount, final Closing Cash, final Closing Indebtedness and final Transaction Expenses (if any) pursuant to the procedures set forth in Section 3.7(c)), then:

(i) (A) if the final Adjustment Amount shall exceed the Estimated Adjustment Amount, then Purchaser shall pay to Sellers an amount of cash in Canadian dollars equal to such excess and (B) if the Estimated Adjustment Amount shall exceed the final Adjustment Amount, then Sellers shall pay to Purchaser an amount of cash in Canadian dollars equal to such excess;

(ii) (A) if the final Closing Cash shall exceed the Estimated Closing Cash, then Purchaser shall pay to Sellers an amount of cash in Canadian dollars equal to such excess and (B) if the Estimated Closing Cash shall exceed the final Closing Cash, then Sellers shall pay to Purchaser an amount of cash in Canadian dollars equal to such excess;

(iii) (A) if the Estimated Closing Indebtedness shall exceed the final Closing Indebtedness, then Purchaser shall pay to Sellers an amount of cash in Canadian dollars equal to such excess and (B) if the final Closing Indebtedness shall exceed the Estimated Closing Indebtedness, then Sellers shall pay to Purchaser an amount of cash equal in Canadian dollars to such excess;

(iv) (A) if the Estimated Transaction Expenses shall exceed the final Transaction Expenses, then Purchaser shall pay to Sellers an amount of cash in Canadian dollars equal to such excess and (B) if the final Transaction Expenses shall exceed the Estimated Transaction Expenses, then Sellers shall pay to Purchaser an amount of cash in Canadian dollars equal to such excess; and

in each of cases (i), (ii), (iii) and (iv), plus interest on such amount from the Closing Date up to but excluding the date on which such payment is made at a rate per annum equal to the Federal Funds Rate as of the Closing Date, calculated on the basis of a year of three-hundred sixty (360) days and the actual number of days elapsed. Any such payment shall be made by wire transfer of immediately available Canadian dollars (with amounts denominated in currencies other than Canadian dollars being converted to Canadian dollars in accordance with Section 1.2(d)) to the account(s) of the Party entitled to receive such payment, which account(s) shall be identified by Purchaser to Sellers or by Sellers to Purchaser, as the case may be, not less than two (2) Business Days prior to the date such payment would be due.

SECTION 3.8 Withholding . Purchaser will be entitled to deduct and withhold, or cause to be deducted and withheld, from any amounts payable pursuant to or as contemplated by this Agreement any withholding Taxes or other amounts required under the Code or any applicable Law to be deducted and withheld. Purchaser and Sellers hereby acknowledge that, absent a change in applicable Law after the date hereof, Purchaser shall not deduct or withhold any Taxes from the payment of the Closing Purchase Price under Section 3.5(a) of this Agreement. In any case where such withholding or deduction is required,

Purchaser shall use reasonable efforts to provide notice to Sellers at least ten (10) Business Days prior to withholding any amount pursuant to this Section 3.8 , and the Parties shall use reasonable efforts to reduce or avoid such withholding where possible. To the extent that any such amounts are so deducted or withheld, such amounts will be treated for all purposes of this Agreement as having been paid to the Person in respect of which such deduction and withholding was made. Sellers and Purchaser shall cooperate in completing any procedural formalities necessary for Purchaser to obtain authorization to make payments under this Agreement without any withholding or deduction for or on account of Tax. Notwithstanding anything to the contrary in this Agreement, any compensatory amounts subject to payroll reporting and withholding payable pursuant to or as contemplated by this Agreement shall be payable in accordance with the payroll procedures of the applicable NGX/Shorcan Company.

ARTICLE IV

REPRESENTATIONS AND WARRANTIES OF SELLER

Except as disclosed in the Sellers Disclosure Letter (it being understood that information disclosed in any section of the Sellers Disclosure Letter shall be deemed to be disclosed with respect to any other section of the Sellers Disclosure Letter to which such disclosure would reasonably pertain or if its relevance to such other section is reasonably apparent on the face of such disclosure), Sellers hereby jointly and severally represent and warrant to Purchaser as of the date hereof and as of the Closing Date (except for representations and warranties which are made as of a specified time which are made only as of such specified time) as follows:

SECTION 4.1 Organization and Good Standing .

(a) Each Seller is a legal entity duly organized, validly existing and in good standing under the laws of the jurisdiction of its organization. Each Seller has all requisite corporate (or other) power and authority to own or lease the assets owned or leased by it and to carry on its business, as currently conducted, except where the failure to have such power or authority would not be material to the Business.

(b) Each Seller is duly qualified to do business and is in good standing as a foreign entity in each jurisdiction where the ownership, lease or operation of the applicable assets or the conduct of its business requires such qualification, except where the failure to be so qualified or in good standing would not be material to the Business.

SECTION 4.2 NGX/Shorcan Entities and NGX/Shorcan Subsidiaries .

(a) Section 4.2(a) of the Sellers Disclosure Letter sets forth (i) each NGX/Shorcan Entity and each Subsidiary of the NGX/Shorcan Entities (individually, an " NGX/Shorcan Subsidiary " and collectively, the " NGX/Shorcan Subsidiaries ," and together with the NGX/Shorcan Entities, the " NGX/Shorcan Companies " and, individually, an " NGX/Shorcan Company "), (ii) the number of authorized, allotted, issued and outstanding Securities of each

NGX/Shorcan Company and the record owners thereof, and (iii) each NGX/Shorcan Company's jurisdiction of incorporation or organization.

(b) Each NGX/Shorcan Company is an entity duly incorporated or organized and is validly existing and, to the extent such concept or a similar concept exists in the relevant jurisdiction, in good standing under the laws of the jurisdiction of its incorporation or organization, as the case may be, and has all requisite corporate or other power and authority, as the case may be, to own, lease and operate its properties and assets and to carry on its business in all material respects as currently conducted.

(c) Each NGX/Shorcan Company is qualified or licensed to do business and, to the extent such concept or a similar concept exists in the relevant jurisdiction, is in good standing in each jurisdiction where the ownership, leasing or operation of its properties or assets requires such qualification or license, except where any failure to be so qualified or licensed and in good standing would not be material to the Business.

(d) Sellers have delivered or made available to Purchaser true, correct and complete copies of the organizational documents of each NGX/Shorcan Company, as amended and in effect on the date of this Agreement.

SECTION 4.3 Title; Capitalization of the NGX/Shorcan Companies .

(a) Sellers have good and valid title to the NGX/Shorcan Equity Interests, free and clear of all Liens (other than restrictions under securities Laws). The NGX/Shorcan Equity Interests have been duly authorized, validly issued, fully paid and, where applicable, are non-assessable. Other than the NGX/Shorcan Equity Interests, there are no other Securities of the NGX/Shorcan Entities outstanding or issued.

(b) All of the outstanding Securities of each NGX/Shorcan Subsidiary (the " NGX/Shorcan Subsidiary Interests ") are owned by an NGX/Shorcan Entity or an NGX/Shorcan Subsidiary that is a wholly owned Subsidiary of an NGX/Shorcan Entity, and each respective NGX/Shorcan Entity or NGX/Shorcan Subsidiary has good and valid title to such NGX/Shorcan Subsidiary Interests, free and clear of all Liens (other than restrictions under securities Laws). All of such NGX/Shorcan Subsidiary Interests have been duly authorized, validly issued, and are fully paid and, where applicable, are non-assessable.

(c) No NGX/Shorcan Company (i) owns (beneficially or of record), directly or indirectly, any Securities in any other Person or (ii) is subject to any obligation to make any investment (in the form of a loan, capital contribution or otherwise) in any other Person.

SECTION 4.4 Authorization; Binding Obligations . Each Seller has all necessary corporate or other power and authority to make, execute and deliver this Agreement and the Related Agreements to which it is a party, or will be a party at Closing, and to perform all of the obligations to be performed by it hereunder and thereunder. The making, execution, delivery and performance of this Agreement and the Related Agreements and the consummation by Sellers of the transactions contemplated hereby and thereby have been duly and validly

authorized by all necessary corporate (or other) action on the part of each Seller, and no other corporate (or other) proceedings on the part of Sellers is necessary to authorize the execution, delivery and performance by Sellers of this Agreement or the Related Agreements or the transactions contemplated hereby or thereby. This Agreement has been and, upon their execution, the Related Agreements will be, duly and validly executed and delivered by Sellers, and assuming the due authorization, execution and delivery by Purchaser, each of this Agreement and the Related Agreements will constitute a valid, legal and binding obligation of each Seller that is a party thereto, enforceable against it in accordance with its terms, except as may be limited by bankruptcy, insolvency, fraudulent transfer, moratorium, reorganization, preference or similar Laws of general applicability relating to or affecting the rights of creditors generally and subject to general principles of equity (regardless of whether enforcement is sought in equity or at law) (collectively, the " Enforceability Exceptions ").

SECTION 4.5 No Conflicts; Consents and Approvals .

(a) The execution and delivery of this Agreement and the Related Agreements by each Seller does not, and the consummation by each Seller of the Sale will not: (i) conflict with any provisions of the organizational documents of either Seller or the NGX/Shorcan Companies; (ii) violate any applicable Law (assuming compliance with the matters set forth in Section 4.5(b) of the Sellers Disclosure Letter); (iii) result, after the giving of notice, with lapse of time or otherwise, in any violation, default or loss of a benefit under, or permit the acceleration or termination of any obligation under or require any consent under or require any offer to purchase or prepayment of any Indebtedness or Liability under, any mortgage, indenture, lease, agreement or other instrument, permit, concession, grant, franchise, license or other Contract to which any NGX/Shorcan Company is a party or by which any NGX/Shorcan Company or any of their respective assets or properties may be bound; (iv) result in the creation or imposition of any Lien (other than Permitted Liens) upon any properties or assets of any NGX/Shorcan Company; or (v) cause the suspension or revocation of any NGX/Shorcan Permit (assuming compliance with the matters set forth in Section 4.5(b) of the Sellers Disclosure Letter); except, in the case of clauses (ii), (iii), (iv) and (v), as would not be material to the Business.

(b) No clearance, consent, approval, order, license or authorization of, or declaration, registration or filing with, or notice to, or permit issued by, any Governmental Authority is required to be made or obtained by Sellers or any NGX/Shorcan Company in connection with the execution or delivery of this Agreement or any Related Agreement by Sellers or the consummation by Sellers of the Sale, except for (i) any clearance, consent, approval, order, license, authorization, declaration, registration, filing, notice or permit set forth in Section 4.5(b) of the Sellers Disclosure Letter; and (ii) any such clearance, consent, approval, order, license, authorization, declaration, registration, filing, notice or permit, the failure of which to make or obtain would not be material to the Business.

SECTION 4.6 Litigation . (a) There is no Proceeding pending or threatened in writing, or, to the Knowledge of Sellers, threatened against any NGX/Shorcan Company, or their respective properties, assets or rights or any of their respective current or former directors,

officers, employees or contractors (in their capacities as such or relating to their services or relationship to the NGX/Shorcan Companies) that is material to the Business, (b) there is no Order outstanding against any NGX/Shorcan Company or that is specifically applicable to its respective properties, assets or rights, that is material to the Business, and (c) there is no Proceeding pending or, to the Knowledge of Sellers, threatened against any NGX/Shorcan Company which seeks to, or would reasonably be expected to, restrain, enjoin or delay the consummation of the Sale or which seeks damages in connection therewith, and no such injunction of any type has been entered or issued. As of the date hereof, there is no material Proceeding which an NGX/Shorcan Company presently intends to initiate.

SECTION 4.7 Compliance with Law .

(a) Except as would not be material to the Business, (i) each of the NGX/Shorcan Companies hold all material Permits that are necessary or required for the lawful conduct of their respective businesses or ownership and operation of their respective assets and properties (the " NGX/Shorcan Permits "), (ii) all NGX/Shorcan Permits are in full force and effect and none of the NGX/Shorcan Permits have been withdrawn, revoked, suspended or cancelled nor is any such withdrawal, revocation, suspension or cancellation pending or, to the Knowledge of Sellers, threatened, (iii) each of the NGX/Shorcan Companies is, and since January 1, 2013, has been, in compliance with the terms of the NGX/Shorcan Permits, and (iv) to the Knowledge of Sellers, no basis exists that would constitute a material breach, violation or default under any NGX/Shorcan Permit or give any Governmental Authority grounds to suspend, revoke or terminate any NGX/Shorcan Permits.

(b) None of the NGX/Shorcan Companies is, or has been at any time since January 1, 2013, in violation of and, no written notice has been given of any violation of any applicable Law, except for any violations that would not be material to the Business.

(c) Except as would not be material to the Business, none of the NGX/Shorcan Companies is or since January 1, 2013 has been party to any Proceeding by or on behalf of any Governmental Authority in respect of any violation of Law (each a " Regulatory Proceeding "), nor has any of them received since January 1, 2013 any written notice of any Regulatory Proceeding and, to the Knowledge of Sellers, nor has any Regulatory Proceeding been threatened in writing. To the Knowledge of Sellers, there are no ongoing investigations other than routine regulatory oversight reviews currently being undertaken by any Governmental Authority in respect of the NGX/Shorcan Companies.

(d) NGX is a registered foreign board of trade pursuant to the rules adopted pursuant to the Commodity Exchange Act. NGX is a registered derivatives clearing organization pursuant to the Commodity Exchange Act. Such registrations are in full force and effect and have not been withdrawn, revoked, limited, suspended, or cancelled, nor is any such withdrawal, revocation, limitation, suspension, or cancellation pending or to the Knowledge of Seller threatened.

(e) The NGX/Shorcan Companies have timely filed all reports, registration statements, notices, forms and other documents, together with any amendments required to made with respect thereto, required by any Governmental Authority (collectively, the " Company Regulatory Documents "). The Company Regulatory Documents are correct and complete in all material respects, and the NGX/Shorcan Companies have paid all fees and assessments due and payable in connection with the Company Regulatory Documents. None of the NGX/Shorcan Companies is, or has been since January 1, 2013, in material non-compliance with any terms of its applicable rulebook, contracting party's agreement, or other similar agreements or documents in connection with any of the NGX/Shorcan Permits.

(f) Since March 20, 2013, none of the NGX/Shorcan Companies has been required to file any forms, reports, demonstrations of compliance or comment letter responses with any Governmental Authority, other than in the Ordinary Course in accordance with a NGX/Shorcan Permit.

(g) None of the NGX/Shorcan Companies is, or is required to be, registered, authorized, recognized, licensed or qualified as a broker-dealer, national securities exchange, securities self-regulatory organization or financial intermediary and/or securities trading platform or have any other similar regulatory status for the provision of any securities financial service in any jurisdiction.

(h) None of the NGX/Shorcan Companies is, or is required to be, (i) registered as a futures commission merchant, commodity trading adviser, commodity pool operator, designated contract market, swap execution facility or introducing broker under the Commodity Exchange Act or any other jurisdiction or (ii) subject to registration under the Investment Company Act of 1940 or any similar Law in the U.S. or any other jurisdiction. Shorcan Energy Brokers is neither registered nor required to be registered as a derivatives clearing organization under the Commodity Exchange Act or any other jurisdiction.

SECTION 4.8 Transactions with Affiliates . Neither Sellers nor any of their Affiliates (other than the NGX/Shorcan Companies), other than in the Ordinary Course or under the agreements set forth in Section 4.8-A of the Sellers Disclosure Letter, (a) has engaged in any transaction with any NGX/Shorcan Company (including any acquisition of any material asset, right or property therefrom) since December 11, 2015, other than the receipt of cash dividends, (b) owns any material property or right, tangible or intangible, which is used in the Business, (c) has, to the Knowledge of Sellers, any claim or cause of action against any NGX/Shorcan Company or (d) owes any money to, or is owed any money by, any NGX/Shorcan Company. Other than this Agreement, any Related Agreement, and the agreements set forth in Section 4.8-A of the Sellers Disclosure Letter, as of immediately after the Closing, neither Sellers nor any of their Affiliates (other than the NGX/Shorcan Companies) shall be a party to any transaction, agreement, understanding or arrangement (written or oral) with the NGX/Shorcan Companies. Section 4.8-B of the Sellers Disclosure Letter sets forth all Contracts between or among an NGX/Shorcan Company, on the one hand, and another NGX/Shorcan Company, on the other hand.

SECTION 4.9 Financial Statements .

(a) Sellers have provided to Purchaser true and complete copies of (i) the audited balance sheet as of, and related audited statements of income, changes in stockholders' equity and cash flows, for the year then ended on, December 31, 2014, December 31, 2015 and December 31, 2016 for NGX (on a consolidated basis) (collectively, the " Audited Financial Statements ") and (ii) the unaudited balance sheet as of, and related unaudited statements of income and changes in stockholders' equity for the year then ended on, December 31, 2014, December 31, 2015 and December 31, 2016 for Shorcan (collectively, the " Unaudited Financial Statements " and, together with the Audited Financial Statements, the " Business Financial Information ").

(b) The Business Financial Information has been prepared from the books and records of the NGX/Shorcan Companies. Subject to the absence of footnotes and other presentation items and normal year-end and other adjustments (which other adjustments are not material to the Business) with respect to the Unaudited Financial Statements, the Business Financial Information, except as otherwise indicated therein, has been prepared in accordance with IFRS, consistently applied within the applicable period, and (i) with respect to the Unaudited Financial Statements of Shorcan, fairly presents, in all material respects, the financial condition and the results of operations of Shorcan as at the respective dates and for the periods covered by such Unaudited Financial Statements; and (ii) with respect to the Audited Financial Statements of NGX, gives a true and fair view of the state of affairs of NGX as at the respective dates and for the periods covered by such Audited Financial Statements.

(c) No NGX/Shorcan Company has any Liabilities other than (i) Liabilities reflected or reserved in the Business Financial Information, (ii) Liabilities incurred in the Ordinary Course after December 31, 2016, (iii) Liabilities incurred in connection with this Agreement or the Related Agreements or the transactions contemplated hereby or thereby, (iv) Liabilities that arise under Contracts to which an NGX/Shorcan Company is a party as of the date hereof (excluding Liabilities for breach, non-performance or default), and (v) Liabilities that, in the aggregate, are not material to the Business.

SECTION 4.10 Employee Benefit Plans .

(a) Section 4.10(a)-1 of the Sellers Disclosure Letter lists each Company Benefit Plan. Section 4.10(a)-2 of the Sellers Disclosure Letter lists each collective bargaining, work rules or similar agreements to which any of the NGX/Shorcan Companies are party with any labor organization, trade union, labor union or works council representing any of the Business Employees (" CBAs ").

(b) With respect to each material Company Benefit Plan, Sellers have heretofore delivered or made available to Purchaser true and complete copies of the Company Benefit Plan and any material amendments thereto, together with any material documents relating to such Company Benefit Plan, including any related trust or other funding vehicle, any reports or summaries required under ERISA or the Code or other Law, member booklets and the

most recent determination or opinion letter received from the IRS with respect to each Company Benefit Plan intended to qualify under Section 401 of the Code.

(c) Each of the Company Benefit Plans has been operated and administered in all material respects in accordance with its terms, any applicable CBAs and all applicable Laws, including ERISA and the Code. In the past six years, no NGX/Shorcan Company has maintained or contributed to or was required to contribute to any plan or arrangement or had any actual or contingent liability as a result of its affiliation (including as an ERISA Affiliate) with any other entity that is or was (i) subject to Section 412 of the Code or Section 302 of Title IV of ERISA, (ii) a multiple employer welfare arrangement within the meaning of Section 3(40) of ERISA, or (iii) a multiemployer plan within the meaning of Section 3(37) or 4001(a)(3) of ERISA. None of the Company Benefit Plans is a Canadian Defined Benefit Plan or a Canadian Multi-Employer Plan.

(d) Neither the execution of this Agreement nor the consummation of the Sale will (either alone or together with any other event) (i) cause any payment (whether for notice of termination, pay in lieu of notice, severance pay or otherwise) to become due to any Business Employee or former employee or current or former director of any NGX/Shorcan Company, (ii) cause an increase in the amount of compensation or benefits or the acceleration of the vesting or timing of payment of any compensation or benefits payable to or in respect of any Business Employee or former employee or current or former director of any NGX/Shorcan Company, (iii) cause any individual to accrue or receive additional benefits, services or accelerated rights to payment of benefits under any Company Benefit Plan, (iv) provide for payments that could subject any person to liability for tax under Section 4999 of the Code or (v) result in payments under any of the Company Benefit Plans which would not be deductible under Section 280G of the Code.

(e) Sellers have previously made available to Purchaser the following information as of the most recent practicable date with respect to each Business Employee as of the date this representation is made: (i) date of hire and effective service date, (ii) job title or position held, (iii) city and state or province of employment, (iv) base salary or current wages, (v) employment status (*i.e.* , active or on leave and full-time or part-time) (vi) accrued vacation; and (vii) the length of notice or pay in lieu of notice or severance pay to be given (by both the employing entity and the employee) pursuant to an applicable employment agreement to terminate employment without cause (if known or applicable).

(f) Each Company Benefit Plan intended to be “qualified” within the meaning of Section 401(a) of the Code has received a favorable determination or opinion letter from the IRS as to its qualification and, to the Knowledge of Sellers, no event has occurred that could reasonably be expected to result in disqualification of such Company Benefit Plan. Each Company Benefit Plan maintained for Business Employees primarily residing in Canada that is intended to qualify for tax-preferred or tax-exempt treatment has been duly registered in accordance with applicable Law, and, to the Knowledge of Sellers, no event has occurred with respect to any such Company Benefit Plan that could result in the revocation of the registration

of such Company Benefit Plan or which could otherwise reasonably be expected to adversely affect the tax status of such Company Benefit Plan.

(g) Except as would not reasonably be expected to result in a liability to Purchaser or any NGX/Shorcan Company, there are no pending or, to the Knowledge of Sellers, threatened claims (other than claims for benefits in the Ordinary Course), investigations by a Governmental Authority, lawsuits or arbitrations which have been asserted or instituted, and to the Knowledge of Sellers, no set of circumstances exists which may reasonably give rise to a claim, investigation or lawsuit under any employment Law or against the Company Benefit Plans, any fiduciaries thereof with respect to their duties to the Company Benefit Plans or the assets of any of the trusts under any of the Company Benefit Plans which could reasonably be expected to result in any material liability of Purchaser or any NGX/Shorcan Company to the Pension Benefit Guaranty Corporation, the Department of Treasury, the Department of Labor, any Governmental Authority, any multi-employer plan, any Company Benefit Plan, any participant in a Company Benefit Plan, or any other Person.

(h) No entity other than any NGX/Shorcan Company is a participating employer under any Company Benefit Plan maintained for Business Employees primarily residing in the United States and no individuals are participating in (or are eligible to participate in) any such Company Benefit Plan, other than the Business Employees (and any spouses, dependents, survivors or dependents of such persons).

(i) All data necessary to administer each Company Benefit Plan maintained for Business Employees primarily residing in the United States is in the possession of or otherwise freely accessible, without restriction, to the NGX/Shorcan Companies or their agents and is in a form which is sufficient for the proper administration of such Company Benefit Plan in accordance with its terms and all Laws and such data is materially complete and correct.

(j) With respect to each Company Benefit Plan established or maintained outside of the United States or Canada primarily for the benefit of Business Employees residing outside of the United States or Canada (a " Foreign Company Benefit Plan "): (i) all material employer and Business Employee contributions to each Foreign Company Benefit Plan required by Law or by the terms of such Foreign Company Benefit Plan have been made, or, if applicable, accrued, in accordance with normal accounting practices; (ii) the fair market value of the assets of each funded Foreign Company Benefit Plan and the liability of each insurer for any Foreign Company Benefit Plan funded through insurance or the book reserve established for any Foreign Company Benefit Plan, together with any accrued contributions, is not materially less than the accrued benefit obligations with respect to all current and former participants in such plan according to the actuarial assumptions and valuations most recently used to determine employer contributions to such Foreign Company Benefit Plan; (iii) each Foreign Company Benefit Plan required to be registered has been registered and has been maintained in good standing with applicable regulatory authorities (including tax authorities); and (iv) each of the Foreign Company Benefit Plans has been operated and administered in all material respects in accordance with its terms and all applicable Laws. Section 4.10(j) of the Sellers Disclosure

Letter separately identifies each Foreign Company Benefit Plan that is a defined benefit pension plan.

SECTION 4.11 Labor Matters .

(a) No NGX/Shorcan Company is party to, bound by, or in the process of negotiating a collective bargaining agreement, other labor-related agreement or understanding or work rules with any labor union, labor organization, staff association or works council, nor to the Knowledge of Sellers, has any NGX/Shorcan Company communicated or represented, whether to any current or former employee, former worker or current or former director of, or consultant to, any NGX/Shorcan Company or any labor union, labor organization, staff association or works council, that it will recognize any labor union, labor organization, staff association or works council.

(b) None of the current or former employees, former workers or current or former directors of, or consultants to, any NGX/Shorcan Company is represented by a labor union, other labor organization, staff association or works council in respect of any NGX/Shorcan Company and, (i) to the Knowledge of Sellers, there is no effort currently being made or threatened by or on behalf of any Business Employees, labor union, trade union, works council, labor organization or staff association to organize any employees, workers or directors of, or consultants to, any NGX/Shorcan Company, and there are currently no activities related to the establishment of a labor union, labor organization, staff association or works council representing employees, workers or directors of, or consultants to, any NGX/Shorcan Company, (ii) no demand for recognition of any employees, workers or directors of, or consultants to, any NGX/Shorcan Company has been made by or on behalf of any labor union, staff association, works council, trade union or labor organization in the past two (2) years, and (iii) no petition has been filed, nor has any proceeding been instituted by any current or former employee or current or former director of, or consultant to, any NGX/Shorcan Company or group of current or former employees, workers or current or former directors of, or consultants to, any NGX/Shorcan Company with any labor relations board or commission or the central arbitration committee seeking recognition of a collective bargaining or works council representative in respect of any NGX/Shorcan Company in the past two (2) years.

(c) There is no pending, actual or, to the Knowledge of Sellers, threatened (i) strike, lockout, work stoppage, slowdown, picketing or labor dispute, other industrial action or dispute with respect to or involving any current or former employee, worker or current or former director of, or consultant to, any NGX/Shorcan Company, and there has been no such action or event in the past three (3) years; (ii) material arbitration, grievance, claim, enquiry, investigation or dispute against any NGX/Shorcan Company involving current or former employees, workers, current or former directors, consultants or any of their representatives concerning their employment or engagement, its termination or otherwise; or (iii) discipline or suspension involving any current or former employee, worker or current or former director of any NGX/Shorcan Company.

(d) Each NGX/Shorcan Company is in compliance and has been in compliance since January 1, 2013 in all material respects with all (i) Laws respecting

employment and employment practices, terms and conditions of employment, labor relations, human rights, accessibility, occupational health and safety, former employees, collective bargaining, disability, immigration, layoffs, health and safety, wages, hours and benefits, employment standards, plant closings and layoffs, including classification of employees, workers, consultants and independent contractors and classification of employees, workers and consultants for overtime eligibility, non-discrimination in employment, data protection, workers' compensation and the collection and remittance of withholding and/or payroll taxes and similar Taxes, and (ii) obligations of any NGX/Shorcan Company under any employment agreement, agreement for the provision of personal services, notice of termination, termination or severance agreement, Order or CBA. No NGX/Shorcan Company has implemented any plant closings or employee layoffs in the past two years that triggered a notice requirement under the Worker Adjustment and Retraining Notification Act of 1988, as amended, or any similar or related Law which was not satisfied.

(e) To the Knowledge of Sellers, no NGX/Shorcan Company is involved in negotiations (whether with employees, workers, directors, consultants or any trade union or other representatives thereof) to vary materially the terms and conditions of employment or engagement of any of its employees, workers, directors or consultants, nor, to the Knowledge of Sellers, are there any outstanding agreements, promises or offers made by any NGX/Shorcan Company to any of its employees, workers, directors or consultants or to any trade union or other representatives thereof concerning or affecting the terms and conditions of employment or engagement of any of its employees, workers, directors or consultants, and no NGX/Shorcan Company is under any contractual or other obligation to change the terms of service of any employee, director or consultant.

(f) No offer of employment or engagement has been made and is currently outstanding by any NGX/Shorcan Company to any individual whose aggregate annual cash compensation would exceed $200,000 and no notice of termination has been given to or received from any Business Employee whose aggregate annual cash compensation exceeds $200,000.

(g) Other than as required by law, no NGX/Shorcan Company operates any custom, policy, practice or has any agreement, pursuant to which employees by reason of the termination of their employment receive a payment or other entitlement in excess of their statutory entitlements. No director of any NGX/Shorcan Company or Business Employee has any entitlement to any accrued but unused holiday or vacation from any previous holiday or vacation year(s).

(h) There are no outstanding loans nor notional loans to any director or Business Employee made by any NGX/Shorcan Company where the amount outstanding on the loan exceeds $10,000.

SECTION 4.12 No Brokers or Finders . Except for Barclays Capital Canada Inc., no broker, finder or investment banker is entitled to any brokerage, finder's or other fee or commission in connection with the Sale based upon arrangements made by or on behalf of Sellers or the NGX/Shorcan Companies or their Affiliates. Sellers are solely responsible for all fees and expenses of Barclays Capital Canada Inc.

SECTION 4.13 Real Property .

(a) None of the NGX/Shorcan Companies owns any real property. Section 4.13(a) of Sellers Disclosure Letter sets forth the address or other description of each parcel of real property leased or subleased by any of the NGX/Shorcan Companies (the " NGX/Shorcan Leased Real Property ") and such information is true and accurate in all material respects. No eminent domain or condemnation Proceeding is pending or, to the Knowledge of Sellers, threatened in writing, that would preclude or materially impair the use of any NGX/Shorcan Leased Real Property.

(b) Except as would not be material to the Business, all buildings, structures, fixtures and improvements included within the NGX/Shorcan Leased Real Property (the " NGX/Shorcan Improvements ") are in good repair and operating condition, and are adequate and suitable for the purposes for which they are presently being used or held for use, and to the Knowledge of Sellers, there are no facts or conditions affecting any of the NGX/Shorcan Improvements that, in the aggregate, would reasonably be expected to materially interfere with the current use, occupancy or operation thereof. Except as would not be material to the Business, no portion of such NGX/Shorcan Leased Real Property has suffered any damage by fire or other casualty loss which has not heretofore been completely repaired and restored to its original condition (ordinary wear and tear excepted).

SECTION 4.14 Absence of Certain Changes . Since December 31, 2016 through the date of this Agreement:

(a) the Business has been conducted in the ordinary course of business (" Ordinary Course ") in all material respects;

(b) there has not been a Business Material Adverse Effect; and

(c) none of Sellers or any Affiliate of Sellers, nor the NGX/Shorcan Companies has taken any action or omitted to take any action that if taken or omitted to be taken after the date of this Agreement would constitute a violation of Section 6.1(b)(v) , Section 6.1(b)(vi) , Section 6.1(b)(ix) , Section 6.1(b)(x) or Section 6.1(b)(xvi) .

SECTION 4.15 Material Contracts .

(a) Section 4.15(a) of the Sellers Disclosure Letter (which is arranged in subsections to correspond to the subsections of this Section 4.15(a)) sets forth the following Contracts as of the date hereof (other than any such Contract solely by or among the NGX/Shorcan Companies) to which any NGX/Shorcan Company is a party or by which it is bound or to which its assets or properties is subject (collectively, the " Material Contracts "):

(i) any Contract for Indebtedness;

(ii) any Contracts under which any NGX/Shorcan Company has advanced or loaned any Person any amounts in excess of $250,000;

(iii) any joint venture, partnership, limited liability company, shareholder, or other similar Contract or arrangements relating to the formation, creation, operation, management or control of any partnership, strategic alliance or joint venture with a third party;

(iv) any Contract or series of related Contracts, including any option agreement, entered into in the past three years relating to the acquisition or disposition by an NGX/Shorcan Company of any business or asset (whether by merger, sale of stock, sale of assets or otherwise) for aggregate consideration in excess of $1,000,000;

(v) any Contract for the voting of Securities of any NGX/Shorcan Company;

(vi) any Contract (including any exclusivity agreement) that purports to limit or restrict in any material respect either the type of business in which any NGX/Shorcan Company may engage or the manner or locations in which any of them may so engage in any business or would require the disposition of any assets or any line of business of any NGX/Shorcan Company;

(vii) any Contract with a non-solicitation or non-compete provision that purports to limit or restrict in any respect any NGX/Shorcan Company;

(viii) any Contract with a "most-favored-nations" pricing provision or that purports to limit or restrict in any material respect any NGX/Shorcan Company;

(ix) any Contract, other than such Contracts entered into in the Ordinary Course, under which (A) any Person (other than any NGX/Shorcan Company) has directly or indirectly guaranteed or provided an indemnity in respect of any liabilities, obligations or commitments of any NGX/Shorcan Company or (B) any NGX/Shorcan Company has directly or indirectly guaranteed or provided an indemnity in respect of liabilities, obligations or commitments of any other Person (other than any NGX/Shorcan Company) (in each case other than endorsements for the purpose of collection in a commercially reasonable manner consistent with industry practice), unless such guarantor or indemnity obligation is less than $500,000;

(x) any Contract under which any NGX/Shorcan Company has granted any Person registration rights (including demand and piggy-back registration rights);

(xi) other than commercially available "off-the-shelf" Software and any other Software that is readily substitutable (without causing material disruption or materially increased cost) in the operation of the Business, any material Contract under which (A) any NGX/Shorcan Company has granted any license, sublicense or other permission to any Person to use any Acquired Intellectual Property, except that non-exclusive licenses to customers of the NGX/Shorcan Companies in the Ordinary Course are not required to be scheduled in subsection (xi) of Section 4.15(a) of the Sellers Disclosure Letter but are nevertheless included in the definition of Material Contracts

herein; or (B) any Person has granted any license, sublicense or other permission to any NGX/Shorcan Company to use any Intellectual Property other than Owned Intellectual Property;

(xii) any Contract that involves or would reasonably be expected to involve expenditures of, or receipts by, any NGX/Shorcan Company in excess of $1,500,000 in the aggregate per any calendar year;

(xiii) any material Contract with any Governmental Authority;

(xiv) any Contract between or among an NGX/Shorcan Company, on the one hand, and any Seller (or Affiliate thereof), on the other hand;

(xv) any Lease for an NGX/Shorcan Leased Real Property, and any other Contract that relates in any way to the occupancy or use of any of the NGX/Shorcan Leased Real Property;

(xvi) any employment agreement or outstanding offer letter that provides for annual compensation in excess of $200,000 or for notice of termination, pay in lieu of notice, severance pay or a change of control payment that exceeds statutory requirements;

(xvii) any Contract under which an NGX/Shorcan Company has permitted any material asset to become subject to a Lien (other than a Permitted Lien);

(xviii) any outstanding general or special powers of attorney executed by or on behalf of an NGX/Shorcan Company;

(xix) (A) any customer Contract with a customer listed in Section 4.23 of the Sellers Disclosure Letter and (B) any supplier Contract with a supplier listed in Section 4.23 of the Sellers Disclosure Letter; and

(xx) any Contract the termination or breach of which or the failure to obtain consent in respect of which would have a Business Material Adverse Effect.

(b) (i) No NGX/Shorcan Company is and, to the Knowledge of Sellers, no other party is, in breach or violation of, or in default under, any Material Contract, except as would not be material to the Business, (ii) each Material Contract is a valid and binding agreement of the NGX/Shorcan Companies, as the case may be, enforceable in accordance with its terms, except for the Enforceability Exceptions, (iii) to the Knowledge of Sellers, no event has occurred or been threatened in writing which would result in a breach or violation of, or a default under, any Material Contract (in each case, with or without notice or lapse of time or both), except as would not be material to the Business, and (iv) each Material Contract (including all modifications and amendments thereto and waivers thereunder) is in full force and effect with respect to the NGX/Shorcan Companies, as applicable, and, to the Knowledge of Sellers, with

respect to the other parties thereto, and an accurate and complete copy of which has been delivered or made available to Purchaser.

SECTION 4.16 Intellectual Property .

(a) All Intellectual Property that is currently used in the conduct of the Business by any NGX/Shorcan Company is either (a) owned by the NGX/Shorcan Companies (such Intellectual Property, " Owned Intellectual Property "), or (b) licensed by the NGX/Shorcan Companies (together with the Owned Intellectual Property, the " Acquired Intellectual Property "), except, in each case, where a failure to so own or license such Intellectual Property would not be material to the Business or the NGX/Shorcan Companies taken as a whole. Section 4.16(a) of the Sellers Disclosure Letter lists, in each case, as of the date hereof, with respect to the Acquired Intellectual Property, all: (i) registrations and applications for registration of Marks; (ii) Patents; (iii) registered copyrights and applications for registration of copyrights; and (iv) material Software. All material Acquired Intellectual Property is valid, subsisting and enforceable, and the NGX/Shorcan Companies are the sole and exclusive owner of the Owned Intellectual Property free and clear of all Liens (other than Permitted Liens).

(b) In each case except as would not be material to the Business or the NGX/Shorcan Companies taken as a whole, neither the operations of the Business nor any of the NGX/Shorcan Companies: (i) has infringed upon, misappropriated or otherwise violated any Intellectual Property of any Person; or (ii) has received any charge, complaint, claim, demand, or notice alleging infringement, misappropriation or violation of the Intellectual Property of any Person (including any invitation to license or request or demand to refrain from using any Intellectual Property of any Person).

(c) To the Knowledge of Sellers: (i) there is no interference, infringement, dilution, misappropriation or other violation of any Acquired Intellectual Property by any Person; (ii) none of the Acquired Intellectual Property is subject to any outstanding judgment, injunction, writ, order, decree or agreement prohibiting or restricting the use thereof by the NGX/Shorcan Companies or their customers; and (iii) no Acquired Intellectual Property is the subject of any re-examination, opposition, cancellation or invalidation proceeding before any Governmental Authority.

(d) Sellers and the NGX/Shorcan Companies have taken commercially reasonable measures to protect the confidentiality of trade secrets and other confidential information owned by the NGX/Shorcan Companies, except as would not be material to the Business or the NGX/Shorcan Companies taken as a whole. Except as would not be material to the Business or the NGX/Shorcan Companies taken as a whole each current and, within the last three (3) years, former consultant and individual that has delivered, developed, contributed to, modified or improved Owned Intellectual Property has executed an agreement with an NGX/Shorcan Company regarding confidentiality and proprietary information and an agreement assigning to an NGX/Shorcan Company all of such consultant's and individual's rights in such development, contribution, modification or improvement and, as applicable, waiving such consultant's and individual's moral rights therein.

SECTION 4.17 Software and Other Information Technology .

(a) Except as would not be material to the Business or the NGX/Shorcan Companies taken as a whole, (i) the NGX/Shorcan Companies have implemented commercially reasonable measures designed to reasonably protect all Information Technology owned or held by any NGX/Shorcan Company and used in the conduct of the Business from loss and unauthorized intrusion, access and modification and (ii) all Information Technology owned or held by any NGX/Shorcan Company and used in the conduct of the Business is free from material defects and material deficiencies.

(b) Except as would not be material to the Business or the NGX/Shorcan Companies taken as a whole, the Software included in the Acquired Intellectual Property does not contain any undocumented code, disabling mechanism or protection feature designed to prevent its use, including any undocumented clock, timer, counter, computer virus, worm, software lock, drop dead device, Trojan-horse routine, trap door, back door (including capabilities that permit non-administrative users to gain unrestricted access or administrative rights to Software or that otherwise bypasses security or audit controls), time bomb or any other codes or instructions that may be used to access, modify, replicate, distort, delete, damage, or disable Owned Software or data, other software operating systems, computers or equipment with which the Software interacts. Except as would not be material to the Business or the NGX/Shorcan Companies taken as a whole, in the past four (4) years, there has been no failure or other substandard performance of any Information Technology or Software which has caused any disruption to the Business or any NGX/Shorcan Company.

(c) No portion of any source code for any Software included within the Owned Intellectual Property (" Owned Software ") has currently been or is obligated to be delivered, licensed or made available to any escrow agent (other than in the Ordinary Course, and the consummation of the transactions contemplated by this Agreement will not provide any such escrow agent with the right to deliver, release or make available any source code included within the Owned Software to any Person.

(d) Section 4.17(d) of the Sellers Disclosure Letter sets forth a complete and accurate list of (i) all material Open Source Software used by any NGX/Shorcan Company as of the date hereof in its products and (ii) the license agreement that governs such Person's use of such Open Source Software. Except as would not be material to the Business or the NGX/Shorcan Companies taken as a whole, no NGX/Shorcan Company has used, modified or distributed any Open Source Software in its products or services in a manner that would impose a requirement as described in subparts (i) through (iii) under the definition of Open Source Software. No Owned Software is being or was developed pursuant to participation in any industry standards body or consortium.

SECTION 4.18 Taxes .

(a) (i) The NGX/Shorcan Companies, and, to the extent directly in respect of the Business, Sellers have filed all material Tax Returns required to have been filed on or before the date hereof and all such Tax Returns were true, correct and complete in all material respects;

(ii) all material Taxes due by the NGX/Shorcan Companies or with respect to the Business (whether or not shown on any Tax Return) have been timely paid.

(b) None of the NGX/Shorcan Companies has waived in writing any statute of limitations in respect of a material amount of Taxes which waiver is currently in effect, has received or requested, in each case in writing, any extension of time to file a material Tax Return that remains unfiled or has granted any currently effective power of attorney with respect to Tax matters.

(c) No Taxing Authority is presently conducting or has conducted within the previous three (3) years, any material dispute, claim, audit, action, suit, proceeding, examination or investigation in relation to the NGX/Shorcan Companies or any other member of a Seller Group to which the NGX/Shorcan Companies belong, and no material issues that have been raised in writing by the relevant Taxing Authority in connection with the examination of the Tax Returns referred to in Section 4.18(a)(i) are currently pending.

(d) No material liens for Taxes have been filed with respect to the Business (other than Taxes for which payment is not yet due), and all material deficiencies asserted in writing or material assessments made in writing as a result of any examination of the Tax Returns referred to in Section 4.18(a)(i) by a Taxing Authority have been paid in full.

(e) The NGX/Shorcan Companies have not been a member of any Seller Group or any other group for Tax purposes other than any Seller Group comprising solely current or former Affiliates of either Seller. The NGX/Shorcan Companies are not bound by any material Tax sharing agreement, indemnity obligation or similar contract, practice or legal requirement.

(f) No NGX/Shorcan Company will be required to recognize more than $500,000 of income in the aggregate during a taxable period concluding after the Closing Date as a result of any deferred intercompany transaction or excess loss account (described in U.S. Treasury regulations under Section 1502 of the Code or similar provisions of state, local or foreign law) existing on or before the Closing Date, any installment sale or open transaction concluded on or before the Closing Date, any change in accounting method, practice or period or any amount prepaid on or before the Closing Date or any settlement or agreement with a Taxing Authority concluded on or before the Closing Date except, in each case, to the extent Taxes arising from such items do not exceed the amounts specifically identified as having been provided for them in the Working Capital.

(g) No NGX/Shorcan Company nor any other member of a Seller Group to which an NGX/Shorcan Company belongs has engaged or agreed to engage in a listed transaction within the meaning of Treasury Regulation Section 1.6011-4(b)(2) that could affect its Tax liability for any taxable period as to which the period for audit and assessment has not expired.

(h) All material Taxes that any of the NGX/Shorcan Companies were or are required by Law to withhold or collect in connection with amounts paid or owing to any

employee, independent contractor, creditor, stockholder, member or other Person have been duly withheld and paid over to the appropriate Taxing Authority, and the NGX/Shorcan Companies have complied in all material respects with all related recordkeeping and reporting requirements.

(i) Each of the NGX/Shorcan Companies is classified as a corporation for U.S. federal income tax purposes.

(j) All material documents in the enforcement of which any NGX/Shorcan Company may be interested have been duly stamped.

(k) Notwithstanding anything to the contrary in this Agreement, nothing in this Section 4.18 shall cause Sellers to be liable for any Taxes for which Sellers are not expressly liable pursuant to Article VIII , and this Section 4.18 , Section 4.9 , Section 4.10 and Section 4.11 contain the exclusive representations and warranties by Sellers with respect to Taxes.

SECTION 4.19 Environmental Matters . Except as would not be material to the Business, since December 31, 2013: (a) the NGX/Shorcan Companies have complied with and are currently in compliance with all Environmental Law applicable to them, (b) the NGX/Shorcan Companies are not subject to any Liabilities, including corrective, investigatory or remedial obligations arising under Environmental Laws, and (c) none of Sellers or the NGX/Shorcan Companies have received any written notice, report or information regarding any Liabilities, including corrective, investigatory or remedial obligations arising under Law, with respect to the NGX/Shorcan Companies.

SECTION 4.20 Assets .

(a) Ownership of Assets . Each NGX/Shorcan Company has good and marketable title to, or, in the case of property held under a lease or other Contract, a valid leasehold interest in, or adequate rights to use, all of the material properties, rights and assets, whether real or personal and whether tangible or intangible, used by it in the conduct of the Business, including all material assets reflected in each of the balance sheets as of December 31, 2016, included in the Business Financial Information, except for such assets that have been sold or otherwise disposed of since December 31, 2016 in the Ordinary Course (collectively, the " Assets "). None of the Assets is subject to any Lien other than a Permitted Lien and none of the Assets is held under a lease or other Contract with an Affiliate of Sellers (other than Assets held by the NGX/Shorcan Companies). Each of the fixtures, fittings and hardware used or held for use by the NGX/Shorcan Companies in the conduct of the Business is free from defects, has been maintained in accordance with normal industry practice, is in good operating condition and repair (subject to normal wear and tear) and is suitable for the purposes for which it presently is used, in each case, in all material respects.

(b) Sufficiency of Assets . The NGX/Shorcan Companies and the Assets, together with the rights of Purchaser and its Affiliates under this Agreement and the Related Agreements, constitute all of the assets, properties, rights and interests that are used or held for use in or necessary to conduct the Business as currently conducted, in all material respects, by the NGX/Shorcan Companies.

(c) No Other Business Activities . None of the NGX/Shorcan Companies conducts any material business activities other than activities related to or incidental to the Business.

SECTION 4.21 Foreign Corrupt Practices Act and International Trade Sanction . None of the NGX/Shorcan Companies, nor any of their respective directors, officers, agents, employees or, to the Knowledge of Sellers, any other Persons acting on their behalf has, in connection with the operation of the Business, (a) used any corporate or other funds, directly or indirectly, for unlawful contributions, payments, gifts or entertainment, (b) made any unlawful expenditures relating to political activity to government officials, candidates or members of political parties or organizations, or any other Person, or (c) established or maintained any unlawful or unrecorded funds in material violation of the Foreign Corrupt Practices Act of 1977, as amended, or any other similar applicable Law (including the United Kingdom Bribery Act 2010, the Corruption of Foreign Public Officials Act (Canada), the Proceeds of Crime (Money Laundering) and Terrorist Financing Act (Canada) any anti-money laundering law or any laws enacted pursuant to the OECD Convention on Combating Bribery of Foreign Public Officials). None of the NGX/Shorcan Companies, nor any of their respective directors, officers, agents, employees or, to the Knowledge of Sellers, any other Persons acting on their behalf has, in connection with the operation of the Business, violated or operated in noncompliance, directly or indirectly, in any material respect, with any export restrictions or other economic sanctions laws, anti-boycott regulations, embargo regulations or other applicable domestic or foreign Laws, including the regulations enacted by the U.S. Treasury Department's Office of Foreign Assets Control (" OFAC "), which prohibit transactions involving parties located in countries subject to comprehensive economic sanctions by OFAC or parties identified on OFAC's Specially Designated Nationals and Blocked Persons List.

SECTION 4.22 Indebtedness . Section 4.22 of the Sellers Disclosure Letter sets forth a list that is correct and complete in all material respects of all Indebtedness of the NGX/Shorcan Companies as of the date hereof.

SECTION 4.23 Customers and Suppliers .

(a) Section 4.23(a) of the Sellers Disclosure Letter sets forth a list, which is complete and accurate in all material respects, of:

(i) each of the fifteen largest customers of NGX (measured by aggregate revenue) during the fiscal year ended on December 31, 2016 and during the six months ended June 30, 2017;

(ii) each of the fifteen largest customers of Shorcan Energy Brokers (measured by aggregate revenue) during the fiscal year ended on December 31, 2016 and during the six months ended June 30, 2017;

(iii) each of the ten largest suppliers of materials, products or services to NGX (measured by the aggregate amount spent by NGX) during the fiscal year ended on December 31, 2016 and during the six months ended June 30, 2017; and

(iv) each of the ten largest suppliers of materials, products or services to Shorcan Energy Brokers (measured by the aggregate amount spent by Shorcan Energy Brokers) during the fiscal year ended on December 31, 2016 and during the six months ended June 30, 2017.

(b) Except as disclosed in Section 4.23(b) of the Sellers Disclosure Letter, none of such customers or suppliers has cancelled, terminated or otherwise materially adversely altered (including any material reduction in the rate or amount of sales or purchases or material increase in the prices charged or paid, as the case may be) or notified an NGX/Shorcan Company in writing of any intention to do any of the foregoing.

SECTION 4.24 Insurance . All insurance policies of or with respect to any of the NGX/Shorcan Companies are in full force and effect and were in full force and effect during the periods of time such insurance policies are purported to be in effect, except for such failures to be in full force and effect that would not be material to the Business. No NGX/Shorcan Company is in breach of or default under, and, to the Knowledge of Sellers, no event has occurred which, with notice or the lapse of time, would constitute such a breach of or default under, or permit termination under, any policy, in each case, except as would not otherwise be material to the Business.

SECTION 4.25 Contracting Party Agreements .

(a) Each party (other than NGX) who is an approved participant on NGX (a " Contracting Party ") has entered into a contracting party agreement substantially in the form set forth in Section 4.25(a)-A of the Sellers Disclosure Letter (a " Contracting Party Agreement ") that incorporates the terms and conditions set forth in Section 4.25(a)-B of the Sellers Disclosure Letter (the " Current Terms and Conditions "). NGX has not entered into any agreement with any Contracting Party that modifies the Current Terms and Conditions.

(b) Each Contracting Party Agreement (including the Current Terms and Conditions incorporated thereto) is (i) a valid and binding agreement of NGX and, to the Knowledge of Sellers, the respective Contracting Party who is party thereto, enforceable in accordance with its terms, except for the Enforceability Exceptions and (ii) in full force and effect with respect to NGX and, to the Knowledge of Sellers, the applicable Contracting Party.

(c) Each Transaction which has not been fully performed as at the date hereof is subject to a Contracting Party Agreement incorporating terms and conditions that are substantially similar to the Current Terms and Conditions.

ARTICLE V

REPRESENTATIONS AND WARRANTIES OF PURCHASER

Except as set forth in the Purchaser Disclosure Letter (it being understood that information disclosed in any section of the Purchaser Disclosure Letter shall be deemed to be

disclosed with respect to any other section of the Purchaser Disclosure Letter to which such disclosure would reasonably pertain or if its relevance to such other section is reasonably apparent on the face of such disclosure), Purchaser hereby represents and warrants to Sellers as of the date hereof and as of the Closing Date (except for representations and warranties which are made as of a specified time which are made only as of such specified time) as follows:

SECTION 5.1 Organization and Good Standing .

(a) Purchaser is a corporation duly organized, validly existing and in good standing under the laws of Delaware. Purchaser has all requisite corporate power and authority to own the NGX/Shorcan Companies. Purchaser has all requisite corporate power and authority to own or lease the assets owned or leased by it and to carry on its business, as currently conducted, except where the failure to have such power or authority would not have a Purchaser Material Adverse Effect.

(b) Purchaser is duly qualified to do business and is in good standing as a foreign entity in each jurisdiction where the ownership, lease or operation of the applicable assets or the conduct of its business requires such qualification, except where the failure to be so qualified or in good standing would not have a Purchaser Material Adverse Effect.

SECTION 5.2 Authorization; Binding Obligations . Purchaser has all necessary corporate power and authority to make, execute and deliver this Agreement and the Related Agreements and to perform all of the obligations to be performed by it hereunder and thereunder. The making, execution, delivery and performance of this Agreement and the Related Agreements and the consummation by Purchaser of the transactions contemplated hereby and thereby have been duly and validly authorized by all necessary corporate action on the part of Purchaser and no other corporate proceedings on the part of Purchaser is necessary to authorize the execution, delivery and performance by Purchaser of this Agreement or the Related Agreements or the transactions contemplated hereby or thereby. This Agreement has been, and, upon their execution, the Related Agreements will be, duly and validly executed and delivered by Purchaser, and assuming the due authorization, execution and delivery by Sellers that are party thereto, each of this Agreement and the Related Agreements will constitute the valid, legal and binding obligation of Purchaser, enforceable against it in accordance with its terms, except as may be limited by the Enforceability Exceptions.

SECTION 5.3 No Conflicts; Consents and Approvals .

(a) The execution and delivery of this Agreement and the Related Agreements by Purchaser does not, and the consummation by Purchaser of the Sale will not: (i) conflict with any provisions of the organizational documents of Purchaser; (ii) violate any applicable Law (assuming compliance with the matters set forth in Section 5.3(b) of the Purchaser Disclosure Letter); (iii) result, after the giving of notice, with lapse of time or otherwise, in any violation, default or loss of a benefit under, or permit the acceleration or termination of any obligation under or require any consent under or require any offer to purchase or prepayment of any Indebtedness or Liability under, any mortgage, indenture, lease, agreement or other instrument, permit, concession, grant, franchise, license or other Contract to which

Purchaser is a party or by which Purchaser or its Subsidiaries or any of their assets or properties may be bound; (iv) result in the creation or imposition of any Lien (other than Permitted Liens) upon any properties or assets of Purchaser or its Subsidiaries; or (v) cause the suspension or revocation of any material Permit of Purchaser or its Subsidiaries; except in the case of clauses (ii), (iii), (iv) and (v), as would not have a Purchaser Material Adverse Effect.

(b) No clearance, consent, approval, order, license or authorization of, or declaration, registration or filing with, or notice to, or permit issued by, any Governmental Authority is required to be made or obtained by Purchaser in connection with the execution or delivery of this Agreement or any Related Agreement by Purchaser or the consummation by Purchaser of the Sale, except for (i) any clearance, consent, approval, order, license, authorization, declaration, registration, filing, notice or permit set forth in Section 5.3(b) of the Purchaser Disclosure Letter and (ii) any such clearance, consent, approval, order, license, authorization, declaration, registration, filing, notice or permit, the failure of which to make or obtain would not have a Purchaser Material Adverse Effect.

SECTION 5.4 Litigation. As of the date hereof, there is no Proceeding pending or, to the Knowledge of Purchaser, threatened against Purchaser, which seeks to, or would reasonably be expected to, restrain, enjoin or delay the consummation of the Sale or which seeks damages in connection therewith, and no injunction of any type has been entered or issued.

SECTION 5.5 Financial Ability. Purchaser has, or will have at Closing, all funds necessary to pay and satisfy in full the obligations pursuant to this Agreement, including to pay any amounts due pursuant to Section 3.7.

SECTION 5.6 Acquisition of Shares for Investment. Purchaser has such knowledge and experience in financial and business matters, and is capable of evaluating the merits and risks of its purchase of the NGX/Shorcan Entities. Without limiting the other provisions hereof, Purchaser confirms that Sellers and their Affiliates have made available to Purchaser and Purchaser's agents the opportunity to ask questions of the officers and management employees of Sellers and their Affiliates, and of the NGX/Shorcan Companies, as well as access to the documents, information and records of Sellers and the NGX/Shorcan Companies, and to acquire additional information about the Business and the financial condition of the NGX/Shorcan Companies, and Purchaser confirms that it has made an independent investigation, analysis and evaluation of the NGX/Shorcan Companies and their properties, assets, business, financial condition, prospects, documents, information and records. Purchaser is acquiring the shares of the NGX/Shorcan Entities for investment and not with a view toward or for sale in connection with any distribution thereof, or with any present intention of distributing or selling the shares of the NGX/Shorcan Entities. Purchaser acknowledges that the shares of the NGX/Shorcan Entities have not been registered under the Securities Act, or any state securities Laws, and have not been qualified by a prospectus under Canadian securities Laws and agrees that the shares of the NGX/Shorcan Entities may not be sold, transferred, offered for sale, pledged, hypothecated or otherwise disposed of without registration under the

Securities Act, except pursuant to an exemption from such registration available under the Securities Act, and without compliance with Canadian securities Laws and foreign securities Laws, in each case, to the extent applicable.

SECTION 5.7 No Brokers or Finders. Except for Citigroup Global Markets Inc., no broker, finder or investment banker is entitled to any brokerage, finder's or other fee or commission in connection with the Sale based upon arrangements made by or on behalf of Purchaser. Purchaser is solely responsible for all fees and expenses of Citigroup Global Markets Inc.

SECTION 5.8 No Additional Representations.

(a) Purchaser acknowledges that neither Sellers nor any of their Affiliates make any representation or warranty as to any matter whatsoever except as expressly set forth in Article IV, in Article V of the Trayport Agreement or in any Related Agreement, and specifically (but without limiting the generality of the foregoing) that neither Sellers nor any of their Affiliates make any representation or warranty with respect to (i) any projections, estimates or budgets delivered or made available to Purchaser (or any of its respective Affiliates, officers, directors, employees or representatives) of future revenues, results of operations (or any component thereof), cash flows or financial condition (or any component thereof) of the NGX/Shorcan Companies or (ii) the future business and operations of the NGX/Shorcan Companies, and Purchaser has not relied on such information or any other representation or warranty not set forth in Article IV, in Article V of the Trayport Agreement or in any such Related Agreement.

(b) Purchaser has conducted its own independent review and analysis of the business, operations, assets, liabilities, results of operations, financial condition and prospects of the NGX/Shorcan Companies and acknowledges that Purchaser has been provided access for such purposes. Purchaser has not relied upon any representations, warranties or statements, whether express or implied, made by Sellers, or any of their Affiliates, stockholders, controlling persons or representatives that are not expressly set forth in Article IV, in Article V of the Trayport Agreement or in any Related Agreement, whether or not such representations and warranties were made in writing or orally. Purchaser acknowledges and agrees that, except for the representations, warranties or statements expressly set forth in Article IV, in Article V of the Trayport Agreement or in the Related Agreements, (i) neither Sellers nor any of their Affiliates makes, or has made, any representations or warranties relating to itself, its Subsidiaries, the NGX/Shorcan Companies or otherwise in connection with the transactions contemplated hereby and Purchaser is not relying on any representation or warranty except for those expressly set forth in this Agreement, the Trayport Agreement or the Related Agreements, as applicable, (ii) no Person has been authorized by Sellers or any of their Affiliates to make any representation or warranty relating to themselves or their business or otherwise in connection with the transactions contemplated hereby, and if made, such representation or warranty must not be relied upon by Purchaser as having been authorized by such party, and (iii) any estimates, projections, predictions, data, financial information, memoranda, presentations or any other materials or information provided or addressed to Purchaser or any of its representatives are not and shall not

be deemed to be or include representations or warranties unless any such materials or information are the subject of any express representation or warranty set forth in Article IV , in Article V of the Trayport Agreement or the Related Agreements, as applicable.

ARTICLE VI

COVENANTS

SECTION 6.1 Conduct of Business .

(a) From the date of this Agreement until the earlier of the Closing Date and the termination of this Agreement in accordance with its terms, except as (i) contemplated or required by this Agreement, (ii) required by applicable Law or the regulations or requirements of any stock exchange or regulatory organization applicable to Sellers or any of their Affiliates, (iii) as may be agreed in writing by Purchaser (which consent shall not be unreasonably withheld, delayed or conditioned), or (iv) as set forth in Section 6.1(a) of the Sellers Disclosure Letter, Sellers agree to cause the NGX/Shorcan Companies to conduct their business in the Ordinary Course, and to preserve substantially intact the business organizations and relationships with all Governmental Authorities, customers, suppliers, business associates and others having material business dealings with the NGX/Shorcan Companies, in each case, in the Ordinary Course; provided , however , that no action by Sellers or any of their Subsidiaries with respect to matters specifically addressed by any provision of Section 6.1(b) shall be deemed a breach of this sentence unless such action would constitute a breach of such other provision.

(b) Except as (w) expressly contemplated or required by this Agreement, (x) required by applicable Law or the regulations or requirements of any stock exchange or regulatory organization applicable to Sellers or any of their Affiliates, (y) as may be agreed in writing by Purchaser (which consent shall not be unreasonably withheld, delayed or conditioned), or (z) as set forth in Section 6.1(b) of the Sellers Disclosure Letter, Sellers agree not to, and to cause the NGX/Shorcan Companies not to:

(i) authorize or effect any amendment to or change the organizational documents of the NGX/Shorcan Companies;

(ii) issue or authorize the issuance of any Securities of the NGX/Shorcan Companies or grant any options, warrants, or other rights to purchase or obtain any of the Securities of the NGX/Shorcan Companies or issue, sell or otherwise dispose of any of the Securities of the NGX/Shorcan Companies or redeem, repurchase or otherwise acquire any Securities of the NGX/Shorcan Companies (other than to another NGX/Shorcan Company);

(iii) declare, authorize, make or pay any dividend or other distribution with respect to the Securities of any NGX/Shorcan Company, other than (A) in the Ordinary Course or (B) cash dividend paid prior to the Closing Date;

(iv) effect any recapitalization, reclassification or similar change in the capitalization of the NGX/Shorcan Companies;

(v) have the NGX/Shorcan Companies assume or incur any Indebtedness in excess of $5,000,000 except (A) Indebtedness incurred in the Ordinary Course or (B) guarantees by any NGX/Shorcan Company of Indebtedness of any other NGX/Shorcan Company;

(vi) have the NGX/Shorcan Companies make or commit to make any capital expenditure other than (A) capital expenditures that will have been fully paid prior to the Closing Date, (B) capital expenditures made in the Ordinary Course or (C) as set forth in the NGX/Shorcan Entities' capital budget, a copy of which is attached as Section 6.1(b)(vi) of the Sellers Disclosure Letter;

(vii) other than in the Ordinary Course and except for renewals or expirations in accordance with the existing terms of any Material Contract, (A) terminate, modify or amend on terms materially adverse to any of the NGX/Shorcan Companies any Material Contract, or (B) enter into any new Contract that would have been considered a Material Contract if it were entered into at or prior to the date hereof;

(viii) enter into, renew, extend or amend any Contracts or arrangements that limit or restrict any of the NGX/Shorcan Companies from engaging or competing in any line of business or in any geographic area;

(ix) sell, lease, license, transfer or otherwise dispose of, either to a third party or otherwise, any assets, property or rights owned or held by the NGX/Shorcan Companies (including Securities of the NGX/Shorcan Subsidiaries), except (A) in the Ordinary Course, (B) pursuant to the terms of a Contract as of the date of this Agreement or (C) to third parties on arms' length terms in an amount not in excess of $2,500,000 in the aggregate;

(x) have the NGX/Shorcan Companies merge with, enter into a consolidation with any Person or acquire a substantial portion of the assets or business of any Person or any division or line of business thereof with a value in excess of $50,000 individually or $250,000 in the aggregate, or otherwise acquire, other than in the Ordinary Course, any assets with a value in excess of $50,000 individually or $250,000 in the aggregate, other than in the Ordinary Course;

(xi) other than in the Ordinary Course, (A) materially amend or otherwise materially modify benefits under any Company Benefit Plan, including with respect to any employment agreements with any officer, employee, worker or consultant of the NGX/Shorcan Companies, (B) accelerate the payment or vesting of benefits or amounts payable or to become payable under any Company Benefit Plan as currently in effect on the date hereof, (C) fail to make any required contribution to any Company Benefit Plan, (D) merge or transfer any Company Benefit Plan or the assets or liabilities of any Company Benefit Plan, (E) change the sponsor of any Company Benefit Plan or

(F) terminate or establish any Company Benefit Plan, except, in each case, with respect to agreements for new hires (other than new hires into executive management positions);

(xii) terminate the employment or contractual relationship of any officer, director, consultant or employee of the NGX/Shorcan Companies, other than terminations of employees or consultants (other than employees in executive management positions) in the Ordinary Course and existing policies and/or terminations for cause;

(xiii) negotiate, enter into, amend or extend any CBA or other Contract with a labor union, works council or other employee representative body;

(xiv) (A) make, revoke or amend any material election relating to Taxes, (B) make a request for a written ruling of a Taxing Authority relating to material Taxes, (C) enter into a Contract with a Taxing Authority relating to material Taxes, (D) materially change any of its methods, policies or practices of reporting income or deductions for U.S. or Canadian federal income tax purposes from those employed in the preparation of its U.S. or Canadian federal income tax returns for the taxable year ended December 31, 2015, or (E) settle or compromise any material Tax claim, audit, or assessment or (F) take any action that could materially increase the Tax liability or materially decrease any Tax attribute of any of the NGX/Shorcan Companies for any period ending after the Closing, in the case of clause (F), other than in the Ordinary Course or consistent with past practice;

(xv) terminate or cancel, or amend or modify in any material respect, any material insurance policies covering the NGX/Shorcan Companies or their respective properties, directors, officers or employees which is not replaced by a comparable amount of insurance coverage, other than in the Ordinary Course;

(xvi) transfer, abandon, allow to lapse, or otherwise dispose of any rights to, or obtain or grant any right to any material Acquired Intellectual Property or disclose any material confidential information, including trade secrets, of any NGX/Shorcan Company to any Person, in each case, other than in the Ordinary Course;

(xvii) other than changes required by IFRS or by a Governmental Authority, change any method of financial accounting or financial accounting practice or policy of the NGX/Shorcan Companies;

(xviii) permit any of its material Assets to become subject to a Lien (other than any Lien that will be released prior to Closing and other than any Permitted Lien), the existence of which materially interferes with, or is reasonably likely to materially interfere with, the operation of the Business;

(xix) cancel, permanently waive or forgive any Indebtedness or claims or rights with a value in excess of $50,000 individually or $250,000 in the aggregate without consideration therefor;

(xx) enter into a settlement, an agreement to settle, a waiver or another compromise regarding any pending or threatened material Proceedings primarily relating to the Business (A) with a value in excess of $50,000 individually or $250,000 in the aggregate, (B) which imposes any affirmative obligation other than payment or which imposes any obligation that restricts the operation of the business of any NGX/Shorcan Company or (C) which does not provide for a full release with regard to the matter that is settled; or

(xxi) agree, or commit to do, any of the foregoing.

SECTION 6.2 Cash and Cash Equivalents; No Purchaser Control. Notwithstanding anything in this Agreement to the contrary, (a) Sellers shall have the right to remove from any NGX/Shorcan Company all Cash and Cash Equivalents in the manner as determined by Sellers (including by means of dividend, the creation or repayment of intercompany debt or otherwise) prior to the Closing Date; provided, however, that nothing herein shall permit Sellers to remove from any NGX/Shorcan Company any Remaining Cash and (b) nothing contained in this Agreement shall give Purchaser, directly or indirectly, the right to control or direct the operations of Sellers or the NGX/Shorcan Companies prior to the Closing. Prior to the Closing, Sellers shall exercise, consistent with the terms and conditions of this Agreement, complete control and supervision of the operations of the NGX/Shorcan Companies.

SECTION 6.3 Access and Confidentiality .

(a) From the date hereof until the earlier of the Closing and termination of this Agreement in accordance with its terms, subject to applicable Law, (i) Sellers shall, and shall cause the NGX/Shorcan Companies to, permit Purchaser and its agents and representatives to have reasonable access, during regular business hours and upon reasonable advance notice for purposes reasonably consistent with this Agreement, to the properties, premises, facilities, employees and representatives and books and records of the NGX/Shorcan Companies (and the Sellers, to the extent related to the Sale), and (ii) Sellers shall, and shall cause the NGX/Shorcan Companies to, direct their respective employees, agents and representatives to cooperate fully with Purchaser and its agents and representatives to the extent related to the Sale; provided , however , that nothing herein shall obligate Sellers or their Affiliates to take any actions that would (A) unreasonably interrupt the normal course of their businesses or (B) result in any waiver of attorney-client privilege or violate any Laws or the terms of any Contract to which any Seller or its Affiliates is a party or to which any of their respective assets are subject; provided , however , that Sellers shall give notice to Purchaser of the fact that it is withholding information or documents pursuant to this clause (B) and Sellers shall use their commercially reasonable efforts to cause such information or documents to be provided in a manner that would not reasonably be expected to waive such privilege or result in such a violation. Purchaser shall comply, and shall cause its representatives to comply, with all safety, health and security rules applicable to the premises being visited. In each case, Purchaser and its agents and representatives shall comply with the confidentiality obligations contained herein.

(b) After the Closing Date, each Party hereto shall, and shall cause its Affiliates, including the NGX/Shorcan Companies, to, preserve and keep all books and records and all information relating to the accounting, business and financial affairs of the NGX/Shorcan Companies prior to the Closing, for five (5) years after the Closing Date, or for any longer period as may be (i) required by any Governmental Authority or (ii) reasonably necessary with respect to the prosecution or defense of any legal action that is then pending or threatened or audit and with respect to which the requesting Party has notified the other Party as to the need to retain such books, records or information. Notwithstanding the foregoing provisions of this Section 6.3(b) , the provisions of Article VIII shall govern the preservation, retention and sharing of Tax Returns and Tax work papers. After the Closing, Purchaser, on the one hand, and Sellers, on the other hand, shall, and shall cause their Affiliates, including, in the case of Purchaser, the NGX/Shorcan Companies, (x) to permit the other Parties, their Affiliates and their representatives to have reasonable access to, and to inspect and copy, all materials referred to in this Section 6.3(b) and (y) to meet with officers and employees of the other Parties, their Affiliates and their representatives on a mutually convenient basis during normal business hours to obtain explanations with respect to such materials and to obtain additional information in connection with the preparation of any financial statements or Tax Returns of such other Parties and their Affiliates.

(c) *Confidentiality* .

(i) All information provided or obtained in connection with the Sale will be held by Purchaser in accordance with the Non-Disclosure Agreement, dated July 21, 2017, between NGX and Intercontinental Exchange Holdings, Inc. (the " Non-Disclosure Agreement "). In the event of a conflict or inconsistency between the terms of this Agreement and the Non-Disclosure Agreement, the terms of this Agreement will govern. Sellers hereby assign in part, effective as of Closing, to Purchaser or the NGX/Shorcan Companies, as specified by Purchaser, the rights that Sellers or their Affiliates may have under any other confidentiality agreements entered into with respect to any potential alternative transaction similar to the Sale, to the extent assignment is permitted thereby only to the extent that such rights relate to (i) the confidentiality obligations of the counterparty to such agreements with respect to the NGX/Shorcan Companies and/or (ii) the non-solicitation and/or non-hire obligations of the counterparty to such agreements with respect to the NGX/Shorcan Companies.

(ii) Each Seller acknowledges that the success of the NGX/Shorcan Companies and the Business after the Closing depends upon the continued preservation of the confidentiality of certain information possessed by such Persons and their Affiliates, that the preservation of the confidentiality of such information by such Persons and their Affiliates is an essential premise of the bargain between Sellers and Purchaser, and that Purchaser would be unwilling to enter into this Agreement in the absence of this Section 6.3(c)(ii) . Accordingly, Sellers shall not, and shall procure that its representatives, Affiliates and Affiliates' representatives will not, directly or indirectly, without the prior written consent of Purchaser, disclose to a third party, any information involving or relating to the Business or any NGX/Shorcan Company; provided , that the

information subject to this Section 6.3(c)(ii) will not include any information that (A) is or becomes generally available to the public other than as a result of a disclosure in violation hereof; (B) is or becomes available to such Person on a non-confidential basis from a source so long as such Person does not know or have reason to believe that the source was prohibited by a contractual, legal, or fiduciary obligation to any NGX/Shorcan Company from disclosing such information; (C) is independently developed, conceived, or discovered by such Person; provided , further , that the provisions of this Section 6.3(c)(ii) will not prohibit any retention of copies of records or disclosure (I) required by any applicable Law so long as prior notice, when reasonably practicable, is given to Purchaser of such disclosure and a reasonable opportunity is afforded Purchaser to contest the same at Purchaser's sole cost and expense (it being agreed that the disclosure of financial or other information regarding the NGX/Shorcan Companies as required by Sellers and their Affiliates' public reporting obligations, shall not require any prior notice or right of Purchaser to contest); provided that if, in the absence of a protective order, each Seller and its Affiliates and their Affiliates' representatives, as applicable, is, in the opinion of counsel (which may be internal counsel), compelled as a matter of law to disclose such information, such Person may disclose only that part of the information as required to be disclosed, (II) made in connection with the defense of any claim or enforcement of any right or remedy relating to this Agreement or the Sale, or (III) if requested by any Governmental Authority having jurisdiction over such Person or (D) relates to any Seller's or any of its Affiliates' status as a customer of the Business or becomes available to any Seller or any of its Affiliates in such person's capacity as a customer of the Business.

SECTION 6.4 Efforts; Filings .

(a) Subject to the terms and conditions of this Agreement, Sellers and Purchaser shall use their reasonable best efforts to take, agree to take, or cause to be taken, any and all actions and to do, or cause to be done, any and all things necessary, proper or advisable under applicable Law or otherwise so as to consummate the Sale, and each shall, and shall cause its respective Affiliates to, cooperate fully to that end. Subject to Section 6.3 and the Non-Disclosure Agreement, and to the extent not prohibited by Law or the applicable Governmental Authority, each Party shall (i) permit the other Parties to review and discuss in advance, and consider in good faith the views of the other Parties in connection with, any proposed written (or any material proposed oral) communication with any Governmental Authority (excluding, in the case of communication by Purchaser and its Affiliates, the CMA to the extent that such communications are not directly in relation to any of this Agreement, the Trayport Agreement or Sellers or their Affiliates) regarding the Sale and (ii) promptly inform the other Parties (and if in writing, provide the other Parties or their counsel with copies) of all correspondence, filings and communications between the Party and any Governmental Authority (excluding, in the case of communication by Purchaser and its Affiliates, the CMA to the extent that such communications are not directly in relation to any of this Agreement, the Trayport Agreement or Sellers or their Affiliates) regarding the Sale. The Parties may, as each deems advisable and necessary, reasonably designate any competitively sensitive material provided to the other Parties under this

Section 6.4 as "outside counsel only." Such materials and the information contained therein shall be given only to the outside legal counsel of the recipient and will not be disclosed by such outside counsel to employees, officers or directors of the recipient unless express permission is obtained in advance from the source of the materials (Purchaser or Sellers, as the case may be) or its legal counsel; provided , however , that materials provided pursuant to this Section 6.4 may be redacted (A) to remove references concerning the valuation of the NGX/Shorcan Companies, (B) as necessary to comply with contractual arrangements, or (C) as necessary to address reasonable legal privilege concerns.

(b) No Party shall participate in any meeting or substantive discussions with any Governmental Authority in connection with this Agreement (or make oral submissions at meetings or in telephone or other conversations) unless it consults with the other Parties in advance and, to the extent not prohibited by such Governmental Authority, gives the other Parties the opportunity to attend and participate thereat; provided , however , that: (i) only Sellers and their representatives shall attend and participate in Sellers' initial communications with, and all telephone calls from, Canadian securities regulators in connection with this Agreement and (ii) this Section 6.4(b) shall not apply to meetings or telephone or other conversations which Purchaser or its Affiliates alone may have with the CMA in relation to the CMA Orders unless such meeting or telephone or other conversation is directly in relation in relation to any of this Agreement, the Trayport Agreement or Sellers or their Affiliates. If Purchaser or its Affiliates has any material substantive discussions with the CMA regarding any of this Agreement, the Trayport Agreement or Sellers or their Affiliates, Purchaser shall promptly inform Sellers of such discussions and the nature and substance thereof (to the extent permitted by the CMA and applicable Law).

(c) Sellers and Purchaser agree to, and to cause their respective Affiliates to, use their respective reasonable best efforts to prepare all documentation, to effect all filings and to obtain all permits, consents, clearances, approvals, the expiry or earlier termination or waiver of all applicable waiting periods, and authorizations of all Governmental Authorities and other Persons necessary to consummate the Sale (or permit the Business to be operated in the same manner following the Sale) as promptly as practicable, in particular, each Party shall, and shall procure that its Subsidiaries and Affiliates (including the NGX/Shorcan Companies) will, as promptly as practicable, provide the other Parties all such assistance and information as may reasonably be required. In furtherance and not in limitation of the foregoing, Purchaser and Sellers shall jointly prepare and file a request for an advance ruling certificate under Section 102 of the Competition Act in respect of the transactions contemplated by this Agreement with the Canadian Commissioner of Competition and each of Sellers and Purchaser agrees to file the information prescribed pursuant to Subsection 114(1) of the Competition Act with the Canadian Commissioner of Competition as promptly as practicable, and in any event within ten (10) Business Days after the execution of this Agreement, and to take all other actions as, in the Purchaser's judgement, acting reasonably, are necessary to cause the expiration or termination of the applicable waiting period under the Competition Act as soon as practicable. If either or both of the Parties receive any request for information or documentary materials from any Governmental Authority, each of the Parties will use their respective reasonable best efforts to respond to and provide reasonably required information in respect of such request to such

Governmental Authority as promptly as possible and counsel for the Parties will reasonably cooperate during the entirety of any such process. Notwithstanding anything in this Agreement to the contrary: (i) neither Purchaser nor any of its Affiliates will have any obligation to enter into negotiations of any kind with any Governmental Authority in respect of or to agree to or to otherwise effect any divestiture, license, hold separate condition or any other restriction or remedy with respect to any assets, businesses or product lines of the NGX/Shorcan Companies, the Purchaser or any Affiliate of Purchaser in connection with the matters addressed in this Section 6.4 and (ii) Purchaser and its Affiliates will have the right (but will not have any obligation) to institute, assert, defend or respond to Proceedings against any Governmental Authority in connection with seeking to obtain approval from any Governmental Authority in connection with the matters addressed in this Section 6.4 .

SECTION 6.5 No Solicitation . Except as provided by Law, during the period commencing on the Closing Date and ending on the second anniversary of the Closing Date, neither Sellers nor their Affiliates shall directly or indirectly solicit any person who was an employee or subcontractor of any of the NGX/Shorcan Companies or the Business on the date hereof or the Closing Date (a " Restricted Person ") to terminate his or her employment with, or otherwise cease his or her relationship with, any of the NGX/Shorcan Companies or the Business or to become an employee of any Seller or any of its Affiliates; provided that nothing in this Section 6.5 shall prohibit Sellers or any of their Affiliates from (A) engaging in general solicitations to the public or general advertising not targeted at any Restricted Person, (B) soliciting any Restricted Person whose employment or engagement has been terminated by any NGX/Shorcan Company following the Closing other than as a response to any inducement or encouragement by any Seller or any of its Affiliates or (C) soliciting any Restricted Person whose employment or engagement with any NGX/Shorcan Company has been terminated by the Restricted Person following the Closing other than as a response to any inducement or encouragement by any Seller or any of its Affiliates (but only after at least ninety (90) days have passed since the date of termination of employment or engagement).

SECTION 6.6 Further Assurances . After the Closing Date, Sellers and Purchaser shall use their commercially reasonable efforts from time to time to do, make, execute and deliver, or cause to be done, made, executed and delivered, at the reasonable request of the other Party, such further acts, assurances, additional documents and instruments (including any assignments, bills of sale, assumption agreements, consents and other similar instruments in addition to those required by this Agreement) as may be reasonably required to give effect to this Agreement and the transactions contemplated hereby, and to provide whatever documents or other evidence of ownership as may be reasonably requested by Purchaser to confirm Purchaser's ownership of the NGX/Shorcan Companies.

SECTION 6.7 Intercompany Agreements; Intercompany Accounts .

(a) Except as set forth in Section 6.7 of the Sellers Disclosure Letter or as otherwise expressly set forth in this Agreement or the Related Agreements, Sellers shall, and

shall cause their Affiliates to, immediately prior to the Closing, execute and deliver such releases, termination agreements and discharges (in forms reasonably acceptable to Purchaser) as are necessary to release and discharge each NGX/Shorcan Company from any and all Liabilities owed to either Seller or any of their Affiliates (other than any NGX/Shorcan Company). In addition, Sellers shall, and shall cause their Affiliates to, immediately prior to the Closing, execute and deliver such releases, termination agreements and discharges (in a form reasonably acceptable to Purchaser) as are necessary to (i) release and discharge Sellers and each of their Affiliates (other than the NGX/Shorcan Companies) from any and all obligations owed to any NGX/Shorcan Company and (ii) terminate all arrangements, commitments, contracts and understandings among Sellers and any of their Affiliates, on the one hand, and any NGX/Shorcan Company, on the other hand, in each case other than those set forth on Section 6.7 of the Sellers Disclosure Letter or as otherwise expressly set forth in this Agreement or the Related Agreements.

(b) On or prior to the Closing Date, all intercompany accounts between either Seller and/or any of their Subsidiaries (other than any NGX/Shorcan Company), on the one hand, and any NGX/Shorcan Company, on the other hand, shall be settled or otherwise eliminated (other than intercompany accounts that arise out of services performed pursuant to Contracts identified in Section 4.15(a)(xiv) of the Sellers Disclosure Letter, which shall remain outstanding in accordance with their terms). Intercompany accounts between and among the NGX/Shorcan Companies shall not be affected by this provision.

SECTION 6.8 Transfer of Intellectual Property Assets . Prior to the Closing, Seller shall, and shall cause its Affiliates to, validly and effectively assign, at no cost, all right, title and interest in and to the Intellectual Property listed in Section 6.8 of the Sellers Disclosure Letter to an NGX/Shorcan Entity.

SECTION 6.9 Retained Business Assets . If, within twelve (12) months following the Closing, any right, property, asset or interest forming part of the Business, which would have needed to be directly or indirectly assigned, transferred or otherwise provided to a NGX/Shorcan Entity in order for the representation and warranty set forth in Section 4.20(b) to be true, is identified by Purchaser or Sellers, then the applicable Party shall notify the other in writing, and, upon the request of Purchaser, (i) to the extent such right, property, asset or interest exclusively forms part of the Business, Sellers shall assign and transfer, or shall cause their applicable Affiliate to assign and transfer, at no cost, all of such right, property, asset or interest as soon as practicable to Purchaser or an Affiliate of Purchaser as designated by Purchaser and (ii) to the extent such right, property, asset or interest does not exclusively form part of the Business, Sellers shall provide, or shall cause their applicable Affiliate to provide, at no cost, all of the rights, benefits and enjoyment of such right, property, asset or interest as soon as practicable to Purchaser or an Affiliate of Purchaser as designated by Purchaser; provided , however , that this Section 6.9 shall not apply to any service that is provided or that reasonably could have been provided as an Additional Service (as defined in the Transition Services Agreement) under the Transition Services Agreement.

SECTION 6.10 Employee Matters .

(a) For the one year period following the Closing Date, Purchaser will provide, or cause one of its Affiliates to provide, each Business Employee who is employed as of the Closing (each a " Continuing Employee "), for so long as he/she remains employed with Purchaser or one of its Affiliates (including any NGX/Shorcan Company) during such one year period, with (A) base salary at least equal to the base salary provided to the Continuing Employees immediately prior to the Closing and (B) benefits (other than equity compensation or defined benefit pension benefits) that, taken as a whole, are comparable in the aggregate to those provided to Continuing Employees immediately prior to the Closing.

(b) Except to the extent necessary to avoid the duplication of benefits, Purchaser shall recognize the service of each Continuing Employee with any NGX/Shorcan Company before the Closing Date as if such service had been performed with Purchaser or its Affiliates (i) for all purposes under the Company Benefit Plans maintained by Purchaser or its Affiliates after the Closing Date (to the extent such plans, programs, or agreements are delivered to Continuing Employees), (ii) for purposes of eligibility and vesting under any employee benefit plans and programs of Purchaser or its Affiliates other than the Company Benefit Plans (the " New Benefit Plans ") in which the Continuing Employee participates after the Closing Date, and (iii) for benefit accrual purposes under any New Benefit Plan that is a vacation or severance plan in which the Continuing Employee participates after the Closing Date.

(c) With respect to any welfare plan maintained by Purchaser or its Affiliates in which Continuing Employees are eligible to participate after the Closing, Purchaser and its Affiliates shall use commercially reasonable efforts to (i) waive all limitations as to preexisting conditions and exclusions with respect to participation and coverage requirements applicable to such employees to the extent such conditions and exclusions were satisfied or did not apply to such employees under the welfare plans maintained by the NGX/Shorcan Companies prior to the Closing and (ii) provide each Continuing Employee with credit for any co-payments and deductibles paid prior to the Closing in satisfying any analogous deductible or out-of-pocket requirements to the extent applicable under any such plan.

(d) Notwithstanding anything in this Section 6.10 to the contrary, nothing contained herein, whether express or implied, shall be treated as an amendment or other modification of any Company Benefit Plan or any employee benefit plan of Purchaser or its Affiliates, or shall limit the right of Purchaser or its Affiliates to amend, terminate or otherwise modify any such Company Benefit Plan or employee benefit plan of Purchaser or its Affiliates following the Closing in accordance with the terms and conditions of such plans. If (i) a party other than the Parties makes a claim or takes other action to enforce any provision in this Agreement as an amendment to any such plan, and (ii) such provision is deemed to be an amendment to such plan even though not explicitly designated as such in this Agreement, then, solely with respect to such plan, such provision shall lapse retroactively and shall have no amendatory effect with respect thereto. The Parties acknowledge and agree that all provisions contained in this Section 6.10 are included for the sole benefit of the Parties, and that nothing in this Agreement, whether express or implied, shall create any third-party beneficiary or other

rights (A) in any other Person, including, without limitation, any Continuing Employee, any participant in any Company Benefit Plan or any employee benefit plan of Purchaser or its Affiliates, or any dependent or beneficiary thereof, or (B) to continued employment with Purchaser or any of its Affiliates.

SECTION 6.11 Directors' and Officers' Indemnification .

(a) For a period of six (6) years from and after the Closing, Purchaser shall cause the NGX/Shorcan Companies to indemnify and hold harmless, and provide advancement of expenses to, all past and present directors and officers of any NGX/Shorcan Company as of the date hereof and anyone who becomes a director or officer of any NGX/Shorcan Company during the period from the date of this Agreement through the Closing (in such capacities) (the " D&O Indemnified Persons ") for all acts and omissions occurring at or prior to the Closing to the same extent such D&O Indemnified Persons are indemnified or have the right to advancement of expenses as of the date of this Agreement by the NGX/Shorcan Companies pursuant to the organizational documents of any applicable NGX/Shorcan Company as in existence on the date hereof, in each case, to the fullest extent that such indemnification and advancement is permitted by applicable Law. Purchaser shall cause the organizational documents of the NGX/Shorcan Companies to contain provisions with respect to indemnification, advancement of expenses and limitation of director and officer liability that are no less favorable to the D&O Indemnified Persons with respect to acts or omission occurring at or prior to the Closing than those set forth in the organizational documents of the NGX/Shorcan Companies as of the date of this Agreement, which provisions thereafter shall, subject to applicable Law, not be amended, repealed or otherwise modified in any manner that would adversely affect the rights thereunder of any D&O Indemnified Persons for a period of six (6) years from and after the Closing. From and after the Closing, Purchaser shall cause the NGX/Shorcan Companies to honor, in accordance with their respective terms, each of the covenants contained in this Section 6.11 .

(b) If Purchaser, the NGX/Shorcan Companies or any of its or their successors or assigns (i) shall consolidate with or merge into any other Person and shall not be the continuing or surviving corporation or other entity of such consolidation or merger or (ii) shall transfer all or substantially all of its properties and assets to any Person, then, in each such case, proper provisions shall be made so that the successors and assigns of Purchaser or the NGX/Shorcan Companies, as the case may be, shall assume all of the obligations set forth in this Section 6.11 .

(c) The obligations of Purchaser, the NGX/Shorcan Companies and any successors thereto under this Section 6.11 shall not be terminated or modified in such a manner as to adversely affect any D&O Indemnified Person to whom this Section 6.11 applies without the consent of such affected D&O Indemnified Person (it being expressly agreed that the D&O Indemnified Persons to whom this Section 6.11 applies shall be third-party beneficiaries of this Section 6.11).

SECTION 6.12 Backstop Agreements . Each Party shall use its commercially reasonable efforts to procure the satisfaction of Section 7.1(d) in respect of the backstop agreements specified in Section 6.12 of the Sellers Disclosure Letter (the " Backstop Agreements "); provided that if any alternative arrangement referenced in Section 7.1(d)(ii) (a) would require Sellers or their Affiliates to make any payment or incur any third-party costs (except if Purchaser agrees to reimburse such payment or costs), (b) would reasonably be expected to require any material clearance, consent, approval, order, license or authorization of, or declaration, registration or filing with, or notice to, or permit issued by, any Governmental Authority which cannot reasonably be expected to be made or procured by Sellers and their Affiliates, or (c) cannot reasonably be achieved within 45 days of the date of this Agreement (which time period, for the avoidance of doubt, includes the time required to make or procure any clearance, consent, approval, order, license or authorization of, or declaration, registration or filing with, or notice to, or permit issued by, any Governmental Authority), then Purchaser shall not pursue such alternative arrangement and shall use its commercially reasonable efforts to procure the satisfaction of Section 7.1(d)(i) in respect of the applicable Backstop Agreement.

SECTION 6.13 Sublease Agreement . Sellers shall use their commercially reasonable efforts, and shall cause TSX Venture Exchange Inc. to use its commercially reasonable efforts, to obtain the consent (the " Landlords' Consent ") of The Great-West Life Assurance Company and ASET Properties Inc. (together, the " Landlords ") to enter into a sublease agreement with NGX substantially in the form attached as Exhibit C (a " Sublease Agreement "). If, prior to the Closing, Sellers have obtained the Landlords' Consent to enter into a Sublease Agreement, then Sellers shall cause TSX Ventures Exchange Inc. and NGX to enter into a Sublease Agreement (with such changes reasonably requested by the Landlords and consented to by the Purchaser, such consent not to be unreasonably withheld, conditioned or delayed) with effect as of the Closing. If Sellers have not obtained the Landlords' Consent prior to the Closing, then from and after the Closing (i) for a period not to exceed 100 days in total (including the time prior to the Closing) (A) Sellers shall continue to use their commercially reasonable efforts, and shall cause TSX Venture Exchange Inc. to use its commercially reasonable efforts, to obtain the Landlords' Consent and (B) once the Landlords' Consent has been obtained, Sellers shall cause TSX Venture Exchange Inc. and Purchaser shall cause NGX to enter into a Sublease Agreement (with such changes reasonably requested by the Landlords and consented to by the Purchaser, such consent not to be unreasonably withheld, conditioned or delayed) and (ii) Sellers shall provide the space that would have been subleased pursuant to the terms of such a sublease agreement as an Additional Service (as defined in the Transition Services Agreement) to Purchaser under the Transition Services Agreement, and Purchaser shall pay the per square foot per annum price for such space pursuant to the Sublease Agreement, until the earlier date of (A) the date on which the Landlords' Consent has been obtained and such a Sublease Agreement has become effective and (B) October 30, 2020.

SECTION 6.14 Preservation of Privilege . Recognizing that Wilmer Cutler Pickering Hale and Dorr LLP and the other law firms specified in Section 6.14 of the Sellers Disclosure Letter (" Seller Counsel ") has acted as legal counsel to Sellers and their Affiliates

(including the NGX/Shorcan Companies) in connection with the negotiation, execution and delivery of this Agreement and the consummation of the Sale (the " Pre-Closing Representation "), and that Seller Counsel intends to or may continue to act as legal counsel to Sellers and their Affiliates after the Closing (which Affiliates shall not include the NGX/Shorcan Companies after the Closing), the Parties hereby agree that after the Closing any attorney-client privilege attaching to communications between Sellers, Sellers' Affiliates or the NGX/Shorcan Companies, on the one hand, and Seller Counsel, on the other hand, to the extent such communications relate to the Pre-Closing Representation, shall belong to and be controlled by Sellers, and following the Closing, none of Purchaser nor its Affiliates (which Affiliates shall include the NGX/Shorcan Companies after the Closing) shall knowingly access any such privileged communications.

SECTION 6.15 Exclusivity . From the date of this Agreement until the Closing, or the earlier termination of this Agreement in accordance with its terms, Sellers shall not, and Sellers shall procure that their representatives, Affiliates (including the NGX/Shorcan Companies) and Affiliates' representatives will not, directly or indirectly: (a) solicit, initiate, or encourage the submission of any proposal or offer from any Person relating to, or enter into or consummate any transaction relating to, the acquisition of any Securities in the NGX/Shorcan Companies or any merger, recapitalization, share exchange, sale of all or substantially all of the NGX/Shorcan Companies' assets (other than sales of inventory in the Ordinary Course) or any similar transaction or any other alternative to the Sale or (b) participate in any substantive discussions or negotiations regarding, furnish any information with respect to, assist or participate in, or facilitate in any other manner, any effort or attempt by any Person to do or seek any of the foregoing. Sellers shall, and shall cause their Affiliates and their and their Affiliates' representatives to, immediately discontinue any conduct that would if continued after the date hereof violate any aspect of the immediately preceding sentence.

SECTION 6.16 Notification of Certain Matters . From the date of this Agreement until the earlier of the Closing Date and the termination of this Agreement in accordance with its terms, Sellers shall promptly deliver to Purchaser notice (including a reasonably detailed description) of any fact, circumstance or development that constitutes (or would reasonably be expected to constitute or result in) any breach of any representation, warranty or covenant set forth herein that would result in the non-satisfaction of any condition set forth in Article VII . No such notice shall be deemed to avoid or cure any breach of representation, warranty or covenant or constitute an amendment of any representation, warranty, covenant or condition in this Agreement or the Sellers Disclosure Letter.

SECTION 6.17 NGX Consent . Prior to the Closing, Sellers shall cause the board of directors of NGX to approve the transfer of one hundred percent (100%) of the equity interests in NGX pursuant to the terms of this Agreement.

ARTICLE VII

CONDITIONS PRECEDENT

SECTION 7.1 Conditions of All Parties to Closing . The respective obligations of each Party hereunder to consummate the Sale shall be subject to the fulfillment (or, if legally permissible, mutual waiver by Sellers and Purchaser), prior to or at the Closing, of each of the following conditions:

(a) No Injunction . No Order that prohibits the consummation of the Sale shall have been entered and shall continue to be in effect.

(b) Regulatory Approvals . All consents, approvals, non-disapprovals and other authorizations of any Governmental Authority set forth in Section 7.1(b) of the Purchaser Disclosure Letter (the " Regulatory Approvals ") shall have been obtained.

(c) Trayport Agreement . All conditions required to be satisfied pursuant to Article VII of the Trayport Agreement shall have been either satisfied (other than those conditions that by their nature are to be satisfied at the Closing (as defined in the Trayport Agreement)) or waived (if permissible).

(d) Backstop Agreements . With respect to each Backstop Agreement, either (i) (A) Purchaser shall have substituted itself or had one of its Affiliates substituted for Sellers and any of their Affiliates (other than any NGX/Shorcan Company), and for Sellers and any of their Affiliates (other than any NGX/Shorcan Company) to be released, effective as of the Closing, in respect of all obligations of Sellers and any of their Affiliates (other than any NGX/Shorcan Company) under such Backstop Agreement (in a form reasonably acceptable to Purchaser and Sellers) and (B) any consent or approval by a counterparty to such Backstop Agreement required in connection with the consummation of the transactions contemplated by this Agreement shall have been received, or (ii) subject to Section 6.12 , Purchaser shall have replaced such Backstop Agreement with an alternative arrangement reasonably acceptable to Purchaser and Sellers.

SECTION 7.2 Conditions to Obligations of Purchaser to Close . Purchaser's obligation to effect the Sale is subject to the satisfaction (or waiver by Purchaser in its sole discretion), prior to or at the Closing, of each of the following conditions:

(a) (i) The representations and warranties of Sellers contained in Section 4.3(a) shall be true and correct except for any *de minimis* inaccuracies as of the date hereof and as of the Closing Date as though made on and as of the Closing Date, (ii) the representations and warranties of Sellers contained in Section 4.1(a) , Section 4.3(b) , Section 4.3(c) and Section 4.4 (without giving effect to any limitation as to "materiality," "Material Adverse Effect" or similar materiality qualifiers set forth therein) shall be true and correct in all material respects as of the date hereof and as of the Closing Date as though made

on and as of the Closing Date and (iii) the other representations and warranties of Sellers contained in Article IV shall be true and correct (without giving effect to any limitation as to "materiality," "Material Adverse Effect" or similar materiality qualifiers set forth therein) as of the date hereof and as of the Closing Date as though made on and as of the Closing Date (except that those representations and warranties which address matters only as of a particular date shall be true and correct only as of such particular date), except in the case of this clause (iii), where the failure to be so true and correct would not have, and would not reasonably be expected to have, a Business Material Adverse Effect.

(b) The covenants and agreements of Sellers to be complied with on or prior to the Closing pursuant to the terms of this Agreement shall have been complied with in all material respects.

(c) Purchaser shall have received at the Closing a certificate dated the Closing Date and validly executed on behalf of each Seller by an appropriate executive officer of such Seller certifying that the conditions specified in Section 7.2(a) and Section 7.2(b) have been satisfied.

(d) Purchaser shall have received at the Closing all of the items listed in Section 3.4 .

(e) Since the date of this Agreement, there has not been a Business Material Adverse Effect.

SECTION 7.3 Conditions to Obligations of Sellers to Close . The obligation of Sellers to effect the Sale is subject to the satisfaction (or waiver by Seller), prior to or at the Closing, of each of the following conditions:

(a) (i) The representations and warranties of Purchaser contained in Section 5.1(a) and Section 5.2 (without giving effect to any limitation as to "materiality," "Material Adverse Effect" or similar materiality qualifiers set forth therein) shall be true and correct in all material respects as of the date hereof and as of the Closing Date as though made on and as of the Closing Date and (ii) the other representations and warranties of Purchaser contained in this Agreement shall be true and correct (without giving effect to any limitation as to "materiality," "Material Adverse Effect" or similar materiality qualifiers set forth therein) as of the date hereof and as of the Closing Date as though made on and as of the Closing Date (except that those representations and warranties which address matters only as of a particular date shall be true and correct as of such particular date) , except in the case of clause (ii). where the failure to be so true and correct would not have, and would not reasonably be expected to have, a Purchaser Material Adverse Effect.

(b) The covenants and agreements of Purchaser to be complied with on or prior to Closing pursuant to the terms of this Agreement shall have been complied with in all material respects.

(c) Sellers shall have received at the Closing a certificate dated the Closing Date and validly executed on behalf of Purchaser by an appropriate executive officer of Purchaser certifying that the conditions specified in Section 7.3(a) and Section 7.3(b) have been satisfied.

(d) Sellers shall have received at the Closing all of the items listed in Section 3.5 .

(e) Since the date of this Agreement, there has not been a Purchaser Material Adverse Effect.

ARTICLE VIII

TAX MATTERS

SECTION 8.1 Tax Indemnification .

(a) Except to the extent specifically reflected as a Tax liability in the determination of the Closing Working Capital, each Seller jointly and severally covenants to pay or cause to be paid an amount equal to, or shall be liable for, and shall indemnify, defend and hold Purchaser and its Affiliates (including the NGX/Shorcan Companies after the Closing Date) harmless from and against (i) any liability for Excluded Taxes, including any reasonable out-of-pocket fees, costs and expenses of any outside attorneys, accountants or other external tax advisors with respect to any Excluded Taxes, and (ii) any and all Damages incurred by Purchaser or any of its Affiliates to the extent arising out of or resulting from the breach of an agreement or covenant made in this Article VIII by Sellers.

(b) Purchaser covenants to pay or cause to be paid an amount equal to, or shall be liable for, and shall indemnify, defend and hold Sellers and their Affiliates harmless from and against (i) any and all liabilities for Taxes with respect to the NGX/Shorcan Companies other than Excluded Taxes that are the responsibility of Sellers under Section 8.1(a) , including any reasonable out-of-pocket fees, costs and expenses of any outside attorneys, accountants or other external tax advisors with respect thereto, and (ii) any and all Damages incurred by Sellers or any of their Affiliates to the extent arising out of or resulting from the breach of an agreement or covenant made in this Article VIII by Purchaser.

(c) Payment in full of any amount due from Sellers or Purchaser under this Section 8.1 shall be made to the affected party in immediately available funds within fifteen (15) days after written demand is made for such payment; provided , however , that no such amounts due are required to be paid prior to three (3) Business Days before such amounts are required to be paid to the relevant Taxing Authority.

SECTION 8.2 Preparation and Filing of Tax Returns .

(a) Sellers shall timely prepare or shall cause to be timely prepared (i) any combined, consolidated or unitary Tax Return that includes Sellers or any of their Affiliates and

(ii) any Tax Return of any NGX/Shorcan Company for any taxable period that ends on or before the Closing Date. Subject to Section 8.5 , and except as otherwise provided in Section 8.2(g)(ii) , Sellers shall deliver to Purchaser for its review, comment and approval (which approval shall not be unreasonably withheld) a copy of such proposed Tax Return (x) in the case of Tax Returns prepared less frequently than on a quarterly basis, at least ten (10) Business Days prior to the due date (giving effect to any validly obtained extension thereof) and (y) in the case of Tax Returns prepared on a quarterly or more frequent basis, at least five (5) Business Days prior to the due date thereof (giving effect to any validly obtained extension thereof). If Purchaser does not approve of the filing of any Tax Return described in this Section 8.2(a) , Purchaser shall provide written notice to Sellers at least three (3) Business Days prior to the anticipated filing date of such Tax Return, and any such dispute shall be subject to the dispute procedures set forth in Section 8.2(h). Subject to Section 8.2(h) with respect to any disputed item, Sellers shall timely file or shall cause to be timely filed any Tax Return described in clause (i) of the first sentence of this Section 8.2(a) and shall deliver to Purchaser, and Purchaser shall timely file or cause to be timely filed in the manner prepared by Sellers, any Tax Returns described in clause (ii) of the first sentence of this Section 8.2(a) . Except to the extent specifically reflected as a Tax liability in the determination of the Closing Working Capital, Sellers shall pay, or cause to be paid, to the appropriate Taxing Authority any amounts shown as due on the Tax Returns described in this Section 8.2(a) .

(b) Purchaser shall, except to the extent that such Tax Returns are the responsibility of Sellers under Section 8.2(a) , timely prepare and file or shall cause to be timely prepared and filed all Tax Returns with respect to any NGX/Shorcan Company.

(c) For any Straddle Period Tax Return of any NGX/Shorcan Company that is the responsibility of Purchaser under Section 8.2(b) , except as otherwise provided in Section 8.2(f) , (1) such Straddle Period Tax Returns shall be prepared consistent with the past practice of the NGX/Shorcan Companies immediately prior to the Closing Date (after taking into account any actions taken pursuant to Section 8.2(g)), and (2) Purchaser shall deliver to Sellers for their review, comment and approval (which approval shall not be unreasonably withheld) a copy of such proposed Tax Return (accompanied by an allocation between the Pre-Closing Period and the Post-Closing Period of the Taxes shown to be due on such Tax Return) (i) in the case of Tax Returns prepared less frequently than on a quarterly basis, at least ten (10) Business Days prior to the due date (giving effect to any validly obtained extension thereof) and (ii) in the case of Tax Returns prepared on a quarterly or more frequent basis, at least five (5) Business Days prior to the due date thereof (giving effect to any validly obtained extension thereof). Sellers shall pay to Purchaser the amount of Taxes shown as due on such Tax Returns that are Excluded Taxes within three (3) Business Days of the due date of such Tax Returns.

(d) Except to the extent required by applicable Law, Purchaser shall not, and shall cause its Subsidiaries not to, amend any Tax Return of any NGX/Shorcan Company for any Pre-Closing Period or for any Straddle Period without the consent of Sellers, which consent shall not be unreasonably withheld, conditioned or delayed.

(e) The Parties agree that this Article VIII expressly permits and contemplates that Purchaser shall file such Tax Returns (including, for the avoidance of doubt, the making of any business registrations to facilitate the filing of any such Tax Returns or the receipt or delivery of any other form of Tax certificate) that Purchaser determines should be filed with respect to taxable periods beginning after the Closing Date, and the Parties expressly acknowledge that this Article VIII permits and contemplates that the filing of such Tax Returns and making of such business registrations, and the manner in which such Tax Returns are completed and filed, may be inconsistent with the past practice of the NGX/Shorcan Companies prior to the Closing Date. Accordingly, any such filing or registration shall not cause any Taxes imposed on or payable with respect to the NGX/Shorcan Companies (including any Taxes imposed as a transferee or successor or by Contract) in respect of any Pre-Closing Period to fail to constitute Excluded Taxes under this Agreement.

(f) Without limiting Section 8.2(e), for a period of eighteen (18) months following the Closing Date, to the extent Purchaser intends to take a position on any Tax Return with respect to any taxable period ending after the Closing Date that materially departs from the past practice of the NGX/Shorcan Companies immediately prior to the Closing Date (after taking into account any actions taken pursuant to Section 8.2(g) or any determinations of the Tax Referee pursuant to Section 8.2(h)), Purchaser shall use commercially reasonable efforts to notify Sellers in writing as soon as reasonably practicable of such intention. If (x) Sellers reasonably object in writing to any such position within five (5) Business Days of the date such notification is sent by Purchaser, and (y) within ten (10) Business Days of the date such notification is sent by Purchaser, Sellers provide written advice from a nationally or internationally recognized law firm or a "Big Four" accounting firm, in each case experienced as to such matters, that Sellers' proposed position with respect any such disputed item is at least more likely than not to be sustained under applicable Tax Law, such matter shall be subject to the dispute procedures set forth in Section 8.2(h). If Sellers either (i) do not provide written notice objecting to the taking of any such position within five (5) Business Days of the date such notification is sent to Sellers or (ii) do not provide written advice from a nationally or internationally recognized law firm or a "Big Four" accounting firm within ten (10) Business Days of the date such notification is sent to Sellers, Sellers shall be deemed to have consented to the position set forth in such notification. Subject to Section 8.2(h) in the case of any disputed item, Purchaser shall deliver to Sellers for their review and comment a copy of any such proposed Tax Return described in this Section 8.2(f) (i) in the case of Tax Returns prepared less frequently than on a quarterly basis, at least ten (10) Business Days prior to the due date (giving effect to any validly obtained extension thereof) and (ii) in the case of Tax Returns prepared on a quarterly or more frequent basis, at least five (5) Business Days prior to the due date thereof (giving effect to any validly obtained extension thereof). Purchaser shall consider in good faith any comments received by Sellers at least three (3) Business Days prior to the due date for such Tax Return.

(g)

(i) Prior to the Closing Date, Sellers shall take the following actions as are necessary in order to remedy or adjust certain Tax filing positions taken by the NGX/Shorcan Companies with respect to Pre-Closing Periods:

(1) Sellers shall use commercially reasonable efforts to review the Tax positions taken by each of the NGX/Shorcan Companies in each U.S. federal, state and local and Canadian federal, provincial and local jurisdiction in which each of the NGX/Shorcan Companies is currently not registered with applicable Taxing Authorities to determine whether registration is likely required for any Taxes in such jurisdiction.

(2) Sellers shall cause each of the NGX/Shorcan Companies to register with applicable Taxing Authorities for all U.S. federal, state and local and Canadian federal, provincial and local Taxes for which such NGX/Shorcan Company is currently not registered, in each case where Purchaser and Sellers agree at least twenty (20) Business Days prior to the Closing Date that registration is likely required (or that are determined by the Tax Referee pursuant to Section 8.2(h) at least twenty (20) Business Days prior to the Closing Date to be likely required).

(3) Sellers shall use commercially reasonable efforts to contact the customers of the NGX/Shorcan Companies to obtain tax exemption certificates (resale exemptions/manufacturing exemptions or other applicable exemption certificates) from any such customers that may be eligible for an exemption and for which an exemption certificate may be required. Sellers shall provide copies of any such exemptions certificates to Purchaser promptly upon receipt. Sellers shall take into account any comments received by Purchaser in assessing the validity of any such exemption certificates.

(4) Sellers shall use commercially reasonable efforts to provide to Purchaser a list of "end user" customers that may be liable for U.S. federal, state and local or Canadian federal, provincial or local Taxes on the sale of commodities or services, which Taxes would be required to be collected from such customers by any of the NGX/Shorcan Companies, and the Parties shall cooperate to determine how to communicate any changes to customers regarding the taxability of any transactions with customers and the timing for imposing any Tax with respect to such transactions.

(5) Sellers shall use commercially reasonable efforts to provide Purchaser with the notional value of commodities or services sold to U.S. customers, by state and local Tax jurisdiction.

(ii) Purchaser and Sellers shall reasonably cooperate with each other in taking the actions set forth in Section 8.2(g)(i) . Prior to submitting any Tax Return or other information to any Taxing Authority with respect to U.S. federal, state and local or Canadian federal, provincial or local Taxes of any NGX/Shorcan Company in a

jurisdiction in which such NGX/Shorcan Company (a) has not previously filed a Tax Return with respect to such Taxes or (b) has previously filed but is not currently filing a Tax Return with respect to such Taxes, Sellers shall use commercially reasonable efforts to deliver to Purchaser for its review and comment a copy of any such proposed Tax Return or information (1) in the case of Tax Returns required to be prepared less frequently than on a quarterly basis, at least ten (10) Business Days prior to the anticipated filing date for such Tax Return or the anticipated date for submitting such other information and (2) in the case of Tax Returns required to be prepared on a quarterly or more frequent basis, at least five (5) Business Days prior to the anticipated filing date for such Tax Return or the anticipated date for submitting such other information. Sellers shall consider in good faith any comments received by Purchaser at least three (3) Business Days prior to the anticipated filing date for such Tax Return or the anticipated date for submitting such other information. If, with respect to any action set forth in this Section 8.2(g)(ii) that could adversely impact Purchaser or its Affiliates (including, after the Closing Date, the NGX/Shorcan Companies) following the Closing Date, (x) Purchaser reasonably objects in writing to the filing of any such Tax Return (including with respect to any item of information contained in any such Tax Return or the positions set forth on any such Tax Return) or providing such information described in this Section 8.2(g)(ii) at least five (5) Business Days prior to the anticipated filing date for such Tax Return or the anticipated date for submitting such other information and (y) Purchaser provides written advice from a nationally or internationally recognized law firm or "Big Four" accounting firm, in each case experienced as to such matters, that both (1) Purchaser's proposed position with respect any such disputed item is at least more likely than not to be sustained under applicable Tax Law and (2) Sellers' proposed position with respect to such disputed item is not at least more likely than not be sustained under applicable Tax Law, such matter shall be subject to the dispute procedures set forth in Section 8.2(h).

(h) Any dispute between the Parties with respect to the matters set forth in Section 8.2(a) , Section 8.2(f) or Section 8.2(g) shall be resolved by the procedures set forth in this Section 8.2(h). In the event that a Party reasonably objects in writing to the filing of any Tax Return or the submission of any information (such Party, the " Disputing Party ") by the other Party pursuant to the requirements set forth in Section 8.2(a) , Section 8.2(f) or Section 8.2(g) , the Parties shall negotiate in good faith to resolve such disagreement by mutual agreement or to determine whether to seek a ruling from an applicable Taxing Authority with respect to the disputed item. If the Parties are unable to reach such mutual agreement within ten (10) Business Days of the date the Disputing Party provided written notice of such dispute to the other Party, and the Parties determine to not seek a ruling from an applicable Taxing Authority (or are unable to agree on a mutually satisfactory manner for seeking a ruling from an applicable Taxing Authority), such dispute shall be resolved by a nationally or internationally recognized expert in the relevant area (i.e., that is either a law firm or KPMG or PricewaterhouseCoopers) (the " Tax Referee "), chosen and mutually acceptable to both Sellers and the Purchaser within five (5) days of the date on which the need to choose the Tax Referee arises. The Tax Referee shall resolve any disputed items and determine which of Sellers' or Purchaser's positions is more likely to be sustained under applicable Tax Law within ten (10) Business Days of having the item referred to

it pursuant to such procedures as it may require. In the event of a dispute governed by this Section 8.2(h), to the extent the Parties are required to take a position prior to the resolution of such disputed item, the Parties shall take positions with respect to such disputed item in a manner consistent with the past practice of the NGX/Shorcan Companies prior to the Closing Date (after taking into account any actions taken pursuant to Section 8.2(g)), and the Parties shall file such amended Tax Returns or other filings as are necessary to reflect the determination of the Tax Referee. The costs of the Tax Referee, and any penalties and interest resulting from any actions that were taken or not taken pursuant to the immediately preceding sentence, shall be borne by the party whose position was not sustained. The Parties agree that this Article VIII expressly permits and contemplates that such Tax Returns filed or information submitted to an applicable Taxing Authority pursuant to this Section 8.2(h), whether by mutual agreement or as a result of a determination of a Tax Referee, are expressly permitted and contemplated under this Article VIII , and that the filing of such Tax Returns or submission of such information, and the manner in which such Tax Returns or information are completed, filed or submitted, may be inconsistent with the past practice of the NGX/Shorcan Companies prior to the Closing Date. Accordingly, any actions taken by Purchaser pursuant to this Section 8.2(h) shall not prejudice Purchaser's rights to indemnification from Sellers with respect to any Excluded Taxes.

SECTION 8.3 Refunds, Credits and Carrybacks .

(a) Subject to Section 8.3(c) , Sellers shall be entitled to any refunds or credits of or against any Excluded Taxes actually received by the Purchaser or the NGX/Shorcan Companies, net of any Taxes or other reasonable out-of-pocket fees, costs and expenses of any outside attorneys, accountants or external other tax advisors with respect to any such refunds or credits, except to the extent such refund or credit is reflected in the determination of Closing Working Capital. Any such Tax refunds or credits for a Straddle Period shall be apportioned between the Pre-Closing Period and the Post-Closing Period pursuant to the principles described in the definition of Excluded Taxes for allocating Taxes with respect to a Straddle Period. Purchaser shall be entitled to any refunds or credits of or against any Taxes other than refunds or credits of or against Excluded Taxes that are described in the first sentence of this Section 8.3(a) .

(b) Purchaser shall, and shall cause the NGX/Shorcan Companies to, promptly forward to Sellers or reimburse Sellers for any refunds or credits due Sellers (pursuant to the terms of this Article VIII) after receipt thereof, and Sellers shall promptly forward to Purchaser or reimburse Purchaser for any refunds or credits due Purchaser (pursuant to the terms of this Article VIII) after receipt thereof.

(c) Purchaser agrees that, to the extent permitted by law, none of the NGX/Shorcan Companies shall elect to carry back any item of loss, deduction or credit which arises in any taxable period ending after the Closing Date (" Subsequent Loss ") into any taxable period ending on or before the Closing Date. If a Subsequent Loss is carried back into any taxable period ending on or before the Closing Date, (i) Sellers shall be entitled to any refund of Taxes realized as a result thereof to the extent such Subsequent Loss relates to or affects any Excluded Taxes or that is carried back to a Seller Group Tax Return and (ii) Purchaser shall be entitled to any other refund of Taxes resulting from such Subsequent Loss.

Section 8.4 Tax Contests .

(a) If any Taxing Authority asserts a Tax Claim, then the Party first receiving notice of such Tax Claim promptly shall provide written notice thereof to the other Parties; provided , however , that the failure of such Party to give such prompt notice shall not relieve the other Party of any of its obligations under this Article VIII , except to the extent that the other Party is actually prejudiced thereby. Such notice shall specify in reasonable detail the basis for such Tax Claim and shall include a copy of the relevant portion of any correspondence received from the Taxing Authority.

(b) Sellers shall have the right to control, at their own expense, any audit, examination, contest, litigation or other proceeding by or against any Taxing Authority (a " Tax Proceeding ") in respect of any NGX/Shorcan Company that relates solely to a taxable period that ends on or before the Closing Date; provided , however , that (i) Sellers shall provide Purchaser with a timely and reasonably detailed account of each stage of such Tax Proceeding, (ii) Sellers shall consult with Purchaser and offer Purchaser an opportunity to comment before submitting any written materials prepared or furnished in connection with such Tax Proceeding, (iii) Sellers shall defend such Tax Proceeding diligently and in good faith as if they were the only party in interest in connection with such Tax Proceeding, (iv) Purchaser shall be entitled to participate, at its own expense, in such Tax Proceeding and receive copies of any written materials relating to such Tax Proceeding received from the relevant Taxing Authority, and (v) Sellers shall not settle, compromise or abandon any such Tax Proceeding without obtaining the prior written consent of Purchaser, which consent shall not be unreasonably withheld.

(c) In the case of a Tax Proceeding for a Straddle Period of any NGX/Shorcan Company, the Controlling Party shall have the right to control, at its own expense, such Tax Proceeding; provided , however , that (i) the Controlling Party shall provide the Non-controlling Party with a timely and reasonably detailed account of each stage of such Tax Proceeding, (ii) the Controlling Party shall consult with the Non-controlling Party and offer the Non-controlling Party an opportunity to comment before submitting any written materials prepared or furnished in connection with such Tax Proceeding, (iii) the Controlling Party shall defend such Tax Proceeding diligently and in good faith as if it were the only party in interest in connection with such Tax Proceeding, (iv) the Non-controlling Party shall be entitled to participate in such Tax Proceeding, at its own expense, if such Tax Proceeding could have an adverse impact on the Non-controlling Party or any of its Affiliates, and (v) the Controlling Party shall not settle, compromise or abandon any such Tax Proceeding without obtaining the prior written consent, which consent shall not be unreasonably withheld, of the Non-controlling Party if such settlement, compromise or abandonment could have an adverse impact on the Non-controlling Party or any of its Affiliates. " Controlling Party " shall mean whichever of Sellers (on the one hand) or Purchaser (on the other hand) is reasonably expected to bear the greater Tax liability in connection with a Straddle Period Tax Proceeding, and " Non-controlling Party " shall mean whichever of Sellers (on the one hand) or Purchaser (on the other hand) is not the Controlling Party with respect to such Straddle Period Tax Proceeding.

(d) Purchaser shall have the right to control, at its own expense, any Tax Proceeding involving any NGX/Shorcan Company (other than any Tax Proceeding described in Section 8.4(b) or Section 8.4(c)).

(e) Without limiting Purchaser's rights under Section 8.2(e) and Section 8.2(f) , Purchaser shall not make any voluntary disclosure or initiate any discussions or examinations with any Taxing Authority, in each case with respect to Taxes of any NGX/Shorcan Company for any taxable period that ends on or before the Closing Date without the prior written consent of the Sellers.

Section 8.5 Sellers Consolidated Returns . Notwithstanding any other provision of this Agreement, (a) Sellers shall, subject to this Section 8.5 , be entitled to control in all respects, and neither Purchaser nor any of its Affiliates shall be entitled to participate in, any Tax Proceeding with respect to any consolidated, combined or unitary Tax Return that includes Sellers and (b) Sellers shall not be required to provide any Person with any consolidated, combined or unitary Tax Return or copy thereof that includes Sellers; provided , however , that to the extent that such Tax Returns would be required to be delivered to Purchaser and would be subject to Purchaser's review and approval pursuant to this Agreement but for this Section 8.5 , the Person that would be required to deliver such Tax Returns shall instead deliver pro forma Tax Returns relating solely to the relevant NGX/Shorcan Company and allow Purchaser to review and approve such pro forma Tax Returns (such approval not to be unreasonably withheld), and Sellers shall reflect Purchaser's reasonable comments to such pro forma Tax Returns on the Tax Returns actually filed with Taxing Authorities.

Section 8.6 Cooperation . Each Party shall, and shall cause its Affiliates to, provide to the other Parties such cooperation, documentation and information as either of them reasonably may request in (a) filing any Tax Return, amended Tax Return or claim for refund, (b) determining a liability for Taxes or an indemnity obligation under this Article VIII or a right to refund of Taxes, (c) conducting any Tax Proceeding, (d) determining an allocation of Taxes between a Pre-Closing Period and Post-Closing Period or (e) taking any actions permitted or required to be taken pursuant to Section 8.2(e) , Section 8.2(f) , Section 8.2(g) or Section 8.2(h). Such cooperation and information shall include providing copies of all relevant portions of relevant Tax Returns, together with all relevant portions of relevant accompanying schedules and relevant work papers, relevant documents relating to rulings or other determinations by Taxing Authorities and relevant records concerning the ownership and Tax basis of property and other information, which any such Party may possess. Each Party will retain all Tax Returns, schedules and work papers, and all material records and other documents relating to Tax matters, of the relevant entities for their respective Tax periods ending on or prior to the Closing Date until the later of (A) the expiration of the statute of limitations for the Tax periods to which the Tax Returns and other documents relate or (B) ten years following the due date (without extension) for such Tax Returns. Thereafter, the Party holding such Tax Returns or other documents may dispose of them after offering the other Party reasonable notice and opportunity to take possession of such Tax Returns and other documents at such other Party's own expense.

Each Party shall make its employees reasonably available on a mutually convenient basis at its cost to provide explanation of any documents or information so provided.

Section 8.7 Tax Sharing Agreements . Anything in this Agreement or any other agreement to the contrary notwithstanding, all liabilities and obligations (a) between Sellers or any of their Affiliates (other than the NGX/Shorcan Companies) on the one hand and the NGX/Shorcan Companies on the other hand, or (b) at the request of Purchaser, between any of the NGX/Shorcan Companies under any Tax allocation or Tax sharing agreement in effect prior to the Closing Date (other than this Agreement) shall cease and terminate as of the Closing Date as to all past, present and future taxable periods, and the NGX/Shorcan Companies shall thereafter not be bound thereby or have any liability thereunder and all powers of attorney of the NGX/Shorcan Companies with respect to Taxes shall be terminated as of the Closing Date and shall be of no further force of effect.

Section 8.8 Timing Differences.

(a) Purchaser agrees that if (i) there is an audit adjustment (or adjustment in any other Tax Proceeding) made with respect to any Tax Item by any Taxing Authority with respect to Taxes for which Sellers are liable or responsible (and which liability is actually satisfied by Sellers), and (ii) as a result of such adjustment, Purchaser, the NGX/Shorcan Companies or any of their respective Subsidiaries or Affiliates receives in a Post-Closing Period an actual reduction in cash Tax liability or any Tax refund in cash, in each case, in or prior to the taxable year in which the audit or other Tax Proceeding is concluded or in the succeeding two taxable years, then Purchaser shall pay to Sellers the amount of such reduction or refund within fifteen (15) days of filing the Tax Return in which such reduction or refund is actually realized, except to the extent such reduction or refund is reflected in the determination of Closing Working Capital.

(b) If Purchaser, the NGX/Shorcan Companies or any of their respective Subsidiaries or Affiliates receives in a Post-Closing Period an actual reduction in cash Tax liability or any Tax refund in cash arising from any deduction arising in respect of any NGX/Shorcan Transaction Expenses that are borne or paid by Sellers, Purchaser acknowledges and agrees that it will pay Sellers the amount of any such reduction or refund that results from such deduction on a Tax Return of Purchaser or any of its Affiliates (including the NGX/Shorcan Companies) in or prior to the taxable year in which the applicable Transaction Expense is paid or in the succeeding two taxable years, which amount shall be paid to Sellers within fifteen (15) days of filing the Tax Return in which such reduction or refund is actually realized, except to the extent such reduction or refund is reflected in the computation of Closing Working Capital and increases the Closing Purchase Price.

Section 8.9 Tax Treatment of Payments . Sellers, Purchaser and their respective Affiliates shall treat any and all payments under this Agreement (including for breach of warranty or representation) as an adjustment to the Closing Purchase Price for Tax purposes unless they are required to treat such payments otherwise by applicable Tax Laws. Accordingly, any reference in this Agreement to an indemnity in respect of a liability for the NGX/Shorcan Entities (or their Subsidiaries) or any obligation of the Parties to make a payment in respect of

the NGX/Shorcan Entities (or their Subsidiaries) shall be construed as a reference to a covenant by Sellers (for themselves and on behalf of its Affiliates) to pay Purchaser (for itself and on behalf of its Affiliates) an amount equal to such liability or payment.

Section 8.10 Sales and Transfer Taxes . Purchaser shall pay and be responsible for all sales, use, value-added, business, goods and services, transfer, stamp duty, documentary, conveyancing or similar taxes or expenses that may be imposed as a result of the Sale, together with any and all penalties, interest and additions to tax with respect thereto (" Transfer Taxes "), and Sellers and Purchaser shall cooperate in timely making all filings, returns, reports and forms as may be required to comply with the provisions of such Tax Laws.

ARTICLE IX

TERMINATION

Section 9.1 Termination . This Agreement may be terminated and the transactions contemplated hereby may be abandoned at any time prior to the Closing:

(a) by the mutual written consent of Purchaser and Sellers;

(b) (i) by either Purchaser or Sellers, upon written notification to the non-terminating Party by the terminating Party, if any Order permanently prohibiting the consummation of the Sale shall have been issued and shall have become final and non-appealable, (ii) by Sellers, upon written notification to Purchaser by Sellers, if a Governmental Authority issues an Order that prohibits the consummation of the Sale (other than where such Order is of an interim or temporary nature), and Purchaser does not seek to overturn such Order within thirty (30) days of its issuance, or (iii) by Purchaser, upon written notification to Sellers by Purchaser, if a Governmental Authority issues an Order that prohibits the consummation of the Sale (other than where such Order is of an interim or temporary nature), and Sellers do not seek to overturn such Order within thirty (30) days of its issuance; provided , however , that a Party shall not have the right to terminate this Agreement pursuant to this Section 9.1(b) if the failure by such Party or of any of its Affiliates to perform any of its material covenants or obligation under this Agreement has been the cause of, or has resulted in, such Order;

(c) by either Purchaser or Sellers, if the Closing has not occurred by the date that is one year from the date of this Agreement (the " Outside Date "); provided , however , that neither Purchaser nor Sellers shall have the right to terminate this Agreement pursuant to this Section 9.1(c) if its failure to perform or breach of any of its material covenants, representations, warranties or obligations under this Agreement has been the cause of, or has resulted in, the failure of the Sale to occur on or before such date;

(d) by Sellers, if Purchaser shall have breached any of its representations, warranties, covenants or agreements contained in this Agreement that would give rise to the failure of a condition set forth in Section 7.3(a) or Section 7.3(b) , which breach cannot be or has not been cured within thirty (30) Business Days after the giving of written notice by Sellers to

Purchaser specifying such breach (provided that in no event shall such thirty (30) Business Day period extend beyond the Outside Date and provided that neither Seller is then in material breach of any of its representations, warranties, covenants or agreements contained in this Agreement);

(e) by Purchaser, if Sellers shall have breached any of their representations, warranties, covenants or agreements contained in this Agreement that would give rise to the failure of a condition set forth in Section 7.2(a) or Section 7.2(b) , which breach cannot be or has not been cured within thirty (30) Business Days after the giving of written notice by Purchaser to Sellers specifying such breach (provided that in no event shall such thirty (30) Business Day period extend beyond the Outside Date and provided that Purchaser is not then in material breach of any of its representations, warranties, covenants or agreements contained in this Agreement);

(f) by either Purchaser or Sellers, if the Trayport Agreement is terminated pursuant to its terms; or

(g) by Purchaser, if the Closing has not occurred by the date that is ninety (90) days from the date of this Agreement.

Section 9.2 Effect of Termination . If this Agreement is terminated, no Party (or any of its Affiliates, directors, officers, representatives or agents) will have any liability to any other Party to this Agreement, except for any liability arising out of any knowing or willful breach of this Agreement (which shall in all circumstances include a Party's or its Affiliate's failure to consummate the Closing on the date that the Closing should have occurred pursuant to Section 3.1) prior to such termination and except for the obligations set forth in Section 6.3(c)(i) , this Section 9.2 and Article X , which shall survive termination. For the avoidance of doubt, in the event of any breach of Purchaser's obligation to consummate the Closing, Purchaser's liability will include any Damages (including any diminution in value of the NGX/Shorcan Companies) suffered by Sellers as a result of the failure of the Closing to occur.

ARTICLE X

MISCELLANEOUS

Section 10.1 Payments . Any payments to be made under this Agreement shall be made by wire transfer in Canadian dollars (with amounts denominated in currencies other than Canadian dollars being converted to Canadian dollars in accordance with Section 1.2(d)) on the relevant due date with value on that date in immediately available funds and without deducting costs. Payments to Sellers shall be made to the bank account specified in Section 10.1 of the Sellers Disclosure Letter or such other account as may hereafter be designated by Sellers to Purchaser (such account, the " Sellers' Bank Account ") and payments to Purchaser shall be made to such bank account hereafter designated by Purchaser to Sellers.

Section 10.2 Notices . All notices, demands, and other communications required or permitted to be given to any Party under this Agreement shall be in writing and any such notice, demand or other communication shall be deemed to have been duly given when delivered by hand, courier or overnight delivery service or, if mailed, two (2) Business Days after deposit in the mail, certified or registered mail, return receipt requested and with first-class postage prepaid, or, if sent by electronic mail, when sent if confirmed by reply electronic mail that is not automated, or, in the case of facsimile notice, when sent and transmission is confirmed, and, regardless of method, addressed to the Party at its address or facsimile number set forth below (or at such other address or facsimile number as the Party shall furnish the other Parties in accordance with this Section 10.2):

(a) If to Purchaser:

Intercontinental Exchange, Inc.
5560 New Northside Drive
Atlanta, GA 30328
Attn: General Counsel
Email: legal-notices@theice.com

With a copy (which shall not constitute notice) to:

Shearman & Sterling LLP
599 Lexington Avenue
New York, NY 10022
Attn: Rory O'Halloran
Email: Rory.O'Halloran@Shearman.com
Facsimile: (212) 848-7179

(b) If to Sellers:

TMX Group Limited
The Exchange Tower
130 King Street West
Toronto, Ontario, M5X 1J2
CANADA
Attn: Legal, Risk and Government Affairs
Email: legal@tmx.com
Facsimile: (416) 947-4461

With a copy (which shall not constitute notice) to:

Wilmer Cutler Pickering Hale and Dorr LLP
1875 Pennsylvania Avenue, NW
Washington, DC 20006
Attn: Stephanie C. Evans
Email: Stephanie.Evans@wilmerhale.com
Facsimile: (202) 663-6363

Section 10.3 Survival of Representations and Warranties and Covenants .

(a) The representations and warranties set forth in Article IV and Article V shall terminate effective as of the Closing and shall not survive the Closing for any purpose, and thereafter there shall be no liability on the part of, nor shall any claim (whether predicated on breach of contract, warranty, tortious conduct, common law, statute, strict liability or otherwise) be made by, any Party or any of their respective Affiliates in respect thereof or (except as provided for in the last sentence of Section 10.3(b) regarding covenants and agreements contemplating action (or inaction) following the Closing) otherwise in respect of or in connection with this Agreement or transactions contemplated hereby.

(b) After the Closing, there shall be no liability on the part of, nor shall any claim be made by, any Party or any of their respective Affiliates in respect of any covenant or agreement to be performed prior to the Closing. The covenants and agreements that contemplate actions (or inaction) to be taken (or not taken) after the Closing shall survive in accordance with their terms.

(c) For the avoidance of doubt, this Section 10.3 shall not in any way limit Purchaser's rights to indemnification under Article VIII .

Section 10.4 Governing Law . This Agreement shall be governed by and construed in accordance with the laws of the State of New York applicable to agreements made and to be performed entirely within such State, without regard to the conflict of laws principles of such State (other than §§ 5-1401 and 5-1402 of the New York General Obligations Law).

Section 10.5 Jurisdiction; Venue; Consent to Service of Process .

(a) Each Party hereby irrevocably and unconditionally submits, for itself and its property, to the exclusive jurisdiction of courts of the State of New York, County of New York, including the federal courts located therein, should federal jurisdiction requirements exist for any action arising out of or relating to this Agreement. Each of the Parties consents to the jurisdiction of such courts (and of the appropriate appellate courts) in any such action or proceeding and waives any objection to venue laid therein. In addition, each of the Parties irrevocably and unconditionally waives and agrees not to assert by way of motion, as a defense

or otherwise (i) any claim that it is not subject to the jurisdiction of the above courts, (ii) that its property is exempt or immune from attachment or execution in any such action or proceeding in the above-named courts, (iii) that such action or proceeding is brought in an inconvenient forum, and (iv) that such action or proceeding should be transferred or removed to any court other than one of the above-named courts, or should be stayed by reason of the pendency of some other proceeding in any other court other than one of the above-named courts, or that this Agreement or the subject matter hereof may not be enforced in or by such courts. Each of the Parties hereby agrees not to commence any such action or proceeding other than before one of the above-named courts. Each of the Parties also hereby agrees that any final and non-appealable judgment against a Party in connection with any such action or proceeding shall be conclusive and binding on such Party and that such judgment may be enforced in any court of competent jurisdiction, either within or outside of the United States. A certified or exemplified copy of such award or judgment shall be conclusive evidence of the fact and amount of such award or judgment. The foregoing consent to jurisdiction shall not (A) constitute submission to jurisdiction or general consent to service of process in the State of New York, County of New York, for any purpose except with respect to any action or proceeding resulting from, relating to or arising out of this Agreement or (B) be deemed to confer rights on any Person other than the respective Parties to this Agreement.

(b) To the extent that any Party has or hereafter may acquire any immunity from jurisdiction of any court or from any legal process (whether through service or notice, attachment prior to judgment, attachment in aid of execution, execution or otherwise) with respect to itself or its property, each of such Seller or Purchaser hereby irrevocably waives such immunity in respect of its obligations with respect to this Agreement.

(c) Each Party irrevocably consents to service of process in the manner provided for the giving of notices pursuant to Section 10.2 of this Agreement. Nothing in this Section 10.5 shall affect the right of any Party to serve process in any other manner permitted by Law.

Section 10.6 Counterparts . This Agreement may be executed in two or more counterparts, each of which shall be an original, with the same effect as if the signatures thereto and hereto were upon the same instrument, and shall become effective when one or more counterparts have been signed by each of the Parties and delivered (by telecopy, electronic delivery or otherwise) to the other Parties. Signatures to this Agreement transmitted by facsimile transmission, by electronic mail in “portable document format” (“.pdf”) form, or by any other electronic means intended to preserve the original graphic and pictorial appearance of a document, will have the same effect as physical delivery of the paper document bearing the original signature.

Section 10.7 Entire Agreement . This Agreement, together with the Trayport Agreement, the Related Agreements, the Disclosure Letters and the Non-Disclosure Agreement and all annexes and exhibits hereto and thereto, embody the entire agreement of the Parties with respect to the subject matter hereof and supersede all prior agreements with respect thereto.

Section 10.8 Amendment, Modification and Waiver. No amendment to this Agreement shall be effective unless it shall be in writing and signed by each Party. Any failure of a Party to comply with any obligation, covenant, agreement or condition contained in this Agreement may be waived by the Party entitled to the benefits thereof only by a written instrument duly executed and delivered by the Party granting such waiver, but such waiver or failure to insist upon strict compliance with such obligation, covenant, agreement or condition shall not operate as a waiver of, or estoppel with respect to, any prior, subsequent or other failure of compliance.

Section 10.9 Severability. If any provision of this Agreement or the application of any such provision is invalid, illegal or unenforceable in any jurisdiction, such invalidity, illegality or unenforceability shall not affect any other provision of this Agreement or invalidate or render unenforceable such provision in any other jurisdiction. In the event that any provision hereof would be invalid, illegal or unenforceable, to the extent permitted by applicable Law, the Parties intend that such provision will be construed by modifying or limiting it so as to be valid and enforceable to the maximum extent compatible with, and possible under, applicable Law, and the Parties agree, to the extent lawful and practicable, to use their reasonable efforts to enter into arrangements to reinstate the intended benefits, net of the intended burdens, of any such provision held invalid, illegal or unenforceable.

Section 10.10 Successors and Assigns; No Third-Party Beneficiaries. This Agreement and all its provisions shall be binding solely upon and inure solely to the benefit of the Parties and their respective permitted successors and assigns, each of which such successors and permitted assigns will be deemed to be a party hereto for all purposes hereof. Nothing in this Agreement, whether expressed or implied, will confer on any Person, other than the Parties or their respective permitted successors and assigns, any rights, remedies or Liabilities; provided, that (a) the provisions of Section 6.11 will inure to the benefit of the D&O Indemnified Persons and (b) the provisions of Section 6.11(a) will inure to the benefit of Seller's Affiliates. No Party may assign its rights or obligations under this Agreement without the prior written consent of the other Parties and any purported assignment without such consent shall be void; provided, that Purchaser may, without the consent of Seller, assign any or all of its rights or obligations hereunder to any of its Subsidiaries that is wholly owned by Purchaser (although no such assignment shall relieve Purchaser of its obligations to Sellers). For the avoidance of doubt, the amalgamation or merger (whether forward or reverse) of any Party to this Agreement with one or more Affiliates of such Party shall not constitute an assignment for purposes of this Section 10.10.

Section 10.11 Publicity. With respect to any information in respect of the transactions contemplated hereby which shall not have been previously issued or disclosed, except as required by Law (including the rules and regulations of any applicable stock exchange), each of Sellers and Purchaser agrees that neither it nor any of its Affiliates will issue a press release or make any other public statement or release any public communication with respect thereto without the prior consultation with the other Party. Purchaser and Sellers agree, to the extent possible and legally permissible, to notify, cooperate and consult with, the other

Party prior to issuing or making any such public statement (and be provided a reasonable opportunity to comment on such public statement).

Section 10.12 WAIVER OF JURY TRIAL . TO THE FULLEST EXTENT PERMITTED BY LAW, EACH OF THE PARTIES IRREVOCABLY WAIVES ALL RIGHT TO TRIAL BY JURY IN ANY ACTION, SUIT, PROCEEDING OR COUNTERCLAIM ARISING OUT OF, IN WHOLE OR IN PART, OR RELATING TO THIS AGREEMENT OR ANY OF THE SALE.

Section 10.13 Expenses . Except as otherwise expressly stated in this Agreement, any costs, expenses, or charges incurred by any of the Parties shall be borne by the Party incurring such cost, expense or charge, in each case, whether or not the transactions contemplated hereby shall be consummated. Except as otherwise provided herein, if the Sale is consummated, all costs, expenses and charges incurred and payable by any of the NGX/Shorcan Companies in connection with the negotiation, preparation, execution and delivery of this Agreement and the Related Agreements and the consummation of the Sale will be Transaction Expenses.

Section 10.14 Specific Performance and Other Equitable Relief . The Parties hereby expressly recognize and acknowledge that immediate, extensive and irreparable damage would result, no adequate remedy at law would exist and damages would be difficult to determine if any provision of this Agreement is not performed in accordance with its specific terms or is otherwise breached. Each Party further acknowledges that a breach or violation of this Agreement cannot be sufficiently remedied by money damages alone and, accordingly, each Party shall be entitled, without the need to post a bond or other security, in addition to damages and any other remedies provided at law or in equity, to specific performance, injunctive and other equitable relief to enforce or prevent any violation. Each Party agrees not to oppose the granting of such equitable relief, and to waive, and to cause its representatives to waive, any requirement for the securing or posting of any bond in connection with such remedy.

Section 10.15 Guarantee . As a material inducement to Purchaser to enter into this Agreement and in recognition of substantial direct and indirect benefits to Guarantor therefrom, Guarantor hereby absolutely, irrevocably and unconditionally guarantees to Purchaser the due and punctual performance by Sellers of all of Sellers' obligations and liabilities under or in respect of this Agreement including all of Sellers' payment obligations hereunder and any obligations or liabilities of Sellers arising from any breach of this Agreement. Guarantor's liabilities hereunder are absolute, unconditional, irrevocable and continuing irrespective of any modification, amendment or waiver of or any consent to departure from the terms and conditions of this Agreement that may be agreed to by Sellers hereto in accordance with the terms of this Agreement. Guarantor agrees that its obligations hereunder shall not be released or discharged, in whole or in part, or otherwise affected by (a) the failure or delay on the part of Purchaser to assert any claim or demand or to enforce any right or remedy against Sellers or (b) any insolvency, bankruptcy, reorganization or other similar proceeding instituted by or against Sellers. Notwithstanding anything to the contrary contained in this Section 10.15 or otherwise, Purchaser hereby agrees that Guarantor shall have all defenses to its obligations under this

guarantee that would be available to Sellers in respect of this Agreement whether pursuant to the terms of this Agreement or pursuant to any applicable Law in connection therewith.

Section 10.16 Joint and Several Liability of Sellers . Sellers shall be jointly and severally liable for all obligations of each Seller under this Agreement and the Transition Services Agreement.

[*Signature Pages Follow*]

IN WITNESS WHEREOF, each Party has caused this Stock Purchase Agreement to be duly executed on its behalf as of the day and year first above written.

INTERCONTINENTAL EXCHANGE, INC.

By: /s/ Benjamin R. Jackson
Name: Benjamin R. Jackson
Title: Chief Commercial Officer

TMX GROUP INC.

By: /s/ Louis V. Eccleston
Name: Louis V. Eccleston
Title: CEO TMX Group

SHORCAN BROKERS LIMITED

By: /s/ Peter Conroy
Name: Peter Conroy
Title: President

TMX GROUP LIMITED

By: /s/ Louis V. Eccleston
Name: Louis V. Eccleston
Title: CEO TMX Group

EXHIBIT 10.6

INTERCONTINENTAL EXCHANGE HOLDINGS, INC.

EMPLOYMENT AGREEMENT

FOR

BENJAMIN JACKSON

This is an Employment Agreement (the " Employment Agreement "), dated as of August 1, 2016, by and between Intercontinental Exchange Holdings, Inc., a wholly-owned subsidiary of Intercontinental Exchange, Inc., a Delaware corporation (together with its affiliates, the " Company " or " ICE "), and Benjamin Jackson (" Executive ").

Recitals

The Company and Executive are parties to an employment agreement dated as of June 19, 2012 (the " Former Agreement ");

The Company and Executive desire to make certain changes to the Former Agreement;

NOW, THEREFORE, in consideration of the premises and the mutual covenants set forth below, the parties hereby agree to the terms of Executive's employment with the Company as follows:

Agreement

1. Term . Subject to the terms and conditions set forth in this Employment Agreement, ICE agrees to employ Executive and Executive agrees to be employed by ICE for a term of two (2) years, which shall start on August 1, 2016 and shall end on the second anniversary of such date. The initial term plus any extension shall be referred to in this Employment Agreement as the " Term ". Each day the Term of this Employment Agreement will automatically extend for one (1) day (unless either party delivers written notice to the other that there will be no such extension) so that there are always two (2) years remaining in the Term at any time.

2. Title; Duties and Responsibilities; Powers . Executive's title initially shall be Chief Commercial Officer. Executive's duties and responsibilities and powers shall be those commensurate with Executive's position that are set from time to time by ICE's CEO or his or her delegate. Executive shall undertake to perform all of Executive's duties and responsibilities and exercise all of Executive's powers in good faith and on a full-time basis and shall at all times act in the course of Executive's employment under this Employment Agreement in the best interests of ICE.

3. Primary Work Site . Executive's primary work site for the Term shall be at ICE's offices in New York, New York. However, Executive shall undertake such travel away from Executive's primary work site and shall work from such temporary work sites as necessary or appropriate to fulfill Executive's duties and responsibilities and exercise Executive's powers under the terms of this Employment Agreement.

4. Outside Activities . Executive shall not serve on any boards of directors of, or provide services (whether as an employee or independent contractor) to, any entity other than ICE (including, for example,

any for-profit, civic, or charitable organization) on or after the date ICE signs this Employment Agreement without obtaining the consent required by ICE's internal compliance reporting procedures then in effect.

5. Compensation and Related Matters .

(a) *Base Salary* . Executive's initial base salary shall be $600,000 per year, which shall be payable in accordance with ICE's standard payroll practices and policies for senior executives. Executive's base salary shall be subject to annual review and periodic increases as determined by the Compensation Committee of ICE's Board of Directors (the " Compensation Committee ") or at the direction of the Board of Directors as a whole. The base salary, as may be in effect from time to time under this Employment Agreement, shall be referred to as the " Base Salary ".

(b) *Annual Bonus* . During the Term, Executive shall be eligible to receive an annual bonus each year. Executive's target annual bonus during the Term shall be 150% of Executive's Base Salary, subject to adjustment from time to time as determined by the Company in its sole discretion (the " Target Bonus "). The actual amount of such bonus, if any, may be higher or lower than the Target Bonus and shall be determined in accordance with a plan adopted and approved by the Compensation Committee, or at the direction of the Compensation Committee, ICE's Chief Executive Officer or his or her delegate, and shall be paid no later than two and one half (2½) months after the end of the taxable year to which the bonus relates.

(c) *Equity Compensation* . Executive shall be eligible for grants of options to purchase common stock of ICE and other forms of ICE equity or equity-based grants. Executive's target annual equity grant date value during the Term shall be $1,500,000 (the " Target Equity Grant "), although the actual grant date value may be varied by the Company in its sole discretion. Except as otherwise provided in this Employment Agreement, the terms of any ICE equity awards granted to Executive shall be determined by the ICE equity incentive plan in effect at the time of any such grant(s) and the award agreement applicable to such grant(s).

(d) *Employee Benefit Plans, Programs and Policies* . Executive shall be eligible to participate in the employee benefit plans, programs and policies in effect from time to time and maintained by ICE for similarly situated senior executives, in accordance with the terms and conditions of such plans, programs and policies.

(e) *Vacation and Other Similar Benefits* . Executive shall accrue at least four (4) weeks of vacation during each calendar year period in the Term, which vacation time shall be taken subject to such terms and conditions as set forth in applicable policies as in effect from time to time. Executive shall also have such paid holidays, sick leave and personal and other time off as called for under ICE's standard policies and practices for executives with respect to paid holidays, sick leave and personal and other time off as may be in effect from time to time.

(f) *Business Expenses* . Executive shall have the right to be reimbursed for reasonable and appropriate business expenses which Executive actually incurs in connection with the performance of Executive's duties and responsibilities under this Employment Agreement in accordance with ICE's expense reimbursement policies and procedures for its senior executives as may be in effect from time to time.

6. Reasons for Termination . ICE shall have the right to terminate Executive's employment at any time, and Executive shall have the right to resign at any time, in each case for any reason or no reason, subject to the terms of this Employment Agreement. The date of termination of Executive's employment will be the date specified in any notice of termination delivered from the Company to Executive (or, in the case of Executive's resignation, from Executive to the Company), except as otherwise set forth below.

(a) *Death* . Executive's employment shall terminate at Executive's death.

(b) *Disability* . ICE shall have the right to terminate Executive's employment on or after the date Executive has a Disability. The term " Disability " as used in this Employment Agreement means any physical or mental condition which renders Executive unable even with reasonable accommodation by ICE to perform the essential functions of Executive's job for at least a one hundred and eighty (180) consecutive day period and which makes Executive eligible to receive benefits under ICE's long term disability plan as of the date Executive's employment terminates.

(c) *Termination by the Company* . The Company may terminate Executive's employment at any time, with or without Cause. The term " Cause " as used in this Employment Agreement will mean:

(i) Executive is convicted of, pleads guilty to, or confesses or otherwise admits to any felony or any act of fraud, misappropriation or embezzlement;

(ii) Executive knowingly engages in any act or course of conduct (a) which is reasonably likely to adversely affect the Company's right or qualification under applicable laws, rules or regulations to serve as an exchange or other form of a marketplace described in Section 9(g) or (b) which violates the rules of any exchange or market in which the Company conducts its Business (as defined in Section 9(g)) (or at such time is actively contemplating effecting trades);

(iii) there is any act or omission by Executive involving willful misconduct or gross negligence in the performance of Executive's duties and responsibilities under Section 2 or the exercise of Executive's powers under Section 2 to the material detriment of the Company; or

(iv) (a) Executive breaches any of the provisions of Section 9(b) through Section 9(g) or (b) Executive violates any provision of any code of conduct adopted by the Company which applies to Executive and any other Company employees if the consequence to such violation for any employee subject to such code of conduct ordinarily would be a termination of his or her employment by the Company.

(d) *Resignation by Executive* . Executive may terminate Executive's employment with or without Good Reason. The term " Good Reason " as used in this Employment Agreement will mean, without Executive's express written consent:

(i) a material reduction in Executive's Base Salary under Section 5(a) or, after a Change in Control, a material reduction in Executive's Target Bonus or Target Equity Grant as set forth in Section 5(b) and (c) and as in effect immediately prior to such Change in Control (for the avoidance of doubt, changes to Executive's Target Bonus or Target Equity Grant prior to a Change in Control shall not constitute "Good Reason");

(ii) a material reduction in the scope, importance or prestige of Executive's duties, responsibilities or powers or Executive's reporting relationships with respect to who reports to Executive and whom Executive reports to at the Company;

(iii) Executive is transferred to a new primary work site which is more than thirty (30) miles (measured along a straight line) from Executive's primary work site immediately before the

transfer unless such new primary work site is closer (measured along a straight line) to Executive's primary residence than Executive's primary work site immediately before the transfer;

(iv) after a Change in Control, Executive's job title is materially diminished or there is a material reduction in Executive's pension and welfare benefits as in effect immediately prior to such Change in Control;

(v) during the first year following a Change in Control, Executive receives notice that the Term of this Employment Agreement will not be renewed in accordance with Section 1 ;

(vi) the failure of any successor to all or substantially all of the business and/or assets of the Company to expressly assume and agree to perform this Employment Agreement pursuant to Section 12 ; or

(vii) a material breach of this Employment Agreement by the Company or its successor.

Notwithstanding the foregoing, no such act or omission will be treated as "Good Reason" under this Employment Agreement unless:

(A) (i) Executive delivers to the Company a detailed, written statement of the basis for Executive's belief that such act or omission constitutes Good Reason, (ii) Executive delivers such statement before the end of the ninety (90) day period which starts on the date there is an act or omission which forms the basis for Executive's belief that Good Reason exists, (iii) Executive gives the Company a thirty (30) day period after the delivery of such statement to cure the basis for such belief and (iv) Executive actually submits Executive's written resignation to the Company and terminates employment during the sixty (60) day period which begins immediately after the end of such thirty (30) day period if Executive reasonably and in good faith determines that Good Reason continues to exist after the end of such thirty (30) day period; or

(B) the Company states in writing to Executive that Executive has the right to treat any such act or omission as Good Reason under this Employment Agreement and Executive resigns during the sixty (60) day period which starts on the date such statement is actually delivered to Executive; provided, that if Executive consents in writing to any reduction described in Section 6(d)(i) or Section 6(d)(ii) , to any transfer described in Section 6(d)(iii) or to any change described in Section 6(d)(iv) in lieu of exercising Executive's right to resign for Good Reason and delivers such consent to the Company, the results of the actions consented to will thereafter be used under this definition for purposes of determining whether Executive subsequently has Good Reason under this Employment Agreement to resign as a result of any such subsequent reduction, transfer or change.

(e) *Removal from any Boards and Position* . Upon the termination of Executive's employment with the Company for any reason, Executive will be deemed to automatically resign from (i) any position with the Company or any subsidiary of the Company, including, but not limited to, as an officer, director or trustee of the Company and any of its subsidiaries and (ii) any board to which Executive has been appointed or nominated on behalf of the Company.

7. Compensation upon Termination . This section provides the payments and benefits to be paid or provided to Executive as a result of Executive's termination of employment. Except as provided in this

Section 7 , Executive will not be entitled to anything further from the Company pursuant to this Employment Agreement as a result of the termination of Executive's employment, regardless of the reason for such termination. Upon any termination of Executive's employment under this Employment Agreement, except as otherwise provided, Executive (or Executive's beneficiary, legal representative or estate, as the case may be, in the event of Executive's death) will be entitled to such rights in respect of any equity awards theretofore made to Executive, and to only such rights, as are provided by the plan or the award agreement pursuant to which such equity awards have been granted to Executive or other written agreement or arrangement between Executive and the Company.

(a) *Resignation without Good Reason or Termination for Cause* . Following the termination of Executive's employment by the Company for Cause or by Executive without Good Reason or upon expiration of the Term, the Company will pay or provide to Executive (or Executive's estate in the event of Executive's death) the following (together, the " Accrued Benefits ") as soon as practicable following the date of termination:

(i) (A) any earned but unpaid Base Salary and (B) any accrued and unused vacation pay, through the date of termination;

(ii) reimbursement for any amounts due Executive pursuant to Section 5(f) (unless such termination occurred as a result of misappropriation of funds); and

(iii) any compensation and/or benefits as may be due or payable to Executive in accordance with the terms and provisions of any employee benefit plans or programs of the Company.

(b) *Termination by Company without Cause or by Executive for Good Reason (Non-Change in Control)* . If, during the term, ICE terminates Executive's employment other than for Cause or a Disability, or Executive resigns for Good Reason, in each case before (except as provided in Section 7(c)(4)) or more than two (2) years after a Change in Control, ICE (in lieu of any severance pay under any severance pay plans, programs or policies) will provide the Accrued Benefits and, subject to Section 8 , will pay or provide to Executive:

(1) a lump sum cash payment equal to two (2) times Executive's Base Salary, as in effect on the date Executive's employment terminates;

(2) a lump sum cash payment equal to two (2) times the greater of (i) the average of the last three (3) annual bonuses received by Executive from ICE or any of its affiliates prior to the date Executive's employment terminates and (ii) the last annual bonus received by Executive from ICE or any of its affiliates prior to the date Executive's employment terminates;

(3) with respect to options to purchase ICE common stock or other equity or equity based grants made to Executive (A) for time-vested options or equity based grants (including performance based grants for which actual performance achievement has already been certified as of the date of employment termination), accelerate Executive's right to exercise such options and vest such equity grants that would otherwise vest within the two-year period following the date of termination, (B) for performance based grants for which performance has not been certified as of the date of employment termination, determine and certify performance based on actual performance achieved after completion of the performance period in accordance with the terms of such grants, and vest the first tranche of such performance grants on the date of such performance certification, and (C) treat Executive as if Executive had remained employed by ICE for two (2) years following

the date of termination so that the time period over which Executive has the right to exercise such options shall be the same as if there had been no termination of Executive's employment until the end of such two-year period; and

(4) a lump sum cash payment in respect of Executive's cost of two (2) years' group health coverage under COBRA.

(c) *Termination by Company without Cause or by Executive for Good Reason (Change in Control Related)* . If, during the term, ICE terminates Executive's employment other than for Cause or a Disability, or Executive resigns for Good Reason, in each case within two (2) years after a Change in Control, or as set forth in Section 7(c)(4) , ICE (in lieu of any severance pay under any severance pay plans, programs or policies) will provide the Accrued Benefits and, subject to Section 8 , will pay or provide to Executive:

(1) the payments and benefits set forth in Section 7(b)(1) and (4) ;

(2) a lump sum cash payment equal to two (2) times the greatest of (i) the average of the last three (3) annual bonuses received by Executive from ICE or any of its affiliates prior to the date Executive's employment terminates, (ii) the last annual bonus received by Executive from ICE or its affiliates prior to a Change in Control and (iii) the last annual bonus received by Executive from ICE or any of its affiliates prior to the date Executive's employment terminates; and

(3) with respect to options to purchase ICE common stock or other equity or equity based grants made to Executive, (A) cause each award of such equity or equity based grants to become fully vested (including the lapsing of all restrictions and conditions) and, as applicable, exercisable as of the date of termination of Executive's employment, and deliver promptly (but no later than 15 days) following termination of Executive's employment any shares of common stock deliverable pursuant to restricted stock units; provided, that any outstanding performance-based awards shall be deemed earned at the greater of the target level or actual performance level through the Change in Control date (or if no target level is specified, the maximum level) with respect to all open performance periods and (B) treat Executive as if Executive had remained employed by ICE for two (2) years following the date of termination so that the time period over which Executive has the right to exercise such options shall be the same as if there had been no termination of Executive's employment until the end of such two-year period; and

(4) notwithstanding the foregoing to the contrary, if during the one hundred eighty (180) day-period ending on a Change in Control, Executive experiences a termination of employment under Section 7(b) , then Executive shall have the right to the benefits under Section 7(c)(3)(A) as if such termination of employment occurred under this Section 7(c) (without duplication for any payments or benefits provided under Section 7(b)(4)) as if the Change in Control date were the date of Executive's termination of employment.

" Change in Control " means the occurrence of any of the following events:

(i) any "person" (as that term is used in Sections 13(d) and 14(d)(2) of the 1934 Act), is or becomes the beneficial owner (as defined in Rule 13d-3 under the 1934 Act), directly or indirectly, of securities representing 30% or more of the combined voting power of the then outstanding securities of the Company eligible to vote for the election of the members of the Company's Board of Directors unless (1) such person is the Company or any subsidiary of the Company, (2) such person is an employee benefit plan (or a trust which is a part of such a plan) which provides benefits exclusively

to, or on behalf of, employees or former employees of the Company or a subsidiary of the Company, (3) such person is Executive, an entity controlled by Executive or a group which includes Executive or (4) such person acquired such securities in a Non-Qualifying Transaction (as defined in Section 7(c)(iii));

(ii) any dissolution or liquidation of the Company or any sale or the disposition of 50% or more of the assets or business of the Company; or

(iii) the consummation of any reorganization, merger, consolidation or share exchange or similar form of corporate transaction involving the Company unless (1) the persons who were the beneficial owners of the outstanding securities eligible to vote for the election of the members of the Company's Board of Directors immediately before the consummation of such transaction hold more than 60% of the voting power of the securities eligible to vote for the members of the board of directors of the successor or survivor corporation in such transaction immediately following the consummation of such transaction and (2) the number of the securities of such successor or survivor corporation representing the voting power described in Section 7(c)(iii)(1) held by the persons described in Section 7(c)(iii)(1) immediately following the consummation of such transaction is beneficially owned by each such person in substantially the same proportion that each such person had beneficially owned the outstanding securities eligible to vote for the election of the members of the Company's Board of Directors immediately before the consummation of such transaction, provided (3) the percentage described in Section 7(c)(iii)(1) of the voting power of the successor or survivor corporation and the number described in Section 7(c)(iii)(2) of the securities of the successor or survivor corporation will be determined exclusively by reference to the securities of the successor or survivor corporation which result from the beneficial ownership of shares of common stock of the Company by the persons described in Section 7(c)(iii)(1) immediately before the consummation of such transaction. Any transaction which satisfies all of the criteria specified in (1), (2) and (3) above will be deemed to be a " Non-Qualifying Transaction ".

(d) *Termination for Disability or Death* . In the event Executive's employment is terminated, during the term, for Disability pursuant to Section 6(b) or due to Executive's death, Executive (or Executive's beneficiary, legal representative or estate) will be entitled to the Accrued Benefits.

8. Release . As a condition to ICE's making any payments to Executive after Executive's termination of employment under this Employment Agreement (other than the Accrued Benefits and the compensation earned before such termination and the benefits due under ICE's employee benefit plans without regard to the terms of this Employment Agreement), Executive or, if Executive is deceased, Executive's estate shall execute and not revoke, within fifty-five (55) days following Executive's termination of employment, a release in a form provided by ICE and as may be in use from time to time, and ICE shall provide such payments or benefits, if applicable, promptly after Executive (or Executive's estate) delivers such release to ICE, but no later than sixty (60) days after the date of Executive's termination of employment.

9. Covenants by Executive .

(a) *Compliance with Company Policies* . Executive agrees to comply with any Company policies and codes of conduct as may be in effect from time to time and that may apply to Executive, including without limitation the ICE Global Code of Business Conduct.

(b) *ICE's and Affiliates' Property* . Upon the termination of Executive's employment for any reason or, if earlier, upon ICE's request, Executive shall promptly return all Property which had been entrusted

or made available to Executive by ICE and each of its affiliates and, if any copy of any such Property was made by, or for, Executive, each and every copy of such Property. " Property " means records, files, memoranda, tapes, computer disks, reports, price lists, customer lists, drawings, plans, sketches, keys, computer hardware and software, cell phones, smart phones, credit cards, access cards, identification cards, company cars and other tangible personal property of any kind or description.

(c) *Trade Secrets* . Executive agrees that Executive will hold in a fiduciary capacity for the benefit of ICE and each of its affiliates, and will not directly or indirectly use or disclose to any person not authorized by ICE, any Trade Secret of ICE or its affiliates that Executive may have acquired (whether or not developed or compiled by Executive and whether or not Executive is authorized to have access to such information) during the term of, and in the course of, or as a result of Executive's employment by ICE or its affiliates for so long as such information remains a Trade Secret. " Trade Secret " means information, without regard to form, including, but not limited to, technical or nontechnical data, a formula, a pattern, a compilation, a program, a device, a method, a technique, a drawing, a process, financial data, financial plans, product plans, or a list of actual or potential customers or suppliers that (a) derives economic value, actual or potential, from not being generally known to, and not being generally readily ascertainable by proper means by, other persons who can obtain economic value from its disclosure or use and (b) is the subject of efforts by ICE and its affiliates that are reasonable under the circumstances to maintain its secrecy. This Section 9(c) is intended to provide rights to ICE and its affiliates which are in addition to, not in lieu of, those rights ICE and its affiliates have under the common law or applicable statutes for the protection of trade secrets.

(d) *Confidential Information* . Executive, while employed under this Employment Agreement and thereafter, shall hold in a fiduciary capacity for the benefit of ICE and its affiliates, and shall not directly or indirectly use or disclose to any person not authorized by ICE, any Confidential Information of ICE or its affiliates that Executive may have acquired (whether or not developed or compiled by Executive and whether or not Executive is authorized to have access to such information) during the term of, and in the course of, or as a result of Executive's employment by ICE or its affiliates. " Confidential Information " means any secret, confidential or proprietary information possessed by ICE or its affiliates relating to their businesses (not otherwise included in the definition of a Trade Secret under this Employment Agreement), including, without limitation, customer lists, details of client or consultant contracts, current and anticipated customer requirements, pricing policies, price lists, market studies, business plans, policies, operational methods, marketing plans or strategies, contracts, products, product development techniques or flaws, computer software programs (including object codes and source codes), data and documentation, database technologies, systems, structures and architectures, know-how, inventions and ideas, past, current and planned research and development, compilations, devices, methods, techniques, processes, designs, reports, specifications, future business plans, business development, costs, licensing strategies, advertising campaigns, financial information and data, business acquisition plans and new personnel acquisition plans that has not become generally available to the public by the act of one who has the right to disclose such information without violating any right of ICE or its affiliates. This Section 9(d) is intended to provide rights to ICE and its affiliates which are in addition to, not in lieu of, those rights ICE and its affiliates have under the common law or applicable statutes for the protection of confidential information. For the avoidance of doubt, nothing in this Employment Agreement shall impair Executive's right to make disclosures under the whistleblower provisions of any applicable law or regulation.

(e) *Intellectual Property Rights* . Executive hereby agrees that all Intellectual Property conceived, invented, developed and/or reduced to practice by Executive, alone or jointly with others, during Executive's employment with ICE or its affiliates is the exclusive property of ICE, regardless of whether such Intellectual Property falls within the scope of Executive's employment with ICE or its affiliates. Executive hereby agrees that all Intellectual Property shall be considered a Work Made For Hire pursuant to 17 U.S.C. § 101 and all

rights, titles and interests therein shall vest exclusively with ICE, and to the extent that any Intellectual Property shall not qualify as a Work Made For Hire, Executive hereby assigns to ICE all of Executive's right, title and interest in such Intellectual Property and agrees to assist ICE, at ICE's expense, to obtain patents, copyright and trademark registrations for Intellectual Property, to execute and deliver all documents and do any and all things necessary and proper on Executive's part to obtain such patents and copyright and trademark registrations and to execute specific assignments and other documents for such Intellectual Property as may be considered necessary or appropriate by ICE at any time during or after Executive's employment with ICE or its affiliates. This Section 9(e) does not apply to any invention that Executive develops entirely on Executive's own time without using ICE's equipment, supplies, facilities, Confidential Information, Trade Secrets, know-how or proprietary information, unless the invention either (a) relates at the time of conception or reduction to practice of the invention to ICE's business, or actual or demonstrably anticipated research or development of ICE, or (b) results from any work performed by Executive for ICE or its affiliates. Executive will not place Intellectual Property in the public domain or disclose any inventions to third parties without the prior written consent of ICE. " Intellectual Property " shall include without limitation all inventions, ideas, discoveries, patents, patent applications, registered and unregistered trademarks and service marks and all goodwill associated therewith and symbolized thereby, domain names, trademark applications and service mark applications, registered and unregistered copyrights (including without limitation databases and other compilations of information), Confidential Information, Trade Secrets and know-how, including processes, schematics, business methods, formulae and computer software programs, and all other intellectual property, property and proprietary rights that, in ICE's sole discretion, could be used within the scope of ICE's business.

(f) *Nonsolicitation of Customers or Employees.*

(i) Customers . Executive, while employed under this Employment Agreement and thereafter during the Restricted Period, shall not, on Executive's own behalf or on behalf of any person, firm, partnership, association, corporation or business organization, entity or enterprise, call on or solicit for the purpose of competing with ICE or its affiliates any customers of ICE or its affiliates with whom Executive had contact during the one-year period preceding Executive's date of termination of employment with ICE or its affiliates or about which Executive learned Confidential Information during Executive's employment with ICE or its affiliates. " Restricted Period " means the eighteen (18) month period after the termination of Executive's employment without regard to the reason for Executive's termination of employment.

(ii) Employees . Executive, while employed under this Employment Agreement and thereafter during the Restricted Period, shall not, either directly or indirectly, call on, solicit or attempt to induce any other officer, employee or independent contractor of ICE or its affiliates with whom Executive had contact at any time during Executive's employment with ICE or its affiliates, to terminate his or her employment or business relationship with ICE or its affiliates and shall not assist any other person or entity in such a solicitation.

(g) *Non-Compete* . Executive and ICE agree that (a) ICE (which expressly includes, for purposes of this Section 9(g) , its successors and assigns, and the direct and indirect subsidiaries of ICE, including, without limitation, Intercontinental Exchange Holdings, Inc.) is engaged in operating global commodity, equity and financial products marketplaces for the trading of physical commodities, futures contracts, options contracts, other derivative instruments, and equities, providing risk management and governance tools, providing clearing services, providing brokerage services, and providing market data relating to these services and operations (such businesses, together with any other products or services that may in the future during the pendency of Employee's employment be offered by ICE or any entity that is then an affiliate of ICE, herein being collectively and without limitation referred to as the " Business "), (b) ICE is one of a limited

number of entities that have developed such a Business, (c) while the Business can be and is available to any person or entity who or which has access to the internet and desires to engage with ICE in the Business, the Business is primarily conducted in, and ICE has offices in, the United States, Canada, the United Kingdom and Singapore, (d) Executive is, and is expected to continue to be during the Term, intimately involved in the Business wherever it operates, and Executive will have access to certain confidential, proprietary information of ICE, (e) this Section 9(g) is intended to provide fair and reasonable protection to ICE in light of the unique circumstances of the Business and (f) ICE would not have entered into this Employment Agreement but for the covenants and agreements set forth in this Section 9(g) . Executive therefore agrees that Executive shall not while employed with this Employment Agreement and thereafter during the Restricted Period, assume or perform, directly or indirectly, any responsibilities and duties that are substantially similar to those Executive performs for ICE on the date Executive executes this Employment Agreement for or on behalf of, or act as a management consultant or strategic consultant for or on behalf of, or own, control or loan money to, any other corporation, partnership, venture, or other business entity that engages in the Business in the United States, Canada, the United Kingdom or Singapore; provided, however, that Executive may own up to five percent (5%) of the stock of a publicly traded company that engages in such competitive business so long as Executive is only a passive investor and is not actively involved in such company in any way that is inconsistent with this Section 9(g) .

(h) *Reasonable and Continuing Obligations* . Executive agrees that Executive's obligations under this Section 9 are obligations which will continue beyond the date Executive's employment terminates and that such obligations are reasonable and necessary to protect ICE's and its affiliates' legitimate business interests. ICE in addition shall have the right to take such other action as ICE deems necessary or appropriate to compel compliance with the provisions of this Section 9 .

(i) *Remedy for Breach* . Executive agrees that the remedies at law for ICE for any actual or threatened breach by Executive of the covenants in this Section 9 would be inadequate and that ICE shall be entitled to specific performance of the covenants in this Section 9 , including entry of an ex parte, temporary restraining order in state or federal court, preliminary and permanent injunctive relief against activities in violation of this Section 9 , or both, or other appropriate judicial remedy, writ or order, without requirement of posting a bond or other security, in addition to any damages and legal expenses which ICE may be legally entitled to recover. Executive acknowledges and agrees that the covenants in this Section 9 shall be construed as agreements independent of any other provision of this or any other agreement between ICE and Executive, and that the existence of any claim or cause of action by Executive against ICE, whether predicated upon this Employment Agreement or any other agreement, shall not constitute a defense to the enforcement by ICE of such covenants.

10. No Waiver . Except for the notice described in Section 19(a) , no failure by either ICE or Executive at any time to give notice of any breach by the other of, or to require compliance with, any condition or provision of this Employment Agreement shall be deemed a waiver of any provisions or conditions of this Employment Agreement.

11. Choice of Law and Courts . This Employment Agreement shall be governed by New York law, and (subject to Section 16) any action that may be brought by either ICE or Executive involving the enforcement of this Employment Agreement or any rights, duties, or obligations under this Employment Agreement, shall be brought exclusively in the state or federal courts sitting in New York, New York, and Executive consents and waives any objection to personal jurisdiction and venue in these courts for any such action.

12. Assignment and Binding Effect. This Employment Agreement shall be binding upon and inure to the benefit of ICE and any successor to all or substantially all of the business or assets of ICE. ICE may assign this Employment Agreement to any affiliate or successor, and no such assignment shall be treated as a termination of Executive's employment under this Employment Agreement, and references to "ICE" shall also be deemed to refer to any such affiliate or successor. Executive's rights and obligations under this Employment Agreement are personal and shall not be assigned or transferred. Any such assignment or attempted assignment by Executive shall be null, void, and of no legal effect.

13. Entire Agreement. This Employment Agreement replaces and supersedes any and all previous agreements and understandings regarding all the terms and conditions of Executive's employment relationship with ICE, including the Former Agreement and this Employment Agreement constitutes the entire agreement of ICE and Executive with respect to such terms and conditions.

14. Amendment. Except as provided in Section 15, no amendment or modification to this Employment Agreement shall be effective unless it is in writing and signed by an authorized representative of ICE and by Executive.

15. Severability. If any provision of this Employment Agreement (including but not limited to any covenant contained in Section 9) shall be found invalid or unenforceable, in whole or in part, then such provision shall be deemed to be modified or restricted to the extent and in the manner necessary to render such provision valid and enforceable, or shall be deemed excised from this Employment Agreement, as may be required under applicable law, and this Employment Agreement shall be construed and enforced to the maximum extent permitted by applicable law, as if such provision had been originally incorporated in this Employment Agreement as so modified or restricted, or as if such provision had not been originally incorporated in this Employment Agreement, as the case may be.

16. Arbitration. ICE shall have the right to obtain an injunction or other equitable relief arising out of Executive's breach of the provisions of Section 9 of this Employment Agreement. However, any other controversy or claim arising out of or relating to this Employment Agreement or any alleged breach of this Employment Agreement, or any other claim arising out of or relating to Executive's employment by ICE, shall be settled by binding arbitration in New York, New York in accordance with the rules of the American Arbitration Association then applicable to employment-related disputes, and a judgment upon the arbitration award may be entered by any court of competent jurisdiction. The arbitration shall be conducted by a single arbitrator selected in accordance with the applicable rules of the American Arbitration Association. The arbitrator shall be empowered to award any category of damages that would be available to the parties under applicable law. ICE shall be responsible for paying the reasonable fees of the arbitrator, unless the fees are otherwise allocated by the arbitrator consistent with applicable law.

Initials of the parties expressly assenting to the arbitration provision in Section 16:	
_____ /s/ BJ _____	_____ /s/ DF _____
Executive's initials	Initials of ICE representative

17. Executive's Legal Fees and Expenses. ICE shall have no obligation under the terms of this Employment Agreement to reimburse Executive for any of Executive's legal fees and expenses for any claims under this Employment Agreement that are unrelated to a Change in Control. ICE shall reimburse Executive for Executive's reasonable legal fees and expenses incurred in connection with any claim made with respect

to Executive's rights under Section 7(c) ; provided, that such reimbursement shall be subject to recoupment by ICE if Executive's claim is found to have been brought in bad faith.

18. Representations . Executive represents and warrants to the Company that Executive is under no contractual or other binding legal restriction which would prohibit Executive from entering into and performing under this Employment Agreement or that would limit the performance Executive's duties under this Employment Agreement.

19. Miscellaneous .

(a) *Notices* . Notices and all other communications shall be in writing and shall be deemed to have been duly given when personally delivered or when mailed by United States registered or certified mail or overnight courier. Notices to ICE shall be sent to 5660 New Northside Drive, Third Floor, Atlanta, Georgia 30328, Attention: Corporate Secretary. Notices and communications to Executive shall be sent to the address Executive most recently provided to ICE.

(b) *Counterparts* . This Employment Agreement may be executed in counterparts, each of which will be deemed an original, but all of which together will constitute one and the same Employment Agreement. An electronic signature is a permissible means of executing this Employment Agreement.

(c) *Headings; References* . The headings and captions used in this Employment Agreement are used for convenience only and are not to be considered in construing or interpreting this Employment Agreement. Any reference to a "section" shall be to a section of this Employment Agreement absent an express statement to the contrary.

(d) *Section 409A of the Code* . This Agreement is intended to comply with the requirements of Section 409A of the Internal Revenue Code of 1986, as amended (" Section 409A "). To the extent that any provision in this Agreement is ambiguous as to its compliance with Section 409A or to the extent any provision in this Agreement must be modified to comply with Section 409A (including, without limitation, Treasury Regulation 1.409A-3(c)), such provision shall be read, or shall be modified (with the mutual consent of the parties, which consent shall not be unreasonably withheld), as the case may be, in such a manner so that all payments due under this Agreement shall comply with Section 409A. In no event may Executive, directly or indirectly, designate the calendar year of payment. To the extent Executive would otherwise be entitled to any payment or benefit under this Employment Agreement or any plan or arrangement of ICE or its affiliates, that constitutes "deferred compensation" subject to Section 409A and that if paid during the six (6) months beginning on the date of termination of Executive's employment would be subject to the Section 409A additional tax because Executive is a "specified employee" (within the meaning of Section 409A and as determined by ICE), the payment will be paid to Executive on the earlier of the first day of the seventh month following Executive's date of termination, a change in ownership or effective control of ICE (within the meaning of Section 409A) or Executive's death. In addition, any payment or benefit due upon a termination of Executive's employment that represents a "deferral of compensation" within the meaning of Section 409A shall be paid or provided to Executive only upon a "separation from service" as defined in Treas. Reg. Section 1.409A-1(h). To the extent applicable, each payment made under this Employment Agreement shall be deemed to be a separate payment, amounts payable under Section 7 of this Employment Agreement shall be deemed not to be a "deferral of compensation" subject to Section 409A to the extent provided in the exceptions in Treas. Reg. Sections 1.409A-1(b)(4) ("short-term deferrals") and (b)(9) ("separation pay plans," including the exception under subparagraph (iii)) and other applicable provisions of Treas. Reg. Section 1.409A-1 through 1.409A-6. Notwithstanding anything to the contrary in this Employment Agreement or elsewhere, any payment or benefit under this Employment Agreement or otherwise that is exempt from Section 409A

pursuant to Treas. Reg. Section 1.409A-1(b)(9)(v)(A) or (C) shall be paid or provided to Executive only to the extent that the expenses are not incurred, or the benefits are not provided, beyond the last day of Executive's second taxable year following Executive's taxable year in which the "separation from service" occurs; and provided further that such expenses shall be reimbursed no later than the last day of Executive's third taxable year following the taxable year in which Executive's "separation from service" occurs. To the extent any expense reimbursement or the provision of any in-kind benefit under this Employment Agreement is determined to be subject to Section 409A, the amount of any such expenses eligible for reimbursement, or the provision of any in-kind benefit, in one calendar year shall not affect the expenses eligible for reimbursement in any other calendar year (except for any life-time or other aggregate limitation applicable to medical expenses), in no event shall any expenses be reimbursed after the last day of the calendar year following the calendar year in which Executive incurred such expenses, and in no event shall any right to reimbursement or the provision of any in-kind benefit be subject to liquidation or exchange for another benefit.

(e) *Withholding Taxes* . The Company may withhold from any amounts or benefits payable under this Employment Agreement income taxes and payroll taxes that are required to be withheld pursuant to any applicable law or regulation or as permissible under ICE's standard payroll practices and policies for senior executives.

IN WITNESS WHEREOF , the parties hereto have executed this Employment Agreement on the date first above written.

INTERCONTINENTAL EXCHANGE HOLDINGS, INC.	**EXECUTIVE**
By: /s/ Doug Foley	/s/ Benjamin Jackson
Doug Foley	
SVP, HR & Administration	Benjamin Jackson

EXHIBIT 10.17

INTERCONTINENTAL EXCHANGE, INC. 2017 OMNIBUS EMPLOYEE INCENTIVE PLAN

2018 PERFORMANCE-BASED RESTRICTED STOCK UNIT AWARD AGREEMENT (EBITDA AND TSR)

Grantee: **[** NAME **]**
Number of Performance-Based Restricted Stock Units: **[•]**
Grant Date: **[** DATE **]**

This Performance-Based Restricted Stock Unit Award Agreement (the " **Award Agreement** ") is dated this **[** DATE **]** (the " **Grant Date** ") by and between **[** NAME **]** (the " **Grantee** ") and Intercontinental Exchange, Inc. (the " **Company** "), pursuant to the Intercontinental Exchange, Inc. 2017 Omnibus Employee Incentive Plan (the " **Plan** "). Capitalized terms not defined in this Award Agreement have the meanings as used or defined in the Plan.

1. **Award.** Pursuant to the Plan, the Company hereby awards to the Grantee **[•]** performance-based restricted stock units (the " **Performance RSUs** "). At the end of the Performance Period set forth in Appendix A of this Award Agreement (the " **Performance Period** ") and in accordance with the terms of the Plan and the satisfaction of the Performance Goals set forth in Appendix A (the " **Performance Goals** "), the Committee will determine the number of Performance RSUs earned under this Award and will advise you of the number (such earned Performance RSUs, the " **Earned RSUs** "). The number of Earned RSUs may range from 0% to 200% of the Performance RSUs initially subject to this Award as set forth in Appendix A, and the actual percentage of Earned RSUs will be prorated on a straight-line basis between the percentages stated in Appendix A. No Performance RSUs will become Earned RSUs if the Company does not achieve Threshold Performance, as provided in Appendix A.

In accordance with Section 2.10.2 of the Plan, the Committee shall have the authority to make equitable adjustments to the Performance Goals as the Committee deems appropriate (including, but not limited to, for one or more of the items of gain, loss, profit or expense: (a) determined to be extraordinary or unusual in nature or infrequent in occurrence, (b) related to the acquisition or disposal of a segment of a business, (c) related to a change in accounting principle under GAAP, (d) related to discontinued operations that do not qualify as a segment of business under GAAP or (e) attributable to the business operations of any entity acquired by the Company during the fiscal year).

An Earned RSU constitutes an unfunded and unsecured promise of the Company to deliver (or cause to be delivered) to the Grantee a Share on a delivery date as provided herein. THIS AWARD IS SUBJECT TO ALL TERMS, CONDITIONS AND PROVISIONS OF THE PLAN AND THIS AWARD AGREEMENT.

2. **Vesting.** Except as otherwise provided herein or, if applicable, in the Grantee's employment agreement with the Company (the " **Employment Agreement** "), the Grantee shall become vested in the Earned RSUs in three equal installments. One-third, or 33 1/3% (which may be rounded to avoid fractional RSU shares), of the Earned RSUs will become vested on February **[•]** , 2019 subject to the Committee's prior certification that the applicable Performance Goals have been achieved, and one-third,

or 33 1/3% (which may be rounded to avoid fractional RSU shares), will vest on each of February **[•]** , 2020 and February **[•]** , 2021 (each, a " **Scheduled Vesting Date** " for this Award). The Grantee's rights in respect of all of his or her Performance RSUs and unvested Earned RSUs are subject to the forfeiture provisions set forth in Paragraph 5. For the avoidance of doubt, prior to becoming a vested, Earned RSU, a Performance RSU does not provide any legal entitlement whatsoever to a Grantee or his or her legal representative or authorized assignee.

3. Delivery. Except as otherwise provided herein, the Shares underlying the vested Earned RSUs are to be delivered on or promptly after each Scheduled Vesting Date (but in no case more than 15 days after such date) (the " **Delivery Date** "). On the Delivery Date, the Company shall transfer to the Grantee one unrestricted, fully transferable Share for each vested Earned RSU scheduled to be paid out on such date and as to which all other conditions have been satisfied.

4. Dividend Equivalent Rights. On the Delivery Date, the Company shall pay to the Grantee a cash amount equal to the product of (x) all cash dividends or other distributions (other than cash dividends or other distributions pursuant to which the Performance RSUs or Earned RSUs were adjusted pursuant to Section 1.3.3 of the Plan), if any, paid on a Share from the Grant Date to the Scheduled Vesting Date and (y) the number of Shares underlying the Grantee's vested Earned RSUs (including for this purpose any Shares which would have been delivered to the Grantee but for being withheld to satisfy tax withholding obligations). The Grantee's rights in respect of the dividend equivalent rights described in the preceding sentence (the " **Dividend Equivalent Rights** ") are subject to the forfeiture provisions set forth in Paragraph 5. For the avoidance of doubt, Dividend Equivalent Rights will not be paid on any unearned or unvested Performance RSUs.

5. Forfeiture. Except as provided in Paragraph 6, Section 3.6 of the Plan, or, if applicable, the Employment Agreement, or as otherwise determined by the Committee, if the Grantee's Employment with the Company terminates for any reason, all of the Grantee's Performance RSUs that have not been earned and all Earned RSUs that have not vested and the corresponding Dividend Equivalent Rights shall immediately be cancelled by the Company, the Grantee's rights and interests (or the rights and interests of the Grantee's legal representative or authorized assignee) in respect of all of his or her Performance RSUs and unvested Earned RSUs and corresponding Dividend Equivalent Rights shall be forfeited and terminate, and no Shares shall be paid or payable in respect of such Performance RSUs or unvested Earned RSUs, and no cash amount shall be paid or payable in respect of such corresponding Dividend Equivalent Rights.

6. Death. Notwithstanding any other provision of this Award Agreement, if the Grantee dies before he or she is vested in 100% of his or her Earned RSUs, provided the Grantee's rights in respect of his or her Earned RSUs have not yet terminated, the Grantee shall vest in his or her unvested Earned RSUs and the Shares corresponding to such unvested Earned RSUs, along with a cash amount in respect of the Grantee's Dividend Equivalent Rights, calculated based on the dividends and other distributions paid on a Share through the date of the Grantee's death, shall be paid to the representative of the Grantee's estate promptly after the Grantee's death (but no later than 90 days after the Grantee's death). Further, notwithstanding any other provision of this Award Agreement, if the Grantee dies during the Performance Period, the Grantee shall be deemed to have earned the Performance RSUs at the Target Performance level as set forth in Appendix A and to have vested in such Earned RSUs, provided the Grantee's rights in respect of his or her Performance RSUs have not terminated prior to the Grantee's death, and the Shares corresponding to such Performance RSUs, along with a cash amount in respect of the Grantee's Dividend Equivalent Rights, calculated based on the number of Shares underlying such Performance RSUs and dividends and other distributions paid on a Share through the date of the Grantee's

death, shall be paid to the representative of the Grantee's estate promptly after the Grantee's death (but no later than 90 days after the Grantee's death).

7. Change in Control. Upon a Change in Control the terms of Section 3.6 of the Plan, or, if applicable and more favorable to the Grantee, the terms of the Employment Agreement shall govern treatment of this Award. As set forth in Section 3.6.2 of the Plan, upon a Change in Control, any outstanding Performance RSUs for open Performance Periods shall be deemed earned at the greater of Target Performance as set forth in Appendix A and actual performance through the date of the Change in Control and will cease to be subject to any further performance conditions but will continue to be subject to time-based vesting following the Change in Control.

8. Ownership, Voting Rights, Duties. The Grantee will not have any rights of a shareholder of the Company with respect to Earned RSUs until delivery of the underlying Shares.

9. Transferability and Resale Restrictions. Performance RSUs may not be transferred in any manner other than by will or by the laws of descent and distribution. Any transferee shall hold such Awards subject to all the provisions of the Plan and of this Award Agreement. If the Grantee is an Employee at the time the Grantee desires to engage in a transaction with respect to the Shares issued in respect of the Earned RSUs, the Grantee will have to comply with the Company's Insider Trading Policy.

10. Compensation Clawback Policy/Recoupment. This Award shall be subject to the terms of the Company's compensation Clawback Policy as it may be amended from time to time and any laws, rules or regulations that require the Company to recoup or recover past compensation from Grantee as a result of a restatement by the Company.

11. Section 409A.

(a) Awards under this Award Agreement are not intended to provide payments that are "nonqualified deferred compensation" subject to Section 409A, and unless and to the extent that the Committee specifically determines otherwise as provided below, this Award Agreement and the Plan shall be interpreted, administered and construed in accordance with this intent, so as to avoid the imposition of taxes and penalties on the Grantee pursuant to Section 409A. The Committee shall have full authority to give effect to the intent of this Paragraph 11(a). The Company shall have no liability to the Grantee if the Plan or any Award, vesting, exercise or payment of any Award hereunder is subject to the additional tax and penalties under Section 409A.

(b) Without limiting the generality of Paragraph 11(a), references to the termination of the Grantee's Employment with respect to the Awards pursuant to this Award Agreement shall mean the Grantee's "separation from service" within the meaning of Section 409A.

(c) Notwithstanding any other provision of this Award Agreement or the Plan to the contrary, with respect to any Award that is subject to Section 409A, if a Grantee is a "specified employee" (within the meaning of Section 409A and as determined by the Company) as of the date of the Grantee's termination of Employment, any payment (whether in Shares or cash equal to the Fair Market Value of the Shares) to be made with respect to the Award upon the Grantee's termination of Employment will be accumulated and paid (without interest) on the first business day of the seventh month following the Grantee's termination of Employment (or earlier death) in accordance with the requirements of Section 409A.

(d) To the extent necessary to comply with Paragraph 11(a), any cash, securities or other property that the Company may deliver in respect of the Earned RSUs will not have the effect of deferring delivery or payment beyond the date on which such delivery or payment would occur with respect to the Shares that would otherwise have been deliverable.

(e) Each delivery of Shares or payment of cash in respect of Earned RSUs will be treated as a separate payment for purposes of Section 409A.

12. Tax Representations and Tax Withholding. The Grantee has had an opportunity to review with his or her own tax advisors the federal, state, local and foreign tax consequences of this investment and the transactions contemplated by this Award Agreement. The Grantee is relying solely on such advisors and not on any statements or representations of the Company or any of its agents. The Grantee understands that he or she (and not the Company) shall be responsible for his or her own tax liability that may arise as a result of this investment or the transactions contemplated by this Award Agreement. The Company may require the Grantee to pay to the Company, or make arrangements satisfactory to the Company regarding payment of, any taxes of any kind required by law to be withheld with respect to the Shares.

13. Entire Agreement. The Plan is incorporated herein by reference. This Award Agreement and the Plan constitute the entire agreement and understanding of the parties hereto with respect to the subject matter hereof and supersede all prior understandings and agreements with respect to such subject matter. If and to the extent that this Award Agreement conflicts or is inconsistent with the terms, conditions and provisions of the Plan, the Plan shall control, and this Award Agreement shall be deemed to be modified accordingly. Any action taken or decision made by the Committee arising out of or in connection with the construction, administration, interpretation or effect of this Award Agreement shall lie within its sole and absolute discretion, as the case may be, and shall be final, conclusive and binding on the Grantee and all persons claiming under or through the Grantee.

14. Amendment. The Committee may amend the Plan and this Award Agreement in any respect whatsoever, provided that any such amendment that materially adversely impairs any rights of the Grantee under this Award Agreement shall be made only with the consent of the Grantee.

15. No Obligation to Employ. Nothing in the Plan or this Award Agreement shall confer on the Grantee any right to continue in the employ of, or other relationship with, the Company, or limit in any way the right of the Company to terminate the Grantee's Employment or other relationship at any time, with or without cause.

16. Notices and Information. Any notice required to be given or delivered to the Company under the terms of this Award Agreement shall be in writing and addressed to the Corporate Secretary of the Company at its principal corporate offices. Any notice required to be given or delivered to the Grantee shall be in writing and addressed to the Grantee at the address indicated below or to such other address as such party may designate in writing from time to time to the Company. All notices shall be deemed to have been given or delivered upon: (i) personal delivery; (ii) three (3) days after deposit in the United States mail by certified or registered mail (return receipt requested); (iii) one (1) business day after deposit with any return receipt express courier (prepaid); or (iv) one (1) business day after transmission by facsimile. For additional information regarding this Award Agreement, the Plan or the administrators of the Plan, please contact the Company's Corporate Secretary at 5660 New Northside Drive, 3 rd Floor, Atlanta, Georgia 30328 (telephone: 770-857-4700).

17. **Successors and Assigns.** The Company may assign any of its rights under this Award Agreement. This Award Agreement shall be binding upon and inure to the benefit of the successors and assigns of the Company. Subject to the restrictions on transfer set forth herein, this Award Agreement shall be binding upon the Grantee and the Grantee's heirs, executors, administrators, legal representatives, successors and assigns.

18. **Choice of Forum.** IN ACCORDANCE WITH SECTION 3.16 OF THE PLAN, THE COMPANY AND THE GRANTEE HEREBY IRREVOCABLY SUBMIT TO THE EXCLUSIVE JURISDICTION OF ANY STATE OR FEDERAL COURT LOCATED IN ATLANTA, GEORGIA OVER ANY SUIT, ACTION OR PROCEEDING ARISING OUT OF OR RELATING TO OR CONCERNING THE PLAN OR THIS AWARD AGREEMENT.

19. **GOVERNING LAW.** THIS AWARD AGREEMENT SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE INTERNAL LAWS OF THE STATE OF GEORGIA WITHOUT REGARD TO PRINCIPLES OF CONFLICT OF LAWS.

20. **Headings.** The headings in this Award Agreement are for the purpose of convenience only and are not intended to define or limit the construction of the provisions hereof.

IN WITNESS WHEREOF, INTERCONTINENTAL EXCHANGE, INC. has caused this Award Agreement to be duly executed and delivered as of the Grant Date.

By: _____

INTERCONTINENTAL EXCHANGE, INC.

Name: Scott A. Hill

Title: Chief Financial Officer

By: _____

GRANTEE

Name: [NAME **]**

APPENDIX A

Performance Period: January 1, 2018 to December 31, 2018

Performance Goal: EBITDA (The Company's consolidated 2018 Earnings Before Interest, Taxes, Depreciation and Amortization (the " **EBIDTA** ").)

	Threshold Performance [1] **(85% of Plan)**	**Target Performance (100% of Plan)**	**Maximum Performance (113% of Plan)**
2018 Consolidated EBITDA [2,3]	$ [•]	$ [•]	$ [•]
% of Target Performance Share Grant Earned [4]	50%	100%	200%

Market Condition Adjustment: Total Shareholder Return [5]

(The Company's 2018 Total Shareholder Return (the " **TSR** ") as compared to the S&P 500 Index (the " **S&P 500** ").) Notwithstanding achievement of the EBITDA goal set forth above, the Committee shall adjust the percentage of Performance RSUs earned downward based on its TSR compared to the S&P 500. The TSR-based reduction is applicable only if the Company's EBITDA exceeds Target Performance, and will only be applied to the portion of the Award generated by the performance exceeding Target Performance.

≥ S&P 500 Index 2018 Return:	50%	100%	200%
Below S&P 500 Index 2018 Return by 10% or less (10% Reduction Over Target):	50%	100%	190%
Below S&P 500 Index 2018 Return by >10% (20% Reduction Over Target):	50%	100%	180%

[1] No Award will be earned for EBITDA performance below this Threshold Performance level.

[2] The Consolidated EBITDA goal will not be adjusted to reflect the effect of any material business transaction as determined by the compensation committee.

[3] Actual EBITDA performance will be adjusted to be consistent with the adjustments made to arrive at our non-GAAP financial disclosure in our Annual Report on Form 10-K filed with the SEC.

[4] Awards will be prorated on a straight-line basis between performance levels on the Performance Goals.

[5] A 14-trading day average stock and index price at the end of 2017 and 2018 will be used to measure the starting and ending point, respectively, for TSR performance.

EXHIBIT 10.18

INTERCONTINENTAL EXCHANGE, INC. 2017 OMNIBUS EMPLOYEE INCENTIVE PLAN

2018 PERFORMANCE-BASED RESTRICTED STOCK UNIT AWARD AGREEMENT (RELATIVE 3-YEAR TSR)

Grantee: **[** NAME **]**
Number of Performance-Based Restricted Stock Units: **[•]**
Grant Date: **[** DATE **]**

This Performance-Based Restricted Stock Unit Award Agreement (the " **Award Agreement** ") is dated this **[** DATE **]** (the " **Grant Date** ") by and between **[** NAME **]** (the " **Grantee** ") and Intercontinental Exchange, Inc. (the " **Company** "), pursuant to the Intercontinental Exchange, Inc. 2017 Omnibus Employee Incentive Plan (the " **Plan** "). Capitalized terms not defined in this Award Agreement have the meanings as used or defined in the Plan.

1. **Award.** Pursuant to the Plan, the Company hereby awards to the Grantee **[•]** performance-based restricted stock units (the " **Performance RSUs** "). At the end of the Performance Period set forth in Appendix A of this Award Agreement (the " **Performance Period** ") and in accordance with the terms of the Plan and the satisfaction of the Performance Goal set forth in Appendix A (the " **Performance Goal** "), the Committee will determine the number of Performance RSUs earned under this Award and will advise you of the number (such earned Performance RSUs, the " **Earned RSUs** "). The number of Earned RSUs may range from 0% to 200% of the Performance RSUs initially subject to this Award as set forth in Appendix A, and the actual percentage of Earned RSUs will be prorated on a straight-line basis between the percentages stated in Appendix A. No Performance RSUs will become Earned RSUs if the Company does not achieve Threshold Performance, as provided in Appendix A.

In accordance with Section 2.10.2 of the Plan, the Committee shall have the authority to make equitable adjustments to the Performance Goal as the Committee deems appropriate (including, but not limited to, for one or more of the items of gain, loss, profit or expense: (a) determined to be extraordinary or unusual in nature or infrequent in occurrence, (b) related to the acquisition or disposal of a segment of a business, (c) related to a change in accounting principle under GAAP, (d) related to discontinued operations that do not qualify as a segment of business under GAAP or (e) attributable to the business operations of any entity acquired by the Company during the fiscal year).

An Earned RSU constitutes an unfunded and unsecured promise of the Company to deliver (or cause to be delivered) to the Grantee a Share on a delivery date as provided herein. THIS AWARD IS SUBJECT TO ALL TERMS, CONDITIONS AND PROVISIONS OF THE PLAN AND THIS AWARD AGREEMENT.

2. **Vesting.** Except as otherwise provided herein or, if applicable, in the Grantee's employment agreement with the Company (the " **Employment Agreement** "), the Grantee shall become vested in the Earned RSUs on February **[•],** 2021 (the " **Vesting Date** ") subject to the Committee's prior certification that the applicable Performance Goal has been achieved. The Grantee's rights in respect of

all of his or her unvested Performance RSUs are subject to the forfeiture provisions set forth in Paragraph 5. For the avoidance of doubt, prior to becoming a vested, Earned RSU, a Performance RSU does not provide any legal entitlement whatsoever to a Grantee or his or her legal representative or authorized assignee.

3. **Delivery.** Except as otherwise provided herein, the Shares underlying the vested Earned RSUs are to be delivered on or promptly after the Vesting Date (but in no case more than 15 days after such date) (the " **Delivery Date** "). On the Delivery Date, the Company shall transfer to the Grantee one unrestricted, fully transferable Share for each Earned RSU as to which all other conditions have been satisfied.

4. **Dividend Equivalent Rights.** On the Delivery Date, the Company shall pay to the Grantee a cash amount equal to the product of (x) all cash dividends or other distributions (other than cash dividends or other distributions pursuant to which the Performance RSUs or Earned RSUs were adjusted pursuant to Section 1.3.3 of the Plan), if any, paid on a Share from the Grant Date to the Vesting Date and (y) the number of Shares underlying the Grantee's vested Earned RSUs (including for this purpose any Shares which would have been delivered to the Grantee but for being withheld to satisfy tax withholding obligations). The Grantee's rights in respect of the dividend equivalent rights described in the preceding sentence (the " **Dividend Equivalent Rights** ") are subject to the forfeiture provisions set forth in Paragraph 5. For the avoidance of doubt, Dividend Equivalent Rights will not be paid on any unearned or unvested Performance RSUs.

5. **Forfeiture.** Except as provided in Paragraph 6, Section 3.6 of the Plan, or, if applicable, the Employment Agreement, or as otherwise determined by the Committee, if the Grantee's Employment with the Company terminates for any reason, all of the Grantee's Performance RSUs that have not been earned and all Earned RSUs that have not vested and the corresponding Dividend Equivalent Rights shall immediately be cancelled by the Company, the Grantee's rights and interests (or the rights and interests of the Grantee's legal representative or authorized assignee) in respect of all of his or her Performance RSUs and unvested Earned RSUs and corresponding Dividend Equivalent Rights shall be forfeited and terminate, no Shares shall be paid or payable in respect of such Performance RSUs or unvested Earned RSUs, and no cash amount shall be paid or payable in respect of such corresponding Dividend Equivalent Rights.

6. **Death.** Notwithstanding any other provision of this Award Agreement, if the Grantee dies during the Performance Period, the Grantee shall be deemed to have earned the Performance RSUs at the Target Performance level as set forth in Appendix A and to have vested in such Earned RSUs, provided the Grantee's rights in respect of his or her Performance RSUs have not terminated prior to the Grantee's death, and the Shares corresponding to such Performance RSUs, along with a cash amount in respect of the Grantee's Dividend Equivalent Rights, calculated based on the number of Shares underlying such Performance RSUs and dividends and other distributions paid on a Share through the date of the Grantee's death, shall be paid to the representative of the Grantee's estate promptly after the Grantee's death (but no later than 90 days after the Grantee's death).

7. **Change in Control.** Upon a Change in Control the terms of Section 3.6 of the Plan, or, if applicable and more favorable to the Grantee, the terms of the Employment Agreement shall govern treatment of this Award. As set forth in Section 3.6.2 of the Plan, upon a Change in Control, any outstanding Performance RSUs for open Performance Periods shall be deemed earned at the greater of Target Performance as set forth in Appendix A and actual performance through the date of the Change in Control and will cease to be subject to any further performance conditions but will continue to be subject to time-based vesting following the Change in Control.

8. Ownership, Voting Rights, Duties. The Grantee will not have any rights of a shareholder of the Company with respect to Earned RSUs until delivery of the underlying Shares.

9. Transferability and Resale Restrictions. Performance RSUs may not be transferred in any manner other than by will or by the laws of descent and distribution. Any transferee shall hold such Awards subject to all the provisions of the Plan and of this Award Agreement. If the Grantee is an Employee at the time the Grantee desires to engage in a transaction with respect to the Shares issued in respect of the Earned RSUs, the Grantee will have to comply with the Company's Insider Trading Policy.

10. Compensation Clawback Policy/Recoupment. This Award shall be subject to the terms of the Company's compensation Clawback Policy as it may be amended from time to time and any laws, rules or regulations that require the Company to recoup or recover past compensation from Grantee as a result of a restatement by the Company.

11. Section 409A.

(a) Awards under this Award Agreement are not intended to provide payments that are "nonqualified deferred compensation" subject to Section 409A, and unless and to the extent that the Committee specifically determines otherwise as provided below, this Award Agreement and the Plan shall be interpreted, administered and construed in accordance with this intent, so as to avoid the imposition of taxes and penalties on the Grantee pursuant to Section 409A. The Committee shall have full authority to give effect to the intent of this Paragraph 11(a). The Company shall have no liability to the Grantee if the Plan or any Award, vesting, exercise or payment of any Award hereunder is subject to the additional tax and penalties under Section 409A.

(b) Without limiting the generality of Paragraph 11(a), references to the termination of the Grantee's Employment with respect to the Awards pursuant to this Award Agreement shall mean the Grantee's "separation from service" within the meaning of Section 409A.

(c) Notwithstanding any other provision of this Award Agreement or the Plan to the contrary, with respect to any Award that is subject to Section 409A, if a Grantee is a "specified employee" (within the meaning of Section 409A and as determined by the Company) as of the date of the Grantee's termination of Employment, any payment (whether in Shares or cash equal to the Fair Market Value of the Shares) to be made with respect to the Award upon the Grantee's termination of Employment will be accumulated and paid (without interest) on the first business day of the seventh month following the Grantee's termination of Employment (or earlier death) in accordance with the requirements of Section 409A.

(d) To the extent necessary to comply with Paragraph 11(a), any cash, securities or other property that the Company may deliver in respect of the Earned RSUs will not have the effect of deferring delivery or payment beyond the date on which such delivery or payment would occur with respect to the Shares that would otherwise have been deliverable.

(e) Each delivery of Shares or payment of cash in respect of Earned RSUs will be treated as a separate payment for purposes of Section 409A.

12. Tax Representations and Tax Withholding. The Grantee has had an opportunity to review with his or her own tax advisors the federal, state, local and foreign tax consequences of this investment and the transactions contemplated by this Award Agreement. The Grantee is relying solely on

such advisors and not on any statements or representations of the Company or any of its agents. The Grantee understands that he or she (and not the Company) shall be responsible for his or her own tax liability that may arise as a result of this investment or the transactions contemplated by this Award Agreement. The Company may require the Grantee to pay to the Company, or make arrangements satisfactory to the Company regarding payment of, any taxes of any kind required by law to be withheld with respect to the Shares.

13. Entire Agreement. The Plan is incorporated herein by reference. This Award Agreement and the Plan constitute the entire agreement and understanding of the parties hereto with respect to the subject matter hereof and supersede all prior understandings and agreements with respect to such subject matter. If and to the extent that this Award Agreement conflicts or is inconsistent with the terms, conditions and provisions of the Plan, the Plan shall control, and this Award Agreement shall be deemed to be modified accordingly. Any action taken or decision made by the Committee arising out of or in connection with the construction, administration, interpretation or effect of this Award Agreement shall lie within its sole and absolute discretion, as the case may be, and shall be final, conclusive and binding on the Grantee and all persons claiming under or through the Grantee.

14. Amendment. The Committee may amend the Plan and this Award Agreement in any respect whatsoever, provided that any such amendment that materially adversely impairs any rights of the Grantee under this Award Agreement shall be made only with the consent of the Grantee.

15. No Obligation to Employ. Nothing in the Plan or this Award Agreement shall confer on the Grantee any right to continue in the employ of, or other relationship with, the Company, or limit in any way the right of the Company to terminate the Grantee's Employment or other relationship at any time, with or without cause.

16. Notices and Information. Any notice required to be given or delivered to the Company under the terms of this Award Agreement shall be in writing and addressed to the Corporate Secretary of the Company at its principal corporate offices. Any notice required to be given or delivered to the Grantee shall be in writing and addressed to the Grantee at the address indicated below or to such other address as such party may designate in writing from time to time to the Company. All notices shall be deemed to have been given or delivered upon: (i) personal delivery; (ii) three (3) days after deposit in the United States mail by certified or registered mail (return receipt requested); (iii) one (1) business day after deposit with any return receipt express courier (prepaid); or (iv) one (1) business day after transmission by facsimile. For additional information regarding this Award Agreement, the Plan or the administrators of the Plan, please contact the Company's Corporate Secretary at 5660 New Northside Drive, 3 rd Floor, Atlanta, Georgia 30328 (telephone: 770-857-4700).

17. Successors and Assigns. The Company may assign any of its rights under this Award Agreement. This Award Agreement shall be binding upon and inure to the benefit of the successors and assigns of the Company. Subject to the restrictions on transfer set forth herein, this Award Agreement shall be binding upon the Grantee and the Grantee's heirs, executors, administrators, legal representatives, successors and assigns.

18. Choice of Forum. IN ACCORDANCE WITH SECTION 3.16 OF THE PLAN, THE COMPANY AND THE GRANTEE HEREBY IRREVOCABLY SUBMIT TO THE EXCLUSIVE JURISDICTION OF ANY STATE OR FEDERAL COURT LOCATED IN ATLANTA, GEORGIA OVER ANY SUIT, ACTION OR PROCEEDING ARISING OUT OF OR RELATING TO OR CONCERNING THE PLAN OR THIS AWARD AGREEMENT.

19. **GOVERNING LAW.** THIS AWARD AGREEMENT SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE INTERNAL LAWS OF THE STATE OF GEORGIA WITHOUT REGARD TO PRINCIPLES OF CONFLICT OF LAWS.

20. **Headings.** The headings in this Award Agreement are for the purpose of convenience only and are not intended to define or limit the construction of the provisions hereof.

IN WITNESS WHEREOF, INTERCONTINENTAL EXCHANGE, INC. has caused this Award Agreement to be duly executed and delivered as of the Grant Date.

By: _____

INTERCONTINENTAL EXCHANGE, INC.
Name: Scott A. Hill
Title: Chief Financial Officer

By: _____

GRANTEE
Name: [NAME **]**

APPENDIX A

Performance Period: January 1, 2018 to December 31, 2020

Performance Goal: Relative 3-Year Total Shareholder Return

Performance RSUs shall be earned based on the Company's 2018 - 2020 Total Shareholder Return [1] (the " **3-Year TSR** ") as compared to the 3-Year TSR for the S&P 500 Index [2] (the " **S&P 500** ").

	Threshold Performance	Target Performance	Maximum Performance
Company 3-Year TSR relative to S&P 500 3-Year TSR	25 th percentile	50 th percentile	75 th percentile
% of Target Performance Share Grant Earned [3]	50%	100%	200%

[1] A 14-trading day average stock and index price at the end of 2017 and 2020 will be used to measure the starting and ending point, respectively, for TSR performance.

[2] "S&P 500 Index" means the constituent companies of the S&P 500 composite index, including the Company and those other consistent companies that (1) are included in the index as of the date that is 30 days prior to the beginning of the Performance Period and (2) continue to trade on a national securities exchange uninterrupted through and including the end of the Performance Period.

[3] Awards will be prorated on a straight-line basis between performance levels.

Exhibit 12.1

Intercontinental Exchange, Inc.
Computation of Ratio of Earnings to Fixed Charges

	Year Ended December 31,				
	2017	**2016**	**2015**	**2014**	**2013**
	(in millions, except ratio)				
Determination of earnings:					
Pre-tax income from continuing operations before income from equity investee, income tax expense and non-controlling interest	2,480	$2,004	$1,648	$1,382	$ 504
Add: Distributed income from equity investee	10	—	7	—	—
Add: Fixed charges	187	178	97	96	56
Less: Income attributable to non-controlling interests	(28)	(27)	(21)	(35)	(16)
Pre-tax earnings before fixed charges	$2,649	$2,155	$1,731	$1,443	$ 544
Fixed charges:					
Interest expense on outstanding debt	$ 167	$ 157	$ 81	$ 80	$ 41
Interest expense on line of credit	$ 4	5	4	6	3
Amortization of debt issuance costs	9	10	7	7	8
Other	$ 7	6	5	3	4
Total fixed charges	$ 187	$ 178	$ 97	$ 96	$ 56
Ratio of earnings to fixed charges	14.2	12.1	17.8	15.0	9.7

Exhibit 21.1

The following is a list of Intercontinental Exchange, Inc.'s significant legal entity subsidiaries as of December 31, 2017, as defined by SEC rules, and the states or jurisdictions in which they are organized. The list includes the parent company of significant subsidiaries even if the parent company did not meet the definition of a significant subsidiary. Excluded from the list are subsidiaries that, if considered in the aggregate, would not constitute a "significant subsidiary" as that term is defined in Rule 1-02(w) of Regulation S-X under the Securities Exchange Act of 1934.

Name of Subsidiary	**Jurisdiction of Incorporation or Organization**
Intercontinental Exchange Holdings, Inc.	Delaware, U.S.A.
ICE Data Management Group, LLC	Delaware, U.S.A.
ICE Data Investment Group, LLC	Delaware, U.S.A.
ICE Data, LP	Delaware, U.S.A.
ICE Futures U.S., Inc.	Delaware, U.S.A.
ICE Clear US, Inc.	New York, U.S.A.
ICE US Holding Company GP LLC	Delaware, U.S.A.
ICE US Holding Company LP LLC	Delaware, U.S.A.
ICE U.S. Holding Company LP	Cayman Islands
ICE Clear Credit LLC	Delaware, U.S.A.
NYSE Holdings LLC	Delaware, U.S.A.
NYSE Group, Inc.	Delaware, U.S.A.
NYSE Arca, Inc.	Delaware, U.S.A.
NYSE American LLC	Delaware, U.S.A.
New York Stock Exchange LLC	New York, U.S.A.
NYSE Market (DE), Inc.	Delaware, U.S.A.
IntercontinentalExchange International, Inc.	Delaware, U.S.A.
ICE UK GP, LLC	Delaware, U.S.A.
ICE UK LP, LLC	Delaware, U.S.A.
ICE Europe Partners LP	United Kingdom
ICE Europe Parent Limited	United Kingdom
Aether IOS Limited	United Kingdom
IntercontinentalExchange Holdings	United Kingdom
ICE Clear Europe Limited	United Kingdom
ICE Futures Holdings Limited	United Kingdom
ICE Futures Holdco No. 1 Limited	United Kingdom
ICE Futures Holdco No. 2 Limited	United Kingdom
ICE Futures Europe	United Kingdom
Interactive Data Holdings Corporation	Delaware, U.S.A.
Igloo Intermediate Corporation	Delaware, U.S.A.
Interactive Data Corporation	Delaware, U.S.A.
Interactive Data Pricing and Reference Data LLC	Delaware, U.S.A.

EXHIBIT 23.1

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the following Registration Statements:

(1) Registration Statement (Form S-3 No. 333-206169) of Intercontinental Exchange, Inc.,
(2) Registration Statement (Form S-8 No. 333-218169) pertaining to the Intercontinental Exchange, Inc. 2017 Omnibus Employee Incentive Plan, and
(3) Registration Statement (Form S-8 No. 333-192301) pertaining to the IntercontinentalExchange, Inc. 2013 Omnibus Employee Incentive Plan, the IntercontinentalExchange Group, Inc. 2013 Omnibus Non-Employee Director Incentive Plan, the IntercontinentalExchange, Inc. 2009 Omnibus Incentive Plan, the IntercontinentalExchange, Inc. 2003 Restricted Stock Deferral Plan for Outside Directors, the IntercontinentalExchange, Inc. 2000 Stock Option Plan, and the NYSE Euronext Omnibus Incentive Plan;

of our reports dated February 7, 2018, with respect to the consolidated financial statements of Intercontinental Exchange, Inc. and Subsidiaries and the effectiveness of internal control over financial reporting of Intercontinental Exchange, Inc. and Subsidiaries included in this Annual Report (Form 10-K) of Intercontinental Exchange, Inc. for the year ended December 31, 2017.

/s/ Ernst & Young LLP

Atlanta, Georgia
February 7, 2018

EXHIBIT 31.1

CERTIFICATIONS

I, Jeffrey C. Sprecher, certify that:

1. I have reviewed this Annual Report on Form 10-K for the year ended December 31, 2017 of Intercontinental Exchange, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 7, 2018

/s/ Jeffrey C. Sprecher

Jeffrey C. Sprecher
Chairman of the Board and
Chief Executive Officer

EXHIBIT 31.2

CERTIFICATIONS

I, Scott A. Hill, certify that:

1. I have reviewed this Annual Report on Form 10-K for the year ended December 31, 2017 of Intercontinental Exchange, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 7, 2018

/s/ Scott A. Hill

Scott A. Hill
Chief Financial Officer

EXHIBIT 32.1

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report of Intercontinental Exchange, Inc. (the "Company") on Form 10-K for the period ended December 31, 2017 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Jeffrey C. Sprecher, Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to the best of my knowledge:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: February 7, 2018

/s/ Jeffrey C. Sprecher

Jeffrey C. Sprecher
Chairman of the Board and
Chief Executive Officer

EXHIBIT 32.2

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report of Intercontinental Exchange, Inc. (the "Company") on Form 10-K for the period ended December 31, 2017 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Scott A. Hill, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to the best of my knowledge:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: February 7, 2018

/s/ Scott A. Hill

Scott A. Hill
Chief Financial Officer