Table of Contents

UNITED STATES SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549
FORM 10-K

Annual Report Pursuant to Section 13 or 15(d) of
the Securities Exchange Act of 1934
For the Fiscal Year Ended December 31, 2017
Commission File Number 001-12215

Quest Diagnostics Incorporated

500 Plaza Drive
Secaucus, New Jersey 07094
(973) 520-2700
Delaware
(State of Incorporation)
16-1387862
(I.R.S. Employer Identification Number)

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

Title of Each Class	*Name of Each Exchange on Which Registered*
Common Stock, $.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 __X__ 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 __X__

Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 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 __X__ No _____

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate website, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files).
Yes __X__ No _____

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of 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. [X]

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 ☐

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

As of June 30, 2017, the aggregate market value of the approximately 136 million shares of voting and non-voting common equity held by non-affiliates of the registrant was approximately $15.1 billion, based on the closing price on such date of the registrant's Common Stock on the New York Stock Exchange.

As of January 31, 2018, there were outstanding 135,637,852 shares of the registrant’s common stock, $.01 par value.

Documents Incorporated by Reference Document	Part of Form 10-K into which incorporated
Portions of the registrant's Proxy Statement to be filed by April 30, 2018	Part III

Such Proxy Statement, except for the portions thereof which have been specifically incorporated by reference, shall not be deemed “filed” as part of this report on Form 10-K.

TABLE OF CONTENTS

Item 1. Business

Quest Diagnostics Incorporated is the world's leading provider of diagnostic information services. We empower people to take action to improve health outcomes. Derived from the world's largest database of clinical lab results, our diagnostic insights reveal new avenues to identify and treat disease, inspire healthy behaviors and improve health care management. In the right hands and with the right context, our diagnostic insights can inspire actions that transform lives.

Quest Diagnostics was incorporated in Delaware in 1990; its predecessor companies date back to 1967. In 2017, we celebrated 50 years of life-changing results. We conduct business through our headquarters in Secaucus, New Jersey, and our laboratories, patient service centers, offices and other facilities around the United States and in selected locations outside the United States. Unless the context otherwise requires, the terms "Quest Diagnostics," the "Company," "we" and "our" mean Quest Diagnostics Incorporated and its consolidated subsidiaries.

During 2017, we generated net revenues of $7.7 billion. Additional financial information concerning Quest Diagnostics, including our consolidated subsidiaries and businesses, for each of the years ended December 31, 2017, 2016 and 2015 is included in the consolidated financial statements and notes thereto in "Financial Statements and Supplementary Data" in Part II, Item 8.

The discussion below includes several tables. The index below is a guide to those tables.

Index to Tables	

The discussion also uses the following defined terms:

ACA - Affordable Care Act
ACO - Accountable Care Organization
CAP - The College of American Pathologists
CLIA - Clinical Laboratory Improvement Act

CMS - Centers for Medicare and Medicaid Services
FDA - U.S. Food and Drug Administration
IDN - Independent Delivery Network (including hospital health systems)
IPA - Independent Physician Association
LDT - Laboratory-Developed Test
PAMA - The Protecting Access to Medicare Act of 2014

OUR STRATEGY AND STRENGTHS

In 2012, Quest Diagnostics launched a new vision, goals and strategy.

Table 1 - Vision, Goals and Values

Vision
Empowering Better Health with Diagnostic Insights

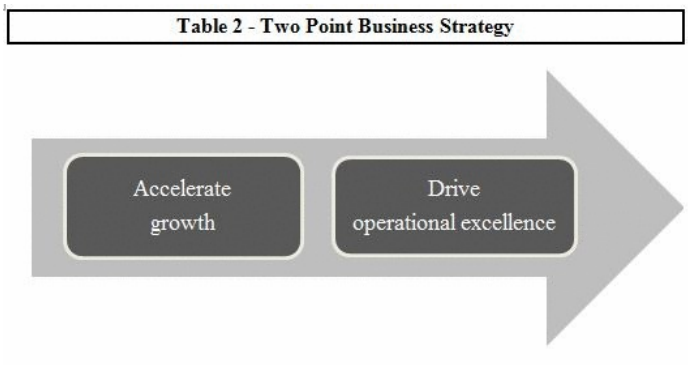
Three Aspirational Goals		
Promote a healthier world	Build value	Create an inspiring workplace

Values					
Quality	Integrity	Accountability	Innovation	Collaboration	Leadership

Our Strategy

In November 2012, we introduced a five-point business strategy to achieve our vision and our goals. We executed on this strategy, and at our Investor Day in November 2016, we updated our strategy to reflect our progress, narrowing our focus to two elements. Our Board of Directors has reviewed our strategy.

Table 2 - Two Point Business Strategy



1. Accelerate growth. Our strategy to accelerate revenue growth is based on a new way of looking at the Company's portfolio of services. The Company's portfolio, from the perspective of growth, can be looked at as discussed in the following table.

Table 3 - Portfolio Growth			
Theme	*Key Characteristics*	*At A Glance*	*Quest Value Proposition*
General Diagnostics	Testing services generating strong cash flows and steady growth	Routine and non-routine testing services Largest revenue stream Essential portion of health care delivery	Scale Operational excellence Access and convenience
Advanced Diagnostics	Testing services providing faster growth through innovation testing model	Genetic and advanced molecular testing services An important part of precision medicine A growing set of unique, innovation-based competitors	Rich clinical, scientific and medical innovation expertise Quality and reliability of new assays Delivering on amplified customer expectations
Diagnostic Services	Laboratory and data-related healthcare opportunities providing faster growth	Enables partners to deliver health care more efficiently (*e.g.*, risk assessment; Professional Laboratory Services; wellness) Services to support population health (*e.g.*, data analytics; extended care services)	Extensive diagnostic capability Large and growing database and analytics expertise Partnerships with industry leaders across healthcare landscape

The Company has identified five strategies to accelerate growth. They are set forth in the following table and discussed further below.

Table 4 - Strategies to Accelerate Growth
Organic growth through:
1. Partnerships with health plans, hospital systems and other risk bearing entities
2. Offering the broadest access to diagnostic innovation
3. Recognition as the consumer-friendly provider of diagnostic information services
4. Supporting population health with data analytics and extended care services
Additionally:
5. Grow 1-2% per year through accretive, strategic acquisitions

The Company also plans to pursue strategic relationships to help accelerate growth. We believe that strategic relationships, including with healthcare providers, public health authorities, consumer-focused entities and others, can position us for growth at the center of healthcare and that healthcare companies that can partner effectively with others will be successful in the long term. The Company has maintained strategic partnerships over the years, and in recent years has pursued additional collaborations with leading partners. In 2017, the Company forged several new strategic relationships, including with Wal-Mart Stores, Inc., Cleveland Clinic, McKesson Specialty Health, U.S. Oncology Network and Texas Oncology. The Company's collaborations are discussed more fully below, in connection with table 14.

Growth through acquisitions. The Company has maintained a strategy, unchanged since November 2012, to grow 1-2% per year through accretive, strategic acquisitions. The Company's approach to acquisitions is discussed below on page 8, under the heading Deliver disciplined capital deployment.

Partner with health plans, independent delivery networks and other risk bearing entities. To help accelerate growth, we are focusing significant resources on large opportunities to partner with outside entities. We are deepening our relationships with health plans. This includes building an information platform to help health plans manage utilization and population health, and enhancing processes to help plans keep laboratory testing in network. We also are seeking to more effectively partner with IDNs, on their laboratory testing strategy. We have deployed a dedicated health systems team to strengthen our

relationships with IDNs, including with respect to their reference testing. We provide reference testing for approximately 50% of hospitals in the U.S., and are the leading provider of this testing in the country.

We have developed a full suite of solutions, our Professional Laboratory Services offerings, to help IDNs build and execute their laboratory strategy. Our industry-leading offering enables IDNs to improve quality, reduce the cost of care and focus on core competencies. We believe that market forces including continued price transparency, cost and utilization pressure, evolving healthcare payment models, capital needs, changing technology and limited resources will drive demand for our expertise. Our key Professional Laboratory Services offerings are highlighted in table 5 below. In 2017, we implemented new Professional Laboratory Services relationships with Montefiore Health System, a premier academic health system in the New York City area, and PeaceHealth Laboratories, in three Pacific Northwest states.

Table 5 - Key Professional Laboratory Services Offerings	
Lab management outsourcing	Data diagnostics, consolidation and insights
Joint venture	Reference testing
Outreach acquisition	Supply chain management
Test menu management	Programs enabling effective patient care management

Offer the broadest access to diagnostic innovation. Our diagnostic solutions deliver high clinical value to the medical community across the U.S. We plan to continue to create value through scientific and product innovation and solution delivery for major clinical opportunities. We are more than just a laboratory. Starting with a clinical focus on a specific disease state or clinical problem, we take advantage of advanced technology for more precise, comprehensive and actionable information, and deliver the information to the medical community in a meaningful way. We make innovative diagnostics solutions available to community physicians through our connectivity solutions, operational footprint and by making complex results actionable. The preferred provider relationship that we announced in 2017 with U.S. Oncology Network is an example of this. We plan to expand our innovative diagnostic solutions through research and development, as well as partnerships with academic institutions, other technology and healthcare leaders and public health agencies. Our collaboration with Cleveland Clinic, as well as our collaboration with McKesson Specialty Health, U.S. Oncology Network and Texas Oncology, are examples we announced in 2017 of our approach to such partnerships.

Our clinical franchises, working with our research and development team, focus on these opportunities and coordinate with our commercial organization to deliver new and improved solutions. Our franchises are designed to enable us to perform like a boutique service provider while maintaining the advantages of our scale, and to identify and access growing market segments so that we can more wisely deploy our resources and target opportunities to best serve our customers and patients.

Table 6 - Clinical Franchises	
Cardiovascular, Metabolic and Endocrinology	Oncology
General Health and Wellness	Prescription Drug Monitoring and Toxicology
Infectious Diseases and Immunology	Sports Science and Human Performance
Neurology	Women’s and Reproductive Health

Our 2017 introduction of QHerit genetic testing, non-fasting cholesterol testing with improved method for assessing heart disease risk and aiding treatment decisions, and our expanded Blueprint for Wellness® offering, as well as the continued growth of our prescription drug monitoring and toxicology and infectious diseases and immunology offerings, are recent examples of the power of our clinical franchises to deliver new solutions and foster organic growth.

Be recognized as the consumer-friendly provider of diagnostic information services. We plan to increase our retail presence, improve the consumer experience and offer consumers the ability to directly access our quality diagnostic information services. We have multiple consumer-centric initiatives, shown in the following table, focused on securing growth in today's changing healthcare landscape.

Table 7 - Consumer-Centric Initiatives to Accelerate Growth	
Consistent and superior consumer experience	Retail consumer partnerships
Information and connectivity	Consumer testing offerings

The Company has a long history of focusing on consumer interests, including being the first national diagnostic information services provider to offer on-line patient appointment scheduling and a patient connectivity solution. The Company has recently taken several actions in support of this strategy, including those set forth in the following table.

Table 8 - Recent Consumer-Centric Initiatives	
Enhance patient experience	• Continued rollout of enhanced patient experience, including real-time payment determination for several major payors and electronic check-in. • Introduced for consumers lipid testing without the need for fasting.
Expand convenient access to testing services	• Partnership with Safeway to expand convenient access to testing services at select Safeway locations across the United States; the number of locations significantly increased in 2017.
Consumer-initiated testing service	• QuestDirect™, our consumer-initiated testing service, available in Colorado and Missouri. Consumer-initiated testing also is available in Arizona and Oklahoma through our joint ventures in those states.
Expand consumer access to test results	• >4.8 million registered users in our MyQuest® health portal and mobile connectivity solution. Implemented MyQuest Advanced Access®, which enables patients to access their historical laboratory test results and trends.
Expand access to basic health care services	• Launched partnership with Wal-Mart Stores to expand access to basic health care services.
Expand sports diagnostics offering	• Continued enhancement and expansion of our Blueprint for Athletes® offerings.
Expand consumer awareness	• Multi-year global collaboration with AncestryDNA to provide genotyping test services.

Support population health with data analytics and extended care services. We are working to accelerate growth by building offerings to support population health with data analytics and extended care services. We are accelerating our efforts to leverage the power of our information assets, to offer solutions using data information services and strategies that enable our customers to deliver the most effective healthcare to the right populations and individuals. We integrate our extensive clinical data to help manage populations and target health care solutions, and pursue opportunities to provide solutions centered on evidence-supported standards of care and guideline mandated testing. Currently the Company is developing additional solutions based on data insights, including pre- and post-market launch pharmaceutical data services as well as clinical trial patient recruitment solutions.

We also are developing extended care services, which will leverage our assets and capabilities (*e.g.*, call centers, patient service centers and mobile workforce) and our collaborative approach. We anticipate that these services will include offerings designed to capture and document information to help healthcare providers, health plans, sponsors and IDNs deliver better care and identify and fill gaps in care for their patient populations. Our joint venture with Wal-Mart Stores, and our Chronic Care Management offering, both launched in 2017, are examples of our efforts to accelerate growth in this manner.

2. Drive operational excellence. We strive to enhance operational excellence and improve our quality and efficiency across every portion of our value chain and supporting operations, from the time that we interact with a potential customer until the time we receive payment. Improving our operations will yield many benefits, including: enhancing customer experience; improving our quality and competitiveness; strengthening our foundation for growth; and increasing employee engagement and shareholder value.

We are building a superior experience, at lower cost, for all of our customers, including patients, health plans, IDNs and physicians. We endeavor to improve our processes and effectiveness at the same time. We are guided by a service dashboard that focuses throughout our operations on quality for patients, health care providers and employees, including medical quality, on-time delivery, competitive costs and employee safety. We are focusing on five major themes to drive operational excellence, highlighted in the following table.

Table 9 - Five Major Themes to Drive Operational Excellence	
Increase digital enablement	Expand margins through cost excellence program
Inspire and engage employees	Transform platform for growth
Deliver quality and service with Quest Management System	

In 2017, we made strong progress on our initiatives. For example, we completed implementation of our new logistics system, have outfitted 60% of our patient service centers with electronic patient check-in and have reduced results-only call volume by nearly 20% compared to 2016 through increased adoption of our digital solutions.

Our cost excellence program, Invigorate, has included structured plans to drive savings and improve performance across the end-to-end value chain.

Table 10 - Invigorate Cost Excellence Program - Flagship Programs	
Revenue services	Organizational design
Information technology	Procurement
Laboratory	Field and customer service

Since 2014, we have been pursuing a goal of $600 million in additional run-rate savings exiting 2017, compared to 2011. We exited 2017 with total run-rate savings in excess of $1.3 billion, compared to 2011. The Company plans to continue to pursue opportunities to achieve additional cost savings.

Our Strengths

We offer high value diagnostic information services and diagnostic solutions that are attractive to our customers (discussed under the heading **Customers** beginning on page 22). We believe that our customers prefer providers that offer a comprehensive and innovative range of tests and services and convenient access to those services. We believe that, by offering such services, we strengthen our market offering, market position and reputation. Table 11 summarizes our strengths, which are discussed in greater detail below.

Table 11 - Positioned to Grow and Continue to Lead	
A foundation of strong operating principles	Unmatched size, scale and capabilities
Leader in providing innovative solutions and diagnostic insights	Strong focus on quality and providing a superior customer experience
Strong collaborator, and strong relationships with healthcare stakeholders	Medical and scientific expertise
Deliver strong value	

Strong operating principles. We have a foundation of three strong operating principles: strengthen organizational capabilities; deliver disciplined capital deployment; and remain focused on diagnostic information services.

Strengthen organizational capabilities. We continuously strive to strengthen our organizational capabilities to support our strategy, enable growth and productivity, better focus on our customers, speed decision-making and empower employees. Highlights include:

- Starting in 2012, we have made changes to our senior management team and restructured our organization to eliminate organizational barriers in our core business, provide leadership in defined geographies, eliminate three unnecessary management layers and streamline regional operations. Our organization is designed to align around future growth opportunities, to coordinate upstream and downstream units in our business for seamless execution and to leverage our company-wide infrastructure to gain more capability, value and efficiency.

- We established the Quest Management System to manage our Company. This system provides a foundation for day-to-day management, and includes a common set of best-in-class business performance tools to help us

develop new capabilities to improve our Company. The system enables us to run the Company with a common language, approach and philosophy, and supports our efforts as we build a high-performance culture, with employees focused on behaviors to make us more agile, transparent, customer-focused, collaborative and performance oriented.

- We launched our new brand - Action from Insight™ - recommitting to a superior customer experience.
- We implemented across our entire organization our Everyday Excellence program, which includes guiding principles to support a superior customer experience and to inspire our employees to be their best every day, with every person and with every customer interaction.
- We (i) offer our Leading Quest Academy, which is designed to strengthen our more senior employee leaders through a highly experiential leadership development program focused on creating a high-performance culture and sharpening the capabilities needed to lead our organization, (ii) offer a leadership training program for our supervisor-level employees and (iii) in 2017 started a new leadership training program for our manager-level employees.
- Reinforcing our commitment to integrity as one of our core values, we updated our Code of Ethics to better align with our brand, goals and vision.
- Employees reported higher engagement levels compared to prior years.

Remain focused on diagnostic information services. We maintain a sharp focus on providing diagnostic information services. In 2016, we completed our efforts to refocus on these services when we sold our Focus Diagnostics products business and concluded the disposition of our Celera® products business. Since 2012, we also have disposed of our OralDNA® salivary diagnostics business, our HemoCue® and Enterix® diagnostic products businesses and ibrutinib royalty rights. These dispositions collectively generated approximately $1 billion of proceeds. In 2015, we also contributed our business of central laboratory testing for clinical trials to a joint venture, Q^2 Solutions™, in which we maintain a minority interest.

Deliver disciplined capital deployment. We focus on shareholder returns and returns on invested capital through a framework that encompasses improving operating performance and disciplined capital deployment.

Our disciplined capital deployment framework includes dividends, share repurchases and investment in our business. The framework is grounded in maintaining an investment grade credit rating. We expect to return a majority of our free cash flow to investors through a combination of dividends and share repurchases.

Consistent with that expectation, in February 2018 we announced that we increased our quarterly common stock dividend by over 11%, from $0.45 per common share to $0.50 per common share. This represents our seventh increase in the dividend since 2011. In December 2016, our Board of Directors approved a $1.0 billion increase in repurchase authority under our common stock repurchase program. Since the beginning of 2012, we have returned more than $2.6 billion to stockholders through repurchases of our common stock.

We expect to generate 1-2% revenue growth per year through value-creating, strategically-aligned acquisitions using disciplined investment criteria. We screen potential acquisitions using guidelines that assess strategic fit and financial considerations, including value creation, returns on invested capital and impact on our earnings. In 2017, we acquired:

- the outreach laboratory testing business of PeaceHealth Laboratories in the Pacific Northwest;
- the Lewisville, Texas - based laboratory businesses Med Fusion and ClearPoint, which form the basis for our first national center of excellence in precision diagnostics for oncology. As part of that acquisition, we became a preferred provider of advanced oncology diagnostics for the U.S. Oncology Network, consisting of over 1,400 independent, community-based physicians, and a preferred provider of a full range of inpatient and outpatient diagnostic services for 12 hospitals of Baylor Scott & White Health in North Texas;
- the Shiel Medical Laboratory business in the greater New York City area;
- certain assets of California Laboratory Associates, a clinical lab network serving patients and providers in the greater Los Angeles area; and

- Cleveland HeartLab, a leader in innovative diagnostics services for managing cardiovascular disease. We established our national cardiometabolic center of excellence at Cleveland HeartLab's laboratory facility in Cleveland.

We will continue to invest in our business in a disciplined manner, including focusing on enhancing our solid foundation of strategic assets and capabilities, accelerating growth and driving operational excellence. Our near-term investments in growth are likely to focus on the strategies to accelerate growth set forth in Table 4 above. Our near-term investments to drive operational excellence are likely to focus on improving the customer experience and gaining efficiency, systems standardization, digital enablement of our processes and footprint optimization.

Our share repurchases, dividends and capital expenditures in each of the last five years are presented in the **Selected Historical Financial Data of Our Company** section beginning on page 54. Our acquisitions in each of the last three years are further discussed in Note 5 to the Consolidated Financial Statements (Part II, Item 8 of this Report).

Our assets and capabilities. We are the world's leading provider of diagnostic information services. We are the leading provider in the United States of clinical laboratory and anatomic pathology testing, and related services.

Table 12 - Assets and Capabilities

◎ Provide healthcare connectivity solutions to >300,000 clinician and hospital accounts and interface with >700 electronic health records systems	◎ Own or control approximately 880 issued and 590 pending patents worldwide in 2017
◎ Strong logistics capabilities • make nearly 80,000 stops daily • >3,600 courier vehicles • 23 aircraft serving the U.S.	◎ One of the largest medical and scientific staffs in the industry to provide interpretive consultation • Approximately 650 M.D.s and Ph.D.s, many of whom are recognized leaders in their field • genetic counselors
◎ >20,000 phlebotomists, paramedics, nurses and other health and wellness professionals	◎ >6,200 patient access points, the most extensive network in the U.S., including phlebotomists in physician offices and >2,200 of our own patient service centers
◎ Access to approximately 80% of U.S. insured lives	◎ Processed approximately 164 million test requisitions in 2017
◎ Industry-leading test menu	◎ Access to >40 billion patient data points from test results delivered over past decade

Innovation. We are a leading innovator in diagnostic information services. We continue to introduce new tests, including many with a focus on personalized and targeted medicine, and new services. Our capabilities include discovery, technology development and clinical validation of diagnostic tests. We develop tests at our esoteric laboratories, such as Quest Diagnostics Nichols Institute®, Athena Diagnostics™, Med Fusion and Cleveland HeartLab.

We successfully transfer technical innovations to the market through our in-house expertise and our relationships with technology developers, including the academic community, pharmaceutical and biotechnology firms, emerging medical technology companies and others that develop and commercialize novel diagnostics, pharmaceutical and device technologies. We search for new opportunities and continue to build a robust pipeline of new solutions. Through our strengths in assay development and the commercialization of testing services, we believe that we are the partner of choice for developers of new technologies, services and tests to introduce their products to the marketplace.

We seek innovations and solutions that help healthcare providers care for their patients through better testing for predisposition, screening, monitoring, diagnosis, prognosis and treatment choices, and that will reduce the overall cost of healthcare. We seek to develop innovations and solutions that help to determine a patient's genotype or gene expression profile relative to a particular disease and its potential therapies, because they can help healthcare providers to determine a patient's susceptibility to disease or to tailor medical care to an individual's needs - such as determining if a medication might be an optimum choice for a particular person, or tailoring the right dosage once the proper medicine is prescribed. In addition, we aim to develop holistic solutions responsive to challenges that healthcare providers and patients face, by developing solutions of multiple tests, information and services focused on specific clinical challenges, and taking advantage of the latest informatics capabilities. We also look for innovations and solutions that are less invasive than currently available options, to increase the choices that healthcare providers and patients have for the collection of diagnostic samples. We additionally seek innovation in the ways we bring solutions to customers, and in the customer experience.

We have expertise with laboratory developed tests for companion and complementary diagnostics, and can offer an array of assets and services to support the development of companion diagnostics, including our robust data set and patient services network.

With these priorities in mind, during 2017 we introduced several new or enhanced disease area solutions, including those discussed below.

Table 13 - New or Enhanced Disease Area Solutions

Cardiovascular, Metabolic and Endocrinology	For all of our cholesterol test services that involve estimates of low-density lipoprotein cholesterol (LDL-C), we introduced a novel LDL-C calculation that improves accuracy of heart disease screening and helps personalize treatment with lipid-lowering medications. The method also does not require patients to fast from food for several hours before testing, enhancing the patient experience. Through our acquisition of Cleveland HeartLab, we are now offering novel biomarkers for cardiovascular risk assessment and management including MPO, Oxidized LDL and ADMA testing. We have also implemented a service for health plans, health systems and others that enables them to help close gaps in care for diabetes, using our Quanum® offering together with our testing solutions and access points (including patient service centers and mobile resources) to engage patients in their homes and places of employment.
General Health and Wellness	We launched our new Blueprint for Wellness® solution, which enables physician telemedicine consultation and referral into care. It also offers additional clinical solutions for participants, such as a diabetes prevention program, colon cancer testing and renal failure services.
Infectious Diseases and Immunology	We launched a new genetic marker, HLA-B*58:01, for evaluating risk of severe cutaneous adverse skin reactions to allopurinol, a drug used to treat gout. We introduced the Xpert® MTB/RIF test providing simultaneous detection of both mycobacterium tuberculosis and rifampin resistance mutations. This test can help physicians decide on whether to remove patients with suspected tuberculosis from isolation earlier. We introduced tree nut component testing, specific IgE blood tests that detect sensitization to specific allergens. Tree nut allergies may elicit severe and even life-threatening reactions in sensitized individuals. We launched a Systemic Sclerosis Antibody Panel and a Myositis Specific Antibody Panel, providing support for the diagnosis and management of these chronic, multisystem, heterogeneous autoimmune diseases. We updated our Anti-nuclear Antibody test offering to enable primary care physicians and specialists to order the right tests in sequence in order to enable diagnosis of rheumatologic disease.

Neurology	We introduced a novel mass spectrometry test for Alzheimer's biomarkers which offer the most specific assessment of established biomarkers (A Beta 40,42 and ApoE) in the cerebrospinal fluid to guide management, research and clinical trials. We began to offer a new epilepsy test using next generation sequencing, providing a high quality assessment of all genes known to be involved in the disease. We initiated implementation of an integrated dementia diagnostic solution based on our collaboration with University of California, San Francisco. This offering integrates laboratory testing, cognitive exam, MRI and clinical evaluation to help primary doctors assess and diagnose dementia to identify treatable cause, shorten time to diagnosis and eliminate waste.
Oncology	We updated our offering for assessment of DNA profiling of cancer - IBM Watson® Genomics from Quest Diagnostics - to improve performance on the variety of cancer sample types that are tested in the community setting. We introduced PDL1 testing to be used as a companion diagnostic for immunotherapy in cancer. We introduced EGFR testing of plasma in cancer patients. This offering enables evaluation of EFGR mutation status of a patient's lung cancer through a simple blood draw, without the need for a tissue biopsy. In collaboration with Veracyte, we introduced thyroid cancer molecular testing services.
Prescription Drug Monitoring and Toxicology	We implemented testing services for common drugs in several additional laboratories, to reduce test turnaround time in response to increasing demand based on the opioid / prescription drug crisis. We also validated an increased number of our Prescription Drug and Drugs of Abuse testing services on oral fluid samples, offering greater convenience and non-invasive testing for our patients.
Sports Science and Human Performance	We expanded and reconfigured the Blueprint for Athletes™ service, which gives athletes insights on their own biology to help improve fitness and performance. We added at-home collection options, including "concierge collection" and the Mitra® Microsampling device. We also added custom coaching, to help athletes create game plans to improve performance. We reconfigured the test services in "stacks" that feature panels of tests with results provided in easy to read action-oriented reports. The stacks include, among others, "Blueprint One" and "Endurance and Conditioning."
Women's and Reproductive Health	We introduced QHerit, a new genetic pan-ethnic carrier screening panel aligned with new medical guidelines. It provides men and women with insights into the genetic risk of passing on heritable disorders to their offspring. We also introduced Creatine Biosynthesis testing to aid in the diagnosis of genetic disease.

Relationships with healthcare stakeholders; collaboration. There are numerous stakeholders in healthcare, including insurers, employers, IDNs, physicians and other healthcare professionals, public health authorities, patients and innovators. We have relationships across the spectrum of healthcare. The patients we serve comprise approximately one-third of the adult population of the United States annually, and approximately one-half of the adult population in the United States over a three-year period. We estimate that annually we serve approximately half of the physicians and half of the hospitals in the United States.

We collaborate with partners that can help us to achieve our vision of empowering better health through diagnostic insights. Through our relationships, we believe that we are a leader in bringing to the market innovation and the ability to empower better health through diagnostic insights. As the industry leader with the largest and broadest U.S. network and a presence outside the United States, we believe we are the distribution channel of choice for developers of new solutions, including large commercial manufacturers, academic medical centers and pharmaceutical and biotechnology firms, to introduce their products to the marketplace. We maintain relationships with advisers and consultants who are leaders in key fields of science and medicine. We work with key groups and organizations, including world class healthcare and consumer-focused

leaders, to foster important advances in healthcare, including in precision medicine and healthcare delivery. Some examples of our collaborations include:

Table 14 - Sample Collaborations

Collaborator	Collaboration
IBM Watson® Health, Memorial Sloan Kettering Cancer Center and the Broad Institute of MIT and Harvard	IBM Watson® Genomics from Quest Diagnostics, a service that helps advance precision medicine by cognitive computing with genomic tumor sequencing. Memorial Sloan Kettering Cancer Center is supplementing Watson's corpus of scientific data with a precision oncology knowledge base to help inform precision treatment options for cancer patients, and the Broad Institute of MIT and Harvard is providing additional genome sequencing capabilities.
Optum	Our billing operations became part of Optum, helping us to reduce the complexity of our billing processes and fostering increased transparency of health care costs. Advance new technology services to digitize our customer orders and workflows, with the goals of reducing bad debt and payer denials and increasing operational efficiency and productivity. Increase the use of diagnostic information services, such as data analytics, population health insights and connectivity solutions, to help improve health care effectiveness and manage costs for health plans and care providers. We became Optum's primary partner for member biometric screening services that Optum provides to employers and health plans.
AncestryDNA	We provide testing to help meet the rapidly growing consumer demand for genetic tests that provide insights into genetic ethnicity, origins and other factors.
Safeway	We are providing diagnostic testing services in company-branded patient service centers in Safeway locations, enhancing convenient access to our services and diagnostic insights for patients.
Inovalon	Data Diagnostics®, a tool that provides real-time patient-specific data analysis that clinicians can order at the point of care to identify and help address gaps in quality, risk, utilization and medical history insights.
Perinatal Quality Foundation	The national initiative to advance clinically appropriate noninvasive prenatal screening.
University of California, San Francisco, the nation's leading university focused exclusively on health	To accelerate the translation of biomedical research into advanced diagnostics in the field of precision medicine. This collaboration has the overarching aim of enabling holistic and integrated diagnostic solutions that close gaps in care or enable new clinical value, with initial focus areas including autism, oncology, neurology and women's health.
U.S. Centers for Disease Control and Prevention ("CDC")	To improve public health analysis of hepatitis C screening, diagnosis and treatment, based on analysis of our database of national hepatitis C virus ("HCV") diagnostic information. With CDC and the American Medical Association, to assess the prevalence of pre-diabetes.
National Institutes of Health	We participate in studies they sponsor (e.g., NIH National Children Study).
IQVIA Holdings Inc.	Joint venture, Q² Solutions™, providing central lab testing services for clinical trials.
Wal-Mart Stores, Inc.	Joint venture to provide expanded access to basic health care services.
American Diabetes Association®	To help identify people at risk for Type 2 diabetes, to share insights on how to lower the risk of developing diabetes and to share action steps that can be taken once a person is diagnosed with diabetes.

Cleveland Clinic	To speed the commercialization of biomarkers on inflammation and other disease areas discovered at Cleveland Clinic, including its Lerner Research Institute; Quest may independently develop test services for these biomarkers. To demonstrate the clinical and economic value of these and other biomarkers.
McKesson Specialty Health, U.S. Oncology Network and Texas Oncology	To enhance and nationally scale a model created by Med Fusion that standardizes clinical care pathways to ensure every patient receives the best possible cancer care. One example is highlighting available diagnostics, such as next-generation sequencing panels to aid therapy selection and monitoring for cancer. This approach guides the physician, according to guidelines and within an electronic health record, to a panel individualized to the patient's cancer type and stage of disease.
Arnold P. Gold Foundation	To advance humanism in healthcare. Quest is a founding member of the Gold Corporate Council.

Medical and Scientific Expertise. Our medical and scientific experts publish research that demonstrates the clinical value and importance of diagnostic testing, including in connection with our research and development efforts. Our Quest Diagnostics Drug Testing Index™, which is a periodic report of trends derived from our aggregate drug testing results, is cited by employers, the federal government and the media to help identify and quantify drug abuse among the nation's workforce. The table below provides a further sample of the activities of our scientific and medical experts.

Table 15 - 2017 Medical and Scientific

Authored more than 145 publications, including approximately 85 articles in peer-reviewed journals	◎ Insights into diagnostic testing; introduce novel diagnostic approaches; provide latest thinking in lab testing and disease diagnosis - Addressed such topics as noninvasive prenatal screening, biomarkers for autoimmune diseases, concurrent use of opioids with other medications, and genetic testing for cancer and for cardiovascular disease risk
Authored textbooks or chapters	◎ Used by academic institutions to train healthcare providers
Participated on scientific committees determining guidelines for diagnostic usage	◎ Fields include personalized medicine, hormone testing and effective test utilization
Published Quest Diagnostics Health Trends™ reports	◎ Identify trends in disease and wellness. - Recent reports focused on opioid use, HCV infection rates, vitamin D and misuse of prescription medications

Health Information Technology Solutions and Information Assets. We have a history of providing leading information technology for diagnostic information services, including for patients, clinicians and healthcare organizations. We were the first national diagnostic information services provider to offer on-line patient appointment scheduling and a patient connectivity solution. We focus on protecting privacy in accordance with applicable regulatory requirements. Our MyQuest®patient healthcare portal enables patients to manage their healthcare and medical information and, among other things, use their smartphone or computer to receive and archive their Quest Diagnostics test results, find a Quest Diagnostics location and schedule appointments. At year end 2017, over 4.8 million consumers were registered on MyQuest®.

We also have significant information assets, including many years of test result data, and offer a robust portfolio of powerful analytics that inspire action and deliver value to an array of customers. With our Quanum® offerings, we are working on solutions designed to:

- enhance the customer experience, including ease of use and patient and provider engagement;
- deliver more precise, comprehensive solutions and actionable information;
- provide increased and interactive insights and analytics to patients and providers;
- foster greater adherence to clinical and reimbursement guidelines;
- promote population health solutions;
- tap the potential of large amounts of clinical information; and
- advance the development of precision medicine.

Quality. Our goal is to provide every patient with services and products of superior quality. We strive to accomplish that through commitment, leadership, and establishing rigorous processes which we measure and continually seek to improve, and by using the Quest Management System, which provides best-in-class business performance tools to create and implement effective and sustainable quality processes. The Quest Diagnostics Quality Program includes policies and procedures to document, measure and monitor the effectiveness of our laboratory operations in providing and improving quality and meeting applicable regulatory requirements for clinical laboratory testing. The Quality Program is designed so that the quality of laboratory services is monitored objectively and evaluated systematically to deliver superior quality care, identify opportunities to improve patient care and resolve identified problems. To help achieve our goal of becoming recognized as the undisputed quality leader in the diagnostics information services industry, we have implemented our Quality System Framework, which serves as a reference guide for our employees and describes our Quality System Elements, which provide the structure for each laboratory to achieve and maintain quality processes.

Customer focus. The customer is at the center of everything we do. Customers have a choice when it comes to selecting a healthcare provider and we strive to give them reason to put their trust in us. We use customer insights in developing our approach and processes, listening to the voice of external and internal customers. Focusing on a thorough understanding of customer needs and requirements, we seek to identify and implement solutions and processes that will result in a superior customer experience. We strive to provide a superior experience for our customers because we believe that this will drive customer loyalty. Our brand -- Action from Insight™ -- reflects our commitment to a superior customer experience. We also maintain our Everyday Excellence program, which includes guiding principles to support a superior customer experience, inspiring our employees to be their best every day, with every person and with every customer interaction.

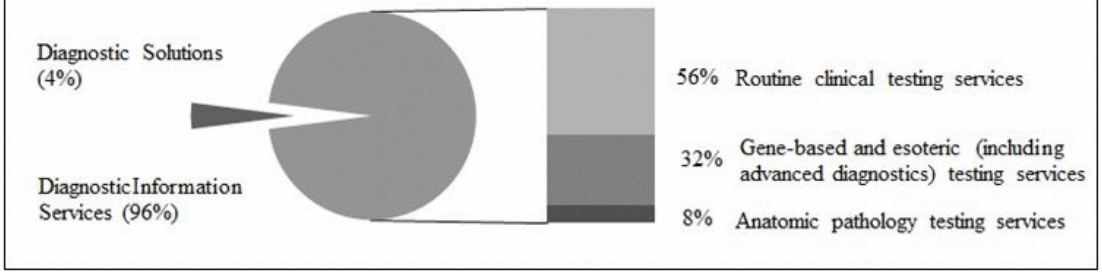
Deliver value. We are highly focused on delivering value to our customers. Diagnostic information services providers differ in the services they provide and the reimbursement they receive for their services. We believe that large diagnostic information services providers may be able to increase their share of the overall diagnostics information services industry due to their large networks and lower cost structures, including as a result of PAMA. We take advantage of our scale, and are aware of the stakeholder dynamics impacting the healthcare markets today, including the increased responsibility of patients for health care costs. Through the quality and breadth of services that we offer, the manner in which we offer them and the reimbursement that we receive for them, we strive to deliver value.

BUSINESS OPERATIONS

As of December 31, 2017, the Company was made up of two businesses: Diagnostic Information Services and Diagnostic Solutions. Our Diagnostic Information Services business develops and delivers diagnostic information services, providing insights that empower and enable a broad range of customers, including patients, clinicians, hospitals, IDNs, health plans, employers and ACOs. Our Diagnostic Solutions group includes our risk assessment services business, which offers solutions for insurers, and our healthcare information technology businesses, which offers solutions for healthcare providers.

We leverage our capabilities and assets to serve our multiple customer bases. Most of our services are provided in the United States. For the years ended December 31, 2017, 2016 and 2015, we derived approximately 1%, 1%, and 2%, respectively, of our net revenues from foreign operations. For the years ended December 31, 2017, 2016 and 2015, approximately 1% of our long-lived assets were held outside the United States. The following table shows the percentage of our 2017 net revenues generated by the activities identified.

Table 16 - 2017 Net Revenues



Diagnostic Information Services

Background - clinical testing. Clinical testing is an essential element in the delivery of healthcare services. Clinicians use clinical testing for predisposition, screening, monitoring, diagnosis, prognosis and treatment choices of diseases and other medical conditions. Clinical testing is generally categorized as clinical laboratory testing and anatomic pathology services.

Clinical laboratory testing, which can be characterized as routine, non-routine or advanced, generally is performed on whole blood, serum, plasma and other body fluids, such as urine, and specimens such as microbiology samples. Clinical laboratory tests which can be performed by most clinical laboratories are considered routine. Routine testing measures various important bodily health parameters such as the functions of the kidney, heart, liver, thyroid and other organs. Commonly ordered routine tests include blood chemistries, urinalysis, allergy tests and complete blood cell counts. Non-routine tests may require professional “hands-on” attention from highly-skilled technical personnel, generally require more sophisticated informatics, technology, equipment or materials, may be performed less frequently than routine tests and may be reimbursed at higher levels than routine tests. It may be not practical, from a cost-effectiveness or infrastructure perspective, for many hospitals, IDNs, ACOs, commercial laboratories or physician office laboratories to develop and perform a broad menu of non-routine tests, or to perform low-volume non-routine testing in-house. Such tests generally are outsourced to a clinical testing laboratory which can perform these non-routine tests. Some non-routine tests are advanced. Advanced tests include procedures in the areas of molecular diagnostics (including next-generation sequencing), oncology, neurology, companion diagnostics and non-invasive pre-natal and other germline genetic testing.

Anatomic pathology services are performed on tissues, such as biopsies, and other samples, such as human cells. Anatomic pathology involves the diagnosis of cancer and other diseases and medical conditions through examination of tissue and cell samples taken from patients.

Our services. We are the world's largest provider of diagnostic information services. We provide information and insights based on the industry-leading menu of routine, non-routine and advanced clinical testing and anatomic pathology testing, and other diagnostic information services. We have built strong testing capabilities, including services for the predisposition, diagnosis, treatment and monitoring of cancers and other diseases, and offer advanced tests in many fields, including endocrinology, immunology, neurology and oncology. Increasingly, we are focused on providing solutions and insights to our customers, based on the testing that we perform, the data that we gather and our extensive medical, information and connectivity assets. We believe that offering services, solutions and insights based on a full range of tests, information assets and other capabilities strengthens our market offering, market position and reputation.

The value creation side of our business is organized by clinical franchise and focuses on customer solutions for the marketplace, including new test development and diagnostic insights. It also includes product and commercial marketing. The value delivery side includes sales, laboratory operations, field operations, logistics and client services. We offer the broadest access in the United States to diagnostic information services through our nationwide network of laboratories, patient service centers, phlebotomists in physician offices, and our connectivity resources, including call centers and mobile paramedics, nurses and other health and wellness professionals. We provide interpretive consultation to healthcare providers through one of the larger medical and scientific staffs in the industry. Our in-house experts, including medical directors, scientific directors, genetic counselors and board certified geneticists, provide medical and scientific consultation to healthcare providers regarding our tests and test results, and help them best utilize our services to improve patient outcomes and enhance patient satisfaction. Our experienced staff has a passion for providing the highest quality service to our customers.

We are a leading provider of infectious disease diagnostic information services and strive to be the first to provide diagnostic solutions for emerging infectious diseases, including our offerings for Zika, West Nile Virus, SARS and Influenza A H1N1. We have leading positions in prescription drug monitoring and toxicology, in the neurology diagnostics market, in advanced cardiovascular diagnostic information services, including our CardioIQ® and Cleveland HeartLab offerings, and in cancer diagnostics, including our QuestVantage™ and Med Fusion offerings. We are a leader in providing testing for the detection of employee use of drugs of abuse, offering a full range of solutions, including urine, hair, blood and oral fluid tests. We are the largest workplace drug testing provider certified by the U.S. Department of Health and Human Services to perform drug testing using electronic custody and control forms for federally-mandated, safety-sensitive workers.

We also are a leading provider of wellness services, including biometric wellness screenings, flu shots and related preventative services that leverage clinical data to improve population health outcomes and reduce healthcare spend. Our wellness solution, Blueprint for Wellness®, begins with biometric screenings conveniently offered at the worksite or through our patient service centers. The solution includes highly personalized reporting and incentive management services. We also offer intervention programs focused on connecting participants to the right care at the right time, such as a program designed to prevent diabetes and other chronic conditions, and another program that enables participants to speak with a board-certified physician about their results and to be guided about actions based on those results. These services are sold directly to employers and through reseller partnerships with many health plans.

We offer Quanum® health information technology solutions, including our products and national healthcare provider network, to help healthcare organizations and clinicians empower better health through diagnostic insights by leveraging the power of our significant information assets, including many years of test result data, and our technology prowess, including our history of providing leading information technology for diagnostic information services. We believe that the breadth and depth of our data, combined with our powerful analytics capabilities, enables us to take advantage of important data-based opportunities in diagnostics, and provides us a competitive advantage. With Inovalon, we also offer Data Diagnostics®, an award-winning point-of-care health analytic technology that is designed to help close costly gaps in care and improve health outcomes. Our portfolio of offerings is designed to address analytic, clinical and financial needs. The solutions help healthcare organizations and clinicians analyze and put in context data, and enable them to connect across the healthcare system and engage with their stakeholders. They can enter, share and access clinical information without costly information technology implementation or significant workflow disruption. Our Quanum® offerings are highlighted in the following table.

Table 17 - Quanum® Health Information Technology

Health Systems	Healthcare Professionals & Practices	Health Plans
• Data Diagnostics	• eLabs	• Data Diagnostics
• Lab Utilization	• ePrescribing	• On Demand Informatics
• ChartMaxx	• Electronic Health Record	
	• Practice Management	
	• Revenue Cycle Management	
	• Interactive Insights	
	• Data Diagnostics	

We offer extended care services that focus on extending the reach of physician offices beyond their traditional four walls, and doing so when and where it is convenient for consumers. These services include offerings designed to capture and document information to help healthcare providers, health plans and IDNs deliver better care, better assess their populations and identify and fill gaps in care for their patient populations. Once gaps are identified, our services engage patients in our retail sites, in home or by telephone, including through our call centers and our mobile base capabilities. We offer services focused on risk assessment, other examinations and chronic care management, and other services like post-hospital discharge visits, diabetic retinopathy and bone density examinations.

We maintain a nationwide network of laboratories, including our world renowned Quest Diagnostics Nichols Institute® and our rapid response laboratories, which are smaller facilities where we can quickly perform an abbreviated menu of routine tests for customers that require rapid turnaround times. We operate 24 hours a day, 365 days a year. We also provide testing services, inpatient anatomic pathology and medical director services at hospital laboratories.

We provide diagnostic information services in multiple markets outside the United States. We have laboratory facilities in Gurgaon, India; Mexico City, Mexico; and San Juan, Puerto Rico. We see opportunities to bring our experience and expertise in diagnostic information services to markets outside the United States, including by leveraging existing facilities to serve new markets.

Our services primarily are provided under the Quest Diagnostics brand, but we also provide services under other brands, including AmeriPath®, Dermpath Diagnostics®, Athena Diagnostics®, ExamOne®, and Quanum®.

Diagnostic Solutions

We are the leading provider of risk assessment services for the life insurance industry. In addition, we offer healthcare organizations and clinicians robust health information technology solutions.

Risk Assessment Services. ExamOne® is the largest provider of risk assessment services to the life insurance industry in North America. We also provide risk assessment services for insurance companies operating outside North America. Our risk assessment services comprise underwriting support services, including data gathering, paramedical examinations and clinical laboratory testing and analytics, designed to assist life insurance companies objectively to evaluate the mortality risks of applicants. Most specimen collections and paramedical examinations are performed by our network of paramedical examiners at the applicant's home or workplace, but they also are offered at approximately 575 company patient service centers in the United States and approximately 400 additional locations in North America. We also contract with third parties to coordinate providing these exams at more than 350 additional locations outside North America.

Healthcare Information Technology. Our healthcare information technology offerings include our Quanum® electronic health records system and our award-winning ChartMaxx® enterprise content management solution for hospitals and health systems. Healthcare organizations have contracted for the use of ChartMaxx® at more than 300 sites in North America. Our Quanum® electronic health records offering enables clinicians to generate a complete record of a clinical patient encounter, automates and streamlines the clinician's workflow, provides clinical decision support tools, captures patient encounter notes and lab and radiology results and enables secure communication with patients and other clinicians.

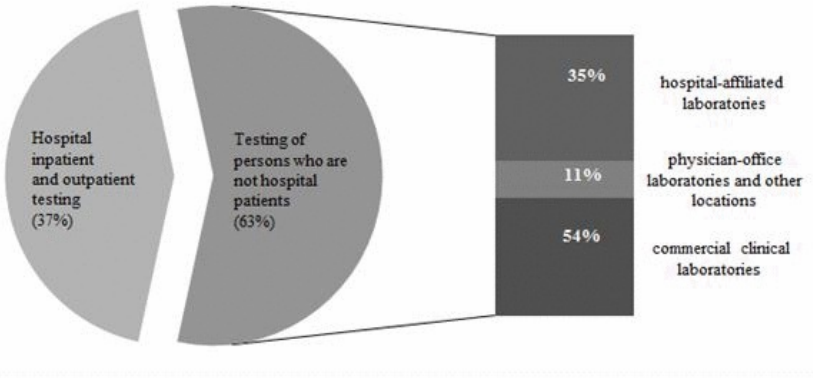
Other

Q² Solutions™, a joint venture with IQVIA Holdings Inc. in which we own a minority interest, is the second largest central laboratory services company in the world and provides services to customers across all segments of the biopharmaceutical industry. Central laboratory testing services are critical to advances in genomics, precision medicine and drug development. Q² Solutions™ has helped develop many of the oncology precision medicine drugs approved by the U.S. Food and Drug Administration in recent years.

THE UNITED STATES CLINICAL TESTING INDUSTRY

The U.S. clinical testing industry consists of two segments. The following table discusses how we believe the industry is structured.

Table 18 – U.S. Clinical Testing Industry



Key Trends

The healthcare system in the United States is evolving; significant change is taking place in the system. We expect that the evolution of the healthcare industry will continue, and that industry change is likely to be extensive. There are a number of key trends that are having, and that we expect will continue to have, a significant impact on the diagnostic information services business in the United States and on our business. These trends are discussed in the chart below; they present both opportunities and risks. We believe that several of the trends, including demographics, price transparency, consolidation, increased consumer involvement and value-based pricing, are favorable to our business. Because diagnostic information services is an essential healthcare service and because of the key trends discussed below, we believe that the industry will continue to grow over the long term and that we are well positioned to benefit from the long-term growth expected in the industry.

Table 19 - Key Trends

Demographics	As the population continues to grow and age, the burden of chronic diseases and unmet diagnostic needs may increase the demand for diagnostic information services.
Prevention and wellness	We believe that the value of detection, prevention, wellness and personalized care is well recognized. Consumers, employers, ACOs, IDNs, health plans and government agencies increasingly focus on helping the healthy stay healthy, detecting symptoms among those at risk and providing preventive insight and care that helps avoid disease.
Medical innovation	Medical advances allow for more accurate and earlier diagnosis and treatment of diseases. Continuing advances in genomics and proteomics are expected to yield new, more sophisticated and specialized diagnostic tests. These advances also are spurring interest in and demand for precision medicine, which relies on diagnostic and prognostic testing and in which data information services and strategies are used to deliver the most effective healthcare to the right populations and individuals. Pharmacogenomic testing increasingly is used as a parameter to help speed drug approval processes and to better focus therapy based on patient and tumor-specific genetic markers. Demand also is growing toward comprehensive care management solutions that serve patients, payers and healthcare providers by improving clinical decision support and access to patient data, and by increasing patient participation in care management and population health management. There is increasing focus on access to patient data and data-driven insights.

Customers and payers	Our customers and payers, including clinicians, health plans, IDNs, ACOs, employers and others, have been consolidating, converging and diversifying. For example, an increased number of hospital systems are considering establishing or have established health insurance plans, and health insurance plans are considering providing or are providing healthcare services. In addition, CVS Health, a leading provider of retail medical clinics and pharmacy benefits management services, has agreed to acquire Aetna, a leading health insurance provider. Consolidation is increasing pricing transparency and bargaining power, and may encourage internalization of clinical testing. Physicians frequently now are employed by hospital systems, IDNs, ACOs or large group practices integrated with healthcare systems, instead of organizing physician-owned practices, which is changing the dynamics for whether clinical testing is performed in or outside of a hospital. Physicians and other clinicians also increasingly are being employed by health plans or their affiliates. Value-based reimbursement is contributing to changes in the healthcare system. ACOs and patient-centered medical homes have grown as a means to deliver patient care. Healthcare services increasingly are being provided by non-traditional providers (*e.g.*, physician assistants), in non-traditional venues (*e.g.*, retail medical clinics, urgent care centers) and using new technologies (*e.g.*, telemedicine). In addition, federal healthcare reform legislation adopted in 2010, the ACA, is resulting in changes in the way that some healthcare services are purchased and delivered in the United States. Patients are also our customers. Increasingly, patients are engaged in their own healthcare, being empowered to manage and understand their healthcare and are bearing responsibility for payment for the services provided to them. See also the discussion under the heading *Patients* in Table 21.
Pricing transparency	There has been a trend toward greater pricing transparency in the healthcare marketplace. This transparency, combined with increased patient financial responsibility for medical care, is enhancing purchasing sophistication and changes in behavior in the healthcare marketplace.
Competition	The diagnostic information services industry remains fragmented, is highly competitive and is subject to new competition. Competition is growing from non-traditional competitors. Increased hospital acquisitions of physician practices may enhance clinician ties to hospital-affiliated laboratories and may strengthen their competitive position. New industry entrants with extensive resources may make acquisitions or expand into our traditional areas of operations.

Reimbursement pressure; affordability	There is a strong focus in the United States on controlling the overall cost of healthcare. Healthcare market participants, including governments, are focused on controlling costs, including potentially by reducing reimbursement for healthcare services, changing reimbursement for healthcare services (*e.g.*, shift from fee for service to capitation), changing medical coverage policies (*e.g.*, healthcare benefits design), requiring preauthorization of laboratory testing, requiring co-pays, introducing laboratory spend management utilities and payment and patient care innovations such as ACOs and patient-centered medical homes. In light of continued pressure to reduce systemic healthcare costs, hospitals may change their approach to providing clinical testing services. The Health Transformation Alliance, a group of over 40 major U.S. companies, was formed to improve and reform the healthcare system in the United States. The rising cost of healthcare in the United States was a key driver for the formation of this alliance. In January 2018, Amazon.com Inc., Berkshire Hathaway Inc. and JPMorgan Chase &Co., citing rising health care costs, announced plans to reduce their workers' health care costs by forming a non-profit venture that would provide simplified, high-quality healthcare for their workers. Pursuant to PAMA, CMS has promulgated revised reimbursement schedules for clinical laboratory testing services provided under Medicare for 2018, 2019 and 2020. Under the revised Medicare Clinical Laboratory Fee Schedule, reimbursement for clinical laboratory testing is scheduled to be reduced in 2018, 2019 and 2020. PAMA calls for further revision of the Medicare Clinical Laboratory Fee Schedule for years after 2020, based on future surveys of market rates; further reduction in reimbursement may result from such revisions. The American Clinical Laboratory Association, of which the Company is a member, initiated a lawsuit charging that in implementing PAMA, CMS failed to follow a Congressional directive to implement a market-based laboratory payment system. The Company supports this lawsuit and also is pursuing a legislative solution from the revised Medicare Clinical Laboratory Fee Schedule implemented by CMS under PAMA, which the Company contends resulted from a flawed process and failed to protect access to laboratory services for Medicare beneficiaries. In 2017, CMS issued a draft national coverage policy for next-generation sequencing cancer panels. The draft policy, were it finalized without change, would effect a *de facto* requirement that each laboratory test using next generation sequencing technology would need to be approved or cleared by the FDA before it is covered by Medicare. Third parties, including health plans, have not announced any change in approach to coverage for next-generation sequencing cancer panels. While pressure to control healthcare costs poses a risk to our Company, it also creates opportunities, such as an opportunity for increased proper utilization of testing as an efficient means to manage the total cost of healthcare. We believe that it also creates greater opportunities for high value, low-cost providers, like our Company, as compared to other providers.
Healthcare utilization	In the past few years, healthcare utilization in the United States has fluctuated based on a number of factors. These factors include, without limitation, the economy, healthcare benefits design, patients delaying medical care and increased patient financial responsibility for medical care. The ACA contained provisions eliminating patient cost-sharing for preventive services, and additional provisions that we believe have increased the number of patients that have health insurance, including Medicaid, and thus better access to diagnostic testing.

Legislative, regulatory and policy environment	Government oversight of and attention to the healthcare industry in the United States is significant and increasing; healthcare payment reform is a top issue. The FDA previously announced guidance initiatives that may impact the clinical laboratory testing business, including by increasing regulation of LDTs. More recently, it has offered suggestions for legislation to address this issue. The ACA has created significant uncertainty as healthcare markets react to changes. For example, more than half of the states have opted in to Medicaid expansion and employers may discontinue offering group health insurance to their employees, shifting more people to exchange products. The President of the United States has announced that he favors repealing the ACA. In 2017, the federal legislature undertook efforts to repeal, revise or replace the ACA, and the individual mandate adopted as part of the ACA was repealed. In more recent legislation, some additional aspects of the ACA were modified: another two-year moratorium was implemented on the device tax imposed on the sellers of certain medical devices in the U.S., including those purchased and used by laboratories; the tax on health insurers was delayed for a year; and the "Cadillac tax" on certain employee benefit plans was also delayed for two years. As part of legislation enacted in early 2018, the Independent Payment Advisory Board, which under the ACA was to be responsible annually to submit proposals aimed at reducing Medicare cost growth while preserving quality, was repealed. The scope and timing of any further legislation to repeal, amend, replace, or reform the rest of the ACA is uncertain, but if such legislation were to become law, it could have a significant impact on the U.S. healthcare system. In addition, uncertainty regarding the ACA prior to any such repeal, amendment, replacement or reform could create uncertainty generally in the healthcare market.
Globalization	There is a growing demand for healthcare services in emerging market countries. Opportunities are arising to participate in the restructuring or growth of the healthcare systems outside the United States. Demographic changes globally also may create opportunities.
Informatics; technology	The increased availability of healthcare data, including data made available as a result of next generation DNA sequencing, and the increased ability to effectively analyze that data at population and patient levels, is impacting healthcare practices. It is anticipated that the increased use of data in healthcare, coupled with mobile healthcare IT solutions for doctors and patients, will help to improve patient outcomes and reduce overall healthcare costs. Informatics, including integrated diagnostic and decision support solutions, predictive analytics, use of population data and healthcare information technology, is spurring advances in precision medicine, including medical decision making and value, for populations and individuals. There is a need for technology solutions to harness these opportunities. In addition, new technology, social media and mobile technology are changing the way that healthcare markets interact with each other, and the expectations that they have about how services are provided, what services are provided, and other capabilities of healthcare market participants. These developments are creating new opportunities and new challenges and disrupting the healthcare environment. Healthcare market participants, including pharmaceutical companies, health plans, clinicians, ACOs and IDNs, are striving to leverage interoperability, informatics and analytics to positively influence the health of patient populations.
Chronic diseases and conditions; gaps in care	We believe that the cost and challenges of identifying, treating and controlling chronic diseases and conditions such as diabetes and heart disease are now well recognized. As a result of multiple factors, including increased focus on population health management and pressure to reduce the systemic costs associated with such diseases and conditions, there is increased focus on better identifying and attempting to reduce or eliminate the gaps in care historically associated with these diseases and conditions. Healthcare market participants are developing new approaches for this purpose.

Healthcare services delivery	Healthcare delivery is moving out of hospitals, doctor offices and other traditional locations in which it had been provided. Care is increasingly being provided in new settings, such as out-patient and home settings. For example, see the discussion of *Emerging Retail Healthcare Providers* in Table 21. This dynamic offers new opportunities and challenges for healthcare providers and reflects not only efforts to take advantage of new technologies, but also the focus, discussed in this table above under the heading *Reimbursement pressure; affordability*, on controlling the overall cost of healthcare.

The Value of Diagnostic Information Services

As noted in Table 19, there is an increased focus on the affordability of healthcare. There also is increased focus on a disease-oriented approach to diagnostics, treatment and management. Healthcare providers, consumers and payers increasingly recognize the value of diagnostic information services as a means to improve health and reduce the overall cost of healthcare through early detection, prevention and treatment. Healthcare providers increasingly rely on diagnostic information services to help identify risk for a disease, to detect the symptoms of disease earlier, to aid in the choice of therapeutic regimen, to monitor patient compliance and to evaluate treatment results. The following table highlights how diagnostic information services can be an important contributor to reducing health care costs and improving care.

Table 20 - Contributing to Reducing Healthcare Costs and Improving Care
• Identifying patients at risk for disease before they require urgent care, hospital treatment or expensive therapies
• Helping clinicians to target the right medicines for the right patients (those who will benefit from the medicines)
• Identifying treatment-related side effects
• Early assessment of the efficacy of a therapy, enabling changes or discontinuation of ineffective therapies
• Enabling population health management by utilizing diagnostic information, identifying gaps in proven care and delivering targeted solutions to individuals who need care
• Identification and proactive management of individuals at risk for developing chronic diseases, to decrease progression and associated costs and morbidity
• Providing telemedicine services along with laboratory testing to help individuals interpret and obtain appropriate advice and referrals into needed care

Customers

We provide diagnostic information services to a broad range of customers, including those discussed below. As discussed in Table 19 above, customers are consolidating, converging and diversifying.

Table 21 - Customers	
Health plans including managed care organizations and other health insurance providers	These customers typically reimburse us as a contracted (or out-of-network) provider on behalf of their members. In certain locations, health plans may delegate to IPAs or other alternative delivery systems (*e.g.*, physician hospital organizations, ACOs, patient-centered medical homes) the ability to negotiate for diagnostic information services on behalf of certain members. Health plans and IPAs often require that diagnostic information services providers accept discounted fee structures or assume all or a portion of the financial risk associated with providing such services through capitated payment arrangements. Under capitated payment arrangements, we provide services at a predetermined monthly reimbursement rate for each covered member, generally regardless of the number or cost of services provided by us. Reimbursement under programs that do not provide for capitated payments is typically negotiated on a fee-for-service basis. Reimbursement from our five largest health plans totaled approximately 18%, and no one health plan accounted for 10%, of our consolidated net revenues in 2017. Health plans typically negotiate directly or indirectly with a number of diagnostic information services providers, and represent approximately one-half of our total clinical testing volumes and one-half of our net revenues from diagnostic information services. There has been a trend of consolidation among health plans. Some health plans also have narrowed their provider networks. We are also sometimes a member of a “complementary network.” A complementary network generally is a set of contractual arrangements that a third party will maintain with various providers that provide discounted fees for the benefit of its customers. A member of a health plan may choose to access a non-contracted provider that is a member of a complementary network; if so, the provider will be reimbursed at a rate negotiated by the complementary network. We attempt to strengthen our relationships with health plans and increase the volume of our services for their members by offering to health plans services and programs that leverage our Company's expertise and resources, including our superior access, extensive test menu, medical staff, data, IT solutions, and wellness and population health management capabilities.
Clinicians	Clinicians, including primary care physicians, specialists and physician assistants, requiring diagnostic information services for patients are the primary referral source for our services when patients choose their diagnostic information services provider. In recent years, there has been a marked increase in the number of physician practices owned by IDNs and hospital systems. There also has been a notable increase in some branches of medicine of the establishment of very large "rolled-up" specialty physician practice groups. Hospitals that own physician practices may require the practices to refer outreach testing to the hospital's affiliated laboratory. Large specialty physician groups may encourage their members to refer testing to other members of the group. In each case, referrals to independent diagnostic services providers may be reduced. Clinicians determine which laboratory to recommend or use based on a variety of factors, including those set forth in table 22.

Hospitals	We believe that we are the industry's leader in servicing hospitals. We provide services to hospitals throughout the United States, including advanced testing services, in some cases helping manage their laboratories and serving as the medical directors of the hospital's histology or clinical laboratory, including through our Professional Laboratory Services offerings. Hospitals generally maintain an on-site laboratory to perform the significant majority of clinical testing for their patients (inpatients and outpatients) and refer certain testing to outside service providers, which typically charge the hospitals on a negotiated fee-for-service basis. Fee schedules for hospital reference testing services often are negotiated on behalf of hospitals by group purchasing organizations. Hospitals also provide outreach testing, and historically were able to negotiate higher reimbursement rates with health plans than commercial clinical laboratories for comparable services. They may seek to leverage their relationships with community clinicians by encouraging the clinicians to send their outreach testing to the hospital's laboratory. Increased hospital acquisitions of physician practices may enhance clinician ties to hospital-affiliated laboratories and may strengthen their competitive position. We also have joint venture arrangements with leading hospitals or IDNs in several metropolitan areas. These joint venture arrangements, which provide diagnostic information services for affiliated hospitals as well as for unaffiliated clinicians and other local healthcare providers, serve as our principal facilities in their service areas. Typically, we have either a majority ownership interest in, or day-to-day management responsibilities for, our joint venture relationships. In light of continued pressure to reduce systemic healthcare costs, hospitals may change their approach to providing clinical testing services, including by seeking ways to improve profitability or to better utilize their laboratory capacity. We believe that our combination of services positions us to be an attractive partner for hospitals, offering a full range of strategic relationships.
ACOs and IDNs	An ACO is a network of providers and facilities that share financial risk in providing or arranging for the provision of healthcare. An IDN is a network of providers and facilities working together in providing or arranging for the provision of healthcare. ACOs and IDNs have increased in number; their impact on the provision of healthcare services to date has varied. ACOs and IDNs may exercise operational and financial control over providers across the continuum of care, and may function as a payer. Thus, they may be able to manage the health of a population group within a defined geography, and also may be able to influence the cost and quality of healthcare delivery, for example through owned entities and through ancillary services. ACOs may be encouraged to consider exclusive arrangements with healthcare providers that become part of the ACO, or to limit service providers to the ACO, since members of the ACO share financial risk. We are actively engaging with ACOs and IDNs to demonstrate the value of our services.
Employers	Employers use tests for drugs of abuse to determine an individual's employability and his or her “fitness for duty.” Companies with high employee turnover, safety conscious environments or regulatory testing requirements provide the highest volumes of testing. Factors such as the general economy and job market can impact the utilization of drugs-of-abuse testing. Employers also are investing in health and wellness services. We meet their needs by providing nationwide access to our customizable biometric and laboratory wellness testing, reporting and analytics, incentive management and flu shot services, and intervention solutions, directly and through health plan and health improvement providers. These services help employers, employees and others manage healthcare costs and capitalize on trends in personalized health. We seek to grow our employer business through offering new and innovative programs to help them with their goals of (1) maintaining a safe and productive workplace, (2) improving healthcare for employees and (3) lowering healthcare costs for employees and employers.

Patients	Patients are taking increased interest in and responsibility for their healthcare. Some patients are interested in ordering their own diagnostics tests, rather than relying upon a healthcare professional to order the tests. In addition, patients often are bearing increased financial responsibility for their healthcare (*e.g.*, high deductible health plans). Patients are paying greater attention to their healthcare, are increasing their demands of healthcare providers, have increased expectations regarding their healthcare experiences and are becoming more sophisticated regarding healthcare. For example, in our experience, patients are more focused on transparency, ease of doing business and understanding diagnostics information services than they have been in the past. In addition, patients are seeking prompt, direct access to their test results. The changing expectations of patients about their healthcare and their healthcare transactions are influencing the way that we think about our business and the services that we provide. We are well positioned to provide information and insights to patients to help them take actions to improve their healthcare, and increasingly we are providing patients with tools to do this.
Emerging Retail Healthcare Providers	In recent years, as the healthcare sector changes, retail providers of healthcare services have emerged and are growing. These providers include "big-box" retailers, pharmacy chains, supermarkets, urgent care centers and Internet-based service providers. We are taking advantage of opportunities to work with these providers, not only to offer new access points for our services (*e.g.*, our collaboration with Safeway), but also to grow our business by expanding our service offerings (*e.g.*, our joint venture with Wal-Mart Stores).
Other Laboratories and Other Customers	We also provide services on a fee-for-service basis to federal, state and local governmental agencies and to other commercial clinical laboratories

In many cases, the customer that orders our services is not responsible to pay for them. Depending on the billing arrangement and applicable law, the payer may be the patient or a third party, such as a health plan, Medicare or a Medicaid program. In light of healthcare reform, there is increased market activity regarding alternative payment models, including bundled payment models. Increasingly, patients are bearing responsibility for some portion of the payment for the services we provide to them, even if a third party is primarily responsible for payment.

GENERAL

Competition. While there has been significant consolidation in the diagnostic information services industry in recent years, our industry remains fragmented and highly competitive. We primarily compete with three types of clinical testing providers: commercial clinical laboratories, hospital-affiliated laboratories and physician-office laboratories. Our largest commercial clinical laboratory competitor is Laboratory Corporation of America Holdings, Inc. In addition, we compete with many smaller regional and local commercial clinical laboratories and specialized advanced laboratories. In anatomic pathology, we compete with anatomic pathology practices, including those in academic institutions and large physician group practices. There also has been a trend among specialty physician practices to establish their own histology laboratory capabilities and/or bring pathologists into their practices, thereby reducing referrals from these practices and increasing the competitive position of these practices.

We believe that healthcare providers consider a number of factors when selecting a diagnostic information services provider. Those factors include:

Table 22 - Factors Considered When Selecting a Diagnostic Information Services Provider

- Service capability and quality
- Accuracy, timeliness and consistency in reporting test results
- Access to medical/scientific thought leaders for consultation
- Patient insurance coverage and experience
- Number and type of tests performed
- Pricing and overall value
- Real time payment determination
- Reputation in the medical community
- Healthcare information technology solutions, including connectivity options
- Patient access, including the number, convenience and geographic coverage of patient service centers
- Ability to develop new and useful tests and services
- Qualifications of its staff
- Provider office workflow
- Capabilities to support population health initiatives

We believe that providing the most attractive service offering in the industry, including the most comprehensive test menu, innovative test offerings, a positive customer experience, a staff including medical and scientific experts, strong quality, unparalleled access and distribution, and data-powered integrated information technology solutions provide us with a competitive advantage.

We believe that large diagnostic information services providers may be able to increase their share of the overall diagnostic information services industry due to their large networks and lower cost structures, including as a result of PAMA. These advantages should enable larger providers to more effectively serve customers. In addition, we believe that consolidation in the diagnostic information services industry will continue. However, a significant portion of clinical testing is likely to continue to be performed by hospitals, which generally have affiliations with community clinicians and may have more, or more convenient, locations in a market. As a result, we compete against hospital-affiliated laboratories primarily on the basis of service capability, quality and pricing. In addition, market activity may increase the competitive environment. For example, health plan actions to exclude large national providers from contracts may enhance the relative competitive position of regional providers. In addition, increased hospital acquisitions of physician practices may enhance the ties of the clinicians to hospital-affiliated laboratories, enhancing the competitive position of hospital-affiliated laboratories. The formation of ACOs and IDNs, and their approach to contracts with healthcare providers, in addition to the impact of informatics, also may impact competition to provide diagnostic information services.

The diagnostic information services industry is faced with changing technology and new product introductions. Competitors may compete using advanced technology, including technology that enables more convenient or cost-effective testing. Competitors also may offer testing to be performed outside of a commercial clinical laboratory, such as (1) point-of-care testing that can be performed by physicians in their offices; (2) testing that can be performed by hospitals in their own laboratories; and (3) home testing that can be carried out without requiring the services of outside providers.

The risk assessment and healthcare information technology industries are highly competitive. We have many competitors, some of which have much more extensive experience in these industries and some of which have greater resources. We compete in the risk assessment business by seeking to provide a superior applicant experience, faster services completion and a wider array of quality, integrated services than our competitors. We compete in the healthcare information technology industry by offering solutions that foster better patient care and improve performance for healthcare providers, including smaller and medium sized physician practices.

Sales and Marketing. Our Diagnostic Information Services business has a unified commercial organization focused on the sale of most of our services. It coordinates closely with our clinical franchises and marketing organization. The commercial organization is centrally led, and is organized regionally, in conjunction with our operations organization, to focus on local customer needs and to ensure aligned delivery for our customers. We have built excellence in our commercial organization, employing world-class processes and tools as well as strong management discipline. We continue to invest in talent, provide industry-leading training and development, focus on opportunities with IDNs and specialty physicians, and foster a customer-focused, performance-driven culture.

We also maintain sales and marketing organizations for our employer drugs-of-abuse testing services in Diagnostic Information Services and our offerings in Diagnostic Solutions.

Information Technology. We use information systems extensively in virtually all aspects of our business, including clinical testing, test ordering and reporting, billing, customer service, logistics and management of medical data. We endeavor to establish systems that create value and efficiencies for our Company and customers. The successful delivery of our services depends, in part, on the continued and uninterrupted performance of our information technology systems. We have taken precautionary measures to prevent problems that could affect our information technology systems.

Some of our historic growth has come through acquisitions and, as a result, we continue to use multiple information systems. We have implemented some common systems, and are planning to standardize laboratory information and billing systems across our operations. We expect that our standardization effort will take several more years to complete, and will result in significantly more centralized systems, improved operating efficiency, more positive customer experiences and enhanced control over our operational environment. Even after we complete our efforts to standardize our historic systems, acquisitions of other businesses in the future may create additional opportunities where we may conclude that system standardization would benefit our company.

Quality Assurance. As discussed further under the heading *Quality* beginning on page 14, our goal is to provide every patient with services and products of superior quality, and to meet that goal we have adopted the Quest Diagnostics

Quality Program. This program includes policies and procedures that document, measure and monitor the effectiveness of our laboratory operations in providing and improving quality and meeting applicable regulatory requirements for clinical laboratory testing. We use the Quest Management System, including standard frameworks and methodologies for project and change management, to manage our Company, and have a culture of continuous improvement. Employing root cause analysis, process improvements and rigorous tracking and measuring, we seek to enhance quality, continuously reduce defects, streamline processes, further increase the efficacy and efficiency of our operations and processes, eliminate waste and help standardize operations across our Company. We also have a robust Supplier Quality Program designed to ensure we have a high quality supplier network and to raise the bar of quality expectations across that network.

In our laboratory operations, our quality assurance efforts focus on pre-analytic, analytic and post-analytic processes, including positive patient identification of specimens, specimen tracking, analysis and report accuracy, proficiency testing, reference range relevance, process audits, statistical process control and personnel training for all of our laboratories and patient service centers. As part of our quality assurance program, we utilize internal proficiency testing, comprehensive quality control and rigorous process audits. For most clinical laboratory tests, quality control samples are processed in parallel with the analysis of patient specimens. The results of tests on these quality control samples are monitored to identify trends, biases or imprecision in our analytical processes. We also focus on the licensing, credentialing, training and competence of our professional and technical staff.

In addition, we participate in external proficiency testing and have accreditation or licenses for our clinical laboratory operations from various regulatory agencies or accrediting organizations, such as CMS, CAP and certain states. All of our laboratories participate in various external quality surveillance programs, including proficiency testing programs administered by CAP or states. CAP is an independent, nongovernmental organization of board-certified pathologists approved by CMS to inspect clinical laboratories to determine compliance with the standards required by CLIA. CAP offers an accreditation program to which clinical laboratories may voluntarily subscribe. All of our major laboratories, including our laboratories outside the U.S., and most of our rapid response laboratories, are accredited by CAP. Accreditation includes on-site inspections and participation in the CAP (or equivalent) proficiency testing program. Also, our cytotechnologists and pathologists participate in an internal peer-review evaluation and one or more external individual proficiency testing programs. In addition, some of our laboratories have achieved International Organization for Standardization certification for their quality management systems.

Intellectual Property Rights. We own significant intellectual property, including patents, patent applications, technology, trade secrets, know-how, copyrights and trademarks in the United States and other countries. From time to time, we also license U.S. and non-U.S. patents, patent applications, technology, trade secrets, know-how, copyrights or trademarks owned by others; we also may license our intellectual property to others. In the aggregate, our intellectual property assets and licenses are of material importance to our business. We believe, however, that no single patent, technology, trademark, intellectual property asset or license is material to our business as a whole.

Our approach is to manage our intellectual property assets, to safeguard them and to maximize their value to our enterprise. We actively defend our important intellectual property assets and pursue protection of our products, processes and other intellectual property where possible.

Our success in remaining a leading innovator in the diagnostic information services industry by continuing to introduce new tests, technology and services will depend, in part, on our ability to license new and improved technologies on favorable terms. Other companies or individuals, including our competitors, may obtain patents or other property rights on tests or processes that we may be performing, that could prevent, limit or interfere with our ability to develop, perform or sell our tests or operate our business.

Enterprise Risk Management Program. We maintain an enterprise risk management program designed to assure a culture of risk awareness throughout the Company's key business, operations and support functions. Our program, which is integrated with the Company’s governance, performance management and internal control frameworks, entails a formal continuous process that identifies, assesses, mitigates and manages both internal and external conditions that could significantly impact the Company and influence its business strategy and performance. The program is based on a framework issued by the Committee of Sponsoring Organizations of the Treadway Commission and focuses on the following risk types:

- Operational risk - risks arising from systems, processes, people and external events that affect the Company’s operational objectives or fundamental reason for its existence, including: product life-cycle and execution; service quality and performance; information management and data protection and security, including cybersecurity; supply chain and business disruption; and other risks, including human capital and reputation.

- Financial risk - risks arising from the Company's ability to meet its financial obligations pursuant to its strategic and operational objectives, including exposure to broad market and more specific industry risk that could impact liquidity, interest rate, credit, pricing and reimbursement, and also to internal and external financial reporting.

- Legal and compliance risk - risks arising from government and regulatory environment and action, legal proceedings and compliance with integrity policies and procedures.

- Strategic risk - risks that will impede the Company's plan to achieve its mission and vision and apply its core values, including changes in the broad market and Company's industry, business development and restructuring activities, competitive threats and practices, technology and product innovation, and public policy.

As part of our program, executive management routinely assesses our enterprise level risks, overall Company-level risk tolerance and the effectiveness of risk management, and monitors the progress of and resources applied to risk mitigation; our Board of Directors plays an active role in overseeing our program. Our primary risk factors are discussed in **Risk Factors** beginning on page 35.

Employees. At December 31, 2017, we employed approximately 45,000 people. This total excludes employees of the joint ventures where we do not have a majority ownership interest. We have no collective bargaining agreements with unions covering employees in the United States, and we believe that our overall relations with our employees are good.

BILLING AND REIMBURSEMENT

Billing. We generally bill for diagnostic information services on a fee-for-service basis under one of two types of fee schedules. These fees may be negotiated or discounted. The types of fee schedules are:

- "Client" fees charged to physicians, hospitals and institutions for which services are performed on a wholesale basis and which are billed on a monthly basis.
- "Patient" fees charged to individual patients and certain third-party payers on a claim-by-claim basis.

Billing for diagnostic information services is very complicated, and we maintain compliance policies and procedures for our billing. Patients, insurance companies, Medicare, Medicaid, physicians, hospitals, IDNs, ACOs and employer groups all have different billing requirements. Some billing arrangements require us to bill multiple payers, and there are several other factors that complicate billing (*e.g*., disparity in coverage and information requirements among various payers; and incomplete or inaccurate billing information provided by ordering clinicians). We incur additional costs as a result of our participation in Medicare and Medicaid programs because diagnostic testing services are subject to complex, stringent and frequently ambiguous federal and state laws and regulations, including those relating to coverage, billing and reimbursement. Additionally, auditing for compliance with applicable laws and regulations as well as internal compliance policies and procedures adds further cost and complexity to the billing process. Changes in laws and regulations could further complicate our billing and increase our billing costs. CMS establishes procedures and continuously evaluates and implements changes to the reimbursement process and requirements for coverage.

As an integral part of our billing compliance program, we investigate reported failures or suspected failures to comply with federal and state healthcare reimbursement requirements. Any Medicare or Medicaid overpayments resulting from non-compliance are reimbursed by us. As a result of these efforts, we have periodically identified and reported overpayments, reimbursed the payers for overpayments and taken appropriate corrective action.

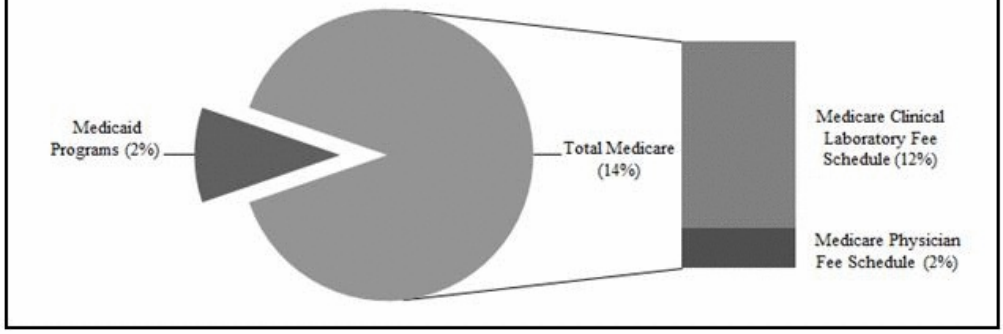
Our bad debt expense is primarily the result of the failure of patients to pay the portion of the receivable that is their responsibility. Increased patient financial responsibility has adversely impacted our bad debt expense in recent years; additional increases in patient financial responsibility may further negatively impact our bad debt expense. The remainder of our bad debt expense is primarily due to missing or incorrect billing information on requisitions and Advance Beneficiary Notices received from healthcare providers. In general, due to the nature of our business, historically we have performed the requested testing and reported test results regardless of whether the billing information is correct or complete. We subsequently attempt to contact the healthcare provider or patient to obtain any missing information and to rectify incorrect billing information. Missing or incorrect information on requisitions complicates and slows down the billing process, creates backlogs of unbilled requisitions and generally increases the aging of accounts receivable and bad debt expense. We are taking, and plan to continue to take, steps to reduce our bad debt expense, including increasing use of electronic ordering, which reduces the incidence of missing or incorrect information, and real-time payment determination.

Government Coverage and Reimbursements. Government payers, such as Medicare and Medicaid, have taken steps and are expected to continue to take steps to control the cost, utilization and delivery of healthcare services, including clinical testing services. Historically, most Medicare and Medicaid beneficiaries were covered under the traditional Medicare and Medicaid programs administered by the federal government. Over the last several years, the federal government has continued to expand its contracts with private health insurance plans for Medicare beneficiaries and has encouraged such beneficiaries to switch from the traditional programs to the private programs, called "Medicare Advantage" programs. There has been growth of health insurance providers offering Medicare Advantage programs and of beneficiary enrollment in these programs. In recent years, in an effort to control costs, states also have mandated that Medicaid beneficiaries enroll in private managed care arrangements.

With regard to the clinical testing services performed on behalf of Medicare beneficiaries, we must bill Medicare directly and must accept the local Medicare carrier's fee schedule amount for covered services as payment in full. In addition, state Medicaid programs are prohibited from paying more (and in most instances, pay significantly less) than Medicare. Currently, Medicare does not require the beneficiary to pay a co-payment for diagnostic information services reimbursed under the Clinical Laboratory Fee Schedule, but generally does require a patient deductible for anatomic pathology services.

Part B of the Medicare program contains fee schedule payment methodologies for clinical testing services performed for covered patients, including a national ceiling on the amount that carriers could pay under their local Medicare clinical testing fee schedules. Historically, the Medicare Clinical Laboratory Fee Schedule and the Medicare Physician Fee Schedule established under that program have been subject to change, including each year. Pursuant to PAMA, which was implemented in 2018, CMS has revised the Medicare Clinical Laboratory Fee Schedule. Under the revised Medicare Clinical Laboratory Fee Schedule, reimbursement for clinical laboratory testing will be reduced in 2018, 2019 and 2020. PAMA calls for further revision of the Medicare Clinical Laboratory Fee Schedule for years after 2020, based on future surveys of market rates; further reduction in reimbursement may result from such revisions. The following table sets forth the percentage of our consolidated net revenues reimbursed under Medicare and Medicaid in 2017.

Table 23 - 2017 Medicare and Medicaid Revenues as % of Consolidated Net Revenues



Violations of laws relating to billing government healthcare programs or federal and state fraud and abuse laws may result in: exclusion from participation in Medicare/Medicaid programs; civil and criminal fines and penalties; and the loss of various licenses, certificates and authorizations necessary to operate our business. Certain violations of these laws may also provide the basis for a civil remedy under the federal False Claims Act, including fines and damages of up to three times the amount claimed.

REGULATION

Our businesses are subject to or impacted by extensive and frequently changing laws and regulations in the United States (at both the federal and state levels) and the other jurisdictions in which we conduct business, including some particular to our business and others relating to conducting business generally (*e.g.*, U.S. Foreign Corrupt Practices Act). We also are subject to inspections and audits by governmental agencies. The table below highlights the key regulatory schemes applicable to our businesses.

Table 24 - Key Regulatory Schemes	
CLIA and State Clinical Laboratory Licensing	CLIA regulates the operations of virtually all clinical laboratories, requiring that they be certified by the federal government and that they comply with various technical, operational, personnel and quality requirements intended to ensure that the services provided are accurate, reliable and timely. State laws may require additional personnel qualifications or licenses, quality control, record maintenance, proficiency testing or detailed review of our scientific method validations and technical procedures for certain tests. Violations of these laws and regulations may result in monetary fines, criminal and civil penalties and/or suspension or exclusion from participation in Medicare, Medicaid and other federal or state healthcare programs.
Fraud and Abuse	Anti-kickback laws and regulations prohibit making payments or furnishing other benefits to influence the referral of tests billed to Medicare, Medicaid or certain other federal or state healthcare programs. In addition, federal and state anti-self-referral laws generally prohibit Medicare and Medicaid payments for clinical tests referred by physicians who have an ownership or investment interest in, or a compensation arrangement with, the testing laboratory. Some states have similar laws that are not limited to Medicare and Medicaid referrals and could also affect other tests referred by clinicians with investment or compensation arrangements with the testing laboratory. Violations of these laws and regulations may result in monetary fines, criminal and civil penalties and/or suspension or exclusion from participation in Medicare, Medicaid and other federal or state healthcare programs.
FDA	The FDA has regulatory responsibility over, among other areas, instruments, software, test kits, reagents and other devices used by clinical laboratories to perform diagnostic testing in the United States. The FDA also regulates drugs-of-abuse testing for employers and insurers, testing for blood bank purposes and testing of donors of human cells for purposes such as in vitro fertilization. A number of advanced tests we develop internally are offered as LDTs. The FDA has claimed regulatory authority over all LDTs, but has stated that it exercised enforcement discretion with regard to most LDTs performed by high complexity CLIA-certified laboratories. Pursuant to the 21st Century Cures Act, the FDA has issued guidance regarding the regulation of clinical decision support software, which may be used in, or in connection with, LDTs. The guidance has created uncertainty regarding whether FDA approval of certain tests is required. In 2017, the FDA published a "Discussion Document" providing its views on legislative alternatives to regulate LDTs. New legislation could significantly impact the clinical laboratory testing business, including by increasing or modifying the regulation of LDTs, hindering our ability to develop and market new services, causing an increase in the cost of our services, delaying our ability to introduce new tests or hindering our ability to perform testing.
Environmental, Health and Safety	We are subject to laws and regulations related to the protection of the environment, the health and safety of employees and the handling, transportation and disposal of medical specimens, infectious and hazardous waste and radioactive materials. For example, the U.S. Occupational Safety and Health Administration has established extensive requirements relating specifically to workplace safety for healthcare employers in the U.S. This includes requirements to develop and implement multi-faceted programs to protect workers from exposure to blood-borne pathogens, including preventing or minimizing any exposure through needle stick injuries. For purposes of transportation, some biological materials and laboratory supplies are classified as hazardous materials and are subject to regulation by one or more of the following agencies: the U.S. Department of Transportation, the U.S. Public Health Service, the U.S. Postal Service and the International Air Transport Association.

Physicians	Our pathologists are required to hold a valid license to practice medicine in the jurisdiction in which they practice. Many of our pathologists enter into an employment agreement. These agreements have varying terms, but generally can be terminated at any time, upon advance notice. Most of the agreements contain covenants generally limiting the activities of the pathologist within a defined geographic area for a limited period of time after termination of employment; the enforceability of these covenants may be limited under state law. Several jurisdictions, including some in which our businesses are located, prohibit business corporations from engaging in the practice of medicine. In certain jurisdictions, business corporations are prohibited from employing licensed healthcare professionals to provide services on behalf of the corporation; these laws vary. In some jurisdictions, anatomic pathology services are delivered through physician-owned entities that employ the practicing pathologists. The manner in which licensed physicians can be organized to perform medical services may be governed by the laws of the jurisdictions in which medical services are provided and by the medical boards or other entities authorized by these jurisdictions to oversee the practice of medicine.
Privacy and Security of Health and Personal Information	We are subject to laws and regulations regarding protecting the security and privacy of certain healthcare and personal information, including the federal Health Insurance Portability and Accountability Act and the regulations thereunder, which establish (i) a complex regulatory framework including requirements for safeguarding protected health information and (ii) comprehensive federal standards regarding the uses and disclosures of protected health information. In addition, in May 2018, the General Data Protection Regulation will supersede current European Union data protection legislation, impose more stringent European Union data protection requirements, and provide greater penalties for noncompliance. A healthcare provider may be required to notify individuals or the government if the provider discovers certain breaches of personal information or protected health information.
Drug Testing; Controlled Substances	All U.S. laboratories that perform drug testing for certain public sector employees and employees of certain federally regulated businesses are required to be certified as meeting the detailed performance and quality standards of the Substance Abuse and Mental Health Services Administration. To obtain access to controlled substances used to perform drugs-of-abuse testing in the United States, laboratories must be licensed by the Drug Enforcement Administration.

Compliance. We strive to conduct our business in compliance with all applicable laws and regulations. All of our laboratories and, where applicable, patient service centers, are licensed and accredited as required by the appropriate federal and state agencies. We have a long-standing and well-established compliance program. The Quality, Safety and Compliance Committee of our Board of Directors oversees, and receives periodic management reports regarding, our compliance program. Our program includes detailed policies and procedures and training programs intended to ensure the implementation and observance of all applicable laws, regulations and Company policies. Further, we conduct in-depth reviews of procedures and facilities to assure regulatory compliance throughout our operations. We conduct annual training of our employees on these compliance policies and procedures.

Many of the laws and regulations applicable to us, including many of those relating to billing, reimbursement for tests and relationships with clinicians and hospitals, are vague or indefinite or have not been interpreted by the courts. The applicability or interpretation of laws and regulations also may not be clear in light of emerging changes in clinical testing science, healthcare technology and healthcare organizations. They may be interpreted or applied by a prosecutorial, regulatory or judicial authority in a manner that could require us to make changes in our operations, including our pricing and/or billing practices. Such occurrences, regardless of their outcome, could, among other things:

- increase our administrative, billing or other operating costs;
- decrease the amount of reimbursement related to diagnostic information services performed;
- damage our reputation; or
- adversely affect important business relationships with third parties.

If we fail to comply with applicable laws and regulations, we could suffer civil and criminal penalties, fines, exclusion from participation in governmental healthcare programs and the loss of various licenses, certificates and authorizations necessary to operate our business, as well as incur additional liabilities from third-party claims, all of which could have a material adverse effect on our business. Certain federal and state statutes, regulations and other laws, including the *qui tam*

provisions of federal and state false claims acts, allow private individuals to bring lawsuits against healthcare companies on behalf of government payers, private payers and/or patients alleging inappropriate billing practices.

The federal or state governments may bring claims based on our current practices, which we believe are lawful. The federal and state governments have substantial leverage in negotiating settlements since the amount of potential damages far exceeds the rates at which we are reimbursed, and the government has the remedy of excluding a non-compliant provider from participation in the Medicare and Medicaid programs. We believe that federal and state governments continue aggressive enforcement efforts against perceived healthcare fraud. Legislative provisions relating to healthcare fraud and abuse provide government enforcement personnel with substantial funding, powers, penalties and remedies to pursue suspected cases of fraud and abuse.

AVAILABLE INFORMATION

We file annual, quarterly and current reports, proxy statements and other information with the Securities and Exchange Commission (the "SEC"). You may read and copy any document that we file with the SEC at the SEC's public reference room at 100 F Street, NE, Washington, DC 20549 on official business days. Please call the SEC at 1-800-SEC-0330 for information regarding the public reference room. The SEC maintains an internet site that contains annual, quarterly and current reports, proxy and information statements and other information that issuers (including the Company) file electronically with the SEC. Our electronic SEC filings are available to the public at the SEC's internet site, www.sec.gov.

Our internet site is www.QuestDiagnostics.com. You can access our Investor Relations webpage at www.QuestDiagnostics.com/investor. The information on our website is not incorporated by reference into this Report. We make available free of charge, on or through our Investor Relations webpage, our proxy statements, Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and any amendments to those reports filed or furnished pursuant to the Securities Exchange Act of 1934, as amended (the "Exchange Act"), as soon as reasonably practical after such material is filed with, or furnished to, the SEC.

We also have a corporate governance webpage, www.QuestDiagnostics.com/governance. You can access information regarding our corporate governance, including the information set forth below, at that page.

Table 25 - Information Available at Our Corporate Governance Webpage

◎ Directors	◎ Corporate Governance Guidelines
◎ Composition of the committees of our Board of Directors	◎ Code of Ethics
◎ Senior management	◎ Certificate of Incorporation
◎ Charters for the standing committees of our Board of Directors	◎ Bylaws
◎ Information about our corporate political contributions	◎ Values
◎ Statements of beneficial ownership of our equity securities filed by our directors, officers and others under Section 16 of the Exchange Act	

EXECUTIVE OFFICERS OF THE COMPANY

The following persons serve as executive officers of the Company.

Table 26 - Executive Officers

Name, Age, Title	Background
Stephen H. Rusckowski (60) *Chairman of the Board, President and Chief Executive Officer*	Mr. Rusckowski joined the Company in May 2012 as President and Chief Executive Officer and became Chairman of the Board on January 1, 2017. From October 2006 until he joined the Company, he was Chief Executive Officer of Philips Healthcare, the largest unit of Royal Philips Electronics, and a member of the Board of Management of Royal Philips Electronics and its Executive Committee. Previously, he was CEO of the Imaging Systems business of Royal Phillips Electronics. Before joining Philips in 2001, Mr. Rusckowski held numerous management positions with the healthcare division of Hewlett-Packard/Agilent Technologies. Mr. Rusckowski has been a director of the Company since May 2012. He has been a director of Xerox Corporation since February 2015, and was a director of Covidien plc from December 2013 to January 2015. Mr. Rusckowski served as Chairman of the American Clinical Laboratory Association from 2013-2016.
Jon R. Cohen, M.D. (63) *Senior Vice President and Group Executive - Diagnostic Solutions*	Dr. Cohen joined the company in March 2009 and served as Chief Medical Officer from then until January 2017. From May 2011 to January 2013, he also had responsibility for Hospital Services. In January 2013, Dr. Cohen assumed responsibility for anatomic pathology services, sports science and human performance and professional laboratory services, and he was responsible for the oncology clinical franchise from January 2013 until January 2017. From February 2014 to July 2015, he had responsibility for our clinical trials business. Dr. Cohen served as the Senior Adviser to New York Governor David Patterson from 2008 to 2009, where he was responsible for all policy and strategic planning. Previously, Dr. Cohen was a managing director, health industries advisory services, at PricewaterhouseCoopers LLP, and spent 21 years with North Shore-Long Island Jewish Health System, one of the nation's largest not-for-profit health systems, including serving as its Chief Medical Officer from 2000 to 2006.
Everett V. Cunningham (51) *Senior Vice President, Commercial*	Mr. Cunningham is responsible for the commercial organization for the Company's Diagnostic Information Services business. Prior to joining the Company in October 2012, he spent 21 years with Pfizer, Inc., where he served from June 2011 to October 2012 as Regional President, Established Products, Asia. From 2009 to 2011, Mr. Cunningham served as Regional President, West Business Unit, Primary Care. From 2007 to 2009, he served as Vice President, Human Resources, Corporate Groups. Before that Mr. Cunningham served Pfizer in a series of sales and leadership and general management roles.

James E. Davis (55) *Executive Vice President, General Diagnostics*	In January 2017, Mr. Davis became Executive Vice President, General Diagnostics; previously he was Senior Vice President and Group Executive - Regional Businesses. In January 2015, he assumed responsibility for the general management of the Company's regional Diagnostic Information Services business. Mr. Davis was responsible for our products business from February 2014 until 2016. From February 2014 to January 2015, he was responsible for operations for the Company's Diagnostic Information Services business. He joined Quest Diagnostics in April 2013 as Senior Vice President, Diagnostics Solutions, with responsibility for the healthcare information technology, risk assessment, clinical trials, diagnostic products and employer solutions businesses. Prior to joining Quest Diagnostics, from March 2012 to April 2013, Mr. Davis served as Lead Director, and then as Chief Executive Officer, of InSightec, Inc., a medical device company that designs and develops ultrasound ablation devices that are guided by magnetic resonance imaging systems. Previously, Mr. Davis held a number of senior positions in General Electric's healthcare business, including from 2007 to 2012 as Vice President and General Manager of GE Healthcare's magnetic resonance imaging business. Prior to joining GE Healthcare, Mr. Davis held leadership positions in GE's aviation business and led the development of strategic and operational improvement initiatives for clients of McKinsey & Company, Inc.
Catherine T. Doherty (55) *Senior Vice President and Group Executive - Clinical Franchise Solutions and Marketing*	Since January 2013, Ms. Doherty has been responsible for overseeing the development of clinical franchise solutions in the areas of cardiovascular, general health and wellness, infectious disease and immunology, and prescription drug monitoring and toxicology, as well as enterprise-wide marketing. From January 2013 to January 2017, she also was responsible for clinical franchise solutions in the areas of neurology and women's health. In February 2014, Ms. Doherty assumed responsibility for the employer solutions and risk assessment businesses. From February 2014 to January 2017, she also was responsible for the healthcare information technology business. From May 2011 to December 2012, she served as Senior Vice President, Physician Services. Prior to May 2011, Ms. Doherty held a variety of positions of increasing responsibility since joining the Company in 1990, including Vice President, Hospital Services; Vice President, Office of the Chairman; Vice President, Finance and Administration for the Hospital business; Vice President, Communications and Investor Relations; and Chief Accounting Officer.
Carrie Eglinton Manner (43) *Senior Vice President, Advanced Diagnostics*	Ms. Eglinton Manner joined the Company in January 2017. She is responsible for the Company's advanced testing activities, including overseeing the development of clinical franchise solutions in the areas of neurology, oncology and women's health. Previously, Ms. Eglinton Manner spent over 20 years in various leadership roles in healthcare businesses at General Electric. From 2015 to 2016, she served as President and CEO of the Detection and Guidance Solutions business, delivering advanced x-ray technologies spanning the continuum of healthcare. From 2013 to 2015, Ms. Eglinton Manner served as President and CEO of OEC Surgical Mobile C-arm systems. She was President and CEO of General Electric's diagnostic pathology laboratory services business from 2012 to 2013, and President of the Maternal Infant Care Business from 2009 to 2012.

Mark J. Guinan (56) *Executive Vice President and Chief Financial Officer*	Mr. Guinan joined the Company in July 2013. From 2010 until joining Quest Diagnostics in 2013, he served as Chief Financial Officer for Hill-Rom Holdings Inc., a manufacturer and provider of medical technologies and related services for the health care industry. Previously, he had served in a number of finance and operations roles in a long career at Johnson & Johnson including 2009 to 2010 as Vice President, Chief Procurement Officer, and 2005 to 2009 as Vice President, Group Finance Pharmaceuticals. Before joining Johnson & Johnson in 1997, he held a number of financial roles at Procter & Gamble.
Michael E. Prevoznik (56) *Senior Vice President and General Counsel*	Mr. Prevoznik joined the Company as Vice President and General Counsel in August 1999. In 2003, he assumed responsibility for governmental affairs. From 1999 until April 2009, Mr. Prevoznik also had responsibility for the Company's Compliance Department. In addition, from April 2011 to January 2017, he had management responsibility for the Company's diagnostic information services activities outside the U.S., and from April 2011 to January 2013, he had management responsibility for the Company's clinical trials business. Prior to joining the Company, Mr. Prevoznik served in positions of increasing responsibility within the compliance organization at SmithKline Beecham, most recently as Vice President, Compliance, with responsibility for coordinating all SmithKline Beecham compliance activities worldwide.

Item 1A. Risk Factors

You should carefully consider all of the information set forth in this Report, including the following risk factors, before deciding to invest in any of our securities. The risks below are not the only ones that we face. Additional risks not presently known to us, or that we presently deem immaterial, may also negatively impact us. Our business, consolidated financial condition, revenues, results of operations, profitability, reputation or cash flows could be materially impacted by any of these factors.

This Report also includes forward-looking statements that involve risks or uncertainties. Our results could differ materially from those anticipated in these forward-looking statements as a result of certain factors, including the risks we face described below and elsewhere. See “Cautionary Factors that May Affect Future Results” on page 43.

The U.S. healthcare system is evolving, and our business could be adversely impacted if we fail to adapt.

The U.S. healthcare system is evolving, in part in response to the passage of the ACA in 2010. The ACA established the Center for Medicare and Medicaid Innovation to examine alternative payment methodologies and conduct demonstration programs. The ACA provided for extensive health insurance reforms, including the elimination of pre-existing condition exclusions and other limitations on coverage, fixed percentages on medical loss ratios, expansion in Medicaid and other programs, employer mandates, individual mandates, creation of state and regional health insurance exchanges, and tax subsidies for individuals to help cover the cost of individual insurance coverage. The ACA also permits the establishment of ACOs.

The President of the United States has announced that he favors repealing the ACA. In 2017, the federal legislature undertook efforts to repeal, revise or replace the ACA, and the individual mandate adopted as part of the ACA was repealed. In more recent legislation, some additional aspects of the ACA were modified: another two-year moratorium was implemented on the device tax imposed on the sellers of certain medical devices in the U.S., including those purchased and used by laboratories; the tax on health insurers was delayed for a year; and the "Cadillac tax" on certain employee benefit plans was also delayed for two years. As part of legislation enacted in early 2018, the Independent Payment Advisory Board, which under the ACA was to be responsible annually to submit proposals aimed at reducing Medicare cost growth while preserving quality, was repealed. The scope and timing of any further legislation to repeal, amend, replace, or reform the rest of the ACA is uncertain, but if such legislation were to become law, it could have a significant impact on the U.S. healthcare system. In addition, uncertainty regarding the ACA prior to any such repeal, amendment, replacement or reform could create uncertainty generally in the healthcare market.

Significant change is taking place in the healthcare system, including as discussed above under the heading The United States Clinical Testing Industry, beginning on page 17. For example, ACOs, IDNs and patient-centered medical homes have grown as a means to deliver patient care. Value-based reimbursement is increasing; CMS has set goals for value-based reimbursement to be achieved. Patients are encouraged to take increased interest in and responsibility for, and often are bearing increased responsibility for payment for, their healthcare. Healthcare industry participants are consolidating. Healthcare services increasingly are being provided by non-traditional providers (*e.g.*, physician assistants), in non-traditional venues (*e.g.*, retail medical clinics, urgent care centers) and using new technologies (*e.g.*, telemedicine). Utilization of the healthcare system is being influenced by several factors, and may result in a decline in the demand for diagnostic information services. We expect that the evolution of the healthcare industry will continue, and that industry change is likely to be extensive.

The clinical testing business is highly competitive, and if we fail to provide an appropriately priced level of service or otherwise fail to compete effectively it could have a material adverse effect on our revenues and profitability.

The clinical testing business remains a fragmented and highly competitive industry. We primarily compete with three types of clinical testing providers: other commercial clinical laboratories, hospital-affiliated laboratories and physician-office laboratories. We also compete with other providers, including anatomic pathology practices and large physician group practices. Hospitals generally maintain on-site laboratories to perform testing on their patients (inpatient or outpatient). In addition, many hospitals compete with commercial clinical laboratories for outreach (non-hospital patients) testing. Hospitals may seek to leverage their relationships with community clinicians and encourage the clinicians to send their outreach testing to the hospital's laboratory. As a result of this affiliation between hospitals and community clinicians, we compete against hospital-affiliated laboratories primarily based on quality and scope of service as well as pricing. In addition, hospitals that own physician practices may require the practices to refer testing to the hospital's laboratory. In recent years, there has been a trend of hospitals acquiring physician practices, increasing the percentage of physician practices owned by hospitals. Increased hospital ownership of physician practices may enhance clinician ties to hospital-affiliated laboratories and may strengthen their competitive position. The formation of ACOs and IDNs, and their approach to contracts with healthcare providers, in addition to the impact of informatics, also may increase competition to provide diagnostic information services.

The diagnostic information services industry also is faced with changing technology and new product introductions. Competitors may compete using advanced technology, including technology that enables more convenient or cost-effective testing. Competitors also may offer testing to be performed outside of a commercial clinical laboratory, such as (1) point-of-care testing that can be performed by physicians in their offices; (2) advanced testing that can be performed by hospitals in their own laboratories; and (3) home testing that can be carried out without requiring the services of outside providers.

Government payers, such as Medicare and Medicaid, have taken steps to reduce the utilization and reimbursement of healthcare services, including clinical testing services.

We face efforts by government payers to reduce utilization of and reimbursement for diagnostic information services. We expect efforts to reduce reimbursements, to impose more stringent cost controls and to reduce utilization of clinical test services will continue.

From time to time, Congress has legislated reductions in, or frozen updates to, the Medicare Clinical Laboratory Fee Schedule. In addition, CMS has adopted policies limiting or excluding coverage for clinical tests that we perform. We also provide physician services that are reimbursed by Medicare under a physician fee schedule, which is subject to adjustment on an annual basis. In recent years, reductions in the Medicare Physician Fee Schedule for anatomic pathology services adversely impacted our business relative to the business of some of our competitors whose anatomic pathology business was not as sizable as ours. Medicaid reimbursement varies by state and is subject to administrative and billing requirements and budget pressures. The ACA includes further provisions that are designed to control utilization and payment levels.

In addition, over the last several years, the federal government has continued to expand its contracts with private health insurance plans for Medicare beneficiaries, called “Medicare Advantage” programs, and has encouraged such beneficiaries to switch from the traditional programs to the private programs. There has been continued growth of health insurance plans offering Medicare Advantage programs, and of beneficiary enrollment in these programs. Also, states have mandated that Medicaid beneficiaries enroll in private managed care arrangements. Recently, state budget pressures have encouraged states to consider several courses of action that may impact our business, such as delaying payments, reducing reimbursement, restricting coverage eligibility, denying claims and service coverage restrictions.

From time to time, the federal government has considered whether competitive bidding could be used to provide clinical testing services for Medicare beneficiaries at attractive rates while maintaining quality and access to care. Congress

periodically considers cost-saving initiatives. These initiatives have included coinsurance for clinical testing services, co-payments for clinical testing and further laboratory fee schedule reductions.

PAMA is impacting the diagnostic information services industry. Pursuant to this legislation, CMS has revised the Medicare Clinical Laboratory Fee Schedule for 2018, 2019 and 2020. Under the revised Medicare Clinical Laboratory Fee Schedule, reimbursement for clinical laboratory testing is scheduled to be reduced in 2018, 2019 and 2020. PAMA calls for further revision of the Medicare Clinical Laboratory Fee Schedule for years after 2020, based on future surveys of market rates; further reduction in reimbursement may result from such revisions.

Health plans and other third parties have taken steps to reduce the utilization and reimbursement of health services, including clinical testing services.

We face efforts by non-governmental third-party payers, including health plans, to reduce utilization of and reimbursement for clinical testing services. For example, since the passage of ACA, there is increased market activity regarding alternative payment models, including bundled payment models. We expect continuing efforts by third-party payers, including in their rules, practices and policies, to reduce reimbursements, to impose more stringent cost controls and to reduce utilization of clinical testing services. ACOs and IDNs also may undertake efforts to reduce utilization of, or reimbursement for, diagnostic information services.

The healthcare industry has experienced a trend of consolidation among health insurance plans, resulting in fewer but larger insurance plans with significant bargaining power to negotiate fee arrangements with healthcare providers, including clinical testing providers. These health plans, and independent physician associations, may demand that clinical testing providers accept discounted fee structures or assume all or a portion of the financial risk associated with providing testing services to their members through capitated payment arrangements. In addition, some health plans have been willing to limit the PPO or POS laboratory network to only a single national laboratory to obtain improved fee-for-service pricing; we may cease to be a contracted provider to a health plan. Some health plans also are reviewing test coding, evaluating coverage decisions and requiring preauthorization of certain testing. There are also an increasing number of patients enrolling in consumer driven products and high deductible plans that involve greater patient cost-sharing.

The increased consolidation among health plans also has increased pricing transparency and bargaining power and the potential adverse impact of ceasing to be a contracted provider with any such insurer. The ACA included provisions, including regarding the creation of healthcare exchanges, that may encourage health insurance plans to increase exclusive contracting.

Government payers and third parties, including health plans, may not recognize the value of, or compensate or reimburse us for, new and innovative solutions.

Government payers and third parties, including health plans, are taking steps to reduce utilization of, and reimbursement for, some new and innovative healthcare solutions, including new tests and other solutions that we may offer.

In 2017, CMS issued a draft national coverage policy for next-generation sequencing cancer panels. The draft policy, were it finalized without change, would effect a *de facto* requirement that each laboratory test using next generation sequencing technology would need to be approved or cleared by the FDA before it is covered by Medicare. Third parties, including health plans, have not announced any change in approach to coverage for next-generation sequencing cancer panels.

The American Medical Association CPT® Editorial Panel is continuing its process of establishing new billing codes to replace codes that describe procedures used in performing molecular testing and toxicology testing. The adoption of these codes on certain occasions has led, and could continue to lead, to limited coverage decisions, payment denials or new procedures or conditions for payment. Payment levels for many new codes remain largely unresolved and healthcare providers continue to address implementation of the new codes.

These steps may discourage innovation and access to innovative solutions that we may offer.

Our business could be negatively affected if we are unable to continue to improve our efficiency.

It is important that we continue to improve our efficiency to enable us to mitigate the impact on our profitability of steps taken by government payers and health insurers to reduce the utilization and reimbursement of healthcare services, including diagnostic information services.

Business development activities are inherently risky, and integrating our operations with businesses we acquire may be difficult.

We plan selectively to enhance our business from time to time through business development activities, such as acquisitions, licensing, investments and alliances. However, these plans are subject to the availability of appropriate opportunities and competition from other companies seeking similar opportunities. Moreover, the success of any such effort may be affected by a number of factors, including our ability to properly assess and value the potential business opportunity, and to integrate it into our business. The success of our strategic alliances depends not only on our contributions and capabilities, but also on the property, resources, efforts and skills contributed by our strategic partners. Further, disputes may arise with strategic partners, due to conflicting priorities or conflicts of interests.

Each acquisition involves the integration of a separate company that has different systems, processes, policies and cultures. Integration of acquisitions involves a number of risks including the diversion of management's attention to the assimilation of the operations of businesses we have acquired, difficulties in the integration of operations and systems and the realization of potential operating synergies, the assimilation and retention of the personnel of the acquired companies, challenges in retaining the customers of the combined businesses, and potential adverse effects on operating results. The process of combining companies may be disruptive to our businesses and may cause an interruption of, or a loss of momentum in, such businesses as a result of the following difficulties, among others:

- loss of key customers or employees;
- difficulty in standardizing information and other systems;
- difficulty in consolidating facilities and infrastructure;
- failure to maintain the quality or timeliness of services that our Company has historically provided;
- diversion of management's attention from the day-to-day business of our Company as a result of the need to deal with the foregoing disruptions and difficulties; and
- the added costs of dealing with such disruptions.

If we are unable successfully to integrate strategic acquisitions in a timely manner, our business and our growth strategies could be negatively affected. Even if we are able to successfully complete the integration of the operations of other companies or businesses we may acquire in the future, we may not be able to realize all or any of the benefits that we expect to result from such integration, either in monetary terms or in a timely manner.

We are subject to numerous legal and regulatory requirements governing our activities, and we may face substantial fines and penalties, and our business activities may be impacted, if we fail to comply.

Our business is subject to or impacted by extensive and frequently changing laws and regulations in the United States (including at both the federal and state levels) and the other jurisdictions in which we engage in business. While we seek to conduct our business in compliance with all applicable laws, many of the laws and regulations applicable to us are vague or indefinite and have not been interpreted by the courts, including many of those relating to:

- billing and reimbursement of clinical testing;
- certification or licensure of clinical laboratories;
- the anti-self-referral and anti-kickback laws and regulations;
- the laws and regulations administered by the FDA;
- the corporate practice of medicine;
- operational, personnel and quality requirements intended to ensure that clinical testing services are accurate, reliable and timely;
- physician fee splitting;
- relationships with physicians and hospitals;
- safety and health of laboratory employees; and
- handling, transportation and disposal of medical specimens, infectious and hazardous waste and radioactive materials.

These laws and regulations may be interpreted or applied by a prosecutorial, regulatory or judicial authority in a manner that could require us to make changes in our operations, including our pricing and/or billing practices. We may not be able to maintain, renew or secure required permits, licenses or any other regulatory approvals needed to operate our business or commercialize our services. If we fail to comply with applicable laws and regulations, or if we fail to maintain, renew or obtain necessary permits, licenses and approvals, we could suffer civil and criminal penalties, fines, exclusion from participation in governmental healthcare programs and the loss of various licenses, certificates and authorizations necessary to operate our

business, as well as incur additional liabilities from third-party claims. If any of the foregoing were to occur, our reputation could be damaged and important business relationships with third parties could be adversely affected.

We regularly receive requests for information, and occasionally subpoenas, from governmental authorities. We also are subject from time to time to *qui tam* claims brought by former employees or other "whistleblowers." The federal and state governments continue aggressive enforcement efforts against perceived healthcare fraud. Legislative provisions relating to healthcare fraud and abuse provide government enforcement personnel substantial funding, powers, penalties and remedies to pursue suspected cases of fraud and abuse. In addition, the government has substantial leverage in negotiating settlements since the amount of potential damages far exceeds the rates at which we are reimbursed for our services, and the government has the remedy of excluding a non-compliant provider from participation in the Medicare and Medicaid programs. Regardless of merit or eventual outcome, these types of investigations and related litigation can result in:

- diversion of management time and attention;
- expenditure of large amounts of cash on legal fees, costs and payment of damages;
- limitations on our ability to continue some of our operations;
- enforcement actions, fines and penalties or the assertion of private litigation claims and damages;
- decreased demand for our services; and/or
- injury to our reputation.

Although we believe that we are in compliance, in all material respects, with applicable laws and regulations, there can be no assurance that a regulatory agency or tribunal would not reach a different conclusion. Moreover, even when an investigation is resolved favorably, the process may be time-consuming and the legal costs and diversion of management focus may be extensive.

Changes in applicable laws and regulations may result in existing practices becoming more restricted, or subject our existing or proposed services to additional costs, delay, modification, withdrawal or reconsideration. Such changes also could require us to modify our business objectives.

Our business could be adversely impacted by the FDA's approach to regulation.

The FDA has regulatory responsibility over, among other areas, instruments, software, test kits, reagents and other devices used by clinical laboratories to perform diagnostic testing in the U.S. A number of tests we develop internally are offered as LDTs. The FDA has claimed regulatory authority over all LDTs, but has stated that it exercised enforcement discretion with regard to most LDTs performed by high complexity CLIA-certified laboratories.

Pursuant to the 21st Century Cures Act, the FDA has issued guidance regarding the regulation of clinical decision support software, which may be used in, or in connection with, LDTs. The guidance has created uncertainty regarding whether FDA approval of certain tests is required.

In 2017, the FDA published a "Discussion Document" providing its views on legislative alternatives to regulate LDTs. New legislation could significantly impact the clinical laboratory testing business, including by increasing or modifying the regulation of LDTs, hindering our ability to develop and market new services, causing an increase in the cost of our services, delaying our ability to introduce new tests or hindering our ability to perform testing.

Failure to accurately bill for our services, or to comply with applicable laws relating to government healthcare programs, could have a material adverse effect on our business.

Billing for diagnostic information services is complex and subject to extensive and non-uniform rules and administrative requirements. Depending on the billing arrangement and applicable law, we bill various payers, such as patients, insurance companies, Medicare, Medicaid, clinicians, hospitals and employer groups. The majority of billing and related operations for our Company are being provided by a third party under the Company's oversight. Failure to accurately bill for our services could have a material adverse effect on our business. In addition, failure to comply with applicable laws relating to billing government healthcare programs may result in various consequences, including: (1) exclusion from participation in Medicare/Medicaid programs; (2) asset forfeitures; (3) civil and criminal fines and penalties; and (4) the loss of various licenses, certificates and authorizations necessary to operate our business.

Failure in our information technology systems, including failures resulting from our systems conversions, could disrupt our operations and cause the loss of confidential information, customers and business opportunities or otherwise adversely impact our business.

IT systems are used extensively in virtually all aspects of our business, including clinical testing, test reporting, billing, customer service, logistics and management of medical data. Our success depends, in part, on the continued and uninterrupted performance of our IT systems. IT systems may be vulnerable to damage, disruptions and shutdown from a variety of sources, including telecommunications or network failures, system conversion or standardization initiatives, human acts and natural disasters.

Despite the security measures we have implemented, our IT systems may be subject to unauthorized tampering, cyber attack or other security breach.

Unauthorized persons may seek to obtain intellectual property and other confidential information that we house on our IT systems. In December 2016, we reported that an internet application on our IT network had been the target of an external cyber attack, resulting in the theft of certain patient data. The accessed data did not include Social Security numbers, credit card information, or insurance and other financial information, and there is no indication that patient data has been misused in any way. When the intrusion was discovered, we immediately took steps to stop any further unauthorized activity. We may be subject to litigation and governmental investigation, and may suffer reputational damage, as a result of the data breach, which could have an adverse impact on our business.

In addition to the data breach reported in December 2016, our IT systems from time to time have experienced other attacks, viruses, attempted intrusions or similar problems, but each was mitigated. Although none materially disrupted, interrupted, damaged or shutdown the Company's IT systems, materially disrupted the Company's performance of its business or, to the Company's knowledge, resulted in material unauthorized access to data, there can be no assurance that we will be able to similarly mitigate future attacks, viruses or intrusions.

We have taken, and continue to take, precautionary measures to reduce the risk of, better detect and respond to future cyber threats, and prevent or minimize vulnerabilities in our IT systems, including the loss or theft of intellectual property and other confidential information that we house on our systems. In addition, we collaborate with government agencies regarding potential cyber threats and have worked with a leading cyber security firm to evaluate and strengthen our systems. However, cyber threats are constantly evolving, thereby increasing the difficulty of detecting and successfully defending against them. Breaches of our network or data security could disrupt the security of our internal systems and business applications, impair our ability to provide services to our customers, compromise intellectual property or confidential information or otherwise adversely impact our business. There can be no assurances that our precautionary measures will prevent or successfully defend against cyber threats that could have a significant impact on our business.

Failure to develop, or acquire licenses for, new tests, technology and services could negatively impact our testing volume and revenues.

The diagnostic information services industry is faced with changing technology and new product introductions. Other companies or individuals, including our competitors, may obtain patents or other property rights that would prevent, limit or interfere with our ability to develop, perform or sell our solutions or operate our business or increase our costs. In addition, they could introduce new tests, technologies or services that may result in a decrease in the demand for our services or cause us to reduce the prices of our services. Our success in continuing to introduce new solutions, technology and services will depend, in part, on our ability to license new and improved technologies on favorable terms. We may be unable to develop or introduce new solutions or services. We also may be unable to continue to negotiate acceptable licensing arrangements, and arrangements that we do conclude may not yield commercially successful clinical tests. If we are unable to license these testing methods at competitive rates, our research and development costs may increase as a result. In addition, if we are unable to develop and introduce, or license, new solutions, technology and services to expand our advanced testing capabilities, our services may become outdated when compared with our competition.

We may be unable to obtain, maintain or enforce our intellectual property rights and may be subject to intellectual property litigation that could adversely impact our business.

We may be unable to obtain or maintain adequate patent or other proprietary rights for our solutions or services or to successfully enforce our proprietary rights. In addition, we may be subject to intellectual property litigation and we may be found to infringe on the proprietary rights of others, which could force us to do one or more of the following:

- cease developing, performing or selling solutions or services that incorporate the challenged intellectual property;
- obtain and pay for licenses from the holder of the infringed intellectual property right;
- redesign or re-engineer our tests;
- change our business processes; or
- pay substantial damages, court costs and attorneys' fees, including potentially increased damages for any infringement held to be willful.

The development of new, more cost-effective solutions that can be performed by our customers or by patients, and the continued internalization of testing by hospitals or physicians, could negatively impact our testing volume and revenues.

The diagnostic information services industry is faced with changing technology and new product introductions, including technology that enables more convenient or cost-effective testing. Competitors also may offer testing to be performed outside of a commercial clinical laboratory, such as (1) point-of-care testing that can be performed by clinicians in their offices; (2) complex testing that can be performed by hospitals in their own laboratories; and (3) home testing that can be carried out without requiring the services of outside providers. Advances in technology also may lead to the need for less frequent testing. Further, diagnostic tests approved or cleared by the FDA for home use are automatically deemed to be "waived" tests under CLIA and may be performed by patients in their homes; test kit manufacturers could seek to increase sales to patients of such test kits.

Some traditional customers for anatomic pathology services, including specialty physicians that generate biopsies through surgical procedures, such as dermatologists, gastroenterologists, urologists and oncologists, have added in-office histology labs or have retained pathologists to read cases on site. Hospitals also are internalizing clinical laboratory testing, including some non-routine and advanced testing. Internalization of testing may reduce demand for services previously referred to outside service providers, such as the Company.

Our outstanding debt may impair our financial and operating flexibility.

As of December 31, 2017, we had approximately $3.8 billion of debt outstanding. Except for operating leases, we do not have any off-balance sheet financing arrangements in place or available. Our debt agreements contain various restrictive covenants. These restrictions could limit our ability to use operating cash flow in other areas of our business because we must use a portion of these funds to make principal and interest payments on our debt. We have obtained ratings on our debt from Standard and Poor's, Moody's Investor Services and Fitch Ratings. There can be no assurance that any rating so assigned will remain for any given period of time or that a rating will not be lowered or withdrawn entirely by a rating agency if in that rating agency's judgment future circumstances relating to the basis of the rating, such as adverse changes in our Company or our industry, so warrant. If such ratings are lowered, our borrowing costs could increase. Changes in our credit ratings, however, do not require repayment or acceleration of any of our debt.

We or our subsidiaries may incur additional indebtedness in the future. Our ability to make principal and interest payments will depend on our ability to generate cash in the future. If we incur additional debt, a greater portion of our cash flows may be needed to satisfy our debt service obligations and if we do not generate sufficient cash to meet our debt service requirements, we may need to seek additional financing. In that case, it may be more difficult, or we may be unable, to obtain financing on terms that are acceptable to us. As a result, we would be more vulnerable to general adverse economic, industry and capital markets conditions as well as the other risks associated with indebtedness.

Our ability to attract and retain qualified employees is critical to the success of our business and the failure to do so may materially adversely affect our performance.

Our people are a critical resource. The supply of qualified personnel may be limited and competition for qualified employees is strong. We may lose, or fail to attract and retain, key management personnel, or qualified skilled technical or professional employees (*e.g.*, pathologists).

Failure to establish, and perform to, appropriate quality standards to assure that the appropriate standard of quality is observed in the performance of our diagnostic information services could adversely affect the results of our operations and adversely impact our reputation.

The provision of diagnostic information services involves certain inherent risks. The services that we provide are intended to provide information for healthcare providers in providing patient care. Therefore, users of our services may have a greater sensitivity to errors than the users of services or products that are intended for other purposes.

Negligence in performing our services can lead to injury or other adverse events. We may be sued under physician liability or other liability law for acts or omissions by our pathologists, laboratory personnel and hospital employees who are under the supervision of our hospital-based pathologists. We are subject to the attendant risk of substantial damages awards and risk to our reputation.

Our operations and reputation may be impaired if we do not comply with privacy laws or information security policies.

In our business, we generate or maintain sensitive information, such as patient data and other personal information. If we do not adequately safeguard that information (including in compliance with the requirements of the European Union General Data Protection Regulation beginning in May 2018) and it were to become available to persons or entities that should not have access to it, our business could be impaired, our reputation could suffer and we could be subject to fines, penalties and litigation. We may be subject to litigation and governmental investigation, and may suffer reputational damage, as a result of a data breach, which could have an adverse impact on our business.

We are subject to numerous political, legal, operational and other risks as a result of our international operations which could impact our business in many ways.

Although we conduct most of our business in the United States, our international operations increase our exposure to the inherent risks of doing business in international markets. Depending on the market, these risks include without limitation:

- changes in the local economic environment;
- political instability;
- social changes;
- intellectual property legal protections and remedies;
- trade regulations;
- procedures and actions affecting approval, production, pricing, reimbursement and marketing of services;
- exchange controls;
- attracting and retaining qualified employees;
- local market practices;
- export and import controls;
- weak legal systems which may affect our ability to enforce contractual rights;
- changes in local laws or regulations; and
- potentially longer payment and collection cycles.

International operations also require us to devote significant management resources to implement our controls and systems in new markets, to comply with the U.S. Foreign Corrupt Practices Act and similar anti-corruption laws in non-U.S. jurisdictions and to overcome challenges based on differing languages and cultures.

Our operations may be adversely impacted by the effects of natural disasters such as hurricanes and earthquakes, health pandemics, hostilities or acts of terrorism and other criminal activities.

Our operations may be adversely impacted by the effects of natural disasters such as hurricanes and earthquakes, health pandemics, hostilities or acts of terrorism or other criminal activities. Such events may result in a temporary decline in the number of patients who seek clinical testing services or in our employees' ability to perform their job duties. In addition, such events may temporarily interrupt our ability to transport specimens, to receive materials from our suppliers or otherwise to provide our services.

Adverse results in material litigation could have an adverse financial impact and an adverse impact on our client base and reputation.

We are involved in various legal proceedings arising in the ordinary course of business including, among other things, disputes as to intellectual property, professional liability and employee-related matters, as well as inquiries from governmental agencies and Medicare or Medicaid carriers. Some proceedings against us involve claims that are substantial in amount and could divert management's attention from operations. The proceedings also may result in substantial monetary damages.

CAUTIONARY FACTORS THAT MAY AFFECT FUTURE RESULTS

Some statements and disclosures in this document are forward-looking statements. Forward-looking statements include all statements that do not relate solely to historical or current facts and can be identified by the use of words such as "may," "believe," "will," "expect," "project," "estimate," "anticipate," "plan" or "continue." These forward-looking statements are based on our current plans and expectations and are subject to a number of risks and uncertainties that could cause our plans and expectations, including actual results, to differ materially from the forward-looking statements. Investors are cautioned not to unduly rely on such forward-looking statements when evaluating the information presented in this document. The following important factors could cause our actual financial results to differ materially from those projected, forecasted or estimated by us in forward-looking statements:

(a) Heightened competition from commercial clinical testing companies, hospitals, physicians and others.
(b) Increased pricing pressure from customers and payers.
(c) A decline in economic conditions.
(d) Impact of changes in payment mix, including any shift from fee-for-service to discounted, capitated or bundled fee arrangements.
(e) Adverse actions by government or other third-party payers, including healthcare reform that focuses on reducing healthcare costs but does not recognize the value and importance to healthcare of clinical testing or innovative solutions, unilateral reduction of fee schedules payable to us, competitive bidding, and an increase in the practice of negotiating for exclusive arrangements that involve aggressively priced capitated or fee-for-service payments by health insurers or other payers.
(f) The impact upon our testing volume and collected revenue or general or administrative expenses resulting from our compliance with Medicare and Medicaid administrative policies and requirements of third-party payers. These include:
    (1) the requirements of payors to provide diagnosis codes for many commonly ordered tests and the possibility that third-party payers will increasingly adopt similar requirements;
    (2) inability to obtain from patients a valid advance beneficiary notice form for tests that cannot be billed without prior receipt of the form;
    (3) increased challenges in operating as a non-contracted provider with respect to health plans;
    (4) the impact of additional or expanded limited coverage policies and limits on the allowable number of test units; and
    (5) the impact of increased prior authorization programs.
(g) Adverse results from pending or future government investigations, lawsuits or private actions. These include, in particular, monetary damages, loss or suspension of licenses, and/or suspension or exclusion from the Medicare and Medicaid programs and/or criminal penalties.
(h) Failure to efficiently integrate acquired businesses and to manage the costs related to any such integration, or to retain key technical, professional or management personnel.
(i) Denial, suspension or revocation of CLIA certification or other licenses for any of our clinical laboratories under the CLIA standards, revocation or suspension of the right to bill the Medicare and Medicaid programs or other adverse regulatory actions by federal, state and local agencies.
(j) Changes in and complexity of federal, state or local laws or regulations, including changes that result in new or increased federal or state regulation of commercial clinical laboratories, tests developed by commercial clinical laboratories or other products or services that we offer or activities in which we are engaged, including regulation by the FDA.
(k) Inability to achieve expected benefits from our acquisitions of other businesses.
(l) Inability to achieve additional benefits from our business performance tools and efficiency initiatives.
(m) Adverse publicity and news coverage about the diagnostic information services industry or us.
(n) Computer or other IT system or IT security failures that affect our ability to perform testing, report test results or properly bill customers, or result in the disclosure of confidential information, including potential failures resulting from implementing common IT systems and other system conversions, telecommunications failures, malicious human acts (such as electronic break-ins or computer viruses) or natural disasters.
(o) Development of technologies that substantially alter the practice of clinical testing, including technology changes that lead to the development of more convenient or cost-effective testing, or testing to be performed outside of a commercial clinical laboratory, such as (1) point-of-care testing that can be performed by physicians in their offices, (2) advanced testing that can be performed by hospitals in their own laboratories or (3) home testing that can be carried out without requiring the services of clinical laboratories.
(p) Negative developments regarding intellectual property and other property rights that could prevent, limit or interfere with our ability to develop, perform or sell our tests or operate our business. These include:
    (1) Issuance of patents or other property rights to our competitors or others; and

(2) Inability to obtain or maintain adequate patent or other proprietary rights for our products and services or to successfully enforce our proprietary rights.

(q) Development of tests by our competitors or others which we may not be able to license, or usage of our technology or similar technologies or our trade secrets or other intellectual property by competitors, any of which could negatively affect our competitive position.

(r) Regulatory delay or inability to commercialize newly developed or licensed tests or technologies or to obtain appropriate reimbursements for such tests.

(s) Failure to properly bill for our services or to obtain appropriate payments for services that we do bill.

(t) Changes in interest rates and changes in our credit ratings from Standard & Poor's, Moody's Investor Services or Fitch Ratings causing an unfavorable impact on our cost of and access to capital.

(u) Inability to hire or retain qualified or key senior management personnel.

(v) Terrorist and other criminal activities, hurricanes, earthquakes or other natural disasters, and health pandemics, which could affect our customers, transportation or systems, or our facilities, and for which insurance may not adequately reimburse us.

(w) Difficulties and uncertainties in the discovery, development, regulatory environment and/or marketing of new services or solutions or new uses of existing tests.

(x) Failure to adapt to changes in the healthcare system and healthcare delivery, including those stemming from the ACA (or its repeal, amendment or replacement), PAMA, trends in utilization of the healthcare system and increased patient financial responsibility for services.

(y) Results and consequences of governmental inquiries.

(z) Difficulty in implementing, or lack of success with, our strategic plan.

(aa) The impact of informatics on our industry and the ability of our Company to adapt to that impact.

(bb) Political, legal, operational and other changes and challenges in international markets.

Item 1B. Unresolved Staff Comments

There are no unresolved SEC comments that require disclosure.

Item 2. Properties

Our executive offices are located in Secaucus, New Jersey. We maintain clinical testing laboratories throughout the continental United States; in several instances a joint venture of which we are a partner maintains the laboratory. We also maintain offices, data centers, call centers, distribution centers and patient service centers at locations throughout the United States. In addition, we maintain offices, patient service centers and clinical laboratories in locations outside the United States, including in Puerto Rico, Mexico, India and Ireland. Our properties that are not owned are leased on terms and for durations that are reflective of commercial standards in the communities where these properties are located. We believe that, in general, our facilities are suitable and adequate for our current and anticipated future levels of operation and are adequately maintained. We believe that if we were unable to renew a lease on any of our facilities, we could find alternative space at competitive market rates and relocate our operations to such new location without material disruption to our business. Several of our principal facilities are highlighted below.

Location	Leased or Owned
Sacramento, California (laboratory)	Leased
West Hills, California (laboratory)	Leased
San Juan Capistrano, California (laboratory)	Owned
Tampa, Florida (laboratory)	Owned
Atlanta, Georgia (laboratory)	Owned
Chicago, Illinois (2) (laboratories)	One owned, one leased
Marlborough, Massachusetts (laboratories)	Leased
Baltimore, Maryland (laboratory)	Owned
Teterboro, New Jersey (laboratory)	Owned
Philadelphia, Pennsylvania (laboratory)	Leased
Dallas, Texas (laboratory)	Leased
Chantilly, Virginia (laboratory)	Leased
Lenexa, Kansas (laboratory)	Owned
Greensboro, North Carolina (laboratory)	Leased
Lewisville, Texas (laboratory)	Leased
Cleveland, Ohio (laboratory)	Leased

Item 3. Legal Proceedings

See Note 17 to the Consolidated Financial Statements (Part II, Item 8 of this Report) for information regarding legal proceedings in which we are involved.

Item 4. Mine Safety Disclosures

Not applicable.

PART II

Item 5. Market for Registrant's Common Stock, Related Stockholder Matters and Issuer Purchases of Equity Securities

Our common stock is listed and traded on the New York Stock Exchange under the symbol "DGX." As of February 1, 2018, we had approximately 2,700 record holders of our common stock; we believe that the number of beneficial holders of our common stock exceeds the number of record holders. The following table sets forth, for the periods indicated, the high and low sales price per share as reported on the New York Stock Exchange Consolidated Tape and dividend information.

	Common Stock Market Price		Dividends Declared
	High	Low	
2016			
First Quarter	$ 72.64	$ 59.66	$ 0.40
Second Quarter	81.41	70.92	0.40
Third Quarter	86.85	80.27	0.40
Fourth Quarter	93.57	79.12	0.45
2017			
First Quarter	$ 100.00	$ 90.13	$ 0.45
Second Quarter	111.87	96.91	0.45
Third Quarter	112.97	91.67	0.45
Fourth Quarter	102.62	90.10	0.45

We currently expect that comparable cash dividends will continue to be paid in the future.

In January 2018, we declared a common stock dividend of $0.50 per common share, payable in April 2018.

The table below sets forth the information with respect to purchases made by or on behalf of the Company of its common stock during the fourth quarter of 2017.

ISSUER PURCHASES OF EQUITY SECURITIES

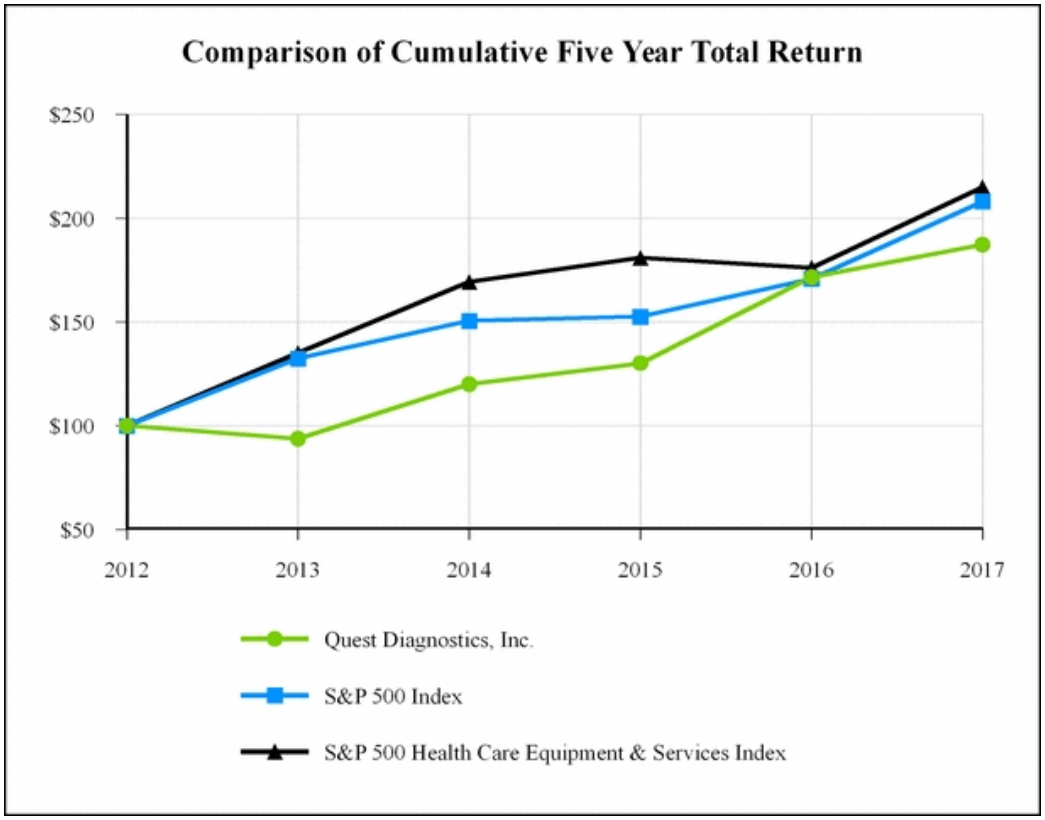
Period	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Approximate Dollar Value of Shares that May Yet Be Purchased Under the Plans or Programs (in thousands)
October 1, 2017 – October 31, 2017				
Share Repurchase Program (A)	41,965	$ 95.32	41,965	$ 1,013,116
Employee Transactions (B)	936	$ 91.20	N/A	N/A
November 1, 2017 – November 30, 2017				
Share Repurchase Program (A)	860,463	$ 92.97	860,463	$ 933,116
Employee Transactions (B)	179	$ 93.75	N/A	N/A
December 1, 2017 – December 31, 2017				
Share Repurchase Program (A)	162,496	$ 98.46	162,496	$ 917,117
Employee Transactions (B)	763	$ 96.15	N/A	N/A
Total				
Share Repurchase Program (A)	1,064,924	$ 93.90	1,064,924	$ 917,117
Employee Transactions (B)	1,878	$ 93.45	N/A	N/A

(A) Since the share repurchase program's inception in May 2003, our Board of Directors has authorized $8.0 billion of share repurchases of our common stock through December 31, 2017. The share repurchase authority has no set expiration or termination date.

(B) Includes: (1) shares delivered or attested to in satisfaction of the exercise price and/or tax withholding obligations by holders of stock options (granted under the Company's Amended and Restated Employee Long-Term Incentive Plan) who exercised options; and (2) shares withheld (under the terms of grants under the Long-Term Incentive Plan) to offset tax withholding obligations that occur upon the delivery of outstanding common shares underlying restricted share units and performance share units.

Performance Graph

Set forth below is a line graph comparing the cumulative total shareholder return on Quest Diagnostics' common stock since December 31, 2012 based on the market price of the Company's common stock and assuming reinvestment of dividends, with the cumulative total shareholder return of companies on the Standard & Poor's 500 Stock Index and the S&P 500 Healthcare Equipment & Services Index.



Date	Closing DGX Price	Total Shareholder Return			Performance Graph Values		
		DGX	S&P 500	S&P 500 H.C.	DGX	S&P 500	S&P 500 H.C.
12/31/2013	$53.54	(6.24)%	32.39%	35.05 %	$ 93.76	$ 132.39	$ 135.05
12/31/2014	$67.06	28.06 %	13.69%	25.34 %	$ 120.06	$ 150.51	$ 169.27
12/31/2015	$71.14	8.35 %	1.38%	6.89 %	$ 130.09	$ 152.59	$ 180.93
12/30/2016	$91.90	31.89 %	11.96%	(2.69)%	$ 171.58	$ 170.84	$ 176.06
12/29/2017	$98.49	9.16 %	21.83%	22.08 %	$ 187.30	$ 208.14	$ 214.93

Item 6. Selected Financial Data

See page 54.

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

See page 59.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

See Management's Discussion and Analysis of Financial Condition and Results of Operations.

Item 8. Financial Statements and Supplementary Data

See Item 15(a)1 and Item 15(a)2.

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

None.

Item 9A. Controls and Procedures

Conclusion Regarding Effectiveness of Disclosure Controls and Procedures

Under the supervision and with the participation of our management, including our Chief Executive Officer and our Chief Financial Officer, we have evaluated the effectiveness of our disclosure controls and procedures (as defined under Rules 13a-15(e) and 15d-15(e) of the Securities Exchange Act of 1934, as amended). Based upon that evaluation, our Chief Executive Officer and our Chief Financial Officer concluded that our disclosure controls and procedures were effective as of the end of the period covered by this annual report.

Report of Management on Internal Control Over Financial Reporting

See page 78.

Changes in Internal Control

During the fourth quarter of 2017, there were no changes in our internal control over financial reporting (as defined in Rule 13a-15(f) under the Securities Exchange Act of 1934, as amended) that materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information

None.

PART III

Item 10. Directors, Executive Officers and Corporate Governance

Our Code of Ethics applies to all employees, executive officers and directors, including our Chief Executive Officer, Chief Financial Officer and Corporate Controller. You can find our Code of Ethics on our corporate governance website, *www.QuestDiagnostics.com/governance*. We will post any amendments to the Code of Ethics, and any waivers that are required to be disclosed by the rules of either the SEC or the New York Stock Exchange, on our website.

Information regarding the Company's executive officers is contained in Part I, Item 1 of this Report under “Executive Officers of the Company.” Information regarding the directors and executive officers of the Company appearing in our Proxy Statement to be filed by April 30, 2018 (“Proxy Statement”) under the captions “Proposal No. 1 - Election of Directors,” “Director Independence,” “Board Committees” and "Section 16(a) Beneficial Ownership Reporting Compliance" is incorporated by reference herein.

Item 11. Executive Compensation

Information appearing in our Proxy Statement under the captions “2017 Director Compensation Table,” “Compensation Discussion and Analysis,” “Information Regarding Executive Compensation” and “Compensation Committee Report” is incorporated by reference herein.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholders' Matters

Information regarding security ownership of certain beneficial owners and management appearing in our Proxy Statement under the captions “Stock Ownership Information” and "Equity Compensation Plan Information" is incorporated by reference herein.

Item 13. Certain Relationships and Related Transactions, and Director Independence

Information regarding certain relationships and related transactions appearing in our Proxy Statement under the captions “Related Person Transactions” and “Director Independence” is incorporated by reference herein.

Item 14. Principal Accounting Fees and Services

Information regarding principal accountant fees and services appearing in our Proxy Statement under the caption “Audit" (excluding the information under the subheading “Audit and Finance Committee Report”) is incorporated by reference herein.

PART IV

Item 15. Exhibits, Financial Statement Schedules

(a) Documents filed as part of this Report.

1. Index to financial statements and supplementary data filed as part of this Report.

2. Financial Statement Schedule.

3. Exhibits

An exhibit index has been filed as part of this Report beginning on page E-1 and is incorporated herein by reference.

(b) Exhibits filed as part of this Report.

An exhibit index has been filed as part of this Report beginning on page E-1 and is incorporated herein by reference.

(c) None.

Item 16. Form 10-K Summary

None.

Signatures

Pursuant to the requirements of Sections 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, on February 23, 2018.

QUEST DIAGNOSTICS INCORPORATED
(Registrant)

By: /s/Stephen H. Rusckowski
Stephen H. Rusckowski
Chairman of the Board, President and Chief Executive Officer

Each individual whose signature appears below constitutes and appoints Michael E. Prevoznik and William J. O'Shaughnessy, Jr., and each of them singly, his or her true and lawful attorneys-in-fact and agents with full power of substitution, 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 on Form 10-K filed 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 and necessary to be done in and about the premises, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all the said attorneys-in-fact and agents or any of them or their or his or her 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 on February 23, 2018.

Signature	Capacity
/s/Stephen H. Rusckowski Stephen H. Rusckowski	Chairman of the Board, President and Chief Executive Officer (Principal Executive Officer)
/s/Mark J. Guinan Mark J. Guinan	Executive Vice President and Chief Financial Officer (Principal Financial Officer)
/s/Robert A. Klug Robert A. Klug	Vice President, Corporate Controller and Chief Accounting Officer (Principal Accounting Officer)
/s/Jenne K. Britell, Ph.D. Jenne K. Britell, Ph.D.	Director
/s/Vicky B. Gregg Vicky B. Gregg	Director
/s/Jeffrey M. Leiden, M.D., Ph. D. Jeffrey M. Leiden, M.D., Ph. D.	Director
/s/Timothy L. Main Timothy L. Main	Director
/s/Gary M. Pfeiffer Gary M. Pfeiffer	Director
/s/Timothy M. Ring Timothy M. Ring	Director
/s/Daniel C. Stanzione, Ph.D. Daniel C. Stanzione, Ph.D.	Director
/s/Gail R. Wilensky, Ph.D. Gail R. Wilensky, Ph.D.	Director

SELECTED HISTORICAL FINANCIAL DATA OF OUR COMPANY

The following table summarizes selected historical financial data of our Company and our subsidiaries at the dates and for each of the periods presented. We derived the selected historical financial data for the years 2013 through 2017 from the audited consolidated financial statements of our Company. The selected historical financial data is only a summary and should be read together with the audited consolidated financial statements and related notes of our Company and management's discussion and analysis of financial condition and results of operations included elsewhere in this Annual Report on Form 10-K.

	Year Ended December 31,				
	2017	2016	2015	2014	2013
	(dollars in millions, except per share data)				
Operations Data:	(a) (b) (c)	(a) (d) (e)	(a) (f) (g)	(a) (h) (i)	(a) (j) (k)
Net revenues	$ 7,709	$ 7,515	$ 7,493	$ 7,435	$ 7,146
Operating income	1,165	1,277	1,399	983	1,475
Income from continuing operations	824	696	753	587	848
Income from discontinued operations, net of taxes	—	—	—	5	35
Net income	824	696	753	592	883
Less: Net income attributable to noncontrolling interests	52	51	44	36	34
Net income attributable to Quest Diagnostics	$ 772	$ 645	$ 709	$ 556	$ 849
Amounts attributable to Quest Diagnostics' stockholders:					
Income from continuing operations	$ 772	$ 645	$ 709	$ 551	$ 814
Income from discontinued operations, net of taxes	—	—	—	5	35
Net income	$ 772	$ 645	$ 709	$ 556	$ 849
Earnings per share attributable to Quest Diagnostics' common stockholders - basic:					
Income from continuing operations	$ 5.63	$ 4.58	$ 4.92	$ 3.80	$ 5.35
Income from discontinued operations	—	—	—	0.03	0.23
Net income	$ 5.63	$ 4.58	$ 4.92	$ 3.83	$ 5.58
Earnings per share attributable to Quest Diagnostics' common stockholders - diluted:					
Income from continuing operations	$ 5.50	$ 4.51	$ 4.87	$ 3.78	$ 5.31
Income from discontinued operations	—	—	—	0.03	0.23
Net income	$ 5.50	$ 4.51	$ 4.87	$ 3.81	$ 5.54
Dividends per common share	$ 1.80	$ 1.65	$ 1.52	$ 1.32	$ 1.20

	Year Ended December 31,				
	2017	2016	2015	2014	2013
	(dollars in millions)				
Balance Sheet Data (at end of year):	(a) (b) (c)	(a) (d) (e)	(a) (f) (g)	(a) (h) (i)	(a) (j) (k)
Cash and cash equivalents	$ 137	$ 359	$ 133	$ 192	$ 187
Total assets	10,503	10,100	9,962	9,857	8,930
Long-term debt	3,748	3,728	3,492	3,224	3,102
Total debt	3,784	3,734	3,651	3,742	3,314
Redeemable noncontrolling interest	80	77	70	—	—
Other Data:					
Net cash provided by operating activities	$ 1,175	$ 1,069	$ 821	$ 944	$ 667
Net cash (used in) provided by investing activities	(805)	(152)	(362)	(1,025)	328
Net cash (used in) provided by financing activities	(592)	(691)	(518)	86	(1,121)
Capital expenditures	252	293	263	308	231
Purchases of treasury stock	465	590	224	132	1,037
Dividends paid	247	223	212	187	185

(a) During the third quarter of 2006, we completed the wind down of NID, a test kit manufacturing subsidiary. As a result, the NID operations have been classified as discontinued operations for all periods presented. We will continue to report NID as a discontinued operation until uncertain tax benefits associated with NID are resolved.

(b) On May 1, 2017, we completed the acquisition of the outreach laboratory service business of PeaceHealth Laboratories ("PHL"). On July 14, 2017, we completed the acquisition of Med Fusion, LLC and Clearpoint Diagnostic Laboratories, LLC ("Med Fusion"). On September 28, 2017, we completed the acquisition of the outreach laboratory service businesses of two hospitals of Hartford HealthCare Corporation ("HHC"), The William W. Backus Hospital and The Hospital of Central Connecticut. On December 1, 2017, we completed the acquisition of Cleveland HeartLab, Inc. ("CHL"). On December 7, 2017, we completed the acquisition of certain assets of the clinical and anatomic pathology laboratory business of Shiel Holdings, LLC ("Shiel"). Consolidated operating results for 2017 include the results of operations of PHL, Med Fusion, HHC, CHL and Shiel subsequent to the closing of the applicable acquisition. For further details regarding our acquisitions, see Note 5 to the consolidated financial statements.

(c) Operating income included:
- pre-tax charges of $105 million, primarily associated with systems conversions, integration and workforce reductions incurred in connection with further restructuring and integrating our business; and
- pre-tax charges of $12 million, primarily a result of non-cash asset impairment charges and incremental costs incurred as a result of hurricanes and costs incurred related to certain legal matters.

In addition to the items included in operating income, income from continuing operations included:
- a net pre-tax gain of $2 million, primarily a result of a gain on the sale of an interest in an equity method investment partially offset by non-cash asset impairment charges associated with an investment;
- $1 million of pre-tax restructuring and integration charges associated with our Q^2 Solutions joint venture;
- a provisional estimated income tax benefit of $106 million associated with the Tax Cuts and Jobs Act, including a deferred income tax benefit of $115 million primarily due to the remeasurement of our net deferred tax liabilities and reserves at the new combined federal and state tax rate, partially offset by $9 million of current tax expense primarily due to the mandatory repatriation toll charge on undistributed foreign earnings and profits;
- excess tax benefits associated with stock-based compensation arrangements of $37 million; and
- income tax expense of $3 million primarily a result of recording a valuation allowance against certain net operating loss carryforwards in a geography impacted by hurricanes.

Net cash provided by operating activities benefited from a decrease in tax payments associated with the realization of a $62 million deferred tax benefit.

Net cash used in investing activities included a $25 million release of escrow proceeds received in 2017 associated with the sale of our Focus Diagnostics products business ("Focus Sale").

(d) On February 29, 2016, we completed the acquisition of the outreach laboratory service business of Clinical Laboratory Partners, LLC ("CLP"), a wholly-owned subsidiary of HHC. Consolidated operating results for 2016 include the results of operations of CLP subsequent to the closing of the acquisition. On May 13, 2016, we completed the Focus Sale: our Focus Diagnostics products business has not been classified as a discontinued operation. For further details regarding dispositions, see Note 6 to the consolidated financial statements.

(e) Operating income included:
- a pre-tax gain of $118 million associated with the Focus Sale;
- pre-tax charges of $78 million, primarily associated with systems conversions and integration incurred in connection with further restructuring and integrating our business; and
- a net pre-tax gain of $7 million, primarily a result of a non-taxable gain on an escrow recovery associated with an acquisition, partially offset by costs associated with winding down subsidiaries, non-cash asset impairment charges and costs incurred related to certain legal matters.

In addition to the items included in operating income, income from continuing operations included:
- income tax expense of $84 million associated with the Focus Sale, consisting of $91 million of current income tax expense and a deferred income tax benefit of $7 million;
- $48 million of pre-tax charges on the retirement of debt associated with the March 2016 cash tender offer and the related income tax benefit of $18 million;
- non-cash asset impairment charges of $7 million associated with certain investments;
- $4 million of pre-tax restructuring and integration charges associated with our Q² Solutions joint venture; and
- excess tax benefits associated with stock-based compensation arrangements of $9 million.

For further details regarding our retirement of debt, see Note 13 to the consolidated financial statements.

Net cash provided by operating activities included:
- $47 million of pre-tax cash charges, or $30 million after the related cash tax benefit, on the retirement of debt associated with the March 2016 cash tender offer;
- $54 million of proceeds received from the termination of interest rate swap agreements; and
- $91 million of income taxes paid in connection with the Focus Sale.

For further details regarding our financial instruments, including the termination of interest rate swap agreements, see Note 14 to the consolidated financial statements

Net cash used in investing activities included proceeds from the sale of businesses of $270 million, principally related to the Focus Sale.

(f) On August 3, 2015, we completed the acquisition of MemorialCare Health System's laboratory outreach business ("MemorialCare"). On November 16, 2015, we completed the acquisition of the business assets of Superior Mobile Medics, Inc. ("Superior Mobile Medics"). Consolidated operating results for 2015 include the results of operations of MemorialCare and Superior Mobile Medics subsequent to the closing of the applicable acquisition. In July 2015, we contributed our clinical trials testing business to a newly formed global clinical trials central laboratory services joint venture with IQVIA Holdings Inc., Q² Solutions ("Clinical Trials Contribution"). Our clinical trials testing business was not classified as a discontinued operation.

(g) Operating income included:
- pre-tax gain of $334 million associated with the Clinical Trials Contribution;
- pre-tax charges of $105 million, primarily associated with workforce reductions and professional fees incurred in connection with further restructuring and integrating our business; and
- net pre-tax charges of $33 million primarily associated with non-cash asset impairment charges and other costs associated with winding down our Celera products business and another subsidiary, costs incurred related to certain legal matters and a pre-tax gain of $13 million associated with a decrease in the fair value of the contingent consideration accrual associated with our Summit Health, Inc. ("Summit Health") acquisition.

In addition to the items included in operating income, income from continuing operations included:
- $144 million of pre-tax charges on retirement of debt associated with the March 2015 cash tender offer and the April 2015 redemption and the related income tax benefit of $57 million;
- deferred income tax expense of $145 million associated with the gain on the Clinical Trials Contribution;

- $58 million deferred income tax benefit associated with winding down a subsidiary; and
- $5 million of pre-tax restructuring and integration charges associated with our Q² Solutions joint venture.

Net cash provided by operating activities included:
- $146 million of pre-tax cash charges, or $89 million after the related cash tax benefit, on the retirement of debt associated with the March 2015 cash tender offer and April 2015 redemption;
- payments associated with an additional payroll cycle in 2015; and
- an income tax payment in the third quarter of 2015 associated with certain tax contingencies.

Net cash used in investing activities included a $33 million investment in Q² Solutions.

Net cash used in financing activities included:
- $51 million of deferred acquisition consideration payments, primarily to UMass Memorial Medical Center ("UMass"), related to the business acquisition in 2013; and
- $63 million of proceeds from the sale of a noncontrolling interest in a subsidiary to UMass.

(h) On March 7, 2014, we completed the acquisition of Solstas Lab Partners Group ("Solstas"). On April 18, 2014, we completed the acquisition of Summit Health. On April 16, 2014, we completed the acquisition of the outreach laboratory service operations of Steward Healthcare, LLC ("Steward"). Consolidated operating results for 2014 include the results of operations of Solstas, Summit Health and Steward subsequent to the closing of the applicable acquisition.

(i) Operating income included:
- pre-tax charges of $121 million, primarily associated with workforce reductions and professional fees incurred in connection with further restructuring and integrating our business;
- pre-tax charges of $24 million principally associated with costs related to certain legal matters; and
- pre-tax gain of $9 million associated with a decrease in the fair value of the contingent consideration accrual associated with our Summit Health acquisition.

In addition to the items included in operating income, income from continuing operations included discrete income tax benefits of $44 million associated with the favorable resolution of certain tax contingencies.

(j) On January 2, 2013, we completed the acquisition of the clinical outreach and anatomic pathology businesses of UMass. On May 15, 2013, we completed the acquisition of the toxicology and clinical laboratory business of Advanced Toxicology Network ("ATN") from Concentra, a subsidiary of Humana Inc. On June 22, 2013, we completed the acquisition of certain lab-related clinical outreach service operations of Dignity Health ("Dignity"), a hospital system in California. On October 7, 2013, we completed the acquisition of ConVerge Diagnostic Services, LLC ("ConVerge"), a leading full-service laboratory providing clinical, cytology and anatomic pathology testing services to patients, physicians and hospitals in New England. Consolidated operating results for 2013 include the results of operations of UMass, ATN, Dignity and ConVerge subsequent to the closing of the applicable acquisition. In September 2013, we completed the sale of our Enterix products business, which was not classified as a discontinued operation.

(k) Operating income included:
- pre-tax charges of $115 million, primarily associated with workforce reductions and professional fees incurred in connection with further restructuring and integrating our business;
- pre-tax gain on sale of the ibrutinib royalty rights of $474 million; and
- pre-tax loss of $40 million associated with the sale of the Enterix products business.

Income (loss) from discontinued operations, net of taxes included:
- gain of $14 million (including foreign currency translation adjustments, partially offset by income tax expense and transaction costs) associated with the sale of our HemoCue products business; and
- discrete tax benefits of $20 million associated with favorable resolution of certain tax contingencies related to our NID business.

Net cash provided by operating activities included:
- income tax payments of $175 million associated with the sale of the ibrutinib royalty rights; and
- $70 million of income tax payments which were deferred from the fourth quarter of 2012 under a program offered to companies whose principal place of business was in states most affected by Hurricane Sandy.

Net cash provided by investing activities included:

- proceeds from the sale of the ibrutinib royalty rights of $474 million, net of transaction costs; and
- proceeds from the sales of HemoCue and Enterix of $296 million.

QUEST DIAGNOSTICS INCORPORATED AND SUBSIDIARIES
MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Our Company

Diagnostic Information Services

Quest Diagnostics empowers people to take action to improve health outcomes. We use our extensive database of clinical lab results to derive diagnostic insights that reveal new avenues to identify and treat disease, inspire healthy behaviors and improve healthcare management. Our diagnostic information services business ("DIS") provides information and insights based on the industry-leading menu of routine, non-routine and advanced clinical testing and anatomic pathology testing, and other diagnostic information services. We provide services to a broad range of customers, including patients, clinicians, hospitals, independent delivery networks ("IDNs"), health plans, employers and accountable care organizations ("ACOs"). We offer the broadest access in the United States to diagnostic information services through our nationwide network of laboratories, patient service centers and phlebotomists in physician offices and our connectivity resources, including call centers and mobile paramedics, nurses and other health and wellness professionals. We are the world's leading provider of diagnostic information services. We provide interpretive consultation with one of the largest medical and scientific staffs in the industry. Our DIS business makes up over 90% of our consolidated net revenues. During 2017, we processed approximately 164 million test requisitions through our extensive laboratory network.

The clinical testing that we perform is an essential element in the delivery of healthcare services. Clinicians use clinical testing for predisposition, screening, monitoring, diagnosis, prognosis and treatment choices of diseases and other medical conditions. The United States clinical testing industry consists of two segments. One segment, which we believe makes up approximately 37% of the total industry, includes hospital inpatient and outpatient testing. The second segment, which we believe makes up approximately 63% of the total industry, includes testing of persons who are not hospital patients, including testing done in commercial clinical laboratories, physician-office laboratories and other locations, as well as hospital outreach (non-hospital patients) testing. We believe that hospital-affiliated laboratories account for approximately 35% of the second segment, commercial clinical laboratories approximately 54% and physician-office laboratories and other locations account for the balance.

The clinical testing industry is subject to seasonal fluctuations in operating results and cash flows. Typically, testing volume declines during vacation and major holiday periods, reducing net revenues and operating cash flows below annual averages. Testing volume is also subject to declines due to severe weather or other events, which can deter patients from having testing performed and which can vary in duration and severity from year to year. Additionally, orders for clinical testing generated from physician offices, hospitals and employers can be affected by factors such as changes in the United States economy and regulatory environment, which affect the number of unemployed and uninsured, and design changes in healthcare plans, which affect the number of physician office and hospital visits.

Diagnostic Solutions

In our Diagnostic Solutions ("DS") businesses, which represents the balance of our consolidated net revenues, we offer a variety of solutions for life insurers and healthcare organizations and clinicians. We are the leading provider of risk assessment services for the life insurance industry. In addition, we offer healthcare organizations and clinicians robust information technology solutions. Prior to the sale of our Focus Diagnostics products business on May 13, 2016 ("Focus Sale") our diagnostics products business manufactured and marketed diagnostic products. Prior to the contribution of our clinical trials testing business to the Q^2 Solutions joint venture on July 1, 2015 ("Clinical Trials Contribution"), our clinical trials testing business was a leading provider of central laboratory testing for clinical trials.

For further details regarding the Focus Sale and the Clinical Trials Contribution, see Note 6 to the consolidated financial statements.

2017 Highlights

- Our total net revenues of $7.71 billion were 2.6% above the prior year. The Focus Sale negatively impacted revenue growth by 0.3% and we estimate that hurricanes negatively impacted revenue growth by approximately 0.4%.
- In our DIS business:
  - Revenues of $7.4 billion increased by 3.3% compared to the prior year.
  - Volume, measured by the number of requisitions, increased 2.3% compared to the prior year.
  - Revenue per requisition increased 1.0% compared to the prior year.
- DS revenues of $339 million were 10.0% below the prior year primarily due to the Focus Sale.
- Net income attributable to Quest Diagnostics' stockholders was $772 million, or $5.50 per diluted share, in 2017, compared to $645 million, or $4.51 per diluted share, in 2016. The increase of 22.0% in diluted earnings per share was primarily due to a tax benefit recorded as a result of the Tax Cuts and Jobs Act ("TCJA"). We estimate that hurricanes negatively impacted diluted earnings per share by approximately $0.14.
- Net cash provided by operating activities was $1.2 billion in 2017, compared to $1.1 billion in the prior year.

Two Point Strategy

Our two point strategy is described in detail in "*Item 1. Business: Our Strategy and Strengths*." We continued to execute on our strategy during 2017 as follows:

Acquisition of the Outreach Laboratory Service Business of PeaceHealth Laboratories

On May 1, 2017, we completed the acquisition of the outreach laboratory services operations of PeaceHealth Laboratories ("PHL"), in an all-cash transaction for $101 million. The acquired outreach laboratory service business of PHL is included in our DIS business. Under a professional laboratory services agreement, Quest will also manage 11 laboratories, which PHL will continue to own.

Acquisition of Med Fusion and Clearpoint

On July 14, 2017, we completed the acquisition of Med Fusion, LLC and Clearpoint Diagnostic Laboratories, LLC ("Med Fusion") in an all-cash transaction for $150 million. Med Fusion provides precision medicine diagnostics to aid cancer treatment nationwide and the acquired businesses form the Company's center of excellence in precision diagnostics for oncology. The acquired laboratory service businesses are included in our DIS business.

Acquisition of the Outreach Laboratory Service Business of The William W. Backus Hospital and The Hospital of Central Connecticut

On September 28, 2017, we completed the acquisition of the outreach laboratory service businesses of two hospitals of Hartford HealthCare Corporation, The William W. Backus Hospital and The Hospital of Central Connecticut in an all-cash transaction for $30 million. The acquired outreach laboratory service businesses are included in our DIS business.

Acquisition of Cleveland HeartLab, Inc.

On December 1, 2017, we completed the acquisition of Cleveland HeartLab, Inc. ("CHL") in an all-cash transaction for $94 million, net of $12 million cash acquired. CHL is a specialty clinical laboratory and disease management company, which forms the basis for our advanced diagnostics center of excellence in cardiovascular testing. The acquired business is included in our DIS business.

Acquisition of the Clinical and Anatomic Pathology Laboratory Business of Shiel Holdings, LLC

On December 7, 2017, we completed the acquisition of certain assets of the clinical and anatomic pathology laboratory business of Shiel Holdings, LLC ("Shiel") in an all-cash transaction for $176 million, which consisted of cash consideration of $170 million and contingent consideration estimated at $6 million. The contingent consideration arrangement is dependent upon the achievement of certain testing volume benchmarks. Shiel serves the New York-New Jersey metropolitan area. The acquired business is included in our DIS business.

For further details regarding our acquisitions, see Note 5 to the consolidated financial statements.

Collaboration with Wal-Mart

In June 2017, we announced our collaboration with Wal-Mart Stores, Inc. ("Wal-Mart") to help improve access to care and, over time, help lower healthcare costs through providing basic healthcare services. The collaboration has launched with a select number of co-branded sites opening within Wal-Mart stores that are initially providing laboratory testing services. Over time, service offerings are expected to expand to include other basic healthcare services.

Invigorate Program

We are engaged in a multi-year program called Invigorate, which is designed to reduce our cost structure and improve our performance. We delivered more than $700 million in run-rate savings (compared to 2011) as we exited 2014, and delivered more than $1.3 billion in run rate savings (compared to 2011) as we exited 2017, exceeding our goal that we announced in November 2014.

Invigorate has consisted of several flagship programs, with structured plans in each, to drive savings and improve performance across the customer value chain. These flagship programs include: organization excellence; information technology excellence; procurement excellence; field and customer service excellence; lab excellence; and revenue services excellence. In addition to these programs, we identified key themes to change how we operate in order to meet our goal of delivering the $1.3 billion of run-rate savings as we exited 2017. These additional key themes include: standardizing our processes, information technology systems, equipment and data; enhancing electronic enabling services; and enhancing reimbursement for work we perform. We believe that our efforts to standardize our information technology systems, equipment and data also foster our efforts to strengthen our foundation for growth and support the value creation initiatives of our clinical franchises by enhancing our operational flexibility, empowering and enhancing the customer experience, facilitating the delivery of actionable insights and bolstering our large data platform.

In January 2015, we adopted a course of action related to this multi-year program. We developed a high-level estimate of the total pre-tax charges expected to be incurred in 2015 through 2017 in connection with the course of action for the program: $300 million. In February 2017, we developed high-level estimates of the pre-tax charges expected to be incurred in 2017 totaling $60 million to $80 million, consisting of up to $10 million of employee separation costs and $60 million to $70 million of systems conversion and integration costs.

During 2017 we incurred $90 million of pre-tax charges including $23 million of employee separation costs and other restructuring related costs with the remainder primarily consisting of systems conversion and integration costs. From 2015 through December 31, 2017, the cumulative pre-tax charges incurred in connection with the Invigorate program were $242 million, including $73 million of cumulative employee separation costs and other restructuring related costs.

For further details of the Invigorate program and associated costs, see Note 4 to the consolidated financial statements.

Outlook and Trends

The healthcare system in the United States is evolving; significant change is taking place in the system. We expect that the evolution of the healthcare industry will continue, and that industry change is likely to be extensive. There are a number of key trends that are having, and that we expect will continue to have, a significant impact on the diagnostic information services business in the United States and on our business. These trends present both opportunities and risks. However, because diagnostic information services is an essential healthcare service, we believe that the industry will continue to grow over the long-term and that we are well-positioned to benefit from the long-term growth expected in the industry.

Healthcare market participants, including governments, are focusing on controlling costs, including potentially by changing reimbursement for healthcare services (including but not limited to a shift from fee for service to capitation), changing medical coverage policies (*e.g.*, healthcare benefits design), preauthorization of laboratory testing, requiring co-pays, introducing laboratory spend management utilities and payment and patient care innovations such as ACOs and patient-centered medical homes. As health plans and government programs require greater levels of patient cost-sharing, our patient collections could be negatively impacted and adversely impact our results of operations. As previously mentioned, there could be a shift to capitation arrangements where we agree to a predetermined monthly reimbursement rate for each member enrolled in a restricted plan, generally regardless of the number or cost of services provided by us. In both 2017 and 2016, we derived approximately 11% of our testing volume and 4% of our DIS revenues from capitated payment arrangements.

Historically, the Medicare Clinical Laboratory Fee Schedule ("CLFS") and the Medicare Physician Fee Schedule established under Part B of the Medicare program have been subject to change, including each year. On November 17, 2017,

the Centers for Medicare and Medicaid Services ("CMS") finalized the 2018 Medicare reimbursement rates for clinical laboratory tests under the CLFS pursuant to Protecting Access to Medicare Act ("PAMA"). The Company expects the impact on our CLFS based revenues (in 2017 CLFS revenues comprised 12% of our consolidated net revenues) as a result of PAMA to be a reduction of approximately 4% in 2018, and approximately 10% in both 2019 and 2020. PAMA calls for further revision of the Medicare Clinical Laboratory Fee Schedule for years after 2020, based on future surveys of market rates; further reduction in reimbursement may result from such revisions. Excluding the impact of PAMA we expect reimbursement pressure for our DIS business in 2018 to remain less than 1%, with PAMA adding an additional 0.5%.

On December 22, 2017, the President signed the TCJA into law. Pursuant to the law, among other changes to U.S. corporate income tax laws, the federal corporate statutory income tax rate is reduced from 35% to 21% effective for 2018; and a mandatory deemed repatriation of post-1986 undistributed foreign earnings and profits will result in a repatriation toll charge. Our activities are primarily in the United States, and, as a result, we expect the impact of the reduction of the federal corporate statutory tax rate to have a positive impact on our results of operations and cash flows. The estimated provisional repatriation toll charge of $9 million was not significant due to our limited international operations.

In addition, the trend of consolidating, converging and diversifying among our customers and payers has continued. Consolidation is increasing price transparency and bargaining power, and encouraging internalization of clinical testing. We also believe that PAMA may be a further catalyst for consolidation as diagnostic information services providers realize lower Medicare reimbursement rates and large diagnostic information services providers may be able to increase their share of the overall diagnostic information services industry due to their large networks and lower cost structures.

For additional information on our key trends, see "*Item 1. Business: The United States Clinical Testing Industry*."

Critical Accounting Policies

The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires us to make estimates and assumptions and select accounting policies that affect our reported financial results and the disclosure of contingent assets and liabilities.

While many operational aspects of our business are subject to complex federal, state and local regulations, the accounting for most of our business is generally straightforward, with net revenues primarily recognized upon completion of the testing process. Our revenues are primarily comprised of a high volume of relatively low-dollar transactions, and about one-half of our total costs and expenses consist of employee compensation and benefits. Due to the nature of our business, several of our accounting policies involve significant estimates and judgments:

- revenues and accounts receivable associated with DIS;
- reserves for general and professional liability claims;
- reserves for other legal proceedings;
- accounting for and recoverability of goodwill; and
- accounting for stock-based compensation expense.

Revenues and accounts receivable associated with DIS

The process for estimating the ultimate collection of receivables associated with our DIS business involves significant assumptions and judgments. We primarily recognize revenue for services rendered upon completion of the testing process. Billings for services reimbursed by third-party payers, including Medicare and Medicaid, are generally recorded as revenues net of allowances for differences between amounts billed and the estimated receipts from such payers. Adjustments to the allowances, based on actual receipts from the third-party payers, are recorded upon settlement as an adjustment to net revenues.

We have a standardized approach to estimate and review the collectibility of our receivables based on a number of factors, including the period they have been outstanding, which results in increased allowances for doubtful accounts requirements as the aging of the related receivables increases. Historical collection and payer reimbursement experience is an integral part of the estimation process related to revenues and allowances for doubtful accounts. Changes to the allowances for doubtful accounts estimates are recorded as an adjustment to bad debt expense within selling, general and administrative expenses. Less than 5% of our net accounts receivable as of December 31, 2017 were outstanding more than 150 days.

We believe that the majority of our bad debt expense is primarily the result of the failure of patients to pay the portion of the receivable that is their responsibility; the remainder is primarily the result of missing or incorrect billing information on requisitions. In addition, we regularly assess the state of our billing operations in order to identify issues which may impact the

collectibility of receivables or allowance estimates. We believe that the collectibility of our receivables is directly linked to the quality of our billing processes, most notably those related to obtaining the correct information in order to bill effectively for the services we provide. As such, we continue to implement "best practices" and endeavor to increase the use of electronic ordering to reduce the number of requisitions that we receive from healthcare providers with missing or incorrect billing information. We believe that our collection and allowance estimation processes, along with our close monitoring of our billing operations, help to reduce the risk associated with material adjustments to reserve estimates.

The following table shows the approximate percentage of our total requisition volume and net revenues associated with our DIS business during 2017 applicable to each payer group:

	% of DIS Volume	% of DIS Revenues
Healthcare Insurers (including coinsurance and deductible responsibilities)	47	51
Government Payers	15	17
Client Payers	37	29
Patients	1	3

The following table shows net accounts receivable as of December 31, 2017 applicable to each payer group:

	% of Consolidated Net Accounts Receivable
Healthcare Insurers	19
Government Payers	14
Client Payers	42
Patients (including coinsurance and deductible responsibilities)	20
Total DIS	95

Healthcare insurers

Reimbursements from healthcare insurers are based on fee-for-service schedules and on capitated payment rates.

Substantially all of the accounts receivable due from healthcare insurers represent amounts billed under fee-for-service arrangements. Collection of such receivables is normally a function of providing complete and correct billing information to the healthcare insurers within the various filing deadlines and typically occurs within 30 to 60 days of billing. Provided we have billed healthcare insurers accurately with complete information prior to the established filing deadline, there has historically been little to no collection risk. If there has been a delay in billing, we determine if the amounts in question will likely go past the filing deadline, and if so, we will reserve accordingly for the billing.

Approximately 4% of our DIS net revenues for the year ended December 31, 2017 are reimbursed under capitated payment arrangements, in which case the healthcare insurers typically reimburse us in the same month services are performed, essentially giving rise to no outstanding accounts receivable at month-end. If any capitated payments are not received on a timely basis, we determine the cause and make a separate determination as to whether or not the collection of the amount from the healthcare insurer is at risk and, if so, would reserve accordingly.

Government payers

Payments for diagnostic information services made by the government are based on fee schedules set by governmental authorities. Collection of such receivables is normally a function of providing the complete and correct billing information within the various filing deadlines. Collection typically occurs within 30 days of billing. Our processes for billing, collecting and estimating uncollectible amounts for receivables due from government payers, as well as the risk of non-collection, are similar to those for healthcare insurers under fee-for-service arrangements.

Client payers

Client payers include physicians, hospitals, ACOs, IDNs, employers, other commercial laboratories and institutions for which services are performed on a wholesale basis, and are billed based on a negotiated fee schedule. Credit risk and ability to pay are more of a consideration for these payers than healthcare insurers and government payers. Collection typically occurs within 60 to 90 days of billing. In addition to our standard approach to establishing allowances for doubtful accounts, our approach to client payer receivables also focuses on specific account reviews, historical collection experience and other factors.

Patients

Patients are billed based on established patient fee schedules, subject to any limitations on fees negotiated with healthcare insurers or physicians on behalf of their patients. Collection of receivables due from patients is subject to credit risk and ability of the patients to pay. In addition to our standard approach to establishing allowances for doubtful accounts, our approach to patient receivables also considers historical collection experience and other factors. Patient receivables are generally fully reserved for when the related billing reaches 210 days outstanding. Balances are automatically written off when they are sent to collection agencies. Reserves are adjusted for estimated recoveries of amounts sent to collection agencies based on historical collection experience, which is regularly monitored.

Reserves for general and professional liability claims

As a general matter, providers of diagnostic information services may be subject to lawsuits alleging negligence or other similar claims. These suits could involve claims for substantial damages. Any professional liability litigation could also have an adverse impact on our client base and reputation. We maintain various liability insurance coverages for claims that could result from providing, or failing to provide, diagnostic information services, including inaccurate testing results, and other exposures. Our insurance coverage limits our maximum exposure on individual claims; however, we are essentially self-insured for a significant portion of these claims. While the basis for claims reserves is actuarially determined losses based upon our historical and projected loss experience, the process of analyzing, assessing and establishing reserve estimates relative to these types of claims involves a high degree of judgment. Although we believe that our present reserves and insurance coverage are sufficient to cover currently estimated exposures, it is possible that we may incur liabilities in excess of our recorded reserves or insurance coverage. Changes in the facts and circumstances associated with claims could have a material impact on our results of operations (principally costs of services), cash flows and financial condition in the period that reserve estimates are adjusted or paid. See Note 17 to the consolidated financial statements for a discussion of our reserves for general and professional liability claims.

Reserves for other legal proceedings

Our businesses are subject to or impacted by extensive and frequently changing laws and regulations, including inspections and audits by governmental agencies, in the United States (at both the federal and state levels) and the other jurisdictions in which we conduct business. Although we believe that we are in compliance, in all material respects, with applicable laws and regulations, there can be no assurance that a regulatory agency would not reach a different conclusion. Any noncompliance by us with applicable laws and regulations could have a material adverse effect on our results of operations. In addition, these laws and regulations may be interpreted or applied by a prosecutorial, regulatory or judicial authority in a manner that could require us to make changes in our operations, including our pricing and/or billing practices. We have, in the past, entered into several settlement agreements with various government and private payers relating to industry-wide billing and marketing practices that had been substantially discontinued. The federal or state governments may bring claims based on our current practices, which we believe are lawful. In addition, certain federal and state statutes, including the *qui tam* provisions of federal and state false claims acts, allow private individuals to bring lawsuits against healthcare companies on behalf of government or private payers alleging inappropriate billing practices. We are aware of certain pending lawsuits including class action lawsuits, and have received subpoenas related to billing practices. See Note 17 to the consolidated financial statements for a discussion of the various legal proceedings that involve the Company.

The process of analyzing, assessing and establishing reserve estimates relative to legal proceedings involves a high degree of judgment. Management has established reserves for legal proceedings in accordance with generally accepted accounting principles. Changes in facts and circumstances related to such proceedings could lead to significant adjustments to reserve estimates for such matters and could have a material impact on our results of operations, cash flows and financial condition in the period that reserve estimates are adjusted or paid.

Accounting for and recoverability of goodwill

We do not amortize goodwill, but evaluate the recoverability and measure the potential impairment of our goodwill annually, or more frequently, in the case of other events that indicate a potential impairment. We have identified the following reporting units for goodwill impairment testing in 2017:

- DIS business;
- Risk assessment services business which is part of our DS businesses

The DIS reporting unit components have been aggregated into a single reporting unit because they have similar economic characteristics, including similarities in financial performance, nature of products or services, nature of production processes and types of customers.

Goodwill is evaluated for impairment annually, or more frequently if events or changes in circumstances indicate that the asset might be impaired. The annual impairment test includes an option to perform a qualitative assessment of whether it is more-likely-than-not that a reporting unit's fair value is less than its carrying value; the qualitative analysis may be performed prior to, or as an alternative to, performing a quantitative goodwill impairment test. In evaluating whether it is more likely than not that the fair value of a reporting unit is less than its carrying value, we assess relevant events and circumstances, such as: (a) macroeconomic conditions; (b) industry and market considerations; (c) cost factors; (d) overall financial performance; (e) other relevant entity-specific events; (f) events affecting a reporting unit; and (g) a sustained decrease in share price. If, after assessing the totality of events or circumstances, we determine that it is more-likely-than-not that the fair value of a reporting unit is less than its carrying value, then we are required to perform the quantitative goodwill impairment test. Otherwise, no further analysis is required. Additionally, the Company's policy is to update the fair value calculation of its reporting units and perform the quantitative goodwill impairment test on a periodic basis.

The quantitative impairment test involves the comparison of the fair value of the reporting unit to its carrying value. If the carrying value is greater than our estimate of fair value, an impairment loss will be recognized in the amount of the excess. We calculate the fair value of each reporting unit using either a discounted cash flows analysis that converts future cash flow amounts into a single discounted present value amount or a market approach. We assess the valuation methodology based upon the relevance and availability of the data at the time we perform the valuation. The discounted cash flows analysis includes several unobservable inputs related to our own assumptions. The assumptions and estimates used in the discounted cash flows model are based upon the best available information in the circumstances and include a forecast of expected future cash flows, long-term growth rates, discount rates that are commensurate with economic risks, assumed income tax rates and estimates of capital expenditures and working capital. The fair values of the reporting units could be different if, for example, forecasted revenue growth rates, economic conditions, government regulations or actions by payers to control utilization of or reimbursement for healthcare services, turn out to be different than our assumptions or estimates. Changes in the assumed discount rates due to changes in interest rates could also affect the estimated fair values of the reporting units. We use a discount rate that considers a weighted average cost of capital plus an appropriate risk premium based upon the reporting unit being valued. Our analysis also considers publicly available information regarding the market capitalization of our Company, as well as (i) the financial projections and future prospects of our business, including its growth opportunities and likely operational improvements, and (ii) comparable sales prices, if available. We believe our estimation methods are reasonable and reflect common valuation practices.

On a quarterly basis, we perform a review of our business to determine if events or changes in circumstances have occurred which could have a material adverse effect on the fair value of the Company and its goodwill. If such events or changes in circumstances were deemed to have occurred, we would perform an impairment test of goodwill and record any noted impairment loss.

We perform our annual impairment test during the fourth quarter of the fiscal year. For the year ended December 31, 2017, in accordance with our policy to perform the quantitative test on a periodic basis, we updated the fair value calculation of our reporting units, performed the quantitative impairment test and concluded that goodwill was not impaired.

Accounting for stock-based compensation expense

We record stock-based compensation as a charge to earnings, net of the estimated impact of forfeited awards. As such, we recognize stock-based compensation cost only for those stock-based awards that are estimated to ultimately vest over their requisite service period, based on the vesting provisions of the individual grants. The process of estimating the fair value of stock-based compensation awards and recognizing stock-based compensation cost over their requisite service periods involves significant assumptions and judgments.

The fair value of each stock option award granted was estimated on the date of grant using a Black-Scholes option-valuation model. Estimating the fair value of stock option awards on the date of grant using the Black-Scholes option-valuation model requires management to make certain assumptions regarding: (i) the expected volatility in the market price of our common stock; (ii) dividend yield; (iii) risk-free interest rates; and (iv) the period of time employees are expected to hold the award prior to exercise (referred to as the expected holding period). Under the Black-Scholes option-valuation model, the expected volatility is based on historical volatilities of our common stock. The dividend yield is based on the approved annual dividend rate in effect and current market price of the underlying common stock at the time of grant. The risk-free interest rate is based on the U.S. Treasury yield curve in effect at the time of grant for bonds with maturities consistent with the expected holding period of the related award. The expected holding period of the awards granted is estimated using the historical exercise behavior of employees.

We estimate the expected impact of forfeited awards and recognize stock-based compensation cost only for those awards expected to vest. We use historical experience to estimate projected forfeitures. If actual forfeiture rates are materially different from our estimates, stock-based compensation expense could be significantly different from what we have recorded in the current period. We periodically review actual forfeiture experience and adjust our estimates as necessary. The cumulative effect on current and prior periods of a change in the estimated forfeiture rate is recognized as compensation cost in earnings in the period of the change.

The terms of our performance share unit awards allow the recipients to earn a variable number of shares based on the achievement of the performance goals specified in the awards. Stock-based compensation expense associated with performance share units is recognized based on management's best estimates of the achievement of the performance goals specified in such awards and the resulting number of shares that will be earned. If the actual number of performance share units earned is different from our estimates, stock-based compensation could be significantly different from what we have recorded in the current period. The cumulative effect on current and prior periods of a change in the estimated number of performance share units expected to be earned is recognized as compensation cost in earnings in the period of the change. While the assumptions used to calculate and account for stock-based compensation awards represent management's best estimates, these estimates involve inherent uncertainties and the application of management's judgment. As a result, if changes are made to our assumptions and estimates, our stock-based compensation expense could vary significantly from period to period. In addition, the number of awards made under our equity compensation plans, changes in the design of those plans, the price of our shares and the performance of our Company can all cause stock-based compensation expense to vary from period to period.

Results of Operations

Basis of Presentation

Our DIS business currently represents our one reportable business segment. The DIS business for each of the three years ended December 31, 2017 accounted for more than 90% of our consolidated net revenues. Our other operating segments consist of our DS businesses. For further details regarding our business segment information, see Note 18 to the consolidated financial statements.

Results of Operations

The following table sets forth certain results of operations data for the periods presented:

	2017	2016	2015	$ Increase (Decrease) 2017 vs. 2016	$ Increase (Decrease) 2016 vs. 2015	% Increase (Decrease) 2017 vs. 2016	% Increase (Decrease) 2016 vs. 2015
	(dollars in millions, except per share data)						
Net revenues:							
DIS business	$ 7,370	$ 7,138	$ 6,965	$ 232	$ 173	3.3 %	2.5 %
DS businesses	339	377	528	(38)	(151)	(10.0)	(28.5)
Total net revenues	$ 7,709	$ 7,515	$ 7,493	$ 194	$ 22	2.6 %	0.3 %
Operating costs and expenses and other operating income:							
Cost of services	$ 4,719	$ 4,616	$ 4,657	$ 103	$ (41)	2.2 %	(0.9)%
Selling, general and administrative	1,750	1,681	1,679	69	2	4.1	0.1
Amortization of intangible assets	74	72	81	2	(9)	2.5	(10.7)
Gain on disposition of business	—	(118)	(334)	118	216	NM	NM
Other operating expense (income), net	1	(13)	11	14	(24)	NM	NM
Total operating costs and expenses, net	$ 6,544	$ 6,238	$ 6,094	$ 306	$ 144	4.9 %	2.4 %
Operating income	$ 1,165	$ 1,277	$ 1,399	$ (112)	$ (122)	(8.8)%	(8.7)%
Other income (expense):							
Interest expense, net	$ (151)	$ (143)	$ (153)	$ 8	$ (10)	5.3 %	(6.3)%
Other income (expense), net	16	(48)	(143)	(64)	(95)	NM	NM
Total non-operating expenses, net	$ (135)	$ (191)	$ (296)	$ (56)	$ (105)	(29.1)%	(35.1)%
Income tax expense	$ (241)	$ (429)	$ (373)	$ (188)	$ 56	(43.9)%	15.3 %
Effective income tax rate	23.4%	39.5%	33.8%	-1610 bps	570 bps	NM	NM
Equity in earnings of equity method investees, net of taxes	$ 35	$ 39	$ 23	$ (4)	$ 16	(9.6)%	73.3 %
Net income attributable to Quest Diagnostics' stockholders	$ 772	$ 645	$ 709	$ 127	$ (64)	19.8 %	(9.1)%
Diluted earnings per common share attributable to Quest Diagnostics' common stockholders	$ 5.50	$ 4.51	$ 4.87	$ 0.99	$ (0.36)	22.0 %	(7.4)%

NM - Not Meaningful
bps - Basis Points

The following table sets forth certain results of operations data as a percentage of net revenues for the periods presented:

	2017	2016	2015
Net revenues:			
DIS business	95.6%	95.0 %	93.0 %
DS businesses	4.4	5.0	7.0
Total net revenues	100.0%	100.0 %	100.0 %
Operating costs and expenses and other operating income:			
Cost of services	61.2%	61.4 %	62.1 %
Selling, general and administrative	22.7	22.4	22.4
Amortization of intangible assets	1.0	1.0	1.1
Gain on disposition of business	—	(1.5)	(4.4)
Other operating expense (income), net	—	(0.3)	0.1
Total operating costs and expenses, net	84.9%	83.0 %	81.3 %
Operating income	15.1%	17.0 %	18.7 %
Bad debt	4.1%	4.1 %	4.0 %

Operating Results

Results for the year ended December 31, 2017 were affected by certain items that on a net basis benefited earnings per share by a net $0.50 as follows:

- excess tax benefits associated with stock-based compensation arrangements of $37 million, or $0.27 per diluted share, recorded in income tax expense;
- a provisional estimated income tax benefit of $106 million, or $0.77 per diluted share, associated with the TCJA, including a deferred income tax benefit of $115 million primarily due to the remeasurement of our net deferred tax liabilities and reserves at the new combined federal and state tax rate, partially offset by $9 million of current tax expense primarily due to the mandatory repatriation toll charge on undistributed foreign earnings and profits;
- pre-tax charges of $106 million ($45 million in cost of services, $60 million in selling, general and administrative expenses and $1 million in equity in earnings of equity method investees, net of taxes), or $0.47 per diluted share, primarily associated with systems conversions, integration and workforce reductions incurred in connection with further restructuring and integrating our business; and
- net pre-tax charges of $10 million ($5 million in cost of services, $7 million in selling, general and administrative expenses and $2 million in other income (expense), net), or $0.07 per diluted share primarily associated with non-cash asset impairment charges associated with an investment, non-cash asset impairment charges and incremental costs incurred as a result of hurricanes, and costs incurred related to certain legal matters, partially offset by gain on the sale of an interest in an equity method investment.

Results for the year ended December 31, 2016 were affected by certain items that on a net basis reduced earnings per diluted share by a net $0.20 as follows:

- excess tax benefits associated with stock-based compensation arrangements of $9 million, or $0.06 per diluted share, recorded in income tax expense;
- pre-tax gain of $118 million, or $0.24 per diluted share, related to the Focus Sale recorded in gain on disposition of business;
- pre-tax charges of $82 million ($40 million in cost of services, $37 million in selling, general and administrative expenses, $1 million in other operating expense (income), net and $4 million in equity in earnings of equity method investees, net of taxes), or $0.35 per diluted share, primarily associated with systems conversions and integration costs in connection with further restructuring and integrating our business;

- pre-tax charges of $48 million, or $0.21 per diluted share, related to the 2016 loss on retirement of debt associated with the March 2016 cash tender offer ("2016 Tender Offer"), in which we purchased $73 million of our Senior Notes due 2037 and $127 million of our Senior Notes due 2040, recorded in other income (expense), net; and
- pre-tax costs of $6 million in selling, general and administrative expenses, a net pre-tax gain of $13 million in other operating expense (income), net and pre-tax costs of $7 million in other income (expense), net that on a combined basis benefited diluted earnings per share by $0.06, primarily a result of a non-taxable gain on an escrow recovery associated with an acquisition, partially offset by costs associated with winding down subsidiaries, non-cash asset impairment charges and costs incurred related to certain legal matters.

Results for the year ended December 31, 2015 were affected by certain items that on a net basis benefited earnings per diluted share by a net $0.48 as follows:

- pre-tax gain of $334 million, or $1.30 per diluted share, related to the Clinical Trials Contribution recorded in gain on disposition of business;
- pre-tax charges of $150 million ($6 million in interest expense, net and $144 million in other income (expense), net), or $0.62 per diluted share, related to the loss on retirement of debt and related refinancing charges in connection with the: March 2015 cash tender offer ("2015 Tender Offer"), in which we purchased $250 million aggregate principal amount of our Senior Notes due 2037 and Senior Notes due 2040; and the April 2015 redemption ("2015 Redemption"), in which we redeemed all of our $500 million Senior Notes due November 2015, $150 million, or 50%, of our Senior Notes due April 2016 and all of our $375 million Senior Notes due July 2017;
- pre-tax charges of $110 million, or $0.46 per diluted share, related to restructuring costs primarily associated with workforce reductions, integration costs associated with acquisitions and professional fees associated with further restructuring and integrating our business ($63 million in cost of services, $42 million in selling, general and administrative expenses and $5 million in equity in earnings of equity method investees, net of taxes);
- a deferred income tax benefit of $58 million, or $0.40 per diluted share, associated with winding down a subsidiary; and
- net pre-tax costs of $31 million ($2 million in cost of services, $21 million in selling, general and administrative expenses, $10 million in other operating expense (income), net and $(2) million in other income (expense), net), or $0.14 per diluted share, primarily associated with non-cash asset impairment charges and other costs associated with Celera Products and winding down of another subsidiary as well as costs incurred related to certain legal matters, partially offset by a pre-tax gain of $13 million associated with a decrease in the fair value of the contingent consideration accrual associated with our Summit Health, Inc. acquisition.

Net Revenues

Net revenues for the year ended December 31, 2017 increased by 2.6% compared to the prior year. The Focus Sale negatively impacted revenue growth by 0.3% and we estimate that hurricanes negatively impacted revenue growth by approximately 0.4%.

DIS revenues for the year ended December 31, 2017 increased by 3.3% compared to the prior year, which reflects continuing expansion of hospital health system relationships and growth in non-routine (including advanced diagnostics) testing. Organic growth (growth excluding the impact of acquisitions) and acquisitions contributed approximately 2.1% and 1.2%, respectively, to DIS revenue growth. DIS volume, measured by the number of requisitions, increased 2.3%, with organic growth and acquisitions contributing approximately 1.4% and 0.9%, respectively, to DIS volume growth. Revenue per requisition increased by 1.0% compared to the prior year. Revenue per requisition benefited from favorable test mix, driven in part by acquisitions, partially offset by moderate pricing pressure of less than 1% and lower revenue per requisition associated with our growth in professional lab services engagements.

Combined revenues in our DS businesses for the year ended December 31, 2017 decreased by 10.0% compared to the prior year primarily due to the Focus Sale.

Net revenues for the year ended December 31, 2016 were 0.3% above the prior year level. The Clinical Trials Contribution, Focus Sale and winding down of Celera Products negatively impacted net revenues by 2.3%.

DIS revenues increased by 2.5% for the year ended December 31, 2016 compared to the prior year. Organic growth and acquisitions contributed 1.7% and 0.8%, respectively, to DIS revenue growth. Our performance reflected continued focus on gene-based and esoteric (including advanced diagnostics) testing and expanding hospital health system relationships. DIS

volume, measured by the number of requisitions, increased 2.0% for the year ended December 31, 2016. Organic growth and acquisitions contributed 1.2% and 0.8%, respectively, to DIS volume growth. Revenue per requisition for the year ended December 31, 2016 increased 0.4% compared to the prior year. Revenue per requisition benefited from favorable test mix, which was partially offset by pricing pressure of approximately 0.7% and lower revenue per requisition associated with our professional lab services engagements.

For the year ended December 31, 2016, combined revenues in our DS businesses decreased by 28.5% compared to the prior year due to the Clinical Trials Contribution, Focus Sale and winding down of Celera Products.

Cost of Services

Cost of services consists principally of costs for obtaining, transporting and testing specimens as well as facility costs used for the delivery of our services.

Cost of services increased $103 million for the year ended December 31, 2017 compared to the prior year. The increases were primarily driven by additional operating costs associated with our acquisitions, higher compensation and benefits expense, and higher supplies expense related to increased testing volume.

Cost of services decreased $41 million for the year ended December 31, 2016 compared to the prior year. The decrease was primarily driven by lower costs as a result of the Clinical Trials Contribution, Focus Sale and winding down of Celera Products, net cost reductions under the Invigorate program, lower restructuring and integration charges and lower depreciation expense, partially offset by higher compensation and benefits expense and higher costs related to our acquisitions. For further details regarding the impact of the change in estimated useful lives of our property, plant and equipment on depreciation expense, see Note 2 to the consolidated financial statements.

Selling, General and Administrative Expenses ("SG&A")

SG&A consist principally of the costs associated with our sales and marketing efforts, billing operations, bad debt expense and general management and administrative support as well as administrative facility costs.

SG&A increased $69 million for the year ended December 31, 2017 compared to the prior year. The increase in SG&A was primarily driven by higher systems conversion, integration and workforce reduction costs associated with our Invigorate program, additional operating costs associated with our acquisitions and higher performance-based compensation costs. Bad debt expense as a percentage of net revenues for the year ended December 31, 2017 was consistent with the prior year.

SG&A increased $2 million for the year ended December 31, 2016 compared to the prior year. The increase in SG&A was primarily driven by higher compensation and benefits and higher bad debt expense, substantially offset by lower costs as a result of the Clinical Trials Contribution, Focus Sale and winding down of Celera Products, net cost reductions under the Invigorate program and lower depreciation expense.

The increase in bad debt expense as a percentage of net revenues for the year ended December 31, 2016, compared to the prior year, was primarily a result of our recent dispositions which had lower bad debt rates than our DIS business.

Amortization of Intangible Assets

The $2 million increase in amortization of intangible assets for the year ended December 31, 2017 compared to the prior year was associated with our acquisitions.

The $9 million decrease in amortization of intangible assets for the year ended December 31, 2016 compared to the prior year was primarily a result of intangible assets that became fully amortized, were disposed of as a result of the Focus Sale and the winding down of Celera Products, or were impaired.

Gain on Disposition of Business

For the year ended December 31, 2016, gain on disposition of business was a result of the Focus Sale. For the year ended December 31, 2015, gain on disposition of business was the non-cash gain resulting from the Clinical Trials Contribution.

Other Operating Expense (Income), net

Other operating expense (income), net includes miscellaneous income and expense items and other charges related to operating activities.

For the year ended December 31, 2016, other operating expense (income), net principally consisted of a non-taxable gain on an escrow recovery associated with an acquisition, partially offset by $7 million of non-cash asset impairment charges.

For the year ended December 31, 2015, other operating expense (income), net included $24 million of non-cash asset impairment charges primarily associated with Celera Products and another subsidiary, partially offset by a gain of $13 million associated with a decrease in the fair value of the contingent consideration accrual associated with our Summit Health, Inc. acquisition.

Interest Expense, net

Interest expense, net for the year ended December 31, 2017 increased by $8 million compared to the prior year. The increase in interest expense, net was primarily driven by higher interest rates associated with our variable rate indebtedness combined with higher average outstanding indebtedness.

Interest expense, net for the year ended December 31, 2016 decreased by $10 million compared to the prior year. The decrease in interest expense, net was primarily a result of lower interest rates as a result of the debt refinancing in 2015 and to a lesser extent the 2016 refinancing.

Other Income (Expense), net

Other income (expense), net represents miscellaneous income and expense items related to non-operating activities, such as gains and losses associated with investments, other non-operating assets and early retirement of debt.

For the year ended December 31, 2017, other income (expense), net included $13 million of gains associated with investments in our deferred compensation plans and a $7 million gain on the sale of an interest in an equity method investment, which are partially offset by non-cash asset impairment charges associated with certain investments of $6 million.

For the year ended December 31, 2016, other income (expense), net included the loss on retirement of debt of $48 million associated with the 2016 Tender Offer and non-cash asset impairment charges associated with certain investments of $7 million.

For the year ended December 31, 2015, other income (expense), net included the loss on retirement of debt of $144 million associated with the 2015 Tender Offer and 2015 Redemption.

Income Tax Expense

For the year ended December 31, 2017, we recorded a provisional estimated income tax benefit of $106 million, associated with the TCJA, including a deferred income tax benefit of $115 million primarily due to the remeasurement of our net deferred tax liabilities and reserves at the new combined federal and state tax rate, partially offset by $9 million of current tax expense primarily due to the mandatory repatriation toll charge on undistributed foreign earnings and profits. In addition, income tax expense included $37 million of excess tax benefits associated with stock-based compensation arrangements.

For the year ended December 31, 2016, income tax expense included $84 million of income taxes associated with the Focus Sale, partially offset by $9 million of excess tax benefits associated with stock-based compensation arrangements and an income tax benefit of $18 million associated with the 2016 Tender Offer. The income tax expense associated with the Focus Sale resulted in an effective tax rate of 71.4% on the transaction, which was significantly in excess of the statutory tax rate primarily due to a lower tax basis in the assets sold, specifically the goodwill associated with the disposition.

For the year ended December 31, 2015, income tax expense included deferred income tax expense of $145 million associated with the gain on the Clinical Trials Contribution, partially offset by a $58 million deferred income tax benefit associated with winding down a subsidiary and a $57 million income tax benefit associated with the 2015 Tender Offer and 2015 Redemption.

Our effective income tax rate for the year ended December 31, 2017 was positively impacted by a provisional estimated $106 million benefit associated with the TCJA and $37 million of excess tax benefits associated with stock-based compensation arrangements.

Our effective income tax rate for the year ended December 31, 2016 was negatively impacted by the higher tax rate, 71.4%, associated with the Focus Sale, partially offset by a non-taxable gain on an escrow recovery associated with an acquisition and $9 million of excess tax benefits associated with stock-based compensation arrangements.

Our effective income tax rate for the year ended December 31, 2015 was positively impacted by the $58 million deferred income tax benefit associated with winding down a subsidiary, partially offset by the higher tax rate, 43.3%, associated with the gain on the Clinical Trials Contribution.

Equity in Earnings of Equity Method Investees, Net of Taxes

For the year ended December 31, 2017 there was a $4 million decrease in equity in earnings of equity method investees, net of taxes.

The $16 million increase in equity in earnings of equity method investees, net of taxes for the year ended December 31, 2016 compared to the prior year was primarily a result of increased earnings associated with our Q^2 Solutions joint venture.

Quantitative and Qualitative Disclosures About Market Risk

We address our exposure to market risks, principally the risk of changes in interest rates, through a controlled program of risk management that includes the use of derivative financial instruments. We do not hold or issue derivative financial instruments for speculative purposes. We seek to mitigate the variability in cash outflows that result from changes in interest rates by maintaining a balanced mix of fixed-rate and variable-rate debt obligations. In order to achieve this objective, we have entered into interest rate swaps. Interest rate swaps involve the periodic exchange of payments without the exchange of underlying principal or notional amounts. Net settlements are recognized as an adjustment to interest expense. We believe that our exposures to foreign exchange impacts and changes in commodity prices are not material to our consolidated financial condition or results of operations. For further details regarding our significant accounting policies on interest rate risk and foreign currency, see Note 2 to the consolidated financial statements.

As of December 31, 2017 and 2016, the fair value of our debt was estimated at approximately $4.0 billion and $3.9 billion, respectively, using quoted prices in active markets and yields for the same or similar types of borrowings, taking into account the underlying terms of the debt instruments. As of December 31, 2017 and 2016, the estimated fair value exceeded the carrying value of the debt by $247 million and $165 million, respectively. A hypothetical 10% increase in market interest rates (representing 31 and 33 basis points on average at December 31, 2017 and 2016, respectively) would potentially reduce the estimated fair value of our debt by approximately $90 million and $102 million as of December 31, 2017 and 2016, respectively.

Borrowings under our secured receivables credit facility and our senior unsecured revolving credit facility are subject to variable interest rates. Interest on our secured receivables credit facility is based on either a rate that is intended to approximate commercial paper rates for highly rated issuers or LIBOR, plus a spread. Interest on our senior unsecured revolving credit facility is subject to a pricing schedule that can fluctuate based on changes in our credit ratings. As such, our borrowing cost under this credit arrangement will be subject to both fluctuations in interest rates and changes in our credit ratings. As of December 31, 2017, the borrowing rate under our $750 million senior unsecured revolving credit facility was LIBOR plus 1.125%, however there were no borrowings outstanding. As of December 31, 2017, there were $30 million of outstanding borrowings under our $600 million secured receivables credit facility with a borrowing rate of 2.27%.

The notional amount of fixed-to-variable interest rate swaps as of both December 31, 2017 and 2016 was $1.2 billion. The aggregate fair value of the fixed-to-variable interest rate swaps was $89 million and $88 million, in a liability position, as of December 31, 2017 and 2016, respectively.

Based on our net exposure to interest rate changes, a hypothetical 10% change to the variable rate component of our variable rate indebtedness (representing 14 basis points) would not impact annual interest expense materially, assuming no changes to the debt outstanding as of December 31, 2017. A hypothetical 10% change in the forward one-month LIBOR curve (representing a 23 basis point change in the weighted average yield) would potentially change the fair value of our derivative liabilities by $18 million.

For further details regarding our outstanding debt and our financial instruments and hedging activities, see Notes 13 and 14, respectively, to the consolidated financial statements.

Risk Associated with Investment Portfolio

Our investment portfolio includes equity investments comprised primarily of strategic equity holdings in privately and publicly held companies. These securities are exposed to price fluctuations and are generally concentrated in the life sciences industry. We regularly evaluate the fair value measurements of our equity investments to determine if losses in value are other than temporary and if an impairment loss has been incurred. The carrying value of our equity investments (excluding investments accounted for under the equity method) was $11 million as of December 31, 2017.

We do not hedge our equity price risk. The impact of an adverse movement in equity prices on our holdings in privately held companies cannot be easily quantified, as our ability to realize returns on investments depends on, among other things, the enterprises' ability to raise additional capital or derive cash inflows from continuing operations or through liquidity events such as initial public offerings, mergers or private sales.

Liquidity and Capital Resources

	2017	2016	2015
	(dollars in millions)		
Net cash provided by operating activities	$ 1,175	$ 1,069	$ 821
Net cash used in investing activities	(805)	(152)	(362)
Net cash used in financing activities	(592)	(691)	(518)
Net change in cash and cash equivalents	$ (222)	$ 226	$ (59)

Cash and Cash Equivalents

Cash and cash equivalents consist of cash and highly liquid short-term investments. Cash and cash equivalents as of December 31, 2017, 2016 and 2015 totaled $137 million, $359 million and $133 million, respectively.

As of December 31, 2017, approximately 37% of our $137 million of consolidated cash and cash equivalents were held outside of the United States. Our current liquidity position does not require repatriation of these funds in order to fund operations in the United States. However, as a result of changes introduced by the TCJA, we may repatriate back to the United States the portion of these foreign funds not expected to be used to maintain or expand operations, including through acquisitions, outside of the United States.

Cash Flows from Operating Activities

Net cash provided by operating activities for the year ended December 31, 2017 was $1.2 billion, compared to $1.1 billion for the year ended December 31, 2016. This $106 million increase in cash provided by operating activities was primarily a result of:

- a decrease in 2017 tax payments associated with the realization of a $62 million deferred tax benefit in 2017 and a $91 million tax payment in 2016 related to the Focus Sale;
- $47 million of payments made in 2016 related to the retirement of debt; and
- improved operating performance in 2017; partially offset by
- $54 million of proceeds received in the third quarter of 2016 from the termination of interest swap agreements.

Net cash provided by operating activities for the year ended December 31, 2016 was $1.1 billion, compared to $821 million for the year ended December 31, 2015. This $248 million increase in cash provided by operating activities was primarily a result of:

- $99 million decrease in payments related to the retirement of debt, principally comprised of premiums paid, associated with the 2016 Tender Offer as compared to the 2015 Tender Offer and 2015 Redemption;
- an additional payroll cycle in 2015;
- $54 million of proceeds received in 2016 from the termination of interest rate swap agreements;
- $25 million decrease in restructuring payments;
- $24 million decrease in interest paid; and
- improved operating performance.

These increases in net cash provided by operating activities were partially offset by a $42 million increase in income taxes paid, which was driven by $91 million of income taxes paid in connection with the Focus Sale.

Days sales outstanding, a measure of billing and collection efficiency, was 45 days, 47 days and 47 days as of December 31, 2017, 2016 and 2015, respectively.

Cash Flows from Investing Activities

Net cash used in investing activities for the year ended December 31, 2017 was $805 million, compared to $152 million for the year ended December 31, 2016. This $653 million increase in cash used in investing activities was a result of:

- $442 million increase in cash paid for business acquisitions; and
- $269 million decrease in proceeds from the disposition of businesses, primarily a result of the Focus Sale in 2016; partially offset by
- $41 million decrease in capital expenditures; and
- $25 million release of escrow proceeds received in 2017 associated with the Focus Sale.

Net cash used in investing activities for the year ended December 31, 2016 was $152 million, compared to $362 million for the year ended December 31, 2015. This $210 million decrease in cash used in investing activities was a result of:

- $270 million increase in proceeds from the disposition of business, principally related to the Focus Sale in 2016; and
- $33 million decrease in investment in equity method investee, related to cash included in our Clinical Trials Contribution in 2015; partially offset by
- $72 million increase in cash paid for business acquisitions in 2016, principally a result of the CLP acquisition in 2016; and
- $30 million increase in capital expenditures.

Cash Flows from Financing Activities

Net cash used in financing activities for the year ended December 31, 2017 was $592 million, compared to $691 million for the year ended December 31, 2016. This $99 million decrease in cash used in financing activities was primarily a result of:

- $125 million decrease in repurchases of our common stock (see "Share Repurchases" for further details) in 2017;
- $80 million increase in bank overdrafts, which are generally settled in cash the following business day; and
- $57 million increase in proceeds from the exercise of stock options, which was a result of an increase in the volume of stock options exercised over the past year; partially offset by
- $23 million in net borrowings (proceeds from borrowings less repayments of debt) in 2017, compared to $145 million in net borrowings in 2016; and
- $24 million increase in dividends paid.

Net cash used in financing activities for the year ended December 31, 2016 was $691 million, compared to $518 million for the year ended December 31, 2015. This $173 million increase in cash used in financing activities was primarily a result of:

- $366 million increase in repurchases of our common stock (discussed in "*Share Repurchases*" below); and
- $63 million decrease in proceeds from the sale of noncontrolling interest in a subsidiary, as a result of the sale of noncontrolling interest in a subsidiary to UMass Memorial Medical Center ("UMass") in 2015; partially offset by

- $145 million in net borrowings (proceeds from borrowings less repayments of debt) in 2016, compared to $84 million in net repayments in 2015; and
- $51 million decrease in payment of deferred acquisition consideration principally a result of a payment to UMass in 2015 related to the business acquisition in 2013.

In 2017, there were $205 million in cumulative borrowings primarily associated with the funding of the CHL and Shiel acquisitions in December 2017 and $175 million in repayments under our secured receivables credit facility. In 2017, there were no borrowings under our senior unsecured revolving credit facility.

In 2016, we completed the issuance of the $500 million principal amount of 3.45% senior notes due June 2026, the 2016 Tender Offer and repaid the remaining $150 million outstanding under the Senior Notes due April 2016. In addition, both cumulative borrowings and repayments under our secured receivables credit facility totaled $1.2 billion in 2016. Both cumulative borrowings and repayments under our senior unsecured revolving credit facility totaled $155 million in 2016.

In 2015, we completed a $1.2 billion senior notes offering, the 2015 Tender Offer and 2015 Redemption. In addition, both cumulative borrowings and repayments under our secured receivables credit facility totaled $1.3 billion in 2015.

For details regarding our debt and related transactions, see Note 13 to the consolidated financial statements.

Dividend Program

During each of the four quarters of 2017 and the fourth quarter of 2016, our Board of Directors declared a quarterly cash dividend of $0.45 per common share. During each of the first three quarters of 2016, our Board of Directors declared a quarterly cash dividend of $0.40 per common share. During each of the quarters of 2015, our Board of Directors declared a quarterly cash dividend of $0.38 per common share. We expect to fund future dividend payments with cash flows from operations.

On January 30, 2018, our Board of Directors authorized an 11% increase in our quarterly dividend from $0.45 to $0.50 per share, or $2.00 per share annually, commencing with the dividend payable on April 18, 2018.

Share Repurchases

In December 2016, our Board of Directors authorized us to repurchase an additional $1 billion of our common stock.
In December 2015, our Board of Directors authorized us to repurchase an additional $500 million of our common stock. As of December 31, 2017, $0.9 billion remained available under the share repurchase authorization.

For the year ended December 31, 2017, we repurchased 4.6 million shares of our common stock for $465 million.

For the year ended December 31, 2016, we repurchased 7.4 million shares of our common stock for $590 million, which includes 3.1 million shares repurchased under an accelerated share repurchase program.

For the year ended December 31, 2015, we repurchased 3.2 million shares of our common stock for $224 million.

For further details regarding our share repurchases, see Note 15 to the consolidated financial statements.

Contractual Obligations and Commitments

The following table summarizes certain of our contractual obligations as of December 31, 2017 (dollars in millions):

	Payments due by period				
Contractual Obligations	**Total**	**Less than 1 year**	**1-3 years**	**3-5 years**	**After 5 years**
Outstanding debt	$ 3,806	$ 30	$ 1,100	$ 550	$ 2,126
Capital lease obligations	42	6	7	2	27
Interest payments on outstanding debt	1,560	162	294	204	900
Operating leases	659	177	238	117	127
Purchase obligations	1,925	286	485	418	736
Merger consideration obligation	7	7	—	—	—
Total contractual obligations	$ 7,999	$ 668	$ 2,124	$ 1,291	$ 3,916

Interest payments on our outstanding debt have been calculated after giving effect to our interest rate swap agreements, using the interest rates as of December 31, 2017 applied to the December 31, 2017 balances, which are assumed to remain outstanding through their maturity dates.

A full description of the terms of our indebtedness and related debt service requirements and our future payments under certain of our contractual obligations is contained in Note 13 to the consolidated financial statements. A full discussion and analysis regarding our minimum rental commitments under noncancelable operating leases is contained in Note 17 to the consolidated financial statements. Purchase obligations include our noncancelable commitments to purchase product or services as described in Note 17 to the consolidated financial statements. A full discussion regarding our acquisition of Shiel and the related merger consideration obligation is contained in Note 5 to the consolidated financial statements. A full discussion regarding the fair value of the contingent consideration associated with our acquisitions is discussed in Note 7 to the consolidated financial statements.

As of December 31, 2017, our total liabilities associated with unrecognized tax benefits were approximately $115 million, which were excluded from the table above. We expect that these liabilities may decrease by less than $35 million within the next twelve months, primarily as a result of payments, settlements, expiration of statutes of limitations and/or the conclusion of tax examinations on certain tax positions. For the remainder, we cannot make reasonably reliable estimates of the timing of the future payments of these liabilities. Additionally, it is reasonably possible that within the next 12 months, as a result of ongoing negotiations with tax authorities and the expiration of statutes of limitations, our total liabilities associated with unrecognized tax benefits will further decrease and beneficially impact the effective tax rate for continuing operations. However, due to the inherent uncertainty of the negotiations and the resulting outcomes, we are not able to estimate the effective tax rate impact at this time. For further details regarding the contingent tax liability reserves, see Note 8 to the consolidated financial statements.

In connection with the sale of an 18.9% noncontrolling interest in a subsidiary to UMass, we granted UMass the right to require us to purchase all of its interest in the subsidiary at fair value commencing July 1, 2020. As of December 31, 2017, the fair value of the redeemable noncontrolling interest on the consolidated balance sheet was $80 million, which was excluded from the table above. Since the redemption of the noncontrolling interest is outside of our control, we cannot make a reasonably reliable estimate of the timing of the future payment, if any, of the redeemable noncontrolling interest. For further details regarding the redeemable noncontrolling interest, see Note 15 to the consolidated financial statements.

Our credit agreements contain various covenants and conditions, including the maintenance of certain financial ratios, that could impact our ability to, among other things, incur additional indebtedness. As of December 31, 2017, we were in compliance with the various financial covenants included in our credit agreements and we do not expect these covenants to adversely impact our ability to execute our growth strategy or conduct normal business operations.

Equity Method Investees

Our equity method investees primarily consist of our clinical trials central laboratory services joint venture and our diagnostic information services joint ventures, which are accounted for under the equity method of accounting. Our investment in equity method investees equals less than 5% of our consolidated total assets. Our proportionate share of income before income taxes associated with our equity method investees equals less than 5% of our consolidated income before income taxes and equity in earnings of equity method investees. We have no material unconditional obligations or guarantees to, or in support of, our equity method investees and their operations. For further details regarding related party transactions with our equity method investees, see Note 19 to the consolidated financial statements.

Requirements and Capital Resources

We estimate that we will invest approximately $350 million to $400 million during 2018 for capital expenditures, to support and grow our existing operations, principally related to investments in information technology, laboratory equipment and facilities, including the planned start of our multi-year new laboratory construction in New Jersey, additional investments in our advanced and consumer growth strategies, as well as final buildout costs associated with the relocation of our headquarters to a lower cost location.

We expect the reduction of the federal corporate statutory tax rate under TCJA to result in tax savings and have a positive impact on our cash from operations, a portion of which we plan to reinvest back into the business and our people during 2018. The tax savings will also offset Medicare payment reductions as a result of PAMA during 2018.

As of December 31, 2017, $1.2 billion of borrowing capacity was available under our existing credit facilities consisting of $499 million available under our secured receivables credit facility and $750 million available under our senior unsecured revolving credit facility. The secured receivables credit facility includes a $250 million loan commitment which matures October 2018, and a $250 million loan commitment and a $100 million letter of credit facility which mature October 2019. The senior unsecured revolving credit facility matures in April 2019. For further details regarding the credit facilities, see Note 13 to the consolidated financial statements.

We believe the borrowing capacity under the credit facilities described above continues to be available to us. Should one or several banks no longer participate in either of our credit facilities, we would not expect it to impact our ability to fund operations. We expect that we will be able to replace our existing credit facilities with alternative arrangements prior to their expiration.

We believe that our cash and cash equivalents and cash from operations, together with our borrowing capacity under our credit facilities, will provide sufficient financial flexibility to fund seasonal and other working capital requirements, capital expenditures, debt service requirements and other obligations, cash dividends on common shares, share repurchases and additional growth opportunities for the foreseeable future. We believe that our credit profile should provide us with access to additional financing to refinance upcoming debt maturities and, if necessary, to fund growth opportunities that cannot be funded from existing sources.

Inflation

We believe that inflation generally does not have a material adverse effect on our results of operations or financial condition.

Impact of New Accounting Standards

The impacts of recent accounting pronouncements not yet effective on our consolidated financial statements are discussed in Note 2 to the consolidated financial statements.

REPORT OF MANAGEMENT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

The management of the Company, including its Chief Executive Officer and Chief Financial Officer, is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) and 15d-15(f) under the Securities Exchange Act of 1934, as amended. Management assessed the effectiveness of the Company's internal control over financial reporting as of December 31, 2017 based on criteria for effective internal control over financial reporting described in *"Internal Control - Integrated Framework (2013)"* issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on this assessment, management has determined that the Company's internal control over financial reporting as of December 31, 2017 is effective.

The 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 accounting principles generally accepted in the United States of America. Internal control over financial reporting includes 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 accounting principles generally accepted in the United States of America, and that receipts and expenditures of the Company are being made only in accordance with authorization of management and directors of the Company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of assets that could have a material effect on the consolidated 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.

PricewaterhouseCoopers LLP, the independent registered public accounting firm that audited the financial statements included in this annual report, audited the Company's internal control over financial reporting as of December 31, 2017 and issued their audit report on the Company's internal control over financial reporting included herein.

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders of Quest Diagnostics Incorporated

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of Quest Diagnostics Incorporated and its subsidiaries as of December 31, 2017 and 2016, and the related consolidated statements of operations, comprehensive income, stockholders' equity and cash flows for each of the three years in the period ended December 31, 2017, including the related notes and financial statement schedule of valuation accounts and reserves for each of the three years in the period ended December 31, 2017 listed under Item 15(a)2 (collectively referred to as the "consolidated financial statements"). We also have audited the Company's internal control over financial reporting as of December 31, 2017, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2017 and 2016, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2017 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2017, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the COSO.

Basis for Opinions

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in Report of Management on Internal Control over Financial Reporting under Item 9A. Our responsibility is to express opinions on the Company's consolidated financial statements and on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) ("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 audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated 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 consolidated 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 consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

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 (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) 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 (iii) 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/ PricewaterhouseCoopers LLP

Florham Park, New Jersey
February 23, 2018

We have served as the Company's auditor since 1995.

QUEST DIAGNOSTICS INCORPORATED AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
DECEMBER 31, 2017 AND 2016
(in millions, except per share data)

	2017	2016
Assets		
Current assets:		
Cash and cash equivalents	$ 137	$ 359
Accounts receivable, net of allowance for doubtful accounts of $269 and $265 as of December 31, 2017 and 2016, respectively	924	926
Inventories	95	82
Prepaid expenses and other current assets	150	155
Assets held for sale	—	9
Total current assets	1,306	1,531
Property, plant and equipment, net	1,145	1,029
Goodwill	6,335	6,000
Intangible assets, net	1,119	949
Investments in equity method investees	462	443
Other assets	136	148
Total assets	$ 10,503	$ 10,100
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable and accrued expenses	$ 1,021	$ 975
Current portion of long-term debt	36	6
Total current liabilities	1,057	981
Long-term debt	3,748	3,728
Other liabilities	663	654
Commitments and contingencies		
Redeemable noncontrolling interest	80	77
Stockholders' equity:		
Quest Diagnostics stockholders' equity:		
Common stock, par value $0.01 per share; 600 shares authorized as of both December 31, 2017 and 2016; 216 shares issued as of both December 31, 2017 and 2016	2	2
Additional paid-in capital	2,612	2,545
Retained earnings	7,138	6,613
Accumulated other comprehensive loss	(48)	(72)
Treasury stock, at cost; 81 shares and 79 shares as of December 31, 2017 and 2016, respectively	(4,783)	(4,460)
Total Quest Diagnostics stockholders' equity	4,921	4,628
Noncontrolling interests	34	32
Total stockholders' equity	4,955	4,660
Total liabilities and stockholders' equity	$ 10,503	$ 10,100

The accompanying notes are an integral part of these statements.

QUEST DIAGNOSTICS INCORPORATED AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF OPERATIONS
FOR THE YEARS ENDED DECEMBER 31, 2017, 2016 AND 2015
(in millions, except per share data)

	2017	2016	2015
Net revenues	$ 7,709	$ 7,515	$ 7,493
Operating costs and expenses and other operating income:			
Cost of services	4,719	4,616	4,657
Selling, general and administrative	1,750	1,681	1,679
Amortization of intangible assets	74	72	81
Gain on disposition of business	—	(118)	(334)
Other operating expense (income), net	1	(13)	11
Total operating costs and expenses, net	6,544	6,238	6,094
Operating income	1,165	1,277	1,399
Other income (expense):			
Interest expense, net	(151)	(143)	(153)
Other income (expense), net	16	(48)	(143)
Total non-operating expenses, net	(135)	(191)	(296)
Income before income taxes and equity in earnings of equity method investees	1,030	1,086	1,103
Income tax expense	(241)	(429)	(373)
Equity in earnings of equity method investees, net of taxes	35	39	23
Net income	824	696	753
Less: Net income attributable to noncontrolling interests	52	51	44
Net income attributable to Quest Diagnostics	$ 772	$ 645	$ 709
Earnings per share attributable to Quest Diagnostics' common stockholders:			
Basic	$ 5.63	$ 4.58	$ 4.92
Diluted	$ 5.50	$ 4.51	$ 4.87
Dividends per common share	$ 1.80	$ 1.65	$ 1.52

The accompanying notes are an integral part of these statements.

QUEST DIAGNOSTICS INCORPORATED AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
FOR THE YEARS ENDED DECEMBER 31, 2017, 2016 AND 2015
(in millions)

	2017	2016	2015
Net income	$ 824	$ 696	$ 753
Other comprehensive income (loss):			
Currency translation	20	(34)	(15)
Investment adjustments, net of taxes	3	(2)	—
Net deferred loss on cash flow hedges, net of tax	1	2	3
Other	—	—	1
Other comprehensive income (loss)	24	(34)	(11)
Comprehensive income	848	662	742
Less: Comprehensive income attributable to noncontrolling interests	52	51	44
Comprehensive income attributable to Quest Diagnostics	$ 796	$ 611	$ 698

The accompanying notes are an integral part of these statements.

QUEST DIAGNOSTICS INCORPORATED AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
FOR THE YEARS ENDED DECEMBER 31, 2017, 2016 AND 2015
(in millions)

	2017	2016	2015
Cash flows from operating activities:			
Net income	$ 824	$ 696	$ 753
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	270	249	304
Provision for doubtful accounts	315	308	297
Deferred income tax provision	9	37	112
Stock-based compensation expense	79	69	52
Gain on disposition of business	—	(118)	(334)
Other, net	(6)	(6)	6
Changes in operating assets and liabilities:			
Accounts receivable	(298)	(343)	(262)
Accounts payable and accrued expenses	(8)	56	(24)
Income taxes payable	16	42	(41)
Termination of interest rate swap agreements	—	54	—
Other assets and liabilities, net	(26)	25	(42)
Net cash provided by operating activities	1,175	1,069	821
Cash flows from investing activities:			
Business acquisitions, net of cash acquired	(581)	(139)	(67)
Proceeds from disposition of business	1	270	—
Escrow proceeds associated with disposition of business	25	—	—
Capital expenditures	(252)	(293)	(263)
Investment in equity method investee	—	—	(33)
Decrease in investments and other assets	2	10	1
Net cash used in investing activities	(805)	(152)	(362)
Cash flows from financing activities:			
Proceeds from borrowings	205	1,869	2,453
Repayments of debt	(182)	(1,724)	(2,537)
Purchases of treasury stock	(465)	(590)	(224)
Exercise of stock options	130	73	60
Employee payroll tax withholdings on stock issued under stock-based compensation plans	(23)	(10)	(7)
Dividends paid	(247)	(223)	(212)
Distributions to noncontrolling interests	(51)	(41)	(42)
Sale of noncontrolling interest in subsidiary	4	—	63
Payment of deferred business acquisition consideration	(3)	—	(51)
Other financing activities, net	40	(45)	(21)
Net cash used in financing activities	(592)	(691)	(518)
Net change in cash and cash equivalents	(222)	226	(59)
Cash and cash equivalents, beginning of year	359	133	192
Cash and cash equivalents, end of year	$ 137	$ 359	$ 133

The accompanying notes are an integral part of these statements.

QUEST DIAGNOSTICS INCORPORATED AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
FOR THE YEARS ENDED DECEMBER 31, 2017, 2016 AND 2015
(in millions)

	Quest Diagnostics Stockholders' Equity								
	Shares of Common Stock Out-standing	Common Stock	Additional Paid-In Capital	Retained Earnings	Accumulated Other Comprehensive Loss	Treasury Stock, at Cost	Non-controlling Interests	Total Stock-holders' Equity	Redeemable Non-controlling Interest
Balance, December 31, 2014	144	$ 2	$ 2,418	$ 5,723	$ (27)	$ (3,815)	$ 29	$ 4,330	$ —
Net income				709			42	751	2
Other comprehensive loss, net of tax					(11)			(11)	
Dividends declared				(219)				(219)	
Distributions to noncontrolling interests							(42)	(42)	
Issuance of common stock under benefit plans	1		6			15		21	
Stock-based compensation expense			48			4		52	
Exercise of stock options	1					60		60	
Shares to cover employee payroll tax withholdings on stock issued under stock-based compensation plans			(7)					(7)	
Tax benefits associated with stock-based compensation plans			5					5	
Purchases of treasury stock	(3)					(224)		(224)	
Sale of redeemable noncontrolling interest			11					11	54
Adjustment to fair value				(14)				(14)	14
Balance, December 31, 2015	143	$ 2	$ 2,481	$ 6,199	$ (38)	$ (3,960)	$ 29	$ 4,713	$ 70
Net income				645			44	689	7
Other comprehensive loss, net of tax					(34)			(34)	
Dividends declared				(231)				(231)	
Distributions to noncontrolling interests							(41)	(41)	
Issuance of common stock under benefit plans			7			15		22	
Stock-based compensation expense			65			4		69	
Exercise of stock options	1		2			71		73	
Shares to cover employee payroll tax withholdings on stock issued under stock-based compensation plans			(10)					(10)	
Purchases of treasury stock	(7)					(590)		(590)	
Balance, December 31, 2016	137	$ 2	$ 2,545	$ 6,613	$ (72)	$ (4,460)	$ 32	$ 4,660	$ 77
Net income				772			45	817	7
Other comprehensive income, net of tax					24			24	
Dividends declared				(247)				(247)	
Distributions to noncontrolling interests							(47)	(47)	(4)
Issuance of common stock under benefit plans			11			12		23	
Stock-based compensation expense			75			4		79	
Exercise of stock options	3		4			126		130	
Shares to cover employee payroll tax withholdings on stock issued under stock-based compensation plans			(23)					(23)	
Purchases of treasury stock	(5)					(465)		(465)	
Sale of noncontrolling interest							4	4	
Balance, December 31, 2017	135	$ 2	$ 2,612	$ 7,138	$ (48)	$ (4,783)	$ 34	$ 4,955	$ 80

The accompanying notes are an integral part of these statements.

QUEST DIAGNOSTICS INCORPORATED AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(in millions unless otherwise indicated)

1. DESCRIPTION OF BUSINESS

Background

Quest Diagnostics Incorporated and its subsidiaries ("Quest Diagnostics" or the "Company") empower people to take action to improve health outcomes. The Company uses its extensive database of clinical lab results to derive diagnostic insights that reveal new avenues to identify and treat disease, inspire healthy behaviors and improve healthcare management. The Company's diagnostic information services business ("DIS") provides information and insights based on the industry-leading menu of routine, non-routine and advanced clinical testing and anatomic pathology testing, and other diagnostic information services. The Company provides services to a broad range of customers, including patients, clinicians, hospitals, independent delivery networks ("IDNs"), health plans, employers and accountable care organizations ("ACOs"). The Company offers the broadest access in the United States to diagnostic information services through its nationwide network of laboratories, patient service centers and phlebotomists in physician offices and the Company's connectivity resources, including call centers and mobile paramedics, nurses and other health and wellness professionals. The Company is the world's leading provider of diagnostic information services. The Company provides interpretive consultation with one of the largest medical and scientific staffs in the industry and hundreds of M.D.s and Ph.D.s, many of whom are recognized leaders in their fields. The Company's Diagnostic Solutions ("DS") businesses offer a variety of solutions for life insurers and healthcare organizations and clinicians. The Company is the leading provider of risk assessment services for the life insurance industry. In addition, the Company offers healthcare organizations and clinicians robust information technology solutions. Prior to the sale of the Focus Diagnostics products business on May 13, 2016 (see Note 6), the Company's diagnostics products business manufactured and marketed diagnostic products. Prior to the contribution of its clinical trials testing business to the Q^2 Solutions joint venture on July 1, 2015 (see Note 6), the Company's clinical trials testing business was a leading provider of central laboratory testing for clinical trials.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Principles of Consolidation

The consolidated financial statements include the accounts of all entities controlled by the Company through its direct or indirect ownership of a majority voting interest and the accounts of any variable interest entities ("VIEs") where the Company is subject to a majority of the risk of loss from the variable interest entity's activities, or entitled to receive a majority of the entity's residual returns, or both. The Company assesses the requirements related to the consolidation of VIEs, including a qualitative assessment of power and economics that considers which entity has the power to direct the activities that "most significantly impact" the VIEs' economic performance and has the obligation to absorb losses of, or the right to receive benefits that could be potentially significant to, the VIE. The Company did not have any VIEs as of both December 31, 2017 and 2016. All significant intercompany accounts and transactions are eliminated in consolidation.

Income attributable to the minority interest in the Company's majority owned and controlled consolidated subsidiaries is recorded as net income attributable to noncontrolling interests in the consolidated statements of operations and the noncontrolling interest is reflected as a separate component of consolidated stockholders' equity.

Equity Method Investments

Investments in entities which the Company does not control, but in which it has a substantial ownership interest (generally between 20% and 49%) and can exercise significant influence, are accounted for using the equity method of accounting. These investments are classified as investments in equity method investees in the consolidated balance sheets. The Company records its pro rata share of the earnings, adjusted for accretion of basis difference, of these investments in equity in earnings of equity method investees, net of taxes in the consolidated statements of operations. The Company reviews its investments in equity method investees for impairment whenever events or changes in circumstances indicate that the carrying amounts may not be recoverable.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States ("GAAP") requires 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 and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Revenue Recognition

The Company primarily recognizes revenue for services rendered upon completion of the testing process. Billings for services reimbursed by third-party payers, including Medicare and Medicaid, are recorded as revenues net of allowances for differences between amounts billed and the estimated receipts from such payers. Adjustments to the allowances, based on actual receipts from the third-party payers, are recorded upon settlement. Billings to the Medicare and Medicaid programs were approximately 16%, 17% and 17% of the Company's consolidated net revenues for the years ended December 31, 2017, 2016 and 2015, respectively. Under capitated arrangements with healthcare insurers, the Company recognizes revenue based on a predetermined monthly reimbursement rate for each member of an insurer's health plan regardless of the number or cost of services provided by the Company.

Revenues from the Company's risk assessment services, healthcare information technology, clinical trials testing (see Note 6 regarding the contribution of the clinical trials testing business to a newly formed joint venture effective July 1, 2015), and diagnostics products businesses (see Note 6 regarding the sale of the Focus Diagnostics products business on May 13, 2016) are recognized when persuasive evidence of a final agreement exists; delivery has occurred or services have been rendered; the price of the product or service is fixed or determinable; and collectibility from the customer is reasonably assured.

Taxes on Income

The provision for income taxes represents income taxes paid or payable for the current year plus the change in deferred taxes during the year. Current and deferred income taxes are measured based on the tax laws that are enacted as of the balance sheet date of the relevant reporting period. Deferred tax assets and liabilities are recognized for the expected future tax consequences of differences between the carrying amounts of assets and liabilities and their respective tax bases using tax rates in effect for the year in which the differences are expected to reverse. A valuation allowance is provided when it is more likely than not that some portion or all of the deferred tax assets will not be realized. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period when the change is enacted. Tax benefits from uncertain tax positions are recognized only if the tax position is more likely than not to be sustained upon examination by taxing authorities based on the technical merits of the position.

Earnings Per Share

The Company's unvested restricted stock units that contain non-forfeitable rights to dividends are participating securities and, therefore, are included in the earnings allocation in computing earnings per share using the two-class method. Basic earnings per common share is calculated by dividing net income, adjusted for earnings allocated to participating securities, by the weighted average number of common shares outstanding. Diluted earnings per common share is calculated by dividing net income, adjusted for earnings allocated to participating securities, by the weighted average number of common shares outstanding after giving effect to all potentially dilutive common shares outstanding during the period. Potentially dilutive common shares include the dilutive effect of outstanding stock options and performance share units granted under the Company's Amended and Restated Employee Long-Term Incentive Plan ("ELTIP") and its Amended and Restated Non-Employee Director Long-Term Incentive Plan ("DLTIP"). Earnings allocable to participating securities include the portion of dividends declared as well as the portion of undistributed earnings during the period allocable to participating securities.

Stock-Based Compensation

The Company records stock-based compensation as a charge to earnings net of the estimated impact of forfeited awards. As such, the Company recognizes stock-based compensation cost only for those stock-based awards that are estimated to ultimately vest over their requisite service period, based on the vesting provisions of the individual grants. The cumulative effect on current and prior periods of a change in the estimated forfeiture rate is recognized as compensation cost in earnings in the period of the change. The terms of the Company's performance share unit awards allow the recipients of such awards to earn a variable number of shares based on the achievement of the performance goals specified in the awards. Stock-based compensation expense associated with performance share units is recognized based on management's best estimates of the achievement of the performance goals specified in such awards and the resulting number of shares that will be earned. The cumulative effect on current and prior periods of a change in the estimated number of performance share units expected to be earned is recognized as compensation cost in earnings in the period of the change. The Company recognizes stock-based compensation expense related to the Company's Amended and Restated Employee Stock Purchase Plan ("ESPP") based on the 15% discount at purchase. For further details regarding stock-based compensation, see Note 16.

Fair Value Measurements

The Company determines fair value measurements used in its consolidated financial statements based upon the exit price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants exclusive of any transaction costs, as determined by either the principal market or the most advantageous market.

Inputs used in the valuation techniques to derive fair values are classified based on a three-level hierarchy. The basis for fair value measurements for each level within the hierarchy is described below with Level 1 having the highest priority and Level 3 having the lowest.

Level 1: Quoted prices in active markets for identical assets or liabilities.
Level 2: Quoted prices for similar assets or liabilities in active markets; quoted prices for identical or similar instruments in markets that are not active; and model-derived valuations in which all significant inputs are observable in active markets.
Level 3: Valuations derived from valuation techniques in which one or more significant inputs are unobservable.

Foreign Currency

The Company predominately uses the U.S. dollar as its functional currency. The functional currency of the Company's foreign operating subsidiaries generally is the applicable local currency. Assets and liabilities denominated in non-U.S. dollars are translated into U.S. dollars at exchange rates as of the end of the reporting period. Income and expense items are translated at the average monthly exchange rates during the year. Resulting translation adjustments are recorded as a component of accumulated other comprehensive loss within stockholders' equity. Gains and losses from foreign currency transactions, which are denominated in a currency other than the functional currency, are included within other operating expense (income), net in the consolidated statements of operations. Transaction gains and losses have historically not been material. The Company may be exposed to market risk for changes in foreign exchange rates primarily under certain intercompany receivables and payables. From time to time, the Company uses foreign exchange forward contracts to mitigate the exposure of the eventual net cash inflows or outflows resulting from these intercompany transactions. The Company's foreign exchange exposure is not material to the Company's consolidated financial condition. The Company does not hedge its net investment in non-U.S. subsidiaries because it views those investments as long-term in nature.

Cash and Cash Equivalents

Cash and cash equivalents include all highly-liquid investments with original maturities, at the time acquired by the Company, of three months or less.

Concentration of Credit Risk

Financial instruments that potentially subject the Company to concentrations of credit risk are principally cash, cash equivalents, short-term investments, accounts receivable and derivative financial instruments. The Company's policy is to place its cash, cash equivalents and short-term investments in highly-rated financial instruments and institutions. Concentration of credit risk with respect to accounts receivable is mitigated by the diversity of the Company's payers and their dispersion across many different geographic regions, and is limited to certain payers who are large buyers of the Company's services. To reduce risk, the Company routinely assesses the financial strength of these payers and, consequently, believes that its accounts receivable credit risk exposure, with respect to these payers, is limited. While the Company has receivables due from federal and state governmental agencies, the Company does not believe that such receivables represent a credit risk since the related healthcare programs are funded by federal and state governments, and payment is primarily dependent on submitting appropriate documentation. As of December 31, 2017 and 2016, receivables due from government payers under the Medicare and Medicaid programs represent approximately 14% and 15%, respectively, of the Company's consolidated net accounts receivable. The portion of the Company's accounts receivable due from patients comprises the largest portion of credit risk. As of December 31, 2017 and 2016, receivables due from patients represent approximately 20% and 17%, respectively, of the Company's consolidated net accounts receivable. The Company applies assumptions and judgments including historical collection experience for assessing collectibility and determining allowances for doubtful accounts for accounts receivable from patients. Refer to *New Accounting Standards To Be Adopted* within this Note 2 for impact of accounting standards update ("ASU") on revenue recognition.

Accounts Receivable and Allowance for Doubtful Accounts

Accounts receivable are reported at realizable value, net of allowances for doubtful accounts, which are estimated and recorded in the period the related revenue is recorded. The Company has a standardized approach to estimate and review the collectibility of its receivables based on a number of factors, including the period they have been outstanding. Historical collection and payer reimbursement experience is an integral part of the estimation process related to allowances for doubtful accounts. In addition, the Company regularly assesses the state of its billing operations in order to identify issues which may impact the collectibility of these receivables or reserve estimates. Changes to the allowances for doubtful accounts estimates are recorded as an adjustment to bad debt expense within selling, general and administrative expenses in the consolidated statements of operations. Receivables deemed to be uncollectible are charged against the allowance for doubtful accounts at the time such receivables are written-off. Recoveries of receivables previously written-off are recorded as credits to the allowance for doubtful accounts.

Inventories

Inventories, which consist principally of testing supplies and reagents, are valued at the lower of cost (first in, first out method) and net realizable value.

Property, Plant and Equipment

Property, plant and equipment is recorded at cost. Major renewals and improvements are capitalized, while maintenance and repairs are expensed as incurred. Costs incurred for computer software developed or obtained for internal use are capitalized for application development activities and expensed as incurred for preliminary project activities and post-implementation activities. Capitalized costs include external direct costs of materials and services consumed in developing or obtaining internal-use software, payroll and payroll-related costs for employees who are directly associated with the internal-use software project, and interest costs incurred, when material, while developing internal-use software. Capitalization of such costs ceases when the project is substantially complete and ready for its intended purpose. Costs for maintenance and training are expensed as incurred. The Company capitalizes interest on borrowings during the active construction period of major capital projects. Capitalized interest is added to the cost of the underlying assets and is amortized over the expected useful lives of the assets. Depreciation and amortization are provided on the straight-line method over expected useful asset lives as of December 31, 2017 as follows:

- buildings and improvements, ranging up to thirty-one and a half years;
- laboratory equipment and furniture and fixtures, ranging from five to twelve years;
- leasehold improvements, the lesser of the useful life of the improvement or the remaining life of the building or lease, as applicable; and

- computer software developed or obtained for internal use, five years.

In connection with the Company's annual review of the estimated useful lives of its property, plant and equipment completed during the first quarter of 2016, the Company revised the estimated useful lives of certain classes of its property, plant and equipment. In order to better reflect the Company's current expectations regarding the use of its assets, the recent operational improvements from its Invigorate program and considering historical and other data, the Company revised the estimated useful lives of its laboratory equipment from a range of five to seven years to a range of seven to ten years, furniture and fixtures from a range of three to seven years to a range of five to twelve years and computer software obtained for internal use from three years to five years. The change in estimated useful lives was accounted for prospectively as a change in accounting estimate effective in the first quarter of 2016. The impact of this change for the year ended December 31, 2016, was a decrease in depreciation expense and an increase in operating income of $37 million and an increase in net income of $23 million, or $0.16 per share on a basic and diluted basis.

Goodwill

Goodwill represents the excess of the fair value of the acquiree (including the fair value of non-controlling interests) over the recognized bases of the net identifiable assets acquired and includes the future economic benefits from other assets that could not be individually identified and separately recognized. Goodwill is not amortized, but instead is periodically reviewed for impairment and an impairment charge is recorded in the periods in which the recorded carrying value of goodwill is more than its fair value.

The goodwill test is performed at least annually, or more frequently if events or changes in circumstances indicate that the asset might be impaired. The annual impairment test includes an option to perform a qualitative assessment of whether it is more-likely-than-not that a reporting unit's fair value is less than its carrying value; the qualitative test may be performed prior to, or as an alternative to, performing a quantitative goodwill impairment test. If, after assessing the totality of events or circumstances, the Company determines that it is more-likely-than-not that the fair value of a reporting unit is less than its carrying value, then the Company is required to perform the quantitative goodwill impairment test. Otherwise, no further analysis is required. Additionally, the Company's policy is to update the fair value calculation of its reporting units and perform the quantitative goodwill impairment test on a periodic basis.

The quantitative impairment test involves the comparison of the fair value of the reporting unit to its carrying value. The Company calculates the fair value of each reporting unit using either a discounted cash flows analysis that converts future cash flow amounts into a single discounted present value amount or a market approach. The Company assesses the valuation methodology based upon the relevance and availability of the data at the time that the valuation is performed. The Company compares the estimate of fair value for the reporting unit to the carrying value of the reporting unit. If the carrying value is greater than the estimate of fair value, an impairment loss will be recognized in the amount of the excess.

On a quarterly basis, the Company performs a review of its business to determine if events or changes in circumstances have occurred which could have a material adverse effect on the fair value of the Company and its goodwill. If such events or changes in circumstances were deemed to have occurred, the Company would perform an impairment test of goodwill as of the end of the quarter and record any noted impairment loss.

The Company performs its annual impairment test during the fourth quarter of the fiscal year. For the year ended December 31, 2017, in accordance with its policy to perform the quantitative test on a periodic basis, the Company updated the fair value calculation of its reporting units, performed the quantitative impairment test and concluded that goodwill was not impaired. For the year ended December 31, 2016, the Company performed the qualitative impairment test. Based on the totality of information available for the DIS and risk assessment services reporting units, the Company concluded that it was more-likely-than-not that the estimated fair values were greater than the carrying values of the reporting units, and as such, no further analysis was required.

Intangible Assets

Intangible assets are recognized at fair value, as an asset apart from goodwill if the asset arises from contractual or other legal rights, or if it is separable. Intangible assets, principally representing the cost of customer-related intangibles, non-competition agreements and technology acquired, are capitalized and amortized on the straight-line method over their expected useful life, which generally ranges from five to twenty years. Intangible assets with indefinite useful lives, consisting principally of acquired tradenames, are not amortized, but instead are periodically reviewed for impairment.

The Company reviews indefinite-lived intangible assets periodically for impairment and an impairment charge is recorded in the periods in which the recorded carrying value of indefinite-lived intangibles is more than its estimated fair value. The indefinite-lived intangible asset impairment test is performed at least annually, or more frequently in the case of other events that indicate a potential impairment.

Based upon the Company's most recent annual impairment tests completed during the fourth quarter of the years ended December 31, 2017 and 2016, the Company concluded that indefinite-lived intangible assets were not impaired.

The Company reviews the recoverability of its long-lived assets (including amortizable intangible assets), other than goodwill and indefinite-lived intangible assets, when events or changes in circumstances occur that indicate that the carrying value of the asset may not be recoverable. Evaluation of possible impairment is based on the Company's ability to recover the asset from the expected future pre-tax cash flows (undiscounted and without interest charges) of the related operations. If the expected undiscounted pre-tax cash flows are less than the carrying amount of such asset, an impairment loss is recognized for the difference between the estimated fair value and carrying amount of the asset.

Investments

The Company's investments, which are included in other assets in the consolidated balance sheets, are comprised of trading securities, available-for-sale securities and other investments. The classification of an investment depends on the Company's intent and ability to hold the investment.

- Trading securities represent participant-directed investments of deferred employee compensation and related Company matching contributions held in trusts pursuant to the Company's supplemental deferred compensation plans (see Note 16). Trading securities are carried at fair value with both realized and unrealized gains and losses recorded currently in earnings as a component of non-operating expenses within other income (expense), net in the consolidated statements of operations. For the years ended December 31, 2017, 2016 and 2015, gains from trading equity securities totaled $8 million, $3 million, and $0 million, respectively.

- Available-for-sale equity securities consists of an investment in registered shares of a public corporation. Available-for-sale equity securities are carried at fair value with unrealized gains and losses, net of tax, recorded as a component of accumulated other comprehensive loss within stockholders' equity and realized gains and losses recorded in other income (expense), net in the consolidated statements of operations. As of December 31, 2017, the Company had gross unrealized gains from available-for-sale equity securities of $0 million.

- Other investments do not have readily determinable fair values and consist of investments in preferred and common shares of privately held companies and are accounted for under the cost method.

Gains and losses on securities sold are based on the average cost method. The Company periodically reviews its investments to determine whether a decline in fair value below the cost basis is other-than-temporary. The primary factors considered in the determination are: the length of time that the fair value of the investment is below carrying value; the financial condition, operating performance and near-term prospects of the investee; and the Company's intent and ability to hold the investment for a period of time sufficient to allow for a recovery in fair value. If the decline in fair value is deemed to be other-than-temporary, the cost basis of the security is written down to fair value. For the year ended December 31, 2017, the Company recorded an other-than-temporary impairment of $6 million in other income (expense), net related to its available-for-sale equity investment.

Investments as of December 31, 2017 and 2016 consisted of the following:

	2017	2016
Available-for-sale equity securities	$ 2	$ 3
Trading equity securities	58	51
Other investments	9	6
Total	$ 69	$ 60

Derivative Financial Instruments

The Company uses derivative financial instruments to manage its exposure to market risks for changes in interest rates and, from time to time, foreign currencies. This strategy includes the use of interest rate swap agreements, forward starting interest rate swap agreements, treasury lock agreements and foreign currency forward contracts to manage its exposure to movements in interest and currency rates. The Company has established policies and procedures for risk assessment and the approval, reporting and monitoring of derivative financial instrument activities. These policies prohibit holding or issuing derivative financial instruments for speculative purposes. The Company does not enter into derivative financial instruments that contain credit-risk-related contingent features or requirements to post collateral.

Interest Rate Risk

The Company is exposed to interest rate risk on its cash and cash equivalents and its debt obligations. Interest income earned on cash and cash equivalents may fluctuate as interest rates change; however, due to their relatively short maturities, the Company does not hedge these assets or their investment cash flows and the impact of interest rate risk is not material. The Company's debt obligations consist of fixed-rate and variable-rate debt instruments. The Company's primary objective is to achieve the lowest overall cost of funding while managing the variability in cash outflows within an acceptable range. In order to achieve this objective, the Company has entered into interest rate swaps. Interest rate swaps involve the periodic exchange of payments without the exchange of underlying principal or notional amounts. Net settlements between the counterparties are recognized as an adjustment to interest expense, net.

The Company accounts for these derivatives as either an asset or liability measured at its fair value. The fair value is based upon model-derived valuations in which all significant inputs are observable in active markets and includes an adjustment for the credit risk of the obligor's non-performance. For a derivative instrument that has been formally designated as a fair value hedge, fair value gains or losses on the derivative instrument along with offsetting fair value gains or losses on the hedged item that are attributable to the risk being hedged are reported in other income (expense), net in the consolidated statements of operations. For derivatives that have been formally designated as a cash flow hedge, the change in the fair value of the derivatives is recorded in accumulated other comprehensive loss. Upon maturity or early termination of an effective interest rate swap designated as a cash flow hedge, unrealized gains or losses are deferred in stockholders' equity, as a component of accumulated other comprehensive loss, and are amortized as an adjustment to interest expense over the period during which the hedged forecasted transaction affects earnings, which is when the Company recognizes interest expense on the hedged cash flows. At inception and quarterly thereafter, the Company formally assesses whether the derivatives that are used in hedging transactions are highly effective in offsetting changes in the fair value or cash flows of the hedged item. After the initial quantitative assessment, this analysis is performed on a qualitative basis and, if it is determined that the hedging relationship was and continues to be highly effective, no further analysis is required. All components of each derivative financial instrument's gain or loss are included in the assessment of hedge effectiveness. If it is determined that a derivative ceases to be a highly effective hedge, the Company discontinues hedge accounting and any deferred gains or losses related to a discontinued cash flow hedge shall continue to be reported in accumulated other comprehensive loss, unless it is probable that the forecasted transaction will not occur. If it is probable that the forecasted transaction will not occur by the originally specified time period, the Company discontinues hedge accounting, and any deferred gains or losses reported in accumulated other comprehensive loss are classified into earnings immediately.

Comprehensive Income (Loss)

Comprehensive income (loss) encompasses all changes in stockholders' equity (except those arising from transactions with stockholders) and includes:

- Foreign currency translation adjustments;

- Investment adjustments, which represent unrealized holding gains (losses), net of tax on available for sale securities, net of other-than-temporary impairment amounts reclassified to other income (expense), net; and
- Net deferred loss on cash flow hedges, which represents deferred losses, net of tax on interest rate related derivative financial instruments designated as cash flow hedges, net of amounts reclassified to interest expense (see Note 15).

New Accounting Standards

Adoption of New Accounting Standards

On January 1, 2017, the Company adopted a new accounting standard issued by the Financial Accounting Standards Board ("FASB") that simplifies the transition to the equity method of accounting by requiring adoption as of the date the investment becomes qualified for equity method accounting. Therefore, upon qualifying for the equity method of accounting as a result of an increase in the level of ownership interest or degree of influence, no retroactive adjustment of the investment is required. The adoption of this standard did not have a material impact on the Company's results of operations, financial position or cash flows.

In the fourth quarter of 2017, the Company adopted a new accounting standard that simplifies the quantitative test for goodwill impairment. The guidance eliminates step two in the current two-step process so that any goodwill impairment is measured as the amount by which the reporting unit's carrying amount exceeds its fair value. The adoption of this standard, which was done on a prospective basis, did not have a material impact on the Company's results of operations, financial position or cash flows.

In the third quarter of 2017, the Company elected to early adopt a new accounting standard, effective January 1, 2017, that amends and simplifies existing hedge accounting guidance and allows for more hedging strategies to be eligible for hedge accounting. In addition, the new standard amends disclosure requirements and how hedge effectiveness is assessed. The adoption of this standard did not have a material impact on the Company's results of operations, financial position or cash flows. For further details regarding the Company's derivative financial instruments, see Note 14.

New Accounting Standards To Be Adopted

In May 2014, the FASB issued an ASU on revenue recognition. This ASU outlines a single comprehensive model to use in accounting for revenue arising from contracts with customers. This standard supersedes existing revenue recognition requirements and eliminates most industry-specific guidance from GAAP. The core principle of the revenue recognition standard is to require an entity to recognize as revenue the amount that reflects the consideration to which it expects to be entitled in exchange for goods or services as it transfers control to its customers. In August 2015, the FASB deferred the effective date of this ASU to the first quarter of 2018, with early adoption permitted beginning in the first quarter of 2017. The ASU can be applied using a full retrospective method or a modified retrospective method of adoption. The Company will adopt the ASU in the first quarter of 2018 using the full retrospective method. The Company continues to assess the impact of this ASU on its results of operations, financial position, cash flows and disclosures. Based on the Company's assessment of this ASU, the majority of the amounts that were historically classified as bad debt expense, primarily related to patient responsibility, will be considered an implicit price concession in determining net revenues. Accordingly, the Company will report uncollectible balances associated with patient responsibility as a reduction of the transaction price and therefore as a reduction in net revenues when historically these amounts were classified as bad debt expense within selling, general and administrative expenses. As a result of this change, the Company preliminarily estimates the following impact to its consolidated statements of operations for the years ended December 31, 2017 and 2016:

QUEST DIAGNOSTICS INCORPORATED AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS – CONTINUED
(in millions unless otherwise indicated)

	Year Ended December 31, 2017			Year Ended December 31, 2016		
	As Reported	Adjustment for ASU on Revenue Recognition	As Adjusted	As Reported	Adjustment for ASU on Revenue Recognition	As Adjusted
Net revenues	$ 7,709	$ (307)	$ 7,402	$ 7,515	$ (301)	$ 7,214
Selling, general and administrative expenses	$ 1,750	$ (307)	$ 1,443	$ 1,681	$ (301)	$ 1,380
Net income attributable to Quest Diagnostics	$ 772	$ —	$ 772	$ 645	$ —	$ 645

In addition, the adoption of this ASU will result in increased disclosure, including qualitative and quantitative disclosures about the nature, amount, timing and uncertainty of revenue and cash flows arising from contracts with customers. However, the adoption of this ASU is not expected to have a material impact on the Company's financial position or cash flows.

In January 2016, the FASB issued an ASU on the recognition and measurement of financial assets and financial liabilities. This ASU requires that all equity investments (except those accounted for under the equity method of accounting or those that result in consolidation of the investee) be measured at fair value with changes in fair value recognized in net income. However, companies may elect to measure equity investments that do not have readily determinable fair values at cost minus impairment, if any, plus or minus changes resulting from observable price changes in orderly transactions for the identical or a similar investment of the same issuer. In addition, the ASU eliminates the requirement to disclose the method and significant assumptions used to estimate the fair value for financial instruments measured at amortized cost on the balance sheet. The ASU is effective for the Company in the first quarter of 2018. The Company does not expect the adoption of this ASU to have a material impact on its results of operations, financial position or cash flows.

In February 2016, the FASB issued an ASU that amends accounting for leases. Under the new guidance, a lessee will recognize assets and liabilities for most leases on its balance sheet but will recognize expense on its consolidated statement of operations similar to current lease accounting. The ASU is effective for the Company in the first quarter of 2019 with early adoption permitted. The new guidance must be adopted using a modified retrospective transition approach. The adoption of this ASU will result in a significant increase to the Company's balance sheet for lease liabilities and right-of-use assets, which has not yet been quantified. The Company is currently assessing the impact of the adoption of this ASU on the Company's results of operations, financial position and cash flows. Significant implementation matters being addressed by the Company include implementing an integrated third-party lease accounting application, assessing the impact to its internal controls over financial reporting and documenting the new lease accounting process.

In June 2016, the FASB issued an ASU that changes the impairment model for most financial instruments, including trade receivables, from an incurred loss method to a new forward-looking approach, based on expected losses. The estimate of expected credit losses will require entities to incorporate considerations of historical information, current information and reasonable and supportable forecasts. This ASU is effective for the Company in the first quarter of 2020 and must be adopted using a modified retrospective transition approach. The Company is currently assessing the impact of the adoption of this ASU on the Company's results of operations, financial position and cash flows.

In August 2016, the FASB issued an ASU that clarifies how certain cash receipts and cash payments are presented and classified in the statement of cash flows. The ASU is effective for the Company in the first quarter of 2018 and must be applied retrospectively to all periods presented. Upon adoption cash payments for debt retirement costs (which were $47 million in 2016) would be reclassified from operating cash outflows to financing cash outflows in the consolidated statements of cash flows. The future impact of the adoption of this ASU on the Company's cash flows will be dependent upon the nature of any future debt refinancing transactions.

In November 2016, the FASB issued an ASU that clarifies the presentation and classification of restricted cash in the statement of cash flows. The ASU requires that amounts generally described as restricted cash and restricted cash equivalents be presented with cash and cash equivalents when reconciling the beginning-of-period and end-of-period total amounts shown on the statement of cash flows. The ASU is effective for the Company in the first quarter of 2018 and must be applied retrospectively to all periods presented. The Company does not expect the adoption of this ASU to have a material impact on its cash flows.

In January 2017, the FASB issued an ASU that provides guidance on evaluating when a set of transferred assets and activities (set) is a business. If an entity determines that substantially all of the fair value of the gross assets acquired is concentrated in a single identifiable asset or a group of similar identifiable assets, then the asset is not a business. If this threshold is not met, then the entity needs to evaluate whether the asset includes, at a minimum, an input and a substantive process that together significantly contribute to the ability to create outputs. The ASU is effective for the Company in the first quarter of 2018 and must be applied prospectively. The future impact of the adoption of this ASU on the Company's results of operations, financial position and cash flows will be dependent upon the nature of any future acquisitions or dispositions made by the Company.

3. EARNINGS PER SHARE

The computation of basic and diluted earnings per common share is as follows (in millions, except per share data):

	2017	2016	2015
Amounts attributable to Quest Diagnostics' common stockholders:			
Net income attributable to Quest Diagnostics	$ 772	$ 645	$ 709
Less: Earnings allocated to participating securities	3	3	3
Earnings available to Quest Diagnostics' common stockholders – basic and diluted	$ 769	$ 642	$ 706
Weighted average common shares outstanding – basic	137	140	144
Effect of dilutive securities:			
Stock options and performance share units	3	2	1
Weighted average common shares outstanding – diluted	140	142	145
Earnings per share attributable to Quest Diagnostics' common stockholders:			
Basic	$ 5.63	$ 4.58	$ 4.92
Diluted	$ 5.50	$ 4.51	$ 4.87

The following securities were not included in the calculation of diluted earnings per share due to their antidilutive effect:

	2017	2016	2015
Stock options	2	1	2

4. RESTRUCTURING ACTIVITIES

Invigorate Program

During 2012, the Company committed to a course of action related to a multi-year program called Invigorate which is designed to reduce its cost structure and improve performance. Invigorate has consisted of several flagship programs, with structured plans in each, to drive savings and improve performance across the customer value chain. These flagship programs include: organization excellence; information technology excellence; procurement excellence; service excellence; lab excellence; and billing excellence. From 2012 through 2014, the Invigorate program was intended to partially offset reimbursement pressures and labor and benefit cost increases; free up additional resources to invest in science, innovation and other growth initiatives; and enable us to improve service quality and operating profitability.

In January 2015, the Company adopted a program to further reduce its cost structure through 2017. This multi-year program continued to focus on the flagship program themes and additional key themes such as: standardizing processes, information technology systems, equipment and data; enhancing electronic enabling services; and enhancing reimbursement for work performed.

(in millions unless otherwise indicated)

Restructuring Charges

The following table provides a summary of the Company's pre-tax restructuring charges for the years ended December 31, 2017, 2016 and 2015:

	2017	2016	2015
Employee separation costs	$ 29	$ 9	$ 38
Facility-related costs	1	2	1
Asset impairment charges	3	—	—
Total restructuring charges	$ 33	$ 11	$ 39

The restructuring charges incurred for the years ended December 31, 2017, December 31, 2016 and December 31, 2015 were primarily associated with various workforce reduction initiatives as the Company continued to simplify and restructure its organization. Of the total restructuring charges incurred during the year ended December 31, 2017, $11 million and $22 million were recorded in cost of services and selling, general and administrative expenses, respectively. Of the total restructuring charges incurred during the year ended December 31, 2016, $6 million and $5 million were recorded in cost of services and selling, general and administrative expenses, respectively. Of the total restructuring charges incurred during the year ended December 31, 2015, $32 million and $7 million were recorded in cost of services and selling, general and administrative expenses, respectively.

Charges for all periods presented were primarily recorded in the Company's DIS business.

The following table summarizes the activity of the restructuring liability as of December 31, 2017 and 2016, which is included in accrued expenses in Note 12:

	Employee Separation Costs	Facility-Related Costs	Total
Balance, December 31, 2015	$ 16	$ 3	$ 19
Income statement expense	9	2	11
Cash payments	(19)	(2)	(21)
Balance, December 31, 2016	6	3	9
Income statement expense	29	1	30
Cash payments	(14)	(3)	(17)
Balance, December 31, 2017	$ 21	$ 1	$ 22

5. BUSINESS ACQUISITIONS

2017 Acquisitions

During 2017, the Company completed acquisitions for an aggregate purchase price of $587 million, net of cash acquired, including the acquisitions discussed below. The 2017 acquisitions resulted in goodwill of $335 million, of which $273 million is deductible for tax purposes. These acquisitions also resulted in $242 million of intangible assets, principally comprised of customer-related intangibles. Net revenues attributable to the 2017 acquisitions were $75 million for the year ended December 31, 2017.

Acquisition of the Outreach Laboratory Service Business of PeaceHealth Laboratories

On May 1, 2017, the Company completed the acquisition of the outreach laboratory service business of PeaceHealth Laboratories ("PHL"), in an all cash transaction for $101 million. PHL is a healthcare system in Oregon, Washington and

Alaska. The assets acquired principally consist of $71 million of tax deductible goodwill and $30 million of customer-related intangible assets. The intangible assets are being amortized over a useful life of 15 years.

Acquisition of Med Fusion, LLC and Clearpoint Diagnostic Laboratories, LLC

On July 14, 2017, the Company completed the acquisitions of Med Fusion, LLC and Clearpoint Diagnostic Laboratories, LLC ("Med Fusion"), in an all-cash transaction for $150 million. The final consideration paid is subject to post closing adjustments related to working capital. Through the acquisition, the Company acquired all of Med Fusion's operations. Med Fusion provides precision medicine diagnostics to aid cancer treatment nationwide and the acquired businesses form the Company's center of excellence in precision diagnostics for oncology. The assets acquired principally consist of $84 million of customer-related intangible assets, $62 million of goodwill (of which $60 million is tax deductible) and $31 million of property, plant and equipment. The liabilities assumed principally consist of a $28 million capital lease obligation. The intangible assets are being amortized over a useful life of 15 years.

Acquisition of the Outreach Laboratory Service Business of The William W. Backus Hospital and The Hospital of Central Connecticut

On September 28, 2017, the Company completed the acquisition of the outreach laboratory service businesses of two hospitals of Hartford HealthCare Corporation ("HHC"), The William W. Backus Hospital and The Hospital of Central Connecticut, in an all-cash transaction for $30 million. The assets acquired principally consist of tax deductible goodwill and customer-related intangible assets.

Acquisition of Cleveland HeartLab, Inc.

On December 1, 2017, the Company completed the acquisition of Cleveland HeartLab, Inc. ("CHL") in an all-cash transaction for $94 million, net of $12 million cash acquired. The final consideration is subject to post closing adjustments related to working capital. CHL is a specialty clinical laboratory and disease management company, which forms the basis for the Company's advanced diagnostics center of excellence in cardiovascular testing. Through the acquisition, the Company acquired all of CHL's operations. Based on the preliminary purchase price allocation, the assets acquired and liabilities assumed consist of $55 million of goodwill (of which $1 million is tax deductible), $32 million of intangible assets, $11 million of deferred tax assets associated with acquired net operating losses, $11 million of deferred tax liabilities primarily associated with acquired intangible assets, $4 million of working capital and $3 million of property, plant and equipment. The intangible assets consist primarily of customer related assets which are being amortized over a useful life of 15 years.

Acquisition of the Clinical and Anatomic Pathology Laboratory Business of Shiel Holdings, LLC

On December 7, 2017, the Company completed the acquisition of certain assets of the clinical and anatomic pathology laboratory business of Shiel Holdings, LLC ("Shiel") in an all-cash transaction for $176 million, which consisted of cash consideration of $170 million and contingent consideration estimated at $6 million. The contingent consideration arrangement is dependent upon the achievement of certain testing volume benchmarks. Shiel serves the New York-New Jersey metropolitan area. Based on the preliminary purchase price allocation, the assets acquired principally consist of $106 million of goodwill (of which $100 million is tax deductible) and $70 million of customer-related intangible assets. The intangible assets are being amortized over a useful life of 15 years. For further details regarding the fair value of the contingent consideration, see Note 7.

2016 Acquisitions

During 2016, the Company completed acquisitions for an aggregate purchase price of $139 million, including the acquisition of the outreach laboratory service business of Clinical Laboratory Partners, LLC discussed below. The 2016 acquisitions resulted in goodwill of $95 million, all of which is deductible for tax purposes. These acquisitions also resulted in $44 million of intangible assets, principally comprised of customer-related intangibles.

Acquisition of the Outreach Laboratory Service Business of Clinical Laboratory Partners, LLC

On February 29, 2016, the Company completed the acquisition of the outreach laboratory service business of Clinical Laboratory Partners, LLC ("CLP"), a wholly-owned subsidiary of HHC, in an all-cash transaction for $135 million. CLP provides clinical testing services to physicians, hospitals, clinics and long-term care facilities in Connecticut. The assets acquired principally consist of $91 million of tax deductible goodwill and $43 million of customer-related intangible assets, which are being amortized over a useful life of 15 years.

2015 Acquisitions

During 2015, the Company completed acquisitions for an aggregate purchase price of $63 million, including the acquisitions of MemorialCare Health System's laboratory outreach business and Superior Mobile Medics, Inc. discussed below. The acquisitions in 2015 resulted in goodwill of $33 million, of which $32 million is deductible for tax purposes. These acquisitions also resulted in $26 million of intangible assets, principally comprised of customer-related intangibles.

Acquisition of MemorialCare Health System's Laboratory Outreach Business

On August 3, 2015, the Company completed the acquisition of MemorialCare Health System's laboratory outreach business ("MemorialCare") in an all-cash transaction valued at $35 million. The assets acquired primarily represent tax deductible goodwill and intangible assets, principally comprised of customer-related intangibles.

Acquisition of the Business Assets of Superior Mobile Medics, Inc.

On November 16, 2015, the Company completed the acquisition of the business assets of Superior Mobile Medics, Inc. ("Superior Mobile Medics"), a national provider of paramedical and health data collection services to the life insurance and employer health and wellness industries, in an all-cash transaction valued at $27 million. The assets acquired primarily represent accounts receivable, tax deductible goodwill and intangible assets, principally comprised of customer-related intangibles.

General Information

The acquisitions described above were accounted for under the acquisition method of accounting. As such, the assets acquired and liabilities assumed are recorded based on their estimated fair values as of the closing date. Supplemental pro forma combined financial information has not been presented as the impact of the acquisitions is not material to the Company's consolidated financial statements. The goodwill recorded primarily includes the expected synergies resulting from combining the operations of the acquired entities with those of the Company and the value associated with an assembled workforce and other intangible assets that do not qualify for separate recognition. All of the goodwill acquired in connection with these acquisitions, except for that associated with Superior Mobile Medics, has been allocated to the Company's DIS business. Goodwill acquired in connection with Superior Mobile Medics has been allocated to the Company's risk assessment business. For further details regarding business segment information, see Note 18.

6. DISPOSITIONS

Sale of Focus Diagnostics Products

On March 29, 2016, the Company entered into a definitive agreement to sell the assets of its non-core Focus Diagnostics products business ("Focus Diagnostics") to DiaSorin S.p.A. ("DiaSorin"). On May 13, 2016, the Company completed the sale of Focus Diagnostics for $300 million in cash, or $293 million net of transaction costs and working capital adjustments, which included $25 million of proceeds which were initially held in escrow and received in 2017. For the year ended December 31, 2016, the Company recorded a $118 million pre-tax gain on disposition of business. The Company also recorded income tax expense of $84 million, consisting of $91 million of current income tax expense (all of which was paid in 2016) and a deferred income tax benefit of $7 million. The income tax expense resulted in an effective tax rate of 71.4%, which was significantly in excess of the statutory tax rate primarily due to a lower tax basis in the assets sold, specifically the goodwill associated with the disposition.

The assets disposed of consisted of $113 million of goodwill, $30 million of intangible assets, with the remaining $38 million consisting of accounts receivable, inventories and property, plant and equipment. In addition, the disposition included liabilities of $6 million.

In connection with the sale, the Company entered into a five year supply agreement with DiaSorin. The supply agreement, which does not include a minimum purchase commitment, enables the Company to purchase certain products and supplies used in its DIS business.

Focus Diagnostics, prior to May 13, 2016, was included in all other operating segments and has not been classified as a discontinued operation. For further details regarding business segment information, see Note 18.

Contribution of Clinical Trials Business

On March 30, 2015, the Company entered into a definitive agreement with Quintiles Transnational Holdings, Inc. (now known as IQVIA Holdings Inc.) to form a global clinical trials central laboratory services joint venture, Q^2 Solutions. The transaction closed on July 1, 2015. In connection with the transaction, the Company contributed certain assets of its clinical trials testing business ("Clinical Trials") and $33 million of cash to the newly formed joint venture in exchange for a non-controlling, 40% ownership interest. The assets of Clinical Trials contributed to the joint venture, principally consisting of property, plant and equipment and goodwill, were classified as assets held for sale in the first quarter of 2015 and were contributed to Q^2 Solutions upon closing of the transaction. Subsequent to closing, the Company's ownership interest in the joint venture is being accounted for under the equity method of accounting. As of December 31, 2017 and 2016, the investment in Q^2 Solutions had a carrying value of $406 million and $389 million, respectively.

During the third quarter of 2015, the Company recognized a pre-tax gain of $334 million based on the difference between the fair value of the Company's equity interest in the newly formed joint venture over the carrying value of the assets contributed. The fair value of the Company's equity interest was determined using discounted cash flows. The most significant assumptions used in the valuation include a discount rate (12%), a long-term growth rate (2.5%) and EBITDA margins. In connection with the gain, the Company recorded a deferred income tax liability of $145 million. Upon formation, the Company's investment in Q^2 Solutions exceeded its equity in the underlying net assets by approximately $219 million. This basis difference is attributable to finite-lived assets, indefinite-lived intangible assets and goodwill of the joint venture. The basis difference associated with the finite-lived assets of $75 million is being amortized over a weighted average useful life of 8 years as a reduction to the carrying value of the investment in equity method investees and corresponding reduction in equity in earnings of equity method investees, net of taxes.

Q^2 Solutions is considered a related party to the Company due to the Company's non-controlling ownership interest in Q^2 Solutions and the Company's continuing involvement in providing diagnostic information services on an ongoing basis. In addition, the Company provides transition services to Q^2 Solutions for a limited period of time. For further details regarding related parties, see Note 19.

Clinical Trials, prior to July 1, 2015, was included in all other operating segments and has not been classified as discontinued operations. For further details regarding business segment information, see Note 18.

(in millions unless otherwise indicated)

7. FAIR VALUE MEASUREMENTS

The following table provides a summary of the recognized assets and liabilities that are measured at fair value on a recurring basis:

		Basis of Fair Value Measurements		
	Total	Level 1	Level 2	Level 3
December 31, 2017				
Assets:				
Trading securities	$ 58	$ 58	$ —	$ —
Cash surrender value of life insurance policies	37	—	37	—
Available-for-sale equity securities	2	2	—	—
Total	$ 97	$ 60	$ 37	$ —
Liabilities:				
Deferred compensation liabilities	$ 103	$ —	$ 103	$ —
Interest rate swaps	89	—	89	—
Contingent consideration	7	—	—	7
Total	$ 199	$ —	$ 192	$ 7
December 31, 2016				
Assets:				
Trading securities	$ 51	$ 51	$ —	$ —
Cash surrender value of life insurance policies	32	—	32	—
Available-for-sale equity securities	3	3	—	—
Total	$ 86	$ 54	$ 32	$ —
Liabilities:				
Deferred compensation liabilities	$ 91	$ —	$ 91	$ —
Interest rate swaps	88	—	88	—
Contingent consideration	3	—	—	3
Total	$ 182	$ —	$ 179	$ 3

The Company offers certain employees the opportunity to participate in non-qualified supplemental deferred compensation plans. A participant's deferrals, together with Company matching credits, are invested in a variety of participant-directed stock and bond mutual funds that are classified as trading securities. The trading securities are classified within Level 1 because the changes in the fair value of these securities are measured using quoted prices in active markets based on the market price per unit multiplied by the number of units held, exclusive of any transaction costs. A corresponding adjustment for changes in fair value of the trading securities is also reflected in the changes in fair value of the deferred compensation obligation. The deferred compensation liabilities are classified within Level 2 because their inputs are derived principally from observable market data by correlation to the trading securities.

The Company offers certain employees the opportunity to participate in a non-qualified deferred compensation program. A participant's deferrals, together with Company matching credits, are “invested” at the direction of the employee in a hypothetical portfolio of investments which are tracked by an administrator. The Company purchases life insurance policies, with the Company named as beneficiary of the policies, for the purpose of funding the program's liability. Changes in the cash surrender value of the life insurance policies are based upon earnings and changes in the value of the underlying investments. Changes in the fair value of the deferred compensation obligation are derived using quoted prices in active markets based on the market price per unit multiplied by the number of units. The cash surrender value and the deferred compensation obligations are classified within Level 2 because their inputs are derived principally from observable market data by correlation to the hypothetical investments. This plan was amended effective January 1, 2018 so that future deferrals under the plan may only be made by participants who made deferrals under the plan in 2017.

(in millions unless otherwise indicated)

The fair value measurements of the Company's interest rate swaps classified within Level 2 of the fair value hierarchy are model-derived valuations as of a given date in which all significant inputs are observable in active markets including certain financial information and certain assumptions regarding past, present and future market conditions.

Investment in available-for-sale equity securities represents an investment in registered shares of a publicly-held company. The Company's investment in available-for-sale equity securities is classified within Level 1 of the fair value hierarchy because the fair value is obtained from quoted prices in an active market.

In April 2014, the Company completed the acquisitions of Summit Health, Inc. ("Summit Health"), a provider of on-site prevention and wellness programs, and Steward Health Care Systems, LLC's ("Steward") laboratory outreach business. In connection with these acquisitions the Company initially recorded an aggregate contingent consideration liability of $26 million. The contingent consideration liability was classified within Level 3 of the fair value hierarchy measured at fair value using a probability weighted and discounted cash flow method. These measurements are based on externally obtained inputs and management's probability assessments of the occurrence of triggering events, appropriately discounted considering the uncertainties associated with the obligations, as well as the likelihood of achieving financial targets. The initial probability estimate of the occurrence of such triggering events associated with the amounts the Company could be obligated to pay in future periods for both Summit Health and Steward was between 5% and 95%. The probability-weighted cash flows were then discounted using a discount rate of 1.5% to 2.8%. Based on actual 2015 results for Summit Health compared to the earn-out target included in the contingent consideration arrangement, no payment was required. Therefore, the fair value of the contingent consideration accrual associated with Summit Health was reduced to $0 in the second quarter of 2015, which resulted in a $13 million gain included in other operating expense (income), net for the year ended December 31, 2015. The remaining contingent consideration associated with Steward of $1 million is expected to be paid in 2018.

In December 2017, the Company completed the acquisition of Shiel which provides for up to $15 million of contingent consideration to be paid based on the achievement of certain testing volume benchmarks. In connection with the acquisition, the Company initially recorded a contingent consideration liability of $6 million which was classified within Level 3 of the fair value hierarchy. The contingent consideration was measured at fair value using an option-pricing model. Significant inputs included management's estimate of volume and other market inputs including comparable company revenue volatility of 6.9% and a discount rate of 4.5%. Any contingent consideration associated with Shiel is expected to be paid in 2018. For further details regarding the Shiel acquisition, see Note 5.

The following table provides a reconciliation of the beginning and ending balances of liabilities using significant unobservable inputs (Level 3):

	Contingent Consideration
Balance, December 31, 2015	$ 3
Purchases, additions and issuances	—
Balance, December 31, 2016	3
Purchases, additions and issuances	6
Settlements	(2)
Balance, December 31, 2017	$ 7

The carrying amounts of cash and cash equivalents, accounts receivable and accounts payable and accrued expenses approximate fair value based on the short maturities of these instruments. As of December 31, 2017 and 2016, the fair value of the Company's debt was estimated at $4.0 billion and $3.9 billion, respectively. Principally all of the Company's debt is classified within Level 1 of the fair value hierarchy because the fair value of the debt is estimated based on rates currently offered to the Company with identical terms and maturities, using quoted active market prices and yields, taking into account the underlying terms of the debt instruments.

(in millions unless otherwise indicated)

8. TAXES ON INCOME

The Company's pre-tax income before equity in earnings of equity method investees consisted of approximately $1.0 billion, $1.1 billion and $1.1 billion from U.S. operations and a pre-tax (loss) income of $(7) million, $4 million and $11 million from foreign operations for the years ended December 31, 2017, 2016 and 2015, respectively.

The Company recognized the income tax effects of the Tax Cuts and Jobs Act ("TCJA") in its 2017 consolidated financial statements in accordance with Staff Accounting Bulletin No. 118, which provides Securities and Exchange Commission staff guidance for the application of ASC Topic 740, *Income Taxes*, in the reporting period in which the TCJA was signed into law. As such, the Company's financial results reflect the provisional estimate of the income tax effects of the TCJA. The estimate of the impact of TCJA is based on certain assumptions and the Company's current interpretation, and may change, as the Company receives additional clarification and implementation guidance and as the interpretation of the TCJA evolves over time.

During the year ended December 31, 2017, the Company recorded a provisional estimated income tax benefit of $106 million associated with the TCJA, including a deferred income tax benefit of $115 million primarily due to the remeasurement of net deferred tax liabilities and reserves at the new combined federal and state tax rate, partially offset by $9 million of current tax expense primarily due to the mandatory repatriation toll charge on undistributed foreign earnings and profits. The Company did not identify items for which the income tax effects of the TCJA have not been completed and a reasonable estimate could not be determined as of December 31, 2017.

As a result of the TCJA, the Company changed its assertion that it intends to indefinitely reinvest undistributed earnings from certain non-U.S. subsidiaries outside the U.S. The Company is indefinitely reinvested in the remaining basis difference and it is not practicable to determine the associated amount of unrecognized deferred tax liability.

During the year ended December 31, 2016, the Company recorded $84 million of income tax expense, consisting of $91 million of current income tax expense and a deferred income tax benefit of $7 million, associated with the sale of Focus Diagnostics (see Note 6). In addition, the Company recognized a non-taxable gain on an escrow recovery associated with an acquisition.

During the year ended December 31, 2015, the Company recognized $145 million of deferred income tax expense associated with the financial reporting and tax basis difference resulting from the contribution of the Clinical Trials business to the Q^2 Solutions joint venture and $58 million of deferred income tax benefit resulting from the future tax effects of winding down a subsidiary.

The components of income tax expense (benefit) for 2017, 2016 and 2015 were as follows:

	2017	2016	2015
Current:			
Federal	$ 226	$ 346	$ 231
State and local	5	45	27
Foreign	1	1	3
Deferred:			
Federal	(20)	33	104
State and local	27	4	7
Foreign	2	—	1
Total	$ 241	$ 429	$ 373

(in millions unless otherwise indicated)

A reconciliation of the federal statutory rate to the Company's effective tax rate for 2017, 2016 and 2015 was as follows:

	2017	2016	2015
Tax provision at statutory rate	35.0 %	35.0 %	35.0 %
State and local income taxes, net of federal benefit	3.8	3.3	2.6
Gains and losses on book and tax basis difference	(0.1)	3.3	(2.7)
Impact of noncontrolling interests	(1.9)	(1.8)	(1.6)
Impact of equity earnings	1.1	1.0	0.7
Excess tax benefits on stock-based compensation arrangements	(3.6)	(0.8)	—
Return to provision true-ups	(2.0)	(0.8)	(0.2)
Impact of TCJA enactment	(10.4)	—	—
Other, net	1.5	0.3	—
Effective tax rate	23.4 %	39.5 %	33.8 %

In 2016, the sale of Focus Diagnostics and the non-taxable gain on an escrow recovery associated with an acquisition resulted in the gains and losses on book and tax basis difference as discussed above.

In 2015, the contribution of the Clinical Trials business to the Q^2 Solutions joint venture and winding down a subsidiary resulted in the gains and losses on book and tax basis difference as discussed above.

The tax effects of temporary differences that give rise to significant portions of the deferred tax assets (liabilities) as of December 31, 2017 and 2016 were as follows:

	2017	2016
Non-current deferred tax assets (liabilities):		
Accounts receivable reserves	$ 63	$ 94
Liabilities not currently deductible	129	189
Stock-based compensation	41	58
Basis differences in investments, joint ventures and subsidiaries	(79)	(87)
Net operating loss carryforwards, net of valuation allowance	83	120
Depreciation and amortization	(403)	(533)
Total non-current deferred tax liabilities, net	$ (166)	$ (159)

As of December 31, 2017 and 2016, non-current deferred tax assets of $4 million and $32 million, respectively, are recorded in other assets. As of December 31, 2017 and 2016, non-current deferred tax liabilities of $170 million and $191 million, respectively, are included in other liabilities.

As of December 31, 2017, the Company had estimated net operating loss carryforwards for federal and state income tax purposes of $184 million and $1.3 billion, respectively, which expire at various dates through 2037. Estimated net operating loss carryforwards for foreign income tax purposes are $68 million as of December 31, 2017, some of which can be carried forward indefinitely while others expire at various dates through 2027. As of December 31, 2017, 2016 and 2015, deferred tax assets associated with net operating loss carryforwards of $155 million, $204 million and $222 million, respectively, have each been reduced by valuation allowances of $57 million, $56 million and $54 million, respectively.

Income taxes payable, including those classified as long-term in other liabilities as of December 31, 2017 and 2016, were $82 million and $62 million, respectively. Prepaid income taxes were $37 million and $14 million as of December 31, 2017 and 2016, respectively, and were recorded in prepaid expenses and other current assets.

(in millions unless otherwise indicated)

The total amount of unrecognized tax benefits as of and for the years ended December 31, 2017, 2016 and 2015 consisted of the following:

	2017	2016	2015
Balance, beginning of year	$ 98	$ 91	$ 122
Additions:			
For tax positions of current year	5	3	5
For tax positions of prior years	23	12	5
Reductions:			
Changes in judgment	(2)	(1)	(11)
Expirations of statutes of limitations	(6)	(7)	(3)
Settlements	(3)	—	(27)
Balance, end of year	$ 115	$ 98	$ 91

The contingent liabilities for tax positions primarily relate to uncertainties associated with the realization of tax benefits derived from the allocation of income and expense among state jurisdictions, the characterization and timing of certain tax deductions associated with business combinations, income and expenses associated with certain intercompany licensing arrangements, certain tax credits and the deductibility of certain settlement payments.

The total amount of unrecognized tax benefits as of December 31, 2017, that, if recognized, would affect the effective income tax rate is $64 million. Based upon the expiration of statutes of limitations, settlements and/or the conclusion of tax examinations, the Company believes it is reasonably possible that the total amount of unrecognized tax benefits may decrease by up to $35 million within the next twelve months.

Accruals for interest expense on contingent tax liabilities are classified in income tax expense in the consolidated statements of operations. Accruals for penalties have historically been immaterial. Interest expense included in income tax expense in each of the years ended December 31, 2017, 2016 and 2015 was approximately $1 million, $2 million and $0 million, respectively. As of December 31, 2017 and 2016, the Company has approximately $13 million and $12 million, respectively, accrued, net of the benefit of a federal and state deduction, for the payment of interest on uncertain tax positions.

The recognition and measurement of certain tax benefits includes estimates and judgment by management and inherently involves subjectivity. Changes in estimates may create volatility in the Company's effective tax rate in future periods and may be due to settlements with various tax authorities (either favorable or unfavorable), the expiration of the statute of limitations on some tax positions and obtaining new information about particular tax positions that may cause management to change its estimates.

In the regular course of business, various federal, state, local and foreign tax authorities conduct examinations of the Company's income tax filings and the Company generally remains subject to examination until the statute of limitations expires for the respective jurisdiction. The Internal Revenue Service has either completed its examinations of the Company's consolidated federal income tax returns or the statute of limitations has expired up through and including the 2012 tax year pending Joint Committee of Congress approval of refund for settlement of certain tax adjustments related to the 2009 tax year. At this time, the Company does not believe that there will be any material additional payments beyond its recorded contingent liability reserves that may be required as a result of these tax audits. As of December 31, 2017, a summary of the tax years that remain subject to examination, awaiting approval, are under appeal, or are otherwise unresolved for the Company's major jurisdictions are:

United States - federal 2009, 2013 - 2017
United States - various states 2006 - 2017

(in millions unless otherwise indicated)

9. SUPPLEMENTAL CASH FLOW & OTHER DATA

Supplemental cash flow and other data for the years ended December 31, 2017, 2016 and 2015 was as follows:

	2017	2016	2015
Depreciation expense	$ 196	$ 177	$ 223
Amortization expense	74	72	81
Depreciation and amortization expense	$ 270	$ 249	$ 304
Interest expense	$ (153)	$ (144)	$ (154)
Interest income	2	1	1
Interest expense, net	$ (151)	$ (143)	$ (153)
Interest paid	$ 159	$ 148	$ 172
Income taxes paid	$ 243	$ 361	$ 319
Assets acquired under capital leases	$ 7	$ —	$ 3
Accounts payable associated with capital expenditures	$ 26	$ 9	$ 15
Dividends payable	$ 61	$ 62	$ 55
Businesses acquired:			
Fair value of assets acquired	$ 657	$ 139	$ 63
Fair value of liabilities assumed	58	—	—
Fair value of net assets acquired	599	139	63
Merger consideration paid (payable), net	(6)	—	4
Cash paid for business acquisitions	593	139	67
Less: Cash acquired	12	—	—
Business acquisitions, net of cash acquired	$ 581	$ 139	$ 67

The escrow proceeds associated with disposition of business received in 2017 related to the sale of Focus Diagnostics. For further details regarding the sale of Focus Diagnostics, see Note 6.

10. PROPERTY, PLANT AND EQUIPMENT

Property, plant and equipment as of December 31, 2017 and 2016 consisted of the following:

	2017	2016
Land	$ 29	$ 28
Buildings and improvements	430	379
Laboratory equipment and furniture and fixtures	1,594	1,462
Leasehold improvements	544	533
Computer software developed or obtained for internal use	934	834
Construction-in-progress	140	193
	3,671	3,429
Less: Accumulated depreciation and amortization	(2,526)	(2,400)
Total	$ 1,145	$ 1,029

(in millions unless otherwise indicated)

11. GOODWILL AND INTANGIBLE ASSETS

The changes in goodwill for the years ended December 31, 2017 and 2016 were as follows:

	2017	2016
Balance, beginning of year	$ 6,000	$ 5,905
Goodwill acquired during the year	335	95
Balance, end of year	$ 6,335	$ 6,000

Principally all of the Company's goodwill as of December 31, 2017 and 2016 was associated with its DIS business.

For the year ended December 31, 2017, goodwill acquired during the period was principally associated with the Shiel, PHL, Med Fusion, CHL, and HHC acquisitions (see Note 5).

For the year ended December 31, 2016, goodwill acquired during the period was principally associated with the CLP acquisition (see Note 5).

Intangible assets as of December 31, 2017 and 2016 consisted of the following:

	Weighted Average Amortization Period (in years)	December 31, 2017			December 31, 2016		
		Cost	Accumulated Amortization	Net	Cost	Accumulated Amortization	Net
Amortizing intangible assets:							
Customer-related	18	$ 1,210	$ (404)	$ 806	$ 971	$ (346)	$ 625
Non-compete agreements	7	7	(5)	2	6	(4)	2
Technology	17	95	(45)	50	93	(40)	53
Other	10	105	(80)	25	103	(70)	33
Total	17	1,417	(534)	883	1,173	(460)	713
Intangible assets not subject to amortization:							
Trade names		235	—	235	235	—	235
Other		1	—	1	1	—	1
Total intangible assets		$ 1,653	$ (534)	$ 1,119	$ 1,409	$ (460)	$ 949

For the year ended December 31, 2016, the Company recognized impairment charges associated with intangible assets of $7 million associated with certain customer related and other intangibles, which have been included in other operating expense (income), net.

(in millions unless otherwise indicated)

The estimated amortization expense related to amortizable intangible assets for each of the five succeeding fiscal years and thereafter as of December 31, 2017 is as follows:

Year Ending December 31,	
2018	$ 82
2019	81
2020	81
2021	74
2022	72
Thereafter	493
Total	$ 883

12. ACCOUNTS PAYABLE AND ACCRUED EXPENSES

Accounts payable and accrued expenses as of December 31, 2017 and 2016 consisted of the following:

	2017	2016
Accrued wages and benefits (including incentive compensation)	$ 325	$ 316
Accrued expenses	246	254
Trade accounts payable	224	231
Overdrafts	71	30
Dividend payable	61	62
Accrued interest	46	46
Accrued insurance	32	31
Income taxes payable	9	3
Merger consideration payable	7	2
Total	$ 1,021	$ 975

(in millions unless otherwise indicated)

13. DEBT

Long-term debt as of December 31, 2017 and 2016 consisted of the following:

	2017	2016
Secured Receivables Credit Facility (2.27% at December 31, 2017)	$ 30	$ —
2.70% Senior Notes due April 2019	300	300
4.75% Senior Notes due January 2020	514	521
2.50% Senior Notes due March 2020	300	299
4.70% Senior Notes due April 2021	559	563
4.25% Senior Notes due April 2024	303	307
3.50% Senior Notes due March 2025	566	568
3.45% Senior Notes due June 2026	470	469
6.95% Senior Notes due July 2037	174	174
5.75% Senior Notes due January 2040	244	244
4.70% Senior Notes due March 2045	300	300
Other	44	13
Debt issuance costs	(20)	(24)
Total long-term debt	3,784	3,734
Less: Current portion of long-term debt	36	6
Total long-term debt, net of current portion	$ 3,748	$ 3,728

Secured Receivables Credit Facility

On October 27, 2017, the Company amended and restated the agreement for the $600 million secured receivables credit facility (the “Secured Receivables Credit Facility”) previously amended in October 2015, maintaining the borrowing capacity under the facility at $600 million. Under the Secured Receivables Credit Facility, the Company can borrow against a $250 million loan commitment maturing October 2018, and a $250 million loan commitment maturing October 2019, and can issue up to $100 million of letters of credit (see Note 17) through October 2019. Borrowings under the Secured Receivables Credit Facility are collateralized by certain domestic receivables. As of December 31, 2017, interest on the borrowings under the Secured Receivables Credit Facility is based on either commercial paper rates for highly-rated issuers or LIBOR plus a spread of 0.70% to 0.725%. The Secured Receivables Credit Facility contains various covenants which could impact the Company's ability to, among other things, incur additional indebtedness. As of December 31, 2017, there was $30 million of outstanding borrowings under the Secured Receivables Credit Facility. As of December 31, 2016, there were no outstanding borrowings under the Secured Receivables Credit Facility.

Senior Unsecured Revolving Credit Facility

In April 2014, the Company amended and restated the agreement for the $750 million senior unsecured revolving credit facility (the “Credit Facility” or "Senior Unsecured Revolving Credit Facility") entered into in September 2011. The amended and restated Credit Facility matures in April 2019. Under the Credit Facility, the Company can issue letters of credit totaling $150 million (see Note 17). Issued letters of credit reduce the available borrowing capacity under the facility. Interest on the Credit Facility is based on certain published rates plus an applicable margin that will vary over a range from 75 basis points to 163 basis points based on changes in the Company's public debt ratings. At the option of the Company, it may elect to lock into LIBOR-based interest rates for periods up to six months. Interest on any outstanding amounts not covered under LIBOR-based interest rate contracts is based on an alternate base rate, which is calculated by reference to the prime rate, the federal funds rate or an adjusted LIBOR rate. As of both December 31, 2017 and 2016, the Company's borrowing rate for LIBOR-based loans under the Credit Facility was LIBOR plus 1.125%. The Credit Facility contains various covenants, including the maintenance of certain financial ratios, which could impact the Company's ability to, among other things, incur additional indebtedness. As of both December 31, 2017 and 2016, there were no outstanding borrowings under the Credit Facility.

(in millions unless otherwise indicated)

Senior Notes Offerings

In May 2016, the Company completed a $500 million senior notes offering (the "2016 Senior Notes"). The offering consisted of $500 million in aggregate principal of 3.45% senior notes due June 2026, issued at a discount of $1 million. The Company incurred $4 million of costs associated with the 2016 Senior Notes, which is included as a reduction to the carrying amount of long-term debt and is being amortized over the term of the related debt. The net proceeds from the 2016 Senior Notes were used to repay outstanding indebtedness under the Senior Unsecured Revolving Credit Facility and the Secured Receivables Credit Facility and for general corporate purposes.

In March 2015, the Company completed a $1.2 billion senior notes offering (the "2015 Senior Notes") that was sold in three tranches: (a) $300 million aggregate principal amount of 2.50% senior notes due March 2020, issued at a discount of $1 million; (b) $600 million aggregate principal amount of 3.50% senior notes due March 2025; and (c) $300 million aggregate principal amount of 4.70% senior notes due March 2045. The Company incurred $11 million of costs associated with the 2015 Senior Notes, which is included as a reduction to the carrying amount of long-term debt and is being amortized over the term of the related debt.

All of the senior notes are unsecured obligations of the Company and rank equally with the Company's other senior unsecured obligations. None of the Company's senior notes have a sinking fund requirement.

Retirement of Debt

In March 2016, the Company completed a cash tender offer to purchase up to $200 million aggregate principal amount of its 6.95% Senior Notes due July 2037 ("Senior Notes due 2037") and 5.75% Senior Notes due January 2040 ("Senior Notes due 2040"). The Company purchased $73 million of its Senior Notes due 2037 and $127 million of its Senior Notes due 2040.

In March 2015, the Company completed a cash tender offer to purchase up to $250 million aggregate principal amount of its Senior Notes due 2037 and Senior Notes due 2040 using a portion of the proceeds from the 2015 Senior Notes. The Company purchased $176 million of its Senior Notes due 2037 and $74 million of its Senior Notes due 2040. In April 2015, the Company redeemed all of its 5.45% Senior Notes due November 2015, $150 million of its 3.20% Senior Notes due April 2016 and all of its 6.40% Senior Notes due July 2017 with the remaining proceeds from the 2015 Senior Notes.

For the years ended December 31, 2016 and 2015, the Company recorded losses on retirement of debt, principally comprised of premiums paid, of $48 million and $144 million, respectively, in other income (expense), net.

Maturities of Long-Term Debt

As of December 31, 2017, long-term debt matures as follows:

Year Ending December 31,	
2018	$ 36
2019	304
2020	803
2021	552
2022	—
Thereafter	2,153
Total maturities of long-term debt	3,848
Unamortized discount	(11)
Debt issuance costs	(20)
Fair value basis adjustments attributable to hedged debt	(33)
Total long-term debt	3,784
Less: Current portion of long-term debt	36
Total long-term debt, net of current portion	$ 3,748

(in millions unless otherwise indicated)

14. FINANCIAL INSTRUMENTS

Interest Rate Derivatives – Cash Flow Hedges

From time to time, the Company has entered into various interest rate lock agreements and forward starting interest rate swap agreements to hedge part of the Company's interest rate exposure associated with the variability in future cash flows attributable to changes in interest rates.

In May 2016, the Company entered into interest rate lock agreements with several financial institutions for a total notional amount of $250 million which were accounted for as cash flow hedges. These agreements were entered into to hedge a portion of the Company's interest rate exposure associated with variability in future cash flows attributable to changes in the ten-year treasury rates related to the planned issuance of the 2016 Senior Notes. In connection with the issuance of the 2016 Senior Notes, these agreements were settled, and the Company paid $1 million. These losses are deferred in stockholders' equity, net of taxes, as a component of accumulated other comprehensive loss, and amortized as an adjustment to interest expense, net over the term of the respective senior notes.

In March 2015, the Company entered into interest rate lock agreements with several financial institutions for a total notional amount of $350 million which were accounted for as cash flow hedges. These agreements were entered into to hedge a portion of the Company's interest rate exposure associated with variability in future cash flows attributable to changes in the five-year, ten-year and thirty-year treasury rates related to the planned issuance of the 2015 Senior Notes. In connection with the issuance of the 2015 Senior Notes, these agreements were settled and the Company received $3 million. These gains are deferred in stockholders' equity, net of taxes, as a component of accumulated other comprehensive loss, and amortized as an adjustment to interest expense, net over the term of the respective senior notes.

During the fourth quarter of 2013 and first quarter of 2014, the Company entered into various forward starting interest rate swap agreements for an aggregate notional amount of $150 million which were accounted for as cash flow hedges. In connection with the issuance of the 2015 Senior Notes, all of these agreements were settled and the Company paid $17 million. These losses are deferred in stockholders' equity, net of taxes, as a component of accumulated other comprehensive loss, and amortized as an adjustment to interest expense, net over the term of the senior notes due 2025.

The total net loss, net of taxes, recognized in accumulated other comprehensive loss, related to the Company's cash flow hedges as of December 31, 2017 and 2016 was $9 million and $10 million, respectively. The net amount of deferred losses on cash flow hedges that is expected to be reclassified from accumulated other comprehensive loss into interest expense, net within the next twelve months is $3 million.

Interest Rate Derivatives – Fair Value Hedges

The Company maintains various fixed-to-variable interest rate swaps to convert a portion of the Company's long-term debt into variable interest rate debt. A summary of the notional amounts of these interest rate swaps as of December 31, 2017 and 2016 was as follows:

	Notional Amount	
Debt Instrument	**2017**	**2016**
4.25% Senior Notes due April 2024	250	250
3.50% Senior Notes due March 2025	600	600
3.45% Senior Notes due June 2026	350	350
	$ 1,200	$ 1,200

The fixed-to-variable interest rate swap agreements in the table above have variable interest rates ranging from one-month LIBOR plus 2.2% to one-month LIBOR plus 3.0%.

As of December 31, 2015, the Company had entered into various fixed-to-variable interest rate swap agreements with an aggregate notional amount of $1.2 billion. In July 2016, the Company terminated those interest rate swaps agreements. As a result of the termination, the Company received proceeds of $60 million, which included $6 million of accrued interest. The

(in millions unless otherwise indicated)

remaining basis adjustment on the respective debt obligation of $54 million will be amortized as a reduction of interest expense over the remaining terms of the hedged debt instrument. Immediately after the termination of these interest rate swaps, the Company entered into new fixed-to-variable interest rate swap agreements, which are reflected in the table above.

In prior years, the Company entered into various fixed-to-variable interest rate swap agreements that were accounted for as fair value hedges of a portion of the senior notes due 2016 and a portion of the senior notes due 2020. In July 2012, the Company monetized the value of these interest rate swap assets by terminating the hedging instruments. The asset value, including accrued interest through the date of termination, was $72 million and the amount to be amortized as a reduction of interest expense over the remaining terms of the hedged debt instruments was $65 million.

As of December 31, 2017, the following amounts were recorded on the consolidated balance sheet related to cumulative basis adjustments for fair value hedges:

	Carrying Amount of Hedged Long-Term Debt	Cumulative Amount of Fair Value Hedging Adjustment Included in the Carrying Amount of the Hedged Long-Term Debt	
Balance Sheet Classification	December 31, 2017	December 31, 2017	
Long-term debt	$ 1,132	$ (33)	(a)

(a) The balance includes $56 million of remaining unamortized hedging adjustment on a discontinued relationship.

The following table presents the effect of fair value hedge accounting on the consolidated statement of operations for the year ended December 31, 2017:

	Other income (expense), net
Total for line item in which the effects of fair value hedges are recorded	$ 16
Gain (loss) on fair value hedging relationships:	
Hedged items (Long-term debt)	$ 1
Derivatives designated as hedging instruments	$ (1)

Interest Rate Derivatives - Economic Hedges

In March 2016, in connection with the retirement of debt (see Note 13), the Company entered into reverse interest rate lock agreements with several financial institutions which were not designated for hedge accounting. The Company entered into these agreements to hedge the variability in cash flows associated with $75 million of the $200 million principal amount of debt that was retired in the first quarter of 2016. These agreements were settled during the first quarter of 2016 resulting in a gain of $1 million which was recognized in other income (expense), net.

In March 2015, in connection with the retirement of debt (see Note 13), the Company entered into reverse interest rate lock agreements with several financial institutions which were not designated for hedge accounting. The Company entered into these agreements to hedge the variability in cash flows associated with $280 million of the $1.3 billion principal amount of debt that was retired in the first and second quarters of 2015. These agreements were settled during the first and second quarters of 2015 which resulted in a gain of $3 million which was recognized in other income (expense), net.

(in millions unless otherwise indicated)

A summary of the fair values of derivative instruments in the consolidated balance sheets was as follows:

	December 31, 2017		December 31, 2016	
	Balance Sheet Classification	Fair Value	Balance Sheet Classification	Fair Value
Derivatives Designated as Hedging Instruments				
Interest rate swaps	Other liabilities	$ 89	Other liabilities	$ 88

15. STOCKHOLDERS' EQUITY AND REDEEMABLE NONCONTROLLING INTEREST

Stockholders' Equity

Series Preferred Stock

Quest Diagnostics is authorized to issue up to 10 million shares of Series Preferred Stock, par value $1.00 per share. The Company's Board of Directors has the authority to issue such shares without stockholder approval and to determine the designations, preferences, rights and restrictions of such shares. No shares are currently outstanding.

Common Stock

On May 4, 2006, the Company's Restated Certificate of Incorporation was amended to increase the number of authorized shares of common stock, par value $0.01 per share, from 300 million shares to 600 million shares.

Changes in Accumulated Other Comprehensive Income (Loss) by Component

Comprehensive income (loss) includes:

- Foreign currency translation adjustments;
- Investment adjustments, which represent unrealized holding gains (losses), net of tax on available for sale securities, net of other-than-temporary impairment amounts reclassified to other income (expense), net;
- Net deferred loss on cash flow hedges, which represents deferred losses, net of tax on interest rate related derivative financial instruments designated as cash flow hedges, net of amounts reclassified to interest expense (see Note 14).

For the years ended December 31, 2017, 2016 and 2015, the tax effects related to the investment adjustments, deferred losses on cash flow hedges and other were not material. Foreign currency translation adjustments related to indefinite investments in non-U.S. subsidiaries are not adjusted for income taxes.

(in millions unless otherwise indicated)

The changes in accumulated other comprehensive income (loss) by component for 2017, 2016 and 2015 were as follows:

	Foreign Currency Translation Adjustment	Investment Adjustments	Net Deferred Loss on Cash Flow Hedges	Other	Accumulated Other Comprehensive Income (Loss)
Balance, December 31, 2014	$ (9)	$ (1)	$ (15)	$ (2)	$ (27)
Other comprehensive (loss) income before reclassifications	(15)	—	—	1	(14)
Amounts reclassified from accumulated other comprehensive loss	—	—	3	—	3
Net current period other comprehensive (loss) income	(15)	—	3	1	(11)
Balance, December 31, 2015	(24)	(1)	(12)	(1)	(38)
Other comprehensive loss before reclassifications	(34)	(2)	—	—	(36)
Amounts reclassified from accumulated other comprehensive loss	—	—	2	—	2
Net current period other comprehensive (loss) income	(34)	(2)	2	—	(34)
Balance, December 31, 2016	(58)	(3)	(10)	(1)	(72)
Other comprehensive income before reclassifications	20	—	—	—	20
Amounts reclassified from accumulated other comprehensive loss	—	3	1	—	4
Net current period other comprehensive income	20	3	1	—	24
Balance, December 31, 2017	$ (38)	$ —	$ (9)	$ (1)	$ (48)

For the years ended December 31, 2017, 2016 and 2015, the gross deferred losses on cash flow hedges were reclassified from accumulated other comprehensive loss to interest expense, net.

For the year ended December 31, 2017, the other-than-temporary impairment amount included in investment adjustments were reclassified from accumulated other comprehensive loss to other income (expense), net.

Dividend Program

During each of the four quarters of 2017 and during the fourth quarter of 2016, the Company's Board of Directors declared a quarterly cash dividend of $0.45 per common share. During each of the first three quarters of 2016, the Company's Board of Directors declared a quarterly cash dividend of $0.40 per common share. During each of the quarters of 2015, the Company's Board of Directors declared a quarterly cash dividend of $0.38 per common share.

Share Repurchase Program

In December 2016 and 2015, the Company’s Board of Directors authorized the Company to repurchase an additional $1 billion and $500 million, respectively, of the Company's common stock.

As of December 31, 2017, $917 million remained available under the Company’s share repurchase authorization. The share repurchase authorization has no set expiration or termination date.

Share Repurchases

For the year ended December 31, 2017, the Company repurchased 4.6 million shares of its common stock for $465 million.

For the year ended December 31, 2016, the Company repurchased 7.4 million shares of its common stock for $590 million, which included 3.1 million shares repurchased under an accelerated share repurchase agreement ("ASR") as follows:

In May 2016, the Company entered into an ASR with a financial institution to repurchase $250 million of the Company's common stock as part of the Company's share repurchase program. The ASR was structured as a combination of two transactions: (1) a treasury stock repurchase; and (2) a forward contract, which permitted the Company to purchase shares immediately with the final purchase price of those shares determined by the volume weighted average price of the Company's common stock during the repurchase period, less a fixed discount. Under the ASR, the Company paid $250 million to the financial institution and received 3.1 million shares of common stock, resulting in a final price per share of $81.04. The Company initially received 2.8 million shares of its common stock during the second quarter of 2016 and received an additional 0.3 million shares upon completion of the ASR during the third quarter of 2016.

For the year ended December 31, 2015, the Company repurchased 3.2 million shares of its common stock for $224 million.

Shares Reissued from Treasury Stock

For the years ended December 31, 2017, 2016 and 2015 the Company reissued 2 million shares, 2 million shares and 1 million shares, respectively, from treasury stock for shares issued under the ESPP and stock option plans.

Redeemable Noncontrolling Interest

On July 1, 2015, UMass Memorial Medical Center ("UMass") acquired an 18.9% noncontrolling interest in a subsidiary of the Company that performs diagnostic information services in a defined territory within the state of Massachusetts. In connection with the transaction, the Company received consideration of $68 million. Under the terms of the transaction, UMass has the right to require the Company to purchase all of its interest in the subsidiary at fair value commencing July 1, 2020. Since the redemption of the noncontrolling interest is outside of the Company's control, it has been presented outside of stockholders' equity at the greater of its carrying amount or its fair value. The Company records changes in the fair value of the noncontrolling interest immediately as they occur. As of December 31, 2017 and 2016, the redeemable noncontrolling interest was $80 million and $77 million, respectively, and was presented at its fair value.

16. STOCK OWNERSHIP AND COMPENSATION PLANS

Employee and Non-employee Directors Stock Ownership Programs

In 2005, the Company established the ELTIP to replace the Company's prior plan. The ELTIP provides for three types of awards: (a) stock options, (b) stock appreciation rights and (c) stock awards. The ELTIP provides for the grant to eligible employees of either non-qualified or incentive stock options, or both, to purchase shares of Company common stock at an exercise price no less than the fair market value of the Company's common stock on the date of grant. Grants of stock appreciation rights allow eligible employees to receive a payment based on the appreciation of Company common stock in cash, shares of Company common stock or a combination thereof. The stock appreciation rights are granted at an exercise price no less than the fair market value of the Company's common stock on the date of grant. Stock options and stock appreciation rights granted under the ELTIP expire on the date designated by the Board of Directors but in no event more than ten years from date of grant. No stock appreciation rights have been granted under the ELTIP. The stock options and shares are subject to forfeiture if employment terminates prior to the end of the vesting period prescribed by the Board of Directors. For all award types, the vesting period is generally over three years from the date of grant. For performance share unit awards, the actual amount of shares earned is based on the achievement of the performance goals specified in the awards. The maximum number of shares of Company common stock that may be optioned or granted under the ELTIP is approximately 71 million shares.

(in millions unless otherwise indicated)

In 2005, the Company established the DLTIP to replace the Company's prior plan. The DLTIP provides for the grant to non-employee directors of non-qualified stock options to purchase shares of Company common stock at an exercise price no less than the fair market value of the Company's common stock on the date of grant. The DLTIP also permits awards of restricted stock and restricted stock units to non-employee directors. Stock options granted under the DLTIP expire on the date designated by the Board of Directors but in no event more than ten years from date of grant, and generally become exercisable in three equal annual installments beginning on the first anniversary date of the grant of the option regardless of whether the optionee remains a director of the Company. The maximum number of shares that may be issued under the DLTIP is 2.4 million shares. For the years ended December 31, 2017, 2016 and 2015, grants under the DLTIP totaled 13 thousand shares, 21 thousand shares and 31 thousand shares, respectively.

The Company's practice has been to issue shares related to its stock-based compensation program from shares of its common stock held in treasury or by issuing new shares of its common stock. See Note 15 for further information regarding the Company's share repurchase program.

The fair value of each stock option award granted was estimated on the date of grant using a Black-Scholes option-valuation model. The expected volatility under the Black-Scholes option-valuation model was based on historical volatilities of the Company's common stock. The dividend yield was based on the approved annual dividend rate in effect and current market price of the underlying common stock at the time of grant. The risk-free interest rate was based on the U.S. Treasury yield curve in effect at the time of grant for bonds with maturities consistent with the expected holding period of the related award. The expected holding period was estimated using the historical exercise behavior of employees.

The weighted average assumptions used in valuing stock options granted in the periods presented were:

	2017	2016	2015
Fair value at grant date	$15.98	$10.35	$11.57
Expected volatility	19.8%	21.6%	21%
Dividend yield	1.9%	2.4%	2.1%
Risk-free interest rate	2.1%	1.4%	1.7%
Expected holding period, in years	5.2	5.3	5.3

The fair value of restricted stock awards, restricted stock units and performance share units is the average market price of the Company's common stock at the date of grant.

The following summarizes the activity relative to stock option awards for 2017:

	Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (in years)	Aggregate Intrinsic Value
Options outstanding, beginning of year	9.1	$ 62.27		
Options granted	1.8	96.02		
Options exercised	(2.2)	58.91		
Options forfeited and canceled	(0.2)	79.74		
Options outstanding, end of year	8.5	$ 70.11	7.1	$ 243
Exercisable, end of year	4.4	$ 60.81	5.9	$ 166
Vested and expected to vest, end of year	8.3	$ 69.73	7.1	$ 240

The aggregate intrinsic value in the table above represents the total pre-tax intrinsic value (the difference between the Company's closing common stock price on the last trading day of 2017 and the exercise price, multiplied by the number of in-the-money options) that would have been received by the option holders had all option holders exercised their options on December 31, 2017. This amount changes based on the fair market value of the Company's common stock. Total intrinsic value of options exercised in 2017, 2016 and 2015 was $94 million, $30 million and $21 million, respectively.

(in millions unless otherwise indicated)

As of December 31, 2017, there was $16 million of unrecognized stock-based compensation cost related to nonvested stock options which is expected to be recognized over a weighted average period of 1.9 years.

The following summarizes the activity relative to stock awards, including restricted stock awards, restricted stock units and performance share units, for 2017, 2016 and 2015:

	2017		2016		2015	
	Shares	Weighted Average Grant Date Fair Value	Shares	Weighted Average Grant Date Fair Value	Shares	Weighted Average Grant Date Fair Value
Shares outstanding, beginning of year	1.5	$ 63.88	1.7	$ 59.92	1.9	$ 55.50
Shares granted	0.4	96.27	0.6	67.26	0.6	71.17
Shares vested	(0.6)	57.59	(0.4)	58.98	(0.3)	55.74
Shares forfeited and canceled	—	—	(0.4)	57.31	(0.5)	58.18
Shares outstanding, end of year	1.3	$ 77.90	1.5	$ 63.88	1.7	$ 59.92

As of December 31, 2017, there was $39 million of unrecognized stock-based compensation cost related to nonvested stock awards, which is expected to be recognized over a weighted average period of 1.8 years. Total fair value of shares vested was $58 million, $28 million and $20 million for the years ended December 31, 2017, 2016 and 2015, respectively. The amount of unrecognized stock-based compensation cost is subject to change based on changes, if any, to management's best estimates of the achievement of the performance goals specified in such awards and the resulting number of shares that will be earned at the end of the performance periods.

For the years ended December 31, 2017, 2016 and 2015, stock-based compensation expense totaled $79 million, $69 million and $52 million, respectively. Income tax benefits recognized in the consolidated statements of operations related to stock-based compensation expense totaled $67 million, $32 million and $20 million for the years ended December 31, 2017, 2016 and 2015, respectively, which includes excess tax benefits associated with stock-based compensation arrangements of $37 million and $9 million for the years ended December 31, 2017 and 2016, respectively.

Employee Stock Purchase Plan

Under the Company's ESPP, substantially all employees can elect to have up to 10% of their annual wages withheld to purchase Quest Diagnostics common stock. The purchase price of the stock is 85% of the market price of the Company's common stock on the last business day of each calendar month. Under the ESPP, the maximum number of shares of Quest Diagnostics common stock which may be purchased by eligible employees is 9 million. Approximately 278 thousand, 332 thousand and 349 thousand shares of common stock were purchased by eligible employees in 2017, 2016 and 2015, respectively.

Defined Contribution Plans

The Company maintains qualified defined contribution plans covering substantially all of its employees. The maximum Company matching contribution is 5% of eligible employee compensation. The Company's expense for contributions to its defined contribution plans aggregated $76 million, $76 million and $77 million for 2017, 2016 and 2015, respectively.

(in millions unless otherwise indicated)

Supplemental Deferred Compensation Plans

The Company has a supplemental deferred compensation plan that is an unfunded, non-qualified plan that provides for certain management and highly compensated employees to defer up to 50% of their salary in excess of their defined contribution plan limits and for certain eligible employees, up to 95% of their variable incentive compensation. The maximum Company matching contribution is 5% of eligible employee compensation. The compensation deferred under this plan, together with Company matching amounts, are credited with earnings or losses measured by the mirrored rate of return on investments elected by plan participants. Each plan participant is fully vested in all deferred compensation, Company match and earnings credited to their account. The amounts accrued under the Company's deferred compensation plans were $58 million and $51 million as of December 31, 2017 and 2016, respectively. Although the Company is currently contributing all participant deferrals and matching amounts to trusts, the funds in these trusts, totaling $58 million and $51 million as of December 31, 2017 and 2016, respectively, are general assets of the Company and are subject to any claims of the Company's creditors.

The Company also offers certain employees the opportunity to participate in a non-qualified deferred compensation program. Eligible participants are allowed to defer up to $20 thousand of eligible compensation per year. The Company matches employee contributions equal to 25%, up to a maximum of $5 thousand per plan year. A participant's deferrals, together with Company matching credits, are “invested” at the direction of the employee in a hypothetical portfolio of investments which are tracked by an administrator. Each participant is fully vested in their deferred compensation and vests in Company matching contributions over a four-year period at 25% per year. This plan was amended effective January 1, 2018 so that future deferrals under the plan may only be made by participants who made deferrals under the plan in 2017. The amounts accrued under this plan were $45 million and $39 million as of December 31, 2017 and 2016, respectively. The Company purchases life insurance policies, with the Company named as beneficiary of the policies, for the purpose of funding the program's liability. The cash surrender value of such life insurance policies was $37 million and $32 million as of December 31, 2017 and 2016, respectively.

For the years ended December 31, 2017, 2016 and 2015, the Company's expense for matching contributions to these plans were not material.

17. COMMITMENTS AND CONTINGENCIES

Letters of Credit and Contractual Obligations

The Company can issue letters of credit under its Secured Receivables Credit Facility and Senior Unsecured Revolving Credit Facility (see Note 13). In support of its risk management program, to ensure the Company’s performance or payment to third parties, $71 million in letters of credit under the Secured Receivables Credit Facility were outstanding as of December 31, 2017. The letters of credit primarily represent collateral for current and future automobile liability and workers’ compensation loss payments.

Minimum rental commitments under noncancelable operating leases, primarily real estate, in effect as of December 31, 2017 are as follows:

Year Ending December 31,		
2018	$	177
2019		139
2020		99
2021		69
2022		48
Thereafter		127
Minimum lease payments	$	659

Operating lease rental expense for 2017, 2016 and 2015 totaled $219 million, $216 million and $224 million, respectively. Rent expense associated with operating leases that include scheduled rent increases and tenant incentives, such as rent holidays and improvement allowances, is recorded on a straight-line basis over the term of the lease.

The Company has certain noncancelable commitments, primarily under take-or-pay arrangements, to purchase products or services from various suppliers, mainly for consulting and other service agreements, and standing orders to purchase reagents and other laboratory supplies. As of December 31, 2017, the approximate total future purchase commitments are $99 million, of which $53 million are expected to be incurred in 2018, $21 million are expected to be incurred in 2019 through 2020 and the balance thereafter.

Billing and Collection Agreement

In September 2016, the Company entered into a ten year agreement with a third party to outsource its billing and related operations for the majority of the Company's revenues. Services under the agreement commenced during the fourth quarter of 2016. The agreement includes an annual fee, which is subject to adjustment based on certain changes in the Company's requisition volume and the achievement of various performance metrics.

Contingent Lease Obligations

The Company remains subject to contingent obligations under certain real estate leases, including real estate leases that were entered into by certain predecessor companies of a subsidiary prior to the Company's acquisition of the subsidiary. While over the course of many years, the title to certain properties and interest in the subject leases have been transferred to third parties and the subject leases have been amended several times by such third parties, the lessors have not formally released the subsidiary predecessor companies from their original obligations under the leases and therefore remain contingently liable in the event of default. The remaining terms of the lease obligations and the Company's corresponding indemnifications range up to 30 years. The lease payments under certain leases are subject to market value adjustments and contingent rental payments and therefore, the total contingent obligations under the leases cannot be precisely determined but are likely to total several hundred million dollars. A claim against the Company would be made only upon the current lessee's default and, in certain cases, after a series of claims and corresponding defaults by third parties that precede the Company in the order of liability. The Company also has certain indemnification rights from other parties to recover losses in the event of default on the lease obligations. The Company believes that the likelihood of its performance under these contingent obligations is remote and no liability has been recorded for any potential payments under the contingent lease obligations.

Legal Matters

The Company is involved in various legal proceedings. Some of the proceedings against the Company involve claims that could be substantial in amount.

In the normal course of business, the Company has been named, from time to time, as a defendant in various legal actions, including arbitrations, class actions and other litigation, arising in connection with the Company's activities as a provider of diagnostic testing, information and services. These legal actions may include lawsuits alleging negligence or other similar legal claims. These actions could involve claims for substantial compensatory and/or punitive damages or claims for indeterminate amounts of damages, and could have an adverse impact on the Company's client base and reputation.

The Company is also involved, from time to time, in other reviews, investigations and proceedings by governmental agencies regarding the Company's business, including, among other matters, operational matters, which may result in adverse judgments, settlements, fines, penalties, injunctions or other relief. The number of these reviews, investigations and proceedings has increased in recent years with regard to many firms in the healthcare services industry, including the Company.

The federal or state governments may bring claims based on the Company's current practices, which it believes are lawful. In addition, certain federal and state statutes, including the *qui tam* provisions of the federal False Claims Act, allow private individuals to bring lawsuits against healthcare companies on behalf of government or private payers. The Company is aware of lawsuits, and from time to time has received subpoenas, related to billing practices based on the qui tam provisions of the Civil False Claims Act or other federal and state statutes, regulations or other laws. The Company understands that there may be other pending qui tam claims brought by former employees or other "whistle blowers" as to which the Company cannot determine the extent of any potential liability.

Management cannot predict the outcome of such matters. Although management does not anticipate that the ultimate outcome of such matters will have a material adverse effect on the Company's financial condition, given the high degree of

judgment involved in establishing loss estimates related to these types of matters, the outcome of such matters may be material to the Company's results of operations or cash flows in the period in which the impact of such matters is determined or paid.

These matters are in different stages. Some of these matters are in their early stages. Matters may involve responding to and cooperating with various government investigations and related subpoenas. As of December 31, 2017, the Company does not believe that any material losses related to the legal matters described above are probable.

Reserves for Legal Matters

Reserves for legal matters totaled $2 million and $5 million as of December 31, 2017 and 2016, respectively.

Reserves for General and Professional Liability Claims

As a general matter, providers of clinical testing services may be subject to lawsuits alleging negligence or other similar legal claims. These suits could involve claims for substantial damages. Any professional liability litigation could also have an adverse impact on the Company's client base and reputation. The Company maintains various liability insurance coverages for, among other things, claims that could result from providing, or failing to provide, clinical testing services, including inaccurate testing results, and other exposures. The Company's insurance coverage limits its maximum exposure on individual claims; however, the Company is essentially self-insured for a significant portion of these claims. Reserves for such matters, including those associated with both asserted and incurred but not reported claims, are established on an undiscounted basis by considering actuarially determined losses based upon the Company's historical and projected loss experience. Such reserves totaled $118 million and $117 million as of December 31, 2017 and 2016, respectively. Management believes that established reserves and present insurance coverage are sufficient to cover currently estimated exposures. Management cannot predict the outcome of any claims made against the Company. Although management does not anticipate that the ultimate outcome of any such proceedings or claims will have a material adverse effect on the Company's financial condition, given the high degree of judgment involved in establishing accruals for loss estimates related to these types of matters, the outcome may be material to the Company's results of operations or cash flows in the period in which the impact of such claims is determined or paid.

18. BUSINESS SEGMENT INFORMATION

The Company's DIS business is the only reportable segment based on the manner in which the Chief Executive Officer, who is the Company's chief operating decision maker ("CODM"), assesses performance and allocates resources across the organization. The DIS business provides diagnostic information services to a broad range of customers, including patients, clinicians, hospitals, IDNs, health plans, employers and ACOs. The Company is the world's leading provider of diagnostic information services, which includes providing information and insights based on the industry-leading menu of routine, non-routine and advanced clinical testing and anatomic pathology testing, and other diagnostic information services. The DIS business accounted for greater than 90% of net revenues in 2017, 2016 and 2015.

All other operating segments include the Company's DS businesses, which consists of its risk assessment services, healthcare information technology, diagnostic products (prior to disposition on May 13, 2016), and clinical trials testing (prior to the formation of the Q^2 Solutions joint venture on July 1, 2015) businesses. The Company's DS businesses offer a variety of solutions for life insurers and healthcare organizations and clinicians.

In addition to the sale of Focus Diagnostics (see Note 6) in 2016, the Company wound down its Celera products business, which did not have a material impact on the Company's consolidated financial statements. As a result of these transactions, the Company has disposed of its diagnostics products business.

As of December 31, 2017, substantially all of the Company’s services were provided within the United States, and substantially all of the Company’s assets were located within the United States.

The following table is a summary of segment information for the years ended December 31, 2017, 2016 and 2015. Segment asset information is not presented since it is not used by the CODM at the operating segment level. Operating earnings (loss) of each segment represents net revenues less directly identifiable expenses to arrive at operating income (loss) for the segment. General corporate activities included in the table below are comprised of general management and administrative corporate expenses, amortization and impairment of intangibles assets, other operating income and expenses net

(in millions unless otherwise indicated)

of certain general corporate activity costs that are allocated to the DIS and DS businesses, and the gains on disposition of businesses associated with the dispositions of Focus Diagnostics and Clinical Trials (see Note 6). The accounting policies of the segments are the same as those of the Company as set forth in Note 2.

	2017	2016	2015
Net revenues:			
DIS business	$ 7,370	$ 7,138	$ 6,965
All other operating segments	339	377	528
Total net revenues	$ 7,709	$ 7,515	$ 7,493
Operating earnings (loss):			
DIS business	$ 1,313	$ 1,244	$ 1,118
All other operating segments	52	64	110
General corporate activities	(200)	(31)	171
Total operating income	1,165	1,277	1,399
Non-operating expenses, net	(135)	(191)	(296)
Income before income taxes and equity in earnings of equity method investees	1,030	1,086	1,103
Income tax expense	(241)	(429)	(373)
Equity in earnings of equity method investees, net of taxes	35	39	23
Net income	824	696	753
Less: Net income attributable to noncontrolling interests	52	51	44
Net income attributable to Quest Diagnostics	$ 772	$ 645	$ 709

Depreciation and amortization expense for the years ended December 31, 2017, 2016 and 2015 were as follows:

	2017	2016	2015
DIS business	$ 189	$ 170	$ 212
All other operating segments	6	6	10
General corporate	75	73	82
Total depreciation and amortization	$ 270	$ 249	$ 304

Capital expenditures for the years ended December 31, 2017, 2016 and 2015 were as follows:

	2017	2016	2015
DIS business	$ 219	$ 264	$ 243
All other operating segments	15	21	16
General corporate	18	8	4
Total capital expenditures	$ 252	$ 293	$ 263

(in millions unless otherwise indicated)

Net revenues by major service for the years ended December 31, 2017, 2016 and 2015 were as follows:

	2017	2016	2015
Routine clinical testing services	$ 4,309	$ 4,179	$ 4,078
Gene-based and esoteric (including advanced diagnostics) testing services	2,449	2,335	2,256
Anatomic pathology testing services	612	624	631
All other	339	377	528
Total net revenues	$ 7,709	$ 7,515	$ 7,493

19. RELATED PARTIES

The Company's equity method investees primarily consist of its clinical trials central laboratory services joint venture and its diagnostic information services joint ventures, which are accounted for under the equity method of accounting. During the years ended December 31, 2017, 2016 and 2015, the Company recognized net revenues of $37 million, $33 million and $30 million, respectively, associated with diagnostic information services provided to its equity method investees. As of December 31, 2017 and 2016, there was $3 million and $10 million, respectively, of accounts receivable from equity method investees related to such services.

During the years ended December 31, 2017, 2016 and 2015, the Company recognized income of $16 million, $19 million and $31 million, respectively, associated with the performance of certain corporate services, including transition services, for its equity method investees, classified within selling, general and administrative expenses. As of December 31, 2017 and 2016, there was $7 million and $5 million, respectively, of other receivables from equity method investees included in prepaid expenses and other current assets related to these service agreements and other transition related items. In addition, accounts payable and accrued expenses as of December 31, 2017 and 2016 included $1 million and $9 million, respectively, due to equity method investees.

20. SUBSEQUENT EVENTS

On January 30, 2018, the Company's Board of Directors authorized an increase in its quarterly dividend from $0.45 per share to $0.50 per share, commencing with the dividend payable on April 18, 2018.

On February 1, 2018, the Company completed its acquisition of Mobile Medical Examination Service ("MedXM"), in an all cash transaction for $130 million and up to $30 million of contingent consideration if certain revenue targets are achieved. MedXM is a leading national provider of home-based health risk assessments and related services. Through the acquisition, the Company acquired all of MedXM's operations.

The preliminary purchase price allocation for the MedXM acquisition, which will be accounted for as a business combination, is not provided as the appraisal necessary to assess the fair values of assets acquired and liabilities assumed is not yet complete, but a significant portion of the purchase price is expected to be allocated to intangible assets and goodwill.

QUEST DIAGNOSTICS INCORPORATED AND SUBSIDIARIES
Quarterly Operating Results (unaudited)
(in millions, except per share data)

2017 (a)	First Quarter (b)	Second Quarter (c)	Third Quarter (d)	Fourth Quarter (e)	Total Year
Net revenues	$ 1,899	$ 1,943	$ 1,931	$ 1,936	$ 7,709
Gross profit	734	773	741	742	2,990
Net income	175	207	175	267	824
Less: Net income attributable to noncontrolling interests	11	14	14	13	52
Net income attributable to Quest Diagnostics	$ 164	$ 193	$ 161	$ 254	$ 772
Earnings per share attributable to Quest Diagnostics' stockholders:					
Basic	$ 1.19	$ 1.40	$ 1.18	$ 1.86	$ 5.63
Diluted	$ 1.16	$ 1.37	$ 1.15	$ 1.82	$ 5.50

2016 (a)	First Quarter (f)	Second Quarter (g)	Third Quarter (h)	Fourth Quarter (i)	Total Year
Net revenues	$ 1,863	$ 1,906	$ 1,885	$ 1,861	$ 7,515
Gross profit	719	751	728	701	2,899
Net income	115	209	205	167	696
Less: Net income attributable to noncontrolling interests	12	14	13	12	51
Net income attributable to Quest Diagnostics	$ 103	$ 195	$ 192	$ 155	$ 645
Earnings per share attributable to Quest Diagnostics' stockholders:					
Basic	$ 0.72	$ 1.38	$ 1.37	$ 1.11	$ 4.58
Diluted	$ 0.71	$ 1.37	$ 1.34	$ 1.09	$ 4.51

(a) In May 2016, the Company completed the sale of Focus Diagnostics (see Note 6).

(b) Included pre-tax charges of $18 million, primarily associated with systems conversions and integration incurred in connection with further restructuring and integrating the Company ($10 million in cost of services and $8 million in selling, general and administrative expenses); and excess tax benefits associated with stock-based compensation arrangements of $16 million recorded in income tax expense.

(c) Included pre-tax charges of $23 million, primarily associated with systems conversions and integration incurred in connection with further restructuring and integrating the Company ($9 million in cost of services, $13 million in selling, general and administrative expenses, and $1 million in equity in earnings of equity method investees, net of taxes); pre-tax gain of $7 million related to the sale of an interest in an equity method investment (recorded in other income (expense), net); $2 million in costs incurred related to certain legal matters (recorded in selling, general and administrative expenses); and excess tax benefits associated with stock-based compensation arrangements of $13 million recorded in income tax expense.

(d) Included pre-tax charges of $23 million, primarily associated with systems conversions and integration incurred in connection with further restructuring and integrating the Company ($12 million in cost of services and $11 million in selling, general and administrative expenses); pre-tax charges of $9 million primarily associated with non-cash asset impairment charges and incremental costs incurred as a result of hurricanes ($3 million in cost of services, $1 million in selling, general and administrative expenses, and $5 million in other income (expense), net); and excess tax benefits associated with stock-based compensation arrangements of $7 million recorded in income tax expense.

QUEST DIAGNOSTICS INCORPORATED AND SUBSIDIARIES
Quarterly Operating Results (unaudited)
(in millions, except per share data)

(e) Included pre-tax charges of $42 million, primarily associated with systems conversions, integration and workforce reductions incurred in connection with further restructuring and integrating the Company ($14 million in cost of services and $28 million in selling, general and administrative expenses); pre-tax charges of $6 million, primarily related to non-cash asset impairment charges and incremental costs incurred as a result of the hurricanes ($2 million in cost of services and $4 million in selling, general and administrative expenses); a provisional estimated income tax benefit of $106 million associated with the TCJA, including a deferred income tax benefit of $115 million primarily due to the remeasurement of net deferred tax liabilities and reserves at the new combined federal and state tax rate, partially offset by $9 million of current tax expense primarily due to the mandatory repatriation toll charge on undistributed foreign earnings and profits; and excess tax benefits associated with stock-based compensation arrangements of $1 million recorded in income tax expense.

(f) Included pre-tax charges of $21 million, primarily associated with systems conversions and integration incurred in connection with further restructuring and integrating the Company ($7 million in cost of services, $12 million in selling, general and administrative expenses and $2 million in equity in earnings of equity method investees, net of taxes); pre-tax charges of $1 million, representing non-cash asset impairment charges recorded in other operating expense (income), net; pre-tax charges of $2 million, primarily representing costs incurred related to certain legal matters recorded in selling, general and administrative expenses; pre-tax charges of $48 million on retirement of debt associated with the March 2016 cash tender offer recorded in other income (expense), net (see Note 13); pre-tax charges of $1 million representing non-cash asset impairment charges associated with an investment recorded in other income (expense), net; and excess tax benefits associated with stock-based compensation arrangements of $2 million recorded in income tax expense.

(g) Included a pre-tax gain of $118 million associated with the sale of Focus Diagnostics; pre-tax charges of $19 million, primarily associated with systems conversions and integration incurred in connection with further restructuring and integrating the Company ($10 million in cost of services, $8 million in selling, general and administrative expenses and $1 million in equity in earnings of equity method investees, net of taxes); pre-tax charges of $1 million, primarily representing costs incurred related to certain legal matters recorded in selling, general and administrative expenses; pre-tax charges of $6 million representing non-cash asset impairment charges associated with certain investments recorded in other income (expense), net; and excess tax benefits associated with stock-based compensation arrangements of $2 million recorded in income tax expense.

(h) Included pre-tax charges of $18 million, primarily associated with systems conversions and integration incurred in connection with further restructuring and integrating the Company ($8 million in cost of services and $10 million in selling, general and administrative expenses); pre-tax gain of $21 million, principally a result of a gain on escrow recovery associated with an acquisition recorded in other operating expense (income), net; and excess tax benefits associated with stock-based compensation arrangements of $3 million recorded in income tax expense.

(i) Included pre-tax charges of $24 million, primarily associated with systems conversions and integration incurred in connection with further restructuring and integrating the Company ($15 million in cost of services, $7 million in selling, general and administrative expenses, $1 million in other operating expense (income), net and $1 million in equity in earnings of equity method investees, net of taxes); pre-tax charges of $6 million representing non-cash asset impairment charges recorded in other operating expense (income), net; and excess tax benefits associated with stock-based compensation arrangements of $2 million recorded in income tax expense.

QUEST DIAGNOSTICS INCORPORATED AND SUBSIDIARIES
SCHEDULE II - VALUATION ACCOUNTS AND RESERVES
(in millions)

	Balance at Beginning of Year	Provision for Doubtful Accounts	Net Deductions and Other		Balance at End of Year
Year Ended December 31, 2017					
Doubtful accounts and allowances	$ 265	$ 315	$ 311	(a)	$ 269
Year Ended December 31, 2016					
Doubtful accounts and allowances	$ 254	$ 308	$ 297	(a)	$ 265
Year Ended December 31, 2015					
Doubtful accounts and allowances	$ 250	$ 297	$ 293	(a)	$ 254

(a) Primarily represents the write-off of accounts receivable, net of recoveries.

SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

EXHIBITS TO FORM 10-K

For the fiscal year ended December 31, 2017

Commission File No. 001-12215

QUEST DIAGNOSTICS INCORPORATED

Exhibit Number	Description
3.1	Restated Certificate of Incorporation (filed as an Exhibit to the Company's current report on Form 8-K (Date of Report: May 20, 2014) and incorporated herein by reference) (Commission File Number 001-12215)
3.2	Amended and Restated By-Laws of the Company (filed as an Exhibit to the Company's current report on Form 8-K (Date of Report: February 25, 2016) and incorporated herein by reference) (Commission File Number 001-12215)
4.1	Form of 6.95% Senior Note due 2037 (filed as an Exhibit to the Company's current report on Form 8-K (Date of Report: June 19, 2007) and incorporated herein by reference) (Commission file Number 001-12215)
4.2	Form of 4.750% Senior Note due 2020 (filed as an Exhibit to the Company's current report on Form 8-K (Date of Report: November 17, 2009) and incorporated herein by reference) (Commission file Number 001-12215)
4.3	Form of 5.750% Senior Note due 2040 (filed as an Exhibit to the Company's current report on Form 8-K (Date of Report: November 17, 2009) and incorporated herein by reference) (Commission file Number 001-12215)
4.4	Form of 4.700% Senior Note due 2021 (filed as an Exhibit to the Company's current report on Form 8-K (Date of Report: March 21, 2011) and incorporated herein by reference) (Commission File Number 001-12215)
4.5	Form of 2.700% Senior Note due 2019 (filed as an Exhibit to the Company's current report on Form 8-K (Date of Report: March 12, 2014) and incorporated herein by reference) (Commission File Number 001-12215)
4.6	Form of 4.250% Senior Note due 2024 (filed as an Exhibit to the Company's current report on Form 8-K (Date of Report: March 12, 2014) and incorporated herein by reference) (Commission File Number 001-12215)
4.7	Form of 2.500% Senior Note due 2020 (filed as an Exhibit to the Company's current report on Form 8-K (Date of Report: March 10, 2015) and incorporated herein by reference) (Commission File Number 001-12215)
4.8	Form of 3.500% Senior Note due 2025 (filed as an Exhibit to the Company's current report on Form 8-K (Date of Report: March 10, 2015) and incorporated herein by reference) (Commission File Number 001-12215)
4.9	Form of 4.700% Senior Note due 2045 (filed as an Exhibit to the Company's current report on Form 8-K (Date of Report: March 10, 2015) and incorporated herein by reference) (Commission File Number 001-12215)
4.10	Form of 3.450% Senior Note due 2026 (filed as an Exhibit to the Company's current report on Form 8-K (Date of Report: May 23, 2016) and incorporated herein by reference) (Commission File Number 001-12215)
4.11	Indenture dated as of June 27, 2001, among the Company, the Subsidiary Guarantors, and the Trustee (filed as an Exhibit to the Company's current report on Form 8-K (Date of Report: June 27, 2001) and incorporated herein by reference) (Commission File Number 001-12215)

4.12	First Supplemental Indenture, dated as of June 27, 2001, among the Company, the Subsidiary Guarantors, and The Bank of New York (filed as an Exhibit to the Company's current report on Form 8-K (Date of Report: June 27, 2001) and incorporated herein by reference) (Commission File Number 001-12215)
4.13	Second Supplemental Indenture, dated as of November 26, 2001, among the Company, the Subsidiary Guarantors, and The Bank of New York (filed as an Exhibit to the Company's current report on Form 8-K (Date of Report: November 26, 2001) and incorporated herein by reference) (Commission File Number 001-12215)
4.14	Third Supplemental Indenture, dated as of April 4, 2002, among the Company, the Additional Subsidiary Guarantors, and The Bank of New York (filed as an Exhibit to the Company's current report on Form 8-K (Date of Report: April 1, 2002) and incorporated herein by reference) (Commission File Number 001-12215)
4.15	Fourth Supplemental Indenture dated as of March 19, 2003, among Unilab Corporation (f/k/a Quest Diagnostics Newco Incorporated), the Company, The Bank of New York, and the Subsidiary Guarantors (filed as an Exhibit to the Company's quarterly report on Form 10-Q for the quarter ended March 31, 2003 and incorporated herein by reference) (Commission File Number 001-12215)
4.16	Fifth Supplemental Indenture dated as of April 16, 2004, among Unilab Acquisition Corporation (d/b/a FNA Clinics of America), the Company, The Bank of New York, and the Subsidiary Guarantors (filed as an Exhibit to the Company's quarterly report on Form 10-Q for the quarter ended March 31, 2004 and incorporated herein by reference) (Commission File Number 001-12215)
4.17	Sixth Supplemental Indenture dated as of October 31, 2005, among the Company, The Bank of New York, and the Subsidiary Guarantors (filed as an Exhibit to the Company's current report on Form 8-K (Date of Report: October 31, 2005) and incorporated herein by reference) (Commission File Number 001-12215)
4.18	Seventh Supplemental Indenture dated as of November 21, 2005, among the Company, The Bank of New York, and the Subsidiary Guarantors (filed as an Exhibit to the Company's current report on Form 8-K (Date of Report: November 21, 2005) and incorporated herein by reference) (Commission File Number 001-12215)
4.19	Eighth Supplemental Indenture dated as of July 31, 2006, among the Company, The Bank of New York, and the Subsidiary Guarantors (filed as an Exhibit to the Company's current report on Form 8-K (Date of Report: July 31, 2006) and incorporated herein by reference) (Commission File Number 001-12215)
4.20	Ninth Supplemental Indenture dated as of September 30, 2006, among the Company, The Bank of New York, and the Subsidiary Guarantors (filed as an Exhibit to the Company's current report on Form 8-K (Date of Report: September 30, 2006) and incorporated herein by reference) (Commission File Number 001-12215)
4.21	Tenth Supplemental Indenture dated as of June 22, 2007, among the Company, The Bank of New York, and the Subsidiary Guarantors (filed as an Exhibit to the Company's current report on Form 8-K (Date of Report: June 19, 2007) and incorporated herein by reference) (Commission File Number 001-12215)
4.22	Eleventh Supplemental Indenture dated as of June 22, 2007, among the Company, The Bank of New York, and the Additional Subsidiary Guarantors (filed as an Exhibit to the Company's current report on Form 8-K (Date of Report: June 19, 2007) and incorporated herein by reference) (Commission File Number 001-12215)
4.23	Twelfth Supplemental Indenture dated as of June 25, 2007, among the Company, The Bank of New York, and the Additional Subsidiary Guarantors (filed as an Exhibit to the Company's current report on Form 8-K (Date of Report: June 19, 2007) and incorporated herein by reference) (Commission File Number 001-12215)
4.24	Thirteenth Supplemental Indenture dated as of November 17, 2009, among the Company, The Bank of New York, and the Subsidiary Guarantors (filed as an Exhibit to the Company's current report on Form 8-K (Date of Report: November 17, 2009) and incorporated herein by reference) (Commission File Number 001-12215)

4.25	Fourteenth Supplemental Indenture dated as of March 24, 2011, among the Company, The Bank of New York, and the Subsidiary Guarantors (filed as an Exhibit to the Company's current report on Form 8-K (Date of Report: March 21, 2011) and incorporated herein by reference) (Commission File Number 001-12215)
4.26	Fifteenth Supplemental Indenture dated as of November 30, 2011, among the Company, The Bank of New York Mellon Trust Company, N.A., as successor trustee to The Bank of New York, and the Subsidiary Guarantors (filed as an Exhibit to the Company's 2011 annual report on Form 10-K and incorporated herein by reference) (Commission File Number 001-12215)
4.27	Sixteenth Supplemental Indenture dated as of March 12, 2014, among the Company, The Bank of New York Mellon Trust Company, N.A., (filed as an Exhibit to the Company's current report on Form 8-K and incorporated herein by reference) (Commission File Number 001-12215)
4.28	Seventeenth Supplemental Indenture dated as of March 10, 2015, among the Company and The Bank of New York Mellon (filed as an Exhibit to the Company's current report on Form 8-K (Date of Report: March 5, 2015) and incorporated herein by reference) (Commission File Number 001-12215)
4.29	Eighteenth Supplemental Indenture dated as of May 26, 2016, among the Company and The Bank of New York Mellon (filed as an Exhibit to the Company's current report on Form 8-K (Date of Report: May 23, 2016) and incorporated herein by reference) (Commission File Number 001-12215)
10.1‡	Amended and Restated Employee Stock Purchase Plan (filed as an Exhibit to the Company's quarterly report on form 10-Q for the quarter ended June 30, 2016 and incorporated herein by reference) (Commission file number 001-12215)
10.2‡	Amended and Restated Quest Diagnostics Incorporated Employee Long-Term Incentive Plan as amended May 15, 2015 (filed as an exhibit to the Company's 2015 quarterly report on Form 10-Q for the quarter ended June 30, 2015 and incorporated herein by reference) (Commission file number 001-12215)
10.3‡	Form of Equity Award Agreement dated as of February 23, 2015 (filed as an exhibit to the Company's 2015 annual report on Form 10-K and incorporated herein by reference) (Commission file number 001-12215)
10.4‡*	Quest Diagnostics Supplemental Deferred Compensation Plan (Post 2004) amended and restated as of November 27, 2017
10.5‡	Quest Diagnostics Supplemental Deferred Compensation Plan (Pre-2005) amended and restated November 27, 2012 (filed as an Exhibit to the Company's 2012 annual report on Form 10-K and incorporated herein by reference) (Commission File Number 001-12215)
10.6‡	Quest Diagnostics Incorporated Senior Management Incentive Plan (filed as Appendix A to the Company's Definitive Proxy Statement dated March 28, 2003 and incorporated herein by reference) (Commission File Number 001-12215)
10.7‡	Amended and Restated Quest Diagnostics Incorporated Executive Officer Severance Plan as amended February 20, 2017 (filed as an exhibit to the Company's 2016 annual report on Form 10-K and incorporated herein by reference) (Commission File Number 001-12215)
10.8‡	The Profit Sharing Plan of Quest Diagnostics Incorporated (Amendment and Restatement, effective as of January 1, 2016) (filed as an exhibit to the Company's 2015 annual report on Form 10-K and incorporated herein by reference) (Commission file number 001-12215)
10.9‡*	Amendment No. 1 to The Profit Sharing Plan of Quest Diagnostics Incorporated, effective as of January 1, 2018

10.10‡	Quest Diagnostics Incorporated Amended and Restated Deferred Compensation Plan For Directors as amended effective January 1, 2016 (filed as an exhibit to the Company's 2015 annual report on Form 10-K and incorporated herein by reference) (Commission file number 001-12215)
10.11‡	Amended and Restated Quest Diagnostics Incorporated Long-Term Incentive Plan for Non-Employee Directors (filed as Annex B to the Company's Definitive Proxy Statement dated April 5, 2017 and incorporated herein by reference) (Commission file number 001-12215)
10.12‡	Form of Non-Employee Director Equity Award Agreement (filed as an Exhibit to the Company's 2011 annual report on Form 10-K and incorporated herein by reference) (Commission File Number 001-12215)
10.13‡	Form of Non-Employee Director Equity Award Agreement dated May 15, 2015 (filed as an exhibit to the Company's 2015 annual report on Form 10-K and incorporated herein by reference) (Commission file number 001-12215)
10.14‡	Form of Non-Employee Director Elective Option Award Agreement (filed as an Exhibit to the Company's 2011 annual report on Form 10-K and incorporated herein by reference) (Commission File Number 001-12215)
10.15‡	Employment Agreement between Stephen H. Rusckowski and Quest Diagnostics Incorporated, dated April 3, 2012 (filed as an Exhibit to the Company's current report on Form 8-K (Date of Report: April 9, 2012) and incorporated herein by reference) (Commission File Number 001-12215)
10.16‡	Amendment to Employment Agreement between Stephen H. Rusckowski and Quest Diagnostics Incorporated, dated June 11, 2015 (filed as an Exhibit to the Company's current report on Form 8-K (Date of Report: June 11, 2015) and incorporated herein by reference) (Commission File Number 001-12215)
10.17‡	Aircraft Timesharing Agreement dated as of December 17, 2013 between Quest Diagnostics Incorporated and Stephen H. Rusckowski (filed as an Exhibit to the Company's 2013 annual report on Form 10-K and incorporated herein by reference) (Commission File Number 001-12215)
11.1	Statement re: Computation of Earnings Per Common Share (the calculation of per share earnings is in Part II, Item 8, Note 3 to the consolidated financial statements (Earnings Per Share) and is omitted in accordance with Item 601(b)(11) of Regulation S-K)
21.1*	Subsidiaries of Quest Diagnostics Incorporated
23.1*	Consent of PricewaterhouseCoopers LLP
24.1*	Power of Attorney (included on signature page)
31.1*	Rule 13a-14(a) Certification of Chief Executive Officer
31.2*	Rule 13a-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.INS*	dgx-20161231.xml
101.SCH*	dgx-20161231.xsd

101.CAL*	dgx-20161231_cal.xml
101.DEF*	dgx-20161231_def.xml
101.LAB*	dgx-20161231_lab.xml
101.PRE*	dgx-20161231_pre.xml

* Filed herewith.

** Furnished herewith.

‡ Management contract or compensatory plan or arrangement required to be filed as an exhibit to this Form 10-K pursuant to Item 15(b) of Form 10-K.

AMENDED AND RESTATED

QUEST DIAGNOSTICS

SUPPLEMENTAL DEFERRED COMPENSATION PLAN

(POST - 2004)

AMENDED AND RESTATED AS OF NOVEMBER 27, 2017

PREAMBLE

Effective as of January 1, 1999, Quest Diagnostics adopted the Quest Diagnostics Supplemental Deferred Compensation Plan for the benefit of certain of its Employees. As a result of the enactment in 2004 of Section 409A of the Internal Revenue Code of 1986, as amended, Quest Diagnostics has adopted this document, the Quest Diagnostics Supplemental Deferred Compensation Plan (Post - 2004), to reflect the terms that will govern amounts that are deferred (within the meaning of Treas. Reg. §1.409A-6(a)(1)) under the Plan in taxable years beginning on and after January 1, 2005. The terms of the Plan as in effect on October 3, 2004 will continue to govern amounts under the Plan that were deferred (within the meaning of Treas. Reg. §1.409A-6(a)(1)) during taxable years beginning prior to January 1, 2005. For these purposes, an amount is considered deferred before January 1, 2005, if before such date, the Participant had a legally binding right to be paid the amount (within the meaning of Treas. Reg. §1.409A-1(b)(1)), and the right to the amount was earned and vested (within the meaning of Treas. Reg. §1.409A-6(a)). The purpose of the Plan is to provide supplemental retirement income and to permit eligible Employees the option to defer receipt of Compensation, pursuant to the terms of the Plan. The Plan is intended to be an unfunded deferred compensation plan maintained for the benefit of a select group of management or highly compensated employees under Sections 201(2), 301(a)(3) and 401(a)(1) of ERISA and therefore to be exempt from Parts 2, 3 and 4 of Subtitle B of Title I of ERISA to the maximum extent permissible under the provisions thereof.

TABLE OF CONTENTS

Article 1.

Definitions.

1.1 Definitions. Pronouns used in the Plan are in the masculine gender but include the feminine gender unless the context clearly indicates otherwise. Wherever used herein, the following terms have the meanings set forth below, unless a different meaning is clearly required by the context:

(a) "**Account**" means an account established on the books of a Participant's Employer for the purpose of recording Deferral Contributions, Employer Contributions and Supplemental Contributions credited on behalf of a Participant in respect of compensation for services to such Employer and any notional income, expenses, gains or losses related thereto. For purposes of this Plan document, "Account" shall include only amounts that are deferred within the meaning of Treas. Reg. §1.409A-6(a)(1)) during taxable years beginning on and after January 1, 2005. The Administrator may establish such subaccounts as it deems appropriate for the administration of the Plan.

(b) "**Administrator**" means Quest Diagnostics acting through its officers and employees.

(c) "**Appeals Committee**" means the Quest Diagnostics Appeals Committee, which is designated from time to time by the Administrator to administer the claims and review procedures specified in Section 10.2.

(d) "**Beneficiary**" means the person or persons entitled under Section 6.3 to receive benefits under the Plan upon the death of a Participant.

(e) "**Bonus**" means the cash bonus that is payable each March (if not deferred pursuant to Section 3.1) under the Senior Management Incentive Plan, the Quest Diagnostics Incorporated Management Incentive Plan or the pursuant to a Goalsharing Plan.

(f) "**Code**" means the Internal Revenue Code of 1986, as amended from time to time.

(g) "**Compensation**" shall have the meaning ascribed to the term "Deferral Compensation" by the Profit Sharing Plan; *provided* that any exclusion attributable to (i) deferred compensation deferred pursuant to this Plan or (ii) limits imposed by Code Section 401(a)(17) shall not apply. Notwithstanding the preceding, with respect to an Eligible Employee whose primary place of employment is outside the United States, Compensation shall exclude such items as housing allowances, educational expenses, trips back and forth to the United States, tax gross-ups and such other similar items of remuneration as may be determined by the Administrator.

(h) "**Deferral Contributions**" means those amounts credited to a Participant's Account pursuant to Section 3.1.

(i) "**Eligible Employee**" means an Employee of an Employer who is determined by the Administrator to be among a select group of management or highly compensated Employees and who is designated by the Administrator as an Eligible Employee for purposes of the Plan.

(j) "**Employee**" means any employee of an Employer.

(k) "**Employer**" means Quest Diagnostics and any successors and assigns unless otherwise provided herein, and shall include any Related Employer or other affiliated employer adopting this Plan.

(l) "**Employer Contributions**" means amounts credited to a Participant's Account pursuant to Section 3.2.

(m) "**Employer Stock**" means any class of common stock of Quest Diagnostics or the preferred stock of Quest Diagnostics that is convertible into common stock.

(n) "**ERISA**" means the Employee Retirement Income Security Act of 1974, as from time to time amended.

(o) "**Goalsharing Plan**" mean a Goalsharing Plan, as in effect from time to time.

(p) "**Participant**" means any Eligible Employee who has filed in accordance with Article 2 an election to defer Compensation pursuant to Section 3.1.

(q) "**Plan**" means the Quest Diagnostics Supplemental Deferred Compensation Plan as in effect from time to time.

(r) "**Plan Year**" means the calendar year.

(s) "**Profit Sharing Plan**" means the Profit Sharing Plan of Quest Diagnostics Incorporated, as amended from time to time.

(t) "**Quest Diagnostics**" means Quest Diagnostics Incorporated.

(u) "**Quest Diagnostics Incorporated Management Incentive Plan**" means the Quest Diagnostics Incorporated Management Incentive Plan, as in effect from time to time.

(v) "**Related Employer**" means any employer other than Quest Diagnostics, if Quest Diagnostics and such other employer are members of a controlled group of corporations (as defined in Section 414(b) of the Code) or an affiliated service group (as defined in Code Section 414(m)), or are trades or businesses (whether or not incorporated) which are under common control (as defined in Code Section 414(c)), or such other employer is required to be aggregated with Quest Diagnostics pursuant to regulations issued under Code Section 414(o).

(w) "**Section 401(a)(17) Limit**" means the maximum amount of annual compensation that can be taken into account by the Profit Sharing Plan pursuant to Code Section 401(a)(17).

(x) "**Section 409A Regulations**" means the regulations and other administrative guidance issued under Code Section 409A.

(y) "**Senior Management Incentive Plan**" means the Quest Diagnostics Incorporated Senior Management Incentive Plan, as in effect from time to time.

(z) "**Signing Bonus**" means a bonus that is negotiated with an Employee prior to the commencement of his employment and that is designated a "signing bonus".

(aa) "**SMIP Bonus Subaccount**" means the portion of a Participant's Account that may be established and maintained by the Administrator on behalf of each Participant who elects to defer a portion of his Bonus payable under the Senior Management Incentive Plan and any other plan intended to pay performance-based compensation within the meaning of Code Section 162(m)(4)(c).

(bb) "**Start Date**" means the date that an Employee's employment with an Employer commences.

(cc) "**Supplemental Contribution**" means an additional discretionary Employer Contribution credited to a Participant's Account pursuant to Section 3.2 .

(dd) "**Trust**" means the trust fund established pursuant to the terms of the Plan.

(ee) "**Trust Agreement**" means the agreement by and among the Trustee and each Employer establishing the Trust.

(ff) "**Trustee**" means the corporation or individuals named in the Trust Agreement and such successor and/or additional trustees as may be named in accordance with the Trust Agreement.

Article 2.

Participation.

2.1 **Commencement of Participation**. Each Eligible Employee who has an election in effect to defer Compensation in accordance with Section 3.1 or has an Account is a Participant in this Plan. Each other Eligible Employee shall become a Participant in this Plan after he has timely filed an election to defer Compensation pursuant to Section 3.1 that has become irrevocable or has a Supplemental Contribution credited to his Account.

2.2 **Resumption of Participation Following Reemployment**. If a Participant ceases to be an Employee and thereafter returns to the employ of an Employer, he may again become a Participant following his reemployment, provided he is an Eligible Employee and has timely filed an election to defer Compensation pursuant to Section 3.1.

2.3 **Change in Employment Status**. If any Participant continues in the employ of an Employer but ceases to be an Eligible Employee, he shall continue to be a Participant until the entire amount of the value of his Account is paid; *provided*, *however*, he shall not be entitled to

make Deferral Contributions or receive an allocation of Employer Contributions or Supplemental Contributions after the end of the Plan Year in which he ceases to be an Eligible Employee and during the remainder of the period that he is not an Eligible Employee.

Article 3.

Contributions.

3.1 Deferral Contributions.

(a) Participant deferral elections. Each Participant may elect to defer (1) up to fifty (50) percent (in whole percentages) of his regular salary to the extent his Compensation that is taken into account under the Profit Sharing Plan for the Plan Year in which his regular salary is earned exceeds the Section 401(a)(17) Limit (no portion of any bonus payment, including the Bonus, shall be eligible for deferral under this provision), (2) up to ninety-five (95) percent (in whole percentages) of his Bonus to the extent his Compensation that is taken into account under the Profit Sharing Plan for the Plan Year in which the Bonus is paid exceeds the Section 401(a)(17) Limit and (3) up to one hundred (100) percent (in whole percentages) of his Signing Bonus, regardless of whether his Compensation is in excess of the Section 401(a)(17) Limit.

(b) Timing of deferral elections.

(1) *In general*. An election to defer Compensation will be timely if it is filed in accordance with procedures established by the Administrator which shall require elections to be filed no later than December 31 of the Plan Year prior to the Plan Year to which the deferral election applies, subject to the limitations on deferral elections set forth in Section 3.1(b)(2).

(2) *First year of eligibility*. An individual who is designated by the Administrator as an Eligible Employee in connection with his commencement of employment with the Employer may make the following elections with respect to Compensation for the Plan Year in which his employment commences:

(i) an Employee whose Start Date occurs no later than January 31st of the Plan Year may, within thirty (30) days following such Start Date, file an election to defer Compensation for such Plan Year; *provided*, *however*, that for the avoidance of doubt, it is noted that, except as provided in Section 3.1(b)(2)(ii), an Employee whose Start Date occurs after January 31st of a Plan Year shall not be eligible to defer Compensation for such Plan Year; and

(ii) regardless of an Employee's Start Date, such Employee may file an election to defer up to one hundred (100) percent (in whole percentages) of his Signing Bonus, *provided* that such election is filed no later than the Employee's Start Date.

Notwithstanding the foregoing, the elections described in clauses (i) and (ii) above will not be available to any Employee who already participates in another elective

nonqualified deferred compensation plan that would be aggregated with this Plan under the Section 409A Regulations.

(c) Effectiveness of deferral election. An election made in accordance with Section 3.1(b)(1), shall become effective on the first day of the Plan Year following the Plan Year in which the deferral election is made. It will apply only to Compensation earned and payable with respect to services rendered after such date. Thus, for example, an election that becomes irrevocable on December 31, 2017 will apply to defer any salary to be earned in 2018 or a Bonus that will be earned in 2018 and paid in early 2019. An election made in accordance with Section 3.1(b)(2)(i) will apply on the first day of the first payroll period that follows receipt by the Administrator of such election and shall apply to Compensation relating to all services performed from the date that it becomes effective through the balance of the Plan Year (unless such election expressly extends beyond such time). An election made in accordance with Section 3.1(b)(2)(ii) will apply uniquely to the Eligible Employee's Signing Bonus. Once an election becomes irrevocable, it will apply to all covered Compensation for services performed through the end of the Plan Year (except as provided in Section 3.1(f)).

(d) Commencement of deferrals.

(1) *Deferrals made pursuant to Sections 3.1(a)(1) and 3.1(a)(2).* For a Participant who has a deferral election solely under 3.1(a)(1), deferrals shall commence as of the payroll period next following the payroll period in which the Participant's Compensation exceeds the Section 401(a)(17) Limit. If a Participant's Compensation for a Plan Year exceeds the Section 401(a)(17) Limit on account of payment of Bonus and the Participant has made a deferral election pursuant to Section 3.1(a)(2), then deferrals shall commence as of the payroll period coincident with the payroll period in which the Bonus is paid.

(2) *Deferrals made pursuant to Sections 3.1(a)(3).* Deferrals of Signing Bonus pursuant to Sections 3.1(a)(3) shall be made in the payroll period in which the Participant's Signing Bonus otherwise would have been paid, regardless of whether the Participant's Compensation is in excess of the Section 401(a)(17) Limit.

(e) Crediting to Account. An Employer shall credit to the Account maintained on behalf of a Participant the amount of Compensation deferred pursuant to such Participant's election under Section 3.1(a).

(f) Election irrevocable except as required pursuant to Profit Sharing Plan. A Participant who has made a hardship withdrawal under the Profit Sharing Plan shall have his deferral election cancelled, may not defer Compensation under this Plan for a period of at least six months from the date of the withdrawal and must make an election as specified pursuant to Section 3.1(b)(1) in order to resume deferrals under the Plan.

(g) Election forms. All Participant elections pursuant to this Section 3.1 shall be on forms prescribed by the Administrator.

(h) Vesting of Deferral Contributions. A Participant shall be fully vested in the Deferral Contributions credited to his Account.

3.2 Participating Employer Contributions.

(a) Employer Contributions. An Employer shall credit an Employer Contribution to the Account maintained on behalf of each Participant who had Deferral Contributions credited to his Account for a payroll period; *provided*, that such Employer Contributions shall only be credited on Compensation that is in excess of the Section 401(a)(17) Limit. Notwithstanding the preceding sentence, no Employer Contribution shall be credited to the Account of a Participant who is also a participant in the Quest Diagnostics Transferee Pension Plan for former Corning Incorporated employees. The amount of the Employer Contribution to be credited on behalf of a Participant shall be equal to the applicable percentage that is specified from time to time in Section 3.2 of the Profit Sharing Plan of the Deferral Contributions made on behalf of the Participant.

(b) Supplemental Contributions. A Participant's Employer may, from time to time in its sole discretion, credit a Supplemental Contribution to a Participant's Account in an amount determined by such Employer in its sole discretion and without regard to any Deferral Contribution elected by such Participant.

(c) Vesting of Employer Contributions and Supplemental Contributions. A Participant shall be fully vested in the Employer Contributions credited to his Account. Unless otherwise specified by the Employer at the time the Supplemental Contribution is made, a Participant shall be fully vested in the Supplemental Contributions credited to his Account. Any portion of the value of a Participant's Account attributable to a Supplemental Contribution that is not fully vested at the time he terminates employment shall be forfeited.

3.3 Transfer of Funds. The Administrator shall provide the Trustee with information on the amount to be credited to each Participant's Account. Each Employer may, as soon as administratively practicable after each payroll period, make a transfer of assets to the Trustee.

Article 4.

Participants' Accounts.

4.1 Individual Accounts. The Administrator will establish and maintain an Account for each Participant which will reflect Deferral Contributions, Employer Contributions and Supplemental Contributions credited to the Account and any notional earnings, expenses, gains and losses credited thereto attributable to the investments in which the Participant's Account is treated as invested. The Administrator will establish and maintain such other accounts and records as it decides in its discretion to be reasonably required or appropriate. Participants will be furnished statements of their Account value at least once each Plan Year.

4.2 Accounting for Payments. A payment to the Participant or to the Participant's Beneficiary(ies) shall be charged to the Participant's Account as of the date of such payment.

Article 5.

Investment of Contributions.

5.1 **Manner of Investment**. All amounts credited to the Accounts of Participants shall be treated as though invested in eligible investments offered by the Administrator.

5.2 **Investment Decisions**. Investments in which the Accounts of Participants shall be treated as invested shall be directed by the Employer, each Participant, or both, as specified pursuant to procedures established by the Administrator from time to time. No portion of the Employer Contributions or Deferrals Contributions credited to a Participant's Account may be treated as though invested in Employer Stock.

Article 6.

Payment of Account.

6.1 **Payment on Specified Date**. Concurrently with a Participant's election to defer Compensation pursuant to Section 3.1 for any Plan Year, the Administrator shall permit a Participant to designate a specific date on which 100% of the value of his Account attributable to such election shall be paid in a lump sum; *provided* that in the event of such Participant's termination of employment or death before the specified date, his Account shall be paid in accordance with Section 6.2 or 6.3, as the case may be, and his election under this Section 6.1 shall no longer be effective. Once an election is made pursuant to this Section 6.1, it shall be irrevocable.

6.2 **Distribution of Vested Account upon Termination of Employment**. (a) *In general*. Upon a Participant's termination of employment other than by reason of death, the vested portion of the Participant's Account shall be paid in a lump sum or, if permitted by the Administrator and specified in the Participant's election to defer Compensation under Section 3.1, under an installment plan not exceeding 10 years. Unless otherwise required pursuant to Section 6.6, payments shall be made or begin within ninety (90) days of the Participant's employment termination. The unvested portion, if any, of the Participant's Account shall be immediately forfeited.

(b) *Installments*. Distributions under an installment plan must be made in substantially equal annual installments, over a period certain which does not exceed 10 years. Each installment shall be based on the value of the Participant's Account, as determined prior to the payment of the relevant installment, divided by the remaining number of installments.

6.3 **Distribution upon Death; Beneficiaries**. (a) *Distributions upon death*. Upon a Participant's death prior to the commencement of benefit payments pursuant to Section 6.2, the vested portion of the Participant's Account shall be paid in a lump sum to the Participant's Beneficiary or Beneficiaries. Payment shall be made as soon as practicable during the remainder of the calendar year in which the Participant died. The unvested portion, if any, of the Participant's Account shall be immediately forfeited. Upon a Participant's death after distributions have begun under an installment plan, no further installments shall be paid and,

instead, payment shall be made of the balance of the Participant's Account as soon as practicable during the remainder of the calendar year in which the Participant died.

(b) *Beneficiary designations*. A Participant may designate a Beneficiary or Beneficiaries, or change any prior designation of Beneficiary or Beneficiaries, by giving notice to the Administrator on a form designated by the Administrator. A Participant's spouse must consent to his designation of a Beneficiary other than his spouse. If more than one person is designated as the Beneficiary, their respective interests shall be indicated on the designation form. Prior to distribution pursuant to Section 6.3, a copy of the death notice or other sufficient documentation must be filed with and approved by the Administrator. If upon the death of the Participant there is, in the opinion of the Administrator, no designated Beneficiary for part or all of the value of the Participant's Account, such amount will be paid to his surviving spouse or, if none, to his estate (such spouse or estate shall be deemed to be the Beneficiary for purposes of the Plan). If a Beneficiary dies after payment to such Beneficiary has commenced, but before the full value of the Participant's Account has been paid, and, in the opinion of the Administrator, no person has been designated to receive such remaining balance, then such balance shall be paid to the deceased Beneficiary's estate.

6.4 Payment Due to an Unforeseen Emergency. (a) *In general.* A Participant shall not be permitted to withdraw any portion of the value of his Account prior to termination of employment or any date specified pursuant to Section 6.1 (whichever occurs first), except that a Participant may apply to the Administrator, in accordance with procedures specified by the Administrator, to withdraw some or all of the value of his Account if such withdrawal is required on account of a financial hardship resulting from an unforeseen emergency. The Administrator shall establish criteria to determine what constitutes financial hardship that are consistent with the Section 409A Regulations. Withdrawals made on account of financial hardship shall be made in a lump sum, and may include such additional amount as necessary to pay any federal, state, local or foreign income taxes reasonably anticipated to result from the distribution.

(b) *Cancellation of deferral elections*. If a Participant receives a hardship distribution from the Profit Sharing Plan or any other Code Section 401(k) plan maintained by Quest Diagnostics or a Related Employer under which deferral elections are suspended for a six-month period, his deferral election under this Plan shall be cancelled for a six-month period beginning upon such distribution. Upon the expiration of such six-month period, deferrals shall not resume during the remainder of the Plan Year in which the cancellation occurs. If such expiration occurs in a Plan Year subsequent to the Plan Year during which such six-month period commenced, the Participant (if still an Eligible Employee) must execute, in accordance with Section 3.1, a new election prior to the start of such subsequent Plan Year in order to resume active participation in the Plan following the expiration of the six-month period.

6.5 Adjustment for Investment Experience During Installment Plan. If the total value of a Participant's Account is not paid in a single sum, the amount remaining in the Account after the first payment will continue to be treated as invested in accordance with Article 5 and will be subject to adjustment until paid to reflect the income, gains and losses on such deemed investment. Unless otherwise permitted by the Administrator, each installment payment shall reduce each investment of the Participant's Account on a pro-rata basis.

6.6 Section 409A and Payment Dates. Unless otherwise permitted under the Section 409A Regulations, all payments shall be made or commence no later than the end of the calendar year in which the applicable payment date occurs or, if later, by the 15th day of the third calendar month following the applicable payment date. If a Participant is determined to be a "Specified Employee" within the meaning of Code Section 409A(a)(2)(B)(i) (pursuant to procedures developed by the Administrator consistent with the Section 409A Regulations), then to the extent required in order to comply with Code Section 409A and the Section 409A Regulations, payments under the Plan to such Participant pursuant to Section 6.2 shall be made or commence after the day following the six month anniversary of the Participant's termination of employment, subject to earlier payment upon the Participant's death.

6.7 Payment in the Event of Taxation. If, for any reason, all or any portion of the value of a Participant's Account under this Plan becomes taxable to the Participant prior to receipt, a Participant may petition the Administrator for a payment of that portion of the value of his Account that has become taxable. Upon the grant of such a petition, a payment shall immediately be made to a Participant in an amount equal to the taxable portion of the value of his Account (which amount shall not exceed the remaining balance of a Participant's Account). If the petition is granted, the tax liability payment shall be made as soon as practicable after the Participant's petition is granted in accordance with Treasury Regulation Sections 1.409A-3(j)(4)(vii) and 1.49A-3(j)(4)(xi).

6.8 Valuations. For purposes of this Article 6, the valuation of a Participant's Account shall be determined as of such valuation dates preceding the payment date as may be determined from time to time by the Administrator.

6.9 Spendthrift Provision. A Participant's or Beneficiary's right to payment under the Plan is not subject in any manner to anticipation, alienation, sale, transfer, assignment, pledge, encumbrance, attachment, judgment, seizure, alimony or separate maintenance owed by Participant or his Beneficiary or garnishment by creditors of the Participant or his Beneficiary, either voluntarily, involuntarily by operation of law or as a result of property settlement, and any attempt to cause such right to payment to be so subjected will not be recognized, except to such extent as shall be required by law.

6.10 Facility of Payment. In the event the Administrator determines, on the basis of medical reports or other evidence satisfactory to the Administrator, that the recipient of any benefit payments under the Plan is incapable of handling his affairs by reason of minority, illness, infirmity or other incapacity, the Administrator may make such payments to a person or institution designated by a court which has jurisdiction over such recipient or a person or institution otherwise having the legal authority under State law for the care and control of such recipient. The receipt by such person or institution of any such payments therefore, and any such payment to the extent thereof, shall discharge the liability of the Employers and the Trust for the payment of benefits hereunder to such recipient.

6.11 Discharge of Obligations. Payment of the value of an Account under the Plan to a person believed in good faith by the Administrator to be a valid Beneficiary shall fully and completely discharge the Employers from all further obligations under this Plan with respect to the Participant. Neither the Administrator nor Quest Diagnostics shall be obliged to search for any Participant or Beneficiary beyond the sending of a registered letter to the Participant's or Beneficiary's last known address. If the Administrator notifies any Participant or Beneficiary that he is entitled to an amount under the Plan and the Participant or Beneficiary fails to claim such amount or make his location known to the Administrator within one year thereafter, then, except as otherwise required by law, if the location of one or more of the next of kin of the Participant is known to the Administrator, the Administrator may direct payment of such amount to any one or more or all of such next of kin, and in such proportions as the Administrator determines. If the location of none of the foregoing persons can be determined, the Administrator shall have the right to direct that the amount payable shall be deemed to be forfeited and retained by the Employers, except that the dollar amount of the forfeiture, unadjusted for deemed earnings, gains or losses in the interim, may be paid in full satisfaction of the Employers' obligations under this Plan in the sole discretion of the Administrator if a claim for payment subsequently is made by the Participant or the Beneficiary to whom it was payable. If any benefit payable to a Participant or Beneficiary who has not been located is subject to escheat pursuant to applicable state law, neither the Administrator nor Quest Diagnostics shall be liable to any person for any payment made in accordance with such law.

6.12 Taxes. There shall be deducted from each payment made under the Plan to the Participant (or Beneficiary) all taxes that Quest Diagnostics determines are required to be withheld or deducted by Quest Diagnostics in respect to such payment or the Plan. Quest Diagnostics shall have the right to reduce any payment by the amount of cash sufficient to provide the amount of such taxes.

Article 7.

Amendment and Termination.

7.1 Amendment by Quest Diagnostics. The Compensation Committee of the Board of Directors of Quest Diagnostics shall have the authority to approve amendments to the Plan at any time and from time to time. Such amendments may amend the Plan in whole or in part. In addition, the Chief Executive Officer and Vice President, Human Resources, of Quest Diagnostics, acting jointly (the "Authorizing Officers"), are hereby authorized, without action by the Board of Directors or any committee thereof, to approve any amendment to the Plan (in whole or in part) at any time and from time to time; *provided*, *however*, that such amendment (x) has been recommended to the Authorizing Officers by Quest Diagnostic's Benefits Committee and (y) does not increase the benefits under the Plan or otherwise materially increase Quest Diagnostic's costs with respect to the Plan. The Authorizing Officers promptly shall report to the Compensation Committee of the Board of Directors any amendment approved by the Authorizing Officers pursuant to this Section 7.1. Notwithstanding the foregoing, no amendment of the Plan may reduce the value of any Participant's Account determined as though the Participant terminated his employment as of the date of such amendment.

7.2 Retroactive Amendments. An amendment made by Quest Diagnostics in accordance with Section 7.1 may be made effective on a date prior to the first day of the Plan Year in which it is adopted. Any retroactive amendment by the Employer shall be subject to the provisions of Section 7.1.

7.3 **Plan Termination**. Neither Quest Diagnostics nor any other Employer has any obligation or liability whatsoever to maintain the Plan for any length of time and may discontinue deferrals under the Plan or terminate the Plan at any time without any liability hereunder for any such discontinuance or termination. Any termination of the Plan shall be accomplished in accordance with Section 409A of the Code and the Section 409A Regulations.

7.4 **Payment upon Termination of the Plan**. Upon termination of the Plan, no further Deferral Contributions, Employer Contributions or Supplemental Contributions shall be made under the Plan, but Accounts of Participants maintained under the Plan at the time of termination shall continue to be governed by the terms of the Plan until paid out in accordance with the terms of the Plan. In its discretion, and notwithstanding any prior election made by the Participant, Quest Diagnostics may, upon Plan termination or at any time thereafter, cause each Participant to be paid in a single lump sum the value of the Participant's Account in full satisfaction of all obligations to the Participant under the Plan if such payment would be consistent with the requirements of Code Section 409A.

Article 8.

The Trust

8.1 **Establishment of Trust**. Quest Diagnostics has established the Trust between each Employer and the Trustee, in accordance with the terms and conditions as set forth in a separate agreement, under which assets are held, administered and managed, subject to the claims of an Employer's creditors in the event of such Employer's insolvency, until paid to Participants and their Beneficiaries as specified in the Plan. The Trust is intended to be treated as a grantor trust under the Code, and the establishment of the Trust is not intended to cause Participants to realize current income on amounts contributed thereto or earnings on the Trust's assets. Notwithstanding the establishment of the Trust, a Participant's rights under the Plan shall be solely those of a general unsecured creditor of Quest Diagnostics and the Employers.

Article 9.

Miscellaneous.

9.1 **Limitation of Rights**. None of the establishment of the Plan or the Trust, or any amendment thereof, or the creation of any fund or Account, or the payment of any benefits, will be construed as giving to any Participant or other person any legal or equitable right against an Employer, the Administrator or the Trustee, except as provided herein, and in no event will the terms of employment or service of any Participant be modified or in any way affected hereby.

9.2 **Furnishing Information**. A Participant or his Beneficiary will cooperate with the Administrator by furnishing any and all information requested by the Administrator and take such other actions as may be requested in order to facilitate the administration of the Plan and the payments of amounts hereunder.

9.3 Information between the Administrator and Trustee. The Administrator agrees to furnish the Trustee, and the Trustee agrees to furnish the Administrator, with such information relating to the Plan and Trust as may be required by the other in order to carry out their respective duties hereunder, including without limitation information required under the Code or ERISA and any regulations issued or forms adopted thereunder.

9.4 Notices. Any notice or other communication in connection with this Plan shall be deemed delivered in writing if addressed as provided below and if either actually delivered at said address or, in the case of a letter, three business days shall have elapsed after the same shall have been deposited in the United States mails, first-class postage prepaid and registered or certified:

(a) If it is sent to Quest Diagnostics, an Employer or the Administrator, it will be at the address specified by Quest Diagnostics, such Employer or the Administrator, as the case may be.

(b) If it is sent to the Trustee, it will be sent to the address set forth in the Trust Agreement, or, in each case, at such other address as the addressee shall have specified by written notice delivered in accordance with the foregoing to the addressee's then-effective notice address.

9.5 Writings and Electronic Communications. All elections, notices and other communication with respect to the Plan, including signatures relating to such documentation, may be executed and stored on paper, electronically or in another medium. Any documentation executed or stored electronically shall comply with the Electronic Signatures Act.

9.6 Governing Law. The Plan will be construed, administered and enforced according to ERISA, and to the extent not preempted thereby, the laws of the State of New Jersey.

9.7 Construction. In the event that it is determined that a Participant or group of Participants does not qualify as a select group of management or highly compensated employees as determined in accordance with Sections 201(2), 301(a)(3) and 401(a)(1) of ERISA, the Administrator shall have the right, in its sole discretion, to prevent the Participant from making future elections to defer Compensation. Following such determination the Plan shall constitute two plans, one covering such non-qualifying Participants and one covering the remaining Participants up to the maximum number of participants permissible for an unfunded deferred compensation plan maintained for the benefit of a select group of management or highly compensated employees under such sections of ERISA.

9.8 Section 409A Compliance. It is the intent of the Employers that this Plan be considered and interpreted in all respects as a nonqualified deferred compensation plan satisfying the requirements of Code Section 409A and deferring the recognition of income by Participants in respect of Deferrals until amounts are actually paid to them pursuant to Article 6. For purposes of this Plan, a "termination of employment" shall be deemed to have occurred when the Participant has a "separation from service" from all Employers as defined in section 1.409A-1(h) of the Section 409A Regulations. Prior to January 1, 2009, the Company operated the Plan in good faith compliance with Section 409A and certain Internal Revenue Service transitional rules then in effect. Written deferral and distribution elections made during, or with respect to, Plan Years 2005-2008 shall remain in effect hereunder, even to the extent that the specific election choices offered for such years may not be available under the terms of this Plan document and/or specific election choices available under this Plan document may not have been offered, *provided* that subsequent actions with respect to such elections (*e.g.*, changes thereto, forms of distribution) shall be governed by the terms of this Plan document. The distribution provisions in Article 6 of this Plan document shall apply to the distribution of amounts deferred (within the meaning of Treas. Reg. §1.409A-6(a)(1)) on and after January 1, 2005 that commence on or after January 1, 2009.

9.9 Recovery of Overpayment. If there is an overpayment under the Plan, Quest Diagnostics has the right at any time, as elected by Quest Diagnostics, to:

(a) recover that overpayment from the person to whom it was made;

(b) offset the amount of that overpayment from a future payment; or

(c) a combination of both.

Quest Diagnostics shall be considered to have established an equitable lien by agreement with the person to whom such overpayment was made. Such payee shall, upon request, execute and deliver such instruments and papers as may be required, and shall do whatever else is necessary, to secure such rights of recovery to Quest Diagnostics. Quest Diagnostics also may determine to compromise its right

to a full recovery in order to facilitate a partial recovery that, in its sole discretion, it deems acceptable.

9.10 Right of Reimbursement. Payments to be made under the terms of the Plan may be used to reimburse the Employer, in accordance with procedures established by the Administrator, any amount the Participant owes an Employer at the time payment under the Plan is required to be made; *provided* that no such reimbursement will be made to the extent that in the reasonable judgment of the Administrator it would cause the Participant to recognize income for United States federal income tax purposes before the payment is made or to incur additional tax or interest pursuant to Code Section 409A or the Section 409A Regulations.

9.11 Clawback. All amounts credited to a Participant's Account under the Plan shall be subject to cancellation and recoupment by Quest Diagnostics, and shall be repaid by the Participant to Quest Diagnostics, to the extent required by law, regulation, listing requirement or as determined in accordance with any Quest Diagnostics policy, in each case, as in effect from time to time; *provided* that no such cancellation or recoupment will be made to the extent that in the reasonable judgment of the Administrator it would cause the Participant to recognize income for United States federal income tax purposes before the payment is made or to incur additional tax or interest pursuant to Code Section 409A or the Section 409A Regulations.

Article 10.

Plan Administration.

10.1 Powers and Responsibilities of the Administrator. The Administrator has the full power and the full responsibility to administer the Plan in all of its details, subject, however, to the applicable requirements of ERISA. The Administrator's powers and responsibilities include, but are not limited to, the following:

(a) To make and enforce such rules and regulations as it deems necessary or proper for the efficient administration of the Plan;

(b) To interpret the Plan, its interpretation thereof in good faith to be final, conclusive and binding on all persons claiming payment under the Plan;

(c) To decide all questions concerning the Plan and the eligibility of any person to participate in the Plan;

(d) To compute the amount of benefits which will be payable to any Participant, former Participant or Beneficiary in accordance with the provisions of the Plan;

(e) To determine the person or persons to whom such benefits will be paid;

(f) To authorize the payment of benefits;

(g) To comply with applicable requirements of Part 1 of Subtitle B of Title I of ERISA; and

(h) To appoint such agents, counsel, accountants, and consultants as may be required to assist in administering the Plan.

10.2 Claims and Review Procedures.

(a) Claims Procedure. If any person believes he is being denied any rights or benefits under the Plan, such person may file a claim in writing with the Administrator. All claims under the Plan must be submitted within one (1) year after the date on which a communication from the Plan, the Employer or the Administrator (or one of their delegates or agents) contains the information contested or challenged by the claim. If any such claim is wholly or partially denied, the Administrator will notify such person of its decision in writing. Such notification will contain (i) specific reasons for the denial, (ii) specific reference to pertinent Plan provisions, (iii) a description of any additional material or information necessary for such person to perfect such claim and an explanation of why such material or information is necessary, and (iv) information as to the steps to be taken if the person wishes to submit a request for review. Such notification will be given within 90 days after the claim is received by the Administrator (or within 180 days, if special circumstances require an extension of time for processing the claim, and if written notice of such extension and circumstances is given to such person within the initial 90-day period). If such notification is not given within such period, the claim will be considered denied as of the last day of such period and such person may request a review of his claim.

(b) Review Procedure. Within 60 days after the date on which a person receives written notice of a denied claim (or, if applicable, within 60 days after the date on which such denial is considered to have occurred), such person (or his duly authorized representative) may (i) file a written request with the Appeals Committee for a review of his denied claim and of pertinent documents and (ii) submit issues and comments to the Appeals Committee. The Appeals Committee will notify such person of its decision in writing. Such notification will be written in a manner calculated to be understood by such person and will contain specific reasons for the decision as well as specific references to pertinent Plan provisions. The decision on review will be made within 60 days after the request for review is received by the Appeals Committee (or within 120 days, if special circumstances require an extension of time for processing the request, such as an election by the Appeals Committee to hold a hearing, and if written notice of such extension and circumstances is given to such person within the initial 60-day period). If the decision on review is not made within such period, the claim will be considered denied.

(c) LIMITATIONS ON ACTIONS. NO ACTION (WHETHER AT LAW, IN EQUITY OR OTHERWISE) SHALL BE BROUGHT BY OR ON BEHALF OF ANY PARTICIPANT OR BENEFICIARY FOR OR WITH RESPECT TO PAYMENT DUE UNDER THIS PLAN UNLESS THE PERSON BRINGING SUCH ACTION HAS TIMELY EXHAUSTED THE PLAN'S CLAIM REVIEW PROCEDURE. **ANY ACTION (WHETHER AT LAW, IN EQUITY OR OTHERWISE) MUST BE COMMENCED WITHIN ONE YEAR**. THIS ONE-YEAR PERIOD SHALL BE COMPUTED FROM THE EARLIER OF

(I) THE DATE A FINAL DETERMINATION DENYING SUCH BENEFIT, IN WHOLE OR IN PART, IS ISSUED UNDER THE PLAN'S CLAIM REVIEW PROCEDURE AND (II) THE DATE SUCH INDIVIDUAL'S CAUSE OF ACTION FIRST ACCRUED (AS DETERMINED UNDER THE LAWS OF THE STATE OF NEW JERSEY WITHOUT REGARD TO PRINCIPLES OF CHOICE OF LAWS).

(d) All action(s) or litigation arising out of or relating to this Plan shall be commenced and prosecuted in the federal district court whose jurisdiction includes Hudson County, New Jersey. Each Employee, claimant or other person consents and submits, as a condition to continued participation in the Plan, to the personal jurisdiction over him of the federal district court whose jurisdiction includes Hudson County, New Jersey in respect of any such action(s) or litigation. Each Employee, claimant or other person also consents to service of process upon him with respect to any such action(s) or litigation by registered mail, return receipt requested, and by any other means permitted by rule or law.

10.3 Plan's Administrative Costs.

The Employers shall pay all reasonable costs and expenses (including legal, accounting, and employee communication fees) incurred by the Administrator and the Trustee in administering the Plan and Trust.

IN WITNESS WHEREOF, Quest Diagnostics has caused this Plan document to be executed by its duly authorized officers, effective as of November 27, 2017.

QUEST DIAGNOSTICS INCORPORATED

By: /s/ Jeffrey S. Shuman
Jeffrey S. Shuman
Senior Vice President, Chief Human Resources Officer
November 27, 2017

By: /s/ Stephen H. Rusckowski
Stephen H. Rusckowski
Chairman of the Board, President and Chief Executive Officer
November 27, 2017

APPENDIX A

This Appendix A describes special provisions applicable to accounts under the Celera Corporation Non-Qualified Savings and Deferral Plan the "Celera Plan") which was established effective as of July 1, 2008 and which was merged into this Plan effective as of June 25, 2012. Contributions under the Celera Plan ceased, and no new participants were admitted, effective as of December 31, 2011.

1. Annual Deferral Amounts. The Celera Plan provided for an "Annual Deferral Amount" to record a participant's deferred salary and bonus for the calendar year in question and any employer contributions with respect to that year, as well as earnings or losses thereon. The Plan will continue to maintain such Annual Deferral Amounts for recordkeeping purposes.

2. Vesting. A Celera Plan participant's deferred salary and bonus were 100% vested. The Celera Plan applied (and the Plan will continue to apply) a 4-year graded vesting schedule to employer contributions, *provided* that a participant will become 100% vested if he or she dies or becomes disabled while employed by Celera and its affiliates. For these purposes:

(1) years of service are measured using the "elapsed time" method and include service with Applera Corporation and Berkeley HeartLab, Inc.;

(2) service with Quest Diagnostics and its affiliates on or after May 17, 2011 is considered service with Celera and its affiliates;

(3) "Retirement Age" means the later of age 65 or five years of service; and

(4) a participant shall be considered "disabled" once he or she is, by reason of any medically determinable physical or mental impairment that can be expected to result in death or to last for a continuous period of not less than 12 months, receiving income replacement benefits for a period of not less than three months under an accident and health plan covering employees of Celera or its affiliates.

3. Time of Distribution. The time of distribution of Annual Deferral Amounts shall be the same as under the Celera Plan. Under the Celera Plan, with respect to each Annual Deferral Amount, a participant was permitted to elect either a "specified date payout" or a payout upon separation from service; the specified payout date had to be at least one year after the close of the year to which the specification applied, e.g., the earliest permitted specified payout date with respect to the Annual Deferral Amount for 2010 was January 1, 2012. Those elections were (and continue to be) irrevocable unless changed in accordance with paragraph 5 below. However, if a participant dies, his vested Annual Payment Amounts will be distributed in a lump sum notwithstanding any election he or she may have made. Payments of Annual Payment Amounts will commence (or will be made) on the 15th day of the month following the month in which the triggering event occurs.

4. Method of Distribution. The method of distribution of Annual Deferral Amounts and distribution elections shall be the same as under the Celera Plan. Further, installments are not considered a series of separate payments for purposes of Section 409A. Those distributions elections will remain in effect unless changed in accordance with paragraph 5 below.

5. Change in Method of Distribution. A participant in the Celera Plan may elect to change the method of payment of, but not the time of payment of, an Annual Deferral Amount; *provided*, *however*, that:

(1) any such change must be made at least 12 months before the first day of the calendar year in which the specified payout date would have occurred (but for the requirements of (2) below applicable to a change of election);

(2) the payment with respect to such changed election must be deferred for a period of not less than 5 years from the date such payment would otherwise originally have been made (or commenced to be made);

(3) the change will not become effective for at least 12 months after the election; and

(4) only one such change is permitted.

6. Lump Sum Distribution of Small Benefit Payments. Notwithstanding anything contained herein to the contrary, if the Administrator determines that a participant's vested balance under the Celera Plan, taking into account all plans that would be aggregated with the Celera Plan under Section 409A of the Code, is $17,000 (as adjusted under Section 402(g)(1)(B) of the Code) or less, the Administrator may pay such vested balance in a lump sum on the 15th day of the month following the month in which the Administrator makes a written decision to make such payment.

7. Designations of Beneficiaries. Beneficiary designations made under the Celera Plan shall not continue to apply to amounts arising under the Celera Plan. Instead, participants in the Celera Plan must file new beneficiary designation in accordance with the procedures established under the Plan.

8. Trust. Effective June 25, 2012, the grantor trust established under the Celera Plan shall be considered as merged into, and superseded by, the grantor trust established under the Plan.

9. Applera Provisions. The following provisions relate to amounts under the Celera Plan attributable to the Applera Corporation Supplemental Executive Retirement Plan: the election (made not later than December 31, 2008) by Kathy Ordonez with respect to her benefits under the Applera Corporation Supplemental Executive Retirement Plan shall be applied as if such benefits were a single Annual Deferral Amount under the Celera Plan.

Exhibit 10.9

AMENDMENT NO. 1 TO
THE PROFIT SHARING PLAN OF
QUEST DIAGNOSTICS INCORPORATED

The Profit Sharing Plan of Quest Diagnostics Incorporated, as presently maintained under an amendment and restatement effective as of January 1, 2016 (the "Plan") is hereby amended in the following respects, effective as of January 1, 2018:

1. The first paragraph of the definition of "Deferral Compensation" in Article I of the Plan is amended as follows:

> "Deferral Compensation - An Employee's wages as defined in Code Section 3401(a) and all other payments of compensation to an Employee by an Employer (in the course of the Employer's trade or business) for which the Employer is required to furnish the Employee a written statement under Code Sections 6041(d), 6051(a)(3) and 6052, excluding reimbursements or other expense allowances, service awards, RecognitionQuest awards, cash and non-cash fringe benefits (e.g., employee discounts), moving expenses, deferred compensation, and welfare benefits, but including Employee Pre-Tax Contributions to this Plan, pre-tax employee contributions to a Code Section 125 plan and pre-tax employee contributions to purchase qualified transportation fringe benefits pursuant to Code Section 132(f)(4)."

2. Appendix A, Participating Employers, of the Plan is amended in its entirety as attached hereto.

As evidence of its adoption of this Amendment, Quest Diagnostics Incorporated has caused this Amendment to be executed by its Chief Human Resources Officer on this 20th day of December 2017.

QUEST DIAGNOSTICS INCORPORATED

By: /s/ Jeffrey S. Shuman

Title: SVP and Chief Human Resources Officer

APPENDIX A

PARTICIPATING EMPLOYERS

The Plan allows Employers other than Quest Diagnostics to adopt its provisions. The names (and jurisdictions of organization) of Quest Diagnostics and the other Employers, as of January 1, 2018, in the Plan are:

MEMBERS OF THE QUEST CONTROLLED GROUP

American Medical Laboratories, Incorporated (DE)
Athena Diagnostics, Inc. (DE)
Diagnostic Reference Services, Inc. (MD)
ExamOne LLC (DE)
ExamOne World Wide, Inc. (PA)
ExamOne World Wide of NJ, Inc. (NJ)
LabOne, LLC (MO)
LabOne of Ohio, Inc. (DE)
MetWest, Inc. (DE)
Nomad Massachusetts, Inc. (MA)
Pathology Building Partnership (MD)
Quest Diagnostics Clinical Laboratories, Inc. (DE)
Quest Diagnostics Domestic Holder LLC (DE)
Quest Diagnostics Holdings Incorporated (DE)
Quest Diagnostics Incorporated (DE)
Quest Diagnostics Incorporated (MD)
Quest Diagnostics Incorporated (MI)
Quest Diagnostics Incorporated (NV)
Quest Diagnostics Infectious Disease, Inc. (DE)
Quest Diagnostics International LLC (DE)
Quest Diagnostics Investments LLC (DE)
Quest Diagnostics LLC (CT)
Quest Diagnostics LLC (IL)
Quest Diagnostics LLC (MA)
Quest Diagnostics Massachusetts LLC (MA)
Quest Diagnostics Nichols Institute (CA)
Quest Diagnostics Nichols Institute, Inc. (VA)
Quest Diagnostics of Pennsylvania Inc. (DE)
Quest Diagnostics Receivables Inc. (DE)
Quest Diagnostics Terracotta LLC (DE)
Quest Diagnostics Ventures, LLC (DE)
Solstas Lab Partners Group, LLC (NC)
Solstas Lab Partners, LLC (VA)
Specialty Laboratories, Inc. (CA)
Spectrum Holding Company, Inc. (DE)
Summit Health, Inc. (MI)
Unilab Corporation (DE)
A. Bernard Ackerman, M.D. Dermatopathology, PC (NY)
AmeriPath Cincinnati, Inc. (OH)
AmeriPath Cleveland, Inc. (OH)
AmeriPath Consolidated Labs, Inc. (FL)
AmeriPath Florida, LLC (DE)
AmeriPath Hospital Services Florida, LLC (DE)
AmeriPath, Inc. (DE)
AmeriPath Indianapolis, P.C. (IN)
AmeriPath Kentucky, Inc. (KY)
AmeriPath Lubbock 5.01(a) Corporation (TX)
AmeriPath Lubbock Outpatient 5.01(a) Corporation (TX)
AmeriPath Milwaukee, S.C. (WI)
AmeriPath New York, LLC (DE)
AmeriPath PAT 5.01(a) Corporation (TX)
AmeriPath Pittsburgh, Inc. (PA)
AmeriPath Texarkana 5.01(a) Corporation (TX)
AmeriPath Texas Inc. (TX)
AmeriPath Tucson, Inc. (AZ)
Arlington Pathology Association 5.01(a) Corporation (TX)
Clearpoint Diagnostic Laboratories, LLC (TX)
Cleveland Heartlab, Inc. (DE)
Colorado Pathology Consultants, P.C. (CO)
Consolidated DermPath, Inc. (DE)
Dermatopathology of Wisconsin, S.C. (WI)
DFW 5.01(a) Corporation (TX)
Diagnostic Pathology Services, Inc. (OK)
Institute for Dermatopathology, P.C. (PA)
Kailash B. Sharma, M.D., Inc. (GA)
Kilpatrick Pathology, P.A. (NC)
Med Fusion, LLC (TX)
NAPA 5.01(a) Corporation (TX)
Nuclear Medicine and Pathology Associates (GA)
Ocmulgee Medical Pathology Association, Inc. (GA)
Southwest Diagnostic Laboratories, P.C. (CO)
St. Luke's Pathology Associates, P.A. (KS)
TXAR 5.01(a) Corporation (TX)

EMPLOYERS THAT ARE NOT MEMBERS OF THE QUEST CONTROLLED GROUP

Associated Pathologists, Chartered (NV)
Desert Pathology Medical Group, Inc.
Diagnostic Laboratory of Oklahoma LLC (OK)
DGXWMT JV, LLC (DE)
Quest Diagnostics Venture LLC (PA)

Exhibit 21.1

Quest Diagnostics Incorporated (DE)
(Incorporated on December 12, 1990 in Delaware; FEIN No. 16-1387862)
Subsidiaries, Joint Ventures and Affiliates

Company	**Registered Alternate Name**
100% Quest Diagnostics Holdings Incorporated (DE)	
100% Quest Diagnostics International Holding Limited (UK)	
100% Quest Diagnostics Holdings Sarl (Luxembourg)	
100% Quest Diagnostics Subsidiary Holdings Sarl (Luxembourg)	
100% Quest Diagnostics Holdings Ltd. (UK)	
100% Exam*One* Canada, Inc. (New Brunswick)	
100% Quest Diagnostics Brasil Holdings Ltd. (UK)	
100% Quest Diagnostics Testes Forenses do Brasil Ltda. (Brazil)	
99.9% Quest Diagnostics HTAS India Private Limited (India) (0.1% Quest Diagnostics Subsidiary Holdings SARL)	
100% Quest Diagnostics of Puerto Rico, Inc. (PR)	
100% Quest Diagnostics do Brasil Ltda. (Brazil)	
100% Quest Diagnostics Ireland Limited (Ireland)	
100% Quest Diagnostics Subsidiary Holdings Ltd. (UK)	
40% Q Squared Solutions Holdings Limited (UK)	
100% Quest Diagnostics (Shanghai) Co., Ltd. (China)	
100% Quest Diagnostics Clinical Laboratories, Inc. (DE)	Advanced Toxicology Network Smithkline Beecham Clinical Laboratories
100% Lab*One*, LLC (MO)	LabOne, Inc. of Kansas Quest Diagnostics
100% Exam*One* World Wide, Inc. (PA)	
100% ExamOne LLC (DE)	
100% ExamOne World Wide of NJ, Inc. (NJ)	
51% DGXWMT JV, LLC (DE)	
100% Lab*One* of Ohio, Inc. (DE)	Quest Diagnostics LabOne
(44%) Mid America Clinical Laboratories (IN)	
(51%) Diagnostic Laboratory of Oklahoma LLC (OK)	
(70%) Quest Diagnostics Domestic Holder LLC (DE) (30% Focus Diagnostics, Inc. (DE))	
40% Q Squared Solutions Holdings, LLC (DE)	
100% Quest Diagnostics International LLC (DE)	
100% Quest Diagnostics Incorporated (MD)	
100% Diagnostic Reference Services Inc. (MD)	
100% Pathology Building Partnership (MD) (gen. ptnrshp.)	
100% Quest Diagnostics Incorporated (MI)	Quest Diagnostics Incorporated

Exhibit 21.1

100% Quest Diagnostics India Private Limited (India)	
100% Quest Diagnostics Infectious Disease, Inc. (DE)	Focus/MRL, Inc. Quest Diagnostics
(30%) Quest Diagnostics Domestic Holder LLC (DE) (70% Quest Diagnostics Clinical Laboratories, Inc. (DE))	
100% Quest Diagnostics Investments LLC (DE)	
100% Quest Diagnostics LLC (IL)	Quest Diagnostics LLC
100% Quest Diagnostics LLC (MA)	Quest Diagnostics LLC
81.1% Quest Diagnostics Massachusetts LLC (MA)	
100% Quest Diagnostics LLC (CT)	
100% Quest Diagnostics Mexico Holding Company Trust (Mexico)	
100% Quest Diagnostics Mexico, S de RL de CV (Mexico)	
100% Quest Diagnostics Terracotta LLC (DE)	
100% Quest Diagnostics Nichols Institute (CA)	Nichols Institute
100% Quest Diagnostics of Pennsylvania Inc. (DE)	
51% Quest Diagnostics Venture LLC (PA)	
53.5% Associated Clinical Laboratories of Pennsylvania, L.L.C. (PA)	
1% Associated Clinical Laboratories, L.P. (PA)	
52.97% Associated Clinical Laboratories, L.P. (PA)	
100% Quest Diagnostics Receivables Inc. (DE)	
100% Quest Diagnostics Turquoise LLC (DE)	
100 % Quest Diagnostics Ventures LLC (DE)	
100% Athena Diagnostics, Inc. (DE)	
100% American Medical Laboratories, Incorporated (DE)	
100% Quest Diagnostics Nichols Institute, Inc. (VA)	Nichols Institute
100% Quest Diagnostics Incorporated (NV)	Quest Diagnostics Incorporated of Nevada
100% Clearpoint Diagnostic Laboratories, LLC (TN)	Clearpoint Diagnostic Laboratories
100% Cleveland HeartLab, Inc. (DE)	Cleveland HeartLab Services, Inc.
100% Med Fusion, LLC (TN)	med fusion med fusion clin-trials med fusion clin-labs
100% MetWest Inc. (DE)	Quest Diagnostics Incorporated
49% Sonora Quest Laboratories LLC (AZ)	
100% Nomad Massachusetts, Inc. (MA)	
100% Laboratorio de Analisis Biomedicos, S.A. (Mexico)	

Exhibit 21.1

100% Spectrum Holding Company, Inc. (DE)	
100% Solstas Lab Partners Group, LLC (NC)	Solstas Lab - Birmingham Solstas Lab - FD Molecular Solstas Lab - Federal Drive Solstas Lab - Mendenhall Oaks Solstas Lab Partners Solstas Lab - Trustee's Tower Professional Building
100% Solstas Lab Partners, LLC (VA)	
100% Summit Health, Inc. (MI)	Quest Diagnostics Incorporated Retail Health Network Summit Health Independent Clinical Laboratories
100% Unilab Corporation (DE)	Quest Diagnostics
100% AmeriPath, Inc. (DE)	
100% AmeriPath Cincinnati, Inc. (OH)	Richfield Laboratory of Dermatopathology
100% AmeriPath Cleveland, Inc. (OH)	AmeriPath GI Institute Dermpath Diagnostics
100% AmeriPath Consolidated Labs, Inc. (FL)	
100% AmeriPath Florida, LLC (DE)	AmeriPath Central Florida AmeriPath Northeast Florida AmeriPath Southwest Florida Bay Area Dermatopathology Dermpath Diagnostics Dermpath Diagnostics Bay Area Institute for Immunofluorescence Institute for Podiatric Pathology
100% AmeriPath Hospital Services Florida, LLC (DE)	
100% AmeriPath Kentucky, Inc. (KY)	
100% AmeriPath Lubbock 5.01(a) Corporation (TX)	AmeriPath Southwest Texas
100% AmeriPath Lubbock Outpatient 5.01(a) Corporation (TX)	AmeriPath Marketing USA, Inc.

100% AmeriPath New York, LLC (DE)	AmeriPath Gastrointestinal Diagnostics AmeriPath Northeast Dermpath Diagnostics Dermpath Diagnostics NE-Braintree Ackerman Academy of Dermatopathology Dermpath Diagnostics New York Dermpath Diagnostics New England
100% AmeriPath PAT 5.01(a) Corporation (TX)	
100% AmeriPath Pittsburgh, Inc. (PA)	Dermpath Diagnostics The Dermatopathology Laboratory

100% AmeriPath Texarkana 5.01(a) Corporation (TX)	AmeriPath Chappell Joyce Pathology Chappell Joyce Pathology
100% AmeriPath Texas Inc. (DE)	
100% AmeriPath Tucson, Inc. (AZ)	
100% Arlington Pathology Association 5.01(a) Corporation (TX)	
100% Consolidated DermPath, Inc. (DE)	
100% DFW 5.01(a) Corporation (TX)	AmeriPath North Texas AmeriPath Dallas AmeriPath DFW 5.01(a) Corporation
100% Diagnostic Pathology Services, Inc. (OK)	Dermpath Diagnostics
100% Kailash B. Sharma, M.D., Inc. (GA)	
100% Institute for Dermatopathology, Inc. (PA)	Dermpath Diagnostics
100% NAPA 5.01(a) Corporation (TX)	
100% Nuclear Medicine and Pathology Associates (GA)	
100% Ocmulgee Medical Pathology Association, Inc. (GA)	AmeriPath Georgia Gastrointestinal Diagnostics Dermpath Diagnostics
100% Specialty Laboratories, Inc. (CA)	Quest Diagnostics Nichols Institute of Valencia, Inc.
100% TXAR 5.01(a) Corporation (TX)	

Additional Entities Consolidated for Accounting Purposes	**Registered Alternate Name**
A. Bernard Ackerman, M.D. Dermatopathology, PC (NY)	
AmeriPath Indianapolis, P.C. (IN)	AmeriPath Indianapolis, PSC Dermpath Diagnostics
AmeriPath Milwaukee, S.C. (WI)	
Colorado Pathology Consultants, P.C. (CO)	AmeriPath Colorado Dermpath Diagnostics
Dermatopathology of Wisconsin, S.C. (WI)	
Kilpatrick Pathology, P.A. (NC)	
Diamond Occupational Health Services, P.S.C. (PR)	
Southwest Diagnostic Laboratories, P.C. (CO)	
St. Luke's Pathology Associates, P.A. (KS)	AmeriPath Kansas City

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statements on Form S-3 (No. 333-211336) and Form S-8 (Nos. 333-184580, 333-182863, 333-143889, 333-136196, 333-136195, 333-60758, 333-60477, 333-157447, 333-162710, 333-162711, 333-207746, 333-214215 and 333-221076) of Quest Diagnostics Incorporated of our report dated February 23, 2018 relating to the financial statements, financial statement schedule and the effectiveness of internal control over financial reporting, which appears in this Form 10-K.

By /s/ PricewaterhouseCoopers LLP

PricewaterhouseCoopers LLP

Florham Park, New Jersey
February 23, 2018

Exhibit 31.1

CERTIFICATION OF CHIEF EXECUTIVE OFFICER PURSUANT TO
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Stephen H. Rusckowski, certify that:

1. I have reviewed this annual report on Form 10-K of Quest Diagnostics Incorporated;

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.

February 23, 2018

By /s/ Stephen H. Rusckowski

Stephen H. Rusckowski
Chairman, President and
Chief Executive Officer

Exhibit 31.2

CERTIFICATION OF CHIEF FINANCIAL OFFICER PURSUANT TO
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Mark J. Guinan, certify that:

1. I have reviewed this annual report on Form 10-K of Quest Diagnostics Incorporated;

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.

February 23, 2018

By /s/ Mark J. Guinan

Mark J. Guinan
Executive Vice President and
Chief Financial Officer

Exhibit 32.1

CERTIFICATION OF CHIEF EXECUTIVE OFFICER PURSUANT TO 18 U.S.C. § 1350,
AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

Pursuant to 18 U.S.C. § 1350, the undersigned certifies that, to the best of my knowledge, the Annual Report on Form 10-K for the period ended December 31, 2017 of Quest Diagnostics Incorporated, as being filed with the Securities and Exchange Commission concurrently herewith, fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. § 78m or 78o(d)) and that the information contained in the Annual Report fairly presents, in all material respects, the financial condition and results of operations of Quest Diagnostics Incorporated.

Dated: February 23, 2018

/s/ Stephen H. Rusckowski

Stephen H. Rusckowski
Chairman, President and
Chief Executive Officer

Exhibit 32.2

CERTIFICATION OF CHIEF FINANCIAL OFFICER PURSUANT TO 18 U.S.C. § 1350,
AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

Pursuant to 18 U.S.C. § 1350, the undersigned certifies that, to the best of my knowledge, the Annual Report on Form 10-K for the period ended December 31, 2017 of Quest Diagnostics Incorporated, as being filed with the Securities and Exchange Commission concurrently herewith, fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. § 78m or 78o(d)) and that the information contained in the Annual Report fairly presents, in all material respects, the financial condition and results of operations of Quest Diagnostics Incorporated.

Dated: February 23, 2018

/s/ Mark J. Guinan

Mark J. Guinan
Executive Vice President and
Chief Financial Officer