
**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, 2018

or

Transition report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

For the transition period from _____ to _____

Commission file number - 1-11353

LABORATORY CORPORATION OF AMERICA HOLDINGS

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of incorporation or organization)

13-3757370

(I.R.S. Employer Identification No.)

358 South Main Street,

Burlington, North Carolina

(Address of principal executive offices)

27215

(Zip Code)

(Registrant's telephone number, including area code) **336-229-1127**

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

Title of each class

Common Stock, \$0.10 par value

Name of exchange on which registered

New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Act: None

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

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

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the 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 No .

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted 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 such files). Yes No .

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§ 232.405) 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. [].

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 [X]

Accelerated filer []

Non-accelerated filer []

Smaller reporting company []

Emerging growth company []

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

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

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

As of June 30, 2018, the aggregate market value of the common stock held by non-affiliates of the registrant was approximately \$17.5 billion, based on the closing price on such date of the registrant's common stock on the New York Stock Exchange.

Indicate the number of shares outstanding of each of the registrant's classes of common stock, as of the latest practicable date: 98.6 million shares as of February 26, 2019.

DOCUMENTS INCORPORATED BY REFERENCE

List hereunder the following documents if incorporated by reference and the Part of the Form 10-K into which the document is incorporated:

Portions of the Registrant's Notice of Annual Meeting and Proxy Statement to be filed no later than 120 days following December 31, 2018, are incorporated by reference into Part III.

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PART I

Item 1. BUSINESS

Laboratory Corporation of America[®] Holdings (LabCorp[®] or the Company) is a leading global life sciences company that is deeply integrated in guiding patient care. The Company provides comprehensive clinical laboratory and end-to-end drug development services through LabCorp Diagnostics (LCD) and Covance Drug Development (CDD). LabCorp is positioned at the convergence of research and care delivery to enable more precise and individualized healthcare, bringing together world-class diagnostics and drug development capabilities. With nearly 61,000 employees worldwide, the Company's mission is to improve health and improve lives by delivering world-class diagnostics, accelerating the availability of innovative medicines to patients, and using technology to change the way care is delivered. LabCorp, an S&P 500 company, was named to FORTUNE magazine's 2019 List of World's Most Admired Companies, making the annual list for the second consecutive year.

The Company provides diagnostic, drug development and technology-enabled solutions for more than 120 million patient encounters per year. The Company typically processes tests on more than 2.5 million patient specimens per week and also supports clinical trial activity in approximately 100 countries through its industry-leading central laboratory, preclinical, and clinical development businesses, generating more safety and efficacy data to support drug approvals than any other company. CDD collaborated on 93% of the novel drugs approved by the U.S. Food and Drug Administration (FDA) in 2018, including 94% of the novel rare and orphan disease drugs and 94% of the novel oncology drugs. In addition, CDD has been involved in the development of all of the current top 50 drugs on the market as measured by sales revenue.

The Company, a Delaware corporation, is headquartered in Burlington, North Carolina, and was incorporated in 1971. Although portions of its business have an even longer history, the Company identifies its founding in 1969 and will celebrate its 50th anniversary in 2019. The Company has continually expanded and diversified its business offerings, technological expertise, geographic reach, revenue base, and financial growth opportunities through a combination of organic investments and disciplined acquisitions.

Combined, Global Capabilities

Today, the Company participates in drug development from discovery through commercialization; it is the go-to partner for the development, validation and commercialization of companion diagnostics, which are key drivers of personalized medicine; it offers a growing menu of nearly 5,000 high-quality, high-value clinical laboratory tests; and, increasingly, it provides guidance to consumers and care providers about how to integrate drugs and diagnostics into patient care.

The combination of LCD's and CDD's core capabilities enables the Company to create compelling advantages for clients. LCD's patient insights and CDD's global physician-investigator performance data create a powerful competitive advantage that presents significant long-term growth potential. As a result, LabCorp can win studies and recruit patients and investigators for trials more efficiently. The Company has proprietary data sets with more than 30 billion lab test results, reaching roughly 50% of the United States (U.S.) population and a significant database of experienced investigators and trial sites. The 2017 acquisition of Chiltern International Group, Inc. (Chiltern) further enhanced Covance's offerings as a major partner serving the top 20 biopharmaceutical segment and expanded the Company's current offering to include a dedicated focus on the high-growth emerging and mid-market biopharmaceutical segments.

The combined capabilities of the business have also contributed to the Company's position as a market leader in the development and commercialization of companion and complementary diagnostics. Companion diagnostics are tests that should be used before a patient can be treated with a specific therapeutic to help identify how or if the therapeutic will be effective or if it may cause adverse events. Complementary diagnostics are not required for determining who should receive the therapeutic, or how it should be used, but can give physicians valuable information about a patient's potential response to a specific therapeutic or class of therapeutics. The Company's dedicated companion diagnostics team collaborated with over 50 clients on more than 100 companion diagnostics projects in 2018. LCD and CDD have been involved in the development of drugs and their associated companion diagnostics for more than 20 years, and together have supported more FDA-approved companion diagnostics than any other company.

The Company serves a broad range of customers, including managed care organizations (MCOs), biopharmaceutical and medical device companies, governmental agencies, physicians and other healthcare providers (e.g. physician assistants and nurse practitioners, generally referred to herein as physicians), hospitals and health systems, employers, patients and consumers, contract research organizations (CROs) and independent clinical laboratories. Through the tools the Company provides, customers can leverage the Company's deep scientific and therapeutic experience, cutting-edge technology, and considerable real-world data and patient intelligence, LabCorp customers can understand and respond to evolving patient needs with precision. The breadth of the Company's offerings has accelerated revenue and profit growth while generating strong returns for shareholders through share price appreciation. The Company's diversified service offerings also help to balance the impact of changes in the U.S. healthcare

payment system, such as the reductions to the Medicare fee schedule under the Protecting Access to Medicare Act (PAMA), and associated reductions to other payers including Medicaid.

Positioning the Company for the Future

The Company believes that it can play a larger role in the rapidly evolving healthcare environment by continuing to focus on three key strategic initiatives to broaden its role: supporting customers' transition to value-based care, streamlining the drug development process, and creating a leading and differentiated consumer experience. In addition, the Company believes that continued consolidation in healthcare and the Company's strong relationships with hospitals and health systems will allow LabCorp to provide leading solutions to help improve patient outcomes and reduce healthcare costs as health systems increasingly become the focal point of coordinated patient care.

Value-Based Care

The healthcare system is in the midst of a complex and iterative transition to value-based care, with increased use of reimbursement models based on quality of care and on patient outcomes, and less reliance on traditional fee-for-services based payments. The Company is focused on improving efficiency in care delivery, reducing the overall cost of patient care, and using the Company's combination of diagnostic and drug development capabilities to accelerate progress towards more precise and individualized healthcare.

The Company is supporting customers transitioning to value-based care through its differentiated, comprehensive solutions including leading laboratory services, clinical decision support (CDS), robust data integration offerings, drug development solutions, and payer and provider collaborations. The Company is a critical player in enabling targeted, tailored, high-value care in part by helping physicians choose the right test to determine the right medication at the right dosage, and helping to deliver the next generation of lifesaving drugs, which increasingly rely on the individual patient's genetic makeup to determine appropriateness of use, dosing and co-treatment options. In 2018, LabCorp announced that effective January 1, 2019, it would be an in-network laboratory for Aetna, in addition to extending its existing in-network agreement with UnitedHealthcare. With these agreements, the Company is a contracted laboratory partner for all of the major national managed care plans, which reinforces the Company's differentiated value proposition to physicians and patients. In November 2018, the Company also extended its agreement with Horizon Blue Cross Blue Shield of New Jersey. The Company will continue to be the exclusive laboratory for Horizon Medicaid members. The Company will no longer be the exclusive capitated laboratory for Horizon HMO Members but will continue to be an in-network laboratory for all Horizon members, including HMO members.

Streamlining Drug Development

In today's healthcare landscape, there is a need to streamline the drug development process to bring new drugs to market faster. However, the number of compounds in the pipeline continues to grow and the development path is increasingly complex and costly. These trends have led to growing competition for investigators and patients in clinical studies. In this environment, demand from biopharmaceutical companies for data-driven study design and execution, scalable, innovative tools and processes, and access to relevant analytes, biomarkers and tests continues to rise.

CDD's unique end-to-end global capabilities provide biopharmaceutical and medical device companies with differentiated solutions to streamline development by allowing for more efficient study design, and faster and more targeted identification of eligible patients and investigators. The Company's investment in CDD's unmatched combination of capabilities, analytics and scale has strengthened its leadership advantage in areas such as companion diagnostics and real-world evidence insights. The Company's integration of new innovations in this space, such as using robotic software process automation, also enhances efficiency and quality. In addition, LCD's strategic relationships with hospitals and health systems create opportunities for those organizations to become research partners to participate in studies and clinical trials with CDD.

The unique combination of the Company's diagnostic and drug development operating models enables the Company to create differentiated and innovative solutions to streamline the drug development process. The Company expects to see increasing adoption of virtual clinical trials and mobile health technology by clinical trial sponsors. For example, the Company is applying its market access call-center capabilities to enroll and engage patients, its patient service centers (PSCs) to provide blood draws and biometric assessments in locations convenient to patients, and its central laboratory services to perform the associated testing. These offerings, individually or in combination, can speed patient recruitment and site selection, improve trial design and data quality, and thereby decrease study duration, costs, and the patient burden of participating in clinical research.

The Growing Importance of the Consumer in Healthcare

Patients are increasingly interested in their health and wellness and they are becoming more influential in their healthcare decision-making, instead of simply reacting to symptoms of disease. They have more responsibility for the costs of their care and technological advances are driving an expectation of convenient channels for accessing healthcare. This change requires healthcare providers to increasingly view patients as consumers. The Company is investing in new tools and technology to create a

differentiated consumer experience through innovations to increase consumer engagement and new channels to enhance consumer convenience and access to LabCorp's high-quality lab services.

In 2018, the Company announced plans to significantly expand the LabCorp at Walgreens collaboration to at least 600 locations over the next four years, following positive feedback to the initial sites in four states. Consumers, healthcare providers, and managed care plans have expressed strong interest in this innovative partnership. LabCorp's and Walgreens complementary healthcare expertise underpins LabCorp at Walgreens, which is uniquely situated to deliver a wide range of personalized, integrated, consumer-facing services over time. Additional collaboration opportunities with Walgreens are focused on improving the consumer experience and using data integration to enhance product and service offerings.

The Company also launched Pixel by LabCorpSM, a consumer-initiated testing platform that features sample self-collection from the comfort of home and personalized online results. Consumers can now purchase test packages with home-based sample collection that offer screening for wellness, heart health, diabetes, and colorectal cancer. Additional test offerings and use cases are planned for the future. In 2019, the Company also plans to add a consumer-initiated, phlebotomy-based offering to the Pixel platform that will broaden consumer access to the most important and frequently requested tests. With this added service, consumers are empowered to order tests online and visit LabCorp PSCs for sample collection.

In 2018, the Company completed the rollout of several patient self-service tools to enhance the experience in its PSCs, including self-check-in, improved insurance card recognition technology using machine learning, enhanced mobile applications and upgraded online bill payment.

LCD's online LabCorp | Patient portal and mobile app offer convenient access to new and historical test results, information about tests, and an option to receive information about clinical trials. In an effort to further expand consumers' ability to easily access their health records from any location, the Company announced that it supports Health Records on iPhone[®], a service that allows LabCorp patients to access their LabCorp laboratory test results along with other available medical data from multiple providers in the Apple[®] Health app.

The Company's multi-faceted consumer engagement strategy is advancing at a rapid pace, which further differentiates the Company's offerings from competitors and creates new opportunities for long-term profitable growth. The Company also continues to invest in and evaluate technologies that may enable additional methods for self-collection of specimens, and is exploring the potential use of wearable devices for diagnostics and in clinical trials.

The Company performs the DNA testing for 23andMe. The Company also continues to support telemedicine, and other new care delivery models, that empower and engage healthcare consumers.

Hospital and Health System Partnerships

The healthcare industry continues to consolidate with private medical practices joining larger medical groups or affiliating with health systems, and health systems merging and absorbing additional facilities. MCOs are increasingly taking on the roles of both payers and care providers, and in some markets, large health systems are creating their own MCO. These combined organizations can provide economies of scale and the capital to make substantially greater investments in technology, and in some cases they can exercise greater control over how and where patients access care.

The Company supports those goals through its unique combination of diagnostics and drug development. It offers highly efficient and integrated lab testing across multiple types of care settings. It can simplify information technology structures and interfaces to standardize lab testing and data across a disparate network of providers, facilities and systems. That data can also identify patients that may be eligible for clinical trials and physicians who may be able to serve as clinical trial investigators. The Company believes that its ability to offer these high-value integrated solutions is a differentiator in the marketplace.

For more than three decades, the Company has developed and maintained a broad range of collaborations with hospitals and health systems and the Company continues to develop those relationships. In 2018, the Company entered into or extended strategic relationships with multiple health systems across the country, including Appalachian Regional Healthcare, Mount Sinai Health System, and Baptist Healthcare System, Inc. based in Louisville, Kentucky, among others. These relationships are foundational in delivering high-quality, outcomes-driven, and cost-effective care to patients. The Company will continue to invest in its team and capabilities to support this important strategic initiative.

The Company is uniquely positioned to capitalize on the opportunities of the rapidly changing healthcare system. The combination of its leading diagnostics and drug development businesses strengthens its value proposition to key stakeholders and differentiates the Company from its competitors.

Company Reporting

The Company's Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, and all amendments to those reports are made available free of charge through the Investor Relations section of the Company's website

at www.labcorp.com as soon as reasonably practicable after such material is electronically filed with, or furnished to, the U.S. Securities and Exchange Commission (SEC). Additionally, the SEC maintains a website at <http://www.sec.gov> that contains reports, proxy and information statements, and other information regarding issuers, including the Company, that file electronically with the SEC.

The matters discussed in this “Business” section should be read in conjunction with the Consolidated Financial Statements found in Item 8 of Part II of this report, which include additional financial information about the Company, such as financial information about geographic areas. This report includes forward-looking statements that involve risks or uncertainties. The Company’s results could differ materially from those anticipated in these forward-looking statements as a result of certain factors, including the risk factors described in Item 1A of Part I of this report and elsewhere. For more information about forward-looking statements, see “Forward-Looking Statements” in Item 7.

Business Segments

The Company reports its business in two segments, LCD and CDD. In 2018, LCD and CDD contributed 62% and 38%, respectively, of revenues to the Company, and in 2017 contributed 67% and 33%, respectively. For further financial information about these segments, including information for each of the last three fiscal years regarding revenue, operating income and other important information, see Note 21 to the Consolidated Financial Statements.

LCD Segment

LCD is an independent clinical laboratory business. It offers a comprehensive menu of frequently requested and specialty testing through an integrated network of primary and specialty laboratories across the U.S. This network is supported by a sophisticated information technology system, with more than 65,000 electronic interfaces to deliver test results, nimble and efficient logistics, and local labs offering rapid response testing. The Company also provides patient access points, strategically and conveniently located throughout the U.S., including nearly 2,000 PSCs operated by the Company and more than 6,000 in-office phlebotomists who are located in customer offices and facilities. In addition to diagnostic testing, LCD also offers a range of other testing services, including paternity and occupational and wellness testing for employers. During 2018, the Company sold its Covance Food Solutions (CFS) business, which provided food testing and integrity services, as well as its domestic and international forensic analysis businesses. LCD offers an expansive test menu including a wide range of clinical, anatomic pathology, genetic and genomic tests, and regularly adds new tests and improves the methodology of existing tests to enhance patient care. In 2018, with the introduction of Pixel by LabCorp, the Company also began offering consumer-initiated wellness testing.

Through the dedicated effort of approximately 39,000 employees, LCD typically processes tests on more than 2.5 million patient specimens each week and has laboratory locations throughout the U.S. and other countries, including Canada.

Clinical Laboratory Testing Industry

It is estimated that although laboratory services account for less than 3.0% of total U.S. healthcare spending (and approximately 1.0% of Medicare expenditures), the results of those tests impact an estimated 70% of all decisions regarding a patient's care.

Laboratory tests and procedures are used generally to assist in the diagnosis, monitoring and treatment of diseases and medical conditions through the examination of substances in blood, tissues and other specimens. The results of such tests can help in the evaluation of health, the detection of conditions or pathogens and the selection of appropriate therapies. Clinical laboratory testing is generally categorized as either clinical pathology testing, which is performed on body fluids including blood, or anatomical pathology testing, in which a pathologist examines histologic (i.e., tissue) or cytologic samples (i.e., human cells). Clinical and anatomical pathology procedures are frequently ordered as part of regular healthcare office visits and hospital admissions in connection with patient care. Certain of these tests and procedures are used in the diagnosis and management of a wide variety of medical conditions such as cancer, infectious disease, endocrine disorders, cardiac disorders and genetic disease.

The Company believes that in 2018, the U.S. clinical laboratory testing industry generated revenues of approximately \$80.0 billion. The clinical laboratory industry consists primarily of three types of providers: hospital-based laboratories, physician-office laboratories and independent clinical and anatomical pathology laboratories, such as those operated by LCD. The clinical laboratory business is intensely competitive. The Centers for Medicare and Medicaid Services (CMS) of the U.S. Department of Health and Human Services (HHS) has estimated that in 2018 there were approximately 9,000 hospital-based laboratories, approximately 122,000 physician-office laboratories and more than 6,000 independent clinical laboratories in the U.S. LCD competes with all of those laboratories.

LCD believes that the selection of a laboratory is primarily based on the following factors:

- Quality, timeliness and consistency in reporting test results;
- Reputation of the laboratory in the medical community or field of specialty;
- Contractual relationships with MCOs;
- Service capability and convenience;

- Number and type of tests performed;
- Connectivity solutions offered; and
- Pricing of the laboratory's services.

LCD believes that it competes favorably in all of these areas.

LCD believes that consolidation in the clinical laboratory testing business will continue. In addition, LCD believes that it and other large, independent clinical laboratory testing companies will be able to increase their share of the overall clinical laboratory testing market due to a number of factors, including cost efficiencies afforded by large-scale automated testing, mergers and acquisitions of complementary businesses; changes in payment models to performance and value-based reimbursement to deliver better outcomes at lower cost, and large, integrated service networks. In addition, legal restrictions on physician referrals and physician ownership of laboratories, as well as ongoing regulation of laboratories, are expected to continue to contribute to the ongoing consolidation of the industry.

Although testing for healthcare purposes and customers who provide healthcare services represents the most significant portion of the clinical laboratory industry, clinical laboratories also perform testing for other purposes and customers, including employment and occupational testing, DNA testing to determine parentage and to assist in immigration eligibility determinations, environmental testing, wellness testing, toxicology testing, pain management testing, and medical drug monitoring.

LCD Testing Operations and Productivity

LCD has a network of PSCs offering specimen collection services, phlebotomists placed at a customer location, branches, rapid response (STAT) laboratories, primary testing laboratories and specialty testing laboratories. Many of LCD's laboratories hold ISO 15189 certification, providing customers with the assurance of quality that comes with this rigorous global standard.

Generally, a PSC is a facility maintained by LCD to serve patients. The PSC staff collects specimens for testing as requested by the physician. PSC staff also perform specimen preparation to produce laboratory-ready samples that can be tested upon receipt by the testing laboratory, expediting the delivery of test results. A significant portion of patient specimens are collected by the customer's staff at its office or facility, or in some cases, by an LCD phlebotomist who has been placed in the customer location for the specific purpose of collecting and processing specimens to be tested by LCD.

The Company has developed a comprehensive and nimble logistics system that efficiently brings specimens from the point of collection to the testing laboratory, incorporating specimen intake, tracking, and processing procedures that minimize errors and expedite the performance of testing and delivery of results. Specimens collected at PSCs and at customer locations are then picked up principally by LCD's in-house courier system (and to a lesser extent, through independent couriers) and delivered to a branch or directly to one of LCD's laboratories for testing. A branch is a central facility that collects specimens in a region for shipment to a regional or specialty laboratory for testing, and is also frequently used as a base for sales and distribution staff. STAT laboratories, which may be co-located with a branch or a PSC, perform critical testing for nearby customers, with results typically delivered within 2-3 hours of receipt of the specimen. Primary testing laboratories perform frequently requested testing on a large scale. Specialty testing laboratories perform one or more types of specialty and esoteric testing.

Each specimen and the associated test order is checked for completeness and given a unique identification number. The unique identification number assigned to each specimen associates the results to the appropriate patient. The testing, billing information and test results are entered into LCD's systems electronically or manually depending on physician, test type and equipment involved. Most of LCD's automated testing equipment is connected to its information systems. Most specimens are picked up from the customer's location by late afternoon or early evening and delivered to the testing laboratory by late evening on the day of collection or overnight. Test results are, in most cases, electronically delivered to the physician via electronic interfaces, the LabCorp Link™ (formerly LabCorp Beacon) platform, smart printers or personal computer-based products. The Company makes test results available directly to patients through its LabCorp | Patient mobile app and online tool, and by enabling access to test results through Health Records on iPhone.

LCD remains focused on improving quality and productivity while lowering costs throughout all phases of its operations, supported by LCD's technology, automation and facility rationalization initiatives. As part of an ongoing commitment to remain the most efficient and highest-value provider of laboratory services, LCD executed a comprehensive business process improvement initiative, referred to as LaunchPad, to reengineer its systems and processes to create a sustainable and more efficient business model, and to improve the experience of all stakeholders. The Company achieved its LaunchPad goals of delivering both short- and long-term savings, and implementing system and process improvements that are expected to yield continuing benefits for the foreseeable future. In late 2018, the Company announced that it had begun phase II of LaunchPad for LCD. The Company expects phase II of LCD's LaunchPad initiative to deliver approximately \$200.0 in net savings over the next three years, while incurring approximately \$40.0 in one-time implementation costs. Approximately one-third of the total savings are expected to be realized each year.

LCD Testing Services

LCD offers a growing menu of nearly 5,000 tests. Several hundred of those tests are used in general patient care by physicians to establish or support a diagnosis, to monitor treatment or to search for an otherwise undiagnosed condition. The most frequently requested tests include blood chemistry analyses, urinalyses, blood cell counts, thyroid tests, Pap tests, hemoglobin A1C, prostate-specific antigen (PSA), tests for sexually-transmitted diseases [e.g. chlamydia, gonorrhea, trichomoniasis and human immunodeficiency virus (HIV)], hepatitis C (HCV), tests, vitamin D, microbiology cultures and procedures, and alcohol and other substance-abuse tests. LCD performs this core group of tests in its major laboratories using sophisticated instruments, with most results reported within 24 hours or less.

In addition, LCD provides a comprehensive range of specialty testing services in the areas of women's health, allergy, diagnostic genetics, cardiovascular disease, infectious disease, endocrinology, oncology, coagulation, pharmacogenetics, toxicology and medical drug monitoring.

LCD also performs a range of other testing services, including parentage and occupational testing and wellness testing for employers. In addition, until the sale of the CFS business, which was completed on August 1, 2018, LCD provided testing services to the food, beverage, nutraceutical, animal feed, chemical and agrochemical industries, which included nutritional analysis and equivalency, nutritional content fact labels, microbiological and chemical contaminant safety analysis, product development expertise, sensory testing, pesticide screening and stability testing. LCD also provided forensic services to assist in DNA analysis for investigations until the sale of its foreign and domestic forensic testing services businesses during the third and fourth quarters of 2018, respectively.

LCD's Specialty Testing Group performs esoteric testing, cancer diagnostics and other complex procedures. The Specialty Testing Group offers advanced methods and access to scientific expertise and consultation in the following disciplines:

Anatomic Pathology/Oncology. LCD offers advanced comprehensive tumor tissue analysis, including immunohistochemistry, (IHC), cancer cytogenetics and fluorescence in situ hybridization (FISH), through its Dianon Pathology and Integrated Oncology specialty testing laboratories. Applications for molecular diagnostics continue to increase in oncology for leukemia analysis and solid tumor assessment. In cancers such as colon and lung cancer, assays that analyze genetic mutations can help guide appropriate therapy choices for a given patient. Through the combined expertise of LCD and CDD, the Company is a recognized leader in the development and introduction of companion and complementary diagnostics, which are becoming increasingly important in the treatment of cancer with new, targeted therapies for which only certain patients may be eligible, or which may provide greater or lesser benefits to certain patients, based on their individual genetic makeup.

Cardiovascular Disease. LCD's cardiovascular menu includes cholesterol tests, expanded lipid profiles, a metabolic syndrome profile and tests for heart failure, thrombosis and stroke. LCD also offers complete testing for monitoring disease progression and therapy response, including its CDS portfolio to help guide treatment and monitoring decisions.

Coagulation. LCD offers an extensive menu of tests for hemostasis and thrombosis, including bleeding profiles and screening tests, factor analysis, thrombin generation markers, and thrombotic risk evaluation. LCD recently introduced new, internally developed methods to test for ADAMTS13 and serotonin release in the evaluation of heparin-induced thrombocytopenia, both of which are life-threatening blood clot disorders. The new methods offer clinically significant improvements to previously available tests. LCD also performs testing in support of clinical trials largely for therapies to treat hemophilia.

Diagnostic Genetics. LCD offers cytogenetic, molecular cytogenetic, biochemical and molecular genetic tests. The biochemical genetics offerings include a variety of prenatal screening options, including integrated and sequential prenatal assays and non-invasive prenatal testing (NIPT) for more sensitive and earlier assessment of risk for multiple fetal chromosomal aneuploidies, such as Down syndrome. LCD has expanded its cytogenetics offerings through the use of whole genome single-nucleotide polymorphism (SNP) microarray technology, which provides enhanced detection of subtle chromosomal changes associated with the etiology of mental retardation, developmental delay and autism. The molecular genetics services include multiplex analyses of a variety of disorders, gene sequencing applications for both somatic and germ-line alterations and whole exome sequencing. Through Integrated Genetics, LCD provides the most comprehensive genetic test menu in the industry, as well as an experienced team of genetic counselors and medical geneticists to provide patients and their physicians with analysis, assessment and interpretation of genetic test results to help optimize patient decisions and outcomes.

Endocrinology. LCD is a leading provider of advanced hormone/steroid testing, including comprehensive services for the endocrine specialist. LCD has expanded its menu in esoteric endocrine testing and has launched an initiative to develop steroid testing utilizing mass spectrometry technology. Mass spectrometry is used for detection of low levels of small molecule steroids, including testosterone in women, children and hypogonadal men. Additionally, LCD offers endocrine-related tests for genetic conditions including congenital adrenal hyperplasia, short stature, and thyroid cancer, along with providing extensive age- and gender-related reference intervals for those tests.

Infectious Disease. LCD provides complete HIV testing services, including viral load measurements, genotyping and phenotyping, and host genetic factors that are important tools in managing and treating HIV infections. The addition of resistance tests, including PhenoSense®, PhenoSenseGT®, Trofile®, and GenoSure PRIme® complements the existing HIV GenoSure® assay and provides LCD with an industry-leading, comprehensive portfolio of HIV resistance testing services. LCD also provides extensive testing services for HCV infections, including both viral load determinations and strain genotyping and host genetic factors. LCD continues to develop molecular assays for infectious disease.

Women's Health. LCD offers a comprehensive menu of women's health testing. A key feature of this menu is the industry's leading suite of NIPT tests, including MaterniT® GENOME, a fully validated genome-wide NIPT test, reflecting the Company's deep prenatal genetics capabilities. Other LCD testing options for women's health include the NuSwab® portfolio, featuring high-quality, convenient single-swab tests for common infections of the genital tract; an innovative age-based test protocol for cervical cancer and sexually-transmitted disease screening; liquid-based Pap testing with image-guided cervical cytology for improved cervical cancer detection; and out-of-the-vial Pap testing with options for human papillomavirus (HPV). LCD also offers tests that utilize the latest technical innovations for the full range of reproductive care, including maternal serum screening, prenatal diagnostics, ethnicity carrier screening, testing for causes of infertility or miscarriage as well as postnatal testing services.

Pharmacogenetics. LCD provides access to the latest tests in the emerging field of pharmacogenetics. These tests can help physicians understand how a patient metabolizes certain drugs, allowing them to select the most appropriate therapies or adjust dosing.

Parentage and Donor Testing. LCD provides forensic testing used in connection with parentage evaluation services that assist in determining parentage for child support enforcement proceedings and determining genetic relationships for immigration purposes. Parentage testing involves the evaluation of immunological and genetic markers in specimens obtained from the child, the mother and the alleged or putative father. LCD also provides testing services in reconstruction cases, which assist in determining parentage without the presence of the parent in question. Additionally, LCD provides human leukocyte antigen testing to match organ and tissue transplant recipients with compatible donors.

Occupational Testing Services. LCD provides testing services for the detection of drug and alcohol use for private and government customers. These testing services are designed to produce forensic quality test results that satisfy the rigorous requirements of regulated and non-regulated workplace drug testing programs. Additionally, LCD provides employee wellness screenings comprised of biometric measurements and diagnostic tests to assist in the detection of health risks including cardiovascular disease and diabetes. LCD also provides medical drug monitoring tests that detect common pain medications and illicit drugs to assist physicians with assessing the full scope of a patient's drug use.

Medical Drug Monitoring Services. Medical drug monitoring is laboratory testing that monitors patients for the use of prescription pain medications or other controlled substances. These testing services are designed to provide physicians with information relevant to the treatment of patients who are prescribed controlled substances, including opioid pain medications, antianxiety medications, stimulants, and medications prescribed in medication-assisted treatment programs. This testing can help physicians identify patients who are not taking their prescribed doses, which could be an indication that the drugs are being diverted elsewhere, and also to identify patients who may be supplementing their prescribed medication with other, non-prescribed substances. LCD offers broad choice in medical drug monitoring test options. LCD testing may assist in identifying patients who may benefit from greater caution and increased monitoring or interventions when risk factors are identified.

Chronic Disease Programs. LCD uses a programmatic approach to the comprehensive evaluation and treatment of chronic diseases, including chronic kidney disease, cardiovascular disease, metabolic bone disease and diabetes, and it offers CDS reports to both physicians and patients. LCD believes these chronic disease programs represent potential significant savings to the healthcare system by facilitating more effective management of these chronic diseases.

Kidney Stone Prevention. LCD provides services to assist physicians and patients to prevent or minimize the formation of kidney stones, a painful and often debilitating condition that can also require expensive treatment if kidney stones are formed. Through sophisticated algorithms created by the leading specialists in the field, LCD provides patient-specific treatment recommendations and other clinical and patient support for those who have a history of kidney stones or are identified as likely to develop kidney stones.

Development of New Tests

Advances in medicine continue to fundamentally change diagnostic testing. New tests are allowing clinical laboratories to provide unprecedented amounts of health-related information to physicians and patients. New molecular diagnostic tests that have been introduced over the past several years, including a gene-based test for HPV, HIV drug resistance assays, and molecular genetic testing for cystic fibrosis, have now become part of standard clinical practice. LCD continued its industry leadership in gene-based

and esoteric testing in 2018. As science continues to advance, LCD expects new testing technologies to emerge and, therefore, intends to continue to invest in advanced testing capabilities so that it can remain on the forefront of diagnostic laboratory testing. The Company has added, and expects to continue to add, new testing technologies and capabilities through a combination of internal development initiatives, technology licensing and partnership transactions, and selected business acquisitions. Through its sales force, LCD rapidly introduces new testing technologies to customers. This differentiation is important in the retention and growth of business.

In 2018, LCD continued its emphasis on scientific innovation and leadership with the introduction of significant test menu and automation enhancements and by launching more than 70 new tests. LCD is focused on the expansion of existing programs in molecular diagnostics as well as the introduction of new assays and assay platforms through licensing partnerships, acquisitions and internal development. The Company's commitment to the scientific advancement in the development and assessment of new diagnostics and therapeutics is evidenced by producing nearly 600 peer-reviewed publications and presentations at scientific meetings, along with regular presentations in academic medical center grand rounds and seminars, in 2018.

Examples of new tests and services introduced in 2018 include:

Infectious Diseases. LCD now offers a series of BioFire® test panels, produced by bioMerieux, with application across four clinical areas: respiratory, blood culture, gastrointestinal, and meningitis/encephalitis. These panels identify more than a hundred pathogens, including viruses, bacteria, yeast, parasites, and antimicrobial resistance genes, with faster turnaround times to help physicians more quickly and precisely diagnose and begin treatment in often-critical cases.

Oncology. LCD continued its leadership in oncology by offering a significant number of new tests focused on the diagnosis and treatment of cancer. LCD was one of the first laboratories to join Thermo Fisher's Next-Generation Sequencing Companion Dx Center of Excellence Program, offering enhanced participation in clinical trials and early access to novel testing platforms and assays. With the Omniseq Immune Report CardSM test and the OmniSeq Comprehensive® panel, LCD became the exclusive laboratory to provide U.S. physicians with unique insights to help guide treatment decisions for cancer patients who may be appropriate candidates for immunotherapy and other targeted treatments. LCD extended its offering of proprietary NGS VistaSeqSM Cancer panels. The VistaSeq tests screen for elevated risk of hereditary cancer, and the expanded offering includes tests for multiple additional types of cancer.

Women's Health. LCD maintained its leading position in women's health testing, including a robust menu of NIPT testing options, ranging from screening for the common autosomal trisomies, to detection of select microdeletions, to a genome-wide assessment of large copy number variants. These offerings provide the most comprehensive menu of noninvasive fetal aneuploidy screening. LCD began to offer ReproSURE™, a blood test designed to provide information about ovarian reserve, which is an indication of a woman's reproductive potential to help physicians and patients in selecting the most appropriate fertility treatment to increase chances of becoming pregnant.

Medical Drug Monitoring and Toxicology. LCD's existing expertise in medical drug monitoring and toxicology, through MedTox Laboratories and LabCorp Occupational Testing Services, was enhanced through the acquisition of Pathology Associates Medical Laboratory (PAML). The combination will allow LCD to provide expanded access and capacity for medical drug monitoring and toxicology services.

LCD continues its collaborations with university, hospital and academic institutions, such as Boston University, Columbia University, Duke University, Johns Hopkins University, The Mount Sinai Hospital, the University of Tennessee and Yale University, to license and commercialize new diagnostic tests.

LCD Technology-Enabled Solutions

LCD's technology-enabled solutions include an innovative and proprietary suite of applications to enable patients, healthcare providers, health systems, accountable care organizations (ACOs), and insurers with convenient and secure access to LCD's data and services. These industry-leading solutions are designed to improve health and improve lives by providing a better laboratory experience for physicians and patients, and ultimately improving the delivery of care.

LCD's centralized and proprietary LabCorp | Link™, which focuses on physicians and health systems, is a suite of capabilities that enhance the customer experience and provide an end-to-end lab solution. These assets and functionalities include:

- A physician portal optimized for web and mobile devices;
- Express electronic ordering for essentially all of LCD's brands and services;
- Integrated results viewing and enhanced reports;
- Lab analytics that provide one-click trending of patient, test and population data;
- Clinical Decision Support tools at the point of testing and resulting;
- AccuDraw, which provides graphical, step-by-step guidance to help improve accuracy, workflow and turnaround time in the collection and processing of specimens at the point of collection;

- Services-oriented architecture with rules-based engines, content aggregation and seamless integration with practice workflow; and
- An installable mobile app available through the Apple and Google app stores which enables healthcare providers to receive alerts that test results are available, view test results, and access test information and contact information for LCD experts from their own mobile device at any time or location.

LCD's centralized and proprietary LabCorp | Patient is a suite of web and mobile applications that enhances the patient's experience. These assets and functionalities include:

- A patient web application optimized for use on desktop computers and mobile devices;
- An installable mobile app published in the Apple Store and Google app stores;
- Biometric ID login support;
- Integrated results viewing and patient education materials;
- Online appointment scheduling;
- Electronic invoice presentment and payment;
- An online patient cost estimator for select genetic tests; and
- An option to receive information about clinical trials.

LCD also fully deployed two new patient self-service products in 2018 across all PSCs nationwide.

- LabCorp | PreCheck™ is a mobile-optimized web application that allows patients to easily schedule a PSC visit in advance and to complete all demographic and insurance entry and verification in advance, to streamline the check-in process when they arrive for service. PreCheck also features a mobile check-in to indicate arrival in the waiting room without having to wait in line for an Express tablet.
- LabCorp | Express™ uses tablets in custom enclosures and proprietary software located in PSC waiting rooms to enable patients with or without an appointment to check into the PSC. If they do not already have an appointment, they can find the next available one at that or a nearby PSC. Express is optimized to capture and confirm demographic and insurance information through barcode scanning and OCR technologies, eliminating typing on the screen. During 2018, payment processing was also added to Express, enabling card payments of overdue or current balances.

These solutions are now fully deployed across the nationwide PSC network and are designed to expedite the intake process and improve patient flow at the PSC. Both also provide options to receive testing and appointment notifications via email or text message. These apps have demonstrably increased patient and staff satisfaction. In addition, the notifications may help increase test compliance, and the patient data collected will help accelerate enrollment in LabCorp | Patient and further increase the growing population of patients who may receive information about clinical study opportunities with CDD.

LCD's centralized and proprietary LabCorp | Payer™ enables healthcare insurers and ACOs to obtain test results and quality data through a self-service web application. Results and quality data are increasingly important as the healthcare system focuses on new payment models and the need to deliver better patient outcomes and reduce cost. Over time, this new portal will be expanded to deliver a wide variety of data and analytic value.

During 2018, LCD delivered more than 6.0 million enhanced CDS reports for chronic health conditions, including kidney disease, cardiovascular disease, metabolic bone disease and diabetes. LCD's proprietary CDS reports integrate patient-specific diagnostic information and evidence-based healthcare content to help physicians and patients better manage health. In addition, these decision-support programs promote physician adherence to evidence-based treatment guidelines.

LCD continues to develop new population health analytics programs that provide healthcare business intelligence tools to health systems, physician practices, and ACOs. These tools are intended to assist customers in their compliance and reporting requirements with respect to efficient management of their productivity, quality and patient outcome metrics.

Billing for Laboratory Services

Billing for laboratory services is a complicated process involving many payers such as MCOs, Medicare, Medicaid, physicians and physician groups, hospitals, patients and employer groups, all of which have different billing requirements. In addition, billing arrangements with third-party administrators may further complicate the billing process. Most testing services are billed to a party other than the physician or other authorized person who ordered the test. A growing portion of revenue is derived from patients in the form of deductibles, coinsurance, copayments, and charges for non-covered tests.

LCD utilizes a centralized billing system in the collection of approximately 92.4% of its domestic revenue (87.6% of consolidated LCD revenue). This system generates bills to LCD customers based on payer type. Client payers (which includes physicians, hospitals, health systems, ACOs, employers and other entities) are typically billed monthly, whereas patient, Medicare, Medicaid, and MCO bills are typically generated daily. Accounts receivable are then monitored by billing personnel and follow-up activities are conducted as necessary.

Revenue is adjusted for price concessions related to negotiated discounts and the anticipated impact of adjustments, denials (Medicare, Medicaid and MCOs), and account write-offs (collection risk). Anticipated write-offs are recorded as an adjustment to revenue and at an amount considered necessary to record the segment's revenue at its net realizable value.

The majority of LCD's collection risk is related to accounts receivable from both insured and uninsured patients who are unwilling or unable to pay. In 2018, LCD continued its focus on process, technology innovation and account management initiatives to reduce the negative impact of patient accounts receivable write-offs. In 2017, the Company implemented system enhancements to provide patients with an estimate of their out-of-pocket costs when presenting at a LabCorp PSC.

Non-credit-related issues that slow the billing process, such as missing or incorrect billing information on test requisitions also contribute to a reduction in sales. LCD vigorously attempts to obtain any missing information or rectify any incorrect billing information received from the ordering physician. However, LCD typically performs the requested tests and returns the test results regardless of whether billing information is correct or complete. LCD believes that this experience is similar to that of its primary competitors. LCD continues to focus on process initiatives aimed at reducing the impact of these non-credit-related issues. This is accomplished through ongoing identification of root-cause issues, deploying technology-enabled solutions, training provided to internal and external resources involved in the patient data capture process, and an emphasis on the use of electronic test ordering. Specific to technology-enabled solutions, in 2016 LCD deployed insurance eligibility verification and address validation at the time of service in all PSCs. In 2018, the Company developed a self-serve platform for physicians to resolve claim issues related to diagnosis denials.

For the Company's operations in Ontario, Canada, the Ontario Ministry of Health and Long-Term Care (Ministry) determines who can establish a licensed community medical laboratory and caps the amount that each of these licensed laboratories can bill the government-sponsored healthcare plan. The Ontario government-sponsored healthcare plan covers the cost of clinical laboratory testing performed by the licensed laboratories. The provincial government discounts the annual testing volumes based on certain utilization discounts and establishes an annual maximum it will pay for all community laboratory tests. The agreed-upon reimbursement rates are subject to Ministry review at the end of each year and can be adjusted at the government's discretion based upon the actual volume and mix of testing services performed by the licensed healthcare providers in the province during the year. In 2018, the amount of the Company's capitated revenue derived from the Ontario government-sponsored healthcare plan was CAD \$188.1 million.

Effect of U.S. Market Changes on the Clinical Laboratory Business

The delivery of, and reimbursement for, healthcare continues to change in the U.S., impacting all stakeholders, including the clinical laboratory business. Medicare (which principally serves patients who are 65 and older), Medicaid (which principally serves low-income patients) and insurers have increased their efforts to control the cost, utilization and delivery of healthcare services. Measures to regulate healthcare delivery in general and clinical laboratories in particular have resulted in reduced prices, added costs and decreased test utilization for the clinical laboratory industry by imposing new, increasingly complex regulatory and administrative requirements. The government also has continued to adjust the Medicare and Medicaid fee schedules at the national and local level, and LCD believes that pressure to reduce government reimbursement will continue.

Fees for most laboratory services reimbursed by Medicare are established in the Clinical Laboratory Fee Schedule (CLFS) and fees for other testing reimbursed by Medicare, primarily related to pathology, are covered by the Physician Fee Schedule (PFS). During 2018, approximately 12.9% of LCD's revenue was reimbursed under the CLFS (12.6% in 2017), and approximately 0.7% was reimbursed under the PFS (0.7% in 2017). Over the past several years, LCD has experienced governmental reimbursement reductions as a direct result of the Patient Protection and Affordable Care Act (ACA), the Medicare Access and CHIP Reauthorization Act of 2015 (MACRA), and the Achieving a Better Life Experience Act of 2014 (ABLE Act). Payer policy changes have further impacted the reimbursement for LCD. PAMA, which became law on April 1, 2014, and went into effect on January 1, 2018, resulted in a net reduction in reimbursement revenue of approximately \$70.0 million in 2018 from all payers affected by the CLFS. Unless further implementation of PAMA is delayed or changed, an additional reduction of approximately \$115.0 million is expected for 2019, from all payers affected by the CLFS. These laws include provisions designed to control healthcare expenses reimbursed by government programs through a combination of reductions to fee schedules, incentives to physicians to participate in alternative payment models such as risk-sharing, and new methods to establish and adjust fees.

In 2018, LCD realized a net reduction of approximately \$1.7 million in PFS revenue, driven by reductions in reimbursement for flow cytometry procedures. In 2019, LCD anticipates it will realize an additional net reduction of approximately \$2.1 million in PFS revenue attributable to continued reductions in reimbursement for flow cytometry procedures.

Beginning in 2018, under PAMA, CMS set the CLFS using the weighted median of reported private payer prices paid to certain laboratories that receive a majority of their Medicare revenue from the CLFS and PFS and that bill Medicare under their own National Provider Identifier (NPI). On June 23, 2016, CMS issued a final rule to implement PAMA that required applicable laboratories, including LCD, to begin reporting their test-specific private payer payment amounts to CMS during the first quarter of 2017. CMS exercised enforcement discretion to permit reporting for an additional 60 days, through May 30, 2017. CMS used

that private market data to calculate weighted median prices for each test (based on applicable current procedural technology (CPT) codes) to represent the new CLFS rates beginning in 2018, subject to certain phase-in limits. For 2018-2020, a test price cannot be reduced by more than 10.0% per year; for 2021-2023, a test price cannot be reduced by more than 15.0% per year. The process of data reporting and repricing will be repeated every three years for Clinical Diagnostic Laboratory Tests (CDLTs). The second data reporting period for CDLTs will occur during the first quarter of 2020, and new CLFS rates for CDLTs will be established based on that data beginning in 2021, subject to the previously described phase-in limits for 2021-2023. The third data reporting period for CDLTs will occur during the first quarter of 2023, and new CLFS rates for CDLTs will be established based on that data beginning in 2024. CLFS rates for 2024 and subsequent periods will not be subject to phase-in limits. CLFS rates for Advanced Diagnostic Laboratory Tests (ADLTs) will be updated annually.

CMS published its initial proposed CLFS rates under PAMA for 2018-2020 on September 22, 2017. Following a public comment period, CMS made adjustments and published final CLFS rates for 2018-2020 on November 17, 2017, with additional adjustments published on December 1, 2017.

The final rates published by CMS were based on data reported by only 1% of all laboratories paid by Medicare in 2015, and only 1% of the reported data was from hospital laboratories. Consequently, the American Clinical Laboratory Association (ACLA) filed a federal civil action against HHS for declaratory and injunctive relief on December 11, 2017, arguing that CMS violated the PAMA statute by excluding most of the laboratory market from reporting data on which the rates were based, resulting in rates that do not fairly reflect the private market as the clear language of PAMA requires. On September 21, 2018, the U.S. District Court for the District of Columbia dismissed the action for lack of subject matter jurisdiction, and in December 2018, ACLA filed an appeal.

On November 1, 2018, CMS released its final rule for the 2019 PFS, which included two revisions to the regulatory definition of “applicable laboratory” under PAMA. First, CMS indicated that hospital outreach labs that bill Medicare Part B using bill type 14X will now qualify as applicable laboratories even if they do not bill Medicare Part B using their own NPI, provided they meet other applicable requirements. Second, CMS removed Medicare Advantage (Medicare Part C) revenue from the denominator of the “majority of Medicare revenues” ratio for identifying applicable laboratories.

A November 2018 report issued by the U.S. Government Accountability Office (GAO) questioned the methodology used by CMS for the new payment rates under PAMA and suggested that implementation of PAMA could lead to significant increases in Medicare expenditures. In January 2019, the U.S. Senate Finance Committee sent a letter to HHS about the GAO report and inquired about the potential cost to taxpayers. ACLA has stated that the GAO’s report reflects inaccurate assumptions and a misunderstanding of standard industry practice for laboratory billing.

ACLA continues to work with Congress and with CMS on potential legislative and regulatory reform of PAMA, which if adopted could reduce the negative impact of PAMA as currently implemented by CMS. The Company supports the ongoing efforts to prevent or lessen the negative impact of the changes to the CLFS pursuant to PAMA, and the full impact of those efforts, and what the long-term effect will be on the CLFS rates is not yet known.

On November 4, 2016, CMS noted in a final rule implementing MACRA that it intended to apply Merit-Based Incentive Payment System (MIPS) requirements to pathologists practicing in independent laboratories, including LCD. Under this requirement, LCD pathologists would have been required to begin reporting certain quality metrics in 2017 for LCD to avoid negative PFS payment adjustments or to qualify for positive PFS payment adjustments beginning in 2019. ACLA met with CMS on March 9, 2017, regarding implementation of this requirement, which was not proposed in the MACRA proposed rule. CMS clarified that it would not apply MIPS requirements to pathologists practicing in independent laboratories.

Further healthcare reform could occur in 2019, including changes to the ACA and Medicare reform, as well as administrative requirements that may continue to affect coverage, reimbursement, and utilization of laboratory services in ways that are currently unpredictable.

In addition, market-based changes have affected and will continue to affect the clinical laboratory business. Reimbursement from commercial payers for diagnostic testing has shifted and will continue to shift away from traditional, fee-for-service models to alternatives, including value-based, bundled pay-for-performance, and other risk-sharing payment models. The growth of the managed care sector and consolidation of MCOs present various challenges and opportunities to LCD and other clinical laboratories.

In May 2018, the Company signed an extension of its long-term agreement with UnitedHealthcare, however, effective January 1, 2019, the Company will no longer be UnitedHealthcare’s exclusive national laboratory in the U.S. The Company also signed an agreement with Aetna in May 2018, under which it became a preferred national laboratory for Aetna, effective January 1, 2019; the Company had previously been in-network for a limited number of Aetna members. In November 2018, the Company also extended its agreement with Horizon Blue Cross Blue Shield of New Jersey. The Company will continue to be the exclusive laboratory for Horizon Medicaid members. The Company will no longer be the exclusive capitated laboratory for Horizon HMO Members but will continue to be an in-network laboratory for all Horizon members, including HMO members. These agreements

reflect a trend by MCOs away from laboratory exclusivity, and toward their opening their networks to additional laboratory providers in order to give their members increased choice.

The Company also serves many other MCOs. These organizations have different contracting philosophies, which are influenced by the design of their products. Some MCOs contract with a limited number of clinical laboratories and engage in direct negotiation of rates. Other MCOs adopt broader networks with generally uniform fee structures for participating clinical laboratories. In some cases, those fee structures are specific to independent clinical laboratories, while the fees paid to hospital-based and physician-office laboratories may be different, and are typically higher. MCOs may also offer Managed Medicare or Managed Medicaid plans. In addition, some MCOs use capitation rates to fix the cost of laboratory testing services for their enrollees. Under a capitated reimbursement arrangement, the clinical laboratory receives a per-member, per-month payment for an agreed upon menu of laboratory tests provided to MCO members during the month, regardless of the number of tests performed. For the year ended December 31, 2018, capitated contracts with MCOs accounted for approximately \$279.3 million, or 4.0%, of LCD's revenues. LCD's ability to attract and retain MCO customers has become even more important as the impact of various healthcare reform initiatives continues, including expanded health insurance exchanges and ACOs.

In addition to reductions in test reimbursement, the Company also anticipates potential declines in test volumes as a result of increased controls over the utilization of laboratory services by Medicare, Medicaid, and other third-party payers, particularly MCOs. MCOs are implementing, directly or through third parties, various types of laboratory benefit management programs, which may include lab networks, utilization management tools (such as prior authorization and/or prior notification), and claims edits, which impact coverage and reimbursement of clinical laboratory tests. Some of these programs address clinical laboratory testing broadly, while others are focused on molecular and genetic testing. In addition, continued movement by patients into consumer-driven health plans may have an impact on the utilization of laboratory testing.

Despite the overall negative market changes regarding reimbursement discussed above, LCD believes that the volume of clinical laboratory testing is positively influenced by several factors, including the expansion of Medicaid, managed care, and private insurance exchanges. In addition, LCD believes that increased knowledge of the human genome and continued innovation in laboratory medicine will continue to foster greater appreciation of the value of gene-based diagnostic assays. Additional factors that may lead to future volume growth include an increase in the number and types of tests that are readily available (due to advances in technology and increased cost efficiencies) for the diagnosis of disease, and the general aging of the U.S. population. As previously discussed, LCD also believes that it and other large, independent clinical laboratory testing companies will be able to increase their share of the overall clinical laboratory testing market due to a number of market factors, primarily related to a continued drive to improve outcomes and reduce costs across the healthcare system. LCD believes that its enhanced and growing esoteric menu of tests, leading position with companion diagnostics, broad geographic footprint, and operating efficiency provide a strong platform for growth.

CDD Segment

CDD provides end-to-end drug development, medical device and diagnostic development solutions from early-stage research to clinical development and commercial market access. Its customers comprise biopharmaceutical, medical device and diagnostic companies across the world. With more than 21,000 employees worldwide and a global network of operations, CDD offers deep expertise in early development and clinical trials in each main therapeutic category. Through its industry-leading central laboratory business, it supports clinical trial activity in approximately 100 countries, generating more safety and efficacy data to support drug approvals than any other company. CDD collaborated on more than 93% of the novel drugs approved by the FDA in 2018, including more than 94% of the novel rare and orphan disease drugs and 94% of the novel oncology drugs. In addition, CDD has been involved in the development of all current top 50 drugs on the market as measured by 2017 U.S. sales revenue.

Drug Development Industry

Drug development services companies like CDD are also referred to as CROs and typically derive substantially all of their revenue from research and development (R&D), as well as marketing expenditures of the biopharmaceutical industry. Outsourcing of R&D services by biopharmaceutical companies to CROs has increased in the past, and is expected to continue increasing in the future. Increasing pressures to improve return on investment, to increase spending on R&D, to stay abreast of scientific advances and to comply with stringent government regulations have all contributed to this outsourcing to CROs. A CRO provides biopharmaceutical companies flexibility in aligning resources to demand. The investment and amount of time required to develop new products are significant and have been increasing. These trends create opportunities for CDD and other CROs that can help make the development process more efficient.

The drug development industry has many participants ranging from hundreds of small providers to a limited number of large CROs with global capabilities. CDD competes against these small and large CROs, as well as in-house departments of biopharmaceutical, medical device and diagnostic companies, and to a lesser extent, selected universities and teaching hospitals.

CDD believes that customers selecting a CRO often consider the following factors, among others:

- Reputation for quality, efficient, timely performance and regulatory compliance;
- Expertise and experience in operations;
- Application of technology and innovation;
- Specific therapeutic and scientific expertise;
- Market access services;
- Ability to recruit patients;
- Scope of service offerings;
- Strengths in various geographic markets;
- Price;
- Quality of facilities;
- Ability to acquire, process, analyze and report data in a rapid and accurate manner;
- Quality of relationships including investigator and patient;
- Ability to manage large-scale clinical trials both domestically and internationally, including the recruitment of appropriate and sufficient clinical-trial subjects; and
- Size and scale.

CDD believes that it competes favorably in all of these areas.

Preclinical Services

CDD's preclinical service offerings include research models, lead optimization, analytical services, safety assessment, and chemistry manufacturing and control (CMC) services for drug and device development. CDD offers solution-based approaches by leveraging highly experienced program development directors and project managers to help guide strategic decisions and manage development in an integrated, streamlined manner across CDD's nine analytical laboratories and preclinical laboratories in the U.S., the United Kingdom (U.K.), Germany and China. CDD's historical innovations in the preclinical area include technologies such as Covance MarketPlace and StudyTracker®. Covance MarketPlace is a private, secure web portal providing potential investors or partners access to information about new drugs in development. StudyTracker is an internet-based customer access product, allowing customers of toxicology, bioanalytical, metabolism, and reproductive and developmental toxicology services to review study schedules and data on a near real-time basis.

Research Models. CDD is an American Association for Accreditation of Laboratory Animal Care (AAALAC) International accredited provider of purpose-bred research models globally. Due to regulation by the FDA and other foreign regulatory bodies, safety and efficacy testing on research models is required as part of the drug development process prior to testing in humans. CDD has a strong commitment to animal welfare, and has instituted progressive enrichment practices and rigorous health testing standards that exceed industry standards to protect the health of CDD's models. CDD is also committed to seeking out alternatives to, or the reduction of, the use of research models when possible. CDD's research models include standard lines as well as disease state and genetically altered models to accommodate customers' needs. CDD offers purpose-bred-specific, pathogen-free rabbits, canines, nonhuman primates, and other species, as well as blood and tissue products and surgical/technical services, including telemetry. The purpose-bred research animals are sold to biopharmaceutical companies, university research centers and CROs.

Lead Optimization. Lead optimization services are non-regulated experiments designed to connect early discovery activities to regulated pre-clinical studies. These services include toxicology, *in vivo* pharmacology with model development and integrated safety and efficacy capabilities, nonclinical imaging, nonclinical pathology services, pharmacokinetic/toxicokinetic (PK/TK) analysis reporting and immunology services.

Analytical Services. Bioanalytical testing services help determine the appropriate dose and frequency of drug administration from late discovery evaluation through Phase III clinical testing on a full-scale, globally integrated basis. CDD's analytical services offering includes liquid chromatography-mass spectroscopy immunoanalytical solutions and specialty support, translational biomarker solutions, discovery bioanalysis, vaccine analysis, PK/TK analysis and reporting, and organic synthesis. In addition, CDD offers a growing menu of validated, nonproprietary assays for hundreds of compounds, eliminating method development and validation time, and reducing program cost. CDD has dedicated lab facilities across three continents providing *in vitro* drug metabolism, *in vivo* radiolabeled absorption, distribution, metabolism and excretion studies; metabolite identification/profiling and nonclinical PK screening; and radiosynthesis services. CDD also provides pharmaceutical chemistry services that determine the metabolic profile and bioavailability of drug candidates.

Safety Assessment. Safety assessment services include general, genetic, and immunotoxicology services; nonclinical pathology services; safety pharmacology services; preclinical medical device services; and developmental and reproductive toxicology (DART) studies. CDD's drug development services employ state-of-the-art technology and an integrated program for both large and small molecules with facilities across three continents. CDD's nonclinical pathology group comprises certified veterinary pathologists who provide critical insights and recommendations to help customers navigate the drug development process. CDD's safety pharmacology services utilize the Value Added Safety Pharmacology & Toxicology approach to

economically assess pharmacology endpoints during toxicology studies to minimize safety issues during the clinical phases. DART services help customers assess the birth defect risk for potential drug candidates.

Biopharm CMC Manufacturing Solutions. CDD's CMC solutions offer packages supporting FDA Investigational New Drug Application and New Drug Application/Biologics License Application submissions, as well as programs to help CDD's customers meet acceptance criteria for the release of drug products for both biologics and small molecules. CDD's CMC solutions provide well-coordinated capabilities and expertise operating within a global quality system framework to deliver robust, cost-effective solutions. Capabilities include safety, identity, strength, quality and purity assessments for biologics.

Early Phase Development Solutions. Early Phase Development Solutions (EPDS) offers customers access to a focused, multidisciplinary team of experts that crafts integrated solutions to rapidly identify and develop lead drug candidates and reduce development challenges. EPDS provides customers with seamless integration of the complete array of CDD nonclinical and early clinical services, with a focus on scientific integrity and human subject safety. EPDS also offers an innovative parallel study approach for shorter proof-of-concept studies. This approach can increase clinical return on investment through the application of medical, scientific and therapeutic expertise, along with patient stratification strategies.

Central Laboratory Services

CDD provides central laboratory and specialty testing services to biopharmaceutical customers through its global network of central laboratories in the U.S., Switzerland, Singapore and China, as well as its strategic agreement for central laboratory services testing in Japan with BML, Inc., a leading Japanese laboratory testing company.

CDD's capabilities provide customers the flexibility to conduct studies on a global basis. Because CDD uses standardized laboratory equipment, methods, reagents and calibrators for studies, data can be combined with clinical trials in different regions to produce global trial reference ranges. Combinable data eliminates the cumbersome process of harmonizing results generated using different methods in different laboratories on different equipment. CDD also offers external-facing tools such as LabLink+ and Xcellerate® Investigator Portal, which are internet-based customer programs that allow customers to review and query clinical trial lab data on a near real-time basis, that provide an opportunity for enhanced collaboration between the investigator sites, CROs and sponsors.

CDD operates the world's largest automated clinical trial sample collection kit production line, located in Indianapolis, Indiana. This facility provides kits and supplies to investigator sites around the world, promoting global consistency in sample collection. Extensive automation in the kit production process enables kits to be produced with 5.5 sigma precision, while maintaining the scalability needed to meet increasing global demand. CDD's biorepository facility in Greenfield, Indiana, is dedicated to long-term storage of clinical trial specimens. CDD has additional sample storage facilities in Indianapolis, Indiana; Geneva, Switzerland; Singapore; and Shanghai, China, as well as a state-of-the-art distribution center in Mechelen, Belgium. These actively monitored facilities are able to store a wide range of specimens, including plasma, serum, whole blood, DNA and tissue.

CDD has six ISO 15189-certified laboratories that provide customers with the assurance that comes with this rigorous global standard. In addition to utilizing the broad scientific expertise of the LCD Specialty Testing Group, CDD has implemented a novel model for external lab selection and management that provides rigor and reduces internal resource drain for trial sponsors. The extended laboratory management solutions team focuses on managing all aspects of referral laboratory services, including vendor negotiations, governance, quality management, data services and contract services.

CDD, in conjunction with LCD's expertise in a wide range of specialty and esoteric testing disciplines, offers a scientifically rich and diverse menu of specialty testing capabilities, spanning the clinical development continuum. These include applied genomics, next-generation sequencing, anatomic and molecular pathology, flow cytometry, clinical immunoassays as well as preclinical and exploratory biomarker development. The combination of CDD and LCD differentiated capabilities and unparalleled experience in companion and complementary diagnostic services support the parallel development of a new medicine and its associated diagnostic assay. The Company's dedicated companion diagnostics team collaborated with over 50 clients on more than 100 companion diagnostic projects in 2018. CDD can support the development of in-vitro diagnostic, companion diagnostics and laboratory-developed tests (LDTs). By combining CDD's strength in central laboratory and early-stage clinical development with LCD's strength in test commercialization, the Company is well positioned to offer comprehensive, end-to-end support for companion diagnostic development.

Clinical Development and Commercialization Services

CDD offers a comprehensive range of clinical development and commercialization services, including the full service management of Phase I through IV clinical studies, along with a wide offering of functional service provider (FSP) solutions. CDD has extensive experience in all major therapeutic areas, and provides the following core services either on an individual or aggregated basis to meet its customers' needs: study design and modeling; patient recruitment; coordination of study activities; trial logistics; monitoring of study site performance; clinical data management and biostatistical analysis; pharmacovigilance/safety assessments; and medical writing and regulatory services. CDD also has a dedicated group with extensive experience in

the conduct of trials for medical devices, to provide services for the expanding market in medical devices, including mobile health (mHealth) devices.

CDD has extensive experience in designing and managing global clinical trials and regional clinical trial activities in North America, Europe, Latin America and the Asia-Pacific region. These trials may be conducted separately or simultaneously as part of a multinational or global development plan. CDD can manage every aspect of a clinical trial, from clinical development plans and protocol design to new drug applications and other supporting services.

CDD provides clinical pharmacology services at its four clinics in the U.S. and Europe, including first-in-human trials, and early clinical trial subject proof-of-concept studies of new biopharmaceuticals.

CDD offers a range of commercialization solutions, including life cycle management and post-approval studies, which are typically conducted after a drug has successfully undergone clinical efficacy and safety testing and the New Drug Application/Biologics License Application has been submitted to and approved by the FDA and/or comparable applications are submitted to and approved by other regulatory bodies. CDD also offers market access solutions, including reimbursement consulting and hotlines, patient assistance programs, health economic and outcomes research services, observational studies, real-world evidence and analytics services, and value communication services. Biopharmaceutical companies purchase these services to serve patients in need of therapy and to help optimize their return on R&D investments.

CDD Technology-Enabled Solutions

CDD's technology-enabled solutions are designed to improve the drug development process, by providing its biopharmaceutical customers with greater access to key insights and improved trial management. These proprietary software as a service (SaaS) solutions include the award-winning Xcellerate informatics platform, the PharmAcuity suite of software applications, and CDD's endpoint trial management solution. In addition to these solutions, CDD offers its biopharmaceutical customers unique laboratory specimen management solutions from its Global Specimen Solutions (GSS) service platform as well as an efficient, global interactive study randomization technology, to optimize study management and reduce trial-supply costs. Covance MarketPlace securely connects developers with interested companies for licensing opportunities and to accelerate strategic discussions.

Xcellerate integrates and operates with multiple sources of data to deliver unique and timely information throughout the course of customer studies. Xcellerate helps to reduce the cost, time, complexity and risk associated with clinical trials. These solutions leverage a highly innovative data integration and visualization technology that provides timely, secure, integrated and contextualized access to all clinical trial data to enable proactive risk management and informed decision making. Key Xcellerate modules include Trial Design, Clinical Trial Management, Clinical Data Hub, Monitoring, Data Management and Insights:

- Xcellerate Trial Design enables customers to map available patient populations and identify optimal sites and investigators by drawing on the world's largest proprietary clinical trial knowledge base.
- Xcellerate Clinical Trial Management provides the foundational operating systems to enable frictionless execution of clinical trials.
- Xcellerate Clinical Data Hub integrates clinical trial data from any source and makes it accessible to study teams in a timely, secure and contextualized manner to support a broad range of monitoring, analytic, and reporting needs.
- Xcellerate Data Management enables data managers to enhance data quality and completeness, and accelerates database locking by identifying missing, erroneous or inconsistent data as well as managing queries holistically.
- Xcellerate Monitoring enables customers to improve data quality, clinical trial subject safety and protocol compliance in the execution of clinical trials by proactively identifying and mitigating risks at the study site and clinical trial subject level.
- Xcellerate Insights enables effective operational oversight by providing interactive, up-to-date views of a broad range of operational metrics and key performance indicators at the study and portfolio levels through a secure collaboration portal, producing insights that enable its users to make decisions about study management and patient impacts.

PharmAcuity is a cloud-based suite of software applications that helps biopharmaceutical companies fine-tune their clinical trial strategy, planning, and design months before a trial begins. The performance data available via PharmAcuity is derived from past trials and public data sources covering more than 130 countries, reflecting the worldwide nature of clinical trials. Key PharmAcuity modules include Metrics and Benchmarking, and Trial Forecasting:

- PharmAcuity Metrics and Benchmarking enables clients to assess the performance of historical trials relative to current targets, as well as set accurate and feasible targets for a variety of future trial milestones. Utilizing the rest of the biopharmaceutical industry's performance data as a benchmark, this module allows the client to evaluate clinical trial performance against the industry, leading to more efficient trial, enrollment, and country planning.
- PharmAcuity Trial Forecasting empowers clients to forecast their own clinical trial performance and build different forecasting scenarios across multiple dimensions, all based on proprietary inputs and historical, contextual industry performances.

Covance MarketPlace enables biopharmaceutical companies to showcase therapeutic assets to interested parties for licensing opportunities during the early phases of drug development. With unprecedented access to the Company's exclusive network of

drug developers and through its private, secure web portal, companies can share non-confidential information about their assets to attract potential investors or partners. Interested parties can find asset listings via targeted asset alerts and easy-to-use search functions. The platform provides users with direct, secure communication with asset owners, accelerating strategic discussions. It is one more way the Company helps transform drug development programs, delivered by the only global drug development partner with the expertise spanning preclinical, clinical and commercial phases.

GSS provides a suite of innovative software applications for lifecycle specimen management. GSS' GlobalCODE® application provides unified data from a single-interface that allows for tracking of specimens from collection through destruction, as well as cross-protocol analytics and management of samples according to informed consent-allowable usage. The GSS SnapTRACK® application provides for capture of information upon sample collection, and pushes sample-related information into GlobalCODE in near real-time. The GSS LabCODE® platform provides an innovative and client-configurable cloud-based Laboratory Information Management System (LIMS) to biopharmaceutical companies, enabling rapid data integration across numerous in-house laboratories.

CDD's endpoint trial management solutions offer interactive response technology (IRT) to provide visibility across a client's clinical development portfolio, enabling optimization of study management and reduced trial supply costs while helping to bring novel therapies to market faster. Key endpoint modules include:

- endpoint's proprietary PULSE® platform comprises pre-validated, configurable study components that enable rapid development and quicker modification to a client's existing IRT system. PULSE can help to streamline complex trial randomization methods, improve drug supply management, and simplify site, study, and subject management. The fully digital, mobile-ready system allows access to patient data and outcomes in real time.
- endpoint's DRIVE platform provides visibility into supplies management for an entire clinical development portfolio. It provides automated supply functionality to help minimize costs, reduce waste, and manage regulatory compliance across multiple trial sites.

CDD's other proprietary technology assets include an investigator database and analytic methodologies that are used to design and manage site selection and clinical trial subject enrollment. Covance MarketPlace provides a private, secure web portal to potential investors or partners, enabling access to information about new drugs in development.

Together, CDD's technology-enabled solutions improve the transparency, quality and speed of clinical trials, resulting in reduced costs and increased market potential for biopharmaceutical customers.

Customers

The Company provides its services to a broad range of customers. The primary customer groups serviced by the Company include:

MCOs. The Company serves many MCOs, each of which operate on a national, regional or local basis. Fees for clinical laboratory testing services rendered for physicians may be billed to a patient's third-party payer, such as an MCO, with reimbursement typically based on a negotiated, fee-for-service basis, and in some circumstances reimbursement is based on a capitated arrangement.

Biopharmaceutical Companies. The Company serves hundreds of biopharmaceutical companies, ranging from the world's largest biopharmaceutical companies to emerging to mid-market organizations. Contracts with these institutions generally take the form of fee-for-service or fixed-price arrangements.

Physicians and Other Healthcare Providers. Physicians who require clinical laboratory testing for their patients are a primary source of requests for LCD's testing services. Physicians may practice individually, or as part of small or large physician groups, including those operated as part of a broader health system. Fees for clinical laboratory testing services rendered for physicians are billed either to the physician, the physician group, the patient or the patient's third-party payer, such as an MCO, Medicare or Medicaid. Billings are typically on a fee-for-service basis. If the billings are to the physician, they are based on a customer-specific fee schedule and are subject to negotiation. Otherwise, the patient or third-party payer is billed at the Company's patient fee schedule, subject to third-party payer contract terms and negotiation by physicians on behalf of their patients. Patient sales are recorded at the Company's patient fee schedule, net of any discounts negotiated with physicians on behalf of their patients, or made available through charity care or an uninsured or underinsured patient program. Revenues received from Medicare and Medicaid billings are based on government-set fee schedules and reimbursement rules.

Hospitals and Health Systems. The Company provides hospitals and health systems with services ranging from core and specialty testing to supply chain and technical support services, and the opportunity to be a research partner for participation in studies and clinical trials with CDD. Individual hospitals generally maintain on-site laboratories to perform immediately needed testing for patients receiving care. However, they also refer less time-sensitive procedures, less frequently needed procedures and highly specialized procedures to outside facilities, including independent clinical laboratories such as the

Company and laboratories operated by larger hospitals or health systems. In some cases, a hospital's on-site laboratory may be operated or managed by an outside contractor or independent laboratory, including the Company. The Company typically charges hospitals for any such tests on a fee-for-service basis that is derived from the Company's client fee schedule. Fees for laboratory management services are typically billed monthly at contractual rates.

Other Customers. The Company serves a broad range of other customers, including, but not limited to, governmental agencies, employers, patients and consumers, CROs, academic institutions and independent clinical laboratories. Until the sale of the CFS business in the third quarter of 2018, the Company also served food and nutritional companies. These customers typically pay on a negotiated fee-for-service basis or based on a set fee schedule.

Capital Allocation

The Company believes it has a strong track record of deploying capital to investments that enhance the Company's business and return capital to shareholders.

From 2014, the Company has invested net cash of approximately \$6.4 billion and equity of \$1.8 billion in strategic business acquisitions. These acquisitions have significantly expanded the Company's service offerings, expanded its customer and revenue mix, as well as strengthened and broadened the scope of its geographic presence. The Company continues to evaluate acquisition opportunities that leverage the Company's core competencies, complement existing scientific and technological capabilities, increase the Company's presence in key geographic, therapeutic and strategic areas, and meet or exceed the Company's financial criteria.

From 2014, the Company repurchased approximately \$1.4 billion in shares at an average price of approximately \$137.04 per share. During 2018, the Company purchased 4.2 million shares of its common stock at a total cost of \$700.0 million. At the end of 2018, the Company had outstanding authorization from the board of directors to purchase an additional \$443.5 million of Company common stock. On February 6, 2019, the board of directors replaced the Company's existing share repurchase plan with a new plan authorizing repurchase of up to \$1.25 billion of the Company's shares. The repurchase authorization has no expiration date.

During 2018, the Company repaid \$400.0 million of its Senior Notes and \$295.0 million of its term loans. In addition, the Company borrowed and repaid \$467.2 million of debt through its revolving credit facility within 2018. The Company will continue to evaluate all opportunities for strategic deployment of capital in light of market conditions.

From 2014, capital expenditures other than acquisitions have been \$1.4 billion, representing approximately 3.1% of the Company's total net revenues during the same period. The Company expects such capital expenditures in 2019 to be approximately 4.0% of net revenues, primarily in connection with projects to support growth in the Company's core businesses, facility expansion and updates, ongoing projects related to LaunchPad within the LCD business, LaunchPad's expansion within the CDD business, phase II of LCD's LaunchPad and further acquisition integration initiatives.

Seasonality and External Factors

The Company experiences seasonality in both segments of its business. For example, testing volume generally declines during the year-end holiday period and other major holidays and can also decline due to inclement weather or natural disasters. Declines in testing volume reduce net revenues, operating margins and cash flows. Operations are also impacted by changes in the global economy, exchange rate fluctuations, political and regulatory changes, the progress of ongoing studies and the startup of new studies, as well as the level of expenditures made by the biopharmaceutical industry in R&D. The results of both segments are impacted by exchange rate fluctuations. Approximately 22.1% of the Company's net revenues are billed in currencies other than the U.S. dollar, with the Swiss franc, British pound, Canadian dollar and the euro representing the largest components of its currency exposure. The inclusion of Chiltern for a full twelve months in 2018 increased the Company's percentage of revenues billed in currencies other than the U.S. dollar. Given the seasonality and changing economic factors impacting the business, comparison of the results for successive quarters may not accurately reflect trends or results for the full year.

Investments in Joint Venture Partnerships

The Company holds investments in joint venture partnerships, with two located in Alberta, Canada, one located in Florence, South Carolina and several that were acquired through the Company's acquisition of PAML. These businesses are primarily represented by partnership agreements between the Company and other independent diagnostic laboratory investors. Under these agreements, all partners share in the profits and losses of the businesses in proportion to their respective ownership percentages. All partners are actively involved in the major business decisions made by each joint venture. The Company does not consolidate the results of these joint ventures.

The first Canadian partnership is a leader in occupational testing across Canada similar to LCD's U.S. occupational testing services. The second Canadian partnership has a license to conduct diagnostic testing services in the province of Alberta.

Substantially all of its revenue is received as reimbursement from the Alberta government's healthcare programs (AHS). In August 2016, AHS and the Canadian partnership reached an agreement to extend the contract for five additional years through March 2022, with the intent to have the services provided pursuant to the contract transferred to AHS at the end of the five-year period. In consideration of AHS acquiring the assets and assuming liabilities in accordance with the parties' agreement, AHS will pay CAD 50.0 million to the partnership when the transfer is effective, subject to a working capital adjustment.

As a result of the acquisition of PAML, the Company acquired PAML's ownership interests in six joint ventures. During 2017 and 2018, the Company further acquired the ownership interests of the other members of four of the six joint ventures, and divested interest in one of the six joint ventures to the other member. The Company and the other members of the sixth joint venture made the decision to dissolve the sixth joint venture to be effective in 2019.

Sales, Marketing and Customer Service

LCD offers its diagnostic services through a sales force focused on serving the specific needs of customers in different market segments. These market segments generally include primary care, women's health, specialty medicine (e.g., infectious disease, endocrinology, gastroenterology and rheumatology), oncology, ACOs, and hospitals and health systems. LCD's general sales force is also supported by a team of clinical specialists that focuses on selling esoteric testing and meeting the unique needs of the specialty medicine markets.

CDD's global sales activities are conducted by sales personnel in North America, Europe and the Asia-Pacific region. The sales force provides customer coverage across the biopharmaceutical industry for services including lead optimization, preclinical safety assessment, analytical services, clinical trials, central laboratories, biomarkers and companion diagnostics, market access and technology solutions. Customer segments called upon include global and regional biopharmaceutical companies, other CROs and academic institutions.

The sales force is responsible for both new sales and for customer retention and relationship building and is compensated through a combination of salaries, commissions and bonuses at levels commensurate with each individual's qualifications, performance and responsibilities.

Information Systems

The Company is committed to developing and commercializing technology-enabled solutions to support its operations and provide better care. LCD and CDD each operate standard platforms for their core business services, and the Company operates standard platforms for its financial and reporting systems. These standard systems provide consistency within workflows and information as well as a high level of system availability, security, and stability. LCD's and CDD's primary laboratory systems, including standardized support for molecular diagnostics, digital pathology and enhanced specialty laboratory solutions. The Company's centralized information systems are responsible for tremendous operational efficiencies, enabling the Company to achieve consistent, structured, and standardized operating results and superior patient care.

In addition, LCD and CDD each offer proprietary and industry-leading information systems, which are discussed in more detail in the sections dedicated to each of those segments.

Quality

LCD and CDD have comprehensive quality systems and processes that the Company believes are appropriate for their respective businesses. This includes licensing, credentialing, training and competency of professional and technical staff, and internal auditing. In addition to the Company's own quality programs, the Company's laboratories, facilities and processes are subject to on-site regulatory agency inspections and accreditation evaluations, and surveys, as applicable, by local or national government agencies; external proficiency testing programs; and inspections and audits by customers.

Virtually all facets of the Company's services are subject to quality programs and procedures, including accuracy and reproducibility of tests; turnaround time; customer service; data integrity; patient satisfaction; and billing. The Company's quality program includes measures that compare current performance against desired performance goals to monitor critical aspects of service to its customers and patients.

The Company has procedures for monitoring its internal performance, as well as that of its vendors, suppliers and other key stakeholders. In addition, various groups and departments within the Company provide oversight to monitor and control vendor products and performance, and play an essential role in the Company's approach to quality through improvements in processes and automation. These groups include LCD's National Office of Quality, CDD's Global Regulatory Compliance and Quality Assurance Unit, the Company's supply chain management department, CDD's clinical trial services global vendor management department, CDD's central laboratory services expanded laboratory management services department, and project management staff supporting LCD and CDD.

Customer Interaction. Continual improvement in the customers' experience with the Company is essential. Use of technology and workflow improvements are helping to improve the patient experience by: reducing patient wait times at PSCs through advance appointment scheduling and patient check-in through LabCorp | PreCheck; expediting the patient registration process at the PSC through LabCorp | Express; enhancing the specimen collection process through LabCorp Touch and AccuDraw; and allowing patients to access their test results, obtain educational materials, schedule appointments and pay bills directly through LabCorp | Patient. LabCorp | Payer provides healthcare organizations with a centralized location to access test results and quality data. CDD processes permit faster clinical trial study start-up and subject enrollment along with timely delivery of established deliverables to enhance and improve customer interaction.

Specimen Management. The Company's standardized logistics and specimen tracking technologies allow the timely transportation, monitoring, and storage of specimens. The Company is continually working to maintain and improve its ability to timely collect, transport and track specimens from collection points to all Company or designated external locations. In December 2017, CDD acquired GSS, which has expertise in streamlined global specimen tracking, as well as tracking for informed consent, and live data analytics that deliver actionable insights from specimens across development programs. CDD had previously entered into a strategic alliance with GSS in October 2016.

Quality Control. The Company regularly performs quality control testing. This may include in-process and post-process quality control checks; use of applicable control materials and reference standards, peer reviews, and data review meetings; programmed data edit checks to detect variances and unusual data patterns; dual programming; and mock runs.

LCD Internal Proficiency Testing. LCD has an extensive internal proficiency testing program to assess LCD's analytical and post-analytical phases of laboratory testing, accuracy, precision of its testing protocols, and technologist/technician performance. This program supplements the external proficiency programs required by the laboratory accrediting agencies.

Accreditation. The Company participates in numerous externally administered quality surveillance programs, including the College of American Pathologists (CAP) program. CAP is an independent non-governmental organization of board-certified pathologists that offers an accreditation program to which laboratories voluntarily subscribe. CAP has been granted deemed status authority by CMS to inspect clinical laboratories to determine adherence to the Clinical Laboratory Improvement Amendments of 1988 (CLIA) requirements. The CAP program involves both on-site inspections of the laboratory and participation in a CAP accepted proficiency testing program for all categories in which the laboratory is accredited. A laboratory's receipt of accreditation by CAP satisfies the CMS requirement for CLIA certification. LCD's major diagnostic laboratories, CDD's major central laboratory facilities, and CDD's Phase I clinical research unit in Dallas, Texas, are accredited by CAP.

The Company has multiple labs that have received ISO 15189 accreditation. ISO 15189 is an international standard that recognizes the quality and technical competence of medical laboratories. The list below reflects the Company's labs that have achieved this accreditation and the year in which it was achieved:

LCD

- Regional Testing Facility, Raritan, New Jersey - January 2017
- Regional Testing Facility, Knoxville, Tennessee - November 2016
- Regional Testing Facility, San Antonio, Texas - July 2016
- Colorado Coagulation, Denver, Colorado - January 2016
- Dynacare, Laval, Québec - March 2015
- Regional Testing Facility, Dublin, Ohio - March 2015
- Endocrine Sciences, Calabasas, California - January 2015
- Regional Testing Facility, Dallas, Texas - April 2014
- Regional Testing Facility, Denver, Colorado - March 2014
- Integrated Genetics, Santa Fe, New Mexico - October 2013
- Integrated Genetics, Westborough, Massachusetts - September 2013
- Dynacare, Montreal, Québec - June 2013
- Regional Testing Facility, Phoenix, Arizona - April 2013
- Regional Testing Facility, Birmingham, Alabama - February 2013
- Integrated Oncology, Brentwood, Tennessee - February 2012
- ViroMed, Burlington, North Carolina - January 2012
- Center for Molecular Biology and Pathology (CMBP), Research Triangle Park, North Carolina - February 2011
- Regional Testing Facility, Tampa, Florida - January 2010
- Integrated Oncology, Phoenix, Arizona - September 2009

CDD

- Covance Central Laboratory Services Inc., Los Angeles, California - August 2018
- Covance Central Laboratory Services Inc., Indianapolis, Indiana - August 2015

- BML Covance Central Laboratory, Tokyo, Japan - March 2015 (Operated for CDD pursuant to a strategic agreement with BML, Inc.)
- Covance Pharmaceutical Research and Development (Shanghai) Co. Ltd., Shanghai, China - March 2015
- Covance (Asia) Pte. Ltd., Singapore - June 2014
- Covance Central Laboratory Services SARL, Geneva, Switzerland - October 2013

Intellectual Property Rights

The Company relies on a combination of patents, trademarks, copyrights, trade secrets, and nondisclosure and non-competition agreements to establish and protect its proprietary technology. The Company has filed and obtained numerous patents in the U.S. and abroad, and regularly files patent applications, when appropriate, to establish and protect its proprietary technology. Occasionally, the Company also licenses U.S. and non-U.S. patents, patent applications, technology, trade secrets, know-how, copyrights or trademarks owned by others. The Company believes, however, that no single patent, technology, trademark, intellectual property asset or license is material to its business as a whole.

Patents covering the Company's technologies are subject to challenges. Issued patents may be successfully challenged, invalidated, circumvented, or declared unenforceable so that patent rights would not create an effective competitive barrier. In addition, the laws of some countries may not protect proprietary rights to the same extent as do the laws of the U.S.

Parties may file claims asserting that the Company's technologies infringe on their intellectual property. The Company cannot predict whether parties will assert such claims against it, or whether those claims will harm its business. If the Company is forced to defend against such claims, the Company could face costly litigation and diversion of management's attention and resources. As result of such disputes, the Company may have to develop costly non-infringing technology or enter into licensing agreements. These agreements, if necessary, may require financial or other terms that could have an adverse effect on the Company's business and financial condition.

Employees

As of December 31, 2018, the Company had nearly 61,000 employees worldwide, approximately 22.0% of whom were employed outside of the U.S. The Company's U.S. based subsidiaries have three collective bargaining agreements, which cover approximately 770 employees. Non-U.S. based subsidiaries have 13 collective bargaining agreements, which cover approximately 2,780 employees.

The Company's success is highly dependent on its ability to attract and retain qualified employees, and the Company believes that it has good working relationships with its employees.

Regulation and Reimbursement

General

Because the Company operates in a number of distinct operating environments and in a variety of locations worldwide, it is subject to numerous, and sometimes overlapping, regulatory environments. Both the clinical laboratory industry and the drug development business are subject to significant governmental regulation at the national, state and local levels. As described below, these regulations concern licensure and operation of clinical laboratories, claim submission and reimbursement for laboratory services, healthcare fraud and abuse, drug development services, security and confidentiality of health information, quality, and environmental and occupational safety.

Regulation of Clinical Laboratories

Virtually all clinical laboratories operating in the U.S. must be certified by the federal government or by a federally approved accreditation agency. In most cases, that certification is regulated by CMS through CLIA. CLIA requires that applicable clinical laboratories meet quality assurance, quality control and personnel standards. Laboratories also must undergo proficiency testing and are subject to inspections. Clinical laboratories in locations other than the U.S. are generally subject to comparable regulation in their respective jurisdictions.

Standards for testing under CLIA are based on the complexity of the tests performed by the laboratory, with tests classified as "high complexity," "moderate complexity," or "waived." Laboratories performing high-complexity testing are required to meet more stringent requirements than moderate-complexity laboratories. Laboratories performing only waived tests, which are tests determined by the FDA to have a low potential for error and requiring little oversight, may apply for a certificate of waiver exempting them from most CLIA requirements. All major and many smaller Company facilities hold CLIA certificates to perform high-complexity testing. The Company's remaining smaller testing sites hold CLIA certificates to perform moderate-complexity testing or a certificate of waiver. The sanctions for failure to comply with CLIA requirements include suspension, revocation or limitation of a laboratory's CLIA certificate, which is necessary to conduct business; cancellation or suspension of the laboratory's approval to receive Medicare and/or Medicaid reimbursement; as well as significant fines and/or criminal penalties. The loss or

suspension of a CLIA certification, imposition of a fine or other penalties, or future changes in the CLIA law or regulations (or interpretation of the law or regulations) could have a material adverse effect on the Company.

The Company is also subject to state and local laboratory regulation. CLIA provides that a state may adopt laboratory regulations different from or more stringent than those under federal law, and a number of states have implemented their own laboratory regulatory requirements. State laws may require that laboratory personnel meet certain qualifications, specify certain quality controls, or require maintenance of certain records.

The Company believes that it is in compliance with all laboratory requirements applicable to its laboratories operated both within the U.S. and in other countries. The Company's laboratories have continuing programs to maintain operations in compliance with all such regulatory requirements, but no assurances can be given that the Company's laboratories will pass all future licensure or certification inspections.

FDA and Other Regulatory Agency Laws and Regulations

Various regulatory agencies, including the FDA in the U.S., have regulatory responsibility over the development, testing, manufacturing, labeling, advertising, marketing, distribution, and surveillance of diagnostic and therapeutic products and services, including certain products and services offered by the Company, and the development of therapeutic products that comprise the majority of CDD's business. The FDA and other regulatory agencies periodically inspect and review the manufacturing processes and product performance of diagnostic and therapeutic products. These agencies have the authority to take various administrative and legal actions for noncompliance, such as fines, product suspensions, warning or untitled letters, recalls, injunctions and other civil and criminal sanctions. There are similar national and regional regulatory agencies in the jurisdictions outside the U.S. in which the Company operates.

On October 3, 2014, the FDA issued draft guidance regarding FDA regulation of LDTs. On November 18, 2016, the FDA announced that it would not release final guidance at this time and instead would continue to work with stakeholders, the new administration, and Congress to determine the right approach, and on January 13, 2017, the FDA released a discussion paper outlining a possible risk-based approach for FDA and CMS oversight of LDTs. Later in 2017, the FDA indicated that Congress should enact legislation to address improved oversight of diagnostics including LDTs, rather than the FDA addressing the issue through administrative policy proposals. There are other regulatory and legislative proposals that would increase general FDA oversight of clinical laboratories and LDTs. The outcome and ultimate impact of such proposals on the Company is difficult to predict at this time.

CDD's laboratory facilities and LCD's clinical laboratory facilities that perform testing in support of clinical trials, must conform to a range of standards and regulations, including GLP and good clinical practice (GCP), good manufacturing practice, (GMP), human subject protection and investigational product exemption regulations, and quality system regulation (QSR), requirements, as applicable. The preclinical and clinical studies that the Company conducts are subject to periodic inspections by the FDA as well as other regulatory agencies in the jurisdictions outside the U.S. in which the Company operates, which may include, without limitation, the Medicines and Healthcare products Regulatory Agency (MHRA), in the U.K., the European Medicines Agency, the China Food and Drug Administration, and the Pharmaceuticals and Medical Devices Agency in Japan, to determine compliance with GLP and GCP as well as other applicable standards and regulations. If a regulatory agency determines during an inspection that the Company's equipment, facilities, laboratories, operations, or processes do not comply with applicable regulations and GLP and/or GCP standards, the regulatory agency may issue a formal notice, which may be followed by a warning letter if observations are not addressed satisfactorily. Noncompliance may result in, among other things, unanticipated compliance expenditures, or the regulatory agency seeking civil, criminal or administrative sanctions and/or remedies against the Company, including suspension of its operations.

Additionally, certain CDD services and activities, such as CMC services and manufacturing of investigational medicinal products for use in certain Phase I studies managed by CDD, must conform to current good manufacturing practice (cGMP). CDD is subject to periodic inspections by the FDA and the MHRA, as well as other regulatory agencies in the jurisdictions outside the U.S. in which the Company operates, in order to assess, among other things, cGMP compliance. If a regulatory agency identifies deficiencies during an inspection, it may issue a formal notice, which may be followed by a warning letter if observations are not addressed satisfactorily. Failure to maintain compliance with cGMP regulations and other applicable requirements of various regulatory agencies could result in, among other things, fines, unanticipated compliance expenditures, suspension of manufacturing, enforcement actions, injunctions, or criminal prosecution.

The U.S Animal Welfare Act (AWA)

The conduct of animal research at CDD's facilities in the U.S. must be in compliance with the AWA, which governs the care and use of warm-blooded animals for research in the U.S. other than laboratory rats, mice and chickens, and is enforced through periodic inspections by the U.S. Department of Agriculture (USDA). The AWA establishes facility standards regarding several aspects of animal welfare, including housing, ventilation, lighting, feeding and watering, handling, veterinary care, and

recordkeeping. CDD complies with licensing and registration requirement standards set by the USDA and similar agencies in foreign jurisdictions such as the European Union and China for the care and use of regulated species. If the USDA determines that CDD's equipment, facilities, laboratories or processes do not comply with applicable AWA standards, it may issue an inspection report documenting the deficiencies and setting deadlines for any required corrective actions. The USDA may impose fines, suspend and/or revoke licenses and registrations, or confiscate research animals. Other countries where the Company conducts business have similar laws and regulations with which the Company must also comply. In addition, certain of CDD's animal-related activities may be subject to regulation by the U.S. Centers for Disease Control and Prevention, the Office of Laboratory Animal Welfare of the National Institutes of Health, the U.S. Fish and Wildlife Service, and similar organizations in other jurisdictions.

Payment for Clinical Laboratory Services

In 2018, LCD derived approximately 15.8% of its net revenue directly from the Medicare and Medicaid programs. In addition, LCD's other commercial laboratory testing business that is not directly related to Medicare or Medicaid nevertheless depends significantly on continued participation in these programs and in other government healthcare programs, in part because customers often want a single laboratory to perform all of their testing services. In recent years, both governmental and private sector payers have made efforts to contain or reduce healthcare costs, including reducing reimbursement for clinical laboratory services.

Reimbursement under the Medicare PFS is capped at different rates in each Medicare Administrative Contractor's jurisdiction. Pursuant to PAMA, reimbursement under the CLFS is set at a national rate that is updated every three years for most tests. State Medicaid programs are prohibited from paying more than the Medicare fee schedule limit for clinical laboratory services furnished to Medicaid recipients. Laboratories primarily bill and are reimbursed by Medicare and Medicaid directly for covered tests performed on behalf of Medicare and Medicaid beneficiaries; for beneficiaries that participate in Managed Medicare and Managed Medicaid plans, laboratory bills are submitted to and paid by MCOs that manage those plans. Approximately 12.9% of LCD's revenue is reimbursed by Medicare under the CLFS.

Many pathology services performed by LCD are reimbursed by Medicare under the PFS. The PFS assigns relative value units to each procedure or service, and a conversion factor is applied to calculate the reimbursement. The PFS is also subject to adjustment on an annual basis. Such adjustments can impact both the conversion factor and relative value units. The Sustainable Growth Rate (SGR), the formula previously used to calculate the fee schedule conversion factor, would have resulted in significant decreases in payment for most physician services for each year since 2003. However, Congress intervened repeatedly to prevent these payment reductions, and the conversion factor was increased or frozen for the subsequent year. MACRA permanently replaced the SGR formula and transitioned PFS reimbursement to a value-based payment system. MACRA retroactively avoided a 21.2% reduction in PFS reimbursement that had been scheduled for April 1, 2015, and provided for PFS conversion factor increases of 0.5% from July 1, 2015 to December 31, 2015, and 0.5% in each of years 2016-2019, followed by 0.0% updates for 2020-2025, and updates that vary based on participation in alternative payment models in subsequent years. These changes to the conversion factor may be offset by reductions to the relative value units, as was the case with the 2016 PFS reductions. In addition, rates will be adjusted under the new MIPS beginning in 2019. Approximately 0.7% of LCD's revenue is reimbursed under the PFS.

In addition to changes in reimbursement rates, LCD is also impacted by changes in coverage policies for laboratory tests and annual CPT coding revisions. Medicare, Medicaid and private payer diagnosis code requirements and payment policies negatively impact LCD's ability to be paid for some of the tests it performs. Further, some payers require additional information to process claims or have implemented prior authorization policies which delay or prohibit payment. CLFS coding and billing changes related to toxicology and other procedures were implemented in 2016 and 2017. The Company experienced delays in the pricing and implementation of the new toxicology codes; however, the Company largely overcame issues related to price and margins through direct negotiation with the associated payers. Limited coding and billing changes related to other procedure types were implemented in 2018, and further changes are expected to be implemented in 2019. The Company expects some delays in pricing and implementation of these new codes.

Future changes in national, state and local laws and regulations (or in the interpretation of current regulations) affecting government payment for clinical laboratory testing could have a material adverse effect on the Company. Based on currently available information, the Company is unable to predict what type of changes in legislation or regulations, if any, will occur.

Privacy, Security and Confidentiality of Health Information and Other Personal Information

In the U.S., the Health Insurance Portability and Accountability Act of 1996 (HIPAA) was designed to address issues related to the security and confidentiality of health information and to improve the efficiency and effectiveness of the healthcare system by facilitating the electronic exchange of information in certain financial and administrative transactions. These regulations apply to health plans and healthcare providers that conduct standard transactions electronically and healthcare clearinghouses (covered entities). Six such regulations include: (i) the Transactions and Code Sets Rule; (ii) the Privacy Rule; (iii) the Security Rule; (iv) the Standard Unique Employer Identifier Rule, which requires the use of a unique employer identifier in connection with certain electronic transactions; (v) the National Provider Identifier Rule, which requires the use of a unique healthcare provider identifier

in connection with certain electronic transactions; and (vi) the Health Plan Identifier Rule, which requires the use of a unique health plan identifier in connection with certain electronic transactions.

The Company believes that it is in compliance in all material respects with the current Transactions and Code Sets Rule. The Company implemented Version 5010 of the HIPAA Transaction Standards and believes it has fully adopted the ICD-10-CM code set. While to date the Company has not experienced any sustained disruption in receipts or indications of substantive reductions to reimbursement and net revenues related to the implementation of the ICD-10-CM code set, further future application of restrictive clinical or payment policies could negatively impact the Company. The Company believes it is in compliance in all material respects with applicable laws and regulations for electronic funds transfers and remittance advice transactions.

The Privacy Rule regulates the use and disclosure of protected health information (PHI) by covered entities. It also sets forth certain rights that an individual has with respect to his or her PHI maintained by a covered entity, such as the right to access or amend certain records containing PHI or to request restrictions on the use or disclosure of PHI. The Privacy Rule requires covered entities to contractually bind third parties, known as business associates, in the event that they perform an activity or service for or on behalf of the covered entity that involves the creation, receipt, maintenance, or transmission of PHI. The Company believes that it is in compliance in all material respects with the requirements of the HIPAA Privacy Rule.

On December 12, 2018, HHS issued a request for information (RFI) seeking input from the public on how the HIPAA regulations, and the Privacy Rule in particular, could be modified to amend existing, or impose additional, obligations relating to the processing of PHI. The Company will participate in this process and assess the impact of the changes to the Privacy Rule or other HIPAA regulations to its business.

The Security Rule establishes requirements for safeguarding patient information that is electronically transmitted or electronically stored. The Company believes that it is in compliance in all material respects with the requirements of the HIPAA Security Rule.

The U.S. Health Information Technology for Economic and Clinical Health Act (HITECH), which was enacted in February 2009, with regulations effective on September 23, 2013, strengthened and expanded the HIPAA Privacy and Security Rules and their restrictions on use and disclosure of PHI. HITECH includes, but is not limited to, prohibitions on exchanging PHI for remuneration and additional restrictions on the use of PHI for marketing. HITECH also fundamentally changes a business associate's obligations by imposing a number of Privacy Rule requirements and a majority of Security Rule provisions directly on business associates that were previously only directly applicable to covered entities. Moreover, HITECH requires covered entities to provide notice to individuals, HHS, and, as applicable, the media when unsecured PHI is breached, as that term is defined by HITECH. Business associates are similarly required to notify covered entities of a breach. The Company believes its policies and procedures are fully compliant with the HITECH requirements.

On February 6, 2014, CMS and HHS published final regulations that amended the HIPAA Privacy Rule to provide individuals (or their personal representatives) with the right to receive copies of their test reports from laboratories subject to HIPAA, or to request that copies of their test reports be transmitted to designated third parties. The Company revised its policies and procedures to comply with these new access requirements and updated its privacy notice to reflect individuals' new access rights under this final rule.

The Standard Unique Employer Identifier Rule requires that employers have standard national numbers that identify them on standard transactions. The Employer Identification Number, or a Federal Tax Identification Number, issued by the Internal Revenue Service was selected as the identifier for employers and was adopted effective July 30, 2002. The Company believes it is in compliance with these requirements.

The administrative simplification provisions of HIPAA mandate the adoption of standard unique identifiers for healthcare providers. The intent of these provisions is to improve the efficiency and effectiveness of the electronic transmission of health information. The National Provider Identifier Rule requires that all HIPAA-covered healthcare providers, whether they are individuals or organizations, must obtain a National Provider Identifier (NPI) to identify themselves in standard HIPAA transactions. NPI replaces the unique provider identification number and other provider numbers previously assigned by payers and other entities for the purpose of identifying healthcare providers in standard electronic transactions. The Company believes that it is in compliance with the HIPAA National Provider Identifier Rule in all material respects.

The Health Plan Identifier (HPID) is a unique identifier designed to furnish a standard way to identify health plans in electronic transactions. CMS published the final rule adopting the HPID for health plans required by HIPAA on September 12, 2012. Effective October 31, 2014, CMS announced a delay, until further notice, in enforcement of regulations pertaining to health plan enumeration and use of the HPID in HIPAA transactions adopted in the HPID final rule. This delay remains in effect. The Company will continue to monitor future developments related to the HPID and respond accordingly.

Violations of the HIPAA provisions could result in civil and/or criminal penalties, including significant fines and up to 10 years in prison. HITECH also significantly strengthened HIPAA enforcement by increasing the civil penalty amounts that may be

imposed, requiring HHS to conduct periodic audits to confirm compliance and authorizing state attorneys general to bring civil actions seeking either injunctions or damages in response to violations of the HIPAA privacy and security regulations that affect the privacy of state residents.

The total cost associated with meeting the ongoing requirements of HIPAA and HITECH is not expected to be material to the Company's operations or cash flows. However, future regulations and interpretations of HIPAA and HITECH could impose significant costs on the Company.

In addition to the HIPAA regulations described above, numerous other data protection, privacy and similar laws govern the confidentiality, security, use and disclosure of personal information. These laws vary by jurisdiction, but they most commonly regulate or restrict the collection, use and disclosure of medical and financial information and other personal information. In the U.S., some state laws are more restrictive and, therefore, are not preempted by HIPAA. Penalties for violation of these laws may include sanctions against a laboratory's licensure, as well as civil and/or criminal penalties.

On June 28, 2018, the California legislature passed the California Consumer Privacy Act (CCPA), which becomes effective January 1, 2020. The CCPA creates new transparency requirements and grants California residents several new rights with regard their personal information. Failure to comply with the CCPA may result in, among other things, significant civil penalties and injunctive relief, or potential statutory or actual damages. The Company is executing on a plan to support compliance with the CCPA.

On January 2, 2018, the Substance Abuse and Mental Health Services Administration of HHS (SAMHSA) announced the finalization of proposed changes to the Confidentiality of Substance Use Disorder Patient Records regulation, 42 Code of Federal Regulations Part 2. This regulation protects the confidentiality of patient records relating to the identity, diagnosis, prognosis, or treatment that are maintained in connection with the performance of any federally assisted program or activity relating to substance use disorder education, prevention, training, treatment, rehabilitation, or research. Under the regulation, patient identifying information may only be released with the individual's written consent, subject to certain limited exceptions. The latest changes to this regulation seek to align to its requirements more closely with HIPAA, while maintaining more stringent confidentiality of substance use disorder information. The Company will adopt such changes to its policies and procedures as may be necessary for compliance.

The European Union General Data Protection Regulation (GDPR) Regulation (EU) 2016/679, became effective May 25, 2018, replacing Directive 95/46/EC. The GDPR established new requirements applicable to the use and transfer of personal data and imposes penalties for noncompliance of up to the greater of €20 million or 4% of worldwide revenue. The GDPR requires transparency with regard to the means and purposes of processing of personal data; collection of consent to process personal data in certain circumstances; the ability to provide records of processing upon request by a supervisory authority or data controller; implementation of appropriate technical and organizational measures to maintain security of personal data; notification of personal data breaches to supervisory authorities, data controllers and individuals within expedient time frames; and performance of data protection impact assessments for certain processing activities. Personal data may only be transferred outside of the European Union to a country that offers an adequate level of data protection under standards set by the European Union. The GDPR also provides individual data subjects with certain rights, where applicable, including the right of access, the right to rectification, the right to be forgotten, the right to restrict or object to processing and the right to data portability. The Company has established processes and frameworks to manage compliance with the GDPR and other global privacy and data protection requirements, and to manage preparation for future enacted regulations. Compliance could impose significant costs on the Company.

In addition to the GDPR, numerous other countries have laws governing the collection, use, disclosure and transmission (including cross-border transfer) of personal information, including medical information. The legislative and regulatory landscape for privacy and data protection is complex and continually evolving. Data protection regulations have been enacted or updated in countries where the Company does business in Asia, Latin America, Canada, and Europe. Failure to comply with these regulations may result in, among other things, civil, criminal and contractual liability, fines, regulatory sanctions and damage to the Company's reputation.

Fraud and Abuse Laws and Regulations

Existing U.S. laws governing federal healthcare programs, including Medicare and Medicaid, as well as similar state laws, impose a variety of broadly described fraud and abuse prohibitions on healthcare providers, including clinical laboratories. These laws are interpreted liberally and enforced aggressively by multiple government agencies, including the U.S. Department of Justice, HHS' Office of Inspector General (OIG) and various state agencies. Historically, the clinical laboratory industry has been the focus of major governmental enforcement initiatives. The U.S. government's enforcement efforts have been increasing over the past decade, in part as a result of the enactment of HIPAA, which included several provisions related to fraud and abuse enforcement, including the establishment of a program to coordinate and fund U.S., state and local law enforcement efforts. The Deficit Reduction Act of 2005 also included new requirements directed at Medicaid fraud, including increased spending on enforcement and financial incentives for states to adopt false claims act provisions similar to the U.S. False Claims Act. Amendments to the False Claims

Act, and other enhancements to the U.S. fraud and abuse laws enacted as part of the ACA, have further increased fraud and abuse enforcement efforts and compliance risks. For example, the ACA established an obligation to report and refund overpayments from Medicare or Medicaid within 60 days of identification (whether or not paid through any fault of the recipient); failure to comply with this new requirement can give rise to additional liability under the False Claims Act and Civil Monetary Penalties statute.

The U.S. Anti-Kickback Statute prohibits knowingly providing anything of value in return for, or to induce the referral of, Medicare, Medicaid or other U.S. healthcare program business. Violations can result in imprisonment, fines, penalties, and/or exclusion from participation in U.S. healthcare programs. The OIG has published “safe harbor” regulations that specify certain arrangements that are protected from prosecution under the Anti-Kickback Statute if all conditions of the relevant safe harbor are met. Failure to fit within a safe harbor does not necessarily constitute a violation of the Anti-Kickback Statute; rather, the arrangement would be subject to scrutiny by regulators and prosecutors and would be evaluated on a case-by-case basis. Many states have their own Medicaid anti-kickback laws, and several states also have anti-kickback laws that apply to all payers (i.e., not just government healthcare programs).

From time to time, the OIG issues alerts and other guidance on certain practices in the healthcare industry that implicate the Anti-Kickback Statute or other fraud and abuse laws. Examples of such guidance documents particularly relevant to the Company and its operations follow.

In October 1994, the OIG issued a Special Fraud Alert on arrangements for the provision of clinical laboratory services. The Fraud Alert set forth a number of practices allegedly engaged in by some clinical laboratories and healthcare providers that raise issues under the U.S. fraud and abuse laws, including the Anti-Kickback Statute. These practices include: (i) providing employees to furnish valuable services for physicians (other than collecting patient specimens for testing) that are typically the responsibility of the physicians’ staff; (ii) offering certain laboratory services at prices below fair market value in return for referrals of other tests that are billed to Medicare at higher rates; (iii) providing free testing to physicians’ managed care patients in situations where the referring physicians benefit from such reduced laboratory utilization; (iv) providing free pickup and disposal of biohazardous waste for physicians for items unrelated to a laboratory’s testing services; (v) providing general-use facsimile machines or computers to physicians that are not exclusively used in connection with the laboratory services; and (vi) providing free testing for healthcare providers, their families and their employees (i.e., so-called “professional courtesy” testing). The OIG emphasized in the Special Fraud Alert that when one purpose of such arrangements is to induce referrals of program-reimbursed laboratory testing, both the clinical laboratory and the healthcare provider (e.g., physician) may be liable under the Anti-Kickback Statute, and may be subject to criminal prosecution and exclusion from participation in the Medicare and Medicaid programs. More recently, in June 2014, the OIG issued another Special Fraud Alert addressing compensation paid by laboratories to referring physicians for blood specimen processing and for submitting patient data to registries. This Special Fraud Alert reiterates the OIG’s long-standing concerns about payments from laboratories to physicians in excess of the fair market value of the physician’s services and payments that reflect the volume or value of referrals of federal U.S. program business.

The OIG has expressed additional concern about the provision of discounts on laboratory services billed to customers in return for the referral of U.S. healthcare program business. In a 1999 Advisory Opinion, the OIG concluded that a laboratory’s offer to a physician of significant discounts on non-U.S. healthcare program laboratory tests might violate the Anti-Kickback Statute on the basis that such discounts could be viewed as in exchange for referrals by the physician of business to be billed by the laboratory to Medicare at non-discounted rates.

The OIG has also issued guidance in 1989 and 2003 regarding joint venture arrangements that may be viewed as suspect under the Anti-Kickback Statute. These documents have relevance to clinical laboratories that are part of (or are considering establishing) joint ventures with potential sources of U.S. healthcare program business. Some of the elements of joint ventures that the OIG identified as “suspect” include: arrangements in which the capital invested by referring providers is disproportionately small and the return on investment is disproportionately large when compared to a typical investment; specific selection of investors who are in a position to make referrals to the venture; and arrangements in which one of the parties to the joint venture expands into a line of business that is dependent on referrals from the other party (sometimes called “shell” joint ventures). In a 2004 advisory opinion, the OIG expressed concern about a proposed joint venture in which a laboratory company would assist physician groups in establishing off-site pathology laboratories where the physicians’ financial and business risk in the venture was minimal and the physicians would contract out substantially all laboratory operations, committing very little in the way of financial, capital, or human resources.

In addition to the Anti-Kickback Statute, in October 2018, the U.S. enacted the Eliminating Kickbacks in Recovery Act of 2018 (EKRA), as part of the Substance Use-Disorder Prevention that Promotes Opioid Recovery and Treatment for Patients and Communities Act (SUPPORT Act). EKRA is an all-payer anti-kickback law that makes it a criminal offense to pay any remuneration to induce referrals to, or in exchange for, patients using the services of a recovery home, a substance use clinical treatment facility, or laboratory. Although it appears that EKRA was intended to reach patient brokering and similar arrangements to induce patronage of substance use recovery and treatment, the language in EKRA is broadly written. As drafted, an EKRA prohibition on incentive

compensation to sales employees is inconsistent with the federal anti-kickback statute and regulations, which permit payment of employee incentive compensation, a practice that is common in the industry. Significantly, EKRA permits the U.S. Department of Justice to issue regulations clarifying EKRA's exceptions or adding additional exceptions, but such regulations have not yet been issued. The Company is working through its trade association to address the scope of EKRA and is seeking clarification or correction.

Violations of other fraud and abuse laws can also result in exclusion from participation in U.S. healthcare programs, including Medicare and Medicaid. One basis for such exclusion is an individual or entity's submission of claims to Medicare or Medicaid that are substantially in excess of that individual or entity's usual charges for like items or services. In a June 18, 2007, withdrawal of proposed rulemaking, the OIG stated that it would continue evaluating billing patterns on a case-by-case basis, noting that it is "concerned about disparities in the amounts charged to Medicare and Medicaid when compared to private payers," that it continues to believe its exclusion authority for excess charges "provides useful backstop protection for the public from providers that routinely charge Medicare or Medicaid substantially more than their other customers" and that it will use "all tools available ... to address instances where Medicare or Medicaid are charged substantially more than other payers." An enforcement action by the OIG under this statutory exclusion basis or an enforcement action by Medicaid officials of similar state law restrictions could have an adverse effect on the Company.

Under another U.S. statute, known as the Stark Law or "self-referral" prohibition, physicians who have a financial or a compensation relationship with a commercial laboratory may not, unless an exception applies, refer Medicare patients for testing to the laboratory, regardless of the intent of the parties. Similarly, laboratories may not bill Medicare for services furnished pursuant to a prohibited self-referral. There are several Stark Law exceptions that are relevant to arrangements involving clinical laboratories, including: i) fair market value compensation for the provision of items or services; ii) payments by physicians to a laboratory for commercial laboratory services; iii) ancillary services (including laboratory services) provided within the referring physician's own office, if certain criteria are satisfied; iv) physician investment in a company whose stock is traded on a public exchange and has stockholder equity exceeding \$75.0 million; and v) certain space and equipment rental arrangements that are set at a fair market value rate and satisfy other requirements. Many states have their own self-referral laws as well, which in some cases apply to all patient referrals, not just government reimbursement programs.

There are a variety of other types of U.S. and state fraud and abuse laws, including laws prohibiting submission of false or fraudulent claims. The Company seeks to conduct its business in compliance with all U.S. and state fraud and abuse laws. The Company is unable to predict how these laws will be applied in the future, and no assurances can be given that its arrangements will not be subject to scrutiny under such laws. Sanctions for violations of these laws may include exclusion from participation in Medicare, Medicaid and other U.S. or state healthcare programs, significant criminal and civil fines and penalties, and loss of licensure. Any exclusion from participation in a U.S. healthcare program, or material loss of licensure, arising from any action by any federal or state regulatory or enforcement authority, would likely have a material adverse effect on the Company's business. In addition, any significant criminal or civil penalty resulting from such proceedings could have a material adverse effect on the Company's business.

Environmental, Health and Safety

The Company is subject to licensing and regulation under laws and regulations relating to the protection of the environment, and human health and safety laws and regulations relating to the handling, transportation and disposal of medical specimens and hazardous materials, infectious and hazardous waste and radioactive materials. All Company laboratories are subject to applicable laws and regulations relating to biohazard disposal of all laboratory specimens, and the Company generally utilizes outside vendors for disposal of such specimens. In addition, the U.S. Occupational Safety and Health Administration (OSHA) has established extensive requirements relating to workplace safety for healthcare employers, including clinical laboratories, whose workers may be exposed to blood-borne pathogens such as HIV, HCV and hepatitis B virus (HCB). These regulations, among other things, require work practice controls, protective clothing and equipment, training, medical follow-up, vaccinations and other measures designed to minimize exposure to, and transmission of, blood-borne pathogens. Other countries where the Company conducts business have similar laws and regulations concerning the environment and human health and safety with which the Company must also comply.

In 2012, the OSHA Hazard Communication Standard was revised based on the adoption of the Globally Harmonized System that provides criteria for the classification of chemical hazards. Updated copies of Safety Data Sheets for chemical products used across the Company were obtained prior to the effective date of June 1, 2015.

The Company seeks to comply with all relevant environmental and human health and safety laws and regulations. Failure to comply could subject the Company to various administrative and/or other enforcement actions.

Drug Testing

Drug testing for public sector employees is regulated by the SAMHSA, which has established detailed performance and quality standards that laboratories must meet to be approved to perform drug testing on employees of U.S. government contractors and certain other entities. To the extent that the Company's laboratories perform such testing, each must be certified as meeting SAMHSA standards. The Company's laboratories in Research Triangle Park, North Carolina; Raritan, New Jersey; Houston, Texas; Southaven, Mississippi; Spokane, Washington; and St. Paul, Minnesota are all SAMHSA certified.

Controlled Substances

CDD handles controlled substances as part of the services it provides in preclinical testing and clinical trials. The use of controlled substances in testing for drugs of abuse is regulated by the U.S. Drug Enforcement Administration. The Company seeks to conduct its business in compliance with these regulations as applicable. Violations of these rules may result in criminal and civil fines and penalties.

Compliance Program

The Company maintains a comprehensive, global compliance program that includes ongoing evaluation and monitoring of its compliance with the laws and regulations of the U.S. and the other countries in which it has operations. The objective of the Company's compliance program is to develop, implement, monitor and update compliance safeguards, as appropriate. Although the Company is subject to a broad range of regulations, its compliance program has a particular focus on regulations related to healthcare fraud and abuse, anti-kickback, physician self-referral, government reimbursement programs, anti-bribery/anti-corruption, anti-human trafficking and trade sanctions, among others. Emphasis is placed on developing and implementing compliance policies and guidelines, personnel training programs and monitoring and auditing activities. The compliance program demonstrates the Company's commitment to conducting business at the highest standards of ethical conduct and integrity.

The Company seeks to conduct its business in compliance with all statutes, regulations, and other requirements applicable to its clinical laboratory operations and drug development business. The clinical laboratory industry and drug development industries are, however, subject to extensive regulation, and many of these statutes and regulations have not been interpreted by the courts. In addition, the applicability or interpretation of statutes and regulations may not be clear in light of emerging changes in clinical testing science, healthcare technology, and healthcare organizations. Applicable statutes and regulations may be interpreted or applied by a prosecutorial, regulatory or judicial authority in a manner that would materially adversely affect the Company. Potential sanctions for violation of these statutes and regulations include significant civil and criminal penalties, fines, exclusion from participation in governmental healthcare programs, and the loss of various licenses, certificates, and authorizations necessary to operate, as well as potential liabilities from third-party claims, all of which could have a material adverse effect on the Company's business.

Information Security

Information security is one of the Company's top priorities. Securing personal and health information is critical to the Company's business operations and to future growth, as the Company is committed to using technology to improve the delivery of care. The Company employs a secure technology framework that enables continuous operations of laboratory devices, computers, and communications systems. The Company has experienced and expects to continue to confront attempts by cybercriminals who seek access to its systems and data. A security breach could have a material adverse operational, financial, regulatory, and reputational impact to the Company.

The Company uses state-of-the art tools and advanced analytics to proactively identify and protect against potential information system disruptions and breaches; to monitor, test and secure key networks and services; and to facilitate prompt resumption of operations if a breach or interruption should occur. The Company has also implemented policies and procedures designed to comply with global laws and regulations related to the privacy and security of personal or health information. In addition, the Company carries cybercrime and business interruption insurance.

Over the past several years, the Company has significantly increased its investment in cybersecurity to expand its security posture and address the ever-evolving cyberthreat landscape. Additional resources are dedicated to expand the Company's ability to investigate and remediate any cybersecurity vulnerabilities.

On July 16, 2018, the Company reported that it had detected suspicious activity on its information technology network and was taking steps to respond to and contain the activity. The activity was subsequently determined to be a new variant of ransomware affecting certain LCD information technology systems. CDD systems were not directly affected by the ransomware. As part of its response, the Company promptly took certain systems offline to contain and remove the ransomware from its systems. The incident temporarily affected test processing and customer access to test results, and also affected certain other information technology systems involved in conducting Company-wide operations. Operations were returned to normal within a few days of the incident. As part of its in-depth investigation into this incident, the Company engaged outside security experts and worked

with authorities, including law enforcement. The investigation determined that the ransomware did not and could not transfer patient or client data outside of Company systems and that there was no theft or misuse of patient or client data. The Company has incurred total expenditures related to addressing this attack of \$12.6 in consulting fees and employee overtime during the recovery period following the attack in addition to estimated lost revenue of \$9.8.

The Company has insurance coverage for costs resulting from cyber-attacks and has filed a claim for recovery of its losses resulting from this incident. However, disputes over the extent of insurance coverage for claims are not uncommon and the Company has not recorded any estimated proceeds resulting from this claim. Furthermore, while the Company has not been the subject of any legal proceedings involving this incident, it is possible that the Company could be the subject of claims from persons alleging they suffered damages from the incident, or actions by governmental authorities.

The Company continues to invest in its technology and training to help protect its information technology systems and operations from cyber-attacks.

Item 1A. Risk Factors

Investors should carefully consider all of the information set forth in this report, including the following risk factors, before deciding to invest in any of the Company's securities. The risks below are not the only ones that the Company faces. Additional risks not presently known to the Company, or that it presently deems immaterial, may also negatively impact the Company. The Company's 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. The Company's results could differ materially from those anticipated in these forward-looking statements as a result of certain factors, including the risks described below and elsewhere. See "Forward-Looking Statements" in Item 7.

Changes in payer regulations or policies (or in the interpretation of current regulations or policies), insurance regulations or approvals, or changes in other laws, regulations or policies in the United States (U.S.), may adversely affect U.S. governmental and third-party coverage or reimbursement for clinical laboratory testing and may have a material adverse effect upon the Company.

U.S. and state government payers, such as Medicare and Medicaid, as well as insurers, including managed care organizations (MCOs), have increased their efforts to control the cost, utilization and delivery of healthcare services. From time to time, Congress has considered and implemented changes in Medicare fee schedules in conjunction with budgetary legislation. The first phase of reductions pursuant to the Protecting Access to Medicare Act (PAMA) came into effect on January 1, 2018, and will continue annually subject to certain phase-in limits through 2023, and without limitations for subsequent periods. Further reductions due to changes in policy regarding coverage of tests or other requirements for payment, such as prior authorization, diagnosis code and other claims edits, or a physician or qualified practitioner's signature on test requisitions, may be implemented from time to time. Reimbursement for pathology services performed by LabCorp Diagnostics (LCD) is also subject to statutory and regulatory reduction. Reductions in the reimbursement rates and changes in payment policies of other third-party payers may occur as well. Such changes in the past have resulted in reduced payments as well as added costs and have decreased test utilization for the commercial laboratory industry by adding more complex new regulatory and administrative requirements. Further changes in third-party payer regulations, policies, or laboratory benefit or utilization management programs may have a material adverse effect on LCD's business. Actions by federal and state agencies regulating insurance, including healthcare exchanges, or changes in other laws, regulations, or policies may also have a material adverse effect upon LCD's business.

The Company could face significant monetary damages and penalties and/or exclusion from government programs if it violates anti-fraud and abuse laws.

The Company is subject to extensive government regulation at the federal, state, and local levels in the U.S. and other countries where it operates. The Company's failure to meet governmental requirements under these regulations, including those relating to billing practices and financial relationships with physicians, hospitals, and health systems could lead to civil and criminal penalties, exclusion from participation in Medicare and Medicaid and possible prohibitions or restrictions on the use of its laboratories. While the Company believes that it is in material compliance with all statutory and regulatory requirements, there is a risk that government authorities might take a contrary position. This risk includes, but is not limited to, the potential that government enforcement authorities may take a contrary position with respect to the Eliminating Kickbacks in Recovery Act (EKRA), given its recent passage and lack of associated regulations to clarify or add exceptions. Such occurrences, regardless of their outcome, could damage the Company's reputation and adversely affect important business relationships.

The Company's business could be harmed from the loss or suspension of a license or imposition of a fine or penalties under, or future changes in, or interpretations of, the law or regulations of the Clinical Laboratory Improvement Act of 1967, and the Clinical Laboratory Improvement Amendments of 1988 (CLIA), or those of Medicare, Medicaid or other national, state or local agencies in the U.S. and other countries where the Company operates laboratories.

The commercial laboratory testing industry is subject to extensive U.S. regulation, and many of these statutes and regulations have not been interpreted by the courts. CLIA extends federal oversight to virtually all clinical laboratories operating in the U.S. by requiring that they be certified by the federal government or by a federally approved accreditation agency. The sanction for failure to comply with CLIA requirements may be suspension, revocation or limitation of a laboratory's CLIA certificate, which is necessary to conduct business, as well as significant fines and/or criminal penalties. In addition, the Company is subject to regulation under state law. State laws may require that laboratories and/or laboratory personnel meet certain qualifications, specify certain quality controls or require maintenance of certain records. The Company also operates laboratories outside of the U.S. and is subject to laws governing its laboratory operations in the other countries where it operates.

Applicable statutes and regulations could be interpreted or applied by a prosecutorial, regulatory or judicial authority in a manner that would adversely affect the Company's business. Potential sanctions for violation of these statutes and regulations include significant fines and the suspension or loss of various licenses, certificates and authorizations, which could have a material adverse effect on the Company's business. In addition, compliance with future legislation could impose additional requirements on the Company, which may be costly.

U.S. Food and Drug Administration (FDA) regulation of diagnostic products and increased FDA regulation of laboratory-developed tests (LDTs) could result in increased costs and the imposition of fines or penalties, and could have a material adverse effect upon the Company's business.

The FDA has regulatory responsibility for instruments, test kits, reagents and other devices used by clinical laboratories. The FDA enforces laws and regulations that govern the development, testing, manufacturing, performance, labeling, advertising, marketing, distribution and surveillance of diagnostic products, and it regularly inspects and reviews the manufacturing processes and product performance of diagnostic products. LCD's point-of-care testing devices are subject to regulation by the FDA.

Since the 1990s, the FDA has asserted that it has authority to regulate LDTs as medical devices, but has exercised enforcement discretion to refrain from systematic regulation of LDTs. In 2014, the FDA issued draft guidance describing how it intended to discontinue its enforcement discretion policy and begin regulating LDTs as medical devices; however, that draft guidance has not been finalized, and FDA has instead continued its enforcement discretion policy and has indicated that it intends to work with Congress to enact comprehensive legislative preform of diagnostics oversight. As such, LDTs developed by high complexity clinical laboratories are currently generally offered as services to health care providers under the CLIA regulatory framework administered by the Centers for Medicare and Medicaid Services (CMS) of the U.S. Department of Health and Human Services (HHS), without the requirement for FDA clearance or approval. There are other regulatory and legislative proposals that would increase general FDA oversight of clinical laboratories and LDTs. The outcome and ultimate impact of such proposals on the business is difficult to predict at this time.

Current FDA regulation of the Company's diagnostic products and potential future increased regulation of the Company's LDTs could result in increased costs and administrative and legal actions for noncompliance, including warning letters, fines, penalties, product suspensions, product recalls, injunctions and other civil and criminal sanctions, which could have a material adverse effect upon the Company.

Failure to comply with U.S., state, local or international environmental, health and safety laws and regulations, including the U.S. Occupational Safety and Health Administration Act and the U.S. Needlestick Safety and Prevention Act, could result in fines and penalties and loss of licensure, and have a material adverse effect upon the Company's business.

As previously discussed in Item 1 of Part I of this report, the Company is subject to licensing and regulation under laws and regulations relating to the protection of the environment and human health and safety, including laws and regulations relating to the handling, transportation and disposal of medical specimens, infectious and hazardous waste and radioactive materials, as well as regulations relating to the safety and health of laboratory employees. Failure to comply with these laws and regulations could subject the Company to denial of the right to conduct business, fines, criminal penalties and/or other enforcement actions that would have a material adverse effect on its business. In addition, compliance with future legislation could impose additional requirements on the Company that may be costly.

Failure to comply with privacy and security laws and regulations could result in fines, penalties and damage to the Company's reputation with customers and have a material adverse effect upon the Company's business.

If the Company does not comply with existing or new laws and regulations related to protecting the privacy and security of personal or health information, it could be subject to monetary fines, civil penalties or criminal sanctions.

In the U.S., the Health Insurance Portability and Accountability Act of 1996 (HIPAA) privacy and security regulations, including the expanded requirements under U.S. Health Information Technology for Economic and Clinical Health Act (HITECH), establish comprehensive standards with respect to the use and disclosure of protected health information (PHI), by covered entities, in addition to setting standards to protect the confidentiality, integrity and security of PHI.

HIPAA restricts the Company's ability to use or disclose PHI, without patient authorization, for purposes other than payment, treatment or healthcare operations (as defined by HIPAA), except for disclosures for various public policy purposes and other permitted purposes outlined in the privacy regulations. HIPAA and HITECH provide for significant fines and other penalties for wrongful use or disclosure of PHI in violation of the privacy and security regulations, including potential civil and criminal fines and penalties. The regulations establish a complex regulatory framework on a variety of subjects, including:

- The circumstances under which the use and disclosure of PHI are permitted or required without a specific authorization by the patient, including, but not limited to, treatment purposes, activities to obtain payments for the Company's services, and its healthcare operations activities;
- A patient's rights to access, amend and receive an accounting of certain disclosures of PHI;
- The content of notices of privacy practices for PHI;
- Administrative, technical and physical safeguards required of entities that use or receive PHI; and
- The protection of computing systems maintaining electronic PHI.

The Company has implemented policies and procedures designed to comply with the HIPAA privacy and security requirements as applicable. The privacy and security regulations establish a "floor" and do not supersede state laws that are more stringent. Therefore, the Company is required to comply with both additional federal privacy and security regulations and varying state privacy and security laws. In addition, federal and state laws that protect the privacy and security of patient information may be subject to enforcement and interpretations by various governmental authorities and courts, resulting in complex compliance issues. For example, the Company could incur damages under state laws pursuant to an action brought by a private party for the wrongful use or disclosure of health information or other personal information.

On June 28, 2018, the California legislature passed the California Consumer Privacy Act (CCPA), which becomes effective January 1, 2020. The CCPA creates new transparency requirements and grants California residents several new rights with regard their personal information. Failure to comply with the CCPA may result in, among other things, significant civil penalties and injunctive relief, or potential statutory or actual damages. The Company is executing on a plan to support compliance with the CCPA.

The Company may also be required to comply with the data privacy and security laws of other countries in which it operates or with which it transfers and receives data. For example, the European Union's (EU) General Data Protection Regulation (GDPR), which took effect May 25, 2018, created a range of new compliance obligations for subject companies and imposes penalties for noncompliance of up to the greater of €20 million or 4% of worldwide revenue. The Company has established processes and frameworks to manage compliance with the GDPR, but there remains uncertainty as to how EU supervisory authorities will interpret and enforce the regulation. The costs of compliance with the GDPR could be significant. Potential fines and penalties in the event of a violation of the GDPR could have a material adverse effect on the Company's business and operations. In addition, similar data protection regulations addressing access, use, disclosure and transfer of personal data have been enacted or updated in countries where the Company does business in Asia, Latin America, Canada and Europe. The Company expects to make changes to its business practices and to incur additional costs associated with compliance with these evolving and complex regulations.

Failure to maintain the security of customer-related information or compliance with security requirements could damage the Company's reputation with customers, cause it to incur substantial additional costs and become subject to litigation and enforcement actions.

The Company receives and stores certain personal and financial information about its customers. In addition, the Company depends upon the secure transmission of confidential information over public networks, including information permitting cashless payments. The Company also works with third-party service providers and vendors that provide technology systems and services that are used in connection with the receipt, storage and transmission of customer personal and financial information. A compromise in the Company's security systems, or those of the Company's third party service providers and vendors, that results in customer personal information being obtained by unauthorized persons or the Company's or third party's failure to comply with security requirements for financial transactions could adversely affect the Company's reputation with its customers and others, as well as the Company's results of operations, financial condition and liquidity. It could also result in litigation against the Company and the imposition of fines and penalties.

Discontinuation or recalls of existing testing products; failure to develop or acquire licenses for new or improved testing technologies; or the Company's customers using new technologies to perform their own tests could adversely affect the Company's business.

From time to time, manufacturers discontinue or recall reagents, test kits or instruments used by the Company to perform laboratory testing. Such discontinuations or recalls could adversely affect the Company's costs, testing volume and revenue.

The commercial laboratory industry is subject to changing technology and new product introductions. The Company's success in maintaining a leadership position in genomic and other advanced testing technologies will depend, in part, on its ability to develop, acquire or license new and improved technologies on favorable terms and to obtain appropriate coverage and reimbursement for these technologies. The Company may not be able to negotiate acceptable licensing arrangements, and it cannot be certain that such arrangements will yield commercially successful diagnostic tests. If the Company is unable to license these testing methods at competitive rates, its research and development (R&D) costs may increase as a result. In addition, if the Company is unable to license new or improved technologies to expand its esoteric testing operations, its testing methods may become outdated when compared with the Company's competition, and testing volume and revenue may be materially and adversely affected.

In addition, advances in technology may lead to the development of more cost-effective technologies such as point-of-care testing equipment that can be operated by physicians or other healthcare providers (including physician assistants, nurse practitioners and certified nurse midwives, generally referred to herein as physicians) in their offices or by patients themselves without requiring the services of freestanding clinical laboratories. Development of such technology and its use by the Company's customers could reduce the demand for its laboratory testing services and the utilization of certain tests offered by the Company and negatively impact its revenues.

Currently, most commercial laboratory testing is categorized as high or moderate complexity, and thereby is subject to extensive and costly regulation under CLIA. The cost of compliance with CLIA makes it impractical for most physicians to operate clinical laboratories in their offices, and other laws limit the ability of physicians to have ownership in a laboratory and to refer tests to such a laboratory. Manufacturers of laboratory equipment and test kits could seek to increase their sales by marketing point-of-care laboratory equipment to physicians and by selling test kits approved for home or physician office use to both physicians and patients. Diagnostic tests approved for home use are automatically deemed to be "waived" tests under CLIA and may be performed in physician office laboratories as well as by patients in their homes with minimal regulatory oversight. Other tests meeting certain FDA criteria also may be classified as "waived" for CLIA purposes. The FDA has regulatory responsibility over instruments, test kits, reagents and other devices used by clinical laboratories, and it has taken responsibility from the U.S. Centers for Disease Control and Prevention for classifying the complexity of tests for CLIA purposes. Increased approval of "waived" test kits could lead to increased testing by physicians in their offices or by patients at home, which could affect the Company's market for laboratory testing services and negatively impact its revenues.

Healthcare reform and changes to related products (e.g., health insurance exchanges), changes in government payment and reimbursement systems, or changes in payer mix, including an increase in capitated reimbursement mechanisms and evolving delivery models, could have a material adverse effect on the Company's net revenues, profitability and cash flow.

LCD's testing services are billed to MCOs, Medicare, Medicaid, physicians and physician groups, hospitals, patients and employer groups. Most testing services are billed to a party other than the physician or other authorized person who ordered the test. Increases in the percentage of services billed to government and MCOs could have an adverse effect on the Company's net revenues.

The Company serves many MCOs. These organizations have different contracting philosophies, which are influenced by the design of their products. Some MCOs contract with a limited number of clinical laboratories and engage in direct negotiation of rates. Other MCOs adopt broader networks with generally uniform fee structures for participating clinical laboratories. In some cases, those fee structures are specific to independent clinical laboratories, while the fees paid to hospital-based and physician-office laboratories may be different, and are typically higher. MCOs may also offer Managed Medicare or Managed Medicaid plans. In addition, some MCOs use capitation rates to fix the cost of laboratory testing services for their enrollees. Under a capitated reimbursement arrangement, the clinical laboratory receives a per-member, per-month payment for an agreed upon menu of laboratory tests provided to MCO members during the month, regardless of the number of tests performed.

Capitation shifts the risk of increased test utilization (and the underlying mix of testing services) to the commercial laboratory provider. The Company makes significant efforts to obtain adequate compensation for its services in its capitated arrangements. For the year ended December 31, 2018, such capitated contracts accounted for approximately \$279.3 million, or 4.0%, of LCD's revenues.

The Company's ability to attract and retain MCOs is critical given the impact of healthcare reform, related products and expanded coverage (e.g. health insurance exchanges and Medicaid expansion) and evolving value-based care and risk-based reimbursement delivery models (e.g., accountable care organizations (ACOs) and Independent Physician Associations (IPAs)).

A portion of the managed care fee-for-service revenues is collectible from patients in the form of deductibles, coinsurance and copayments. As patient cost-sharing has been increasing, the Company's collections may be adversely impacted.

In addition, Medicare and Medicaid and private insurers have increased their efforts to control the cost, utilization and delivery of healthcare services, including commercial laboratory services. Measures to regulate healthcare delivery in general, and clinical laboratories in particular, have resulted in reduced prices, added costs and decreased test utilization for the commercial laboratory industry by increasing complexity and adding new regulatory and administrative requirements. Pursuant to legislation passed in late 2003, the percentage of Medicare beneficiaries enrolled in Managed Medicare plans has increased. The percentage of Medicaid beneficiaries enrolled in Managed Medicaid plans has also increased, and is expected to continue to increase; however, changes to, or repeal of, the Patient Protection and Affordable Care Act (ACA) may continue to affect coverage, reimbursement, and utilization of laboratory services, as well as administrative requirements, in ways that are currently unpredictable. Further healthcare reform could adversely affect laboratory reimbursement from Medicare, Medicaid or commercial carriers.

The Company also experienced delays in the pricing and implementation of new molecular pathology codes among various payers, including Medicaid, Medicare and commercial carriers. While some delays were expected, several non-commercial payers required an extended period of time to price key molecular codes, and a number of those payers, mostly government entities, indicated that they would no longer pay for tests that they had previously covered. These issues (particularly payer policy changes) and changes in coverage had a negative impact on revenue, revenue per requisition, and margins and cash flows in 2014 through 2018, and are expected to have a continuing negative impact. Similarly, the Clinical Laboratory Fee Schedule (CLFS) coding and billing changes related to toxicology and other procedures were implemented in 2016 and 2017. The Company experienced delays in the pricing and implementation of the new toxicology codes; however, the Company largely overcame issues related to price and margins through direct negotiation with the associated payers. Limited coding and billing changes related to other procedure types were implemented in 2018, and further changes are expected to be implemented in 2019. The Company expects some continued delays in the pricing and implementation of these new codes.

In addition, some MCOs are implementing, directly or through third parties, various types of laboratory benefit management programs that may include lab networks, utilization management tools (such as prior authorization and/or prior notification), and claims edits, which may impact coverage or reimbursement for commercial laboratory tests. Some of these programs address commercial laboratory testing broadly, while others are focused on molecular and genetic testing.

The Company expects the efforts to impose reduced reimbursement, more stringent payment policies, and utilization and cost controls by government and other payers to continue. If LCD cannot offset additional reductions in the payments it receives for its services by reducing costs, increasing test volume, and/or introducing new services and procedures, it could have a material adverse effect on the Company's net revenues, profitability and cash flows. In 2014, Congress passed PAMA, requiring Medicare to change the way payment rates are calculated for tests paid under the CLFS, and to base the payment on the weighted median of rates paid by private payers. On June 23, 2016, CMS issued a final rule to implement PAMA that required applicable laboratories, including LCD, to begin reporting their test-specific private payer payment amounts to CMS during the first quarter of 2017. CMS exercised enforcement discretion to permit reporting for an additional 60 days, through May 30, 2017. CMS used that private market data to calculate weighted median prices for each test (based on applicable current procedural technology (CPT) codes) to represent the new CLFS rates beginning in 2018, subject to certain phase-in limits. For 2018-2020, a test price cannot be reduced by more than 10.0% per year; for 2021-2023, a test price cannot be reduced by more than 15.0% per year. The process of data reporting and repricing will be repeated every three years for Clinical Diagnostic Laboratory Tests (CDLTs). The second data reporting period for CDLTs will occur during the first quarter of 2020, and new CLFS rates for CDLTs will be established based on that data beginning in 2021, subject to the previously described phase-in limits for 2021-2023. The third data reporting period for CDLTs will occur during the first quarter of 2023, and new CLFS rates for CDLTs will be established based on that data beginning in 2024. CLFS rates for 2024 and subsequent periods will not be subject to phase-in limits. CLFS rates for Advanced Diagnostic Laboratory Tests (ADLTs) will be updated annually. CMS published its initial proposed CLFS rates under PAMA for 2018-2020 on September 22, 2017. Following a public comment period, CMS made adjustments and published final CLFS rates for 2018-2020 on November 17, 2017, with additional adjustments published on December 1, 2017. For 2018, the Company realized a net reduction in reimbursement of approximately \$70.0 million from all payers affected by the CLFS. Unless further implementation of PAMA is delayed or changed, an additional reduction of approximately \$115 million is expected for 2019, from all payers affected by the CLFS. The Company supports the efforts of the American Clinical Laboratory Association (ACLA) to work with Congress on potential legislative reform of PAMA, which if enacted could reduce the negative impact of PAMA as implemented by CMS.

Healthcare reform legislation also contains numerous regulations that will require the Company, as an employer, to implement significant process and record-keeping changes to be in compliance. These changes increase the cost of providing healthcare coverage to employees and their families. Given the limited release of regulations to guide compliance, as well as potential changes to the ACA, the exact impact to employers, including the Company, is uncertain.

Changes in government regulation or in practices relating to the biopharmaceutical industry could decrease the need for certain services that Covance Drug Development (CDD) provides.

CDD assists biopharmaceutical companies in navigating the regulatory drug approval process. Changes in regulations such as a relaxation in regulatory requirements or the introduction of simplified drug approval procedures, or an increase in regulatory requirements that CDD has difficulty satisfying or that make its services less competitive, could eliminate or substantially reduce the demand for its services. Also, if government efforts to contain drug costs impact biopharmaceutical company profits from new drugs, or if health insurers were to change their practices with respect to reimbursement for biopharmaceutical products, some of CDD's customers may spend less, or reduce their growth in spending on R&D.

On December 13, 2016, the 21st Century Cures Act was signed into law. This Act provides funding designed to increase government spending on certain drug development initiatives; contains several provisions designed to help make the drug development process more streamlined and efficient; and allows the FDA to increase staffing to support drug development, review and regulation. These provisions should be helpful to biopharmaceutical companies and contract research organizations (CROs), including CDD, to the extent that they capitalize on the use of data, adaptive trial designs, real-world evidence, biomarkers and other development tools that are accepted by the FDA.

In addition, implementation of healthcare reform legislation that adds costs could limit the profits that can be made from the development of new drugs. This could adversely affect R&D expenditures by biopharmaceutical companies, which could in turn decrease the business opportunities available to CDD both in the U.S. and other countries. New laws or regulations may create a risk of liability, increase CDD costs or limit service offerings through CDD.

Failure to comply with the regulations of drug regulatory agencies, such as the FDA, the Medicines and Healthcare products Regulatory Agency in the United Kingdom (U.K.), the European Medicines Agency, the China Food and Drug Administration, and the Pharmaceuticals and Medical Devices Agency in Japan, could result in sanctions and/or remedies against CDD and have a material adverse effect upon the Company.

The operation of CDD's preclinical laboratory facilities and clinical trial operations must conform to good laboratory practice (GLP) and good clinical practice (GCP), as applicable, as well as all other applicable standards and regulations, as further described in Item 1 of Part I of this report. The business operations of CDD's clinical and preclinical laboratories also require the import, export and use of medical devices, in vitro diagnostic devices, reagents, and human and animal biological products. Such activities are subject to numerous applicable local and international regulations with which CDD must comply. If CDD does not comply, CDD could potentially be subject to civil, criminal or administrative sanctions and/or remedies, including suspension of its ability to import or export to or from certain countries, which could have a material adverse effect upon the Company.

Additionally, certain CDD services and activities must conform to current good manufacturing practice (cGMP), as further described in Item 1 of Part I of this report. Failure to maintain compliance with GLP, GCP, or cGMP regulations and other applicable requirements of various regulatory agencies could result in warning or untitled letters, fines, unanticipated compliance expenditures, suspension of manufacturing, and civil, criminal or administrative sanctions and/or remedies against CDD, including suspension of its laboratory operations, which could have a material adverse effect upon the Company.

Increased competition, including price competition, could have a material adverse effect on the Company's revenues and profitability.

As further described in Item 1 of Part I of this report, both LCD and CDD operate in highly competitive industries. The commercial laboratory business is intensely competitive both in terms of price and service. Pricing of laboratory testing services is often one of the most significant factors used by physicians, third-party payers and consumers in selecting a laboratory. As a result of significant consolidation in the commercial laboratory industry, larger commercial laboratory providers are able to increase cost efficiencies afforded by large-scale automated testing. This consolidation results in greater price competition. LCD may be unable to increase cost efficiencies sufficiently, if at all, and as a result, its net earnings and cash flows could be negatively impacted by such price competition. The Company may also face increased competition from companies that do not comply with existing laws or regulations or otherwise disregard compliance standards in the industry. Additionally, the Company may also face changes in fee schedules, competitive bidding for laboratory services, or other actions or pressures reducing payment schedules as a result of increased or additional competition.

Competitors in the CRO industry range from hundreds of smaller CROs to a limited number of large CROs with global capabilities. CDD's main competition consists of these small and large CROs, as well as in-house departments of biopharmaceutical companies and, to a lesser extent, select universities and teaching hospitals. CDD's services have from time to time experienced periods of increased price competition that had an adverse effect on a segment's profitability and consolidated net revenues and net income. There is competition among CROs for both customers and potential acquisition candidates. Additionally, few barriers to entering the CRO industry further increases possible new competition.

These competitive pressures may affect the attractiveness or profitability of LCD's and CDD's services, and could adversely affect the financial results of the Company.

Failure to obtain and retain new customers, the loss of existing customers or material contracts, or a reduction in services or tests ordered or specimens submitted by existing customers, or the inability to retain existing and/or create new relationships with health systems could impact the Company's ability to successfully grow its business.

To maintain and grow its business, the Company needs to obtain and retain new customers and business partners. In addition, a reduction in tests ordered or specimens submitted by existing customers, a decrease in demand for the Company's services from existing customers, or the loss of existing contracts, without offsetting growth in its customer base, could impact the Company's ability to successfully grow its business and could have a material adverse effect on the Company's net revenues and profitability. The Company competes primarily on the basis of the quality of services, reporting and information systems, reputation in the medical community and the drug development industry, the pricing of services and ability to employ qualified personnel. The Company's failure to successfully compete on any of these factors could result in the loss of existing customers, an inability to gain new customers and a reduction in the Company's business.

Continued and increased consolidation of MCOs, biopharmaceutical companies, health systems, physicians and other customers could adversely affect the Company's business.

Many healthcare companies and providers, including MCOs, biopharmaceutical companies, health systems and physician practices are consolidating through mergers, acquisitions, joint ventures and other types of transactions and collaborations. In addition to these more traditional horizontal mergers that involve entities that previously competed against each other, the healthcare industry is experiencing an increase in vertical mergers, which involve entities that previously did not offer competing goods or services. As the healthcare industry consolidates, competition to provide goods and services may become more intense, and vertical mergers may give those combined companies greater control over more aspects of healthcare, including increased bargaining power. This competition and increased customer bargaining power may adversely affect the price and volume of the Company's services.

In addition, as the broader healthcare industry trend of consolidation continues, including the acquisition of physician practices by health systems, relationships with hospital-based health systems and integrated delivery networks are becoming more important. LCD has a well-established base of relationships with those systems and networks, including collaborative agreements. LCD's inability to retain its existing relationships with those physicians as they become part of healthcare systems and networks and/or to create new relationships could impact its ability to successfully grow its business.

Services performed by LCD's former nutritional chemistry and food safety business and future developments of point-of-production testing could expose the Company to various risks, including liability for errors and omissions in work conducted for LCD customers.

Until the sale of its Covance Food Solutions (CFS) business effective August 1, 2018, LCD offered a range of product-development and product-integrity services to food and beverage manufacturers and retailers, industry organizations and academic institutions. These services exposed the Company to many of the same, or similar, risks that are applicable to other business activities of the Company, including with respect to the operations of its facilities and compliance with applicable laws and regulations. The agricultural, food, beverage and dietary supplement industries face increasing regulatory requirements, including regulations issued under the Food Safety Modernization Act. With these enhanced requirements on the Company's customers, there is an increased risk that errors in or omissions from nutritional analysis and food safety tests previously conducted by the Company for its former customers could result in liability for the Company under customer contracts. LCD is also exploring the possibility of developing point-of-production testing for food safety, and these services could expose the Company to similar risks.

Changes or disruption in services or supplies provided by third parties, including transportation, could adversely affect the Company's business.

The Company depends on third parties to provide services critical to the Company's business. Although the Company has a significant proprietary network of ground and air transport capabilities, certain of the Company's businesses are heavily reliant on third-party ground and air travel for transport of clinical trial and diagnostic testing supplies and specimens, research products, and people. A significant disruption to these travel systems, or the Company's access to them, could have a material adverse effect on the Company's business. The Company is also reliant on an extensive network of third-party suppliers and vendors of certain services and products, including for certain animal populations. Disruptions to the continued supply of these services, products, or animal populations may arise from export/import restrictions or embargoes, political or economic instability, pressure from animal rights activists, adverse weather, natural disasters, transportation disruptions, or other causes. Disruption of supply could have a material adverse effect on the Company's business.

Damage or disruption to the Company's facilities could adversely affect the Company's business.

Many of the Company's facilities could be difficult to replace in a short period of time. Any event that causes a disruption of the operation of these facilities might impact the Company's ability to provide service to customers and, therefore, could have a material adverse effect on the Company's financial condition, results of operations and cash flows.

The Company bears financial risk for contracts that, for reasons beyond the Company's control, may be underpriced, subject to cost overruns, delayed, or terminated or reduced in scope.

The Company has many contracts that are structured as fixed-price for fixed-contracted services or fee-for-service with a cap. The Company bears the financial risk if these contracts are underpriced or if contract costs exceed estimates. Such underpricing or significant cost overruns could have an adverse effect on the Company's business, results of operations, financial condition and cash flows.

Many of CDD's contracts, in particular, provide for services on a fixed-price or fee-for-service with a cap basis and they may be terminated or reduced in scope either immediately or upon notice. Cancellations may occur for a variety of reasons, including:

- Failure of products to satisfy safety requirements;
- Unexpected or undesired results of the products;
- Insufficient clinical trial subject enrollment;
- Insufficient investigator recruitment;
- A customer's decision to terminate the development of a product or to end a particular study; and
- CDD's failure to perform its duties properly under the contract.

Although its contracts often entitle it to receive the costs of winding down the terminated projects, as well as all fees earned up to the time of termination, the loss, reduction in scope or delay of a large contract or the loss, delay or conclusion of multiple contracts could materially adversely affect CDD.

Contract research services in the drug development industry create liability risks.

In contracting to work on drug development trials and studies, CDD faces a range of potential liabilities, including:

- Errors or omissions that create harm to clinical trial subjects during a trial or to consumers of a drug after the trial is completed and regulatory approval of the drug has been granted;
- General risks associated with clinical pharmacology facilities, including negative consequences from the administration of drugs to clinical trial participants or the professional malpractice of clinical pharmacology physicians;
- Risks that animals in CDD's breeding facilities may be infected with diseases that may be harmful and even lethal to themselves and humans despite preventive measures contained in CDD's business policies, including those for the quarantine and handling of imported animals; and
- Errors and omissions during a trial that may undermine the usefulness of a trial or data from the trial or study or may delay the entry of a drug to the market.

CDD contracts with physicians, also referred to as investigators, to conduct the clinical trials to test new drugs on clinical trial subjects. These tests can create a risk of liability for personal injury or death to clinical trial subjects resulting from negative reactions to the drugs administered or from professional malpractice by third party investigators.

While CDD endeavors to include in its contracts provisions entitling it to be indemnified and entitling it to a limitation of liability, these provisions do not uniformly protect CDD against liability arising from certain of its own actions. CDD could be materially and adversely affected if it were required to pay damages or bear the costs of defending any claim that is not covered by a contractual indemnification provision, or in the event that a party which must indemnify it does not fulfill its indemnification obligations, or in the event that CDD is not successful in limiting its liability or in the event that the damages and costs exceed CDD's insurance coverage. There can be no assurance that CDD will be able to maintain sufficient insurance coverage on acceptable terms.

Adverse results in material litigation matters could have a material adverse effect upon the Company's business.

The Company may become subject in the ordinary course of business to material legal actions related to, among other things, intellectual property disputes, contract disputes, data and privacy issues, professional liability and employee-related matters. The Company may also receive inquiries and requests for information from governmental agencies and bodies, including Medicare or Medicaid payers, requesting comment and/or information on allegations of billing irregularities, billing and pricing arrangements, or privacy practices that are brought to their attention through audits or third parties. Legal actions could result in substantial monetary damages as well as damage to the Company's reputation with customers, which could have a material adverse effect upon its business.

The Company's quarterly operating results may vary.

The Company's operating results, particularly for CDD, may vary significantly from quarter to quarter and are influenced by factors over which the Company has little control, such as:

- Changes in the general global economy;
- Exchange rate fluctuations;
- The commencement, completion, delay or cancellation of large projects or groups of projects;
- The progress of ongoing projects;
- The timing of and charges associated with completed acquisitions or other events; and
- Changes in the mix of the Company's services.

The Company believes that operating results for any particular quarter are not necessarily a meaningful indication of future results. While fluctuations in the Company's quarterly operating results could negatively or positively affect the market price of the Company's common stock, these fluctuations may not be related to the Company's future overall operating performance.

The failure to successfully obtain, maintain and enforce intellectual property rights and defend against challenges to the Company's intellectual property rights could adversely affect the Company.

Many of the Company's services, products and processes rely on intellectual property, including patents, copyrights, trademarks and trade secrets. In some cases, that intellectual property is owned by another party and licensed to the Company, sometimes exclusively. The value of the Company's intellectual property relies in part on the Company's ability to maintain its proprietary rights to such intellectual property. If the Company is unable to obtain or maintain the proprietary rights to its intellectual property, if it is unable to prevent attempted infringement against its intellectual property, or if it is unable to defend against claims that it is infringing on another party's intellectual property, the Company could be adversely affected. These adverse effects could include the Company having to abandon, alter and/or delay the deployment of products, services or processes that rely on such intellectual property; having to procure and pay for licenses from the holders of intellectual property rights that the Company seeks to use; and having to pay damages, fines, court costs and attorney's fees in connection with intellectual property litigation.

CDD's revenues depend on the biopharmaceutical industry.

CDD's revenues depend greatly on the expenditures made by the biopharmaceutical industry in R&D. In some instances, biopharmaceutical companies are reliant on their ability to raise capital in order to fund their R&D projects. Biopharmaceutical companies are also reliant on reimbursement for their products from government programs and commercial payers. Accordingly, economic factors and industry trends affecting CDD's customers in these industries may also affect CDD. If these companies were to reduce the number of R&D projects they conduct or outsource, whether through the inability to raise capital, reductions in reimbursement from governmental programs or commercial payers, industry trends, economic conditions or otherwise, CDD could be materially adversely affected.

Actions of animal rights activists may have an adverse effect on the Company.

CDD's preclinical services utilize animals in preclinical testing of the safety and efficacy of drugs. Such activities are required for the development of new medicines and medical devices under regulatory regimes in the U.S., Europe, Japan and other countries. CDD also breeds and sells animals for biomedical research. Acts of vandalism and other acts by animal rights activists who object to the use of animals in drug development could have an adverse effect on the Company.

Animal populations may suffer diseases that can damage CDD's inventory, harm its reputation, result in decreased sales of research products or result in other liability.

It is important that research products be free of diseases, including infectious diseases. The presence of diseases can distort or compromise the quality of research results, cause loss of animals in CDD's inventory, result in harm to humans or outside animal populations if the disease is not contained to animals in inventory, or result in other losses. Such results could harm CDD's reputation or have an adverse effect on CDD's financial condition, results of operations, and cash flows.

Failure to conduct animal research in compliance with animal welfare laws and regulations could result in sanctions and/or remedies against CDD and have a material adverse effect upon the Company.

The conduct of animal research at CDD's facilities must be in compliance with applicable laws and regulations in the jurisdictions in which those activities are conducted. These laws and regulations include the U.S. Animal Welfare Act (AWA), which governs the care and use of warm-blooded animals for research in the U.S. other than laboratory rats, mice and chickens, and is enforced through periodic inspections by the U.S. Department of Agriculture (USDA). The AWA establishes facility standards regarding several aspects of animal welfare, including housing, ventilation, lighting, feeding and watering, handling, veterinary care and recordkeeping. Similar laws and regulations apply in other jurisdictions in which CDD conducts animal research, including the European Union (E.U.) and China. CDD complies with licensing and registration requirement standards

set by these laws and regulations in the jurisdictions in which it conducts animal research. If an enforcement agency determines that CDD's equipment, facilities, laboratories or processes do not comply with applicable standards, it may issue an inspection report documenting the deficiencies and setting deadlines for any required corrective actions. For noncompliance, the agency may take action against CDD that may include fines, suspension and/or revocation of animal research licenses, or confiscation of research animals.

An inability to attract and retain experienced and qualified personnel could adversely affect the Company's business.

The loss of key management personnel or the inability to attract and retain experienced and qualified employees at the Company's clinical laboratories and drug development facilities could adversely affect the business. The success of the Company is dependent in part on the efforts of key members of its management team. Success in maintaining the Company's leadership position in genomic and other advanced testing technologies and in drug development will depend in part on the Company's ability to attract and retain skilled research professionals. In addition, the success of the Company's clinical laboratories also depends on employing and retaining qualified and experienced laboratory professionals, including specialists, who perform commercial laboratory testing services. In the future, if competition for the services of these professionals increases, the Company may not be able to continue to attract and retain individuals in its markets. The Company's revenues and earnings could be adversely affected if a significant number of professionals terminate their relationship with the Company or become unable or unwilling to continue their employment.

Unionization of employees, union strikes, work stoppages or failure to comply with labor or employment laws could adversely affect the Company's operations and have a material adverse effect upon the Company's business.

The Company is a party to a limited number of collective bargaining agreements with various labor unions and is subject to employment and labor laws and unionization activity in the U.S. and other countries in which it conducts business. Disputes with regard to the terms of these agreements, potential inability to negotiate acceptable contracts with these unions, unionization activity, or a failure to comply with labor or employment laws could result in, among other things, labor unrest, strikes, work stoppages, slowdowns by the affected workers, fines and penalties. If any of these events were to occur, or other employees were to become unionized, the Company could experience a significant disruption of its operations or higher ongoing labor costs, either of which could have a material adverse effect upon the Company's business. Additionally, future labor agreements, or renegotiation of labor agreements or provisions of labor agreements, or changes in labor or employment laws, could compromise its service reliability and significantly increase its costs, which could have a material adverse effect upon the Company's business. Also, the Company may incur substantial additional costs and become subject to litigation and enforcement actions if the Company fails to comply with legal requirements affecting its workforce and labor practices, including laws and regulations relating to wage and hour practices and unlawful workplace harassment and discrimination.

A significant increase in LCD's or CDD's days sales outstanding could have an adverse effect on the Company's business, including its cash flow, by increasing its bad debt or decreasing its cash flow.

Billing for laboratory services is a complex process. Laboratories bill many different payers, including doctors, patients, hundreds of insurance companies, Medicare, Medicaid and employer groups, all of which have different billing requirements. In addition to billing complexities, LCD has experienced an increase in patient responsibility as a result of managed care fee-for-service plans that continue to increase patient deductibles, coinsurance and copayments, or implement restrictive coverage policies that can further increase patient costs. LCD expects this trend to continue. A material increase in LCD's days sales outstanding level could have an adverse effect on the Company's business, including potentially increasing its bad debt rate and decreasing its cash flows. Although CDD does not face the same level of complexity in its billing processes, it could also experience delays in billing or collection, and a material increase in CDD's days sales outstanding could have an adverse effect on the Company's business, including potentially decreasing its cash flows.

Failure in the Company's information technology systems or delays or failures in the development and implementation of updates or enhancements to those systems could significantly increase testing turnaround time or delay billing processes and otherwise disrupt the Company's operations or customer relationships.

The Company's operations and customer relationships depend, in part, on the continued performance of its information technology systems. Despite network security measures and other precautions the Company has taken, its information technology systems are potentially vulnerable to physical or electronic break-ins, computer viruses and similar disruptions. In addition, the Company is in the process of integrating the information technology systems of its recently acquired subsidiaries, and the Company may experience system failures or interruptions as a result of this process. Sustained system failures or interruption of the Company's systems in one or more of its operations could disrupt the Company's ability to process laboratory requisitions, perform testing, provide test results or drug development data in a timely manner and/or bill the appropriate party. Failure of the Company's information technology systems could adversely affect the Company's business, profitability and financial condition.

Hardware and software failures, delays in the operation of computer and communications systems, the failure to implement new systems or system enhancements to existing systems, and cyber security breaches may harm the Company.

The Company's success depends on the efficient and uninterrupted operation of its computer and communications systems. A failure of the network or data-gathering procedures could impede the processing of data, delivery of databases and services, customer orders and day-to-day management of the business and could result in the corruption or loss of data. While certain operations have appropriate disaster recovery plans in place, there currently are not redundant facilities everywhere in the world to provide information technology capacity in the event of a system failure. Despite any precautions the Company may take, damage from fire, floods, hurricanes, power loss, telecommunications failures, computer viruses, break-ins, cybersecurity breaches and similar events at the Company's various computer facilities could result in interruptions in the flow of data to the servers and from the servers to customers. In addition, any failure by the computer environment to provide required data communications capacity could result in interruptions in service. In the event of a delay in the delivery of data, the Company could be required to transfer data collection operations to an alternative provider of server-hosting services. Such a transfer could result in delays in the ability to deliver products and services to customers. Additionally, significant delays in the planned delivery of system enhancements, or improvements and inadequate performance of the systems once they are completed could damage the Company's reputation and harm the business.

Security breaches and unauthorized access to the Company's or its customers' data could harm the Company's reputation and adversely affect its business.

The Company has experienced and expects to continue to experience attempts by computer programmers and hackers to attack and penetrate the Company's layered security controls, like the 2018 ransomware attack. These attempts, if successful, could result in the misappropriation or compromise of personal information or proprietary or confidential information stored within the Company's systems, create system disruptions or cause shutdowns. External actors may be able to develop and deploy viruses, worms and other malicious software programs that attack the Company's systems or otherwise exploit any security vulnerabilities. Outside parties may also attempt to fraudulently induce employees to take actions, including the release of confidential or sensitive information or to make fraudulent payments through illegal electronic spamming, phishing, spear phishing, or other tactics. Although the Company has robust information security procedures and other safeguards in place, which are monitored and routinely tested internally and by external parties, because the techniques used to obtain unauthorized access, disable or degrade service, or sabotage systems change frequently and often are not recognized until launched against a target, the Company may be unable to anticipate all of these techniques or to implement adequate preventive measures. In addition, as cyber threats continue to evolve, the Company may be required to expend additional resources to continue to enhance the Company's information security measures or to investigate and remediate any information security vulnerabilities. The Company's remediation efforts may not be successful and could result in interruptions, delays or cessation of service. This could also impact the cost and availability of cyber insurance to the Company. Breaches of the Company's security measures and the unauthorized dissemination of personal, proprietary or confidential information about the Company or its customers or other third-parties could expose customers' private information. Such breaches could expose customers to the risk of financial or medical identity theft or expose the Company or other third-parties to a risk of loss or misuse of this information, result in litigation and potential liability for the Company, damage the Company's brand and reputation or otherwise harm the Company's business. Any of these disruptions or breaches of security could have a material adverse effect on the Company's business, regulatory compliance, financial condition and results of operations.

Operations may be disrupted and adversely impacted by the effects of natural disasters such as adverse weather and earthquakes, acts of terrorism, or other criminal activities, or disease pandemics.

Natural disasters may result in a temporary decline of volumes in both segments. In addition, such events may temporarily interrupt the Company's ability to transport specimens, the Company's ability to efficiently commence studies, the Company's information technology systems, the Company's ability to utilize certain laboratories, and/or the Company's ability to receive material from its suppliers. Significant weather conditions can affect customer operations and thereby impact testing volume. In addition, long-term disruptions in the infrastructure caused by disease pandemics, the outbreak of war, the escalation of hostilities or acts of terrorism (particularly involving locations in which the Company has operations) could adversely affect business operations.

A significant deterioration in the economy could negatively impact testing volumes, drug development services, cash collections and the availability of credit.

The Company's operations are dependent upon ongoing demand for diagnostic testing and drug development services by patients, physicians, hospitals, MCOs, biopharmaceutical companies and others. A significant downturn in the economy could negatively impact the demand for diagnostic testing and drug development services, as well as the ability of customers to pay for services rendered. In addition, uncertainty in the credit markets could reduce the availability of credit and impact the Company's ability to meet its financing needs in the future.

Foreign currency exchange fluctuations could have an adverse effect on the Company's business.

The Company has business and operations outside the U.S., and CDD derives a significant portion of its net revenues from international operations. Since the Company's consolidated financial statements are denominated in U.S. dollars, fluctuations in exchange rates from period to period will have an impact on reported results. In addition, CDD may incur costs in one currency related to its services or products for which it is paid in a different currency. As a result, factors associated with international operations, including changes in foreign currency exchange rates, could significantly affect CDD's results of operations, financial condition and cash flows.

The Company's international operations could subject it to additional risks and expenses that could adversely impact the business or results of operations.

The Company's international operations expose it to risks from failure to comply with foreign laws and regulations that differ from those under which the Company operates in the U.S. In addition, the Company may be adversely affected by other risks of expanded operations in foreign countries, including, but not limited to, changes in reimbursement by foreign governments for services provided by the Company; compliance with export controls and trade regulations; changes in tax policies or other foreign laws; compliance with foreign labor and employee relations laws and regulations; restrictions on currency repatriation; judicial systems that less strictly enforce contractual rights; countries that do not have clear or well-established laws and regulations concerning issues relating to commercial laboratory testing or drug development services; countries that provide less protection for intellectual property rights; and procedures and actions affecting approval, production, pricing, reimbursement and marketing of products and services. Further, international operations could subject the Company to additional expenses that the Company may not fully anticipate, including those related to enhanced time and resources necessary to comply with foreign laws and regulations, difficulty in collecting accounts receivable and longer collection periods, and difficulties and costs of staffing and managing foreign operations. In some countries, the Company's success will depend in part on its ability to form relationships with local partners. The Company's inability to identify appropriate partners or reach mutually satisfactory arrangements could adversely affect the business and operations.

Expanded international operations may increase the Company's exposure to liabilities under the anti-corruption laws.

Anti-corruption laws in the countries where the Company conducts business, including the U.S. Foreign Corrupt Practices Act (FCPA), U.K. Bribery Act, and similar laws in other jurisdictions, prohibit companies and their intermediaries from engaging in bribery including improperly offering, promising, paying or authorizing the giving of anything of value to individuals or entities for the purpose of corruptly obtaining or retaining business. The Company operates in some parts of the world where corruption may be common and where anti-corruption laws may conflict to some degree with local customs and practices. The Company maintains an anti-corruption program including policies, procedures and training and safeguards in the engagement and management of third parties acting on the Company's behalf. Despite these safeguards, the Company cannot guarantee protection from corrupt acts committed by employees or third parties associated with the Company. Violations or allegations of violations of anti-corruption laws could have a significant adverse effect on the business or results of operations.

Changes in tax laws and regulations or the interpretation of such may have a significant impact on the financial position, results of operations and cash flows of the Company.

U.S. and foreign governments continue to review, reform and modify tax laws, including with respect to the Organisation for Economic Co-operation and Development's base erosion and profit shifting initiative. Changes in tax laws and regulations could result in material changes to the domestic and foreign taxes that the Company is required to provide for and pay.

In addition, the Company is subject to regular audits with respect to its various tax returns and processes in the jurisdictions in which it operates. Errors or omissions in tax returns, process failures or differences in interpretation of tax laws by tax authorities and the Company may lead to litigation, payments of additional taxes, penalties and interest.

On December 22, 2017, the U.S. Tax Cuts and Jobs Act (TCJA) was passed into law. The TCJA has given rise to significant one-time and ongoing changes to the taxes recognized and paid by the Company, and the full impact of the changes may only become fully understood over time.

A failure to identify and successfully close and integrate strategic acquisition targets could have a material adverse effect on the Company's business objectives and its net revenues and profitability.

Part of the Company's strategy involves deploying capital in investments that enhance the Company's business, which includes pursuing strategic acquisitions to strengthen the Company's scientific capabilities and enhance therapeutic expertise, enhance esoteric testing and global drug development capabilities, and increase presence in key geographic areas. Since 2014, the Company has invested net cash of approximately \$6.4 billion and equity of \$1.8 billion in strategic business acquisitions. However, the Company cannot assure that it will be able to identify acquisition targets that are attractive to the Company or that are of a large enough size to have a meaningful impact on the Company's operating results. Furthermore, the successful closing and integration

of a strategic acquisition entails numerous risks, including, among others:

- Failure to obtain regulatory clearance, including due to antitrust concerns;
- Loss of key customers or employees;
- Difficulty in consolidating redundant facilities and infrastructure and in standardizing information and other systems;
- Unidentified regulatory problems;
- Failure to maintain the quality of services that such companies have historically provided;
- Coordination of geographically separated facilities and workforces; and
- Diversion of management's attention from the day-to-day business of the Company.

The Company cannot assure that current or future acquisitions, if any, or any related integration efforts will be successful, or that the Company's business will not be adversely affected by any future acquisitions, including with respect to net revenues and profitability. Even if the Company is able to successfully integrate the operations of businesses that it may acquire in the future, the Company may not be able to realize the benefits that it expects from such acquisitions.

The Company's level of indebtedness could adversely affect the Company's liquidity, results of operations and business.

At December 31, 2018, indebtedness on the Company's outstanding Senior Notes totaled approximately \$5,500.0 million in aggregate principal. The Company is also a party to credit agreements relating to a \$1.0 billion revolving credit facility and a 2017 term loan with a balance of \$527.0 million as of December 31, 2018. Under the term loan facility and the revolving credit facility, the Company is subject to negative covenants limiting subsidiary indebtedness and certain other covenants typical for investment-grade-rated borrowers, and the Company is required to maintain a leverage ratio within certain limits.

The Company's level of indebtedness could adversely affect its business. In particular, it could increase the Company's vulnerability to sustained, adverse macroeconomic weakness, limit its ability to obtain further financing, and limit its ability to pursue certain operational and strategic opportunities, including large acquisitions.

The Company may also enter into additional transactions or credit facilities, including other long-term debt, which may increase its indebtedness and result in additional restrictions upon the business. In addition, major debt rating agencies regularly evaluate the Company's debt based on a number of factors. There can be no assurance that the Company will be able to maintain its existing debt ratings, and failure to do so could adversely affect the Company's cost of funds, liquidity and access to capital markets.

Global economic conditions and government and regulatory changes, including, but not limited to, the U.K.'s pending exit from the European Union (E.U.) could adversely impact the Company's business and results of operations.

The Company could be adversely impacted due to the consequences of changes in the economy, governments or regulations across the globe. In June 2016, a majority of voters in the U.K. elected to withdraw from the E.U. (often referred to as Brexit) in a national referendum. Although the referendum was advisory, the current U.K. government is abiding by the referendum and is in negotiations to withdraw from the E.U. in the near future. The terms of any withdrawal and future relations between the E.U. and the U.K. are not yet determined. While it appears that E.U. laws and regulations will continue to apply in the U.K. until the withdrawal is completed, it is difficult to anticipate how the clinical trial landscape in the U.K. might change in the next several years.

This type of development or other government or regulatory change could depress economic activity, which could adversely impact the Company's business, financial condition and results of operations. This could include long-term volatility in the currency markets and long-term detrimental effects on the value of affected currencies.

The Company's uses of financial instruments to limit its exposure to interest rate and currency fluctuations could expose it to risks and financial losses that may adversely affect the Company's financial condition, liquidity and results of operations.

To reduce the Company's exposure to interest rate fluctuations and currency exchange fluctuations, it has entered into, and in the future may enter into for these or other purposes, financial swaps, or hedging arrangements, with various financial counterparties. In addition to any risks related to the counterparties, there can be no assurances that the Company's hedging activity will be effective in insulating it from the risks associated with the underlying transactions, that the Company would not have been better off without entering into these hedges, or that the Company will not have to pay additional amounts upon settlement.

Item 1B. UNRESOLVED STAFF COMMENTS

None.

Item 2. PROPERTIES

The Company's corporate headquarters are located in Burlington, North Carolina, and include facilities that are both owned and leased.

LabCorp Diagnostics (LCD) operates through a network of patient service centers, branches, rapid response laboratories, primary laboratories, and specialty laboratories. The table below summarizes certain information as to LCD's principal operating and administrative facilities as of December 31, 2018.

<u>Location</u>	<u>Nature of Occupancy</u>
Primary Facilities:	
Birmingham, Alabama	Leased
Phoenix, Arizona	Owned
Prescott, Arizona	Leased
Calabasas, California	Leased
Los Angeles, California	Leased
Monrovia, California	Leased
San Diego, California	Leased
San Francisco, California	Leased
Tustin, California	Leased
Englewood, Colorado	Leased
Shelton, Connecticut	Leased
Hollywood, Florida	Leased
Tampa, Florida	Leased
Tucker, Georgia	Leased
Chicago, Illinois	Leased
Itasca, Illinois	Leased
Louisville, Kentucky	Leased
Lafayette, Louisiana	Owned
Westborough, Massachusetts	Leased
Roseville, Minnesota	Leased
St. Paul, Minnesota	Owned
Kansas City, Missouri	Owned
Raritan, New Jersey	Owned
Santa Fe, New Mexico	Owned
New York, New York	Leased
Burlington, North Carolina (5)	Owned/Leased
Charlotte, North Carolina	Leased
Greensboro, North Carolina	Leased
McLeansville, North Carolina	Leased
Raleigh, North Carolina	Leased
Research Triangle Park, North Carolina (3)	Leased
Dublin, Ohio	Owned
Oklahoma City, Oklahoma	Leased
Brentwood, Tennessee	Leased
Knoxville, Tennessee	Leased
Austin, Texas	Leased
Dallas, Texas	Leased
Houston, Texas	Leased
San Antonio, Texas	Leased
Chesapeake, Virginia	Leased
Herndon, Virginia	Leased
Kennewick, Washington	Owned
Seattle, Washington	Leased
Spokane, Washington (3)	Leased
Charleston, West Virginia	Leased

Covance Drug Development (CDD) operates on a global scale. The table below summarizes certain information as to CDD's principal operating and administrative facilities as of December 31, 2018.

<u>Location</u>	<u>Nature of Occupancy</u>
Primary Facilities:	
Mechelen, Belgium	Leased
Beijing, China	Leased
Shanghai, China (3)	Owned/Leased
Muenster, Germany	Owned
Pune, India	Leased
Bangalore, India	Leased
Singapore	Leased
Geneva, Switzerland	Owned
Harrogate, United Kingdom	Owned
Leeds, United Kingdom	Owned
Maidenhead, United Kingdom	Leased
San Francisco, California	Leased
Daytona Beach, Florida	Leased
Greenfield, Indiana	Owned
Indianapolis, Indiana	Leased
Gaithersburg, Maryland	Leased
Princeton, New Jersey	Leased
Cary, North Carolina	Leased
Denver, Pennsylvania	Owned
Alice, Texas	Owned
Dallas, Texas	Leased
Chantilly, Virginia	Leased
Cumberland, Virginia	Owned
Madison, Wisconsin	Owned

All of the Company's primary laboratory and drug development facilities have been built or improved for the purpose of providing commercial laboratory testing or drug development services. The Company believes that these existing facilities and plans for expansion are suitable and adequate and will provide sufficient production capacity for the Company's currently foreseeable level of operations. The Company believes that if it were unable to renew a lease or if a lease were to be terminated on any of the facilities it presently leases, it could find alternate space at competitive market rates and readily relocate its operations to such new locations without material disruption to its operations.

Item 3. LEGAL PROCEEDINGS (dollars in millions)

The Company is involved from time to time in various claims and legal actions, including arbitrations, class actions, and other litigation (including those described in more detail below), arising in the ordinary course of business. Some of these actions involve claims that are substantial in amount. These matters include, but are not limited to, intellectual property disputes; commercial and contract disputes; professional liability; employee-related matters; and inquiries, including subpoenas and other civil investigative demands, from governmental agencies, Medicare or Medicaid payers, managed care organizations (MCOs) reviewing billing practices or requesting comment on allegations of billing irregularities that are brought to their attention through billing audits or third parties. The Company receives civil investigative demands or other inquiries from various governmental bodies in the ordinary course of its business. Such inquiries can relate to the Company or other parties, including physicians and other healthcare providers (e.g., physician assistants and nurse practitioners, generally referred to herein as physicians). The Company works cooperatively to respond to appropriate requests for information.

The Company also is named from time to time in suits brought under the *qui tam* provisions of the False Claims Act and comparable state laws. These suits typically allege that the Company has made false statements and/or certifications in connection with claims for payment from U.S., federal or state healthcare programs. The suits may remain under seal (hence, unknown to the Company) for some time while the government decides whether to intervene on behalf of the *qui tam* plaintiff. Such claims are an inevitable part of doing business in the healthcare field today.

The Company believes that it is in compliance in all material respects with all statutes, regulations and other requirements applicable to its commercial laboratory operations and drug development support services. The healthcare diagnostics and drug development industries are, however, subject to extensive regulation, and the courts have not interpreted many of the applicable statutes and regulations. Therefore, the applicable statutes and regulations could be interpreted or applied by a prosecutorial, regulatory or judicial authority in a manner that would adversely affect the Company. Potential sanctions for violation of these statutes and regulations include significant civil and criminal penalties, fines, the loss of various licenses, certificates and authorizations, additional liabilities from third-party claims, and/or exclusion from participation in government programs.

Many of the current claims and legal actions against the Company are in preliminary stages, and many of these cases seek an indeterminate amount of damages. The Company records an aggregate legal reserve, which is determined using calculations based on historical loss rates and assessment of trends experienced in settlements and defense costs. In accordance with Financial Accounting Standards Board (FASB) Accounting Standards Codification Topic 450 "Contingencies," the Company establishes reserves for judicial, regulatory, and arbitration matters outside the aggregate legal reserve if and when those matters present loss contingencies that are both probable and estimable and would exceed the aggregate legal reserve. When loss contingencies are not both probable and estimable, the Company does not establish separate reserves.

The Company is unable to estimate a range of reasonably probable loss for the proceedings described in more detail below in which damages either have not been specified or, in the Company's judgment, are unsupported and/or exaggerated and (i) the proceedings are in early stages; (ii) there is uncertainty as to the outcome of pending appeals or motions; (iii) there are significant factual issues to be resolved; and/or (iv) there are novel legal issues to be presented. For these proceedings, however, the Company does not believe, based on currently available information, that the outcomes will have a material adverse effect on the Company's financial condition, though the outcomes could be material to the Company's operating results for any particular period, depending, in part, upon the operating results for such period.

As previously reported, the Company responded to an October 2007 subpoena from the U.S. Department of Health & Human Services Office of Inspector General's regional office in New York. On August 17, 2011, the U.S. District Court for the Southern District of New York unsealed a False Claims Act lawsuit, *United States of America ex rel. NPT Associates v. Laboratory Corporation of America Holdings*, which alleges that the Company offered UnitedHealthcare kickbacks in the form of discounts in return for Medicare business. The Plaintiff's Third Amended Complaint further alleges that the Company's billing practices violated the False Claims Acts of 14 states and the District of Columbia. The lawsuit seeks actual and treble damages and civil penalties for each alleged false claim, as well as recovery of costs, attorney's fees, and legal expenses. Neither the U.S. government nor any state government has intervened in the lawsuit. The Company's Motion to Dismiss was granted in October 2014 and Plaintiff was granted the right to replead. On January 11, 2016, Plaintiff filed a motion requesting leave to file an amended complaint under seal and to vacate the briefing schedule for the Company's Motion to Dismiss while the government reviews the amended complaint. The Court granted the motion and vacated the briefing dates. Plaintiff then filed the Amended Complaint under seal. The Company will vigorously defend the lawsuit.

In addition, the Company has received various other subpoenas since 2007 related to Medicaid billing. In October 2009, the Company received a subpoena from the State of Michigan Department of Attorney General seeking documents related to its billing to Michigan Medicaid. The Company cooperated with this request. In October 2013, the Company received a Civil Investigative Demand from the State of Texas Office of the Attorney General requesting documents related to its billing to Texas Medicaid. The Company cooperated with this request. On October 5, 2018, the Company received a second Civil Investigative Demand from the State of Texas Office of the Attorney General requesting documents related to its billing to Texas Medicaid. The Company is cooperating with this request.

On May 2, 2013, the Company was served with a False Claims Act lawsuit, *State of Georgia ex rel. Hunter Laboratories, LLC and Chris Riedel v. Quest Diagnostics Incorporated, et al.*, filed in the State Court of Fulton County, Georgia. The lawsuit, filed by a competitor laboratory, alleges that the Company overcharged Georgia's Medicaid program. The State of Georgia filed a Notice of Declination on August 13, 2012, before the Company was served with the complaint. The case was removed to the U.S. District Court for the Northern District of Georgia. The lawsuit seeks actual and treble damages and civil penalties for each alleged false claim, as well as recovery of costs, attorney's fees, and legal expenses. On March 14, 2014, the Company's Motion to Dismiss was granted. The Plaintiffs replied their complaint, and the Company filed a Motion to Dismiss the First Amended Complaint. In May 2015, the Court dismissed the Plaintiffs' anti-kickback claim and remanded the remaining state law claims to the State Court of Fulton County. In July 2015, the Company filed a Motion to Dismiss these remaining claims. The Plaintiffs filed an opposition to the Company's Motion to Dismiss in August 2015. Also, the State of Georgia filed a brief as *amicus curiae*. The parties have reached a settlement in principle.

On August 24, 2012, the Company was served with a putative class action lawsuit, *Sandusky Wellness Center, LLC, et al. v. MEDTOX Scientific, Inc., et al.*, filed in the U.S. District Court for the District of Minnesota. The lawsuit alleges that on or about February 21, 2012, the defendants violated the U.S. Telephone Consumer Protection Act (TCPA) by sending unsolicited facsimiles to Plaintiff and more than 39 other recipients without the recipients' prior express invitation or permission. The lawsuit seeks the greater of actual damages or the sum of \$0.0005 for each violation, subject to trebling under the TCPA, and injunctive relief. In September of 2014, Plaintiff's Motion for Class Certification was denied. In January of 2015, the Company's Motion for Summary Judgment on the remaining individual claim was granted. Plaintiff filed a notice of appeal. On May 3, 2016, the U.S. Court of Appeals for the Eighth Circuit issued its decision and order reversing the District Court's denial of class certification. The Eighth Circuit remanded the matter for further proceedings. On December 7, 2016, the District Court granted the Plaintiff's renewed Motion for Class Certification. The parties have reached a settlement in principle, which will require court approval.

On August 31, 2015, the Company was served with a putative class action lawsuit, *Patty Davis v. Laboratory Corporation of America, et al.*, filed in the Circuit Court of the Thirteenth Judicial Circuit for Hillsborough County, Florida. The complaint alleges that the Company violated the Florida Consumer Collection Practices Act by billing patients who were collecting benefits under the Workers' Compensation Statutes. The lawsuit seeks injunctive relief and actual and statutory damages, as well as recovery of attorney's fees and legal expenses. In April 2017, the Circuit Court granted the Company's Motion for Judgment on the Pleadings. The Plaintiff has appealed the Circuit Court's ruling to the Florida Second District Court of Appeal. The Company will vigorously defend the lawsuit.

In December 2014, the Company received a Civil Investigative Demand issued pursuant to the U.S. False Claims Act from the U.S. Attorney's Office for South Carolina, which requested information regarding alleged remuneration and services provided by the Company to physicians who also received draw and processing/handling fees from competitor laboratories Health Diagnostic Laboratory, Inc. (HDL) and Singulex, Inc. (Singulex). The Company cooperated with the request. On April 4, 2018, the U.S. District Court for the District of South Carolina, Beaufort Division, unsealed a False Claims Act lawsuit, *United States of America ex rel. Scarlett Lutz, et al. v. Laboratory Corporation of America Holdings*, which alleges that the Company's financial relationships with referring physicians violate federal and state anti-kickback statutes. The Plaintiffs' Fourth Amended Complaint further alleges that the Company conspired with HDL and Singulex in violation of the Federal False Claims Act and the California and Illinois insurance fraud prevention acts by facilitating HDL's and Singulex's offers of illegal inducements to physicians and the referral of patients to HDL and Singulex for laboratory testing. The lawsuit seeks actual and treble damages and civil penalties for each alleged false claim, as well as recovery of costs, attorney's fees, and legal expenses. Neither the U.S. government nor any state government has intervened in the lawsuit. The Company filed a Motion to Dismiss seeking the dismissal of the claims asserted under the California and Illinois insurance fraud prevention statutes, the conspiracy claim, the reverse False Claims Act claim, and all claims based on the theory that the Company performed medically unnecessary testing. On January 16, 2019, the Court entered an order granting in part and denying in part the Motion to Dismiss. The Court dismissed the Plaintiffs' claims based on the theory that the Company performed medically unnecessary testing, the claims asserted under the California and Illinois insurance fraud prevention statutes, and the reverse False Claims Act claim. The Court denied the Motion to Dismiss as to the conspiracy claim. The Company will vigorously defend the lawsuit.

On August 3, 2016, the Company was served with a putative class action lawsuit, *Daniel L. Bloomquist v. Covance Inc., et al.*, filed in the Superior Court of California, County of San Diego. The complaint alleges that Covance Inc. violated the California Labor Code and California Business & Professions Code by failing to provide overtime wages, failing to provide meal and rest periods, failing to pay for all hours worked, failing to pay for all wages owed upon termination, and failing to provide accurate itemized wage statements to Clinical Research Associates and Senior Clinical Research Associates employed by Covance in California. The lawsuit seeks monetary damages, civil penalties, injunctive relief, and recovery of attorney's fees and costs. On October 13, 2016, the case was removed to the United States District Court for the Southern District of California. On May 3, 2017, the U.S. District Court for the Southern District of California remanded the case to the Superior Court. The Company will vigorously defend the lawsuit.

Prior to the Company's acquisition of Sequenom, between August 15, 2016 and August 24, 2016, six putative class-action lawsuits were filed on behalf of purported Sequenom stockholders (captioned *Malkoff v. Sequenom, Inc., et al.*, No. 16-cv-02054-JAH-BLM, *Gupta v. Sequenom, Inc., et al.*, No. 16-cv-02084-JAH-KSC, *Fruchter v. Sequenom, Inc., et al.*, No. 16-cv-02101-WQH-KSC, *Asiatrade Development Ltd. v. Sequenom, Inc., et al.*, No. 16-cv-02113-AJB-JMA, *Nunes v. Sequenom, Inc., et al.*, No. 16-cv-02128-AJB-MDD, and *Cusumano v. Sequenom, Inc., et al.*, No. 16-cv-02134-LAB-JMA) in the U.S. District Court for the Southern District of California challenging the acquisition transaction. The complaints asserted claims against Sequenom and members of its board of directors (the Individual Defendants). The *Nunes* action also named the Company and Savoy Acquisition Corp. (Savoy), a wholly owned subsidiary of the Company, as defendants. The complaints alleged that the defendants violated Sections 14(e), 14(d)(4) and 20 of the Securities Exchange Act of 1934 by failing to disclose certain allegedly material information. In addition, the complaints in the *Malkoff* action, *Asiatrade* action, and the *Cusumano* action alleged that the Individual Defendants breached their fiduciary duties to Sequenom shareholders. The actions sought, among other things, injunctive relief enjoining the merger. On August 30, 2016, the parties entered into a Memorandum of Understanding (MOU) in each of the above-referenced actions. On September 6, 2016, the Court entered an order consolidating for all pre-trial purposes the six individual actions described above under the caption *In re Sequenom, Inc. Shareholder Litig.*, Lead Case No. 16-cv-02054-JAH-BLM, and designating the complaint from the *Malkoff* action as the operative complaint for the consolidated action. On November 11, 2016, two competing motions were filed by two separate stockholders (James Reilly and Shikha Gupta) seeking appointment as lead plaintiff under the terms of the Private Securities Litigation Reform Act of 1995. On June 7, 2017, the Court entered an order declaring Mr. Reilly as the lead plaintiff and approving Mr. Reilly's selection of lead counsel. The parties agree that the MOU has been terminated. The Plaintiffs filed a Consolidated Amended Class Action Complaint on July 24, 2017, and the Defendants filed a Motion to Dismiss, which remains pending. The Company will vigorously defend the lawsuit.

On February 7, 2017, Sequenom received a subpoena from the U.S. Securities and Exchange Commission (SEC) relating to an SEC investigation into the trading activity of Sequenom shares in connection with the Company's July 2016 announcement

regarding the Sequenom merger. On March 7, 2017, the Company received a similar subpoena. The Company is cooperated with these requests. In December 2018, the SEC informed the Company that it has closed its investigation of Sequenom.

On March 10, 2017, the Company was served with a putative class action lawsuit, *Victoria Bouffard, et al. v. Laboratory Corporation of America Holdings*, filed in the U.S. District Court for the Middle District of North Carolina. The complaint alleges that the Company's patient list prices unlawfully exceed the rates negotiated for the same services with private and public health insurers in violation of various state consumer protection laws. The lawsuit also alleges breach of implied contract or quasi-contract, unjust enrichment, and fraud. The lawsuit seeks statutory, exemplary, and punitive damages, injunctive relief, and recovery of attorney's fees and costs. In May 2017, the Company filed a Motion to Dismiss Plaintiffs' Complaint and Strike Class Allegations; the Motion to Dismiss was granted in March 2018 without prejudice. On October 10, 2017, a second putative class action lawsuit, *Sheryl Anderson, et al. v. Laboratory Corporation of America Holdings*, was filed in the U.S. District Court for the Middle District of North Carolina. The complaint contained similar allegations and sought similar relief to the Bouffard complaint, and added additional counts regarding state consumer protection laws. On August 10, 2018, the Plaintiffs filed an Amended Complaint, which consolidated the *Bouffard* and *Anderson* actions. On September 10, 2018, the Company filed a Motion to Dismiss Plaintiffs' Amended Complaint and Strike Class Allegations, which remains pending. The Company will vigorously defend the lawsuits.

On August 1, 2017, the Company was served with a putative class action lawsuit, *Maria T. Gonzalez, et al. v. Examination Management Services, Inc. and Laboratory Corporation of America Holdings*, filed in the U.S. District Court for the Southern District of California. The complaint alleges that the Company misclassified phlebotomists as independent contractors through an arrangement with the co-Defendant temporary staffing agency. The complaint further alleges that the Company violated the California Labor Code and California Business and Professions Code by failing to pay minimum wage, failing to pay for all hours worked, failing to pay for all wages owed upon termination, and failing to provide accurate itemized wage statements. The lawsuit seeks monetary damages, civil penalties, injunctive relief, and recovery of attorney's fees and costs. The parties have reached a tentative settlement, which will require court approval.

On September 7, 2017, the Company was served with a putative class action lawsuit, *John Sealock, et al. v. Covance Market Access Services, Inc.*, filed in the U.S. District Court for the Southern District of New York. The complaint alleges that Covance Market Access Services, Inc. violated the Fair Labor Standards Act and New York labor laws by failing to provide overtime wages, failing to pay for all hours worked, and failing to provide accurate wage statements. The lawsuit seeks monetary damages, civil penalties, injunctive relief, and recovery of attorney's fees and costs. In November 2017, the Company filed a Motion to Strike Class Allegations, which was denied. In December 2017, the Plaintiff filed a Motion for Conditional Certification of a Collective Action, which was granted in May 2018. In December 2018, Plaintiff filed, and the Court granted, a second motion to conditionally certify an expanded class to a nationwide class action. The Company will vigorously defend the lawsuit.

On November 6, 2017, Covance was served with two False Claims Act lawsuits, Health Choice Alliance, LLC on behalf of the *United States of America, et al. v. Eli Lilly and Company, Inc. et al.*, and Health Choice Advocates, LLC, on behalf of the *United States of America v. Gilead Sciences, Inc., et al.*, both filed in the U.S. District Court for the Eastern District of Texas. The complaints allege that under the Federal False Claims Act and various state analogues Covance and the co-defendants unlawfully provided in-kind remuneration to medical providers in the form of reimbursement support services in order to induce providers to prescribe certain drugs. Neither the U.S. government nor any state government intervened in the lawsuits. The lawsuits seek actual and treble damages and civil penalties for each alleged false claim, as well as recovery of costs. The Company's Motion to Dismiss was filed in both cases in February 2018. The *Gilead* case was dismissed on July 27, 2018. On August 10, 2018, the Court in the *Lilly* case entered an Order granting in part and denying in part without prejudice the Defendants' Motions to Dismiss. On September 12, 2018, Plaintiffs in the *Lilly* case filed a Second Amended Complaint, which included additional allegations related to the same conduct alleged in the previous complaint. On December 17, 2018, the United States of America filed a Motion to Dismiss the Second Amended Complaint in the *Lilly* case with prejudice. On January 9, 2019, the Plaintiff in the *Lilly* case filed a Notice of Voluntary Dismissal Without Prejudice as to all claims against Covance.

On December 11, 2017, the American Clinical Laboratory Association (ACLA) filed a lawsuit captioned *ACLA v. Azar* in the U.S. District Court for the District of Columbia to challenge the methodology used by the Department of Health and Human Services in implementing certain aspects of the PAMA legislation. On September 21, 2018, the Court entered a Memorandum Opinion dismissing the lawsuit for lack of subject matter jurisdiction. On October 19, 2018, ACLA filed a notice of appeal.

On April 2, 2018, the Company was served with a putative class action lawsuit, *Craig Cunningham, et al. v. Laboratory Corporation of America Holdings d/b/a LabCorp*, filed in the U.S. District Court for the Middle District of North Carolina. The lawsuit alleges that the Company violated the TCPA by contacting Plaintiff at least twice on his cell phone without his prior consent using a prerecorded or artificial voice. The lawsuit seeks actual damages for each violation, subject to trebling under the TCPA, and injunctive relief. In November 2018, the lawsuit was dismissed with prejudice pursuant to a settlement between the parties.

On July 16, 2018, the Company reported that it had detected suspicious activity on its information technology network and was taking steps to respond to and contain the activity. The activity was subsequently determined to be a new variant of ransomware affecting certain LCD information technology systems. In response, the Company took certain systems offline which temporarily

affected test processing and customer access to test results, and also affected certain other information technology systems involved in conducting Company-wide operations. To date, the Company has not been the subject of any legal proceedings involving this incident, but it is possible that the Company could be the subject of claims from persons alleging they suffered damages from the incident, or actions by governmental authorities. The Company cooperated with law enforcement and regulatory authorities with respect to the incident.

The Company has insurance coverage for costs resulting from cyber-attacks and has filed a claim for recovery of its losses resulting from this incident. However, disputes over the extent of insurance coverage for claims are not uncommon and the Company has not recorded any estimated proceeds resulting from this claim. Furthermore, while the Company has not been the subject of any legal proceedings involving this incident, it is possible that the Company could be the subject of claims from persons alleging they suffered damages from the incident, or actions by governmental authorities.

On September 10, 2018, the Company was served with a LCPAGA lawsuit, *Terri Wilson v. Laboratory Corporation of America Holdings*, which was filed in the U.S. District Court for the Northern District of California. Plaintiff alleges claims for failure to pay meal and rest break premiums, failure to provide compliant wage statements, failure to compensate employees for all hours worked, and failure to pay wages upon termination of employment. Plaintiff asserts these actions violate various Labor Code provisions and constitute an unfair competition practice under California law. The lawsuit seeks monetary damages, civil penalties, injunctive relief, and recovery of attorney's fees and costs. The Company will vigorously defend the lawsuit.

On September 21, 2018, the Company was served with a putative class action lawsuit, *Alma Haro v. Laboratory Corporation of America et al.*, which was filed in the Superior Court of California, County of Los Angeles. Plaintiff alleges that employees were not properly paid overtime compensation, minimum wages, meal and rest break premiums, did not receive compliant wage statements, and were not properly paid wages upon termination of employment. Plaintiff asserts these actions violate various Labor Code provisions and constitute an unfair competition practice under California law. The lawsuit seeks monetary damages, civil penalties, and recovery of attorney's fees and costs. The Company will vigorously defend the lawsuit.

On December 20, 2018, the Company was served with a putative class action lawsuit, *Feckley v. Covance Inc., et al.*, filed in the Superior Court of California, County of Orange. The complaint alleges that Covance Inc. violated the California Labor Code and California Business & Professions Code by failing to properly pay commissions to employees under a sales incentive compensation plan upon their termination of employment. The lawsuit seeks monetary damages, civil penalties, punitive damages, and recovery of attorney's fees and costs. On January 22, 2018, the case was removed to the U.S. District Court for the Central District of California. The Company will vigorously defend the lawsuit.

Under the Company's present insurance programs, coverage is obtained for catastrophic exposure as well as those risks required to be insured by law or contract. The Company is responsible for the uninsured portion of losses related primarily to general, professional and vehicle liability, certain medical costs and workers' compensation. The self-insured retentions are on a per occurrence basis without any aggregate annual limit. Provisions for losses expected under these programs are recorded based upon the Company's estimates of the aggregated liability of claims incurred. At December 31, 2018, the Company had provided letters of credit aggregating approximately \$72.2, primarily in connection with certain insurance programs. The Company's availability under its Revolving Credit Facility is reduced by the amount of these letters of credit.

Item 4. MINE SAFETY DISCLOSURES

Not applicable.

PART II**Item 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS, AND ISSUER PURCHASES OF EQUITY SECURITIES****Market Information**

The Company's common stock, par value \$0.10 per share, or Common Stock, trades on the New York Stock Exchange or NYSE under the symbol "LH."

Holders

On February 26, 2019, there were approximately 3,000 holders of record of the Common Stock.

Transfer Agent

The transfer agent for the Company's Common Stock is American Stock Transfer & Trust Company, Shareholder Services, 6201 Fifteenth Avenue, Brooklyn, NY 11219, telephone: 800-937-5449, website: www.amstock.com.

Dividends

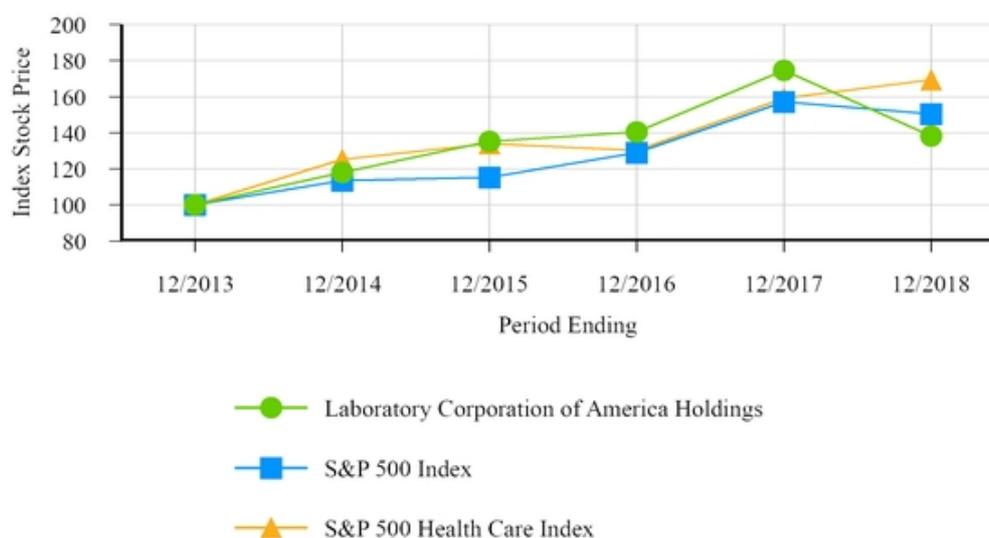
The Company has not historically paid dividends on its Common Stock and does not presently anticipate paying any dividends on its Common Stock in the foreseeable future.

Common Stock Performance

The graph below shows the cumulative total return assuming an investment of \$100 on December 31, 2013, in each of the Company's common stock, the Standard & Poor's, or S&P Composite-500 Stock Index and the S&P 500 healthcare Index, or Peer Group, and assuming that all dividends were reinvested.

Comparison of Five Year Cumulative Total Return

	12/2013	12/2014	12/2015	12/2016	12/2017	12/2018
Laboratory Corporation of America Holdings	\$ 100.00	\$ 118.09	\$ 135.32	\$ 140.51	\$ 174.58	\$ 138.29
S&P 500 Index	\$ 100.00	\$ 113.69	\$ 115.26	\$ 129.05	\$ 157.22	\$ 150.33
S&P 500 Health Care Index	\$ 100.00	\$ 125.34	\$ 133.97	\$ 130.37	\$ 159.15	\$ 169.44

Comparison of Cumulative Five Year Total

Issuer Purchases of Equity Securities (all amounts in millions, except per share amounts)

The following table sets forth information with respect to purchases of shares of the Company's Common Stock made during the quarter ended December 31, 2018, by or on behalf of the Company:

	Total Number of Shares Repurchased	Average Price Paid Per Share	Total Number of Shares Repurchased as Part of Publicly Announced Program	Maximum Dollar Value of Shares that May Yet Be Repurchased Under the Program
October 1 - October 31	0.6	\$ 168.34	0.6	\$ 744.0
November 1 - November 30	1.1	163.81	1.1	555.9
December 1 - December 31	0.8	143.02	0.8	443.5
	2.5	\$ 158.40	2.5	

At the end of 2017, the Company had outstanding authorization from the board of directors to purchase up to \$401.4 of Company common stock. On April 24, 2018, the board authorized an increase in the Company's share repurchase program to a total of \$1,000.0. During 2018, the Company purchased 4.2 shares of its common stock at a total cost of \$700.0. At the end of 2018, the Company had outstanding authorization from its board of directors to purchase an additional \$443.5 of Company common stock. On February 6, 2019, the board of directors replaced the Company's existing share repurchase plan with a new plan authorizing repurchase of up to \$1.25 billion of the Company's shares. The repurchase authorization has no expiration date.

Item 6. SELECTED FINANCIAL DATA (in millions, except per share amounts)

The selected financial data presented below under the captions "Statement of Operations Data" and "Balance Sheet Data" as of and for the five-year period ended December 31, 2018, are derived from consolidated financial statements of the Company, which have been audited by an independent registered public accounting firm. This data should be read in conjunction with the accompanying notes, the Company's consolidated financial statements and the related notes thereto, and "Management's Discussion and Analysis of Financial Condition and Results of Operations," all included elsewhere in this annual report.

	Year Ended December 31,				
	(a) 2018	(b)(k) 2017	(c)(k) 2016	(d)(k) 2015	(e)(k) 2014
Statement of Operations Data:					
Net revenues	\$ 11,333.4	\$ 10,308.0	\$ 9,552.9	\$ 8,505.7	\$ 6,011.6
Gross profit	3,176.4	3,091.8	2,854.0	2,903.3	2,203.1
Operating income (i)	1,325.7	1,305.2	1,270.6	996.8	904.3
Net earnings attributable to Laboratory Corporation of America Holdings (j)	883.7	1,227.1	711.8	437.6	511.2
Basic earnings per common share	\$ 8.71	\$ 11.99	\$ 6.94	\$ 4.43	\$ 6.03
Diluted earnings per common share	\$ 8.61	\$ 11.81	\$ 6.82	\$ 4.35	\$ 5.91
Basic weighted average common shares outstanding	101.4	102.4	102.5	98.8	84.8
Diluted weighted average common shares outstanding	102.6	103.9	104.3	100.6	86.4
Balance Sheet Data:					
Cash and cash equivalents, and short-term investments	\$ 426.8	\$ 316.6	\$ 433.6	\$ 716.4	\$ 580.0
Goodwill and intangible assets, net (h)	11,271.4	11,567.0	9,824.9	9,526.6	4,575.2
Total assets (f)	16,185.3	16,673.0	14,334.8	14,104.7	7,262.8
Long-term obligations (f) (g)	6,059.8	6,762.1	5,849.5	6,364.2	2,990.8
Total shareholders' equity	6,971.4	6,804.1	5,518.2	4,945.1	2,820.5

(a) During 2018, the Company recorded net restructuring charges of \$48.1. The charges were comprised of \$40.3 in severance and other personnel costs and \$11.8 in facility-related costs primarily associated with facility closures and general integration initiatives. These charges were offset by the reversal of previously established reserves of \$2.0 in unused severance and \$2.0 in unused facility-related costs.

(b) During 2017, the Company recorded net restructuring charges of \$70.9. The charges were comprised of \$36.1 in severance and other personnel costs and \$39.9 in facility-related costs primarily associated with facility closures and general integration initiatives. These charges were offset by the reversal of previously established reserves of \$0.5 in unused severance and \$4.6 in unused facility-related costs. The Company also recognized asset impairment losses of \$23.5

related to the termination of software development projects within the Covance Drug Development (CDD) segment and the forgiveness of certain indebtedness for LabCorp Diagnostics (LCD) customers in areas heavily impacted by hurricanes during the third quarter.

- (c) During 2016, the Company recorded net restructuring charges of \$58.4. The charges were comprised of \$30.9 in severance and other personnel costs and \$33.8 in facility-related costs primarily associated with facility closures and general integration initiatives. These charges were offset by the reversal of previously established reserves of \$2.8 in unused severance and \$3.5 in unused facility-related costs.
- (d) During 2015, the Company recorded net restructuring charges of \$113.9. The charges were comprised of \$59.2 in severance and other personnel costs and \$55.8 in facility-related costs primarily associated with facility closures and general integration initiatives. These charges were offset by the reversal of previously established reserves of \$1.1 in unused facility-related costs.
- (e) During 2014, the Company recorded net restructuring charges of \$17.8. The charges were comprised of \$10.5 in severance and other personnel costs and \$8.4 in facility-related costs primarily associated with facility closures and general integration initiatives. These charges were offset by the reversal of previously established reserves of \$0.4 in unused severance and \$0.7 in unused facility-related costs.
- (f) During the first quarter of 2016, the Company adopted Accounting Standards Update (ASU 2015-03) *Interest-Imputation of Interest: Simplifying the Presentation of Debt Issuance Costs*. In accordance with this guidance, unamortized debt issuance costs of \$52.8 and \$39.0 associated with the Senior Notes and loan obligations have been reclassified from total assets to long-term obligations for fiscal 2015 and 2014, respectively, in the table above.
- (g) Long-term obligations primarily include the Company's zero-coupon convertible subordinated notes, 5.625% Senior Notes due 2015, 3.125% Senior Notes due 2016, 2.20% Senior Notes due 2017, 2.50% Senior Notes due 2018, 4.625% Senior Notes due 2020, 2.625% Senior Notes due 2020, 3.75% Senior Notes due 2022, 3.20% Senior Notes due 2022, 4.00% Senior Notes due 2023, 3.25% Senior Notes due 2024, 3.60% Senior Notes due 2025, 3.60% Senior Notes due 2027, 4.70% Senior Notes due 2045, 2014 term loan, 2017 term loan, revolving credit facility and other long-term obligations. The accreted balance of the zero-coupon convertible subordinated notes was \$8.7, \$8.8, \$42.4, \$94.5, and \$93.9 at December 31, 2018, 2017, 2016, 2015, and 2014, respectively. The principal balance of the 5.625% Senior Notes was \$0.0 at December 31, 2018, 2017, 2016 and 2015 and \$250.0 at December 31, 2014. The principal balance of the 3.125% Senior Notes was \$0.0 at December 31, 2018, 2017, and 2016 and \$325.0 at December 31, 2015 and 2014. The principal balance of the 4.625% Senior Notes was \$600.0 at December 31, 2018, 2017, 2016, 2015, and 2014. The aggregate fair value of the fixed-to-variable interest rate swap on the 4.625% Senior Notes was (\$3.1) at December 31, 2018, \$4.1 at December 31, 2017, \$14.6 at December 31, 2016, \$21.6 at December 31, 2015, and \$18.5 at December 31, 2014. The principal balance of the 2.625% Senior Notes was \$500.0 at December 31, 2018, 2017, 2016, and 2015, and was \$0.0 for the year 2014. The principal balance of the 2.20% Senior Notes was \$0.0 at December 31, 2018 and 2017 and \$500.0 at December 31, 2016, 2015, and 2014. The principal balance of the 3.75% Senior Notes was \$500.0 at December 31, 2018, 2017, 2016, 2015, and 2014. The principal balance of the 3.20% Senior Notes was \$500.0 at December 31, 2018, 2017, 2016 and 2015 and was \$0.0 at December 31, 2014. The principal balance of the 2.50% Senior Notes due 2018 was \$0.0 at December 31, 2018 and \$400.0 for all other years presented. The principal balance of the 4.00% Senior Notes due 2023 was \$300.0 at December 31, 2018, 2017, 2016, 2015, and 2014. The principal balances of the 3.60% Senior Notes due 2025 and 4.70% Senior Notes due 2045 were \$1,000.0 and \$900.0, respectively, at December 31, 2018, 2017, 2016 and 2015 and were each \$0.0 at both December 31, 2014. The principal balance of the 3.25% Senior Notes due 2024 was \$600.0 at December 31, 2018 and 2017, and \$0.0 for all other years presented. The principal balance of the 3.60% notes due 2027 was \$600.0 at December 31, 2018 and 2017, and \$0.0 for all other years presented. The outstanding balance on the 2014 term loan was \$0.0 at December 31, 2018, \$72.0 at December 31, 2017, \$565.0 at December 31, 2016, \$715.0 at December 31, 2015, and \$0.0 at December 31, 2014. The outstanding balance on the 2017 term loan was \$527.1 at December 31, 2018, \$750.0 at December 31, 2017, and \$0.0 for all other years presented. The outstanding balance on the revolving credit facility was \$0.0 at December 31, 2018, 2017, 2016, 2015, and 2014. The remainder of other long-term obligations consisted primarily of capital leases and mortgages payable with balances of \$67.8, \$76.8, \$71.8, \$60.9, and \$42.4 at December 31, 2018, 2017, 2016, 2015, and 2014, respectively. Long-term obligations exclude amounts due to affiliates.
- (h) During 2016, the Company revised the final purchase price allocation for Covance. As a result, an out of period adjustment of \$25.6 was recorded to reduce goodwill and increase a deferred tax asset as of December 31, 2015. The Company concluded that the impact of this adjustment was not material to the current or prior periods.
- (i) The Company changed its financial statement classification for certain gross receipts taxes in 2016, removing these taxes from its provision for income taxes and moving this expense into selling, general and administrative expenses. Certain gross receipts taxes of \$6.1, \$6.1, and \$7.6 were reclassified in 2015, 2014 and 2013, respectively.

- (j) Net earnings attributable to Laboratory Corporation of America Holdings in 2017 includes a provisional net benefit of \$519.0 due to the Tax Cuts and Jobs Act (TCJA). For additional information on the TCJA, see Note 14 to the Consolidated Financial Statements.
- (k) The selected financial data for the years ended December 31, 2018, 2017 and 2016 and as of December 31, 2018, 2017 and 2016, reflects the adoption of Accounting Standards Codification 606 *Revenue from Contracts with Customers* (ASC 606). See Note 1 of the notes to the consolidated financial statements for a summary of adjustments. The select financial data for the years ended December 31, 2015 and 2014 and as of December 31, 2015 and 2014 does not reflect the adoption of ASC 606.

Item 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS (in millions)

General

During the year ended December 31, 2018, the Company's revenue grew by 9.9%, driven by acquisitions of 7.6%, organic growth of 2.7%, and the benefit of foreign currency translation of 30 basis points, partially offset by the impact from divestitures of (0.7%). The Company defines organic growth as the increase in revenue excluding revenue from acquisitions for the first twelve months after the close of each acquisition.

During 2018, the Company divested its Covance Food Solutions business and its forensic testing services business in the United Kingdom (U.K.) and the United States (U.S.) Operating income for the divested businesses was \$7.6 for the year ended December 31, 2018.

Effective January 1, 2018, the Company adopted Accounting Standards Codification ASC 606 *Revenue from Contracts with Customers* using the full retrospective method. All financial results and comparisons to financial results in 2017 and 2016 have been restated. This accounting change increased revenue, lowered earnings, and had no impact on cash flow. Upon adoption, bad debt expense within the LabCorp Diagnostics (LCD) segment is being classified as a reduction in revenue rather than as a selling, general and administrative expense. Within the Covance Drug Development (CDD) segment the standard impacts the accounting for changes in the scope of work, investigator fees, measures of progress and sales commissions.

On July 16, 2018, the Company reported that it had detected suspicious activity on its information technology network and was taking steps to respond to and contain the activity. The activity was subsequently determined to be a new variant of ransomware affecting certain LCD information technology systems. CDD systems were not directly affected by the ransomware. As part of its response, the Company promptly took certain systems offline to contain and remove the ransomware from its systems. The incident temporarily affected test processing and customer access to test results, and also affected certain other information technology systems involved in conducting Company-wide operations. Operations were returned to normal within a few days of the incident. As part of its in-depth investigation into this incident, the Company engaged outside security experts and worked with authorities, including law enforcement. The investigation determined that the ransomware did not and could not transfer patient or client data outside of Company systems and that there was no theft or misuse of patient or client data. The Company has incurred total expenditures related to addressing this attack of \$12.6 in consulting fees and employee overtime during the recovery period following the attack in addition to estimated lost revenue of \$9.8.

The Company has insurance coverage for costs resulting from cyber-attacks and has filed a claim for recovery of its losses resulting from this incident. However, disputes over the extent of insurance coverage for claims are not uncommon and the Company has not recorded any estimated proceeds resulting from this claim. Furthermore, while the Company has not been the subject of any legal proceedings involving this incident, it is possible that the Company could be the subject of claims from persons alleging they suffered damages from the incident, or actions by governmental authorities.

The Company continues to invest in its technology and training to help protect its information technology systems and operations from cyber-attacks.

The Company remains on track to deliver \$150.0 of net savings from CDD's three-year LaunchPad initiative by the end of 2020, and \$30.0 of cost synergies from the integration of Chiltern by the end of 2019. The Company expects phase II of LCD's LaunchPad initiative to deliver approximately \$200.0 in net savings over the next three years, while incurring approximately \$40.0 in one-time implementation costs. Approximately one-third of the total savings are expected to be realized each year.

The Protecting Access to Medicare Act (PAMA) which became law on April 1, 2014, and went into effect on January 1, 2018, resulted in a net reduction of revenue of approximately \$70.0 in 2018 from all payers affected by the Clinical Lab Fee Schedule. Unless further implementation of PAMA is delayed or changed, an additional reduction of approximately \$115.0 is expected for 2019, from all payers affected by the Clinical Lab Fee Schedule.

Results of Operations*Years ended December 31, 2018, 2017, and 2016***Revenues**

	Years Ended December 31,			Change	
	2018	2017	2016	2018	2017
LCD	\$ 7,030.8	\$ 6,858.2	\$ 6,307.6	2.5%	8.7%
CDD	4,313.1	3,451.6	3,245.8	25.0%	6.3%
Intercompany eliminations	(10.5)	(1.8)	(0.5)	483.3%	260.0%
Total	\$ 11,333.4	\$ 10,308.0	\$ 9,552.9	9.9%	7.9%

The 9.9% increase in net revenue for the year ended December 31, 2018, as compared with the corresponding period in 2017 was due to growth from acquisitions of 7.6%, organic growth of 2.7%, and the benefit of from foreign currency translation of approximately 0.3%, partially offset by a 0.7% decrease due to divestitures.

LCD revenues for the year ended December 31, 2018, were \$7,030.8, an increase of 2.5% over revenues of \$6,858.2 in the corresponding period in 2017. The increase in revenues was primarily driven by acquisitions, organic volume (measured by requisitions), partially offset by the impact of the implementation of PAMA and divestitures. Growth in volume, measured by requisitions, of 3.6%, was due to organic volume growth of 1.8% and acquisition volume growth of 2.0%, partially offset by the impact of divestitures of (0.2%). Price and mix negatively impacted revenue by (1.0%). The change in price and mix included the impact of divestitures of (0.9%), lower reimbursement from the implementation of PAMA of (1.0%), other organic price and mix, as well as acquisitions.

CDD revenues for the year ended December 31, 2018, were \$4,313.1, an increase of 25.0% over revenues of \$3,451.6 in the corresponding period in 2017. The increase in revenue was primarily due to acquisitions (including Chiltern), which contributed growth of 17.5%, an increase in organic growth of 6.6% and a favorable impact from foreign currency translation of approximately 0.9%.

The 7.9% increase in revenue for the year ended December 31, 2017, as compared with the corresponding period in 2016 was due to growth from acquisitions of 5.8% and organic growth of 2.1%.

LCD revenues for the year ended December 31, 2017, were \$6,858.2, an increase of 8.7% over revenues of \$6,307.6 in the corresponding period in 2016. The increase in revenue was the result of acquisitions, organic volume growth (measured by requisitions), price and mix. Total volume (measured by requisitions) increased by 5.8%, of which organic volume was 2.2% and acquisition volume was 3.6%. Revenue per requisition increased 2.9%.

CDD revenues for the year ended December 31, 2017, were \$3,451.6, an increase of 6.3% over revenues of \$3,245.8 in the corresponding period in 2016. The increase in revenue was primarily due to the acquisition of Chiltern, which contributed growth of 6.1%, an increase in organic growth of 0.4% and an unfavorable impact from foreign currency translation of approximately 0.2%.

Cost of Revenues

	Years Ended December 31,			Change	
	2018	2017	2016	2018	2017
Cost of revenues	\$ 8,157.0	\$ 7,216.2	\$ 6,698.9	13.0%	7.7%
Cost of revenues as a % of revenues	72.0%	70.0%	70.1%		

Cost of revenues (primarily laboratory, labor and distribution costs) increased 13.0% in 2018 as compared with 2017 primarily due to acquisitions and organic volume growth. The increase in cost of revenues as a percentage of revenues in 2018 as compared to 2017 was primarily due to the timing of acquisitions (Chiltern closed in September 2017) as well as higher costs of revenue for certain acquisitions. In addition, the Company paid a special one-time bonus of \$31.1 (\$24.8 of which was recorded in cost of revenues) to its non-bonus eligible employees in recognition of the benefits the Company is receiving from the passage of the U.S. Tax Cuts and Jobs Act (TCJA). As a direct result of the ransomware attack experienced during July, the Company incurred \$6.8 in employee overtime during the recovery period following the attack. The increase in net cost of revenues in 2018 was negatively impacted by a net increase of 0.2% due to currency fluctuations.

Cost of revenues (primarily laboratory, labor and distribution costs) increased 7.7% in 2017 as compared with 2016 primarily due to increased volume, measured by requisitions, and test mix changes. The slight decrease in cost of revenues as a percentage of revenues in 2017 as compared to 2016 was due to LaunchPad savings and acquisition integration synergies offset by relatively higher costs of revenues for certain 2017 acquisitions. The increase in cost of revenues in 2017 was negatively impacted by a net increase of 0.1% due to currency fluctuations.

Labor and testing supplies for the year ended December 31, 2018, comprise over 70.7% of the Company's cost of revenues. Cost of revenues has increased over the three-year period ended December 31, 2018, primarily due to the impact of acquisitions, overall growth in the Company's volume, and increases in merit-based labor costs.

Selling, General and Administrative Expenses

	Years Ended December 31,			Change	
	2018	2017	2016	2018	2017
Selling, general and administrative expenses	\$ 1,570.9	\$ 1,499.2	\$ 1,345.5	4.8%	11.4%
SG&A as a % of revenues	13.9%	14.5%	14.1%		

Selling, general and administrative expenses as a percentage of net revenues decreased to 13.9% in 2018 compared to 14.5% in 2017. The decrease in selling, general and administrative expenses as a percentage of revenues is primarily due to LaunchPad savings and acquisition synergies. The increase in selling, general and administrative expenses in 2018 was impacted by a net increase of 0.2% due to currency fluctuations.

The Company incurred integration and other costs of \$54.7 primarily relating to the Chiltern acquisition and the sale of the CFS business. On July 16, 2018, the Company reported that it had detected suspicious activity on its information technology network and was taking steps to respond to and contain the activity. The activity was subsequently determined to be a new variant of ransomware affecting certain LCD information technology systems. As a direct result of the ransomware attack experienced during July, the Company incurred \$12.6 in consulting fees and employee overtime during the recovery period following the attack. The Company also recorded \$9.6 in consulting expenses relating to the Chiltern integration and management integration costs along with a special one-time bonus of \$31.1 (\$6.3 of which was recorded in selling, general and administrative expenses) to its non-bonus eligible employees in recognition of the benefits the Company is receiving from the passage of the TCJA. In addition, the Company incurred \$9.8 of non-capitalized costs associated with the implementation of a major system as part of its LaunchPad business process improvement initiative. Excluding these charges, selling, general and administrative expenses as a percentage of revenues were 13.0% for the year ended December 31, 2018.

Selling, general and administrative expenses as a percentage of revenues increased to 14.5% in 2017 compared to 14.1% in 2016. The increase in selling, general and administrative expenses as a percentage of revenues is primarily due to current year acquisitions offset by LaunchPad savings. The increase in selling, general and administrative expenses in 2017 was impacted by a net increase of 0.1% due to currency fluctuations.

During 2017, the Company incurred legal and other costs of \$43.9 primarily relating to the acquisition of Chiltern. The Company also recorded \$23.3 in consulting and other expenses relating to Covance and Chiltern integration initiatives, along with \$0.9 in short-term equity retention arrangements relating to the acquisition of Covance. In addition, the Company incurred \$11.7 of non-capitalized cost associated with a major system as part of its LaunchPad business process improvement initiative. The Company also recognized asset impairment losses of \$20.9 related to the termination of software development projects within the CDD segment and the forgiveness of certain indebtedness for LCD customers in areas heavily impacted by hurricanes during the third quarter. Excluding these charges, selling, general and administrative expenses as a percentage of revenues were 13.6% for the year ended December 31, 2017.

During 2016, the Company incurred additional legal and other costs of \$4.6 relating to the wind-down of two operations used to service minimum volume service contract operations. On February 9, 2016, the Company reached an agreement for the sale of assets and business of one of these sites. As required by U.K. law, substantially all of the employees were transferred with the business. On November 21, 2016, following the wind-down of the business, the Company reached an agreement for the sale of the property and assets of the other site. In addition, the Company incurred \$8.0 in acquisition fees and expenses. The Company also recorded \$6.9 in consulting expenses relating to fees incurred as part of its Covance acquisition integration costs and compensation analysis, along with \$2.5 in short-term equity retention arrangements relating to the Covance acquisition and \$8.9 of accelerated equity compensation relating to executive transition. In addition, the Company incurred \$9.0 of non-capitalized costs associated with the implementation of a major system as part of LaunchPad. Excluding these charges, selling, general and administrative expenses as a percentage of revenues were 13.7% for the year ended December 31, 2016.

Amortization Expense

	Years Ended December 31,			Change	
	2018	2017	2016	2018	2017
LCD	\$ 104.0	\$ 116.7	\$ 93.4	(10.9)%	24.9%
CDD	127.7	99.8	86.1	28.0 %	15.9%
Amortization of intangibles and other assets	\$ 231.7	\$ 216.5	\$ 179.5	7.0 %	20.6%

The increase in amortization of intangibles and other assets from 2016 through 2018 primarily reflects the impact of acquisitions offset by the impact of business dispositions and working capital and earnout adjustments.

Restructuring and Other Special Charges

	Years Ended December 31,		
	2018	2017	2016
Restructuring and other special charges	\$ 48.1	\$ 70.9	\$ 58.4

During 2018, the Company recorded net restructuring charges of \$48.1; \$20.5 within LCD and \$27.6 within CDD. The charges were comprised of \$40.3 in severance and other personnel costs and \$11.8 in facility-related costs primarily associated with general integration activities. The charges were offset by the reversal of previously established reserves of \$2.0 in unused severance and \$2.0 in unused facility-related costs.

During 2017, the Company recorded net restructuring charges of \$70.9; \$16.8 within LCD and \$54.1 within CDD. The charges were comprised of \$36.1 in severance and other personnel costs, \$18.8 in facility-related costs primarily associated with general integration activities, and an asset impairment loss of \$20.9 related to the termination of a software development project within the CDD segment and the forgiveness of indebtedness for LCD customers in areas heavily impacted by hurricanes experienced during the third quarter of 2017. The charges were offset by the reversal of previously established reserves of \$0.5 in unused severance and \$4.4 in unused facility-related costs.

During 2016, the Company recorded net restructuring and other special charges of \$58.4; \$15.8 within LCD and \$42.6 within CDD. The charges were comprised of \$30.9 related to severance and other personnel costs along with \$33.8 in costs associated with facility closures. A substantial portion of these costs relate to the planned closure of duplicative data center operations and other facilities. These charges were offset by the reversal of previously established reserves of \$2.8 in unused severance and \$3.5 in unused facility-related costs, as the result of selling one of its minimum volume service contract facilities to a third party.

Interest Expense

	Years Ended December 31,			Change	
	2018	2017	2016	2018	2017
Interest expense	\$ 244.2	\$ 235.1	\$ 219.1	3.9%	7.3%

The increase in interest expense for 2018 as compared with the corresponding period in 2017 is primarily due to the issuance of Senior Notes and the 2017 Term loan in the third quarter of 2017 and the impact of increasing interest rates on variable rate debt, partly offset by the repayment of Senior Notes in 2017 and 2018, lower borrowings under the Company's Revolving Credit Facility and the benefit of the cross currency swaps entered into in 2018.

The increase in interest expense for 2017 as compared with the corresponding period in 2016 is primarily due to the issuance of Senior Notes, the addition of the 2017 term loan, and increased borrowings under the Company's Revolving Credit Facility, to fund the acquisition of Chiltern and support growth. This increase was partially offset by the repayment of the 2.20% Senior Notes in August 2017 and a portion of the zero-coupon subordinated notes, and the retirement of the convertible Senior Notes acquired as part of the Sequenom acquisition in October 2016.

Equity Method Income, Net

	Years Ended December 31,			Change	
	2018	2017	2016	2018	2017
Equity method income, net	\$ 11.6	\$ 11.3	\$ 7.9	2.7%	43.0%

Equity method income, net represents the Company's ownership share in joint venture partnerships along with equity investments in other companies in the healthcare industry. All of these partnerships and investments reside within LCD. The increase in income for 2018 as compared with the corresponding period in 2017 was primarily due to the increased profitability in two of the joint ventures offset by the consolidation of a joint venture during the second quarter of 2018 related to the acquisition of Pathology Associates Medical Laboratories (PAML).

Other, Net

	Years Ended December 31,			Change	
	2018	2017	2016	2018	2017
Other, net	\$ 167.7	\$ (6.0)	\$ 12.5	2,895.0%	(148.0)%

The change in other, net for the year ended December 31, 2018 is primarily due to a gain of \$258.3 recognized on the sale of the CFS business offset by losses on the dispositions of the Company's forensic testing services businesses in the U.K. and the

U.S. of \$48.9 and \$24.5, respectively. The Company wrote-off a venture fund investment of \$5.2 and also recorded a \$7.5 pension settlement charge as a result of lump sum distributions exceeding threshold levels. In addition, foreign currency transaction losses were \$3.6 and \$5.3, respectively, for the 2018 and 2017 periods presented.

The decrease in other, net for the year ended December 31, 2017, is primarily due to the inclusion of a net gain of \$9.7 on the sale of investment securities from the Company's venture fund in 2016, offset by an increase in net realized foreign currency transaction losses.

Income Tax Expense

	Years Ended December 31,		
	2018	2017	2016
Income tax expense	\$ 384.4	\$ (155.4)	\$ 360.7
Income tax expense as a % of income before tax	30.3%	(14.4)%	33.6%

In 2018, the Company's effective tax rate was 30.3% and was favorably impacted by the U.S. federal corporate tax rate decreasing from 35.0% to 21.0%, partially offset by the additional tax recorded for TCJA under SAB 118 and the new TCJA global intangible low taxed income (GILTI) tax. Additionally, the 2018 rate was higher due to increased income taxes paid on divestitures where net tax basis was lower than net book basis and certain restructuring activities.

The 2017 tax rate of (14.4)% resulted from the Company recording a fourth quarter provisional estimate for the TCJA, which resulted in a reduction in income tax expense arising from a re-measurement of deferred taxes, and the release of deferred taxes on unremitted foreign earnings, partially offset by the deemed repatriation tax. Given the significant changes resulting from the TCJA, the estimated financial impact was provisional and subject to further clarification, which resulted in changes to these estimates in 2018. The 2017 rate was also favorably impacted by foreign earnings taxed at rates lower than the U.S. and by share-based compensation.

In 2016, the Company's effective rate of 33.6% was favorably impacted by foreign earnings taxed at lower rates than the U.S. statutory tax rate and, for 2016 specifically, by a reduction in certain foreign rates. The 2016 rate also benefited from the early adoption of share-based payment accounting and the reversal of uncertain tax position reserves.

The Company considers substantially all of its foreign earnings to be permanently reinvested overseas.

Operating Results by Segment

	Years Ended December 31,			Change	
	2018	2017	2016	2018	2017
LCD operating income	\$ 1,166.7	\$ 1,300.9	\$ 1,182.0	(10.3)%	10.1 %
LCD operating margin	16.6%	19.0%	18.7%	(2.4)%	0.3 %
CDD operating income	\$ 303.6	\$ 144.9	\$ 236.5	109.5 %	(38.7)%
CDD operating margin	7.0%	4.2%	7.3%	2.8 %	(3.1)%
General corporate expenses	\$ (144.6)	\$ (140.6)	\$ (147.9)	2.8 %	(4.9)%
Total operating income	\$ 1,325.7	\$ 1,305.2	\$ 1,270.6	1.6 %	2.7 %

LCD operating income was \$1,166.7 for the year ended December 31, 2018, a decrease of (10.3)% over operating income of \$1,300.9 in the corresponding period of 2017 and a decrease of 240 basis points in operating margin year-over-year. The decrease in margin was primarily due to the implementation of PAMA and the impact of business disruptions from the ransomware attack and Hurricane Florence, along with increased personnel costs. Operating margins were also impacted by the special one-time bonus paid to its non-bonus eligible employees.

CDD operating income was \$303.6 for the year ended December 31, 2018, an increase of 109.5% over operating income of \$144.9 in the corresponding period of 2017 and an increase of 280 basis points in operating margin year-over-year. The improved operating margin was primarily due to acquisitions and organic growth combined with lower restructuring and other special charges due to the expansion of LaunchPad partially offset by the special one-time bonus to its non-bonus eligible employees.

General corporate expenses are comprised primarily of administrative services such as executive management, human resources, legal, finance, corporate affairs, and information technology. Corporate expenses were \$144.6 for the year ended December 31, 2018, an increase of 2.8% over corporate expenses of \$140.6 in the corresponding period of 2017. The increase in corporate expenses in 2018 is primarily due to an increase in professional services for accounting, auditing and consulting services.

Liquidity, Capital Resources and Financial Position

The Company's strong cash-generating capability and financial condition typically have provided ready access to capital markets. The Company's principal source of liquidity is operating cash flow, supplemented by proceeds from debt offerings. The Company's senior unsecured revolving credit facility is further discussed in Note 12 to the Company's Consolidated Financial Statements.

In summary the Company's cash flows were as follows:

	For the Year Ended December 31,		
	2018	2017	2016
Net cash provided by operating activities	\$ 1,305.4	\$ 1,498.1	\$ 1,197.1
Net cash provided by (used for) investing activities	206.7	(2,228.7)	(795.7)
Net cash (used in) provided by financing activities	(1,389.9)	593.2	(671.0)
Effect of exchange rate on changes in cash and cash equivalents	(12.0)	20.5	(13.2)
Net change in cash and cash equivalents	\$ 110.2	\$ (116.9)	\$ (282.8)

Cash and Cash Equivalents

Cash and cash equivalents at December 31, 2018, 2017, and 2016 totaled \$426.8, \$316.6, and \$433.6, respectively. Cash and cash equivalents consist of highly liquid instruments, such as time deposits and other money market investments, which have original maturities of three months or less.

Cash Flows from Operating Activities

During the year ended December 31, 2018, the Company's operations provided \$1,305.4 of cash as compared to \$1,498.1 in 2017. The \$192.7 decrease in cash provided from operations in 2018 as compared with the corresponding 2017 period was primarily due to higher working capital requirements to support overall business growth in 2018 and a net tax payment of approximately \$105.0 related to the divestiture of its food and forensic testing service businesses in 2018, the net proceeds from which are recorded in net cash provided by investing activities. The Company's 2018 earnings were impacted by \$48.1 of restructuring and special items compared to an impact of \$70.9 during the same period in 2017.

During the year ended December 31, 2017, the Company's operations provided \$1,498.1 of cash as compared to \$1,197.1 in 2016. The \$301.0 increase in cash provided from operations in 2017 as compared with the corresponding 2016 period was primarily due to higher net earnings and improved working capital in 2017. The Company's 2017 earnings were impacted by \$70.9 of restructuring and special items compared to an impact of \$58.4 during the same period in 2016.

Cash Flows from Investing Activities

Net cash provided by investing activities for the year ended December 31, 2018, was \$206.7 as compared to \$2,228.7 used for the year ended December 31, 2017. The \$2,435.4 increase in cash provided by investing activities for the year ended December 31, 2018, was primarily due to a year over year decrease of \$1,764.8 in cash paid for acquisitions. In addition, the Company had proceeds of \$708.3 from the sale of assets and disposition of businesses during 2018 in comparison to \$5.5 during 2017. Capital expenditures were \$379.8 and \$312.9 for the years ended December 31, 2018 and 2017, respectively. Capital expenditures in 2018 were 3.4% of revenues primarily in connection with projects to support growth in the Company's core businesses, projects related to LaunchPad and further Covance integration initiatives. The Company intends to continue to pursue acquisitions to fund growth, to make important investments in its business, including in information technology, and to improve efficiency and enable the execution of the Company's mission. Such expenditures are expected to be funded by cash flow from operations or, as needed, through borrowings under debt facilities, including the Company's revolving credit facility or any successor facility. The Company expects capital expenditures in 2019 to be approximately 4.0% of revenues, primarily in connection with projects to support growth in the Company's core businesses, facility updates, ongoing projects related to LaunchPad within the LCD business, LaunchPad's expansion within the CDD business, and further acquisition integration initiatives.

Net cash used in investing activities for the year ended December 31, 2017, was \$2,228.7 as compared to \$795.7 for the year ended December 31, 2016. The \$1,433.0 increase in cash used in investing activities for the year ended December 31, 2017, was primarily due to a year over year increase of \$1,334.0 in cash paid for acquisitions, primarily Chiltern. In addition, the Company had proceeds of \$5.5 from the sale of assets during 2017 in comparison to \$30.8 during 2016. Capital expenditures were \$312.9 and \$278.9 for the years ended December 31, 2017 and 2016, respectively. Capital expenditures in 2017 were 3.1% of revenues primarily in connection with projects to support growth in the Company's core businesses, projects related to LaunchPad and further Covance integration initiatives.

Cash Flows from Financing Activities

Net cash used for financing activities for the year ended December 31, 2018, was \$1,389.9 compared to cash provided by financing activities of \$593.2 for the year ended December 31, 2017. This movement in cash within financing activities for 2018,

as compared to 2017, was primarily a result of \$704.6 of debt and capital lease repayments and \$700.0 in share repurchases in 2018 compared to \$908.7 in net financing proceeds offset by \$338.1 share repurchases in 2017.

Net cash provided by financing activities for the year ended December 31, 2017, was \$593.2 compared to cash used for financing activities of \$671.0 for the year ended December 31, 2016. This movement in cash within financing activities for 2017, as compared to 2016, was primarily a result of \$908.7 of net financing proceeds offset by \$338.1 in share repurchases in 2017 compared to \$653.4 in debt repayments combined with \$43.9 share repurchases in 2016.

On August 22, 2017, the Company issued new Senior Notes representing \$1,200.0 in debt securities consisting of a \$600.0 aggregate principal amount of 3.25% Senior Notes due 2024 and a \$600.0 aggregate principal amount of 3.60% Senior Notes due 2027. Interest on these notes is payable semi-annually on March 1 and September 1 of each year, commencing on March 1, 2018. Net proceeds from the offering of these notes were \$1,190.1 after deducting underwriting discounts and other expenses of the offering. Net proceeds were used to pay off the 2.20% Senior Notes due August 23, 2017, as well as a portion of the cash consideration and the fees and expenses in connection with the Chiltern acquisition.

On September 15, 2017, the Company entered into a new \$750.0 term loan which will mature on September 15, 2022. The 2017 term loan balance at December 31, 2018, was \$527.1.

On September 15, 2017, the Company also entered into an amendment and restatement of its existing senior revolving credit facility, which was originally entered into on December 21, 2011, was amended and restated on December 15, 2015 and was further amended on July 13, 2016. The senior revolving credit facility consists of a five-year revolving facility in the principal amount of up to \$1,000.0, with the option of increasing the facility by up to an additional \$350.0, subject to the agreement of one or more new or existing lenders to provide such additional amounts and certain other customary conditions. The revolving credit facility also provides for a subfacility of up to \$100.0 for swing line borrowings and a subfacility of up to \$150.0 for issuances of letters of credit. The revolving credit facility is permitted to be used for general corporate purposes, including working capital, capital expenditures, funding of share repurchases and certain other payments, and acquisitions and other investments. There were no balances outstanding on the Company's current revolving credit facility at December 31, 2018, or December 31, 2017.

Under the Company's term loan credit facilities and the revolving credit facility, the Company is subject to negative covenants limiting subsidiary indebtedness and certain other covenants typical for investment grade-rated borrowers and the Company is required to maintain certain leverage ratios. The Company was in compliance with all covenants under the term loan credit facilities and the revolving credit facility at December 31, 2018. As of December 31, 2018, the ratio of total debt to consolidated pro forma trailing 12 month earnings before interest, tax, depreciation, and amortization (EBITDA) was 3.0 to 1.0.

The 2017 term loan credit facility accrues interest at a per annum rate equal to, at the Company's election, either a London Interbank Offered Rate (LIBOR) rate plus a margin ranging from 0.875% to 1.50%, or a base rate determined according to a prime rate or federal funds rate plus a margin ranging from 0.0% to 0.50%. Advances under the revolving credit facility accrue interest at a per annum rate equal to, at the Company's election, either a LIBOR rate plus a margin ranging from 0.775% to 1.25%, or a base rate determined according to a prime rate or federal funds rate plus a margin ranging from 0.00% to 0.25%. Fees are payable on outstanding letters of credit under the revolving credit facility at a per annum rate equal to the applicable margin for LIBOR loans, and the Company is required to pay a facility fee on the aggregate commitments under the revolving credit facility, at a per annum rate ranging from 0.10% to 0.25%. The interest margin applicable to the credit facilities, and the facility fee and letter of credit fees payable under the revolving credit facility, are based on the Company's senior credit ratings as determined by S&P and Moody's.

As of December 31, 2018, the effective interest rate on the revolving credit facility was 3.5% and the effective interest rate was 3.6% on the 2017 term loans.

As of December 31, 2018, the Company provided letters of credit aggregating \$72.2, primarily in connection with certain insurance programs. Letters of credit provided by the Company are issued under the Company's revolving credit facility and are renewed annually.

During 2018, the Company purchased 4.2 shares of its common stock at a total cost of \$700.0. At the end of 2018, the Company had outstanding authorization from the board of directors to purchase an additional \$443.5 of Company common stock. On February 6, 2019, the board of directors replaced the Company's existing share repurchase plan with a new plan authorizing repurchase of up to \$1.25 billion of the Company's shares. The repurchase authorization has no expiration date.

The Company had a \$26.7 and \$27.4 reserve for unrecognized income tax benefits, including interest and penalties, as of December 31, 2018 and December 31, 2017, respectively. For the year ended December 31, 2018, approximately \$6.0 of the tax reserve is classified in accrued expenses and other in the Company's Consolidated Balance Sheet while the remaining \$20.7 is classified in deferred income taxes and other tax liabilities. Substantially all of the tax reserve for the year ended December 31, 2017 are classified in deferred income taxes and other tax liabilities in the Company's Consolidated Balance Sheet.

During 2018 and 2017, the Company settled notices to convert \$0.3 and \$25.2 aggregate principal amount at maturity of its zero-coupon subordinated notes with a conversion value of \$0.7 and \$33.9, respectively. The total cash used for these settlements was \$0.3 and \$33.9 and the Company also issued 0.0 and 0.3 additional shares of common stock, respectively. As a result of these conversions in 2018 and 2017, the Company also reversed approximately \$0.2 and \$13.7, respectively, of deferred tax liability to reflect the tax benefit realized upon issuance of the shares.

On September 11, 2018, the Company announced that for the period of September 11, 2018, to March 8, 2019, the zero-coupon subordinated notes will accrue contingent cash interest at a rate of no less than 0.125% of the average market price of a zero-coupon subordinated note for the five trading days ended September 8, 2017, in addition to the continued accrual of the original issue discount.

On January 3, 2019, the Company announced that its zero-coupon subordinated notes may be converted into cash and common stock at the conversion rate of 13.4108 per \$1,000.0 principal amount at maturity of the notes, subject to the terms of the zero-coupon subordinated notes and the Indenture, dated as of October 23, 2006, between the Company, and The Bank of New York Mellon as trustee and the conversion agent. In order to exercise the option to convert all or a portion of the zero-coupon subordinated notes, holders are required to validly surrender their zero-coupon subordinated notes at any time during the calendar quarter beginning January 1, 2019, through the close of business on the last business day of the calendar quarter, which is 5:00 p.m., New York City time, on Friday, March 31, 2019. If notices of conversion are received, the Company plans to settle the cash portion of the conversion obligation with cash on hand and/or borrowings under its revolving credit facility.

Credit Ratings

The Company's investment grade debt ratings from Moody's and BBB from Standard & Poor's (S&P) contribute to its ability to access capital markets.

Contractual Cash Obligations

	Payments Due by Period				
	Total	2019	2020 - 2021	2022 - 2023	2024 and thereafter
Operating lease obligations	\$ 763.4	\$ 196.1	\$ 258.7	\$ 147.8	\$ 160.8
Contingent future licensing payments (a)	18.1	1.6	7.7	7.6	1.2
Minimum royalty payments	15.8	2.3	7.6	5.6	0.3
Purchase obligations	8.1	8.1	—	—	—
Capital lease obligations	96.5	14.8	25.8	21.5	34.4
Scheduled interest payments on Senior Notes	1,898.1	208.1	368.7	291.6	1,029.7
Scheduled interest payments on Term Loan (d)	84.3	21.1	46.5	16.7	—
Long-term debt	6,027.0	—	1,100.0	1,827.0	3,100.0
Total contractual cash obligations (b) (c)	\$ 8,911.3	\$ 452.1	\$ 1,815.0	\$ 2,317.8	\$ 4,326.4

- (a) Contingent future licensing payments will be made if certain events take place, such as the launch of a specific test, the transfer of certain technology, and the achievement of specified revenue milestones.
- (b) The table does not include obligations under the Company's pension and postretirement benefit plans, which are included in "Note 17 to Consolidated Financial Statements." Benefits under the Company's postretirement medical plan are made when claims are submitted for payment, the timing of which is not practicable to estimate.
- (c) The table does not include the Company's reserve for unrecognized tax benefits. The Company had a \$26.7 and \$27.4 reserve for unrecognized tax benefits, including interest and penalties, at December 31, 2018, and 2017, respectively, which is included in "Note 14 to Consolidated Financial Statements." Substantially all of these tax reserves are classified in other long-term liabilities in the Company's Consolidated Balance Sheets at December 31, 2018, and 2017.
- (d) Interest payments due by period for the Company's debt subject to variable interest rates are calculated based on rates in place as of December 31, 2018.

Off-Balance Sheet Arrangements

The Company does not have transactions or relationships with "special purpose" entities, and the Company does not have any off-balance sheet financing other than normal operating leases and letters of credit.

Other Commercial Commitments

As of December 31, 2018, the Company provided letters of credit aggregating approximately \$72.2, primarily in connection with certain insurance programs. Letters of credit provided by the Company are secured by the Company's revolving credit facility and are renewed annually.

The contractual value of the noncontrolling interest put in the Company's Ontario subsidiary totaled \$15.0 and \$16.3 at December 31, 2018, and 2017, respectively, and has been classified as mezzanine equity in the Company's consolidated balance sheet.

Based on current and projected levels of cash flows from operations, coupled with availability under its revolving credit facility, the Company believes it has sufficient liquidity to meet both its anticipated short-term and long-term cash needs; however, the Company continually reassesses its liquidity position in light of market conditions and other relevant factors.

Critical Accounting Policies

The preparation of financial statements in conformity with generally accepted accounting principles 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 reported periods. While the Company believes these estimates are reasonable and consistent, they are by their very nature estimates of amounts that will depend on future events. Accordingly, actual results could differ from these estimates. The Company's Audit Committee periodically reviews the Company's significant accounting policies. The Company's critical accounting policies arise in conjunction with the following:

- Revenue recognition;
- Pension expense;
- Accruals for self-insurance reserves;
- Income taxes; and
- Goodwill and indefinite-lived assets.

Revenue Recognition

Within the LCD segment, a revenue transaction is initiated when LCD receives a requisition order to perform a diagnostic test. The information provided on the requisition form is used to determine the party that will be billed for the testing performed and the expected reimbursement. LCD recognizes revenue and satisfies its performance obligation for services rendered when the testing process is complete and the associated results are reported. Sales are distributed among four payer portfolios - clients, patients, Medicare and Medicaid and third-party.

The following are descriptions of the LCD payer portfolios:

Clients

Client payers represent the portion of LCD's revenue related to physicians, hospitals, health systems, accountable care organizations (ACOs), employers and other entities where payment is received exclusively from the entity ordering the testing service. Generally, client sales are recorded on a fee-for-service basis at LCD's client list price, less any negotiated discount. A portion of client billing is for laboratory management services, collection kits and other non-testing services or products. In these cases, revenue is recognized when services are rendered or delivered.

This portfolio also included LCD's nutritional chemistry services through CFS, which was sold on August 1, 2018. LCD offered a broad range of services to the food and nutraceutical and animal feed industries. Revenue was recognized using an output-based measure of progress based on the volume of activities in each period.

Patients

This portfolio includes revenue from uninsured patients and member cost-share for insured patients (e.g., coinsurance, deductibles and non-covered services). Uninsured patients are billed based upon LCD's patient fee schedules, net of any discounts negotiated with physicians on behalf of their patients. LCD bills insured patients as directed by their health plan and after consideration of the fees and terms associated with an established health plan contract.

Medicare and Medicaid

This portfolio relates to fee-for-service revenue from traditional Medicare and Medicaid programs. Net revenue from these programs is based on the fee schedule established by the related government authority. In addition to contractual discounts, other adjustments including anticipated payer denials are considered when determining net revenue. Any remaining adjustments to revenue are recorded at the time of final collection and settlement. These adjustments are not material to LCD's results of operations in any period presented.

Third-Party

Third-party includes revenue related to MCOs. The majority of LCD's third-party revenue is reimbursed on a fee-for-service basis. These payers are billed at LCD's established list price and revenue is recorded net of contractual discounts. The majority of

LCD's MCO sales are recorded based upon contractually negotiated fee schedules with sales for non-contracted MCOs recorded based on historical reimbursement experience.

Third-party reimbursement is also received through capitation agreements with MCOs and independent physician associations (IPAs). Under capitated agreements, revenue is recognized based on a negotiated per-member, per-month payment for an agreed upon menu of tests, or based upon the proportionate share earned by LCD from a capitation pool. When the agreed upon reimbursement is based solely on an established rate per member, revenue is not impacted by the volume of testing performed. Under a capitation pool arrangement, the aggregate value of an established rate per member is distributed based on the volume and complexity of the procedures performed by laboratories participating in the agreement. LCD recognizes revenue monthly, based upon the established capitation rate or anticipated distribution from a capitated pool.

LCD has a formal process to estimate and review the collectability of its receivables based on the period of time they have been outstanding. The majority of LCD's collection risk is related to accounts receivable from both insured and uninsured patients who are unwilling or unable to pay. Anticipated write-offs are recorded as an adjustment to revenue and at an amount considered necessary to record the segment's revenue at its net realizable value. In addition to contractual discounts, other adjustments including anticipated payer denials are considered when determining revenue. Any remaining adjustments to revenue are recorded at the time of final collection and settlement. These adjustments are not material to LCD's results of operations in any period presented.

The nature of CDD's obligations include agreements to manage a full clinical trial, provide services for a specific phase of a trial, or provide research products to the customer. Generally, the amount of the transaction price estimated at the beginning of the contract is equal to the amount expected to be billed to the customer. Other payments may also factor into the calculation of transaction price, such as volume-based rebates that are retroactively applied to prior transactions in the period.

Historically a majority of CDD's revenues have been earned under contracts that range in duration from a few months to a few years, but can extend in duration up to five years or longer. Occasionally, CDD also has entered into minimum volume arrangements with certain customers. Under these types of arrangements, if the annual minimum dollar value of a service commitment is not reached, the customer is required to pay CDD for the shortfall. Annual minimum commitment shortfalls are not recognized until the end of the period when the amount has been determined and agreed to by the customer.

CDD recognizes revenue either as services are performed or as products are delivered, depending on the nature of the work contracted. If performance is completed at a specific point in time, the Company evaluates the nature of the agreement to determine when the good or service is transferred into the customer's control.

Service contracts generally take the form of fee-for-service or fixed-price arrangements subject to pricing adjustments based on changes in scope. In cases where performance spans multiple accounting periods, revenue is recognized as services are performed, measured on a proportional-performance basis, using either input or output methods that are specific to the service provided. In an output method, revenue is determined by dividing the actual units of output achieved by the total units of output required under the contract and multiplying that percentage by the total contract value. The total contract value, or total contractual payments, represents the aggregate contracted price for each of the agreed upon services to be provided.

When using an input method, revenue is recognized by dividing the actual units of input incurred by the total units of input budgeted in the contract, and multiplying that percentage by the total contract value. In each situation, the Company believes that the methods used most accurately depict the progress of the Company towards completing its obligations. Billing schedules and payment terms are generally negotiated on a contract-by-contract basis. In some cases, CDD bills the customer for the total contract value in progress-based installments as certain non-contingent billing milestones are reached over the contract duration. These milestones include, but are not limited to, contract signing, initial dosing, investigator site initiation, patient enrollment and/or database lock. The term "billing milestone" relates only to a billing trigger in a contract whereby amounts become billable and payable in accordance with a negotiated predetermined billing schedule throughout the term of a project. These billing milestones are generally not performance-based (i.e., there is no potential additional consideration tied to specific deliverables or performance). In other cases, billing and payment terms are tied to the passage of time (e.g., monthly billings). In either case, the total contract value and aggregate amounts billed to the customer would be the same at the end of the project.

Proportional performance contracts typically contain a single service (e.g., management of a clinical study) and therefore no allocation of the contract price is required. Fee-for-service contracts are typically priced based on transaction volume. Since the volume of activities in a fee-for-service contract is unspecified, the contract price is entirely variable and is allocated to the time period in which it is earned. For contracts that include multiple distinct goods and services, CDD allocates the contract price to the goods and services based on a customer price list, if available. If a price list is not available, CDD will estimate the transaction price using either market prices or an "expected cost plus margin" approach.

While CDD attempts to negotiate terms that provide for billing and payment of services prior or within close proximity to the provision of services, this is not always possible. While a project is ongoing, cash payments are not necessarily representative of

aggregate revenue earned at any particular point in time, as revenues are recognized when services are provided, while amounts billed and paid are in accordance with the negotiated billing and payment terms.

In some cases, payments received are in excess of revenue recognized. For example, a contract invoicing schedule may provide for an upfront payment of 10% of the full contract value upon contract signing, but at the time of signing performance of services has not yet begun. Payments received in advance of services being provided are deferred as contract liabilities on the balance sheet. As the contracted services are subsequently performed and the associated revenue is recognized, the contract liability balance is reduced by the amount of revenue recognized during the period.

In other cases, services may be provided and revenue recognized before the customer is invoiced. In these cases, revenue recognized will exceed amounts billed, and the difference, representing a contract asset, is recorded for the amount that is currently not billable to the customer pursuant to contractual terms. Once the customer is invoiced, the contract asset is reduced for the amount billed, and a corresponding account receivable is recorded. All contract assets are billable to customers within one year from the respective balance sheet date.

Most contracts are terminable with or without cause by the customer, either immediately or upon notice. These contracts often require payment to CDD of expenses to wind down the study or project, fees earned to date and, in some cases, a termination fee or a payment to CDD of some portion of the fees or profits that could have been earned by CDD under the contract if it had not been terminated early. Termination fees are included in net revenues when services are performed and realization is assured.

The following are descriptions of the full range of drug development services provided by CDD:

Preclinical services include the sale of research models, fee-for-service activities such as bioanalytical testing services, and proportional performance activities such as toxicology studies. Revenue for sale of research models is recognized at a point in time, typically upon shipment, when control transfers to the customer. Revenue for bioanalytical testing services is recognized at a point in time upon communication of results to the customer. Revenue for proportional performance activities, including toxicology studies, is recognized using an input-based measure of progress in which revenue is recognized as expenses are incurred for the research models, labor hours, and other costs attributable to the study.

Through its central laboratory, CDD produces and supplies specimen collection kits that are utilized in clinical studies, and provides transportation, project management, data management, and laboratory testing services on an as-needed basis throughout the duration of its customers' clinical studies. Revenue for central laboratory services is recognized using an output-based measure of progress based on volume of activities in each period. CDD also provides long-term specimen storage services, for which revenue is recognized using an input-based measure of progress based on costs incurred.

CDD provides clinical development and commercialization services, including clinical pharmacology services, full management of Phase II through IV clinical studies, and market access solutions. Revenue for clinical pharmacology services, which includes first-in-human trials, is recognized using an output-based measure of progress based on bed nights. Revenue for full service clinical studies is recognized using an input-based measure of progress based on costs incurred (including pass-through costs such as investigator grants and reimbursable out-of-pocket expenses). Clinical services utilizing the input-based measure of progress account for approximately 50% of CDD revenue. Revenue for market access solutions is recognized using various methods. Revenue for fee-for-service arrangements, such as reimbursement consulting hotlines and patient assistance programs, is recognized using an output method based on transaction volume which corresponds to the amount charged to the customer. For consulting services billed based on time and materials, revenue is recognized using the right to invoice practical expedient.

CDD endeavors to assess and monitor the creditworthiness of its customers to which it grants credit terms in the ordinary course of business. CDD maintains a provision for doubtful accounts relating to amounts due that may not be collected. This bad debt provision is monitored on a monthly basis and adjusted as circumstances warrant. Since the recorded bad debt provision is based upon management's judgment, actual bad debt write-offs may be greater or less than the amount recorded. Historically, bad debt write-offs have not been material.

Pension Expense

The Company has a defined-benefit retirement plan (Company Plan) and a non-qualified supplemental retirement plan (PEP). In October 2009, the Company received approval from its board of directors to freeze any additional service-based credits for any years of service after December 31, 2009, on the Company Plan and the PEP. Both plans have been closed to new participants. Employees participating in the Company Plan and the PEP no longer earn service-based credits, but continue to earn interest credits. In addition, effective January 1, 2010, all employees eligible for the defined-contribution retirement plan (401K Plan) receive a minimum 3% non-elective contribution (NEC) concurrent with each payroll period. The 401K Plan also permits discretionary contributions by the Company of up to 1% and up to 3% of pay for eligible employees, based on service.

The Company Plan covers substantially all employees employed by the Company prior to December 31, 2009. The benefits to be paid under the Company Plan are based on years of credited service through December 31, 2009, interest credits and average

compensation. The Company's policy is to fund the Company Plan with at least the minimum amount required by applicable regulations. The PEP covers a portion of the Company's senior management group. Prior to 2010, the PEP provided for the payment of the difference, if any, between the amount of any maximum limitation on annual benefit payments under the Employee Retirement Income Security Act of 1974 and the annual benefit that would be payable under the Company Plan but for such limitation. Effective January 1, 2010, employees participating in the PEP no longer earn service-based credits. The PEP is an unfunded plan.

In addition, as a result of the Covance acquisition, the Company has a frozen non-qualified Supplemental Executive Retirement Plan (SERP). The SERP, which is not funded, is intended to provide retirement benefits for certain employees who were executive officers of Covance prior to the Covance acquisition. Benefit amounts are based upon years of service and compensation of the participating employees. As a result of the Covance acquisition, the Company also sponsors two defined-benefit pension plans for the benefit of its employees at two U.K. subsidiaries (U.K. Plans) and one defined-benefit pension plan for the benefit of its employees at a German subsidiary (German Plan), all of which are legacy plans of previously acquired companies and are closed to new entrants. Benefit amounts for all three plans are based upon years of service and compensation. The German Plan is unfunded while the U.K. Plans are funded. The Company's funding policy for the U.K. Plans has been to contribute annually amounts at least equal to the local statutory funding requirements.

The Company's net pension cost is developed from actuarial valuations. Inherent in these valuations are key assumptions, including discount rates and expected return on plan assets, which are updated on an annual basis at the beginning of each year. The Company is required to consider current market conditions, including changes in interest rates, in making these assumptions. Changes in pension costs may occur in the future due to changes in these assumptions. The key assumptions used in accounting for the defined-benefit retirement plans were a 4.3% discount rate and a 6.5% expected long-term rate of return on plan assets for the Company Plan, a 4.4% discount rate for the PEP, a 1.7% discount rate and a 2.0% expected salary increase for the German plan and a 2.5% discount rate and a 3.6% expected salary increase for the U.K. Plans as of December 31, 2018.

Discount Rate

The Company evaluates several approaches toward setting the discount rate assumption that is used to value the benefit obligations of its retirement plans. At year-end, priority was given to use of the Towers Watson Bond:Link model, which simulates the purchase of investment-grade corporate bonds at current market yields with principal amounts and maturity dates closely matching the Company's projected cash disbursements from its plans. This completed model represents the yields to maturity at which the Company could theoretically settle its plan obligations at year end. The weighted-average yield on the modeled bond portfolio is then used to form the discount rate assumption used for each retirement plan. A one percentage point decrease or increase in the discount rate would have resulted in a respective increase or decrease in 2018 retirement plan expense of \$2.4 for the Company Plan and PEP. A one percentage point decrease or increase in the discount rate would have resulted in a respective increase or decrease in 2018 retirement plan expense of \$0.9 for the U.K. Plans.

Return on Plan Assets

In establishing its expected return on plan assets assumption, the Company reviews its asset allocation and develops return assumptions based on different asset classes adjusting for plan operating expenses. Actual asset over/under performance compared to expected returns will respectively decrease/increase unrecognized loss. The change in the unrecognized loss will change amortization cost in upcoming periods. A one percentage point increase or decrease in the expected return on plan assets would have resulted in a corresponding change in 2018 pension expense of \$2.5 for the Company Plan. A one percentage point increase or decrease in the expected return on plan assets would have resulted in a corresponding change in 2018 pension expense of \$2.8 for the U.K. Plans.

Net pension cost for 2018 was \$20.9 as compared with \$14.6 in 2017 and \$14.9 in 2016. The increase in pension expense was due to increases in the amount of net amortization and deferral as a result of lower discount rates as well as a \$7.5 settlement charge. Pension expense for the Company Plan and the PEP is expected to increase to \$13.3 in 2019 as a result of a lower assumed discount rate and changes in participant mortality tables. Pension expense for the Germany Plan and the U.K. Plans is expected to increase to \$1.2 in 2019 as a result of a decrease in the expected return on plan assets.

Further information on the Company's defined-benefit retirement plans is provided in Note 17 to the Consolidated Financial Statements.

Accruals for Self-Insurance Reserves

Accruals for self-insurance reserves (including workers' compensation, auto and employee medical) are determined based on a number of assumptions and factors, including historical payment trends and claims history, actuarial assumptions and current and estimated future economic conditions. These estimated liabilities are not discounted.

The Company is self-insured (up to certain limits) for professional liability claims arising in the normal course of business, generally related to the testing and reporting of laboratory test results. The Company maintains excess insurance which limits the

Company's maximum exposure on individual claims. The Company estimates a liability that represents the ultimate exposure for aggregate losses below those limits. The liability is based on assumptions and factors for known and incurred but not reported claims, including the frequency and payment trends of historical claims.

If actual trends differ from these estimates, the financial results could be impacted. Historical trends have not differed significantly from these estimates.

Income Taxes

The Company accounts for income taxes utilizing the asset and liability method. Under this method, deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases and for tax loss carryforwards. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date. The Company does not recognize a tax benefit, unless the Company concludes that it is more likely than not that the benefit will be sustained on audit by the taxing authority based solely on the technical merits of the associated tax position. If the recognition threshold is met, the Company recognizes a tax benefit measured at the largest amount of the tax benefit that the Company believes is greater than 50% likely to be realized. The Company records interest and penalties in income tax expense.

During the fourth quarter of 2017, the Company recorded the estimated impact of the TCJA, which resulted in a favorable remeasurement of deferred taxes, partially offset by the deemed repatriation tax. In 2018, the Company completed the analysis of the 2017 provisional estimated of the TCJA in accordance with SAB 118. The Company recorded \$45.0 of additional income tax expense in 2018 related to the TCJA provisions implemented in 2017.

Goodwill and Indefinite-Lived Assets

The Company assesses goodwill and indefinite-lived intangibles for impairment at least annually or whenever events or changes in circumstances indicate that the carrying amount of such assets may not be recoverable. In accordance with updates to the Financial Accounting Standards Board's (FASB) authoritative guidance regarding goodwill and indefinite-lived intangible asset impairment testing, an entity is allowed to first assess qualitative factors as a basis for determining whether it is necessary to perform quantitative impairment testing. If an entity determines that it is not more likely than not that the estimated fair value of an asset is less than its carrying value, then no further testing is required. Otherwise, impairment testing must be performed in accordance with the original accounting standards. The updated FASB guidance also allows an entity to bypass the qualitative assessment for any reporting unit in its goodwill assessment and proceed directly to performing the quantitative assessment. Similarly, a company can proceed directly to a quantitative assessment in the case of impairment testing for indefinite-lived intangible assets as well.

The quantitative goodwill impairment test includes the estimation of the fair value of each reporting unit as compared to the carrying value of the reporting unit. Reporting units are businesses with discrete financial information that is available and reviewed by management. The Company estimates the fair value of a reporting unit using both income-based and market-based valuation methods. The income-based approach is based on the reporting unit's forecasted future cash flows that are discounted to the present value using the reporting unit's weighted average cost of capital. For the market-based approach, the Company utilizes a number of factors such as publicly available information regarding the market capitalization of the Company as well as operating results, business plans, market multiples, and present value techniques. Based upon the range of estimated values developed from the income and market-based methods, the Company determines the estimated fair value for the reporting unit. If the estimated fair value of the reporting unit exceeds the carrying value, the goodwill is not impaired and no further review is required. An entity should recognize an impairment charge for the amount by which the carrying amount exceeds the reporting unit's fair value; however, the loss recognized should not exceed the total amount of goodwill allocated to that reporting unit.

The income-based fair value methodology requires management's assumptions and judgments regarding economic conditions in the markets in which the Company operates and conditions in the capital markets, many of which are outside of management's control. At the reporting unit level, fair value estimation requires management's assumptions and judgments regarding the effects of overall economic conditions on the specific reporting unit, along with assessment of the reporting unit's strategies and forecasts of future cash flows. Forecasts of individual reporting unit cash flows involve management's estimates and assumptions regarding:

- Annual cash flows, on a debt-free basis, arising from future revenues and profitability, changes in working capital, capital spending and income taxes for at least a five-year forecast period.
- A terminal growth rate for years beyond the forecast period. The terminal growth rate is selected based on consideration of growth rates used in the forecast period, historical performance of the reporting unit and economic conditions.

- A discount rate that reflects the risks inherent in realizing the forecasted cash flows. A discount rate considers the risk-free rate of return on long-term treasury securities, the risk premium associated with investing in equity securities of comparable companies, the beta obtained from the comparable companies and the cost of debt for investment grade issuers. In addition, the discount rate may consider any company-specific risk in achieving the prospective financial information.

Under the market-based fair value methodology, judgment is required in evaluating market multiples and recent transactions. Management believes that the assumptions used for its impairment tests are representative of those that would be used by market participants performing similar valuations of the reporting units.

Management performed its annual goodwill and intangible asset impairment testing as of the beginning of the fourth quarter of 2018. The Company elected to perform the qualitative assessment for goodwill and intangible assets for all reporting units except the Canadian reporting unit and its indefinite-lived assets consisting of acquired Canadian licenses for which a quantitative assessment was performed.

In the qualitative assessment, the Company considered relevant events and circumstances for each reporting unit, including (i) current year results, (ii) financial performance versus management's annual and five-year strategic plans, (iii) changes in the reporting unit carrying value since prior year, (iv) industry and market conditions in which the reporting unit operates, (v) macroeconomic conditions, including discount rate changes, and (vi) changes in products or services offered by the reporting unit. If applicable, performance in recent years was compared to forecasts included in prior valuations. Based on the results of the qualitative assessment, the Company concluded that it was not more likely than not that the carrying values of the goodwill and intangible assets were greater than their fair values, and that further quantitative testing was not necessary.

In 2018, the Company utilized an income approach to determine the fair value of its Canadian reporting unit and its indefinite-lived assets consisting of acquired Canadian licenses. Based upon the results of the quantitative assessment, the Company concluded that the fair value of the indefinite-lived Canadian licenses was greater than the carrying value.

It is possible that the Company's conclusions regarding impairment or recoverability of goodwill or intangible assets in any reporting unit could change in future periods. There can be no assurance that the estimates and assumptions used in the Company's goodwill and intangible asset impairment testing performed as of the beginning of the fourth quarter of 2018 will prove to be accurate predictions of the future, if, for example, (i) the businesses do not perform as projected, (ii) overall economic conditions in 2018 or future years vary from current assumptions (including changes in discount rates), (iii) business conditions or strategies for a specific reporting unit change from current assumptions, including loss of major customers, (iv) investors require higher rates of return on equity investments in the marketplace or (v) enterprise values of comparable publicly traded companies, or actual sales transactions of comparable companies, were to decline, resulting in lower multiples of revenues and EBITDA. The Company will particularly monitor the financial performance of and assumptions for two of the CDD reporting units for which an income approach was performed in 2018. A future impairment charge for goodwill or intangible assets could have a material effect on the Company's consolidated financial position and results of operations.

FORWARD-LOOKING STATEMENTS

The Company has made in this report, and from time to time may otherwise make in its public filings, press releases and discussions by Company management, forward-looking statements concerning the Company's operations, performance and financial condition, as well as its strategic objectives. Some of these forward-looking statements can be identified by the use of forward-looking words such as "believes", "expects", "may", "will", "should", "seeks", "approximately", "intends", "plans", "estimates", or "anticipates" or the negative of those words or other comparable terminology. Such forward-looking statements are subject to various risks and uncertainties and the Company claims the protection afforded by the safe harbor for forward-looking statements contained in the Private Securities Litigation Reform Act of 1995. Actual results could differ materially from those currently anticipated due to a number of factors in addition to those discussed elsewhere herein, including in Item 1A Risk Factors, and in the Company's other public filings, press releases and discussion with Company management, including:

1. changes in government and third-party payer regulations, reimbursement, or coverage policies or other future reforms in the healthcare system (or in the interpretation of current regulations), new insurance or payment systems, including state, regional or private insurance cooperatives (e.g., health insurance exchanges) affecting governmental and third-party coverage or reimbursement for commercial laboratory testing, including the impact of PAMA;
2. significant monetary damages, fines, penalties, assessments, refunds, repayments, damage to the Company's reputation, unanticipated compliance expenditures and/or exclusion or disbarment from or ineligibility to participate in government programs, among other adverse consequences, arising from enforcement of anti-fraud and abuse laws and other laws applicable to the Company in jurisdictions in which the Company conducts business;
3. significant fines, penalties, costs, unanticipated compliance expenditures and/or damage to the Company's reputation arising from the failure to comply with applicable privacy and security laws and regulations, including the Health Insurance Portability and Accountability Act of 1996, the Health Information Technology for Economic and Clinical Health Act, the European Union's General Data Protection Regulation and similar laws and regulations in jurisdictions in which the Company conducts business;
4. loss or suspension of a license or imposition of a fine or penalties under, or future changes in, or interpretations of applicable licensing laws or regulations regarding the operation of clinical laboratories and the delivery of clinical laboratory test results, including, but not limited to, the U.S. Clinical Laboratory Improvement Act of 1967 and the Clinical Laboratory Improvement Amendments of 1988 and similar laws and regulations in jurisdictions in which the Company conducts business;
5. penalties or loss of license arising from the failure to comply with applicable occupational and workplace safety laws and regulations, including the U.S. Occupational Safety and Health Administration requirements and the U.S. Needlestick Safety and Prevention Act and similar laws and regulations in jurisdictions in which the Company conducts business;
6. fines, unanticipated compliance expenditures, suspension of manufacturing, enforcement actions, damage to the Company's reputation, injunctions, or criminal prosecution arising from failure to maintain compliance with current good manufacturing practice regulations and similar requirements of various regulatory agencies in jurisdictions in which the Company conducts business;
7. sanctions or other remedies, including fines, unanticipated compliance expenditures, enforcement actions, injunctions or criminal prosecution arising from failure to comply with the Animal Welfare Act or similar national, state and local laws and regulations in jurisdictions in which the Company conducts business;
8. changes in testing guidelines or recommendations by government agencies, medical specialty societies and other authoritative bodies affecting the utilization of laboratory tests;
9. changes in applicable government regulations or policies affecting the approval, availability of, and the selling and marketing of diagnostic tests, drug development, or the conduct of drug development and medical device and diagnostic studies and trials, including regulations and policies of the U.S. Food and Drug Administration, the U.S. Department of Agriculture, the Medicine and Healthcare products Regulatory Agency in the U.K., the State Drug Administration in China (formerly the China Food and Drug Administration), the Pharmaceutical and Medical Devices Agency in Japan, the European Medicines Agency and similar regulations and policies of agencies in jurisdictions in which the Company conducts business;
10. changes in government regulations or reimbursement pertaining to the biopharmaceutical and medical device and diagnostic industries, changes in reimbursement of biopharmaceutical products or reduced spending on research and development by biopharmaceutical customers;
11. liabilities that result from the failure to comply with corporate governance requirements;

12. increased competition, including price competition, potential reduction in rates in response to price transparency and consumerism, competitive bidding and/or changes or reductions to fee schedules and competition from companies that do not comply with existing laws or regulations or otherwise disregard compliance standards in the industry;
13. changes in payer mix or payment structure, including insurance carrier participation in health insurance exchanges, an increase in capitated reimbursement mechanisms, the impact of a shift to consumer-driven health plans or plans carrying an increased level of member cost-sharing, and adverse changes in payer reimbursement or payer coverage policies (implemented directly or through a third-party utilization management organization) related to specific diagnostic tests, categories of testing or testing methodologies;
14. failure to retain or attract MCO business as a result of changes in business models, including new risk-based or network approaches, out-sourced Laboratory Network Management or Utilization Management companies, or other changes in strategy or business models by MCOs;
15. failure to obtain and retain new customers, an unfavorable change in the mix of testing services ordered, or a reduction in tests ordered, specimens submitted or services requested by existing customers;
16. difficulty in maintaining relationships with customers or retaining key employees as a result of uncertainty surrounding the integration of acquisitions and the resulting negative effects on the business of the Company;
17. consolidation and convergence of MCOs, biopharmaceutical companies, health systems, large physician organizations and other customers, potentially causing material shifts in insourcing, utilization, pricing and reimbursement, including full and partial risk-based models;
18. failure to effectively develop and deploy new systems, system modifications or enhancements required in response to evolving market and business needs;
19. customers choosing to outsource services that are or could be purchased from the Company;
20. failure to identify, successfully close and effectively integrate and/or manage acquisitions of new businesses;
21. inability to achieve the expected benefits and synergies of newly-acquired businesses, including due to items not discovered in the due-diligence process, and the impact on the Company's cash position, levels of indebtedness and stock price;
22. termination, loss, delay, reduction in scope or increased costs of contracts, including large contracts and multiple contracts;
23. liability arising from errors or omissions in the performance of testing services, contract research services or other contractual arrangements;
24. changes or disruption in services or supplies provided by third parties, including transportation;
25. damage or disruption to the Company's facilities;
26. damage to the Company's reputation, loss of business, or other harm from acts of animal rights activists or potential harm and/or liability arising from animal research activities or the provision of animal research products;
27. adverse results in litigation matters;
28. inability to attract and retain experienced and qualified personnel;
29. failure to develop or acquire licenses for new or improved technologies, such as point-of-care testing, mobile health technologies, and digital pathology, or potential use of new technologies by customers and/or consumers to perform their own tests;
30. substantial costs arising from the inability to commercialize newly licensed tests or technologies or to obtain appropriate coverage or reimbursement for such tests;
31. failure to obtain, maintain and enforce intellectual property rights for protection of the Company's products and services and defend against challenges to those rights;
32. scope, validity and enforceability of patents and other proprietary rights held by third parties that may impact the Company's ability to develop, perform, or market the Company's products or services or operate its business;
33. business interruption or other impact on the business due to adverse weather, fires and/or other natural disasters, acts of war, terrorism or other criminal acts, and/or widespread outbreak of influenza or other pandemic illness;
34. discontinuation or recalls of existing testing products;

35. a failure in the Company's information technology systems, including with respect to testing turnaround time and billing processes, or the failure to maintain the security of business information or systems or to protect against cybersecurity attacks such as denial of service attacks, malware, ransomware and computer viruses, or delays or failures in the development and implementation of the Company's automation platforms, any of which could result in a negative effect on the Company's performance of services, a loss of business or increased costs, damages to the Company's reputation, significant litigation exposure, an inability to meet required financial reporting deadlines, or the failure to meet future regulatory or customer information technology, data security and connectivity requirements;
36. business interruption, increased costs, and other adverse effects on the Company's operations due to the unionization of employees, union strikes, work stoppages, general labor unrest or failure to comply with labor or employment laws;
37. failure to maintain the Company's days sales outstanding levels, cash collections (in light of increasing levels of patient responsibility), profitability and/or reimbursement arising from unfavorable changes in third-party payer policies, payment delays introduced by third party benefit management organizations and increasing levels of patient payment responsibility;
38. impact on the Company's revenue, cash collections and the availability of credit for general liquidity or other financing needs arising from a significant deterioration in the economy or financial markets or in the Company's credit ratings by Standard & Poor's and/or Moody's;
39. failure to maintain the expected capital structure for the Company, including failure to maintain the Company's investment grade rating;
40. changes in reimbursement by foreign governments and foreign currency fluctuations;
41. inability to obtain certain billing information from physicians, resulting in increased costs and complexity, a temporary disruption in receipts and ongoing reductions in reimbursements and net revenues;
42. expenses and risks associated with international operations, including, but not limited to, compliance with the U.S. Foreign Corrupt Practices Act, the U.K. Bribery Act, other applicable anti-corruption laws and regulations, trade sanction laws and regulations, and economic, political, legal and other operational risks associated with foreign jurisdictions;
43. failure to achieve expected efficiencies and savings in connection with the Company's business process improvement initiatives;
44. changes in tax laws and regulations or changes in their interpretation, including the TCJA; and
45. global economic conditions and government and regulatory changes, including, but not limited to the U.K.'s announced intention to exit from the European Union.

Item 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURE ABOUT MARKET RISK (in millions)

Market risk is the potential loss arising from adverse changes in market rates and prices, such as foreign currency exchange rates, interest rates and other relevant market rate or price changes. In the ordinary course of business, the Company is exposed to various market risks, including changes in foreign currency exchange and interest rates, and the Company regularly evaluates the exposure to such changes. The Company addresses its exposure to market risks, principally the market risks associated with changes in foreign currency exchange rates and interest rates, through a controlled program of risk management that includes, from time to time, the use of derivative financial instruments such as foreign currency forward contracts, cross currency swaps and interest rate swap agreements. Although, as set forth below, the Company's zero-coupon subordinated notes contain features that are considered to be embedded derivative instruments, the Company does not hold or issue derivative financial instruments for trading purposes.

Foreign Currency Exchange Rates

Approximately 13.6% of the Company's revenues for the year ended December 31, 2018 and approximately 10.9% of those for the year ended 2017 were denominated in currencies other than the U.S. dollar. The Company's financial statements are reported in U.S. dollars (USD) and, accordingly, fluctuations in exchange rates will affect the translation of revenues and expenses denominated in foreign currencies into U.S. dollars for purposes of reporting the Company's consolidated financial results. In both 2018 and 2017, the most significant currency exchange rate exposures were to the Canadian dollar, Swiss franc, euro and British pound. Excluding the impacts from any outstanding or future hedging transactions, a hypothetical change of 10% in average exchange rates used to translate all foreign currencies to U.S. dollars would have impacted income before income taxes for 2018 by approximately \$4.6. Gross accumulated currency translation adjustments recorded as a separate component of shareholders' equity were \$(176.6) and \$265.1 at December 31, 2018, and 2017, respectively. The Company does not have significant operations in countries in which the economy is considered to be highly inflationary.

The Company earns revenue from service contracts over a period of several months and, in some cases, over a period of several years. Accordingly, exchange rate fluctuations during this period may affect the Company's profitability with respect to such

contracts. The Company is also subject to foreign currency transaction risk for fluctuations in exchange rates during the period of time between the consummation and cash settlement of transactions. The Company limits its foreign currency transaction risk through exchange rate fluctuation provisions stated in some of its contracts with customers, or it may hedge transaction risk with foreign currency forward contracts. At December 31, 2018, the Company had 34 open foreign exchange forward contracts with various amounts maturing monthly through January 2019 with a notional value totaling approximately \$487.9. At December 31, 2017, the Company had 26 open foreign exchange forward contracts with various amounts maturing monthly through January 2018 with a notional value totaling approximately \$360.5.

The Company is party to six USD to Swiss Franc cross-currency swap agreements with an aggregate notional amount of \$600.0, maturing in 2022 and 2025, as a hedge against the impact of foreign exchange movements on its net investment in a Swiss Franc functional currency subsidiary.

Interest Rates

Some of the Company's debt is subject to interest at variable rates. As a result, fluctuations in interest rates affect the Company's financial results. The Company attempts to manage interest rate risk and overall borrowing costs through an appropriate mix of fixed and variable rate debt including the utilization of derivative financial instruments, primarily interest rate swaps.

Borrowings under the Company's term loan credit facilities and revolving credit facility are subject to variable interest rates, unless fixed through interest rate swaps or other agreements. As of December 31, 2018, and 2017, the Company had approximately \$0.0 and \$72.0, respectively, of unhedged variable rate debt under the 2014 term loan credit facility and \$527.1 and \$750.0, respectively, under the 2017 term loan credit facility.

Each quarter-point increase or decrease in the variable rate would result in the Company's interest expense changing by approximately \$2.1 per year for the Company's unhedged variable rate debt.

During the third quarter of 2013, the Company entered into two fixed-to-variable interest rate swap agreements for its 4.625% Senior Notes due 2020 with an aggregate notional amount of \$600.0 and variable interest rates based on one-month London Interbank Offered Rate (LIBOR) plus 2.298% to hedge against changes in the fair value of a portion of the Company's long-term debt.

The Company's zero-coupon subordinated notes contain the following two features that are considered to be embedded derivative instruments under authoritative guidance in connection with accounting for derivative instruments and hedging activities:

- 1) The Company will pay contingent cash interest on the zero-coupon subordinated notes after September 11, 2006, if the average market price of the notes equals 120% or more of the sum of the issue price, accrued original issue discount and contingent additional principal, if any, for a specified measurement period.
- 2) Holders may surrender zero-coupon subordinated notes for conversion during any period in which the rating assigned to the zero-coupon subordinated notes by Standard & Poor's Ratings Services is BB- or lower.

Item 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

Information required by this item is incorporated by reference to the *Report of Independent Registered Public Accounting Firm* and the consolidated financial statements, related notes and supplementary data. See the Index on Page F-1.

Item 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

Not Applicable.

Item 9A. CONTROLS AND PROCEDURES

Disclosure Controls and Procedures

As of the end of the period covered by this report, the Company carried out under the supervision and with the participation of the Company's management, including the Company's principal executive officer and principal financial officer, an evaluation of the effectiveness of the Company's disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended). Based upon this evaluation, the Company's principal executive officer and principal financial officer concluded that the Company's disclosure controls and procedures were effective as of the end of the period covered by this annual report.

Changes in Internal Control over Financial Reporting

There have been no changes in the Company's internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) during the quarter ended December 31, 2018, that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

Report of Management on Internal Control over Financial Reporting

The Company's management 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).

The internal control over financial reporting at the Company was 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 U.S. Internal control over financial reporting includes those policies and procedures that:

- pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the Company;
- provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with accounting principles generally accepted in the U.S.;
- provide reasonable assurance that receipts and expenditures of the Company are being made only in accordance with authorization of management and directors of the Company; and
- 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.

The Company's management assessed the effectiveness of the Company's internal control over financial reporting as of December 31, 2018. Management based this assessment 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 (COSO). Based on this assessment, the Company's management determined that, as of December 31, 2018, the Company maintained effective internal control over financial reporting. Management reviewed the results of its assessment with the Audit Committee of the Company's board of directors.

PricewaterhouseCoopers LLP, an independent registered public accounting firm, who audited and reported on the consolidated financial statements of the Company included in this annual report, also audited the effectiveness of the Company's internal control over financial reporting as of December 31, 2018, as stated in its report, which is included herein immediately preceding the Company's audited financial statements.

Item 9B. OTHER INFORMATION

None.

PART III

Item 10. DIRECTORS, EXECUTIVE OFFICERS and CORPORATE GOVERNANCE

Board of Directors

David P. King - Mr. King (62) has served as chairman of the board, president, and chief executive officer of the Company since May 6, 2009; prior to that date he served as a director, president, and chief executive officer of the Company since January 1, 2007. Mr. King served as executive vice president and chief operating officer from December 2005 to January 2007, as executive vice president of Strategic Planning and Corporate Development from January 2004 to December 2005 and originally joined the Company in September 2001 as senior vice president, general counsel, and chief compliance officer. Prior to joining the Company, he was a partner with Hogan & Hartson LLP (now Hogan Lovells US LLP) in Baltimore, Maryland from 1992 to 2001. He also sits on the boards of directors of the Seattle Science Foundation, the American Clinical Laboratory Association and PATH, where he has served as board chair since January 2018. Mr. King is also on the board of trustees of Elon University. Mr. King also served on the board of directors of Cardinal Health Inc., a public company, from 2011 until 2018. Mr. King has nearly twenty years' experience with the Company in a variety of roles of increasing responsibility in corporate operations, strategic planning, and corporate administration. Mr. King has a deep understanding of the clinical laboratory industry, business strategy, finance, sales and marketing, mergers and acquisitions, risk management and executive management of the Company and its operations.

Kerrii B. Anderson^{1,4} - Ms. Anderson (61) has served as a director of the Company since May 17, 2006. Ms. Anderson was chief executive officer of Wendy's International Inc., a restaurant operating and franchising company, from April 2006 until September

2008, when the company was merged with Triarc. Ms. Anderson served as executive vice president and chief financial officer of Wendy's International from 2000 to 2006. Prior to this position, she was chief financial officer, senior vice president of M/I Schottenstein Homes, Inc. from 1987 to 2000. Ms. Anderson is currently a director of Abercrombie & Fitch and a member of the Audit Committee. She also has served as a director and a member of the Compensation Committee and Audit Committee of Worthington Industries, Inc. (NYSE: WOR) since September 2010 and a director and member of the Audit and Finance Committee of Abercrombie & Fitch Co. (NYSE: ANF) since February 2018. Ms. Anderson serves on the Financial Committee of the Columbus Foundation and on the Board of Trustees, as well as the Chair of the Finance and Audit Committee for Ohio Health. She serves on the Board of Trustees for Elon University, as well as Chairwoman of the Audit Committee for Elon. Ms. Anderson served as the chairwoman of the board of Chiquita Brands International Inc. from October 2012 until the Company was sold on January 6, 2015, and was the chair of the Nominating and Corporate Governance Committee and a member of the Audit Committee. She also was a director of PF Chang's China Bistro, Inc. from 2010 until June 2012 and Wendy's International. from 2006 until September 30, 2008. Ms. Anderson has a strong record of leadership in operations and strategy. Ms. Anderson is also an audit committee financial expert as a result of her experience as CEO and CFO of Wendy's International. Through her service on other public company boards, Ms. Anderson brings extensive financial, mergers and acquisitions, international, talent management, corporate governance and executive compensation experience to the Company's board.

Jean-Luc Bélingard^{2,3} - Mr. Bélingard (70) has served as a director of the Company since April 28, 1995. From 2011 to December 2017, Mr. Bélingard served as chairman of bioMérieux, the worldwide leader of the IVD microbiology segment and a non-U.S. public company since 2010. Mr. Bélingard continues to serve on the board of directors of bioMérieux and as vice president of Institut Mérieux. Prior to serving as chairman, Mr. Bélingard had served as chief executive officer of bioMérieux from July 2011 to April 2014. Mr. Bélingard retired as chairman and chief executive officer of Ipsen SA, a diversified French healthcare holding company, on November 22, 2010. He had served in that position since 2002. Prior to this position, Mr. Bélingard was chief executive officer from 1999 to 2001 of bioMérieux-Pierre Fabre, a diversified French healthcare holding company, where his responsibilities included the management of that company's worldwide pharmaceutical and cosmetic business. From 1990 to 1999, Mr. Bélingard was CEO of Roche Diagnostics and a member of the Hoffman La Roche group Executive Committee. Mr. Bélingard is a director of the following non-U.S. public companies: Stallergenes Greer (U.K.) since 2011, Transgene SA since 2013, and Lupin Limited (India). Mr. Bélingard holds directorships at various Institut Mérieux Group companies, in particular at Institut Mérieux, the Group's parent company. Mr. Bélingard serves on the advisory board of Laboratoire Pierre Fabre S.A. (France) since 2013, which is owned by The Pierre Fabre Foundation, a government-recognized public organization. Mr. Bélingard is also a member of the Bill and Melinda Gates Foundation CEO Roundtable. Mr. Bélingard has been chairman of "FEFIS," the French Federation of Health Industries (Fédération Française des Industries de Santé), since 2016, and, since January 2017, he has been a member of the Conseil National de l'Industrie (C.N.I.) chaired by the French government. Mr. Bélingard's long tenure at Roche, Ipsen and bioMérieux demonstrates his valuable business, leadership and management experience, including leading a large healthcare organization with global operations. He brings a strong strategic, operational and risk management background to the Company's board and an important international perspective to the board's deliberations. In addition, Mr. Bélingard has extensive corporate governance experience through his service on other public company boards.

D. Gary Gilliland, M.D., Ph.D.^{1,3} - Dr. Gilliland (64) has served as a director of the Company since April 1, 2014. Since January 2, 2015, Dr. Gilliland has served as president and director of the NCI-designated Fred Hutchinson Cancer Research Center in Seattle, WA. Prior to that, he was the inaugural vice dean and vice president for precision medicine at the University of Pennsylvania Perelman School of Medicine from October 2013 to January 2015, where he was responsible for synthesizing research and clinical-care initiatives across all medical disciplines, including cancer, heart and vascular medicine, neurosciences, genetics and pathology, in order to create a national model for the delivery of precise, personalized medicine. From 2009 until he joined Penn Medicine in 2013, Dr. Gilliland was senior vice president of Merck Research Laboratories and Oncology Franchise head. At Merck, Dr. Gilliland oversaw first-in-human studies, proof-of-concept trials, and Phase II/III registration trials that included the development of pembrolizumab, or anti-PD1, for treatment of cancer, and managed all preclinical and clinical oncology licensing activities. Prior to joining Merck, Dr. Gilliland was a member of the faculty at Harvard Medical School for nearly 20 years, where he served as professor of medicine and a professor of stem cell and regenerative biology. He was also an investigator of the Howard Hughes Medical Institute from 1996 to 2009, director of the Leukemia Program at the Dana-Farber/Harvard Cancer Center from 2002 to 2009, and director of the Cancer Stem Cell Program of the Harvard Stem Cell Institute from 2004 to 2009. Dr. Gilliland has a Ph.D. in microbiology from UCLA and an M.D. from University of California San Francisco School of Medicine. He is board-certified in internal medicine and had his fellowship training in hematology and oncology, all at Harvard Medical School. Dr. Gilliland's expertise in cancer genetics and his experience working within medical communities ranging from academia to the pharmaceutical industry position him to provide a practical and balanced perspective to the board. Dr. Gilliland also brings to the board executive experience in clinical research, as well as in healthcare finance and mergers and acquisitions.

Garheng Kong, M.D., Ph.D.^{2,4} - Dr. Kong (43) has served as a director of the Company since December 1, 2013. Dr. Kong is the managing partner of Sofinnova HealthQuest Capital, a healthcare focused investment firm, and was previously a general partner at Sofinnova Ventures, a position he held from 2010 to 2013. Before joining Sofinnova, Dr. Kong was a general partner from 2000 to 2010 at Intersouth Partners, a venture capital firm where he was a founding investor or board member for various life science

ventures, several of which were acquired by large pharmaceutical companies. Prior to his investing career, Dr. Kong was employed by GlaxoSmithKline, McKinsey & Company, and TherOx. Dr. Kong served on the board of directors of Histogenics Corporation (NASDAQ:HSGX), a public biotechnology company where he also served as Chairman of the Board from July 2012 until February 2019. Dr. Kong has served on the Board of Directors of Avedro, Inc., a commercial-stage ophthalmic medical technology company, (NASDAQ: AVDR) since April 2017. Dr. Kong has served on the Board of Melinta Therapeutics, a pharmaceutical company formerly known as Cemptra Pharmaceuticals (NASDAQ: CEMP), since 2006, and served as chairman of the board from 2008 to 2017. Dr. Kong has been on the board of Alimera Sciences (NASDAQ: ALIM) since October 2012 when Sofinnova Ventures made an investment in Alimera where he also serves as the chairman of the compensation committee. Dr. Kong has served on the board of directors of Strongbridge Biopharma plc (NASDAQ: SBBP) since 2015. Dr. Kong also sits on the Duke University Medical Center board of visitors. Dr. Kong holds an M.D., a Ph.D. in biomedical engineering, and an MBA from Duke University. Dr. Kong brings to the board knowledge and experience in both the healthcare and finance fields, as well as executive leadership, based on his medical background and his work in life science-related venture capital. Dr. Kong also brings corporate governance expertise through his service on public company boards.

Robert E. Mittelstaedt, Jr.^{2,4} - Mr. Mittelstaedt, Jr. (75) has served as a director of the Company since November 1996. Mr. Mittelstaedt is dean emeritus of the W. P. Carey School of Business at Arizona State University, where he served as dean and professor of management from 2004 to 2013. Prior to June 30, 2004, he was vice dean of executive education of The Wharton School, University of Pennsylvania. Mr. Mittelstaedt had served with The Wharton School since 1973, with the exception of the period from 1985 to 1989 when he founded, served as chief executive officer of, and subsequently sold Intellego Inc., a company engaged in practice management, systems development, and service bureau billing operations in the medical industry. Mr. Mittelstaedt also serves as a lead independent director and Nominating and Governance Committee chair of Innovative Solutions & Support, Inc. (NASDAQ: ISSC). He served on the board and was the Compensation Committee chair of W.P. Carey Inc. until his retirement on September 21, 2016. Mr. Mittelstaedt brings to the board experience as a recognized expert in business strategy, corporate governance and executive compensation issues as well as extensive experience in corporate finance, mergers and acquisitions, sales and marketing, talent management and risk management. Mr. Mittelstaedt will retire from the LabCorp board of directors pursuant to the Company's mandatory retirement policy at the conclusion of his current term on May 9, 2019.

Peter M. Neupert^{1,4} - Mr. Neupert (62) has served as a director of the Company since January 2013. Mr. Neupert was an operating partner at Health Evolution Partners, a health only, middle market private equity firm, from January 2012 until June 2015. Prior to that, Mr. Neupert served as corporate vice president of the Microsoft Health Solutions Group from its formation in 2005 to January 2012. Mr. Neupert served on the President's Information Technology Advisory Committee (PITAC), co-chairing the Health Information Technology Subcommittee and helping to drive the "Revolutionizing Health Care Through Information Technology" report, published in June 2004. Mr. Neupert served as the founding president and chief executive officer of drugstore.com from 1998 to 2001 and as chairman of the board of directors through September 2004. Mr. Neupert is also a director of Clinithink Ltd., Adaptive Biotechnologies, Inc., Navigating Cancer Inc., and high SH Holdings Inc. He served on the board of directors of Quality Systems, Inc., now known as NextGen Healthcare, Inc. (NASDAQ: NXGN) from August 2013 to January 2014 and Freedom Innovations LLC from May 2013 to April 2016. He serves as a trustee for the Fred Hutchinson Cancer Research Center and was an active member of the Institute of Medicine's Roundtable on Value & Science-Driven Healthcare from 2007 to 2011. Mr. Neupert brings to the board experience as a recognized expert in health information technology and perspective on how to grow shareholder value leveraging business strategies with technology. Mr. Neupert is an audit committee financial expert as a result of his experience, including his experience as CEO and chairman of drugstore.com. His prior experience as a public company CEO and board member of both private and public companies brings practical insight to the board with respect to business strategy, corporate governance, executive leadership, corporate finance and M&A, talent management and emerging trends in healthcare. His previous international business experience also enables him to provide the board with an understanding of businesses and services adjacent to the diagnostic testing industry and the impact of technology, including cybersecurity risk and oversight.

Richelle Parham^{1,4} - Ms. Parham (51) has served as a director of the Company since February 8, 2016. In October 2016, Ms. Parham joined Camden Partners, a private equity firm, as a general partner focusing on investments in growth stage global consumer companies. Prior to Camden Partners, Ms. Parham served as vice president, chief marketing officer of eBay from November 2010 to March 2015. Ms. Parham was responsible, globally, for eBay brand strategy and brand marketing, to reach 108+ million active eBay users, Internet marketing and for customer relationship management. Prior to joining eBay, Ms. Parham served as head of global marketing innovation and Initiatives and head of Global Marketing Services at Visa, Inc. from 2008 to 2010. Her experience also includes 13 years at Digitas, Inc., a leading marketing agency, where she held a variety of senior leadership roles, including senior vice president and general manager of the agency's Chicago office. An advocate of empowering female leaders through STEM programs, Ms. Parham is on the advisory board for Girls Who Code. Ms. Parham has served as a Director of Best Buy Co. (NYSE: BBY), Inc. and e.l.f. Beauty (NYSE: ELF), Inc. since March 16, 2018. She served on the board of directors for Scripps Network Interactive Inc. (NYSE:SNI) from 2012 to March 2018 when Scripps Network was acquired by Discovery Communications. Ms. Parham holds double Bachelor of Science degrees in business administration and design arts from Drexel University. She became a member of the Drexel University board of trustees in 2014. Ms. Parham brings to the board extensive senior-level executive experience, including corporate finance and mergers and acquisitions. Ms. Parham also brings more than

20 years of global strategy and marketing experience, as well as expertise in understanding consumers and the consumer decision journey.

Adam H. Schechter^{2,3} - Mr. Schechter (54) has served as a director of the Company since April 1, 2013. Mr. Schechter was an executive vice president of Merck & Co., Inc. and President of Global Human Health from 2010 to 2018 and is presently special advisor to the CEO of Merck & Co., Inc. Prior to becoming president, Global Human Health, Mr. Schechter served as president, Global Pharmaceutical Business, from 2007 to 2010. Mr. Schechter's extensive experience at Merck included global and U.S.-focused leadership roles spanning sales, marketing, and managed markets, as well as business and product development. Mr. Schechter serves on the board of directors for the European Federation of Pharmaceutical Industries and Associations. He is a board member for Water.org and an executive board member for the National Alliance for Hispanic Health. Mr. Schechter serves as the board's lead independent director. Mr. Schechter brings to the board global business acumen and general management experience, as well as demonstrated success in leading large, innovation-focused organizations. Mr. Schechter's deep knowledge of the pharmaceutical and healthcare industries and extensive experience collaborating with many of its key stakeholders to achieve patient-focused outcomes brings practical insight to the board with respect to business strategies to service the changing healthcare environment.

R. Sanders Williams, M.D.^{1,3} - Dr. Williams, (70) has served as a director of the Company since May 16, 2007. Dr. Williams is president emeritus of The J. David Gladstone Institutes since January 1, 2018. Prior to this appointment, he was president of The J. David Gladstone Institutes since November 2009, and he served as Chief Executive Officer of The J. David Gladstone Foundation until December 31, 2018. Dr. Williams also currently is professor of medicine at the University of California San Francisco, professor of medicine at Duke University, and senior advisor for science and technology, Duke University. Dr. Williams served Duke University between 2001 and 2010 as dean of the School of Medicine, senior vice chancellor, senior advisor for International Strategy, and founding dean of the Duke-NUS Graduate Medical School Singapore. He has served previously as president of the Association of University Cardiologists, chairman of the Research Committee of the American Heart Association, on the editorial boards of leading biomedical journals, on the Advisory Committee to the Director of the National Institutes of Health and on the board of External Advisors of the National Heart, Lung and Blood Institute. Dr. Williams was a director of Bristol-Myers Squibb Company (NYSE: BMS) from 2006 until May 2013 and has been a director of Amgen, Inc. (NASDAQ: AMGN) since October 2014. Dr. Williams is a member of the National Academy of Medicine, and a Fellow of the American Association for the Advancement of Science. Dr. Williams' experience as a physician, biomedical scientist, and executive leader brings important perspective to his service to the Company as a director. Dr. Williams also brings experience in corporate finance and mergers and acquisitions, complex health systems, including international healthcare organizations and delivery systems, and corporate governance.

Committees:

¹ Audit

² Compensation

³ Quality and Compliance

⁴ Nominating and Corporate Governance

Management Team

David P. King - Mr. King (62) serves as chairman of the board, president, and chief executive officer. Refer to the biography above in the "Board of Directors" section.

Glenn A. Eisenberg - Mr. Eisenberg (57) has served as executive vice president and chief financial officer since June 2014. Mr. Eisenberg received his Bachelors of Arts degree from Tulane University in 1982 and his Master of Business Administration from Georgia State University in 1988. From 2002 until he joined the Company, he served as the executive vice president of finance and administration and chief financial officer at The Timken Company, a \$4.3 billion leading global manufacturer of highly engineered bearings and alloy steels and related products and services. Previously, he served as president and chief operating officer of United Dominion Industries, now a subsidiary of SPX Corporation, after working in several roles in finance, including executive vice president and chief financial officer. Mr. Eisenberg serves on the board of directors of US Ecology Inc., and he served on the boards of directors of Family Dollar Stores Inc. until July 2015, where he chaired the Audit Committee; and Alpha Natural Resources Inc. until May 2015, where he was the lead independent director and chaired the Nominating and Corporate Governance Committee.

John D. Ratliff - Mr. Ratliff (59) is CEO of Covance Drug Development. Mr. Ratliff is a highly respected biopharmaceutical leader, with extensive experience in increasingly important roles in the industry. Most recently, he served as president and CEO of HUYA Bioscience International, a leader in globalizing biopharmaceutical innovation. Mr. Ratliff's experience in biopharmaceuticals also includes nearly 10 years at Quintiles (now known as IQVIA), joining as chief financial officer in 2004, becoming chief operating officer in 2006, and president and chief operating officer in 2010. He led Quintiles' global services organization, with its clinical research, commercial, consulting, and lab operations, and was a member of the company's board of

directors. Mr. Ratliff is chairman of the board of directors of the Association of Clinical Research Organizations. Previous roles throughout his career also include serving as chief financial officer at Acterna, a provider of communications test solutions for telecommunications and cable network operators; and in positions of increasing responsibility during his 19-year tenure at IBM. Mr. Ratliff holds a bachelor's degree in industrial and systems engineering from the Georgia Institute of Technology in Atlanta and an MBA from Duke University in Durham, North Carolina.

Gary M. Huff - Mr. Huff (52) is CEO of LabCorp Diagnostics. Prior to becoming CEO, Huff served as the senior vice president of health systems and strategic alliances for LabCorp Diagnostics. Before joining LabCorp, he was the president and CEO of Baylor Miraca Genetics Laboratories (BMGL), a \$68 million precision medicine genetics and genomics company formed by Baylor College of Medicine and Miraca Holdings Inc. Before joining BMGL, Mr. Huff served as the executive vice president and chief operating officer of Solstas Lab Partners. Prior to Solstas, he was a senior executive for LabCorp. During his tenure, he held various leadership positions, including North Atlantic Division senior vice president, national toxicology vice president, associate vice president of sales and marketing operations, and executive director of business development for hospitals and strategic alliances. Mr. Huff started his career in the laboratory industry with Roche Biomedical Laboratories. He serves on the board of directors of the Alzheimer's Association - Western Carolina Chapter, and he is a graduate of Indiana University with a Bachelor of Arts in general studies/psychology and has been certified in Lean Six Sigma. Mr. Huff's employment with the Company terminated effective December 31, 2018.

Lance V. Berberian - Mr. Berberian (56) has served as senior vice president and chief information officer since February 2014. Prior to that, he served as chief information officer at IDEXX Laboratories, a global leader in diagnostics and information technology solutions for animal health and food and water quality, from May 2007 to January 2014. Mr. Berberian served as chief information officer and president of Kellstrom Aerospace Defense, a fully integrated supply chain firm, from January 2000 to April 2007. He also served as chief information officer of Interim Healthcare from September 1997 to January 2000.

Edward T. Dodson - Mr. Dodson (65) has served as senior vice president and chief accounting officer since June 2005. He also has served as the principal accounting officer since December 2014. Mr. Dodson, who has been a certified public accountant for 35 years, joined the Company in August 1997 as vice president and corporate controller and became senior vice president in June 2001. Prior to joining the Company in 1997, Mr. Dodson was a senior manager in the audit and consulting practice of KPMG LLP., where he worked for 17 years in that firm's Greensboro, North Carolina and Brussels, Belgium, offices. Mr. Dodson will retire from LabCorp effective April 1, 2019.

F. Samuel Eberts III - Mr. Eberts (59) has served as senior vice president, chief legal officer, secretary, and chief compliance officer since January 1, 2009. Prior to that time, he served as senior vice president, and general counsel since August 2004. Prior to joining the Company, he was vice president, secretary, and general counsel of Stepan Company. Before joining Stepan Company, he was assistant general counsel for Cardinal Health Inc. from 1998 to 2001 and associate general counsel for Allegiance Healthcare Corporation (Allegiance Healthcare Corporation was purchased by Cardinal Health in 1998). Prior to that time, he was chief counsel of the Biotech North America division of Baxter International Inc. Mr. Eberts retired from the Company effective February 15, 2019.

Lisa J. Uthgenannt - Ms. Uthgenannt (58) has served as chief human resources officer since March 2015. Prior to that she served as senior vice president of human resources for Covance since November 2010. Prior to joining Covance, Ms. Uthgenannt held numerous leadership positions at Johnson & Johnson, in both medical devices and pharmaceutical businesses since 2000. In her last role as vice president of human resources for the comprehensive care sector, she served as a key adviser and executive coach to the worldwide chairman, helping to define the initial strategies and plans to advance the corporation's comprehensive approach to chronic disease management. She also led the organization in designing and implementing a streamlined business model to increase product pipeline performance and accelerate growth opportunities.

Brian Caveney, M.D. - Dr. Caveney (45) has served as senior vice president and chief medical officer since September 2017. In this role, he has broad responsibility for the medical and scientific strategy of the enterprise, in addition to overseeing the Company's managed care business and function. Most recently, Dr. Caveney was chief medical officer at Blue Cross and Blue Shield of North Carolina, or Blue Cross NC, where he joined in 2011. In addition to various roles in the Healthcare Division of the core health plan, Dr. Caveney also served as chief clinical officer of Mosaic Health Solutions, a wholly owned subsidiary of Blue Cross NC for strategic investments in diversified health solutions businesses. Prior to joining Blue Cross NC, Dr. Caveney was a practicing physician and assistant professor at Duke University Medical Center and also provided consulting services for several companies in the Research Triangle Park, North Carolina, region. Dr. Caveney holds an M.D. from the West Virginia University School of Medicine, a J.D. from the West Virginia University College of Law and an M.P.H. in health policy and administration from the University of North Carolina at Chapel Hill. He completed his residency at Duke University Medical Center and is board-certified in preventive medicine, with a specialty in occupational and environmental medicine. He is the past president of the Southeastern Atlantic College of Occupational and Environmental Medicine.

Sandra van der Vaart - Ms. van der Vaart (59) has served as senior vice president, global general counsel and secretary since February 2019. Prior to that, she served as senior vice president, deputy chief legal officer since September 2015 and senior vice president, general counsel and assistant secretary since January 2009. Prior to serving in these roles, Ms. van der Vaart served in various other roles within the legal department since August 2002. Ms. van der Vaart holds a J.D. from the University of Virginia and a bachelor of science in nursing from the University of North Carolina at Chapel Hill.

Peter Wilkinson - Mr. Wilkinson (48) will serve as senior vice president and chief accounting officer, effective April 1, 2019. Mr. Wilkinson currently serves in the role of senior vice president, accounting since January 2019. Prior to that, Mr. Wilkinson served as executive vice president and chief financial officer of Syneos Health, Inc.'s clinical division, a biopharmaceuticals services organization, from August 2017 to July 2018 and as senior vice president and chief accounting officer of INC Research Holdings, Inc., a publicly traded predecessor to Syneos Health, from February 2016 to August 2017. Mr. Wilkinson also previously served as senior vice president in the INC Research Finance Department from July 2014 to February 2016. Prior to his position with INC Research, Mr. Wilkinson worked as a self-employed financial consultant following an earlier career as a financial and accounting officer at Pharmaceutical Product Development, LLC, a clinical research organization.

Except for the information regarding the executive officers and directors above, the information called for by this item is incorporated by reference to information in the 2018 Proxy Statement under the captions "Section 16(a) Beneficial Ownership Reporting Compliance," "Corporate Governance Policies and Procedures - Code of Conduct and Ethics," and "Corporate Governance."

Item 11. EXECUTIVE COMPENSATION

The information required by this item is incorporated by reference to information in the 2019 Proxy Statement under the captions "Executive Compensation" and "Director Compensation."

Item 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

See "Note 15 to the Consolidated Financial Statements" for a discussion of the Company's Stock Compensation Plans. Except for the above referenced footnote, the information called for by this item is incorporated by reference to information in the 2019 Proxy Statement under the captions "Security Ownership of Certain Beneficial Holders and Management," "Compensation Discussion and Analysis" and "Executive Compensation."

Item 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The information required by this item is incorporated by reference to information in the 2019 Proxy Statement under the captions "Board Independence" and "Related Party Transactions."

Item 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

The information required by this item is incorporated by reference to information in the 2019 Proxy Statement under the caption "Fees to Independent Registered Public Accounting Firm."

PART IV

Item 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a) List of documents filed as part of this report:

(1) Consolidated Financial Statements and Report of Independent Registered Public Accounting Firm included herein:

See Index on page F-1

(2) Financial Statement Schedules:

See Index on page F-1

All other schedules are omitted as they are inapplicable or the required information is furnished in the Consolidated Financial Statements or notes thereto.

(3) Index to and List of Exhibits

Exhibits 10.1 through 10.32 and 10.40 and 10.41 are management contracts or compensatory plans or arrangements.

- 3.1 [Amended and Restated Certificate of Incorporation of the Company dated May 24, 2001 \(incorporated herein by reference to Exhibit 3.1 to the Company's Registration Statement on Form S-3, filed with the Commission on October 19, 2001, File No. 333-71896\).](#)
- 3.2 [Amended and Restated By-Laws of the Company dated January 4, 2017. * \(incorporated herein by reference to Exhibit 3.1 of the Company's Quarterly Report on Form 10-Q for the period ended March 31, 2017\).](#)
- 4.1 [Specimen of the Company's Common Stock Certificate \(incorporated herein by reference to Exhibit 4.1 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2001\).](#)
- 4.2 [Registration Rights Agreement, dated as of January 28, 2003, between the Company and the Initial Purchasers \(incorporated herein by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K, filed with the Commission on February 3, 2003\).](#)
- 4.3 [Indenture, dated as of October 23, 2006, between the Company and The Bank of New York, as trustee, including the Form of Global Note attached as Exhibit A thereto \(incorporated herein by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K filed on October 24, 2006\).](#)
- 4.4 [Indenture, dated as of November 19, 2010, between the Company and U.S. Bank National Association, as trustee \(incorporated herein by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K filed on November 19, 2010\).](#)
- 4.5 [Second Supplemental Indenture, dated as of November 19, 2010, between the Company and U.S. Bank National Association, as trustee, including the form of the 2020 Notes \(incorporated herein by reference to Exhibit 4.3 to the Company's Current Report on Form 8-K filed on November 19, 2010\).](#)
- 4.6 [Third Supplemental Indenture, dated as of August 23, 2012, between the Company and U.S. Bank National Association, as trustee, including the form of the 2017 Notes \(incorporated herein by reference to Exhibit 4.2 to the Company's Current Report on Form 8-K filed on August 23, 2012\).](#)
- 4.7 [Fourth Supplemental Indenture, dated as of August 23, 2012, between the Company and U.S. Bank National Association, as trustee, including the form of the 2022 Notes \(incorporated herein by reference to Exhibit 4.3 to the Company's Current Report on Form 8-K filed on August 23, 2012\).](#)
- 4.8 [Fifth Supplemental Indenture, dated as of November 1, 2013, between the Company and U.S. Bank National Association, as trustee, including the form of the 2018 Notes \(incorporated herein by reference to Exhibit 4.2 to the Company's Current Report on Form 8-K filed on November 1, 2013\).](#)
- 4.9 [Sixth Supplemental Indenture, dated as of November 1, 2013, between the Company and U.S. Bank National Association, as trustee, including the form of the 2023 Notes \(incorporated herein by reference to Exhibit 4.3 to the Company's Current Report on Form 8-K filed on November 1, 2013\).](#)
- 4.10 [Seventh Supplemental Indenture, dated as of January 30, 2015, between the Company and U.S. Bank National Association, as trustee, including the form of the 2020 Notes \(incorporated herein by reference to Exhibit 4.2 to the Company's Current Report on Form 8-K filed on January 30, 2015\).](#)
- 4.11 [Eighth Supplemental Indenture, dated as of January 30, 2015, between the Company and U.S. Bank National Association, as trustee, including the form of the 2022 Notes \(incorporated herein by reference to Exhibit 4.3 to the Company's Current Report on Form 8-K filed on January 30, 2015\).](#)
- 4.12 [Ninth Supplemental Indenture, dated as of January 30, 2015, between the Company and U.S. Bank National Association, as trustee, including the form of the 2025 Notes \(incorporated herein by reference to Exhibit 4.4 to the Company's Current Report on Form 8-K filed on January 30, 2015\).](#)
- 4.13 [Tenth Supplemental Indenture, dated as of January 30, 2015, between the Company and U.S. Bank National Association, as trustee, including the form of the 2045 Notes \(incorporated herein by reference to Exhibit 4.5 to the Company's Current Report on Form 8-K filed on January 30, 2015\).](#)
- 4.14 [Eleventh Supplemental Indenture, dated as of August 22, 2017, between the Company and U.S. Bank National Association, as trustee, including the form of the 2024 Notes \(incorporated by reference to Exhibit 4.2 to the Company's Current Report on Form 8-K filed on August 22, 2017\).](#)
- 4.15 [Twelfth Supplemental Indenture, dated as of August 22, 2017, between the Company and U.S. Bank National Association, as trustee, including the form of the 2027 Notes \(incorporated by reference to Exhibit 4.3 to the Company's Current Report on Form 8-K filed on August 22, 2017\).](#)
- 10.1 National Health Laboratories Incorporated Pension Equalization Plan (incorporated herein by reference to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 1992).
- 10.2 [Laboratory Corporation of America Holdings amended and restated new Pension Equalization Plan \(incorporated herein by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the period ended September 30, 2004\).](#)
- 10.3 [First Amendment to the Laboratory Corporation of America Holdings amended and restated new Pension Equalization Plan \(incorporated herein by reference to Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q for the period ended September 30, 2004\).](#)

- 10.4 [Second Amendment to the Laboratory Corporation of America Holdings amended and restated new Pension Equalization Plan \(incorporated herein by reference to Exhibit 10.4 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2004\).](#)
- 10.5 National Health Laboratories 1988 Stock Option Plan, as amended (incorporated herein by reference to the Company's Registration Statement on Form S-1, filed with the Commission on July 9, 1990, File No. 33-35782).
- 10.6 [National Health Laboratories 1994 Stock Option Plan \(incorporated herein by reference to Exhibit 4.1 to the Company's Registration Statement on Form S-8, filed with the Commission on August 12, 1994, File No. 33-55065\).](#)
- 10.7 [Laboratory Corporation of America Holdings Senior Executive Transition Policy \(incorporated herein by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the period ended June 30, 2004\).](#)
- 10.8 [Laboratory Corporation of America Holdings 1995 Stock Plan for Non-Employee Directors \(incorporated herein by reference Exhibit 4.c to the Company's Registration Statement on Form S-8, filed with the Commission on September 26, 1995, File No. 33-62913\).](#)
- 10.9 [First Amendment to Laboratory Corporation of America Holdings 1995 Stock Plan for Non-Employee Directors \(incorporated herein by reference to Annex II to the Company's Definitive Proxy Statement on Schedule 14A, filed with the Commission on June 6, 1997\).](#)
- 10.10 [Second Amendment to the Laboratory Corporation of America Holdings 1995 Stock Plan for Non-Employee Directors \(incorporated herein by reference to Annex I of the Company's Definitive Proxy Statement on Schedule 14A, filed with the Commission on April 25, 2001\).](#)
- 10.11 [Laboratory Corporation of America Holdings Amended and Restated 1999 Stock Incentive Plan \(incorporated herein by reference to Annex I to the Company's Definitive Proxy Statement on Schedule 14A filed with the Commission on May 3, 1999\).](#)
- 10.12 [Laboratory Corporation of America Holdings 2000 Stock Incentive Plan \(incorporated herein by reference to Exhibit 4.3 to the Company's Registration Statement on Form S-8, filed with the Commission on June 5, 2000, File No. 333-38608\).](#)
- 10.13 [Laboratory Corporation of America Holdings 2000 Stock Incentive Plan as Amended and Restated April 3, 2002, \(incorporated herein by reference to Exhibit 4.1 to the Company's Registration Statement on Form S-8, filed with the Commission on June 19, 2002, File No. 333-90764\).](#)
- 10.14 [Dynacare Inc., Amended and Restated Employee Stock Option Plan \(incorporated herein by reference to Exhibit 10.1 to the Company's Registration Statement on Form S-8, filed with the Commission on August 7, 2002, File No. 333-97745\).](#)
- 10.15 [DIANON Systems, Inc. 1996 Stock Incentive Plan \(incorporated herein by reference to Exhibit 10.1 the Company's Registration Statement on Form S-8, filed with the Commission on January 21, 2003, File No. 333-102602\).](#)
- 10.16 [DIANON Systems, Inc. 1999 Stock Incentive Plan \(incorporated herein by reference to Exhibit 10.2 the Company's Registration Statement on Form S-8, filed with the Commission on January 21, 2003, File No. 333-102602\).](#)
- 10.17 [DIANON Systems, Inc. 2000 Stock Incentive Plan\(incorporated herein by reference to Exhibit 10.3 to the Company's Registration Statement on Form S-8, filed with the Commission on January 21, 2003, File No. 333-102602\).](#)
- 10.18 [DIANON Systems, Inc. 2001 Stock Incentive Plan \(incorporated herein by reference Exhibit 10.4 to the Company's Registration Statement on Form S-8, filed with the Commission on January 21, 2003, File No. 333-102602\).](#)
- 10.19 [UroCor, Inc. Second Amended and Restated 1992 Stock Option Plan \(incorporated herein by reference Exhibit 10.5 to the Company's Registration Statement on Form S-8, filed with the Commission on January 21, 2003, File No. 333-102602\).](#)
- 10.20 [Laboratory Corporation of America Holdings Deferred Compensation Plan \(incorporated herein by reference to Exhibit 10.22 the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2004\).](#)
- 10.21 [First Amendment to the Laboratory Corporation of America Holdings Deferred Compensation Plan \(incorporated herein by reference to Exhibit 10.23 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2004\).](#)
- 10.22 [Second Amendment to the Laboratory Corporation of America Holdings Deferred Compensation Plan \(incorporated herein by reference to Exhibit 10.8 to the Company's Quarterly Report on Form 10-Q for the period ended June 30, 2005\).](#)
- 10.23 [Third Amendment to the Laboratory Corporation of America Amended and Restated New Pension Equalization Plan \(incorporated herein by reference Exhibit 10.6 to the Company's Quarterly Report on Form 10-Q for the period ended June 30, 2005\).](#)
- 10.24 [Third Amendment to the Laboratory Corporation of America Holdings Deferred Compensation Plan \(incorporated herein by reference to Exhibit 10.28 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2006\).](#)
- 10.25 [Fourth Amendment to the Laboratory Corporation of America Holdings Deferred Compensation Plan \(incorporated herein by reference to Exhibit 10.34 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2007\).](#)

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- 10.26 [Laboratory Corporation of America Holdings 2008 Stock Incentive Plan \(incorporated herein by reference to Annex III to the Company's Definitive Proxy Statement on Schedule 14A filed on March 25, 2008\).](#)
- 10.27 [Amendment to Laboratory Corporation of America Holdings 2008 Stock Incentive Plan \(incorporated herein by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed on May 7, 2008\).](#)
- 10.28 [Laboratory Corporation of America Holdings Amended and Restated Master Senior Executive Severance Plan \(incorporated herein by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the period ended March 31, 2009\).](#)
- 10.29 [Laboratory Corporation of America Holdings Master Senior Executive Change in Control Severance Plan \(incorporated herein by reference to Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q for the period ended March 31, 2009\).](#)
- 10.30 [First Amendment to the Laboratory Corporation of America Holdings Master Senior Executive Change in Control Severance Plan \(incorporated herein by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the period ended March 31, 2010\).](#)
- 10.31 [Second Amendment to the Laboratory Corporation of America Holdings Master Senior Executive Change in Control Severance Plan \(incorporated herein by reference to Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q for the period ended March 31, 2010\).](#)
- 10.32 [Laboratory Corporation of America Holdings 2012 Omnibus Incentive Plan \(incorporated herein by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on May 2, 2012\).](#)
- 10.33 [Second Amended and Restated Credit Agreement, dated as of September 15, 2017, \(originally dated as of December 21, 2011\), among the Company, Bank of America, N.A. as Administrative Agent, Swing Line Lender and L/C Issuer, Wells Fargo Bank, National Association as Syndication Agent and L/C Issuer, Credit Suisse AG, Cayman Islands Branch as Documentation Agent and L/C Issuer, the Bank of Tokyo-Mitsubishi UFJ, LTD., Barclays Bank PLC, Credit Suisse AG, Cayman Islands Branch, KeyBank National Association, PNC Bank, National Association, TD Bank, N.A., and U.S. Bank National Association, as Documentation Agents, Merrill Lynch, Pierce, Fenner & Smith Incorporated, Wells Fargo Securities, LLC and Credit Suisse Securities \(USA\) LL as Joint Lead Arrangers and Joint Book Managers, and the lenders named therein \(incorporated herein by reference to Exhibit 10.3 to the Company's Annual Report on Form 10-Q filed on November 2, 2017\).](#)
- 10.34 [Term Loan Credit Agreement, dated as of December 19, 2014, among the Company, Bank of America, N.A., as Administrative Agent, Wells Fargo Bank, National Association, as Syndication Agent, the Bank of Tokyo-Mitsubishi UFJ, LTD., Barclays Bank PLC, Credit Suisse AG, Cayman Islands Branch, KeyBank National Association, PNC Bank, National Association, TD Bank, N.A. and U.S. Bank National Association, as Documentation Agents, Merrill Lynch, Pierce, Fenner & Smith Incorporated, Wells Fargo Securities, LLC and Credit Suisse Securities \(USA\) LLC as Joint Lead Arrangers and Joint Book Managers, and the lenders named therein \(incorporated herein by reference to Exhibit 10.40 to the Company's Annual Report on Form 10-K filed on February 26, 2015\).](#)
- 10.35 [Amendment No. 1, dated as of March 5, 2015, to the Term Loan Credit Agreement dated as of December 19, 2014, with Bank of America, N.A. \(incorporated herein by reference to Exhibit 10.6 to the Company's Quarterly Report on Form 10-Q filed on May 4, 2015\).](#)
- 10.36 [Amendment No. 2, dated as of July 13, 2016, to the Term Loan Credit Agreement dated as of December 19, 2014, with Bank of America, N.A. \(incorporated herein by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q filed on October 28, 2016\).](#)
- 10.37 [Amendment No. 3, dated as of September 15, 2017, to the Term Loan Credit Agreement dated as of December 19, 2014, with Bank of America, N.A. \(incorporated herein by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q filed on November 2, 2017\).](#)
- 10.38 [Laboratory Corporation of America Holdings 2016 Omnibus Incentive Plan \(incorporated by reference herein to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on May 16, 2016\).](#)
- 10.39 [Laboratory Corporation of America Holdings 2016 Employee Stock Purchase Plan \(incorporated by reference herein to Exhibit 10.2 to the Company's Current Report on Form 8-K filed on May 16, 2016\).](#)
- 10.40 [Term Loan Credit Agreement, dated as of September 15, 2017, with Bank of America, N.A. \(incorporated herein by reference to Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q filed on November 2, 2017\).](#)
- 10.41 [Employment Separation Agreement and General Release, by and between the Company and Gary Huff, dated as of December 31, 2018. \(incorporated by reference herein to Exhibit 10.1 to the Company's Current Report on Form 8-K/A filed on January 4, 2019\).](#)
- 21* [List of Subsidiaries of the Company](#)
- 23.1* [Consent of PricewaterhouseCoopers LLP, an independent registered public accounting firm](#)
- 24.1* [Power of Attorney of Kerri B. Anderson](#)
- 24.2* [Power of Attorney of Jean-Luc Bélingard](#)
- 24.3* [Power of Attorney of D. Gary Gilliland, M.D., Ph.D.](#)
- 24.4* [Power of Attorney of Garheng Kong, M.D., Ph.D.](#)
- 24.5* [Power of Attorney of Robert E. Mittelstaedt, Jr.](#)
- 24.6* [Power of Attorney of Peter M. Neupert](#)
- 24.7* [Power of Attorney of Richelle Parham](#)
- 24.8* [Power of Attorney of Adam H. Schechter](#)
- 24.9* [Power of Attorney of R. Sanders Williams, M.D.](#)
- 31.1* [Certification by the Chief Executive Officer pursuant to Rule 13a-14\(a\) or Rule 15d-14\(a\)](#)
- 31.2* [Certification by the Chief Financial Officer pursuant to Rule 13a-14\(a\) or Rule 15d-14\(a\)](#)
- 32* [Written Statement of Chief Executive Officer and Chief Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 \(18 U.S.C. Section 1350\)](#)
- 101.INS* XBRL Instance Document
- 101.SCH* XBRL Taxonomy Extension Schema
- 101.CAL* XBRL Taxonomy Extension Calculation Linkbase
- 101.DEF* XBRL Taxonomy Extension Definition Linkbase

101.LAB* XBRL Taxonomy Extension Label Linkbase
101.PRE* XBRL Taxonomy Extension Presentation Linkbase

* Filed herewith

Item 16. FORM 10-K SUMMARY

None.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

LABORATORY CORPORATION OF AMERICA HOLDINGS

Registrant

By: /s/ DAVID P. KING

David P. King

Chairman of the Board, President

and Chief Executive Officer

Dated: February 28, 2019

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 on February 28, 2019 in the capacities indicated.

<u>Signature</u>	<u>Title</u>
<u>/s/ DAVID P. KING</u> David P. King	Chairman of the Board, President and Chief Executive Officer (Principal Executive Officer)
<u>/s/ GLENN A. EISENBERG</u> Glenn A. Eisenberg	Executive Vice President, Chief Financial Officer and Treasurer (Principal Financial Officer)
<u>/s/ EDWARD T. DODSON</u> Edward T. Dodson	Senior Vice President and Chief Accounting Officer (Principal Accounting Officer)
<u>*</u> Kerrii B. Anderson	Director
<u>*</u> Jean-Luc Bélingard	Director
<u>*</u> D. Gary Gilliland, M.D., Ph.D.	Director
<u>*</u> Garheng Kong, M.D., Ph.D.	Director
<u>*</u> Robert E. Mittelstaedt, Jr.	Director
<u>*</u> Peter M. Neupert	Director
<u>*</u> Richelle Parham	Director
<u>*</u> Adam H. Schechter	Director
<u>*</u> R. Sanders Williams, M.D.	Director

* Sandra van der Vaart, by her signing her name hereto, does hereby sign this report on behalf of the directors of the Registrant after whose typed names asterisks appear, pursuant to powers of attorney duly executed by such directors and filed with the Securities and Exchange Commission.

By: /s/ Sandra van der Vaart
Sandra van der Vaart
Attorney-in-fact

**LABORATORY CORPORATION OF AMERICA HOLDINGS AND SUBSIDIARIES
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AND SCHEDULE**

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Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders of Laboratory Corporation of America Holdings:

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of Laboratory Corporation of America Holdings and its subsidiaries (the “Company”) as of December 31, 2018 and December 31, 2017, and the related consolidated statements of operations, comprehensive earnings, changes in shareholders’ equity and cash flows for each of the three years in the period ended December 31, 2018, including the related notes and schedule of valuation and qualifying accounts and reserves for each of the three years in the period ended December 31, 2018 listed in the accompanying index (collectively referred to as the “consolidated financial statements”). We also have audited the Company’s internal control over financial reporting as of December 31, 2018, 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, 2018 and December 31, 2017, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2018 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, 2018, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the COSO.

Change in Accounting Principle

As discussed in Note 1 to the consolidated financial statements, the Company changed the manner in which it accounts for revenues from contracts with customers in 2018.

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 appearing 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
Raleigh, North Carolina
February 28, 2019

We have served as the Company's auditor since 1997.

PART I – FINANCIAL INFORMATION

Item 1. Financial Information

LABORATORY CORPORATION OF AMERICA HOLDINGS AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
(In Millions)

	December 31, 2018	December 31, 2017
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 426.8	\$ 316.6
Accounts receivable	1,467.9	1,531.0
Unbilled services	394.4	316.5
Supplies inventories	237.3	227.2
Prepaid expenses and other	309.0	308.8
Current assets held for sale	—	33.7
Total current assets	2,835.4	2,733.8
Property, plant and equipment, net	1,784.7	1,706.6
Goodwill, net	7,360.3	7,400.9
Intangible assets, net	3,911.1	4,166.1
Joint venture partnerships and equity method investments	60.5	58.4
Deferred income taxes	1.7	1.9
Other assets, net	231.6	217.5
Long-term assets held for sale	—	387.8
Total assets	\$ 16,185.3	\$ 16,673.0
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 634.6	\$ 573.9
Accrued expenses and other	870.0	793.3
Unearned revenue	356.4	380.8
Short-term borrowings and current portion of long-term debt	17.9	417.5
Current liabilities held for sale	—	20.2
Total current liabilities	1,878.9	2,185.7
Long-term debt, less current portion	6,041.9	6,344.6
Deferred income taxes and other tax liabilities	940.0	875.5
Other liabilities	334.0	376.0
Long-term liabilities held for sale	—	66.3
Total liabilities	9,194.8	9,848.1
Commitments and contingent liabilities		
Noncontrolling interest	19.1	20.8
Shareholders' equity		
Common stock, 98.9 and 101.9 shares outstanding at December 31, 2018 and 2017, respectively	11.7	12.0
Additional paid-in capital	1,451.1	1,989.8
Retained earnings	7,079.8	6,196.1
Less common stock held in treasury	(1,108.1)	(1,060.1)
Accumulated other comprehensive loss	(463.1)	(333.7)
Total shareholders' equity	6,971.4	6,804.1
Total liabilities and shareholders' equity	\$ 16,185.3	\$ 16,673.0

The accompanying notes are an integral part of these consolidated financial statements.

LABORATORY CORPORATION OF AMERICA HOLDINGS AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF OPERATIONS
(In Millions, Except Per Share Data)

	Years Ended December 31,		
	2018	2017	2016
Revenues	11,333.4	10,308.0	9,552.9
Cost of revenues	8,157.0	7,216.2	6,698.9
Gross profit	3,176.4	3,091.8	2,854.0
Selling, general and administrative expenses	1,570.9	1,499.2	1,345.5
Amortization of intangibles and other assets	231.7	216.5	179.5
Restructuring and other special charges	48.1	70.9	58.4
Operating income	1,325.7	1,305.2	1,270.6
Other income (expenses):			
Interest expense	(244.2)	(235.1)	(219.1)
Equity method income, net	11.6	11.3	7.9
Investment income	7.5	2.1	1.7
Other, net	167.7	(6.0)	12.5
Earnings before income taxes	1,268.3	1,077.5	1,073.6
Provision (benefit) for income taxes	384.4	(155.4)	360.7
Net earnings	883.9	1,232.9	712.9
Less: Net earnings attributable to the noncontrolling interest	(0.2)	(5.8)	(1.1)
Net earnings attributable to Laboratory Corporation of America Holdings	\$ 883.7	\$ 1,227.1	\$ 711.8
Basic earnings per common share	\$ 8.71	\$ 11.99	\$ 6.94
Diluted earnings per common share	\$ 8.61	\$ 11.81	\$ 6.82

The accompanying notes are an integral part of these consolidated financial statements.

LABORATORY CORPORATION OF AMERICA HOLDINGS AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE EARNINGS
(In Millions, Except Per Share Data)

	Years Ended December 31,		
	2018	2017	2016
Net earnings	\$ 883.9	\$ 1,232.9	\$ 712.9
Foreign currency translation adjustments	(176.6)	265.1	(250.8)
Net benefit plan adjustments	29.3	20.9	(40.3)
Other comprehensive earnings (loss) before tax	(147.3)	286.0	(291.1)
Provision (benefit) for income tax related to items of comprehensive earnings	17.9	(37.8)	(3.8)
Other comprehensive earnings (loss), net of tax	(129.4)	248.2	(294.9)
Comprehensive earnings	754.5	1,481.1	418.0
Less: Net earnings attributable to the noncontrolling interest	(0.2)	(5.8)	(1.1)
Net comprehensive earnings attributable to Laboratory Corporation of America Holdings	<u>\$ 754.3</u>	<u>\$ 1,475.3</u>	<u>\$ 416.9</u>

The accompanying notes are an integral part of these consolidated financial statements.

LABORATORY CORPORATION OF AMERICA HOLDINGS AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY
(In Millions)

	Common Stock	Additional Paid-in Capital	Retained Earnings	Treasury Stock	Accumulated Other Comprehensive Loss	Total Shareholders' Equity
BALANCE AT DECEMBER 31, 2015	\$ 12.0	\$ 1,974.5	\$ 4,223.7	\$ (978.1)	\$ (287.0)	\$ 4,945.1
Cumulative effect change in accounting principle ASC 606	—	—	33.5	—	—	—
Net earnings attributable to Laboratory Corporation of America Holdings	—	—	711.8	—	—	711.8
Other comprehensive earnings, net of tax	—	—	—	—	(294.9)	(294.9)
Issuance of common stock for acquisition consideration	—	—	—	—	—	—
Issuance of common stock under employee stock plans	0.1	70.5	—	—	—	70.6
Net share settlement tax payments from issuance of stock to employees	—	—	—	(34.6)	—	(34.6)
Conversion of zero-coupon convertible debt	—	21.0	—	—	—	21.0
Stock compensation	—	109.6	—	—	—	109.6
Income tax benefit from stock options exercised	—	—	—	—	—	—
BALANCE AT DECEMBER 31, 2016	12.1	\$ 2,131.7	\$ 4,969.0	\$ (1,012.7)	\$ (581.9)	\$ 5,518.2
Net earnings attributable to Laboratory Corporation of America Holdings	—	—	1,227.1	—	—	1,227.1
Other comprehensive earnings, net of tax	—	—	—	—	248.2	248.2
Issuance of common stock under employee stock plans	0.1	73.5	—	—	—	73.6
Net share settlement tax payments from issuance of stock to employees	—	—	—	(47.4)	—	(47.4)
Conversion of zero-coupon convertible debt	—	12.8	—	—	—	12.8
Stock compensation	—	109.7	—	—	—	109.7
Purchase of common stock	(0.2)	(337.9)	—	—	—	(338.1)
BALANCE AT DECEMBER 31, 2017	12.0	\$ 1,989.8	\$ 6,196.1	\$ (1,060.1)	\$ (333.7)	\$ 6,804.1
Net earnings attributable to Laboratory Corporation of America Holdings	—	—	883.7	—	—	883.7
Other comprehensive earnings, net of tax	—	—	—	—	(129.4)	(129.4)
Issuance of common stock under employee stock plans	—	69.1	—	—	—	69.1
Net share settlement tax payments from issuance of stock to employees	—	—	—	(48.0)	—	(48.0)
Conversion of zero-coupon convertible debt	—	0.3	—	—	—	0.3
Stock compensation	—	91.6	—	—	—	91.6
Purchase of common stock	(0.3)	(699.7)	—	—	—	(700.0)
BALANCE AT DECEMBER 31, 2018	\$ 11.7	\$ 1,451.1	\$ 7,079.8	\$ (1,108.1)	\$ (463.1)	\$ 6,971.4

The accompanying notes are an integral part of these consolidated financial statements.

LABORATORY CORPORATION OF AMERICA HOLDINGS AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
(In Millions)

	Years Ended December 31,		
	2018	2017	2016
CASH FLOWS FROM OPERATING ACTIVITIES:			
Net earnings	\$ 883.9	\$ 1,232.9	\$ 712.9
Adjustments to reconcile net earnings to net cash provided by operating activities:			
Depreciation and amortization	552.1	533.2	499.2
Stock compensation	91.6	109.7	109.6
(Gain) loss on sale of assets	6.2	1.5	(9.2)
Gain on disposition of businesses	(184.9)	—	—
Accrued interest on zero-coupon subordinated notes	0.2	0.3	1.6
Cumulative earnings (in excess) less than distributions from equity method investments	(0.9)	0.5	1.2
Asset impairment	5.3	23.5	—
Deferred income taxes	22.2	(525.8)	54.7
Change in assets and liabilities (net of effects of acquisitions):			
Decrease (increase) in accounts receivable, net	50.2	(13.2)	(83.6)
Decrease (increase) in unbilled services	(81.0)	4.0	(6.0)
Increase in inventories	(18.9)	(16.4)	(9.6)
(Increase) decrease in prepaid expenses and other	(57.9)	19.8	(26.5)
Increase (decrease) in accounts payable	43.3	172.3	(8.7)
(Decrease) increase in unearned revenue	(33.8)	58.6	18.8
Increase (decrease) in accrued expenses and other	27.8	(102.8)	(57.3)
Net cash provided by operating activities	<u>1,305.4</u>	<u>1,498.1</u>	<u>1,197.1</u>
CASH FLOWS FROM INVESTING ACTIVITIES:			
Capital expenditures	(379.8)	(312.9)	(278.9)
Proceeds from sale of assets	50.1	5.5	30.8
Proceeds from disposition of businesses	3.7	—	—
Proceeds from sale of held for sale assets	654.5	—	—
Proceeds from exit of cross currency swaps	18.3	—	—
Proceeds from sale of investments	—	—	13.5
Acquisition of licensing technology	—	(2.5)	—
Investments in equity affiliates	(22.3)	(36.2)	(12.5)
Acquisition of businesses, net of cash acquired	(117.8)	(1,882.6)	(548.6)
Net cash provided by (used for) investing activities	<u>206.7</u>	<u>(2,228.7)</u>	<u>(795.7)</u>
CASH FLOWS FROM FINANCING ACTIVITIES:			
Proceeds from Senior Notes offerings	—	1,200.0	—
Proceeds from term loan	—	750.0	—
Payments on term loan	(295.0)	(493.0)	(150.0)
Proceeds from revolving credit facilities	467.2	1,392.2	139.5
Payments on revolving credit facilities	(467.2)	(1,392.2)	(139.5)
Payments on Senior Notes	(400.0)	(500.1)	(454.7)
Payments on zero-coupon subordinated notes	(0.3)	(25.2)	(40.3)
Payment of debt issuance costs	—	(15.3)	—
Payments on long-term lease obligations	(9.3)	(7.7)	(8.4)
Noncontrolling interest distributions	(6.4)	(1.0)	(2.1)
Deferred payments on acquisitions	—	(2.6)	(7.6)
Net share settlement tax payments from issuance of stock to employees	(48.0)	(47.4)	(34.6)
Net proceeds from issuance of stock to employees	69.1	73.6	70.6
Purchase of common stock	(700.0)	(338.1)	(43.9)
Net cash (used for) provided by financing activities	<u>(1,389.9)</u>	<u>593.2</u>	<u>(671.0)</u>
Effect of exchange rate changes on cash and cash equivalents	<u>(12.0)</u>	<u>20.5</u>	<u>(13.2)</u>
Net increase (decrease) in cash and cash equivalents	110.2	(116.9)	(282.8)
Cash and cash equivalents at beginning of year	316.6	433.6	716.4
Cash and cash equivalents included in assets held for sale	—	(0.1)	—
Cash and cash equivalents at end of year	<u>\$ 426.8</u>	<u>\$ 316.6</u>	<u>\$ 433.6</u>

The accompanying notes are an integral part of these consolidated financial statements.

LABORATORY CORPORATION OF AMERICA HOLDINGS AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(Dollars and shares in millions, except per share data)

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Financial Statement Presentation

Laboratory Corporation of America Holdings[®] together with its subsidiaries (the Company), is a leading global life sciences company that is deeply integrated in guiding patient care, providing comprehensive clinical laboratory and end-to-end drug development services. The Company's mission is to improve health and improve lives by delivering world-class diagnostic solutions, bringing innovative medicines to patients faster and using technology to provide better care. The Company serves a broad range of customers, including managed care organizations (MCOs), biopharmaceutical companies, governmental agencies, physicians and other healthcare providers (e.g. physician assistants and nurse practitioners, generally referred to herein as physicians), hospitals and health systems, employers, patients and consumers, contract research organizations (CROs), food and nutritional companies and independent clinical laboratories. During 2018, the Company sold its Covance Food Solutions (CFS) business, which provided food testing and integrity services, as well as its domestic and international forensic analysis businesses. The Company believes that it generated more revenue from laboratory testing than any other company in the world in 2018.

The Company reports its business in two segments, LabCorp Diagnostics (LCD) and Covance Drug Development (CDD). For further financial information about these segments, including information for each of the last three fiscal years regarding revenue, operating income, and other important information, see Note 21 to the Consolidated Financial Statements. In 2018, LCD and CDD contributed 62% and 38%, respectively, of revenues to the Company, and in 2017 contributed 67% and 33%, respectively.

The consolidated financial statements include the accounts of the Company and its majority-owned subsidiaries for which it exercises control. Long-term investments in affiliated companies in which the Company exercises significant influence, but which it does not control, are accounted for using the equity method. Investments in which the Company does not exercise significant influence (generally, when the Company has an investment of less than 20% and no representation on the investee's board of directors) are accounted for at fair value or at cost minus impairment for those investments that do not have readily determinable fair values. All significant inter-company transactions and accounts have been eliminated. The Company does not have any variable interest entities or special purpose entities whose financial results are not included in the consolidated financial statements.

The financial statements of the Company's operating foreign subsidiaries are measured using the local currency as the functional currency. Assets and liabilities are translated at exchange rates as of the balance sheet date. Revenues and expenses are translated at average monthly exchange rates prevailing during the year. Resulting translation adjustments are included in "Accumulated other comprehensive income."

Recently Adopted Guidance

Revenue from Contracts with Customers

In May 2014, the Financial Accounting Standards Board (FASB) issued the converged standard on revenue recognition with the objective of providing a single, comprehensive model for all contracts with customers to improve comparability in the financial statements of companies reporting using International Financial Reporting Standards (IFRS) and United States (U.S.) Generally Accepted Accounting Principles (GAAP). The standard contains principles that an entity must apply to determine the measurement of revenue and timing of when it is recognized. The underlying principle is that an entity must recognize revenue to depict the transfer of goods or services to customers at an amount that the entity expects to be entitled to in exchange for those goods or services.

The standard was effective for the Company beginning January 1, 2018. The Company elected to adopt the standard using the full retrospective approach, which resulted in a recasting of revenue and the related financial statement items for 2016 and 2017. During transition to the new standard, the Company also elected several practical expedients, as provided by the standard. Contracts that began and ended within the same annual reporting period were not restated. Contracts that were completed by December 31, 2017 that had variable consideration were estimated using the transaction price at the date the contract was completed. The amount of the transaction price allocated to the remaining performance obligations were not disclosed for prior reporting periods. Contracts that were modified prior to the earliest reporting period were reflected in the earliest reporting period with an aggregate adjustment for prior modifications.

As a result of the new standard, the Company has changed its accounting policies for revenue recognition. The significant changes under the new standard, and the quantitative impact of these changes, are detailed below.

LABORATORY CORPORATION OF AMERICA HOLDINGS AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(Dollars and shares in millions, except per share data)

LCD

The primary impact of the new standard to the LCD segment was classifying bad debt expense of \$312.5 and \$287.9 for the years ended December 31, 2017 and December 31, 2016, respectively, as a reduction in revenue rather than as a selling, general and administrative expense.

CDD

The primary impact of the new standard to the CDD segment was as follows:

Investigator fees: Prior to the new standard, reimbursements of investigator fees by clients were netted against the amounts paid to investigators in net revenues, on the basis that CDD was acting as the agent in arranging the investigator services. Under the new standard, revenue for investigator services and other reimbursable activities is recognized gross of fees paid to the investigators and other vendors, on the basis that a clinical study is considered a single, combined performance obligation for which CDD acts as a principal. Where CDD assumes the obligations by contract in studies involving patients, CDD is the principal because CDD may contract directly with third party clinical trial sites and investigators for investigator services and other reimbursable activities, which are combined with other CDD services in the management of a clinical study. Where CDD has assumed certain clinical trial sponsor obligations by contract in studies involving patients, CDD has primary responsibility for fulfilling its obligations associated with the full management of a clinical study, is subject to inventory risk since it may be obligated to compensate investigators and other vendors for reimbursable activities regardless of payment by the customer, and has discretion within the framework agreed upon with the customer in setting the price of the study, including the budget for all pass-through costs, including investigator grants.

The financial impact of this change on revenue for the years ended December 31, 2017 and December 31, 2016 was an increase of \$267.6 and \$234.5, respectively. Revenue and expenses from reimbursable out-of-pocket costs were previously recognized gross as separate line items from Net revenues and Net cost of revenue in the Consolidated Statement of Operations. Under the new standard, reimbursable out-of-pocket costs continue to be recognized gross, but are no longer presented separately (i.e., expenses are included in Cost of revenues and reimbursements are included in Revenues). In the statement of financial position, unbilled investigator fees and reimbursable out of pocket costs were reclassified from "Prepaid expenses and other" to "Unbilled services" and billed investigator grants and reimbursable out-of-pocket costs were reclassified from "Prepaid expenses and other" to "Accounts receivable, net."

Measure of progress: Prior to the new standard, service fee revenue in clinical studies was recognized on a proportional-performance basis, generally using output measures that are specific to the service provided (e.g., number of investigators enrolled, number of sites initiated, number of trial subjects enrolled and number of monitoring visits completed), while reimbursable out-of-pocket revenue was recognized when the associated expense was incurred. Changes in contract value from changes in scope were reflected once the customer agreed to the changes in scope and renegotiated pricing terms. Under the new standard, revenue in a clinical study (inclusive of budgeted reimbursable pass-through costs) is recognized using an input-based measure of progress based on costs incurred (including pass-through costs such as investigator services and reimbursable out-of-pocket expenses). If a customer's approval of a work scope change creates an enforceable right to payment, the related revenue will be estimated and included in the measure of progress before a formal change order is executed, which results in recognition of revenue as services are provided. The financial impact of this change on revenue for the years ended December 31, 2017 and December 31, 2016 was a decrease of \$58.9 and \$36.1, respectively.

Sales commissions: Prior to the new standard, sales commissions were recorded as an expense each quarter when incurred. Under the new standard, sales commissions are amortized according to the expected service period to which the commissions relate on the basis that they are recoverable through the margin inherent in the contracts and recognizes the unamortized commissions as current and long-term assets.

The Company applied the portfolio practical expedient in the new standard to determine the amortization period for assets recognized from sales commissions. Under the portfolio approach, the Company determined CDD's weighted average contract term for groups of contracts with similar characteristics, and then amortized the capitalized sales commissions for that group over that term. The Company believes that any difference between the amortization patterns under the specific identification approach and the portfolio approach are not significant to the Company's consolidated financial statements. The financial impact of this change on selling, general, and administrative expenses for the years ended December 31, 2017 and December 31, 2016 was a decrease of \$2.9 and \$4.4, respectively.

The total quantitative impact of the new standard on retained earnings as of January 1, 2016 was an increase of \$33.5.

LABORATORY CORPORATION OF AMERICA HOLDINGS AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(Dollars and shares in millions, except per share data)

Pension Accounting

In March 2017, the FASB issued a new accounting standard that requires employers that present a measure of operating income in their statement of income to include only the service cost component of net periodic pension cost and net periodic post-retirement benefit cost in operating expenses with other employee compensation costs. The other components of net benefit cost, including amortization of prior service cost/credit and settlement and curtailment effects are to be included in other, net non-operating expenses. The Company adopted this standard effective January 1, 2018. The adoption of this standard reduced operating margin due to the service cost remaining in operating expenses with no offset from the other components of net pension cost and has been applied retrospectively. The adoption of this standard had no impact on net earnings.

Reimbursable Out-of-Pocket Expenses

CDD pays on behalf of its customers certain out-of-pocket costs for which the Company is reimbursed at cost, without mark-up or profit. Out-of-pocket costs paid by CDD are reflected in operating expenses, while the reimbursements received are reflected in revenues in the consolidated statements of operations.

Cost of Revenue

Cost of revenue includes direct labor and related benefit charges, other direct costs, shipping and handling fees, and an allocation of facility charges and information technology costs. Selling, general and administrative expenses consist primarily of administrative payroll and related benefit charges, advertising and promotional expenses, administrative travel and an allocation of facility charges and information technology costs. Cost of advertising is expensed as incurred.

Use of Estimates

The preparation of financial statements in conformity with generally accepted accounting principles requires the Company 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 reported periods. Significant estimates include implicit price concessions, revenue estimates, the allowances for doubtful accounts, deferred tax assets, fair values and amortization lives for intangible assets, and accruals for self-insurance reserves and pensions. The allowance for doubtful accounts is determined based on historical collections trends, the aging of accounts, current economic conditions and regulatory changes. Actual results could differ from those estimates.

Concentration of Credit Risk

Financial instruments that potentially subject the Company to concentrations of credit risk consist primarily of cash and cash equivalents and accounts receivable.

The Company maintains cash and cash equivalents with various major financial institutions. The total cash and cash equivalent balances that exceeded the balances insured by the Federal Deposit Insurance Commission, were approximately \$423.0 and \$315.5 at December 31, 2018, and 2017, respectively.

Substantially all of the Company's accounts receivable are with companies in the healthcare or biopharmaceutical industry and individuals. However, concentrations of credit risk are mitigated due to the number of the Company's customers as well as their dispersion across many different geographic regions.

Although LCD has receivables due from U.S. and state governmental agencies, the Company does not believe that such receivables represent a credit risk since the related healthcare programs are funded by U.S. and state governments, and payment is primarily dependent upon submitting appropriate documentation. Accounts receivable balances (gross) from Medicare and Medicaid were \$88.8 and \$109.8 at December 31, 2018, and 2017, respectively.

For the Company's operations in Ontario, Canada, the Ontario Ministry of Health and Long-Term Care (Ministry) determines who can establish a licensed community medical laboratory and caps the amount that each of these licensed laboratories can bill the government sponsored healthcare plan. The Ontario government-sponsored healthcare plan covers the cost of commercial laboratory testing performed by the licensed laboratories. The provincial government discounts the annual testing volumes based on certain utilization discounts and establishes an annual maximum it will pay for all community laboratory tests. The agreed-upon reimbursement rates are subject to Ministry review at the end of year and can be adjusted (at the government's discretion) based upon the actual volume and mix of test work performed by the licensed healthcare providers in the province during the year. The capitated accounts receivable balances from the Ontario government sponsored healthcare plan were CAD 0.5 and CAD 12.9 at December 31, 2018, and 2017, respectively.

The portion of the Company's accounts receivable due from patients comprises the largest portion of credit risk. At December 31, 2018, and 2017, receivables due from patients represented approximately 21.5% and 20.9% of the Company's consolidated gross

LABORATORY CORPORATION OF AMERICA HOLDINGS AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(Dollars and shares in millions, except per share data)

accounts receivable. The Company applies assumptions and judgments including historical collection experience for assessing collectability and determining allowances for doubtful accounts for accounts receivable from patients.

Earnings per Share

Basic earnings per share is computed by dividing net earnings attributable to Laboratory Corporation of America Holdings by the weighted average number of common shares outstanding. Diluted earnings per share is computed by dividing net earnings including the impact of dilutive adjustments by the weighted average number of common shares outstanding plus potentially dilutive shares, as if they had been issued at the earlier of the date of issuance or the beginning of the period presented. Potentially dilutive common shares result primarily from the Company's outstanding stock options, restricted stock awards, performance share awards, and shares issuable upon conversion of zero-coupon subordinated notes.

The following represents a reconciliation of basic earnings per share to diluted earnings per share:

	2018			2017			2016		
	Income	Shares	Per Share Amount	Income	Shares	Per Share Amount	Income	Shares	Per Share Amount
Basic earnings per share	\$ 883.7	101.4	\$ 8.71	\$ 1,227.1	102.4	\$ 11.99	\$ 711.8	102.5	\$ 6.94
Stock options and restricted stock units	—	1.2	—	—	1.4	—	—	1.5	—
Effect of convertible debt, net of tax	—	—	—	—	0.1	—	—	0.3	—
Diluted earnings per share	\$ 883.7	102.6	\$ 8.61	\$ 1,227.1	103.9	\$ 11.81	\$ 711.8	104.3	\$ 6.82

The following table summarizes the potential common shares not included in the computation of diluted earnings per share because their impact would have been antidilutive:

	Years Ended December 31,		
	2018	2017	2016
Stock options	0.1	0.1	—

Stock Compensation Plans

The Company measures stock compensation cost for all equity awards at fair value on the date of grant and recognizes compensation expense over the service period for awards expected to vest. The fair value of restricted stock units and performance share awards is determined based on the number of shares granted and the quoted price of the Company's common stock on the grant date. Such value is recognized as expense over the service period, net of estimated forfeitures. The estimation of equity awards that will ultimately vest requires judgment and the Company considers many factors when estimating expected forfeitures, including types of awards, employee class, and historical experience. The cumulative effect on current and prior periods of a change in the estimated forfeiture rate is recognized as compensation expense in earnings in the period of the revision. Actual results and future estimates may differ substantially from the Company's current estimates.

See Note 15 for assumptions used in calculating compensation expense for the Company's stock compensation plans.

Cash Equivalents

Cash and cash equivalents consist of highly liquid instruments, such as commercial paper, time deposits, and other money market instruments, substantially all of which have maturities when purchased of three months or less.

Inventories

Inventories, consisting primarily of purchased laboratory and customer supplies and finished goods, are stated at the lower of cost (first-in, first-out) or market. Supplies accounted for \$200.1 and \$195.2 and finished goods accounted for \$37.2 and \$32.4 of total inventory at December 31, 2018, and 2017, respectively.

Prepaid Expenses and Other

In connection with the management of multi-site clinical trials, CDD pays on behalf of its customers certain out-of-pocket costs, for which the Company is reimbursed at cost, without markup or profit.

Also included in prepaid expenses and other current assets is land held for sale. The Company records long-lived assets as held for sale when a plan to sell the asset has been initiated and all other held for sale criteria have been satisfied. Assets classified as held for sale of \$55.2 as of December 31, 2017, are recorded in prepaid and other current assets on the consolidated balance sheet at the lower of their carrying value or fair value less cost to sell. This asset was sold during 2018. The assets held for sale associated with the CFS business are reported within the separate assets held for sale line items.

LABORATORY CORPORATION OF AMERICA HOLDINGS AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(Dollars and shares in millions, except per share data)

Property, Plant and Equipment

Property, plant and equipment are recorded at cost. The cost of properties held under capital leases is equal to the lower of the net present value of the minimum lease payments or the fair value of the leased property at the inception of the lease. Depreciation and amortization expense is computed on all classes of assets based on their estimated useful lives, as indicated below, using the straight-line method.

	Years
Buildings and building improvements	10 - 40
Machinery and equipment	3 - 10
Furniture and fixtures	5 - 10
Software	3 - 10

Leasehold improvements and assets held under capital leases are amortized over the shorter of their estimated useful lives or the term of the related leases. Expenditures for repairs and maintenance are charged to operations as incurred. Retirements, sales and other disposals of assets are recorded by removing the cost and accumulated depreciation from the related accounts with any resulting gain or loss reflected in the consolidated statements of operations.

Capitalized Software Costs

The Company capitalizes purchased software which is ready for service and capitalizes software development costs incurred on significant projects starting from the time that the preliminary project stage is completed and the Company commits to funding a project until the project is substantially complete and the software is ready for its intended use. Capitalized costs include direct material and service costs and payroll and payroll-related costs. Research and development (R&D) costs and other computer software maintenance costs related to software development are expensed as incurred. Capitalized software costs are amortized using the straight-line method over the estimated useful life of the underlying system ranging from three to ten years, generally five years.

Long-Lived Assets

The Company assesses goodwill and indefinite-lived intangibles for impairment at least annually or whenever events or changes in circumstances indicate that the carrying amount of such assets may not be recoverable.

Management performed its annual goodwill and intangible asset impairment testing as of the beginning of the fourth quarter of 2018. The Company elected to perform the qualitative assessment for goodwill and intangible assets for all reporting units except the Canadian reporting unit and its indefinite-lived assets consisting of acquired Canadian licenses for which a quantitative assessment was performed.

In this qualitative assessment, the Company considered relevant events and circumstances for each reporting unit, including (i) current year results, (ii) financial performance versus management's annual and five-year strategic plans, (iii) changes in the reporting unit carrying value since prior year, (iv) industry and market conditions in which the reporting unit operates, (v) macroeconomic conditions, including discount rate changes, and (vi) changes in products or services offered by the reporting unit. If applicable, performance in recent years was compared to forecasts included in prior valuations. Based on the results of the qualitative assessment, the Company concluded that it was not more likely than not that the carrying values of the goodwill and intangible assets were greater than their fair values, and that further quantitative testing was not necessary.

The Company utilized an income approach to determine the fair value of its Canadian reporting unit and its indefinite-lived assets consisting of acquired Canadian licenses. Based upon the results of the quantitative assessment, the Company concluded that the fair value of the indefinite-lived Canadian licenses was greater than the carrying value.

Long-lived assets, other than goodwill and indefinite-lived assets, are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amounts may not be recoverable. Recoverability of assets to be held and used is determined by the Company at the level for which there are identifiable cash flows by comparison of the carrying amount of the assets to future undiscounted net cash flows before interest expense and income taxes expected to be generated by the assets. Impairment, if any, is measured by the amount by which the carrying amount of the assets exceeds the fair value of the assets (based on market prices in an active market or on discounted cash flows). Assets to be disposed of are reported at the lower of the carrying amount or fair value.

Intangible Assets

Intangible assets are amortized on a straight-line basis over the expected periods to be benefited, as set forth in the table below, such as legal life for patents and technology and contractual lives for non-compete agreements.

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	Years	
Customer relationships	10	- 36
Patents, licenses and technology	3	- 15
Non-compete agreements	5	
Trade names	5	- 15

Debt Issuance Costs

The costs related to the issuance of debt are capitalized, netted against the related debt for presentation purposes and amortized to interest expense over the terms of the related debt.

Professional Liability

The Company is self-insured (up to certain limits) for professional liability claims arising in the normal course of business, generally related to the testing and reporting of laboratory test results. The Company estimates a liability that represents the ultimate exposure for aggregate losses below those limits. The liability is based on assumptions and factors for known and incurred but not reported claims, including the frequency and payment trends of historical claims.

Income Taxes

The Company accounts for income taxes utilizing the asset and liability method. Under this method deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases and for tax loss carryforwards. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date. The Company does not recognize a tax benefit unless the Company concludes that it is more likely than not that the benefit will be sustained on audit by the taxing authority based solely on the technical merits of the associated tax position. If the recognition threshold is met, the Company recognizes a tax benefit measured at the largest amount of the tax benefit that the Company believes is greater than 50% likely to be realized. The Company records interest and penalties in income tax expense.

Derivative Financial Instruments

Interest rate swap agreements, which have been used by the Company from time to time in the management of interest rate exposure, are accounted for at fair value.

The Company's zero-coupon subordinated notes contain two features that are considered to be embedded derivative instruments under authoritative guidance in connection with accounting for derivative instruments and hedging activities. The Company believes these embedded derivatives had no fair value at December 31, 2018, and 2017.

Cross currency swap agreements, which have been used by the Company to hedge exposure of its net investment in a foreign subsidiary denominated in non-U.S. currency, are accounted for at fair value.

See Note 19 for the Company's objectives in using derivative instruments and the effect of derivative instruments and related hedged items on the Company's financial position, financial performance and cash flows.

Fair Value of Financial Instruments

Fair value measurements for financial assets and liabilities are determined based on the assumptions that a market participant would use in pricing an asset or liability. A three-tiered fair value hierarchy draws distinctions between market participant assumptions based on (i) observable inputs such as quoted prices in active markets (Level 1), (ii) inputs other than quoted prices in active markets that are observable either directly or indirectly (Level 2) and (iii) unobservable inputs that require the Company to use present value and other valuation techniques in the determination of fair value (Level 3).

Research and Development

The Company expenses R&D costs as incurred.

Foreign Currencies

For subsidiaries outside of the U.S. that operate in a local currency environment, income and expense items are translated to U.S. dollars at the monthly average rates of exchange prevailing during the period, assets and liabilities are translated at period-end exchange rates and equity accounts are translated at historical exchange rates. Translation adjustments are accumulated in a separate component of shareholders' equity in the consolidated balance sheets and are included in the determination of comprehensive income in the consolidated statements of comprehensive earnings and consolidated statements of changes in shareholders' equity. Transaction gains and losses are included in the determination of net income in the consolidated statements of operations.

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New Accounting Pronouncements

In February 2016, the FASB issued a new accounting standard that sets out the principles for the recognition, measurement, presentation and disclosure of leases for both parties to a contract (i.e., lessees and lessors). The new standard requires lessees to apply a dual approach, classifying leases as either finance or operating leases based on the principle of whether or not the lease is effectively a financed purchase by the lessee. This classification will determine whether lease expense is recognized based on an effective interest method or on a straight-line basis over the term of the lease. A lessee is also required to record a right-of-use asset and a lease liability for all leases with a term of greater than 12 months regardless of their classification. Leases with a term of 12 months or less will be accounted for based on guidance similar to current guidance for operating leases. The new standard requires lessors to account for leases using an approach that is substantially equivalent to existing guidance for sales-type leases, direct financing leases and operating leases. The Company is adopting the standard on January 1, 2019. The Company will adopt the standard using a modified retrospective transition approach and will not restate its comparative periods. The adoption of the standard will not have a material impact on the Company's Consolidated Statement of Operations. The Company will implement a new module into the current leasing software solution which will facilitate compliance with the new standard. Given the size of the Company's lease portfolio, the adoption of this standard is expected to have a material impact on the Company's gross balance sheet with the recording of the right-to-use asset and a corresponding lease liability. During transition to the new standard, the Company elected the package of practical expedients for all leases that existed prior to the effective date of the standard, which includes not reassessing whether any contracts are or contain embedded leases, reassessing the classification of existing leases, and reassessing whether previously capitalized initial direct costs qualify for capitalization under the new standard. The Company has also elected not to separate lease and non-lease components. The Company will complete its review of the completeness and accuracy of the lease data and finalize its updated controls in accordance with the new standard during the first quarter of 2019.

In June 2016, the FASB issued a new accounting standard intended to provide financial statement users with more decision-useful information about expected credit losses and other commitments to extend credit held by the reporting entity. The standard replaces the incurred loss impairment methodology in current GAAP with one that reflects expected credit losses and requires consideration of a broader range of reasonable and supportable information to inform credit loss estimates. The update is effective on January 1, 2020, with early adoption permitted. The Company is currently evaluating the impact this new standard will have on the consolidated financial statements.

In August 2016, the FASB issued a new accounting standard that makes eight targeted changes to how cash receipts and cash payments are presented and classified in the statement of cash flows. The Company adopted this standard on a retrospective basis effective January 1, 2018. As a result, the Company reclassified accreted interest paid upon conversion of its zero-coupon subordinated notes from a financing activity to an operating activity for all periods presented.

In January 2017, the FASB issued a new accounting standard that changes the definition of a business to assist entities with evaluating when a set of transferred assets and activities is a business. The Company adopted this standard effective January 1, 2018. The adoption did not have a material impact on the consolidated financial statements.

In July 2017, the FASB issued a new accounting standard intended to reduce the complexity associated with the issuer's accounting for certain financial instruments with characteristics of liabilities and equity. Specifically, a down round feature would no longer cause a free-standing equity-linked financial instrument (or embedded conversion option) to be accounted for as a derivative liability at fair value with changes in fair value recognized in current earnings. This update is effective on January 1, 2019, with early adoption permitted and the option to use the retrospective or modified retrospective adoption method. The adoption of this standard did not have a material impact on the Company's consolidated financial statements.

In August 2017, the FASB issued a new accounting standard intended to more closely align hedge accounting with companies' risk management strategies, simplify the application of hedge accounting and increase transparency as to the scope and results of hedging programs. As a result, more hedging strategies are eligible for hedge accounting. The Company early adopted this standard effective January 1, 2018, and as allowed by the standard, elected to change the methodology for assessing hedge effectiveness of net investment hedges from a method based on changes in forward exchange rates to a method based on changes in spot exchange rates. The spot methodology under this standard allows the interest accrual components of hedge instruments to be reported directly in earnings while the changes in the fair value of hedge instruments attributable to changes in the spot rate are reported in the cumulative translation adjustment section of other comprehensive income.

In February 2018, the FASB issued a new accounting standard update that gives entities the option to reclassify to retained earnings tax effects related to items in accumulated other comprehensive income that the FASB refers to as having been stranded in accumulated other comprehensive income as a result of tax reform. This update is effective on January 1, 2019, with early adoption permitted. The Company's adoption of this standard effective January 1, 2019, did not have a material impact on the Company's consolidated financial statements.

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In August 2018, the FASB issued a new accounting standard to remove, modify, and add to the disclosure requirements on fair value measurements. The standard is effective on January 1, 2020, with early adoption permitted. The Company is currently evaluating the impact this new standard will have on the consolidated financial statements.

In August 2018, the FASB issued a new accounting standard to remove, modify, and add to the disclosure requirements on defined benefit pension and other postretirement plans. The standard is effective on January 1, 2021, with early adoption permitted. The Company is currently evaluating the impact this new standard will have on the consolidated financial statements.

In August 2018, the FASB issued a new accounting standard to align the requirements for capitalizing implementation costs incurred in a hosting arrangement that is a service contract with the requirements for capitalizing implementation costs incurred to develop or obtain internal-use software. The standard is effective on January 1, 2020, with early adoption permitted. The Company is currently evaluating the impact this new standard will have on the consolidated financial statements.

Reclassifications and Revisions

The Company adopted Accounting Standard Update 2016-09 *Compensation - Stock Compensation (Topic 718)* during 2016 and incorrectly classified payments made to tax authorities for withheld shares from an employee's equity award as cash flows from operating activities versus cash flows from financing activities. As a result, the Company has revised the consolidated statement of cash flows for these tax payments of \$47.4 and \$34.6 for the year ended December 31, 2017 and 2016, respectively, from operating activities to financing activities. The Company concluded that these errors were not material individually or in the aggregate to any of the periods impacted.

Adoption of the standards related to revenue recognition, pension accounting and cash receipts and payments as well as the revision for payments made to tax authorities for withheld shares from equity awards impacted previously reported results as follows:

Consolidated Statement of Operations				
For the Year Ended December 31, 2017				
	As Previously Reported	ASC 606 Revenue Adjustments	Pension Adjustments	As Adjusted
Total revenues	\$ 10,441.4	\$ (133.4)	\$ —	\$ 10,308.0
Total cost of revenue	6,977.4	238.6	0.2	7,216.2
Gross profit	3,464.0	(372.0)	(0.2)	3,091.8
Selling, general and administrative expenses	1,812.4	(315.1)	1.9	1,499.2
Other operating and non-operating expenses, net	516.7	0.5	(2.1)	515.1
Provision for income taxes	(139.1)	(16.3)	—	(155.4)
Net earnings	1,274.0	(41.1)	—	1,232.9
Less: Net earnings attributable to noncontrolling interest	(5.8)	—	—	(5.8)
Net earnings attributable to Laboratory Corporation of America Holdings	<u>\$ 1,268.2</u>	<u>\$ (41.1)</u>	<u>\$ —</u>	<u>\$ 1,227.1</u>
Basic earnings per share	\$ 12.39			\$ 11.99
Diluted earnings per share	\$ 12.21			\$ 11.81

Consolidated Statement of Operations				
For the Year Ended December 31, 2016				
	As previously reported	ASC 606 Revenue Adjustments	Pension Adjustments	As Adjusted
Total revenues	\$ 9,437.2	\$ 115.7	\$ —	\$ 9,552.9
Total cost of revenue	6,256.7	435.8	6.4	6,698.9
Gross profit	3,180.5	(320.1)	(6.4)	2,854.0
Selling, general and administrative expenses	1,630.2	(287.9)	3.2	1,345.5
Other operating and non-operating expenses, net	444.8	(0.3)	(9.6)	434.9
Provision for income taxes	372.3	(11.6)	—	360.7
Net earnings	733.2	(20.3)	—	712.9
Less: Net earnings attributable to noncontrolling interest	(1.1)	—	—	(1.1)
Net earnings attributable to Laboratory Corporation of America Holdings	<u>\$ 732.1</u>	<u>\$ (20.3)</u>	<u>\$ —</u>	<u>\$ 711.8</u>
Basic earnings per share	\$ 7.14			\$ 6.94
Diluted earnings per share	\$ 7.02			\$ 6.82

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Consolidated Statement of Cash Flows				
For the Year Ended December 31, 2017				
	As Previously Reported	Tax Payments for Equity Awards Revision	Zero-Coupon Notes Adjustments	As Adjusted
Net cash provided by operating activities	\$ 1,459.4	\$ 47.4	\$ (8.7)	\$ 1,498.1
Net cash used for investing activities	(2,228.7)	—	—	(2,228.7)
Net cash provided by financing activities	631.9	(47.4)	8.7	593.2
Effect of exchange rate changes on cash and cash equivalents	20.5	—	—	20.5
Net decrease in cash and cash equivalents	<u>\$ (116.9)</u>			<u>\$ (116.9)</u>

Condensed Consolidated Statement of Cash Flows				
For the Year Ended December 31, 2016				
	As Previously Reported	Tax Payments for Equity Awards Revision	Zero-Coupon Notes Adjustments	As Adjusted
Net cash provided by operating activities	\$ 1,175.9	\$ 34.6	\$ (13.4)	\$ 1,197.1
Net cash used for investing activities	(795.7)	—	—	(795.7)
Net cash provided by financing activities	(649.8)	(34.6)	13.4	(671.0)
Effect of exchange rate changes on cash and cash equivalents	(13.2)	—	—	(13.2)
Net decrease in cash and cash equivalents	<u>\$ (282.8)</u>			<u>\$ (282.8)</u>

The below adjustments have been made to the December 31, 2017 balance sheet and are all the result of the implementation of ASC 606. The adjustments include a cumulative catch-up adjustment, reclassification of unbilled services, and the capitalization of contract acquisition costs.

Condensed Consolidated Balance Sheets			
December 31, 2017			
	As Previously Reported	ASC 606 Revenue Adjustments	As Adjusted
Current assets	\$ 2,682.6	\$ 51.2	\$ 2,733.8
Long-term assets	13,885.4	53.8	13,939.2
Total assets	<u>\$ 16,568.0</u>	<u>\$ 105.0</u>	<u>\$ 16,673.0</u>
Current liabilities	\$ 2,046.1	\$ 139.6	\$ 2,185.7
Long-term liabilities	7,671.1	(8.7)	7,662.4
Noncontrolling interest	20.8	—	20.8
Shareholders' equity	6,830.0	(25.9)	6,804.1
Total liabilities and shareholders' equity	<u>\$ 16,568.0</u>	<u>\$ 105.0</u>	<u>\$ 16,673.0</u>

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2. REVENUE

Description of Revenue

The Company's revenue by segment payers/customer groups for the years ended December 31, 2018 and 2017 is as follows:

	For the Year Ended December 31, 2018						Total
	U.S.	Canada	United Kingdom	Switzerland	Other Europe	Other	
Payer/Customer							
<i>LCD</i>							
Clients	17%	1%	—%	—%	—%	—%	18%
Patients	8%	—%	—%	—%	—%	—%	8%
Medicare and Medicaid	9%	—%	—%	—%	—%	—%	9%
Third-party	25%	2%	—%	—%	—%	—%	27%
<i>Total LCD revenues by payer</i>	<u>59%</u>	<u>3%</u>	<u>—%</u>	<u>—%</u>	<u>—%</u>	<u>—%</u>	<u>62%</u>
<i>CDD</i>							
Biopharmaceutical and medical device companies	19%	—%	4%	5%	3%	7%	38%
Total revenues	<u>78%</u>	<u>3%</u>	<u>4%</u>	<u>5%</u>	<u>3%</u>	<u>7%</u>	<u>100%</u>
	For the Year Ended December 31, 2017						Total
	U.S.	Canada	United Kingdom	Switzerland	Other Europe	Other	
Payer/Customer							
<i>LCD</i>							
Clients	19%	1%	—%	—%	—%	—%	20%
Patients	8%	—%	—%	—%	—%	—%	8%
Medicare and Medicaid	10%	—%	—%	—%	—%	—%	10%
Third-party	27%	2%	—%	—%	—%	—%	29%
<i>Total LCD revenues by payer</i>	<u>64%</u>	<u>3%</u>	<u>—%</u>	<u>—%</u>	<u>—%</u>	<u>—%</u>	<u>67%</u>
<i>CDD</i>							
Biopharmaceutical and medical device companies	15%	—%	3%	5%	3%	7%	33%
Total revenues	<u>79%</u>	<u>3%</u>	<u>3%</u>	<u>5%</u>	<u>3%</u>	<u>7%</u>	<u>100%</u>

The following is a description of the current revenue recognition policies of the Company:

LCD

LCD is an independent clinical laboratory business. It offers a comprehensive menu of frequently requested and specialty diagnostic tests through an integrated network of primary and specialty laboratories across the U.S. In addition to diagnostic testing along with occupational and wellness testing for employers and forensic DNA analysis, LCD also offered a range of other testing services, including food solution services.

Within the LCD segment, a revenue transaction is initiated when LCD receives a requisition order to perform a diagnostic test. The information provided on the requisition form is used to determine the party that will be billed for the testing performed and the expected reimbursement. LCD recognizes revenue and satisfies its performance obligation for services rendered when the testing process is complete and the associated results are reported. Sales are distributed among four payer portfolios - clients, patients, Medicare and Medicaid and third-party. LCD considers negotiated discounts and anticipated adjustments, including historical collection experience for the payer portfolio, when sales are recorded.

The following are descriptions of the LCD payer portfolios:

Clients

Client payers represent the portion of LCD's revenue related to physicians, hospitals, health systems, accountable care organizations (ACOs), employers and other entities where payment is received exclusively from the entity ordering the testing service. Generally, client sales are recorded on a fee-for-service basis at LCD's client list price, less any negotiated discount. A

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portion of client billing is for laboratory management services, collection kits and other non-testing services or products. In these cases, revenue is recognized when services are rendered or delivered.

This portfolio also included LCD's nutritional chemistry services through CFS, which was sold on August 1, 2018. LCD offered a broad range of services to the food and nutraceutical and animal feed industries. Revenue was recognized using an output-based measure of progress based on the volume of activities in each period.

Patients

This portfolio includes revenue from uninsured patients and member cost-share for insured patients (e.g., coinsurance, deductibles and non-covered services). Uninsured patients are billed based upon LCD's patient fee schedules, net of any discounts negotiated with physicians on behalf of their patients. LCD bills insured patients as directed by their health plan and after consideration of the fees and terms associated with an established health plan contract.

Medicare and Medicaid

This portfolio relates to fee-for-service revenue from traditional Medicare and Medicaid programs. Net revenue from these programs is based on the fee schedule established by the related government authority. In addition to contractual discounts, other adjustments including anticipated payer denials are considered when determining net revenue. Any remaining adjustments to revenue are recorded at the time of final collection and settlement. These adjustments are not material to LCD's results of operations in any period presented.

Third-Party

Third-party includes revenue related to MCOs. The majority of LCD's third-party revenue is reimbursed on a fee-for-service basis. These payers are billed at LCD's established list price and revenue is recorded net of contractual discounts. The majority of LCD's MCO sales are recorded based upon contractually negotiated fee schedules with sales for non-contracted MCOs recorded based on historical reimbursement experience.

In addition to contractual discounts, other adjustments including anticipated payer denials are considered when determining revenue. Any remaining adjustments to revenue are recorded at the time of final collection and settlement. These adjustments are not material to LCD's results of operations in any period presented.

Third-party reimbursement is also received through capitation agreements with MCOs and independent physician associations (IPAs). Under capitated agreements, revenue is recognized based on a negotiated per-member, per-month payment for an agreed upon menu of tests, or based upon the proportionate share earned by LCD from a capitation pool. When the agreed upon reimbursement is based solely on an established rate per member, revenue is not impacted by the volume of testing performed. Under a capitation pool arrangement, the aggregate value of an established rate per member is distributed based on the volume and complexity of the procedures performed by laboratories participating in the agreement. LCD recognizes revenue monthly, based upon the established capitation rate or anticipated distribution from a capitated pool.

CDD

CDD is a CRO business that provides end-to-end drug development services from early-stage research to clinical trial management and beyond. CDD provides these services predominantly to biopharmaceutical and medical device companies worldwide. Because CDD's client base generally consumes these drug development services across the entire portfolio of CDD pre-clinical and clinical services offerings, there is little variability in the customer base of any particular CDD service offering. The nature of CDD's obligations include agreements to manage a full clinical trial, provide services for a specific phase of a trial, or provide research products to the customer. Generally, the amount of the transaction price estimated at the beginning of the contract is equal to the amount expected to be billed to the customer. Other payments may also factor into the calculation of transaction price, such as volume-based rebates that are retroactively applied to prior transactions in the period.

Historically, a majority of CDD's net revenues have been earned under contracts that range in duration from a few months to a few years, but can extend in duration up to five years or longer. Occasionally, CDD also has entered into minimum volume arrangements with certain customers. Under these types of arrangements, if the annual minimum dollar value of a service commitment is not reached, the customer is required to pay CDD for the shortfall. Annual minimum commitment shortfalls are not recognized until the end of the period when the amount has been determined and agreed to by the customer.

CDD recognizes revenue either as services are performed or as products are delivered, depending on the nature of the work contracted. If performance is completed at a specific point in time, the Company evaluates the nature of the agreement to determine when the good or service is transferred into the customer's control.

Service contracts generally take the form of fee-for-service or fixed-price arrangements subject to pricing adjustments based on changes in scope. In cases where performance spans multiple accounting periods, revenue is recognized as services are performed,

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measured on a proportional-performance basis, using either input or output methods that are specific to the service provided. In an output method, revenue is determined by dividing the actual units of output achieved by the total units of output required under the contract and multiplying that percentage by the total contract value. The total contract value, or total contractual payments, represents the aggregate contracted price for each of the agreed upon services to be provided. When using an input method, revenue is recognized by dividing the actual units of input incurred by the total units of input budgeted in the contract, and multiplying that percentage by the total contract value. In each situation, the Company believes that the methods used most accurately depict the progress of the Company towards completing its obligations. Billing schedules and payment terms are generally negotiated on a contract-by-contract basis. In some cases, CDD bills the customer for the total contract value in progress-based installments as certain non-contingent billing milestones are reached over the contract duration. These milestones include, but are not limited to, contract signing, initial dosing, investigator site initiation, patient enrollment and/or database lock. The term “billing milestone” relates only to a billing trigger in a contract whereby amounts become billable and payable in accordance with a negotiated predetermined billing schedule throughout the term of a project. These billing milestones are generally not performance-based (i.e., there is no potential additional consideration tied to specific deliverables or performance). In other cases, billing and payment terms are tied to the passage of time (e.g., monthly billings). In either case, the total contract value and aggregate amounts billed to the customer would be the same at the end of the project.

Proportional performance contracts typically contain a single service (e.g., management of a clinical study) and therefore no allocation of the contract price is required. Fee-for-service contracts are typically priced based on transaction volume. Since the volume of activities in a fee-for-service contract is unspecified, the contract price is entirely variable and is allocated to the time period in which it is earned. For contracts that include multiple distinct goods and services, CDD allocates the contract price to the goods and services based on a customer price list, if available. If a price list is not available, CDD will estimate the transaction price using either market prices or an “expected cost plus margin” approach.

While CDD attempts to negotiate terms that provide for billing and payment of services prior or within close proximity to the provision of services, this is not always possible. While a project is ongoing, cash payments are not necessarily representative of aggregate revenue earned at any particular point in time, as revenues are recognized when services are provided, while amounts billed and paid are in accordance with the negotiated billing and payment terms.

In some cases, payments received are in excess of revenue recognized. For example, a contract invoicing schedule may provide for an upfront payment of 10% of the full contract value upon contract signing, but at the time of signing performance of services has not yet begun. Payments received in advance of services being provided are deferred as contract liabilities on the balance sheet. As the contracted services are subsequently performed and the associated revenue is recognized, the contract liability balance is reduced by the amount of revenue recognized during the period.

In other cases, services may be provided and revenue recognized before the customer is invoiced. In these cases, revenue recognized will exceed amounts billed, and the difference, representing a contract asset, is recorded for the amount that is currently not billable to the customer pursuant to contractual terms. Once the customer is invoiced, the contract asset is reduced for the amount billed, and a corresponding account receivable is recorded. All contract assets are billable to customers within one year from the respective balance sheet date.

Most contracts are terminable with or without cause by the customer, either immediately or upon notice. These contracts often require payment to CDD of expenses to wind-down the study or project, fees earned to date and, in some cases, a termination fee or a payment to CDD of some portion of the fees or profits that could have been earned by CDD under the contract if it had not been terminated early. Termination fees are included in net revenues when services are performed and realization is assured.

The following are descriptions of the full range of drug development services provided by CDD:

Preclinical services include the sale of research models, fee-for-service activities such as bioanalytical testing services, and proportional performance activities such as toxicology studies. Revenue for sale of research models is recognized at a point in time, typically upon shipment, when control transfers to the customer. Revenue for bioanalytical testing services is recognized at a point in time upon communication of results to the customer. Revenue for proportional performance activities, including toxicology studies, is recognized using an input-based measure of progress in which revenue is recognized as expenses are incurred for the research models, labor hours, and other costs attributable to the study.

Through its central laboratory, CDD produces and supplies specimen collection kits that are utilized in clinical studies, and provides transportation, project management, data management, and laboratory testing services on an as-needed basis throughout the duration of its customers’ clinical studies. Revenue for central laboratory services is recognized using an output-based measure of progress based on volume of activities in each period. CDD also provides long-term specimen storage services, for which revenue is recognized using an input-based measure of progress based on costs incurred.

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CDD provides clinical development and commercialization services, including clinical pharmacology services, full management of Phase II through IV clinical studies, and market access solutions. Revenue for clinical pharmacology services, which includes first-in-human trials, is recognized using an output-based measure of progress based on bed nights. Revenue for full service clinical studies is recognized using an input-based measure of progress based on costs incurred (including pass-through costs such as investigator grants and reimbursable out-of-pocket expenses). Revenue for market access solutions is recognized using various methods. Revenue for fee-for-service arrangements, such as reimbursement consulting hotlines and patient assistance programs, is recognized using an output method based on transaction volume which corresponds to the amount charged to the customer. For consulting services billed based on time and materials, revenue is recognized using the right to invoice practical expedient.

Contract costs

The Company incurs sales commissions in the process of obtaining contracts with customers, which are recoverable through the service fees in the contract. Sales commissions that are payable upon contract award are recognized as assets and amortized over the expected contract term, along with related payroll tax expense. The amortization of commission expense is based on the weighted average contract duration for all commissionable awards in the respective business in which the commission expense is paid, which approximates the period over which goods and services are transferred to the customer. The amortization period of sales commissions ranges from approximately 12 months to 57 months, depending on the business. For businesses that enter primarily short-term contracts, the Company applies the practical expedient which allows costs to obtain a contract to be expensed when incurred if the amortization period of the assets that would otherwise have been recognized is one year or less. Amortization of assets from sales commissions is included in selling, general, and administrative expense.

The Company incurs costs to fulfill contracts with customers, which are recoverable through the service fees in the contract. Contract fulfillment costs include software implementation costs and setup costs for certain market access solutions. These costs are recognized as assets and amortized over the expected term of the contract to which the implementation relates, which is the period over which services are expected to be provided to the customer. This period typically ranges from 24-60 months. Amortization of deferred contract fulfillment costs is included in cost of goods sold.

	December 31, 2018	December 31, 2017
Sales commission assets	\$ 24.2	\$ 24.0
Deferred contract fulfillment costs	12.9	1.7
Total	\$ 37.1	\$ 25.7

Amortization related to sales commission assets and associated payroll taxes for the year ended December 31, 2018, 2017, and 2016 was \$16.9, \$14.3 and \$13.9 respectively. Amortization related to deferred contract fulfillment costs for the years ended December 31, 2018, 2017 and 2016 was \$4.4, \$0.3 and \$0.9, respectively. Impairment expense related to contract costs was immaterial to the Company's consolidated statement of operations. The Company applies the practical expedient to not recognize the effect of financing in its contracts with customers, when the difference in timing of payment and performance is one year or less.

Contract Assets and Liabilities

The following table provides information about receivables, unbilled services, and unearned revenue (contract liabilities) from contracts with customers. Unbilled services are comprised primarily of unbilled receivables, but also include contract assets. A contract asset is recorded when a right to payment has been earned for work performed, but billing and payment for that work is determined by certain contractual milestones, whereas unbilled receivables are billable upon the passage of time. While CDD attempts to negotiate terms that provide for billing and payment of services prior or in close proximity to the provision of services, this is not always possible and there are fluctuations in the level of unbilled services and unearned revenue from period to period.

	December 31, 2018	December 31, 2017
Receivables, which are included in Accounts Receivable, net	\$ 693.6	\$ 694.4
Unbilled services	396.9	318.2
Unearned revenue	354.1	377.4

Revenue recognized during the period, that was included in the unearned revenue balance at the beginning of the period, for the year ended December 31, 2018 was \$204.0. Bad debt expense on receivables, for the year ended December 31, 2018 was immaterial to the Company's consolidated statement of operations.

Performance Obligations Under Long-Term Contracts

Long-term contracts at the Company consist primarily of fully managed clinical studies within the CDD segment. The amount of existing performance obligations under such long-term contracts unsatisfied as of December 31, 2018 was \$3,784.7. The Company

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expects to recognize approximately 39% of the remaining performance obligations as revenue over the next 12 months, and the balance thereafter. The Company's long-term contracts generally range from 1 to 8 years.

The Company applied the practical expedient and does not disclose information about remaining performance obligations that have original expected durations of one year or less. The Company also did not disclose information about remaining performance obligations when the variable consideration was related to a wholly unsatisfied performance obligation within a series of obligations.

Within CDD, revenue of \$21.0 was recognized during the year ended December 31, 2018 from performance obligations that were satisfied in previous periods. This revenue comes from adjustments related to changes in scope and estimates in full service clinical studies.

3. BUSINESS ACQUISITIONS AND DISPOSITIONS

During the year ended December 31, 2018, the Company acquired various businesses and related assets for approximately \$117.8 in cash (net of cash acquired). The purchase consideration for all acquisitions year to date has been allocated to the estimated fair market value of the net assets acquired, including approximately \$67.8 in identifiable intangible assets and a residual amount of goodwill of approximately \$70.5. These acquisitions were made primarily to extend the Company's geographic reach in important market areas and/or enhance the Company's scientific differentiation.

On September 1, 2017, the Company completed the acquisition of Chiltern International Group Limited (Chiltern), a specialty CRO, pursuant to a definitive agreement to acquire all of the share capital of Chiltern, in an all-cash transaction valued at approximately \$1,224.5. The Company funded the acquisition through a combination of bank financing and the issuance of bonds. Chiltern is part of the Company's CDD segment.

The final valuation of acquired assets and assumed liabilities as of September 1, 2017, include the following:

Consideration Transferred	
Cash consideration	\$ 1,224.5
Net Assets Acquired	
Cash and cash equivalents	\$ 30.7
Accounts receivable	103.6
Unbilled services	32.6
Prepaid expenses and other	57.9
Property, plant and equipment	12.1
Goodwill	745.4
Customer relationships	602.0
Trade names and trademarks	10.6
Technology	26.0
Favorable leases	0.9
Total assets acquired	1,621.8
Accounts payable	45.1
Accrued expenses and other	19.6
Unearned revenue	133.7
Deferred income taxes	196.5
Other liabilities	2.4
Total liabilities acquired	397.3
Net assets acquired	\$ 1,224.5

The amortization periods for intangible assets acquired are 21 years for customer relationships, 4 years for trade names and trademarks, and 6 years for technology.

The acquisition contributed \$188.4 and \$11.6 of net revenue and operating income, respectively, during the year ended December 31, 2017.

Unaudited Pro Forma Information

The Company completed the Chiltern acquisition on September 1, 2017. Had the Chiltern acquisition been completed as of January 1, 2016, the Company's pro forma results for 2017 would have been as follows:

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	Year Ended	
	December 31, 2017	December 31, 2016
Total revenues	\$ 10,831.3	\$ 10,387.4
Operating income	1,305.6	1,300.5
Net income	1,209.0	703.8
Earnings per share:		
Basic	\$ 11.80	\$ 6.86
Diluted	\$ 11.65	\$ 6.75

During the year ended December 31, 2017, the Company also acquired various laboratories and related assets, including Pathology Associates Medical Laboratories (PAML) for approximately \$688.8 in cash (net of cash acquired). These acquisitions were made primarily to extend the Company's geographic reach in important market areas and/or enhance the Company's scientific differentiation and esoteric testing capabilities. The purchase consideration for these acquisitions, including Chiltern, has been allocated to the estimated fair market value of the net assets acquired, including approximately \$1,053.0 in identifiable intangible assets (primarily customer relationships and non-compete agreements) and a residual amount of goodwill of approximately \$1,009.8.

During the year ended December 31, 2016, the Company acquired various other laboratories and related assets for \$548.6 (net of cash acquired), including Sequenom, Inc. for approximately \$249.1. The Company completed the acquisition of Sequenom, Inc., a market leader in non-invasive prenatal testing, women's health and reproductive genetics on September 7, 2016, through a cash tender offer for \$2.40 per share, or a transaction price of \$249.1, net of cash received, and acquired \$130.0 of debt. The Sequenom purchase consideration has been allocated to the estimated fair market value of the net assets acquired, including approximately \$146.6 in identifiable intangible assets (primarily customer relationships, technology, and trade names) with weighted-average useful lives of approximately 14.6 years; \$45.1 in deferred tax liabilities (relating to identifiable intangible assets); and a residual amount of non-tax deductible goodwill of approximately \$206.0.

The remaining acquisitions 2016 included various other laboratories and related assets for approximately \$299.5 in cash (net of cash acquired). The purchase consideration for these acquisitions has been allocated to the estimated fair market value of the net assets acquired, including approximately \$126.2 in identifiable intangible assets (primarily customer relationships) and a residual amount of goodwill of approximately \$192.3. These acquisitions were made primarily to extend the Company's geographic reach in important market areas and/or enhance the Company's scientific differentiation and esoteric testing capabilities.

On April 30, 2018, the Company entered into a definitive agreement to sell the CFS business, a global provider of innovative product design and product integrity services for end-user segments that span the global food supply chain, for an all-cash purchase price of \$670.0. The transaction closed on August 1, 2018, and a net gain of \$258.3 was recorded in Other, net in the consolidated statement of operations. Total assets and total liabilities held for sale for the CFS business as of December 31, 2017, include the following:

	December 31, 2017
Assets:	
Cash and cash equivalents	\$ 0.1
Accounts receivable	24.4
Unbilled services	7.6
Supplies inventories	0.4
Prepaid expenses and other	1.2
Property, plant and equipment, net	42.3
Goodwill, net	170.5
Intangible assets, net	174.7
Other assets, net	0.3
Total assets held for sale	\$ 421.5
Liabilities:	
Accounts Payable	\$ 2.4
Accrued expenses and other	15.2
Unearned revenue	2.6
Deferred income taxes and other tax liabilities	64.1
Other liabilities	2.2
Total liabilities held for sale	\$ 86.5
Net assets held for sale	\$ 335.0

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The Company also divested its forensic testing services business in the U.K. and the U.S. on August 7, 2018, and December 31, 2018, respectively, resulting in a losses of \$48.9 and \$24.5, respectively, recorded in Other, net in the consolidated statement of operations.

Operating income for the divested businesses was \$7.6 and \$12.9, for the years ended December 31, 2018, (which includes divested operations through their respective disposal dates) and December 31, 2017, respectively.

4. RESTRUCTURING AND OTHER SPECIAL CHARGES

During 2018, the Company recorded net restructuring charges of \$48.1; \$20.5 within LCD and \$27.6 within CDD. The charges were comprised of \$40.3 in severance and other personnel costs and \$11.8 in facility-related costs primarily associated with general integration activities. The charges were offset by the reversal of previously established reserves of \$2.0 in unused severance and \$2.0 in unused facility-related costs. The Company also recorded \$2.3 in impairment to land held for sale which is included in amortization expense.

During 2017, the Company recorded net restructuring charges of \$70.9; \$16.8 within LCD and \$54.1 within CDD. The charges were comprised of \$36.1 in severance and other personnel costs, \$18.8 in facility-related costs primarily associated with general integration activities, and an asset impairment loss of \$20.9 related to the termination of a software development project within the CDD segment and the forgiveness of indebtedness for LCD customers in areas heavily impacted by hurricanes experienced during the third quarter of 2017. The charges were offset by the reversal of previously established reserves of \$0.5 in unused severance and \$4.4 in unused facility-related costs.

During 2016, the Company recorded net restructuring charges of \$58.4; \$15.8 within LCD and \$42.6 within CDD. The charges were comprised of \$30.9 in severance and other personnel costs and \$33.8 in facility-related costs primarily associated with general integration activities. The Company incurred additional legal and other costs of \$4.6 relating to the wind down of its minimum volume service contract operations and incurred \$8.0 in acquisition fees and expenses.

5. RESTRUCTURING RESERVES

The following represents the Company's restructuring activities for the period indicated:

	LCD		CDD		Total
	Severance and Other Employee Costs	Lease and Other Facility Costs	Severance and Other Employee Costs	Lease and Other Facility Costs	
Balance as of December 31, 2017	\$ 1.7	\$ 10.1	\$ 8.3	\$ 34.6	\$ 54.7
Restructuring charges	16.2	5.4	24.1	6.4	52.1
Reduction of prior restructuring accruals	(0.4)	(0.7)	(1.6)	(1.3)	(4.0)
Cash payments and other adjustments	(15.4)	(7.4)	(24.3)	(12.1)	(59.2)
Balance as of December 31, 2018	\$ 2.1	\$ 7.4	\$ 6.5	\$ 27.6	\$ 43.6
Current					\$ 19.8
Non-current					23.8
					\$ 43.6

The non-current portion of the restructuring liabilities is expected to be paid out over 5.4 years. Cash payments and other adjustments include the reclassification of profit sharing, pension, and holiday accrual.

6. JOINT VENTURE PARTNERSHIPS AND EQUITY METHOD INVESTMENTS

At December 31, 2018, the Company had investments in the following unconsolidated joint venture partnerships and equity method investments:

Locations	Net Investment	Interest Owned
<u>Joint Venture Partnerships:</u>		
Alberta, Canada (2)	\$ 40.9	43.37%
Florence, South Carolina	10.1	49.00%
<u>Equity Method Investments:</u>		
Various	9.5	various

The joint venture partnerships are governed by agreements that mandate unanimous agreement between partners on all major business decisions as well as providing other participating rights to each partner. The equity method investments represent the

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Company's purchase of ownership interests in clinical diagnostic companies. The investments are accounted for under the equity method of accounting as the Company does not have control of these investments. The Company has no material obligations or guarantees to, or in support of, these unconsolidated investments and their operations.

Condensed unconsolidated financial information for joint venture partnerships and equity method investments is shown in the following table.

As of December 31:	2018	2017
Current assets	\$ 67.9	\$ 45.7
Other assets	15.7	14.4
Total assets	\$ 83.6	\$ 60.1
Current liabilities	\$ 33.3	\$ 31.6
Other liabilities	5.8	1.0
Total liabilities	39.1	32.6
Partners' equity	44.5	27.5
Total liabilities and partners' equity	\$ 83.6	\$ 60.1

For the period January 1 - December 31:	2018	2017	2016
Net revenues	\$ 186.3	\$ 212.5	\$ 156.7
Gross profit	62.4	62.6	45.7
Net earnings	34.4	25.7	20.3

The Company's recorded investment in one of its Alberta joint venture partnerships at December 31, 2018, includes \$32.3 of value assigned to that partnership's Canadian license to conduct diagnostic testing services in the province. Substantially all of the joint venture's revenue is received as reimbursement from the Alberta government's healthcare programs (AHS). While the Canadian license provides the joint venture the ability to conduct diagnostic testing in Alberta, it does not guarantee that the provincial government will continue to reimburse diagnostic laboratory testing in future years at current levels. A decision by the provincial government to limit or reduce its reimbursement of laboratory diagnostic services would have a negative impact on the profits and cash flows the Company derives from the joint venture. In August 2016, AHS and the Canadian partnership reached an agreement to extend the contract for five additional years through March 2022, with the intent to have the services provided pursuant to the contract transferred to AHS at the end of the five-year period. In consideration of AHS acquiring the assets and assuming liabilities in accordance with the parties' agreement, AHS will pay CAD 50.0 to the partnership when the transfer is effective, subject to a working capital adjustment. The Company is amortizing the value of the partnership's Canadian license to its residual value over the remaining term of the agreement.

As a result of the acquisition of PAML, the Company acquired PAML's ownership interests in six joint ventures. During 2017 and 2018, the Company further acquired the ownership interests of the other members of four of the six joint ventures, and divested interest in one of the six joint ventures to the other member. The Company and the other members of the sixth joint venture made the decision to dissolve the sixth joint venture to be effective in 2019.

7. ACCOUNTS RECEIVABLE, NET

	December 31, 2018	December 31, 2017
Gross accounts receivable	\$ 1,483.6	\$ 1,537.2
Less allowance for doubtful accounts	(15.7)	(6.2)
	\$ 1,467.9	\$ 1,531.0

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8. PROPERTY, PLANT AND EQUIPMENT, NET

	December 31, 2018	December 31, 2017
Land	\$ 77.4	\$ 78.1
Buildings and building improvements	703.7	689.3
Machinery and equipment	1,243.2	1,149.6
Software	714.6	667.2
Leasehold improvements	340.7	329.3
Furniture and fixtures	93.8	90.4
Construction in progress	304.8	183.2
Equipment and real estate under capital leases	79.4	78.9
	<u>3,557.6</u>	<u>3,266.0</u>
Less accumulated depreciation and amortization of capital lease assets	(1,772.9)	(1,559.4)
	<u>\$ 1,784.7</u>	<u>\$ 1,706.6</u>

Depreciation expense and amortization of property, plant and equipment was \$311.5, \$306.8 and \$311.1 for 2018, 2017 and 2016, respectively, including software depreciation of \$92.7, \$85.6, and \$79.2 for 2018, 2017 and 2016, respectively.

9. GOODWILL AND INTANGIBLE ASSETS

The changes in the carrying amount of goodwill (net of accumulated amortization) for the years ended December 31, 2018 and 2017 are as follows:

	LCD		CDD		Total	
	December 31, 2018	December 31, 2017	December 31, 2018	December 31, 2017	December 31, 2018	December 31, 2017
Balance as of January 1	\$ 3,673.9	\$ 3,644.8	\$ 3,727.0	\$ 2,779.6	\$ 7,400.9	\$ 6,424.4
Goodwill acquired during the year	7.2	198.5	63.3	811.3	70.5	1,009.8
Reclassification of goodwill as held for sale	—	(170.5)	—	—	—	(170.5)
Dispositions	(34.9)	—	—	—	(34.9)	—
Foreign currency impact and other adjustments to goodwill	(7.4)	1.1	(68.8)	136.1	(76.2)	137.2
Balance at end of year	<u>\$ 3,638.8</u>	<u>\$ 3,673.9</u>	<u>\$ 3,721.5</u>	<u>\$ 3,727.0</u>	<u>\$ 7,360.3</u>	<u>\$ 7,400.9</u>

The components of identifiable intangible assets are as follows:

	December 31, 2018			December 31, 2017		
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Customer relationships	\$ 4,119.4	\$ (1,146.7)	\$ 2,972.7	\$ 4,118.1	\$ (992.8)	\$ 3,125.3
Patents, licenses and technology	447.3	(211.2)	236.1	457.9	(188.6)	269.3
Non-compete agreements	76.8	(53.7)	23.1	75.8	(48.3)	27.5
Trade names	404.0	(189.1)	214.9	407.9	(167.9)	240.0
Land use rights	10.8	(4.1)	6.7	10.8	(2.5)	8.3
Canadian licenses	457.6	—	457.6	495.7	—	495.7
	<u>\$ 5,515.9</u>	<u>\$ (1,604.8)</u>	<u>\$ 3,911.1</u>	<u>\$ 5,566.2</u>	<u>\$ (1,400.1)</u>	<u>\$ 4,166.1</u>

A summary of amortizable intangible assets acquired during 2018, and their respective weighted average amortization periods are as follows:

	Amount	Weighted Average Amortization Period
Customer relationships	\$ 62.2	18.2
Patents, licenses and technology	0.3	15.0
Non-compete agreements	1.9	5.0
Trade names	3.4	5.0
	<u>\$ 67.8</u>	<u>17.1</u>

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Amortization of intangible assets, including amortization of the Canadian license recorded in other assets, was \$231.7, \$216.5 and \$179.5 in 2018, 2017 and 2016, respectively. The Company recorded earn-out, purchase accounting adjustments and impairment losses through amortization expense of \$4.5, \$3.0, and \$4.9 in 2018, 2017 and 2016, respectively. Amortization expense of intangible assets is estimated to be \$223.0 in fiscal 2019, \$215.3 in fiscal 2020, \$209.0 in fiscal 2021, \$203.4 in fiscal 2022, \$199.8 in fiscal 2023, and \$2,403.0 thereafter.

10. ACCRUED EXPENSES AND OTHER

	December 31, 2018	December 31, 2017
Employee compensation and benefits	\$ 427.6	\$ 369.3
Self-insurance reserves	40.4	45.7
Accrued taxes payable	124.8	70.6
Royalty and license fees payable	6.4	6.2
Accrued investigator fees and pass through costs	80.4	71.6
Restructuring reserves	19.8	22.0
Acquisition related reserves	19.7	21.3
Interest payable	70.7	71.7
Rebates	26.0	24.6
Other	54.2	90.3
	<u>\$ 870.0</u>	<u>\$ 793.3</u>

11. OTHER LIABILITIES

	December 31, 2018	December 31, 2017
Post-retirement benefit obligation	\$ 6.5	\$ 7.4
Defined-benefit plan obligation	125.8	163.4
Restructuring reserves	23.8	32.5
Self-insurance reserves	30.3	28.9
Deferred compensation plan obligation	64.2	64.5
Worker's compensation and auto	40.9	39.0
Straight-line rent	11.9	12.7
Escheat liability	11.1	10.9
Other	19.5	16.7
	<u>\$ 334.0</u>	<u>\$ 376.0</u>

12. DEBT

Short-term borrowings and current portion of long-term debt at December 31, 2018, and 2017 consisted of the following:

	December 31, 2018	December 31, 2017
Zero-coupon convertible subordinated notes	\$ 8.7	\$ 8.8
2.50% Senior Notes due 2018	—	400.0
Debt issuance costs	(0.5)	(1.4)
Capital lease obligation	7.9	8.3
Current portion of note payable	1.8	1.8
Total short-term borrowings and current portion of long-term debt	<u>\$ 17.9</u>	<u>\$ 417.5</u>

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Long-term debt at December 31, 2018, and 2017 consisted of the following:

	December 31, 2018	December 31, 2017
4.625% Senior Notes due 2020	597.0	604.1
2.625% Senior Notes due 2020	500.0	500.0
3.75% Senior Notes due 2022	500.0	500.0
3.20% Senior Notes due 2022	500.0	500.0
4.00% Senior Notes due 2023	300.0	300.0
3.25% Senior Notes due 2024	600.0	600.0
3.60% Senior Notes due 2025	1,000.0	1,000.0
3.60% Senior Notes due 2027	600.0	600.0
4.70% Senior Notes due 2045	900.0	900.0
2014 Term loan	—	72.0
2017 Term loan	527.1	750.0
Debt issuance costs	(40.3)	(48.2)
Capital leases	51.0	57.8
Note payable	7.1	8.9
Total long-term debt	\$ 6,041.9	\$ 6,344.6

Credit Facilities

On September 15, 2017, the Company entered into a new \$750.0 term loan which will mature on September 15, 2022. The 2017 term loan balance at December 31, 2018, was \$527.1 and at December 31, 2017 was \$750.0.

On December 19, 2014, the Company entered into a five-year term loan credit facility in the principal amount of \$1,000.0 for the purpose of financing a portion of the cash consideration and the fees and expenses in connection with the transactions contemplated by the November 2, 2014 Merger Agreement to acquire Covance. The term loan credit facility was advanced in full on the Covance acquisition date and was amended on July 13, 2016 and further amended on September 15, 2017. The term loan credit facility was fully repaid in 2018. The 2014 term loan balance at December 31, 2017, was \$72.0.

On September 15, 2017, the Company also entered into an amendment and restatement of its existing senior unsecured revolving credit facility, which was originally entered into on December 21, 2011, was amended and restated on December 15, 2015 and was further amended on July 13, 2016. The senior revolving credit facility consists of a five-year revolving facility in the principal amount of up to \$1,000.0, with the option of increasing the facility by up to an additional \$350.0, subject to the agreement of one or more new or existing lenders to provide such additional amounts and certain other customary conditions. The revolving credit facility also provides for a subfacility of up to \$100.0 for swing line borrowings and a subfacility of up to \$150.0 for issuances of letters of credit. The revolving credit facility is permitted to be used for general corporate purposes, including working capital, capital expenditures, funding of share repurchases and certain other payments, and acquisitions and other investments. There were no balances outstanding on the Company's current revolving credit facility at December 31, 2018, or December 31, 2017.

Under the Company's term loan facilities and the revolving credit facility, the Company is subject to negative covenants limiting subsidiary indebtedness and certain other covenants typical for investment grade-rated borrowers and the Company is required to maintain certain leverage ratios. The Company was in compliance with all covenants in the term loan facility and the revolving credit facility at December 31, 2018, and 2017. As of December 31, 2018, the ratio of total debt to consolidated EBITDA was 3.0 to 1.0.

The 2017 term loan credit facility accrues interest at a per annum rate equal to, at the Company's election, either a LIBOR rate plus a margin ranging from 0.875% to 1.50%, or a base rate determined according to a prime rate or federal funds rate plus a margin ranging from 0.0% to 0.50%. Advances under the revolving credit facility accrue interest at a per annum rate equal to, at the Company's election, either a LIBOR rate plus a margin ranging from 0.775% to 1.25%, or a base rate determined according to a prime rate or federal funds rate plus a margin ranging from 0.00% to 0.25%. Fees are payable on outstanding letters of credit under the revolving credit facility at a per annum rate equal to the applicable margin for LIBOR loans, and the Company is required to pay a facility fee on the aggregate commitments under the revolving credit facility, at a per annum rate ranging from 0.10% to 0.25%. The interest margin applicable to the credit facilities, and the facility fee and letter of credit fees payable under the revolving credit facility, are based on the Company's senior credit ratings as determined by S&P and Moody's.

At December 31, 2018, the Company had provided letters of credit aggregating approximately \$72.2, primarily in connection with certain insurance programs. The Company's availability under its Revolving Credit Facility is reduced by the amount of these letters of credit.

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As of December 31, 2018, the effective interest rate on the revolving credit facility was 3.5% and on the 2017 term loan was 3.6%. As of December 31, 2017, the effective interest rate on the revolving credit facility was 2.7%, and the effective interest rate on the 2014 term loan was 2.8% and on the 2017 term loan was 2.6%.

Zero-Coupon Convertible Subordinated Notes

The Company had \$8.6 and \$9.0 aggregate principal amount at maturity of zero-coupon convertible subordinated notes (the Notes) due 2021 outstanding at December 31, 2018, and 2017, respectively. The Notes, which are due in 2021 and are subordinate to the Company's bank debt, were sold at an issue price of \$671.65 per \$1,000.0 principal amount at maturity (representing a yield to maturity of 2.0% per year). Each one thousand dollar principal amount at maturity of the Notes is convertible into 13.4108 shares of the Company's common stock, subject to adjustment in certain circumstances, if one of the following conditions occurs:

- 1) The sales price of the Company's common stock for at least 20 trading days in a period of 30 consecutive trading days ending on the last trading day of the preceding quarter reaches specified thresholds (beginning at 120% and declining 0.1282% per quarter until it reaches approximately 110% for the quarter beginning July 1, 2021 of the accreted conversion price per share of common stock on the last day of the preceding quarter). The accreted conversion price per share will equal the issue price of a note plus the accrued original issue discount and any accrued contingent additional principal, divided by the number of shares of common stock issuable upon conversion of a note on that day. The conversion trigger price for the fourth quarter of 2018 was \$78.64.
- 2) The credit rating assigned to the notes by Standard & Poor's (S&P) Ratings Services is at or below BB-.
- 3) The Notes are called for redemption.
- 4) Specified corporate transactions have occurred (such as if the Company is party to a consolidation, merger or binding share exchange or a transfer of all or substantially all of its assets).

The Company may redeem for cash all or a portion of the Notes at any time at specified redemption prices per one thousand dollar principal amount at maturity of the Notes.

The Company has registered the notes and the shares of common stock issuable upon conversion of the Notes with the Securities and Exchange Commission.

During 2018 and 2017, the Company settled notices to convert \$0.3 and \$37.1 aggregate principal amount at maturity of its zero-coupon subordinated notes with a conversion value of \$0.7 and \$33.9, respectively. The total cash used for these settlements was \$0.3 and \$33.9 and the Company also issued 0.0 and 0.3 additional shares of common stock, respectively. As a result of these conversions, in 2018 and 2017 the Company also reversed approximately \$0.2 and \$13.7, respectively, of deferred tax liability to reflect the tax benefit realized upon issuance of the shares.

The Company announced that for the period of September 12, 2017, to March 10, 2018, the zero-coupon subordinated notes will accrue contingent cash interest at a rate of no less than 0.125% of the average market price of a zero-coupon subordinated note for the five trading days ended September 8, 2018, in addition to the continued accrual of the original issue discount.

On January 3, 2019, the Company announced that its zero-coupon subordinated notes may be converted into cash and common stock at the conversion rate of 13.4108 per \$1,000.0 principal amount at maturity of the notes, subject to the terms of the zero-coupon subordinated notes and the Indenture, dated as of October 24, 2006, between the Company, and The Bank of New York Mellon as trustee and the conversion agent. In order to exercise the option to convert all or a portion of the zero-coupon subordinated notes, holders are required to validly surrender their zero-coupon subordinated notes at any time during the calendar quarter beginning January 1, 2019, through the close of business on the last business day of the calendar quarter, which is 5:00 p.m., New York City time, on Friday, March 31, 2019. If notices of conversion are received, the Company plans to settle the cash portion of the conversion obligation with cash on hand and/or borrowings under its revolving credit facility.

Senior Notes

On August 22, 2017, the Company issued new Senior Notes representing \$1,200.0 in debt securities and consisting of a \$600.0 aggregate principal amount of 3.25% Senior Notes due 2024 and a \$600.0 aggregate principal amount of 3.60% Senior Notes due 2027. Interest on these notes is payable semi-annually on March 1 and September 1 of each year, commencing on March 1, 2018. Net proceeds from the offering of these notes were \$1,190.1 after deducting underwriting discounts and other expenses of the offering. Net proceeds were used to pay off the 2.20% Senior Notes due August 23, 2017, as well as a portion of the cash consideration and the fees and expenses in connection with the Chiltern acquisition.

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On September 30, 2016, the Company announced the successful completion of consent solicitations for the 5.00% convertible Senior Notes due 2017 and 2018, totaling \$130.0, assumed as part of the acquisition of Sequenom. On October 20, 2016, the Company retired \$129.9 of these outstanding notes, and paid an additional \$5.6 relating to the early retirement of the subsidiary indebtedness (recorded as interest expense in the Consolidated Statement of Operations).

On January 30, 2015, the Company issued the Covance acquisition notes, which represent \$2,900.0 in debt securities consisting of \$500.0 aggregate principal amount of 2.625% Senior Notes due 2020, \$500.0 aggregate principal amount of 3.20% Senior Notes due 2022, \$1,000.0 aggregate principal amount of 3.60% Senior Notes due 2025 and \$900.0 aggregate principal amount of 4.70% Senior Notes due 2045. Interest on these notes is payable semi-annually on February 1 and August 1 of each year, commencing on August 1, 2015. Net proceeds from the offering of the Covance acquisition notes were \$2,870.2 after deducting underwriting discounts and other estimated expenses of the offering. Net proceeds were used to pay a portion of the cash consideration and the fees and expenses in connection with the Covance acquisition.

On November 1, 2013, the Company issued \$700.0 in new Senior Notes pursuant to the Company's effective shelf registration on Form S-3. The Senior Notes consisted of \$400.0 aggregate principal amount of 2.50% Senior Notes due 2018 and \$300.0 aggregate principal amount of 4.00% Senior Notes due 2023. Interest on these notes is payable semi-annually on November 1 and May 1 of each year, commencing on May 1, 2014. The net proceeds were used to repay all of the outstanding borrowings under the Company's former revolving credit facility and for general corporate purposes.

During the third quarter of 2013, the Company entered into two fixed-to-variable interest rate swap agreements for the 4.625% Senior Notes due 2020 with an aggregate notional amount of \$600.0 and variable interest rates based on one-month LIBOR plus 2.298% to hedge against changes in the fair value of a portion of the Company's long-term debt. These derivative financial instruments are accounted for as fair value hedges of the Senior Notes due 2020 outstanding at that time. These interest rate swaps are included in other long-term assets or liabilities, as applicable, and added to the value of the Senior Notes, with an aggregate fair value of (\$3.1) at December 31, 2018.

The Senior Notes due 2022 bear interest at the rate of 3.75% per annum, payable semi-annually on February 23 and August 23 of each year, commencing February 23, 2013.

During the first quarter of 2018, the Company entered into six U.S. dollar (USD) to Swiss Franc cross-currency swap agreements with an aggregate notional value of \$600.0 and which were accounted for as a hedge against its net investment in a Swiss subsidiary. Of the notional value, \$300.0 was due to mature in 2022 and \$300.0 was due to mature in 2025. These cross currency swaps maturing in 2022 and 2025 were settled on December 10, 2018 in cash.

During the fourth quarter of 2018, the Company entered into six new USD to Swiss Franc cross-currency swap agreements with an aggregate notional value of \$600.0 and which are accounted for as a hedge against its net investment in a Swiss subsidiary. Of the notional value, \$300.0 matures in 2022 and \$300.0 matures in 2025. These cross currency swaps maturing in 2022 and 2025 are included in other long-term assets with an aggregate fair value of \$(1.0) and \$(1.8), respectively, as of December 31, 2018. Changes in the fair value of the cross-currency swaps are charged or credited through accumulated other comprehensive income in the Consolidated Balance Sheet until the hedged item is recognized in earnings.

The scheduled payments of long-term debt and future minimum lease payments for capital leases at the end of 2018 are summarized as follows:

	Notes and Other	Capital Leases	Total
2019	\$ 10.0	\$ 14.8	\$ 24.8
2020	1,100.0	13.8	1,113.8
2021	—	12.0	12.0
2022	1,527.1	10.8	1,537.9
2023	300.0	10.7	310.7
Thereafter	3,063.8	34.5	3,098.3
	<u>6,000.9</u>	<u>96.6</u>	<u>6,097.5</u>
Less amounts representing interest	—	(37.7)	(37.7)
Total long-term debt	6,000.9	58.9	6,059.8
Less current portion	(10.0)	(7.9)	(17.9)
Long-term debt, due beyond one year	<u>\$ 5,990.9</u>	<u>\$ 51.0</u>	<u>\$ 6,041.9</u>

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13. PREFERRED STOCK AND COMMON SHAREHOLDERS' EQUITY

The Company is authorized to issue up to 265.0 shares of common stock, par value \$0.10 per share. The Company's treasury shares are recorded at aggregate cost. Common shares issued and outstanding are summarized in the following table:

	2018	2017
Issued	122.4	125.1
In treasury	(23.5)	(23.2)
Outstanding	<u>98.9</u>	<u>101.9</u>

The Company is authorized to issue up to 30.0 shares of preferred stock, par value \$0.10 per share. There were no preferred shares outstanding as of December 31, 2018 and 2017.

The changes in common shares issued and held in treasury are summarized below:

Common Shares Issued

	2018	2017	2016
Common stock issued at January 1	125.1	125.6	123.9
Common stock issued under employee stock plans	1.6	1.7	1.6
Common stock issued upon conversion of zero-coupon subordinated notes	—	0.3	0.4
Retirement of common stock	(4.3)	(2.5)	(0.3)
Common stock issued at December 31	<u>122.4</u>	<u>125.1</u>	<u>125.6</u>

Common Shares Held in Treasury

	2018	2017	2016
Common shares held in treasury at January 1	23.2	22.9	22.6
Surrender of restricted stock and performance share awards	0.3	0.3	0.3
Common shares held in treasury at December 31	<u>23.5</u>	<u>23.2</u>	<u>22.9</u>

Share Repurchase Program

During 2018, the Company purchased 4.2 shares of its common stock at a total cost of \$700.0. At the end of 2018, the Company had outstanding authorization from its board of directors to purchase \$443.5 of Company common stock. On February 6, 2019, the board of directors replaced the Company's existing share repurchase plan with a new plan authorizing repurchase of up to \$1.25 billion of the Company's shares. The repurchase authorization has no expiration date.

Accumulated Other Comprehensive Earnings

The components of accumulated other comprehensive earnings are as follows:

	Foreign Currency Translation Adjustments	Net Benefit Plan Adjustments	Accumulated Other Comprehensive Earnings
Balance at December 31, 2016	(471.5)	(110.4)	(581.9)
Current year adjustments	265.1	2.4	267.5
Amounts reclassified from accumulated other comprehensive income (a)	—	18.5	18.5
Tax effect of adjustments	(34.3)	(3.5)	(37.8)
Balance at December 31, 2017	(240.7)	(93.0)	(333.7)
Current year adjustments	(176.6)	29.4	(147.2)
Amounts reclassified from accumulated other comprehensive income for settlement charge	—	(7.5)	(7.5)
Amounts reclassified from accumulated other comprehensive income (a)	—	7.4	7.4
Tax effect of adjustments	27.5	(9.6)	17.9
Balance at December 31, 2018	<u>\$ (389.8)</u>	<u>\$ (73.3)</u>	<u>\$ (463.1)</u>

(a) The amortization of prior service cost is included in the computation of net periodic benefit cost. Refer to Note 16 Pension and Postretirement Plans for additional information regarding the Company's net periodic benefit cost.

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14. INCOME TAXES

The sources of income before taxes, classified between domestic and foreign entities are as follows:

	2018	2017	2016
Pre-tax income			
Domestic	\$ 937.7	\$ 838.8	\$ 884.5
Foreign	330.6	238.7	189.1
Total pre-tax income	<u>\$ 1,268.3</u>	<u>\$ 1,077.5</u>	<u>\$ 1,073.6</u>

The provisions (benefits) for income taxes in the accompanying consolidated statements of operations consist of the following:

	Years Ended December 31,		
	2018	2017	2016
Current:			
Federal	\$ 225.8	\$ 300.8	\$ 235.1
State	61.2	32.9	38.6
Foreign	64.3	53.0	43.9
	<u>\$ 351.3</u>	<u>\$ 386.7</u>	<u>\$ 317.6</u>
Deferred:			
Federal	\$ (2.5)	\$ (547.8)	\$ 54.6
State	30.0	11.4	5.3
Foreign	5.6	(5.7)	(16.8)
	<u>33.1</u>	<u>(542.1)</u>	<u>43.1</u>
	<u>\$ 384.4</u>	<u>\$ (155.4)</u>	<u>\$ 360.7</u>

A net benefit of \$10.2, \$16.9 and \$11.9 in excess stock-based compensation was recorded directly to income tax expense in the years ended December 31, 2018, 2017 and 2016 respectively. The gross benefit was reduced by the Internal Revenue Code Section 162(m) disallowance for non-deductible stock compensation of \$5.9, \$2.0 and \$1.2 for the years ended December 31, 2018, 2017 and 2016, respectively.

The effective tax rates on earnings before income taxes are reconciled to statutory U.S. income tax rates as follows:

	Years Ended December 31,		
	2018	2017	2016
Statutory U.S. rate	21.0 %	35.0 %	35.0 %
State and local income taxes, net of U.S. Federal income tax effect	3.4	2.6	2.7
Foreign earnings taxed at lower rates than the statutory U.S. rate	(0.3)	(3.7)	(3.2)
Restructuring and acquisition items	1.9	0.6	—
Share-based compensation	(0.8)	(1.6)	(1.1)
Re-measurement of deferred taxes	2.4	(36.9)	—
Deferred taxes on unremitted foreign earnings	—	(16.6)	—
Repatriation tax	1.2	5.3	—
GILTI	1.0	—	—
Other	0.5	0.9	0.2
Effective rate	<u>30.3 %</u>	<u>(14.4)%</u>	<u>33.6 %</u>

In December 2017, the U.S. enacted the TCJA, which made widespread changes to the Internal Revenue Code. The TCJA, among other things, reduced the U.S. federal corporate tax rate from 35% to 21% beginning January 1, 2018, requires companies to pay a repatriation tax on earnings of certain foreign subsidiaries that were previously not subject to U.S. tax, and created new income taxes on certain foreign sourced earnings. Also on December 22, 2017, the U.S. Securities and Exchange Commission (SEC) issued Staff Accounting Bulletin No. 118 (SAB 118), which provided companies with additional guidance on how to account for the TCJA in its financial statements, allowing companies utilize a one year measurement period. At December 31, 2017, the Company had not completed the accounting for the tax effects of enactment of the TCJA; however, as described below, a reasonable estimate on the re-measurement of the Company's existing deferred tax balances, the deferred tax revaluation for unremitted foreign earnings, and the one-time repatriation tax was made. For these items, in accordance with SAB 118, a provisional net benefit was recognized, totaling \$519.0, which is included as a component of income tax expense from continuing operations. The Company continued to assess the impact of TCJA throughout the 2018 calendar year and finalized the SAB 118 provisional estimate in the fourth quarter of 2018. For 2018, the Company recorded a total tax expense of \$45.0, \$14.8 related to the repatriation tax and \$30.1 for the re-measurement of deferred taxes. Overall a net benefit of \$474.0 was recorded for TCJA tax provisions effective as of the end of 2018. As additional regulations or guidance in relation to the TCJA are issued, the Company will analyze and record the necessary impacts during the quarter in which this occurs.

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The TCJA includes provisions relating to global low-taxed intangible income (GILTI). The Company finalized its decision on accounting policy during the fourth quarter of 2018. The Company will account for GILTI as a periodic charge in the period it arises. For 2018, the Company recorded \$13.0 for GILTI, which is included as a component of income tax expense from continuing operations.

The effective rate for 2018 was also impacted by increased income taxes paid on divestitures where tax basis was lower than book basis.

The tax effects of temporary differences that give rise to significant portions of the deferred tax assets and deferred tax liabilities are as follows:

	December 31, 2018	December 31, 2017
Deferred tax assets:		
Accounts receivable	\$ 13.9	\$ 14.7
Employee compensation and benefits	104.4	113.6
Deferred earnings	—	3.6
Acquisition and restructuring reserves	16.8	16.8
Tax loss carryforwards	98.3	107.0
Other	34.5	26.0
	<u>267.9</u>	<u>281.7</u>
Less: valuation allowance	(46.2)	(42.8)
Deferred tax assets, net of valuation allowance	<u>\$ 221.7</u>	<u>\$ 238.9</u>
Deferred tax liabilities:		
Deferred earnings	\$ (2.9)	\$ —
Intangible assets	(891.8)	(913.2)
Property, plant and equipment	(182.8)	(156.9)
Zero-coupon subordinated notes	(4.0)	(10.1)
Other	(24.5)	(27.3)
Total gross deferred tax liabilities	<u>(1,106.0)</u>	<u>(1,107.5)</u>
Less: deferred tax liabilities included in long term liabilities held for sale	\$ —	\$ 64.1
Net deferred tax liabilities	<u>\$ (884.3)</u>	<u>\$ (804.5)</u>

The Company has U.S. federal tax loss carryforwards of approximately \$244.1, which expire periodically through 2035. The utilization of tax loss carryforwards is limited due to change of ownership rules; however, at this time, the Company expects to fully utilize substantially all U.S. federal tax loss carryforwards with the exception of approximately \$3.9 for which a full valuation allowance has been provided. The Company has U.S. state tax loss carryforwards of \$630.6, which also expire periodically through 2037, and on which a valuation allowance of \$477.5 has been provided. The Company has foreign tax loss carryforwards of \$34.7 of which \$26.5 has a full valuation allowance. Most of the foreign losses have an indefinite carryover. In addition to the foreign net operating losses, the Company has a foreign capital loss carryforward of \$6.9. The capital loss has an indefinite life and has a full valuation allowance.

The valuation allowance increased from \$42.8 in 2017 to \$46.2 in 2018 primarily due to additional state losses for which no benefit is anticipated.

Unrecognized income tax benefits were \$18.0 and \$19.5 at December 31, 2018, and 2017, respectively. It is anticipated that the amount of the unrecognized income tax benefits will change within the next 12 months; however, these changes are not expected to have a significant impact on the results of operations, cash flows or the financial position of the Company.

The Company recognizes interest and penalties related to unrecognized income tax benefits in income tax expense. Accrued interest and penalties related to uncertain tax positions totaled \$8.7 and \$7.9 as of December 31, 2018, and 2017, respectively. During the years ended December 31, 2018, 2017 and 2016, the Company recognized \$1.8, \$2.3 and \$1.2, respectively, in interest and penalties expense, which was offset by a benefit from reversing previous accruals for interest and penalties of \$0.5, \$4.3 and \$4.0, respectively. During 2018, the Company paid interest of \$0.5.

The following table shows a reconciliation of the unrecognized income tax benefits, excluding interest and penalties, from uncertain tax positions for the years ended December 31, 2018, 2017 and 2016:

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	2018	2017	2016
Balance as of January 1	\$ 19.5	\$ 18.4	\$ 24.2
Increase in reserve for tax positions taken in the current year	3.1	7.3	2.3
Decrease in reserve as a result of payments	(4.6)	—	—
Decrease in reserve as a result of lapses in the statute of limitations	—	(6.2)	(8.1)
Balance as of December 31	<u>\$ 18.0</u>	<u>\$ 19.5</u>	<u>\$ 18.4</u>

As of December 31, 2018, and 2017, \$18.0 and \$19.5, respectively, are the approximate amounts of unrecognized income tax benefits that, if recognized, would favorably affect the effective income tax rate in any future periods.

The Company has substantially concluded all U.S. federal income tax matters for years through 2014. Substantially all material state and local and foreign income tax matters have been concluded through 2012 and 2008, respectively.

The Internal Revenue Service concluded the examination of Covance Inc.'s 2013 federal consolidated income tax return in the third quarter of 2018. There were no material changes as a result of the audit. The Company is appealing a Canada Revenue Agency assessment related to the 2014 income tax return. The Company believes adequate reserves have been established for the assessment. The Company has various state and foreign income tax examinations ongoing throughout the year. The Company believes adequate provisions have been recorded related to all open tax years.

As a result of the TCJA, the Company was effectively taxed on all of its previously unremitted foreign earnings. The TCJA also enacts a territorial tax system that allows, for the most part, tax-free repatriation of foreign earnings. The Company still considers the earnings of its foreign subsidiaries to be permanently reinvested, but if repatriation were to occur the Company would be required to accrue U.S. taxes, if any, and applicable withholding taxes as appropriate. The Company has unremitted earnings and profits of \$490.1 and \$464.9 that are permanently reinvested in its foreign subsidiaries as of December 31, 2018, and 2017, respectively. A determination of the amount of the unrecognized deferred tax liability related to these undistributed earnings is not practicable due to the complexity and variety of assumptions necessary based on the manner in which the undistributed earnings would be repatriated.

15. STOCK COMPENSATION PLANS

Stock Incentive Plans

There are currently 10.3 shares authorized for issuance under the Laboratory Corporation of America Holdings 2016 Omnibus Incentive Plan (the Plan), and at December 31, 2018 there were 7.5 additional shares available for grant under the Plan. The Plan was approved by shareholders at the 2016 annual meeting.

Stock Options

The following table summarizes grants of non-qualified options made by the Company to officers, key employees, and non-employee directors under all plans. Stock options are generally granted at an exercise price equal to or greater than the fair market price per share on the date of grant. Also, for each grant, options vest ratably over a period of three years on the anniversaries of the grant date, subject to their earlier expiration or termination.

Changes in options outstanding under the plans for the period indicated were as follows:

	Number of Options	Weighted-Average Exercise Price per Option	Weighted-Average Remaining Contractual Term	Aggregate Intrinsic Value
Outstanding at December 31, 2017	1.2	\$ 86.55		
Granted	0.1	168.49		
Exercised	(0.5)	79.43		
Cancelled	—	112.61		
Outstanding at December 31, 2018	<u>0.8</u>	\$ 100.30	4.0	\$ 24.1
Vested and expected to vest at December 31, 2018	0.8	\$ 100.30	4.0	\$ 24.1
Exercisable at December 31, 2018	0.6	\$ 87.24	2.8	\$ 24.1

The aggregate intrinsic value in the table above represents the total pre-tax intrinsic value (the difference between the Company's closing stock price on the last trading day of 2018 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, 2018. The amount of intrinsic value will change based on the fair market value of the Company's stock.

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Cash received by the Company from option exercises, the actual tax benefit realized for the tax deductions and the aggregate intrinsic value of options exercised from option exercises under all share-based payment arrangements during the years ended December 31, 2018, 2017, and 2016 were as follows:

	2018	2017	2016
Cash received by the Company	\$ 37.5	\$ 43.9	\$ 52.6
Tax benefits realized	\$ 9.4	\$ 13.4	\$ 13.6
Aggregate intrinsic value	\$ 44.1	\$ 34.8	\$ 35.5

The following table summarizes information concerning currently outstanding and exercisable options.

Range of Exercise Prices	Options Outstanding			Options Exercisable	
	Number Outstanding	Weighted Average		Number Exercisable	Weighted Average Exercise Price
		Remaining Contractual Life	Average Exercise Price		
\$60.40 - 75.63	0.1	1.0	\$71.45	0.1	\$71.45
\$75.64 - 84.86	0.3	3.2	\$84.62	0.3	\$84.62
\$84.87 - 90.74	0.2	2.0	\$90.74	0.2	\$90.74
\$90.75 - 130.60	0.1	7.6	\$127.77	—	\$123.50
\$130.61 and over	0.1	9.1	\$168.49	—	\$168.49
	0.8	4.0	\$100.30	0.6	\$87.24

The following table shows the weighted average grant-date fair values of options issued during the respective year and the weighted average assumptions that the Company used to develop the fair value estimates:

	2018	2017
Fair value per option	\$ 44.37	\$ 32.75
Valuation assumptions		
Weighted average expected life (in years)	6.0	6.0
Risk free interest rate	2.7%	2.1%
Expected volatility	18.9%	19.7%
Expected dividend yield	N/A	N/A

The Black Scholes model incorporates assumptions to value stock-based awards. The risk-free interest rate for periods within the contractual life of the option is based on a zero-coupon U.S. government instrument over the contractual term of the equity instrument. Expected volatility of the Company's stock is based on historical volatility of the Company's stock. The Company uses historical data to calculate the expected life of the option. Groups of employees and non-employee directors that have similar exercise behavior with regard to option exercise timing and forfeiture rates are considered separately for valuation purposes. For 2018, 2017 and 2016, expense related to the Company's stock option plan totaled \$3.5, \$0.9 and \$0.0, respectively. The Company did not grant any options to employees during 2016.

Restricted Stock, Restricted Stock Units and Performance Shares

The Company grants restricted stock, restricted stock units and performance shares (non-vested shares) to officers and key employees and grants restricted stock and restricted stock units to non-employee directors. Restricted stock and units typically vest annually in equal one third increments beginning on the first anniversary of the grant. A performance share grant in 2016 represents a three-year award opportunity for the period 2016-2018, and if earned, vests fully (to the extent earned) in the first quarter of 2019. A performance share grant in 2017 represents a three-year award opportunity for the period of 2017-2019 and, if earned, vests fully (to the extent earned) in the first quarter of 2020. A performance share grant in 2018 represents a three-year award opportunity for the period of 2018-2020 and, if earned, vests fully (to the extent earned) in the first quarter of 2021. Performance share awards are subject to certain earnings per share, revenue and total shareholder return targets, the achievement of which may increase or decrease the number of shares which the grantee earns and therefore receives upon vesting. Unearned restricted stock and performance share compensation is amortized to expense over the applicable vesting periods. For 2018, 2017 and 2016, total restricted stock, restricted stock unit and performance share compensation expense was \$80.1, \$100.8 and \$104.1, respectively.

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The following table shows a summary of non-vested shares for the year ended December 31, 2018:

	Number of Shares	Weighted-Average Grant Date Fair Value
Non-vested at January 1, 2018	1.5	\$ 121.36
Granted	0.7	170.93
Vested	(0.8)	125.02
Canceled	(0.1)	145.50
Non-vested at December 31, 2018	1.3	\$ 140.58

As of December 31, 2018, there was \$90.9 of total unrecognized compensation cost related to non-vested stock options, restricted stock, restricted stock unit and performance share-based compensation arrangements granted under the Company's stock incentive plans. That cost is expected to be recognized over a weighted average period of 1.9 years.

Employee Stock Purchase Plan

Under the 2016 Employee Stock Purchase Plan, the Company is authorized to issue 1.8 shares of common stock. The plan permits substantially all employees to purchase a limited number of shares of Company stock at 85% of market value. The Company issues shares to participating employees semi-annually in January and July of each year. Approximately 0.2 shares were purchased by eligible employees in each of 2018, 2017 and 2016, respectively, under either the 2016 Employee Stock Purchase Plan or the prior plan, which began in 1997 and was amended in 1999, 2004, 2008 and 2012. For 2018, 2017 and 2016, expense related to the Company's employee stock purchase plan was \$8.0, \$8.0 and \$5.5, respectively.

The Company uses the Black-Scholes model to calculate the fair value of the employee's purchase right. The fair value of the employee's purchase right and the assumptions used in its calculation are as follows:

	2018	2017	2016
Fair value of the employee's purchase right	\$ 34.43	\$ 31.54	\$ 23.32
Valuation assumptions			
Risk free interest rate	2.3%	1.3%	0.5%
Expected volatility	0.2	0.2	0.2
Expected dividend yield	—	—	—

16. COMMITMENTS AND CONTINGENT LIABILITIES

The Company is involved from time to time in various claims and legal actions, including arbitrations, class actions, and other litigation (including those described in more detail below), arising in the ordinary course of business. Some of these actions involve claims that are substantial in amount. These matters include, but are not limited to, intellectual property disputes; commercial and contract disputes; professional liability; employee-related matters; and inquiries, including subpoenas and other civil investigative demands, from governmental agencies, Medicare or Medicaid payers and MCOs reviewing billing practices or requesting comment on allegations of billing irregularities that are brought to their attention through billing audits or third parties. The Company receives civil investigative demands or other inquiries from various governmental bodies in the ordinary course of its business. Such inquiries can relate to the Company or other parties, including physicians and other healthcare providers (e.g., physician assistants and nurse practitioners, generally referred to herein as physicians). The Company works cooperatively to respond to appropriate requests for information.

The Company also is named from time to time in suits brought under the *qui tam* provisions of the False Claims Act and comparable state laws. These suits typically allege that the Company has made false statements and/or certifications in connection with claims for payment from U.S. federal or state healthcare programs. The suits may remain under seal (hence, unknown to the Company) for some time while the government decides whether to intervene on behalf of the *qui tam* plaintiff. Such claims are an inevitable part of doing business in the healthcare field today.

The Company believes that it is in compliance in all material respects with all statutes, regulations and other requirements applicable to its commercial laboratory operations and drug development support services. The healthcare diagnostics and drug development industries are, however, subject to extensive regulation, and the courts have not interpreted many of the applicable statutes and regulations. Therefore, the applicable statutes and regulations could be interpreted or applied by a prosecutorial, regulatory or judicial authority in a manner that would adversely affect the Company. Potential sanctions for violation of these statutes and regulations include significant civil and criminal penalties, fines, the loss of various licenses, certificates and authorizations, additional liabilities from third-party claims, and/or exclusion from participation in government programs.

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Many of the current claims and legal actions against the Company are in preliminary stages, and many of these cases seek an indeterminate amount of damages. The Company records an aggregate legal reserve, which is determined using calculations based on historical loss rates and assessment of trends experienced in settlements and defense costs. In accordance with FASB Accounting Standards Codification Topic 450 "Contingencies," the Company establishes reserves for judicial, regulatory, and arbitration matters outside the aggregate legal reserve if and when those matters present loss contingencies that are both probable and estimable and would exceed the aggregate legal reserve. When loss contingencies are not both probable and estimable, the Company does not establish separate reserves.

The Company is unable to estimate a range of reasonably probable loss for the proceedings described in more detail below in which damages either have not been specified or, in the Company's judgment, are unsupported and/or exaggerated and (i) the proceedings are in early stages; (ii) there is uncertainty as to the outcome of pending appeals or motions; (iii) there are significant factual issues to be resolved; and/or (iv) there are novel legal issues to be presented. For these proceedings, however, the Company does not believe, based on currently available information, that the outcomes will have a material adverse effect on the Company's financial condition, though the outcomes could be material to the Company's operating results for any particular period, depending, in part, upon the operating results for such period.

As previously reported, the Company responded to an October 2007 subpoena from the U.S. Department of Health & Human Services Office of Inspector General's regional office in New York. On August 17, 2011, the U.S. District Court for the Southern District of New York unsealed a False Claims Act lawsuit, *United States of America ex rel. NPT Associates v. Laboratory Corporation of America Holdings*, which alleges that the Company offered UnitedHealthcare kickbacks in the form of discounts in return for Medicare business. The Plaintiff's Third Amended Complaint further alleges that the Company's billing practices violated the False Claims Acts of 14 states and the District of Columbia. The lawsuit seeks actual and treble damages and civil penalties for each alleged false claim, as well as recovery of costs, attorney's fees, and legal expenses. Neither the U.S. government nor any state government has intervened in the lawsuit. The Company's Motion to Dismiss was granted in October 2014 and Plaintiff was granted the right to replead. On January 11, 2016, Plaintiff filed a motion requesting leave to file an amended complaint under seal and to vacate the briefing schedule for the Company's Motion to Dismiss while the government reviews the amended complaint. The Court granted the motion and vacated the briefing dates. Plaintiff then filed the Amended Complaint under seal. The Company will vigorously defend the lawsuit.

In addition, the Company has received various other subpoenas since 2007 related to Medicaid billing. In October 2009, the Company received a subpoena from the State of Michigan Department of Attorney General seeking documents related to its billing to Michigan Medicaid. The Company cooperated with this request. In October 2013, the Company received a Civil Investigative Demand from the State of Texas Office of the Attorney General requesting documents related to its billing to Texas Medicaid. The Company cooperated with this request. On October 5, 2018, the Company received a second Civil Investigative Demand from the State of Texas Office of the Attorney General requesting documents related to its billing to Texas Medicaid. The Company is cooperating with this request.

On May 2, 2013, the Company was served with a False Claims Act lawsuit, *State of Georgia ex rel. Hunter Laboratories, LLC and Chris Riedel v. Quest Diagnostics Incorporated, et al.*, filed in the State Court of Fulton County, Georgia. The lawsuit, filed by a competitor laboratory, alleges that the Company overcharged Georgia's Medicaid program. The State of Georgia filed a Notice of Declination on August 13, 2012, before the Company was served with the complaint. The case was removed to the U.S. District Court for the Northern District of Georgia. The lawsuit seeks actual and treble damages and civil penalties for each alleged false claim, as well as recovery of costs, attorney's fees, and legal expenses. On March 14, 2014, the Company's Motion to Dismiss was granted. The Plaintiffs replead their complaint, and the Company filed a Motion to Dismiss the First Amended Complaint. In May 2015, the Court dismissed the Plaintiffs' anti-kickback claim and remanded the remaining state law claims to the State Court of Fulton County. In July 2015, the Company filed a Motion to Dismiss these remaining claims. The Plaintiffs filed an opposition to the Company's Motion to Dismiss in August 2015. Also, the State of Georgia filed a brief as amicus curiae. The parties have reached a settlement in principle.

On August 24, 2012, the Company was served with a putative class action lawsuit, *Sandusky Wellness Center, LLC, et al. v. MEDTOX Scientific, Inc., et al.*, filed in the U.S. District Court for the District of Minnesota. The lawsuit alleges that on or about February 21, 2012, the defendants violated the U.S. Telephone Consumer Protection Act (TCPA) by sending unsolicited facsimiles to Plaintiff and more than 39 other recipients without the recipients' prior express invitation or permission. The lawsuit seeks the greater of actual damages or the sum of \$0.0005 for each violation, subject to trebling under the TCPA, and injunctive relief. In September of 2014, Plaintiff's Motion for Class Certification was denied. In January of 2015, the Company's Motion for Summary Judgment on the remaining individual claim was granted. Plaintiff filed a notice of appeal. On May 3, 2016, the U.S. Court of Appeals for the Eighth Circuit issued its decision and order reversing the District Court's denial of class certification. The Eighth Circuit remanded the matter for further proceedings. On December 7, 2016, the District Court granted the Plaintiff's renewed Motion for Class Certification. The parties have reached a settlement in principle, which will require court approval.

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On August 31, 2015, the Company was served with a putative class action lawsuit, *Patty Davis v. Laboratory Corporation of America, et al.*, filed in the Circuit Court of the Thirteenth Judicial Circuit for Hillsborough County, Florida. The complaint alleges that the Company violated the Florida Consumer Collection Practices Act by billing patients who were collecting benefits under the Workers' Compensation Statutes. The lawsuit seeks injunctive relief and actual and statutory damages, as well as recovery of attorney's fees and legal expenses. In April 2017, the Circuit Court granted the Company's Motion for Judgment on the Pleadings. The Plaintiff has appealed the Circuit Court's ruling to the Florida Second District Court of Appeal. The Company will vigorously defend the lawsuit.

In December 2014, the Company received a Civil Investigative Demand issued pursuant to the U.S. False Claims Act from the U.S. Attorney's Office for South Carolina, which requested information regarding alleged remuneration and services provided by the Company to physicians who also received draw and processing/handling fees from competitor laboratories Health Diagnostic Laboratory, Inc. (HDL) and Singulex, Inc. (Singulex). The Company cooperated with the request. On April 4, 2018, the U.S. District Court for the District of South Carolina, Beaufort Division, unsealed a False Claims Act lawsuit, *United States of America ex rel. Scarlett Lutz, et al. v. Laboratory Corporation of America Holdings*, which alleges that the Company's financial relationships with referring physicians violate federal and state anti-kickback statutes. The Plaintiffs' Fourth Amended Complaint further alleges that the Company conspired with HDL and Singulex in violation of the Federal False Claims Act and the California and Illinois insurance fraud prevention acts by facilitating HDL's and Singulex's offers of illegal inducements to physicians and the referral of patients to HDL and Singulex for laboratory testing. The lawsuit seeks actual and treble damages and civil penalties for each alleged false claim, as well as recovery of costs, attorney's fees, and legal expenses. Neither the U.S. government nor any state government has intervened in the lawsuit. The Company filed a Motion to Dismiss seeking the dismissal of the claims asserted under the California and Illinois insurance fraud prevention statutes, the conspiracy claim, the reverse False Claims Act claim, and all claims based on the theory that the Company performed medically unnecessary testing. On January 16, 2019, the Court entered an order granting in part and denying in part the Motion to Dismiss. The Court dismissed the Plaintiffs' claims based on the theory that the Company performed medically unnecessary testing, the claims asserted under the California and Illinois insurance fraud prevention statutes, and the reverse False Claims Act claim. The Court denied the Motion to Dismiss as to the conspiracy claim. The Company will vigorously defend the lawsuit.

On August 3, 2016, the Company was served with a putative class action lawsuit, *Daniel L. Bloomquist v. Covance Inc., et al.*, filed in the Superior Court of California, County of San Diego. The Complaint alleges that Covance Inc. violated the California Labor Code and California Business & Professions Code by failing to provide overtime wages, failing to provide meal and rest periods, failing to pay for all hours worked, failing to pay for all wages owed upon termination, and failing to provide accurate itemized wage statements to Clinical Research Associates and Senior Clinical Research Associates employed by Covance in California. The lawsuit seeks monetary damages, civil penalties, injunctive relief, and recovery of attorney's fees and costs. On October 13, 2016, the case was removed to the U.S. District Court for the Southern District of California. On May 3, 2017, the U.S. District Court for the Southern District of California remanded the case back to the Superior Court. The Company will vigorously defend the lawsuit.

Prior to the Company's acquisition of Sequenom, between August 15, 2016, and August 24, 2016, six putative class-action lawsuits were filed on behalf of purported Sequenom stockholders (captioned *Malkoff v. Sequenom, Inc., et al.*, No. 16-cv-02054-JAH-BLM, *Gupta v. Sequenom, Inc., et al.*, No. 16-cv-02084-JAH-KSC, *Fruchter v. Sequenom, Inc., et al.*, No. 16-cv-02101-WQH-KSC, *Asiatrade Development Ltd. v. Sequenom, Inc., et al.*, No. 16-cv-02113-AJB-JMA, *Nunes v. Sequenom, Inc., et al.*, No. 16-cv-02128-AJB-MDD, and *Cusumano v. Sequenom, Inc., et al.*, No. 16-cv-02134-LAB-JMA) in the U.S. District Court for the Southern District of California challenging the acquisition transaction. The complaints asserted claims against Sequenom and members of its board of directors (the Individual Defendants). The *Nunes* action also named the Company and Savoy Acquisition Corp. (Savoy), a wholly owned subsidiary of the Company, as defendants. The complaints alleged that the defendants violated Sections 14(e), 14(d)(4) and 20 of the Securities Exchange Act of 1934 by failing to disclose certain allegedly material information. In addition, the complaints in the *Malkoff* action, *Asiatrade* action, and the *Cusumano* action alleged that the Individual Defendants breached their fiduciary duties to Sequenom shareholders. The actions sought, among other things, injunctive relief enjoining the merger. On August 30, 2016, the parties entered into a Memorandum of Understanding (MOU) in each of the above-referenced actions. On September 6, 2016, the Court entered an order consolidating for all pre-trial purposes the six individual actions described above under the caption *In re Sequenom, Inc. Shareholder Litig.*, Lead Case No. 16-cv-02054-JAH-BLM, and designating the complaint from the *Malkoff* action as the operative complaint for the consolidated action. On November 11, 2016, two competing motions were filed by two separate stockholders (James Reilly and Shikha Gupta) seeking appointment as lead plaintiff under the terms of the Private Securities Litigation Reform Act of 1995. On June 7, 2017, the Court entered an order declaring Mr. Reilly as the lead plaintiff and approving Mr. Reilly's selection of lead counsel. The parties agree that the MOU has been terminated. The Plaintiffs filed a Consolidated Amended Class Action Complaint on July 24, 2017, and the Defendants filed a Motion to Dismiss, which remains pending. The Company will vigorously defend the lawsuit.

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On February 7, 2017, Sequenom received a subpoena from the SEC relating to an investigation into the trading activity of Sequenom shares in connection with the Company's July 2016 announcement regarding the Sequenom merger. On March 7, 2017, the Company received a similar subpoena. The Company cooperated with these requests. In December 2018, the SEC informed the Company that it has closed its investigation of Sequenom.

On March 10, 2017, the Company was served with a putative class action lawsuit, *Victoria Bouffard, et al. v. Laboratory Corporation of America Holdings*, filed in the U.S. District Court for the Middle District of North Carolina. The complaint alleges that the Company's patient list prices unlawfully exceed the rates negotiated for the same services with private and public health insurers in violation of various state consumer protection laws. The lawsuit also alleges breach of implied contract or quasi-contract, unjust enrichment, and fraud. The lawsuit seeks statutory, exemplary, and punitive damages, injunctive relief, and recovery of attorney's fees and costs. In May 2017, the Company filed a Motion to Dismiss Plaintiffs' Complaint and Strike Class Allegations; the Motion to Dismiss was granted in March 2018 without prejudice. On October 10, 2017, a second putative class action lawsuit, *Sheryl Anderson, et al. v. Laboratory Corporation of America Holdings*, was filed in the U.S. District Court for the Middle District of North Carolina. The complaint contained similar allegations and sought similar relief to the *Bouffard* complaint, and added additional counts regarding state consumer protection laws. On August 10, 2018, the Plaintiffs filed an Amended Complaint, which consolidated the *Bouffard* and *Anderson* actions. On September 10, 2018, the Company filed a Motion to Dismiss Plaintiffs' Amended Complaint and Strike Class Allegations, which remains pending. The Company will vigorously defend the lawsuits.

On August 1, 2017, the Company was served with a putative class action lawsuit, *Maria T. Gonzalez, et al. v. Examination Management Services, Inc. and Laboratory Corporation of America Holdings*, filed in the U.S. District Court for the Southern District of California. The complaint alleges that the Company misclassified phlebotomists as independent contractors through an arrangement with the co-Defendant temporary staffing agency. The complaint further alleges that the Company violated the California Labor Code and California Business and Professions Code by failing to pay minimum wage, failing to pay for all hours worked, failing to pay for all wages owed upon termination, and failing to provide accurate itemized wage statements. The lawsuit seeks monetary damages, civil penalties, injunctive relief, and recovery of attorney's fees and costs. The parties have reached a tentative settlement, which will require court approval.

On September 7, 2017, the Company was served with a putative class action lawsuit, *John Sealock, et al. v. Covance Market Access Services, Inc.*, filed in the U.S. District Court for the Southern District of New York. The complaint alleges that Covance Market Access Services, Inc. violated the Fair Labor Standards Act and New York labor laws by failing to provide overtime wages, failing to pay for all hours worked, and failing to provide accurate wage statements. The lawsuit seeks monetary damages, civil penalties, injunctive relief, and recovery of attorney's fees and costs. In November 2017, the Company filed a Motion to Strike Class Allegations, which was denied. In December 2017, the Plaintiff filed a Motion for Conditional Certification of a Collective Action, which was granted in May 2018. In December 2018, Plaintiff filed, and the Court granted, a second motion to conditionally certify an expanded class to a nationwide class action. The Company will vigorously defend the lawsuit.

On November 6, 2017, Covance was served with two False Claims Act lawsuits, *Health Choice Alliance, LLC on behalf of the United States of America, et al. v. Eli Lilly and Company, Inc. et al.*, and *Health Choice Advocates, LLC, on behalf of the United States of America v. Gilead Sciences, Inc., et al.*, both filed in the U.S. District Court for the Eastern District of Texas. The complaints allege that under the Federal False Claims Act and various state analogues Covance and the co-defendants unlawfully provided in-kind remuneration to medical providers in the form of reimbursement support services in order to induce providers to prescribe certain drugs. Neither the U.S. government nor any state government intervened in the lawsuits. The lawsuits seek actual and treble damages and civil penalties for each alleged false claim, as well as recovery of costs. The Company's Motion to Dismiss was filed in both cases in February 2018. The *Gilead* case was dismissed on July 27, 2018. On August 10, 2018, the Court in the *Lilly* case entered an Order granting in part and denying in part without prejudice the Defendants' Motions to Dismiss. On September 12, 2018, Plaintiffs in the *Lilly* case filed a Second Amended Complaint, which included additional allegations related to the same conduct alleged in the previous complaint. On December 17, 2018, the United States of America filed a Motion to Dismiss the Second Amended Complaint in the *Lilly* case with prejudice. On January 9, 2019, the Plaintiff in the *Lilly* case filed a Notice of Voluntary Dismissal Without Prejudice as to all claims against Covance.

On April 2, 2018, the Company was served with a putative class action lawsuit, *Craig Cunningham, et al. v. Laboratory Corporation of America Holdings d/b/a LabCorp*, filed in the U.S. District Court for the Middle District of North Carolina. The lawsuit alleges that the Company violated the TCPA by contacting Plaintiff at least twice on his cell phone without his prior consent using a prerecorded or artificial voice. The lawsuit seeks actual damages for each violation, subject to trebling under the TCPA, and injunctive relief. In November 2018, the lawsuit was dismissed with prejudice pursuant to a settlement between the parties.

On July 16, 2018, the Company reported that it had detected suspicious activity on its information technology network and was taking steps to respond to and contain the activity. The activity was subsequently determined to be a new variant of ransomware affecting certain LCD information technology systems. As part of its response, the Company took certain systems offline

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which temporarily affected test processing and customer access to test results, and also affected certain other information technology systems involved in conducting Company-wide operations. The incident temporarily affected test processing and customer access to test results, and also affected certain other information technology systems involved in conducting Company-wide operations. Operations were returned to normal within a few days of the incident. As part of its in-depth investigation into this incident, the Company engaged outside security experts and worked with authorities, including law enforcement. The investigation determined that the ransomware did not and could not transfer patient or client data outside of Company systems and that there was no theft or misuse of patient or client data. To date, the Company has not been the subject of any legal proceedings involving this incident, but it is possible that the Company could be the subject of claims from persons alleging they suffered damages from the incident, or actions by governmental authorities. The Company cooperated with law enforcement and regulatory authorities with respect to the incident.

The Company has insurance coverage for costs resulting from cyber-attacks and has filed a claim for recovery of its losses resulting from this incident. However, disputes over the extent of insurance coverage for claims are not uncommon and the Company has not recorded any estimated proceeds resulting from this claim. Furthermore, while the Company has not been the subject of any legal proceedings involving this incident, it is possible that the Company could be the subject of claims from persons alleging they suffered damages from the incident, or actions by governmental authorities.

On September 10, 2018, the Company was served with a LCPAGA lawsuit, *Terri Wilson v. Laboratory Corporation of America Holdings*, which was filed in the U.S. District Court for the Northern District of California. Plaintiff alleges claims for failure to pay meal and rest break premiums, failure to provide compliant wage statements, failure to compensate employees for all hours worked, and failure to pay wages upon termination of employment. Plaintiff asserts these actions violate various Labor Code provisions and constitute an unfair competition practice under California law. The lawsuit seeks monetary damages, civil penalties, injunctive relief, and recovery of attorney's fees and costs. The Company will vigorously defend the lawsuit.

On September 21, 2018, the Company was served with a putative class action lawsuit, *Alma Haro v. Laboratory Corporation of America et al.*, which was filed in the Superior Court of California, County of Los Angeles. Plaintiff alleges that employees were not properly paid overtime compensation, minimum wages, meal and rest break premiums, did not receive compliant wage statements, and were not properly paid wages upon termination of employment. Plaintiff asserts these actions violate various Labor Code provisions and constitute an unfair competition practice under California law. The lawsuit seeks monetary damages, civil penalties, and recovery of attorney's fees and costs. The Company will vigorously defend the lawsuit.

On December 20, 2018, the Company was served with a putative class action lawsuit, *Feckley v. Covance Inc., et al.*, filed in the Superior Court of California, County of Orange. The complaint alleges that Covance Inc. violated the California Labor Code and California Business & Professions Code by failing to properly pay commissions to employees under a sales incentive compensation plan upon their termination of employment. The lawsuit seeks monetary damages, civil penalties, punitive damages, and recovery of attorney's fees and costs. On January 22, 2018, the case was removed to the U.S. District Court for the Central District of California. The Company will vigorously defend the lawsuit.

Under the Company's present insurance programs, coverage is obtained for catastrophic exposure as well as those risks required to be insured by law or contract. The Company is responsible for the uninsured portion of losses related primarily to general, professional and vehicle liability, certain medical costs and workers' compensation. The self-insured retentions are on a per-occurrence basis without any aggregate annual limit. Provisions for losses expected under these programs are recorded based upon the Company's estimates of the aggregated liability of claims incurred.

The Company leases various facilities and equipment under non-cancelable lease arrangements. Future minimum rental commitments for leases with non-cancelable terms of one year or more at December 31, 2018 are as follows:

	Operating
2019	\$ 196.1
2020	149.0
2021	109.7
2022	83.5
2023	64.2
Thereafter	160.9
Total minimum lease payments	763.4
Less:	
Amounts included in restructuring and acquisition related accruals	(21.9)
Non-cancelable sub-lease income	—
Total minimum operating lease payments	\$ 741.5

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Rental expense, which includes rent for real estate, equipment and automobiles under operating leases, amounted to \$358.7, \$313.8 and \$291.2 for the years ended December 31, 2018, 2017 and 2016, respectively.

17. PENSION AND POSTRETIREMENT PLANS

Pension Plans

The Company has a defined-benefit retirement plan (Company Plan) and a nonqualified supplemental retirement plan (PEP). Both plans have been closed to new participants since December 31, 2009. Employees participating in the Company Plan and the PEP no longer earn service-based credits, but continue to earn interest credits. In addition, effective January 1, 2010, all employees eligible for the defined-contribution retirement plan (401K Plan) receive a minimum 3% non-elective contribution (NEC) concurrent with each payroll period. Employees are not required to make a contribution to the 401K Plan to receive the NEC. The NEC is non-forfeitable and vests immediately. The 401K Plan also permits discretionary contributions by the Company of up to 1% and up to 3% of pay for eligible employees based on service.

The Company's 401K Plan covers substantially all pre-Covance acquisition employees. Prior to 2010, Company contributions to the plan were based on a percentage of employee contributions. From 2011, the Company made non-elective and discretionary contributions to the plan. In 2018, 2017, and 2016, non-elective and discretionary contributions were \$65.0, \$58.1 and \$56.0, respectively. As a result of the Covance acquisition, the Company also incurred expense of \$66.3, \$58.4, and \$51.1 for the Covance 401K Plan in 2018, 2017 and 2016, respectively. Under the Covance 401K Plan, which is available on a voluntary basis to substantially all U.S. Covance employees, the Company matches employee contributions up to a maximum Company contribution of 4.5%.

The Company Plan covers substantially all employees employed prior to December 31, 2009. The benefits to be paid under the Company Plan are based on years of credited service through December 31, 2009, interest credits and average compensation. The Company's policy is to fund the Company Plan with at least the minimum amount required by applicable regulations. The Company made contributions to the Company Plan of \$28.9, \$16.0 and \$10.8 in 2018, 2017 and 2016, respectively.

The PEP covers a portion of the Company's senior management group. Prior to 2010, the PEP provided for the payment of the difference, if any, between the amount of any maximum limitation on annual benefit payments under the Employee Retirement Income Security Act of 1974 and the annual benefit that would be payable under the Company Plan but for such limitation. Effective January 1, 2010, employees participating in the PEP no longer earn service-based credits. The PEP is an unfunded plan.

Projected pension expense for the Company Plan and the PEP is expected to increase to \$13.3 in 2019. This amount excludes any accelerated recognition of pension cost due to the total lump-sum payouts exceeding certain components of net periodic pension cost in a fiscal year. If such levels were to be met in 2019, the Company projects that it would result in additional pension expense of several million dollars. The actual amount would be determined in the fiscal quarter when the lump-sum payments cross the threshold and would be based upon the plan's funded status and actuarial assumptions in effect at that time.

The Company plans to make contributions of \$2.1 to the Company Plan and the PEP during 2019.

The effect on operations for both the Company Plan and the PEP are summarized as follows:

	Year ended December 31,		
	2018	2017	2016
Service cost for benefits earned	\$ 5.2	\$ 5.5	\$ 4.9
Interest cost on benefit obligation	13.0	14.4	15.5
Expected return on plan assets	(16.5)	(16.3)	(16.7)
Net amortization and deferral	11.7	11.0	11.2
Settlements	7.5	—	—
Defined-benefit plan costs	<u>\$ 20.9</u>	<u>\$ 14.6</u>	<u>\$ 14.9</u>

Amounts included in accumulated other comprehensive earnings consist of unamortized net loss of \$116.9. The accumulated other comprehensive earnings that are expected to be recognized as components of the defined-benefit plan costs during 2019 are \$10.5 related to amortization of the net loss. For the year ended December 31, 2018, the Company recorded a pension settlement charge of \$7.5 recorded in Other, net on the Consolidated Statement of Operations as a result of lump sum distributions exceeding threshold levels.

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A summary of the changes in the projected benefit obligations of the Company Plan and the PEP are summarized as follows:

	2018	2017
Balance at January 1	\$ 368.0	\$ 366.5
Service cost	5.2	5.5
Interest cost	13.0	14.4
Actuarial (gain) loss	(21.9)	12.2
Benefits and administrative expenses paid	(30.0)	(30.6)
Merger of Covance SERP	\$ 4.2	\$ —
Balance at December 31	<u>\$ 338.5</u>	<u>\$ 368.0</u>

The Accumulated Benefit Obligation was \$338.5 and \$368.0 at December 31, 2018 and 2017, respectively.

A summary of the changes in the fair value of plan assets follows:

	2018	2017
Fair value of plan assets at beginning of year	\$ 263.7	\$ 247.5
Actual return on plan assets	(14.3)	29.2
Employer contributions	31.4	17.6
Benefits and administrative expenses paid	(30.0)	(30.6)
Fair value of plan assets at end of year	<u>\$ 250.8</u>	<u>\$ 263.7</u>

The net funded status of the Company Plan and the PEP at December 31:

	2018	2017
Funded status	<u>\$ 87.6</u>	<u>\$ 104.3</u>
Recorded as:		
Accrued expenses and other	\$ 2.1	\$ 2.2
Other liabilities	85.5	102.1
	<u>\$ 87.6</u>	<u>\$ 104.3</u>

Weighted average assumptions used in the accounting for the Company Plan and the PEP are summarized as follows:

	2018	2017	2016
Discount rate	4.4%	3.7%	4.2%
Expected long term rate of return	6.5%	6.8%	6.8%

The Company also updated the mortality assumption to the RP-2014 Mortality Tables in 2016 and again in 2017 which decreased the Company's total projected obligation.

The Company maintains an investment policy for the management of the Company Plan's assets. The objective of this policy is to build a portfolio designed to achieve a balance between investment return and asset protection by investing in indexed funds that are comprised of equities of high quality companies and in high quality fixed income securities which are broadly balanced and represent all market sectors. The target allocations for plan assets are 50% equity securities, 43% fixed income securities and 7% in other assets. Equity securities primarily include investments in large-cap, mid-cap and small-cap companies located in the U.S. and to a lesser extent international equities in developed and emerging countries. Fixed income securities primarily include U.S. Treasury securities, mortgage-backed bonds and corporate bonds of companies from diversified industries. Other assets include investments in commodities. The weighted average expected long-term rate of return for the Company Plan's assets is as follows:

	Target Allocation	Weighted Average Expected Long-Term Rate of Return
Equity securities	50.0%	3.4%
Fixed income securities	43.0%	2.7%
Other assets	7.0%	0.4%

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The fair values of the Company Plan's assets at December 31, 2018, and 2017, by asset category are as follows:

Asset Category	Fair Value as of December 31, 2018	Fair Value Measurements as of December 31, 2018 Using Fair Value Hierarchy		
		Level 1	Level 2	Level 3
Cash	\$ 7.8	\$ 7.8	\$ —	\$ —
Equity securities:				
U.S. large cap - blend (a)	54.2	—	54.2	—
U.S. mid cap - blend (b)	20.4	—	20.4	—
U.S. small cap - blend (c)	6.5	—	6.5	—
International equity - blend (d)	36.5	—	36.5	—
Real estate (e)	11.8	—	11.8	—
Fixed income securities:				
U.S. fixed income (f)	103.5	—	103.5	—
U.S. inflation protection income (g)	6.4	—	6.4	—
Total fair value of the Company Plan's assets	\$ 247.1	\$ 7.8	\$ 239.3	\$ —

Asset Category	Fair Value as of December 31, 2017	Fair Value Measurements as of December 31, 2017 Using Fair Value Hierarchy		
		Level 1	Level 2	Level 3
Cash	\$ 7.4	\$ 7.4	\$ —	\$ —
Equity securities:				
U.S. large cap - blend (a)	59.9	—	59.9	—
U.S. mid cap - blend (b)	23.6	—	23.6	—
U.S. small cap - blend (c)	7.7	—	7.7	—
International equity - blend (d)	39.1	—	39.1	—
Commodities index (h)	12.8	—	12.8	—
Fixed income securities:				
U.S. fixed income (f)	107.0	—	107.0	—
U.S. inflation protection income (g)	6.2	—	6.2	—
Total fair value of the Company Plan's assets	\$ 263.7	\$ 7.4	\$ 256.3	\$ —

a) This category represents an equity index fund not actively managed that tracks the S&P 500 Index.

b) This category represents an equity index fund not actively managed that tracks the S&P mid-cap 400 Index.

c) This category represents an equity index fund not actively managed that tracks the Russell 2000 Index.

d) This category represents an equity index fund not actively managed that tracks the MSCI ACWI ex USA Index.

e) This category represents a real estate index fund not actively managed that tracks the Vanguard REIT Index.

f) This category primarily represents bond index funds not actively managed that track the Northern Trust U.S. Aggregate Index as well as an actively managed strategy which utilizes the Metropolitan West Total Return Bond Index as its primary prospectus benchmark.

g) This category primarily represents a bond index fund not actively managed that tracks the Northern Trust U.S. TIPS Index.

h) This category represents a commodities index fund not actively managed that tracks the Dow Jones - UBS Commodity Index.

The following estimated benefit payments under the Company Plan and PEP, which were used in the calculation of projected benefit obligations, are expected to be paid as follows:

2019	\$ 28.2
2020	27.2
2021	26.7
2022	26.4
2023	25.8
Years 2024 and thereafter	117.2

In addition to the PEP, as a result of the Covance acquisition, the Company also has a frozen non-qualified Supplemental Executive Retirement Plan (SERP). The SERP, which is not funded, is intended to provide retirement benefits for certain employees who were executive officers of Covance prior to the acquisition. Benefit amounts are based upon years of service and compensation

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of the participating employees. The pension benefit obligation as of the Covance acquisition date was \$32.8. As of December 31, 2018, the SERP was combined with the PEP.

As a result of the Covance acquisition, the Company sponsors two defined-benefit pension plans for the benefit of its employees at two U.K. subsidiaries (U.K. Plans) and one defined-benefit pension plan for the benefit of its employees at a German subsidiary (German Plan), all of which are legacy plans of previously acquired companies. Benefit amounts for all three plans are based upon years of service and compensation. The German Plan is unfunded while the U.K. Plans are funded. The Company's funding policy has been to contribute annually amounts at least equal to the local statutory funding requirements.

	U.K. Plans	
	Year Ended December 31, 2018	Year Ended December 31, 2017
Service cost	\$ 4.8	\$ 5.1
Interest cost	7.4	7.6
Expected return on plan assets	(12.6)	(11.5)
Net amortization and deferral	—	0.7
Expected participant contributions	(1.3)	(1.3)
Defined-benefit plan costs	<u>\$ (1.7)</u>	<u>\$ 0.6</u>

Assumptions used to determine defined-benefit plan cost:

Discount rate	2.5%	2.7%
Expected return on assets	4.5%	4.7%
Salary increases	3.6%	3.8%

	German Plan	
	Year Ended December 31, 2018	Year Ended December 31, 2017
Service cost	\$ 1.2	\$ 1.2
Interest cost	0.6	0.5
Defined-benefit plan costs	<u>\$ 1.8</u>	<u>\$ 1.7</u>

Assumptions used to determine defined-benefit plan cost:

Discount rate	1.7%	1.7%
Expected return on assets	N/A	N/A
Salary increases	2.0%	2.0%

The weighted average expected long-term rate of return on assets of the U.K. Plans is based on the target asset allocation and the average rate of growth expected for the asset classes invested. The rate of expected growth is derived from a combination of historic returns, current market indicators, the expected risk premium for each asset class over the risk-free rate, and the opinion of professional advisors.

The change in the projected benefit obligation and plan assets, the funded status of the plan and a reconciliation of such funded status to the amounts reported in the consolidated balance sheet as of December 31, 2018, and December 31, 2017, is as follows:

Change in Projected Benefit Obligation:	U.K. Plans	
	2018	2017
Balance at beginning of year	\$ 303.4	\$ 278.1
Service cost	4.8	5.1
Interest cost	7.4	7.6
Actuarial gain	(34.9)	(7.7)
Benefits paid	(6.3)	(6.1)
Plan amendments	1.4	—
Foreign currency exchange rate changes	(15.7)	26.4
Balance at end of year	<u>\$ 260.1</u>	<u>\$ 303.4</u>

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Change in Projected Benefit Obligation:

	German Plan	
	2018	2017
Balance at beginning of year	\$ 35.7	\$ 29.0
Service cost	1.2	1.2
Interest cost	0.6	0.5
Actuarial (gain) loss	(1.7)	1.0
Benefits paid	(0.2)	(0.2)
Foreign currency exchange rate changes	(1.6)	4.2
Balance at end of year	<u>\$ 34.0</u>	<u>\$ 35.7</u>

Change in Fair Value of Assets:

	U.K. Plans	
	2018	2017
Balance at beginning of year	\$ 281.9	\$ 233.2
Company contributions	6.5	6.3
Participant contributions	1.3	1.3
Actual return on assets	(13.6)	23.6
Benefits paid	(6.3)	(6.1)
Foreign currency exchange rate changes	(15.2)	23.6
Fair value of plan assets at end of year	<u>\$ 254.6</u>	<u>\$ 281.9</u>

	U.K. Plans	
	2018	2017
Funded status	\$ 5.6	\$ 21.5
Recorded as:		
Other liabilities	5.6	21.5
	<u>\$ 5.6</u>	<u>\$ 21.5</u>

	German Plan	
	2018	2017
Funded status	\$ 34.0	\$ 35.7
Recorded as:		
Accrued expenses and other	\$ 0.3	\$ 0.3
Other liabilities	33.7	35.4
	<u>\$ 34.0</u>	<u>\$ 35.7</u>

The Company contributed \$6.5 in 2018 to the U.K. Plans and expects to contribute \$6.1 in 2019. No contributions were made to the German plan during 2018, nor are any contributions expected to be made in 2019, as the plan is unfunded.

The accumulated benefit obligation for the U.K. Plans and the German Plan was \$223.8 and \$30.1 at December 31, 2018, respectively. The accumulated benefit obligation for the U.K. Plans and the German Plan was \$261.2 and \$31.5 at December 31, 2017, respectively.

The amounts recognized in accumulated other comprehensive income for the year ended December 31, 2018, and December 31, 2017, is as follows:

	U.K. Plans	
	2018	2017
Net actuarial loss	\$ 10.1	\$ 17.2
Less: Tax benefit (deferred tax asset)	(1.7)	(2.9)
Accumulated other comprehensive income impact	<u>\$ 8.4</u>	<u>\$ 14.3</u>

Assumptions used to determine benefit obligations:

Discount rate	2.9%	2.5%
Salary increases	3.6%	3.6%

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	German Plan	
	2018	2017
Net actuarial loss/(gain)	\$ (1.0)	\$ 0.7
Less: Tax expense (deferred tax liability)	0.3	(0.2)
Accumulated other comprehensive income impact	\$ (0.7)	\$ 0.5
Assumptions used to determine benefit obligations:		
Discount rate	1.9%	1.7%
Salary increases	2.0%	2.0%

There is no net actuarial loss for the U.K. Plans and German Plan, respectively required to be amortized from accumulated other comprehensive income into net periodic pension cost in 2019.

The investment policies for the U.K. Plans are set by the plan trustees, based upon the guidance of professional advisors and after consultation with the Company, taking into consideration the plans' liabilities and future funding levels. The trustees have set the long-term investment policy largely in accordance with the asset allocation of a broadly diversified investment portfolio. Assets are generally invested within the target ranges as follows:

Equity securities	60.0%	to	70.0%
Debt securities	10.0%	to	15.0%
Annuities	10.0%	to	20.0%
Real estate	—%	to	10.0%
Other	—%	to	5.0%

The weighted average asset allocation of the U.K. Plans as of December 31, 2018, by asset category is as follows:

	December 31, 2018
Equity securities	65.0%
Debt securities	19.0%
Annuities	11.0%
Real estate	5.0%

Investments are made in pooled investment funds. Pooled investment fund managers are regulated by the Financial Conduct Authority in the U.K. and operate under terms which contain restrictions on the way in which the portfolios are managed and require the managers to ensure that suitable internal operating procedures are in place. The trustees have set performance objectives for each fund manager and routinely monitor and assess the managers' performance against such objectives. Annuities represent annuity buy-in insurance policies purchased by the plan trustees from large, financially sound insurers. The cash flows from the annuities are intended to match the plan's obligations to specific groups of participants, typically those participants currently receiving benefits.

The fair value of the Company's U.K. Plans' assets as of December 31, 2018, and December 31, 2017, by asset category, are as follows:

Asset Category	December 31, 2018	Fair Value Measurements as of December 31, 2018 Using Fair Value Hierarchy		
		Level 1	Level 2	Level 3
		December 31, 2017	Level 1	Level 2
Cash	\$ 0.7	\$ 0.7	\$ —	\$ —
Mutual funds (a)	226.6	—	226.6	—
Annuities (b)	27.3	—	—	27.3
Total fair value of the Company Plan's assets	\$ 254.6	\$ 0.7	\$ 226.6	\$ 27.3
Asset Category	December 31, 2017	Fair Value Measurements as of December 31, 2017 Using Fair Value Hierarchy		
		Level 1	Level 2	Level 3
		December 31, 2017	Level 1	Level 2
Cash	\$ 0.8	\$ 0.8	\$ —	\$ —
Mutual funds (a)	249.6	—	249.6	—
Annuities (b)	31.5	—	—	31.5
Total fair value of the Company Plan's assets	\$ 281.9	\$ 0.8	\$ 249.6	\$ 31.5

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- a) Mutual funds represent pooled investment vehicles offered by investment managers, which are generally comprised of investments in equities, bonds, property and cash. The plans' trustees hold units in these funds, the value of which is determined by the number of units held multiplied by the unit price calculated by the investment managers. That unit price is derived based on the market value of the securities that comprise the fund, which are determined by quoted prices in active markets. No element of the valuation is based on inputs made by the plans' trustees.
- b) Annuities represent annuity buy-in insurance policies, whereby the insurer pays the pension payments for the lifetime of the members covered. The annuities are assets of the plan and payments from the insurer are made to the plans' trustees, who then use those proceeds to pay the pensioners. The cash flows from the annuities are intended to effectively match the payments to the pensioners covered by the policy. As such, these assets are valued actuarially based upon the value of the liabilities with which they are associated. As the valuation of these assets is judgmental, and there are no observable inputs associated with the valuation, these assets are classified as Level 3 in the fair value hierarchy.

Fair Value Measurement of Level 3 Pension Assets

		Annuities
Balance at January 1, 2017	\$	29.8
Actual return on plan assets		1.7
Balance at December 31, 2017		31.5
Actual return on plan assets		(4.2)
Balance at December 31, 2018	\$	27.3

Expected future benefit payments are as follows:

	U.K. Plans	German Plan
2019	\$ 4.6	\$ 0.3
2020	4.9	0.5
2021	5.2	0.5
2022	6.4	0.6
2023	6.7	0.7
Years 2024 and thereafter	40.6	3.6

Post-employment Retiree Health and Welfare Plan

As a result of the Covance acquisition, the Company sponsors a post-employment retiree health and welfare plan for the benefit of eligible employees at certain U.S. subsidiaries who retire after satisfying service and age requirements. This plan is funded on a pay-as-you-go basis and the cost of providing these benefits is shared with the retirees.

Post-retirement Medical Plan

The Company assumed obligations under a subsidiary's post-retirement medical plan. Coverage under this plan is restricted to a limited number of existing employees of the subsidiary. This plan is unfunded and the Company's policy is to fund benefits as claims are incurred. The effect on operations of the post-retirement medical plan is shown in the following table:

	Year ended December 31,		
	2018	2017	2016
Service cost for benefits earned	\$ —	\$ —	\$ —
Interest cost on benefit obligation	0.3	0.3	0.3
Net amortization and deferral	(1.3)	(6.7)	(15.9)
Post-retirement medical plan costs	\$ (1.0)	\$ (6.4)	\$ (15.6)

Amounts included in accumulated other comprehensive earnings consist of unamortized net loss of \$2.4. The accumulated other comprehensive earnings that are expected to be recognized as components of the post-retirement medical plan costs during 2019 are \$0.4 related to amortization of the net gain resulting from the shift of Medicare-eligible participants to private exchanges.

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A summary of the changes in the accumulated post-retirement benefit obligation follows:

	2018	2017
Balance at January 1	\$ 8.6	\$ 6.8
Interest cost on benefit obligation	0.3	0.3
Actuarial loss	(1.2)	2.5
Benefits paid	(0.8)	(1.0)
Balance at December 31	<u>\$ 6.9</u>	<u>\$ 8.6</u>
Recorded as:		
Accrued expenses and other	\$ 0.9	\$ 1.2
Other liabilities	6.0	7.4
	<u>\$ 6.9</u>	<u>\$ 8.6</u>

The weighted-average discount rates used in the calculation of the accumulated post-retirement benefit obligation were 4.2% and 3.4% as of December 31, 2018, and 2017, respectively. The healthcare cost trend rate was removed due to the expectation of future funding to be at the same level as the previous year's funding.

The following assumed benefit payments under the Company's post-retirement benefit plan, which reflect expected future service, as appropriate, and which were used in the calculation of projected benefit obligations, are expected to be paid as follows:

2019	\$ 0.9
2020	0.9
2021	0.9
2022	0.8
2023	0.7
Years 2024 and thereafter	2.4

Deferred Compensation Plan

The Company has a Deferred Compensation Plan (DCP) under which certain of its executives may elect to defer up to 100.0% of their annual cash incentive pay and/or up to 50.0% of their annual base salary and/or eligible commissions subject to annual limits established by the U.S. government. The DCP provides executives a tax efficient strategy for retirement savings and capital accumulation without significant cost to the Company. The Company makes no contributions to the DCP. Amounts deferred by a participant are credited to a bookkeeping account maintained on behalf of each participant, which is used for measurement and determination of amounts to be paid to a participant, or his or her designated beneficiary, pursuant to the terms of the DCP. The amounts accrued under this plan were \$64.2 and \$64.5 at December 31, 2018, and 2017, respectively. Deferred amounts are the Company's general unsecured obligations and are subject to claims by the Company's creditors. The Company's general assets may be used to fund obligations and pay DCP benefits.

18. FAIR VALUE MEASUREMENTS

The Company's population of financial assets and liabilities subject to fair value measurements as of December 31, 2018, and 2017 were as follows:

	Balance Sheet Classification	Fair Value as of December 31, 2018	Fair Value Measurements as of December 31, 2018		
			Using Fair Value Hierarchy		
			Level 1	Level 2	Level 3
Noncontrolling interest put	Noncontrolling interest	\$ 15.0	\$ —	\$ 15.0	\$ —
Interest rate swap	Other liabilities	3.1	—	3.1	—
Cross currency swaps liability	Other liabilities	2.8	—	2.8	—
Cash surrender value of life insurance policies	Other assets, net	63.5	—	63.5	—
Deferred compensation liability	Other liabilities	64.2	—	64.2	—
Contingent consideration	Other liabilities	18.6	—	—	18.6

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	Balance Sheet Classification	Fair Value as of December 31, 2017	Fair Value Measurements as of December 31, 2017		
			Using Fair Value Hierarchy		
			Level 1	Level 2	Level 3
Noncontrolling interest put	Noncontrolling interest	\$ 16.3	\$ —	\$ 16.3	\$ —
Interest rate swap	Other assets, net	4.1	—	4.1	—
Cash surrender value of life insurance policies	Other assets, net	64.0	—	64.0	—
Deferred compensation liability	Other liabilities	64.5	—	64.5	—
Contingent consideration	Other liabilities	16.5	—	—	16.5
Fair Value Measurement of Level 3 Assets			Contingent Consideration		
Balance at January 1, 2017			\$		16.8
Settlement					(0.3)
Balance at December 31, 2017					16.5
Addition					2.1
Balance at December 31, 2018			\$		18.6

The noncontrolling interest put is valued at its contractually determined value, which approximates fair value. During the year ended December 31, 2018, the carrying value of the noncontrolling interest put decreased by \$1.3 for foreign currency translation.

The Company offers certain employees the opportunity to participate in a DCP. A participant's deferrals are allocated by the participant to one or more of 16 measurement funds, which are indexed to externally managed funds. From time to time, to offset the cost of the growth in the participant's investment accounts, the Company purchases life insurance policies, with the Company named as beneficiary of the policies. Changes in the cash surrender value of the life insurance policies are based upon earnings and changes in the value of the underlying investments, which are typically invested in a similar manner to the participants' allocations. Changes in the fair value of the DCP 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 DCP obligations are classified within Level 2 because their inputs are derived principally from observable market data by correlation to the hypothetical investments.

Contingent accrued earn-out business acquisition consideration liabilities for which fair values are measured as Level 3 instruments. These contingent consideration liabilities were recorded at fair value on the acquisition date and are remeasured quarterly based on the then assessed fair value and adjusted if necessary. The increases or decreases in the fair value of contingent consideration payable can result from changes in anticipated revenue levels and changes in assumed discount periods and rates. As the fair value measure is based on significant inputs that are not observable in the market, they are categorized as Level 3.

The carrying amounts of cash and cash equivalents, accounts receivable, income taxes receivable, and accounts payable are considered to be representative of their respective fair values due to their short-term nature. The fair market value of the zero-coupon subordinated notes, based on market pricing, was approximately \$16.9 and \$18.8 as of December 31, 2018, and 2017, respectively. The fair market value of the Senior Notes, based on market pricing, was approximately \$5,318.0 and \$6,078.9 as of December 31, 2018, and 2017, respectively. The Company's note and debt instruments are considered Level 2 instruments, as the fair market values of these instruments are determined using other observable inputs.

19. DERIVATIVE INSTRUMENTS AND HEDGING ACTIVITIES

The Company addresses its exposure to market risks, principally the market risk associated with changes in interest rates and currency exchange rates, through a controlled program of risk management that includes, from time to time, the use of derivative financial instruments. Although the Company's zero-coupon subordinated notes contain features that are considered to be embedded derivative instruments (see Embedded Derivative section below), the Company does not hold or issue derivative financial instruments for trading purposes. The Company does not believe that its exposure to market risk is material to the Company's financial position or results of operations.

Interest Rate Swap

During the third quarter of 2013, the Company entered into two fixed-to-variable interest rate swap agreements for the 4.625% Senior Notes due 2020 with an aggregate notional amount of \$600.0 and variable interest rates based on one-month LIBOR plus 2.298% to hedge against changes in the fair value of a portion of the Company's long-term debt. These derivative financial instruments are accounted for as fair value hedges of the Senior Notes due 2020. These interest rate swaps are included in other long-term assets or liabilities, as applicable, and added to the value of the Senior Notes. As the specific terms and notional amounts of the derivative financial instruments match those of the fixed-rate debt being hedged, the derivative instruments are assumed to be perfectly effective hedges and accordingly, there is no impact to the Company's consolidated statements of operations. Cash flows from the interest rate swaps are including in operating activities.

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	Carrying amount of hedged liabilities as of December 31,		Cumulative Amount of Fair Value Hedging Adjustment Included in the Carrying Amount of the Hedged Liabilities as of December 31,	
	2018	2017	2018	2017
<i>Balance Sheet Line Item in which Hedged Items are Included</i>				
Long-term debt, less current portion	\$ 597.0	\$ 604.1	\$ (3.1)	\$ 4.1

Embedded Derivatives Related to the Zero-Coupon Subordinated Notes

The Company's zero-coupon subordinated notes contain the following two features that are considered to be embedded derivative instruments under authoritative guidance in connection with accounting for derivative instruments and hedging activities:

- The Company will pay contingent cash interest on the zero-coupon subordinated notes after September 11, 2006, if the average market price of the notes equals 120% or more of the sum of the issue price, accrued original issue discount and contingent additional principal, if any, for a specified measurement period.
- Holder may surrender zero-coupon subordinated notes for conversion during any period in which the rating assigned to the zero-coupon subordinated notes by S&P's Ratings Services is BB- or lower.

The Company believes these embedded derivatives had no fair value at December 31, 2018, and 2017. These embedded derivatives also had no impact on the consolidated statements of operations for the years ended December 31, 2018, 2017 and 2016.

Foreign Currency Forward Contracts

The Company periodically enters into foreign currency forward contracts, which are recognized as assets or liabilities at their fair value. These contracts do not qualify for hedge accounting and the changes in fair value are recorded directly to earnings. The contracts are short-term in nature and the fair value of these contracts is based on market prices for comparable contracts. The fair value of these contracts is not significant as of December 31, 2018.

Cross Currency Swaps

During the first quarter of 2018, the Company entered into six USD to Swiss Franc cross-currency swap agreements with an aggregate notional value of \$600.0 and which were accounted for as a hedge against its net investment in a Swiss subsidiary. Of the notional value, \$300.0 were due to mature in 2022 and \$300.0 were due to mature in 2025. These cross currency swaps maturing in 2022 and 2025 were settled on December 10, 2018 in cash.

During the fourth quarter of 2018, the Company entered into six new USD to Swiss Franc cross-currency swap agreements with an aggregate notional value of \$600.0 and which are accounted for as a hedge against the impact of foreign exchange movements on its net investment in a Swiss Franc functional currency subsidiary. Of the notional value, \$300.0 matures in 2022 and \$300.0 matures in 2025. These cross currency swaps maturing in 2022 and 2025 are included in other long-term assets as of December 31, 2018. Changes in the fair value of the cross-currency swaps are charged or credited through accumulated other comprehensive income in the Consolidated Balance Sheet until the hedged item is recognized in earnings. The cumulative amount of the fair value hedging adjustment included in the current value of the cross currency swaps is \$(2.8) for the year ended December 31, 2018, and was recognized as currency translation within the Consolidated Statement of Comprehensive Earnings. There were no amounts reclassified from the Consolidated Statement of Comprehensive Earnings to the Consolidated Statement of Operations during the year ended December 31, 2018.

The table below presents the fair value of derivatives on a gross basis and the balance sheet classification of those instruments:

Balance Sheet Caption	December 31, 2018			December 31, 2017			
	Fair Value of Derivative			Fair Value of Derivative			
	Asset	Liability	U.S. Dollar Notional	Asset	Liability	U.S. Dollar Notional	
<i>Derivatives Designated as Hedging Instruments</i>							
Interest rate swap	Other assets, net	—	—	—	4.1	—	600.0
Interest rate swap	Other liabilities	—	(3.1)	600.0	—	—	—
Cross currency swaps asset	Other liabilities	—	(2.8)	600.0	—	—	—

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The table below provides information regarding the location and amount of pretax (gains) losses of derivatives designated in fair value hedging relationships:

	Amount of pre-tax gain/(loss) included in other comprehensive income			Amounts reclassified to the Statement of Operations		
	Year Ended December 31,			Year Ended December 31,		
	2018	2017	2016	2018	2017	2016
Interest rate swap contracts	\$ (7.2)	\$ (10.5)	\$ (7.0)	\$ —	\$ —	\$ —
Cross currency swaps	\$ 21.6	\$ —	\$ —	\$ —	\$ —	\$ —

No gains or losses from derivative instruments classified as hedging instruments have been recognized into income for the years ended December 31, 2018, 2017 or 2016.

20. SUPPLEMENTAL CASH FLOW INFORMATION

	Years Ended December 31,		
	2018	2017	2016
Supplemental schedule of cash flow information:			
Cash paid during period for:			
Interest	\$ 296.2	\$ 239.1	\$ 210.7
Income taxes, net of refunds	349.7	348.0	345.7
Disclosure of non-cash financing and investing activities:			
Conversion of zero-coupon convertible debt	0.3	35.0	39.1
Assets acquired under capital leases	0.6	7.3	16
Accrued property, plant and equipment	22.1	1.6	4.4

21. BUSINESS SEGMENT INFORMATION

The following table is a summary of segment information for the years ended December 31, 2018, 2017, and 2016. The “management approach” has been used to present the following segment information. This approach is based upon the way the management of the Company organizes segments within an enterprise for making operating decisions and assessing performance. Financial information is reported on the basis that it is used internally by the chief operating decision maker (CODM) for evaluating segment performance and deciding how to allocate resources to segments. The Company’s chief executive officer has been identified as the CODM.

Segment asset information is not presented because it is not used by the CODM at the segment level. Operating earnings (loss) of each segment represents revenues less directly identifiable expenses to arrive at operating income for the segment. General management and administrative corporate expenses are included in general corporate expenses below.

	2018	2017	2016
Revenues:			
LCD	\$ 7,030.8	\$ 6,858.2	\$ 6,307.6
CDD	4,313.1	3,451.6	3,245.8
Intercompany eliminations	(10.5)	(1.8)	(0.5)
Total revenues	<u>\$ 11,333.4</u>	<u>\$ 10,308.0</u>	<u>\$ 9,552.9</u>
Operating Earnings (Loss):			
LCD	\$ 1,166.7	\$ 1,300.9	\$ 1,182.0
CDD	303.6	144.9	236.5
General corporate expenses	(144.6)	(140.6)	(147.9)
Total operating income	<u>1,325.7</u>	<u>1,305.2</u>	<u>1,270.6</u>
Non-operating expenses, net	(57.4)	(227.7)	(197.0)
Earnings before income taxes	<u>1,268.3</u>	<u>1,077.5</u>	<u>1,073.6</u>
Provision for income taxes	384.4	(155.4)	360.7
Net earnings	<u>883.9</u>	<u>1,232.9</u>	<u>712.9</u>
Less: Net income attributable to noncontrolling interests	(0.2)	(5.8)	(1.1)
Net income attributable to Laboratory Corporation of America Holdings	<u><u>\$ 883.7</u></u>	<u><u>\$ 1,227.1</u></u>	<u><u>\$ 711.8</u></u>

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	2018	2017	2016
Depreciation and Amortization			
LCD	\$ 293.3	\$ 304.7	\$ 270.9
CDD	247.3	217.4	219.5
General corporate	2.6	1.2	0.1
Total depreciation and amortization	<u>\$ 543.2</u>	<u>\$ 523.3</u>	<u>\$ 490.5</u>

	LCD	CDD	Intercompany Eliminations	Total
Geographic distribution of revenues				
US	\$ 6,664.3	\$ 2,189.7	\$ (10.5)	\$ 8,843.5
Canada	342.2	—	—	342.2
United Kingdom	21.8	417.1	—	438.9
Switzerland	—	527.4	—	527.4
Other	2.5	1,178.9	—	1,181.4
Total revenues	<u>\$ 7,030.8</u>	<u>\$ 4,313.1</u>	<u>\$ (10.5)</u>	<u>\$ 11,333.4</u>

	LCD	CDD	Total
Geographic distribution of property, plant and equipment, net			
U.S.	\$ 856.6	\$ 587.1	\$ 1,443.7
Canada	54.7	—	54.7
U.K.	—	117.0	117.0
Switzerland	—	88.5	88.5
Other	3.3	77.5	80.8
Total property, plant and equipment, net	<u>\$ 914.6</u>	<u>\$ 870.1</u>	<u>\$ 1,784.7</u>

22. QUARTERLY DATA (UNAUDITED)

The following is a summary of unaudited quarterly data:

	Year Ended December 31, 2018				
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Full Year
Revenues	\$ 2,848.3	\$ 2,866.3	\$ 2,831.3	\$ 2,787.5	\$ 11,333.4
Gross profit	779.0	835.1	789.9	772.4	3,176.4
Operating income	305.4	369.2	343.4	307.7	1,325.7
Net earnings attributable to Laboratory Corporation of America Holdings	173.2	233.8	318.8	157.9	883.7
Basic earnings per common share	1.70	2.29	3.14	1.58	8.71
Diluted earnings per common share	1.67	2.27	3.10	1.56	8.61

	Year Ended December 31, 2017 (b)				
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter (a)	Full Year
Revenues	\$ 2,413.7	\$ 2,528.2	\$ 2,621.4	\$ 2,744.7	\$ 10,308.0
Gross profit	712.5	778.0	784.2	817.1	3,091.8
Operating income	318.1	329.8	326.7	330.6	1,305.2
Net earnings attributable to Laboratory Corporation of America Holdings	183.0	184.8	171.5	687.8	1,227.1
Basic earnings per common share	1.79	1.80	1.68	6.73	11.99
Diluted earnings per common share	1.75	1.78	1.65	6.63	11.81

(a) Net earnings attributable to Laboratory Corporation of America Holdings in the fourth quarter of 2017 includes amounts recorded due to TCJA.

(b) Amounts presented have been restated to comply with the full retrospective adoption of ASC 606.

Schedule II

LABORATORY CORPORATION OF AMERICA HOLDINGS AND SUBSIDIARIES

VALUATION AND QUALIFYING ACCOUNTS AND RESERVES

Years Ended December 31, 2018, 2017 and 2016

(Dollars in millions)

	Balance at beginning of year	Additions Charged to Costs and Expense	Other (Deductions) Additions	Balance at end of year
Year ended December 31, 2018:				
Applied against asset accounts:				
Valuation allowance-deferred tax assets	\$ 42.8	\$ 3.4	\$ —	\$ 46.2
Year ended December 31, 2017:				
Applied against asset accounts:				
Valuation allowance-deferred tax assets	\$ 31.3	\$ 11.5	\$ —	\$ 42.8
Year ended December 31, 2016:				
Applied against asset accounts:				
Valuation allowance-deferred tax assets	\$ 15.1	\$ 16.2	\$ —	\$ 31.3

Exhibit 21 LIST OF SUBSIDIARIES

1957285 Ontario Inc. dba Quality Underwriting Services
2089729 Ontario, Inc.
2248848 Ontario Inc.
3065619 Nova Scotia Company
3257959 Nova Scotia Company
8165335 Canada Inc.
8348596 Canada Inc.
896988 Ontario Limited
9279-3280 Quebec Inc.
Accupath Diagnostic Laboratories, Inc.
Beacon Laboratory Benefit Solutions, Inc.
CannAmm GP Inc.
CannAmm Limited Partnership
Center for Disease Detection, LLC
Center for Disease Detection International
Centrex Clinical Laboratories, Inc.
Clearstone Central Laboratories (U.S.) Inc.
Clearstone Holdings (International) Ltd.
Clipper Holdings, Inc.
Colorado Coagulation Consultants, Inc.
Correlagen Diagnostics, Inc.
Covance Inc.
Curalab Inc.
Cytometry Associates, Inc.
Czura Thornton (Hong Kong) Limited
DCL Acquisition, Inc.
DCL Medical Laboratories, LLC
DCL Sub LLC
Decision Diagnostics, L.L.C. (aka DaVinici/Medicorp LLC)
Diagnostic Services, Inc.
DIANON Systems, Inc.
DL Holdings Limited Partnership
Dynacare - Gamma Laboratory Partnership
Dynacare Company
Dynacare G.P. Inc.
Dynacare Holdco LLC
Dynacare Laboratories Inc.
Dynacare Laboratories Limited Partnership
Dynacare Northwest Inc.
Dynacare Realty Inc.
DynaLifeDX
DynaLifeDX Infrastructure Inc.
Endocrine Sciences, Inc.
Esoterix Genetic Counseling, LLC
Esoterix Genetic Laboratories, LLC
Esoterix, Inc.
Execmed Health Services Inc.
FirstSource Laboratory Solutions, Inc.
Gamma Dynacare Central Medical Laboratories GP Inc.
Gamma Dynacare Central Medical Laboratory Limited Partnership
GDML Medical Laboratories Inc
Health Trans Services Inc.
HHLA Lab-In-An-Envelope, LLC
Home Healthcare Laboratory of America, LLC
IDX Pathology, Inc.

Impact Genetics Corporation
Impact Genetics, Inc.
Kaleida LabCorp, LLC
Lab Delivery Service of New York City, Inc.
LabCorp Belgium Holdings, Inc.
LabCorp BVBA
LabCorp Central Laboratories (Canada) Inc.
LabCorp Central Laboratories (China) Inc.
LabCorp Development Company
LabCorp Health System Diagnostics, LLC
LabCorp Japan, G.K.
LabCorp Limited
LabCorp Nebraska, Inc.
LabCorp Neon Ltd.
LabCorp Neon Luxembourg S.à r.l.
LabCorp Specialty Testing Billing Service, Inc.
LabCorp Specialty Testing Group, Inc.
LabCorp Tennessee, LLC
LabCorp UK Holdings, Ltd.
Laboratoire Bio-Medic Inc.
Laboratory Corporation of America
LabWest, Inc.
LipoScience, Inc.
Litholink Corporation
MedAxio Insurance Medical Services GP Inc.
Medtox Diagnostics, Inc.
Medtox Laboratories, Inc.
MEDTOX Scientific, Inc.
Monogram Biosciences, Inc.
National Genetics Institute
New Brighton Business Center LLC
New Imaging Diagnostics, LLC
New Molecular Diagnostics Ventures LLC
NWT Inc.
Orchid Cellmark ULC
PA Labs, Inc.
Path Lab, Incorporated
Pathology Associates Medical Lab, LLC
Pee Dee Pathology Associates, Inc.
Persys Technology Inc.
Pixel by LabCorp
Princeton Diagnostic Laboratories of America, Inc.
Proteodyne Corporation
Sequenom Biosciences (India) Pvt. Ltd.
Sequenom Center for Molecular Medicine, LLC
Sequenom, Inc.
SW/DL LLC
Tandem Labs Inc.
The Biomarker Factory, LLC
Viro-Med Laboratories, Inc.

Covance Inc. Active Entities

CJB Inc.
Covance (Argentina) S.A.
Covance (Asia) Pte. Ltd.
Covance (Barbados) Holdings Ltd.
Covance (Barbados) Ltd.
Covance (Canada) Inc.

Covance (Cayman) Holdings, Ltd
Covance (Cayman) Ltd
Covance (Polska) Sp.Zo.o
Covance Asia-Pacific Inc.
Covance Austria GmbH
Covance Bioanalytical Services LLC
Covance Brazil Pharmaceutical Services Limitada
Covance Central Laboratory Services Inc.
Covance Central Laboratory Services Limited Partnership
Covance Central Laboratory Services S.a r.l
Covance Chile Services Limitada
Covance Clinical and Periapproval Services AG
Covance Clinical and Periapproval Services GmbH
Covance Clinical and Periapproval Services Limited
Covance Clinical and Periapproval Services Limited
Covance Clinical and Periapproval Services LLC
Covance Clinical and Periapproval Services SA
Covance Clinical and Periapproval Services S.a r.l
Covance Clinical Development GmbH
Covance Clinical Development SA
Covance Clinical Development S.a r.l

Covance Clinical Development S.R.L.

Covance Clinical Development S.R.L.
Covance Clinical Product Developments Ltd.
Covance Clinical Research Unit Inc.
Covance Clinical Research Unit Limited
Covance Clinical Research, L.P.
Covance CLS Holdings Limited LLC
Covance CLS Holdings Partnership LP
Covance Colombia Services Limitada
Covance CRU Inc.
Covance Denmark ApS
Covance Development Services (Pty) Ltd
Covance Hong Kong Holdings Limited
Covance Hong Kong Services Limited
Covance Hungaria Consultancy Limited Liability Company
Covance India Pharmaceutical Services Private Limited
Covance International Holdings B.V.
Covance Japan Co., Ltd.
Covance Korea Services Limited
Covance Laboratories Inc.
Covance Laboratories Korea Company Limited
Covance Laboratories Limited
Covance Latin America Inc.
Covance Limited
Covance Luxembourg S.a r.l.
Covance Market Access Services Inc.
Covance Mexico Services, S. DE R. L. De C.V.
Covance Neon Luxembourg S.a r.l.
Covance New Zealand Limited
Covance Periapproval Services Inc.
Covance Peru Services S.A.
Covance Pharmaceutical Research and Development (Beijing) Co., Ltd.
Covance Pharmaceutical Research and Development (Shanghai) Co., Ltd.
Covance Preclinical Corporation
Covance Preclinical Services GmbH
Covance Pty Ltd
Covance Research Holdings, LLC

Covance Research Products Inc.
Covance Services (Thailand) Limited
Covance Services Malaysia Sdn. Bhd.
Covance Specialty Pharmacy LLC
Covance Taiwan Services Limited
Covance US Holdings Limited LLC
Covance US Holdings Partnership LP
Covance Virtual Central Laboratory B.V.
CRPP Inc.
Fairfax Storage Limited
Global Specimen Solutions, Inc.
Hazpen Trustees Ltd.
Integrated Safe Foods Pte. Ltd.
Medaxial Limited
Sciformix Corporation
Sciformix Europe Limited
Sciformix Philippines, Inc.
Sciformix Technologies Private Limited
Texas Covance GP, Inc.
The Covance Charitable Foundation

Covance Inc. Inactive Entities

Covance Classic Laboratory Services Inc.
Covance Genomics Laboratory LLC
PMD Properties, LLC
SLJK LLC
REIM LLC
SPHN LLC
JSG R&D LLC
Nexigent Inc.
Covance NPA Inc.

Chiltern International Group Limited Operating Entities

Chiltern Clinical Research KK
Chiltern Clinical Research S.R.L.
Chiltern Clinical Research YH
Chiltern Clinical Research India Private Limited
Chiltern Clinical Research (Philippines) Inc.
Chiltern Clinical Research Ukraine LLC
Chiltern International AB
Chiltern International B.V.
Chiltern International BVBA
Chiltern International EOOD
Chiltern International Kft.
Chiltern International LLC
Chiltern International Ltd.
Chiltern International S.R.L.
Chiltern International Sp.z.o.o.
Chiltern International Sro
Chiltern International (Canada) Ltd.
Chiltern International (Hong Kong) Limited
Chiltern International Group Limited
Chiltern International Holdings Limited
Chiltern International Limited
Chiltern International Portugal LDA
Chiltern International Pty Ltd
Chiltern International Switzerland SARL
Chiltern International Taiwan Ltd

Chiltern International Ukraine LLC
Chiltern Investigacion Clinica Limitada
Chiltern Klinik Arastirma Organizasyon Limited Sirketi
Chiltern - Pesquisa Clinica Ltda.
Chiltern Research International Pty Ltd.
Chiltern Pharmaceutical and Technology Consulting (Shanghai) Co. Ltd.
Chiltern Research International (Singapore) Pte. Ltd.
Endpoint Clinical, Inc.
Endpoint Clinical India Private Limited
Endpoint Clinical (UK) Limited
Havenfern Limited
Integrated Development Associates Co., Ltd.
Integrated Development Associates Philippines, Inc.
Pacific Clinical Research India Private Limited
Ockham Development Group (Holdings) UK Limited
Ockham Europe Limited
Ockham India Clinical Research and Data Services Private Limited
Theorem Clinical Latin America B.V.
Theorem Clinical Research Co., Ltd.
Theorem Clinical Research K.F.T.
Theorem Clinical Research Limited
Theorem Clinical Research L.L.C.
Theorem Clinical Research Holdings B.V.
Theorem Clinical Research International B.V.
Theorem Research Associates, Inc.
Theorem Clinical Research S.A.

Dynacare non-operating entities identified subsequent to the acquisition of Dynacare Inc. on July 25, 2002

1004679 Ontario Limited
563911 Ontario Limited
794475 Ontario Inc.
829318 Ontario Limited
854512 Ontario Limited
879606 Ontario Limited
900747 Ontario Ltd.
925893 Ontario Limited
942487 Ontario Ltd.
942489 Ontario Ltd.
942491 Ontario Limited
942492 Ontario Ltd.
947342 Ontario Ltd.
949235 Ontario Ltd.
958069 Ontario Inc.
977681 Ontario Inc.
978550 Ontario Ltd.
978551 Ontario Ltd.
Amherstview Medical Centre Developments Inc.
DHG Place Du Centre Clinique
Dynacare Canada Inc.
Dynacare International Inc.
Glen Davis Equities Ltd.
L.R.C. Management Service Inc.
Lawrence-Curlew Medical Centre Inc.
Roselat Developments Limited
St. Joseph's Health Centre
Stockwin Corporation Ltd.
Thistle Place Care Corp.
Toronto Argyro Medical Laboratories Ltd.

Woodstock Medical Arts Building Inc.

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. 333-219977) and Forms S-8 (No. 333-102602, No. 333-90764, No. 333-97745, No. 333-150704, No. 333-181107, No. 333-211324 and No. 333-211323) of Laboratory Corporation of America Holdings of our report dated February 28, 2019, relating to the financial statements, financial statement schedule and the effectiveness of internal control over financial reporting, which appears in this Form 10-K.

/s/ PricewaterhouseCoopers LLP

Charlotte, North Carolina

February 28, 2019

POWER OF ATTORNEY

KNOWN ALL MEN BY THESE PRESENTS, that the undersigned hereby constitutes and appoints Sandra van der Vaart her true and lawful attorney-in-fact and agent, with full power of substitution, for her and in her name, place and stead, in any and all capacities, in connection with the Laboratory Corporation of America Holdings (Corporation) Annual Report on Form 10-K for the year ended December 31, 2018, under the Securities Exchange Act of 1934, as amended, including, without limiting the generality of the foregoing, to sign the Form 10-K in the name and on behalf of the Corporation or on behalf of the undersigned as a director or officer of the Corporation, and any amendments to the Form 10-K and any instrument, contract, document or other writing, of or in connection with the Form 10-K or amendments thereto, and to file the same, with all exhibits thereto, and other documents in connection therewith, including this power of attorney, with the Securities and Exchange Commission and any applicable securities exchange or securities self-regulatory body, granting unto said attorneys-in-fact and agents, each acting alone, 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 she might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agents, each acting alone, or she substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

IN WITNESS WHEREOF, the undersigned has signed these presents in this 28th day of February, 2019.

By: /s/ KERRII B. ANDERSON

Kerri B. Anderson

POWER OF ATTORNEY

KNOWN ALL MEN BY THESE PRESENTS, that the undersigned hereby constitutes and appoints Sandra van der Vaart his true and lawful attorney-in-fact and agent, with full power of substitution, for him and in his name, place and stead, in any and all capacities, in connection with the Laboratory Corporation of America Holdings (Corporation) Annual Report on Form 10-K for the year ended December 31, 2018, under the Securities Exchange Act of 1934, as amended, including, without limiting the generality of the foregoing, to sign the Form 10-K in the name and on behalf of the Corporation or on behalf of the undersigned as a director or officer of the Corporation, and any amendments to the Form 10-K and any instrument, contract, document or other writing, of or in connection with the Form 10-K or amendments thereto, and to file the same, with all exhibits thereto, and other documents in connection therewith, including this power of attorney, with the Securities and Exchange Commission and any applicable securities exchange or securities self-regulatory body, granting unto said attorneys-in-fact and agents, each acting alone, 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 might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agents, each acting alone, or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

IN WITNESS WHEREOF, the undersigned has signed these presents in this 28th day of February, 2019.

By: /s/ JEAN-LUC BÉLINGARD

Jean-Luc Bélingard

POWER OF ATTORNEY

KNOWN ALL MEN BY THESE PRESENTS, that the undersigned hereby constitutes and appoints Sandra van der Vaart his true and lawful attorney-in-fact and agent, with full power of substitution, for him and in his name, place and stead, in any and all capacities, in connection with the Laboratory Corporation of America Holdings (Corporation) Annual Report on Form 10-K for the year ended December 31, 2018, under the Securities Exchange Act of 1934, as amended, including, without limiting the generality of the foregoing, to sign the Form 10-K in the name and on behalf of the Corporation or on behalf of the undersigned as a director or officer of the Corporation, and any amendments to the Form 10-K and any instrument, contract, document or other writing, of or in connection with the Form 10-K or amendments thereto, and to file the same, with all exhibits thereto, and other documents in connection therewith, including this power of attorney, with the Securities and Exchange Commission and any applicable securities exchange or securities self-regulatory body, granting unto said attorneys-in-fact and agents, each acting alone, 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 might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agents, each acting alone, or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

IN WITNESS WHEREOF, the undersigned has signed these presents in this 28th day of February, 2019.

By: /s/ D. GARY GILLILAND, M.D., Ph.D
D. Gary Gilliland, M.D., Ph.D

POWER OF ATTORNEY

KNOWN ALL MEN BY THESE PRESENTS, that the undersigned hereby constitutes and appoints Sandra van der Vaart his true and lawful attorney-in-fact and agent, with full power of substitution, for him and in his name, place and stead, in any and all capacities, in connection with the Laboratory Corporation of America Holdings (Corporation) Annual Report on Form 10-K for the year ended December 31, 2018, under the Securities Exchange Act of 1934, as amended, including, without limiting the generality of the foregoing, to sign the Form 10-K in the name and on behalf of the Corporation or on behalf of the undersigned as a director or officer of the Corporation, and any amendments to the Form 10-K and any instrument, contract, document or other writing, of or in connection with the Form 10-K or amendments thereto, and to file the same, with all exhibits thereto, and other documents in connection therewith, including this power of attorney, with the Securities and Exchange Commission and any applicable securities exchange or securities self-regulatory body, granting unto said attorneys-in-fact and agents, each acting alone, 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 might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agents, each acting alone, or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

IN WITNESS WHEREOF, the undersigned has signed these presents in this 28th day of February, 2019.

By: /s/ GARHENG KONG, M.D., Ph.D.

Garheng Kong, M.D., Ph.D.

POWER OF ATTORNEY

KNOWN ALL MEN BY THESE PRESENTS, that the undersigned hereby constitutes and appoints Sandra van der Vaart his true and lawful attorney-in-fact and agent, with full power of substitution, for him and in his name, place and stead, in any and all capacities, in connection with the Laboratory Corporation of America Holdings (Corporation) Annual Report on Form 10-K for the year ended December 31, 2018, under the Securities Exchange Act of 1934, as amended, including, without limiting the generality of the foregoing, to sign the Form 10-K in the name and on behalf of the Corporation or on behalf of the undersigned as a director or officer of the Corporation, and any amendments to the Form 10-K and any instrument, contract, document or other writing, of or in connection with the Form 10-K or amendments thereto, and to file the same, with all exhibits thereto, and other documents in connection therewith, including this power of attorney, with the Securities and Exchange Commission and any applicable securities exchange or securities self-regulatory body, granting unto said attorneys-in-fact and agents, each acting alone, 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 might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agents, each acting alone, or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

IN WITNESS WHEREOF, the undersigned has signed these presents in this 28th day of February, 2019.

By: /s/ ROBERT E. MITTELSTAEDT, JR.

Robert E. Mittelstaedt, Jr.

Exhibit 24.7

POWER OF ATTORNEY

KNOWN ALL MEN BY THESE PRESENTS, that the undersigned hereby constitutes and appoints Sandra van der Vaart her true and lawful attorney-in-fact and agent, with full power of substitution, for her and in her name, place and stead, in any and all capacities, in connection with the Laboratory Corporation of America Holdings (Corporation) Annual Report on Form 10-K for the year ended December 31, 2018, under the Securities Exchange Act of 1934, as amended, including, without limiting the generality of the foregoing, to sign the Form 10-K in the name and on behalf of the Corporation or on behalf of the undersigned as a director or officer of the Corporation, and any amendments to the Form 10-K and any instrument, contract, document or other writing, of or in connection with the Form 10-K or amendments thereto, and to file the same, with all exhibits thereto, and other documents in connection therewith, including this power of attorney, with the Securities and Exchange Commission and any applicable securities exchange or securities self-regulatory body, granting unto said attorneys-in-fact and agents, each acting alone, 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 she might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agents, each acting alone, or her substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

IN WITNESS WHEREOF, the undersigned has signed these presents in this 28th day of February, 2019.

By: /s/ RICHELLE PARHAM

Richelle Parham

POWER OF ATTORNEY

KNOWN ALL MEN BY THESE PRESENTS, that the undersigned hereby constitutes and appoints Sandra van der Vaart his true and lawful attorney-in-fact and agent, with full power of substitution, for him and in his name, place and stead, in any and all capacities, in connection with the Laboratory Corporation of America Holdings (Corporation) Annual Report on Form 10-K for the year ended December 31, 2018, under the Securities Exchange Act of 1934, as amended, including, without limiting the generality of the foregoing, to sign the Form 10-K in the name and on behalf of the Corporation or on behalf of the undersigned as a director or officer of the Corporation, and any amendments to the Form 10-K and any instrument, contract, document or other writing, of or in connection with the Form 10-K or amendments thereto, and to file the same, with all exhibits thereto, and other documents in connection therewith, including this power of attorney, with the Securities and Exchange Commission and any applicable securities exchange or securities self-regulatory body, granting unto said attorneys-in-fact and agents, each acting alone, 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 might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agents, each acting alone, or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

IN WITNESS WHEREOF, the undersigned has signed these presents in this 28th day of February, 2019.

By: /s/ ADAM H. SCHECHTER

Adam H. Schechter

POWER OF ATTORNEY

KNOWN ALL MEN BY THESE PRESENTS, that the undersigned hereby constitutes and appoints Sandra van der Vaart his true and lawful attorney-in-fact and agent, with full power of substitution, for him and in his name, place and stead, in any and all capacities, in connection with the Laboratory Corporation of America Holdings (Corporation) Annual Report on Form 10-K for the year ended December 31, 2018, under the Securities Exchange Act of 1934, as amended, including, without limiting the generality of the foregoing, to sign the Form 10-K in the name and on behalf of the Corporation or on behalf of the undersigned as a director or officer of the Corporation, and any amendments to the Form 10-K and any instrument, contract, document or other writing, of or in connection with the Form 10-K or amendments thereto, and to file the same, with all exhibits thereto, and other documents in connection therewith, including this power of attorney, with the Securities and Exchange Commission and any applicable securities exchange or securities self-regulatory body, granting unto said attorneys-in-fact and agents, each acting alone, 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 might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agents, each acting alone, or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

IN WITNESS WHEREOF, the undersigned has signed these presents in this 28th day of February, 2019.

By: /s/ R. SANDERS WILLIAMS, M.D.

R. Sanders Williams, M.D.

Exhibit 31.1

Certification

I, David P. King, certify that:

1. I have reviewed this annual report on Form 10-K of Laboratory Corporation of America Holdings;
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 Rule 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 28, 2019

By: /s/ DAVID P. KING

David P. King

Chief Executive Officer

(Principal Executive Officer)

Exhibit 31.2

Certification

I, Glenn A. Eisenberg, certify that:

1. I have reviewed this annual report on Form 10-K of Laboratory Corporation of America Holdings;
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 Rule 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 28, 2019

By: /s/ GLENN A. EISENBERG

Glenn A. Eisenberg

Chief Financial Officer

(Principal Financial Officer)

Exhibit 32

Written Statement of
Chief Executive Officer and Chief Financial Officer
Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (18 U.S.C. Section 1350)

The undersigned, the Chief Executive Officer and the Chief Financial Officer of Laboratory Corporation of America Holdings (Company), each hereby certifies that, to his knowledge on the date hereof:

(a) the Form 10-K of the Company for the Period Ended December 31, 2018, filed on the date hereof with the Securities and Exchange Commission (Report) fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(b) information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

By: /s/ DAVID P. KING
David P. King
Chief Executive Officer
February 28, 2019

By: /s/ GLENN A. EISENBERG
Glenn A. Eisenberg
Chief Financial Officer
February 28, 2019

A signed original of this written statement required by Section 906, or other document authenticating, acknowledging, or otherwise adopting the signature that appears in typed form within the electronic version of this written statement required by Section 906, has been provided to Laboratory Corporation of America Holdings and will be retained by Laboratory Corporation of America Holdings and furnished to the Securities and Exchange Commission or its staff upon request.