

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
Form 10-K**

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended December 31, 2017

or

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from to

Commission file number: 001-35406

Illumina, Inc.

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of incorporation or organization)

**5200 Illumina Way
San Diego, California**

(Address of principal executive offices)

33-0804655

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

92122

(Zip Code)

Registrant's telephone number, including area code: (858) 202-4500
Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Name of each exchange on which registered
Common Stock, \$0.01 par value	The NASDAQ Global Select Market

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

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

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the 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 and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of 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, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer Accelerated filer Non-accelerated filer Smaller reporting company Emerging growth company

(Do not check if a smaller reporting company)

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

As of February 9, 2018, there were 147 million shares (excluding 44 million shares held in treasury) of the registrant's common stock outstanding. The aggregate market value of the common stock held by non-affiliates of the registrant as of July 2, 2017 (the last business day of the registrant's most recently completed second fiscal quarter), based on the closing price for the common stock on The NASDAQ Global Select Market on June 30, 2017 (the last trading day before July 2, 2017), was \$22.0 billion. This amount excludes an aggregate of approximately 19 million shares of common stock held by officers and directors and each person known by the registrant to own 10% or more of the outstanding common stock. Exclusion of shares held by any person should not be construed to indicate that such person possesses the power, directly or indirectly, to direct or cause the direction of the management or policies of the registrant, or that the registrant is controlled by or under common control with such person.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's definitive proxy statement for the 2018 annual meeting of stockholders are incorporated by reference into Items 10 through 14 of Part III of this Report.

ILLUMINA, INC.
FORM 10-K
FOR THE FISCAL YEAR ENDED DECEMBER 31, 2017
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Special Note Regarding Forward-Looking Statements

This annual report on Form 10-K contains, and our officers and representatives may from time to time make, “forward-looking statements” within the meaning of the safe harbor provisions of the U.S. Private Securities Litigation Reform Act of 1995. Forward-looking statements can be identified by words such as: “anticipate,” “intend,” “plan,” “goal,” “seek,” “believe,” “project,” “estimate,” “expect,” “strategy,” “future,” “likely,” “may,” “should,” “will,” or the negative of these terms, and similar references to future periods. Examples of forward-looking statements include, among others, statements we make regarding:

- our expectations as to our future financial performance, results of operations, or other operational results or metrics;
- our expectations regarding the launch of new products or services;
- the benefits that we expect will result from our business activities and certain transactions we have completed, such as product introductions, increased revenue, decreased expenses, and avoided expenses and expenditures;
- our expectations of the effect on our financial condition of claims, litigation, contingent liabilities, and governmental investigations, proceedings, and regulations;
- our strategies or expectations for product development, market position, financial results, and reserves; and
- other expectations, beliefs, plans, strategies, anticipated developments, and other matters that are not historical facts.

Forward-looking statements are neither historical facts nor assurances of future performance. Instead, they are based only on our current beliefs, expectations, and assumptions regarding the future of our business, future plans and strategies, projections, anticipated events and trends, the economy, and other future conditions. Because forward-looking statements relate to the future, they are subject to inherent uncertainties, risks, and changes in circumstances that are difficult to predict and many of which are outside of our control. Our actual results and financial condition may differ materially from those indicated in the forward-looking statements. Therefore, you should not rely on any of these forward-looking statements. Important factors that could cause our actual results and financial condition to differ materially from those indicated in the forward-looking statements include, among others, the following:

- challenges inherent in developing, manufacturing, and launching new products and services, including expanding manufacturing operations and reliance on third-party suppliers for critical components;
- the timing and mix of customer orders among our products and services;
- the impact of recently launched or pre-announced products and services on existing products and services;
- our ability to develop and commercialize our instruments and consumables, to deploy new products, services, and applications, and to expand the markets for our technology platforms;
- our ability to manufacture robust instrumentation and consumables;
- our ability to identify and integrate acquired technologies, products, or businesses successfully;
- our expectations and beliefs regarding prospects and growth for the business and its markets;
- the assumptions underlying our critical accounting policies and estimates;
- our assessments and estimates that determine our effective tax rate;
- our assessments and beliefs regarding the outcome of pending legal proceedings and any liability, that we may incur as a result of those proceedings;
- uncertainty, or adverse economic and business conditions, including as a result of slowing or uncertain economic growth in the United States or worldwide; and

- other factors detailed in our filings with the SEC, including the risks, uncertainties, and assumptions described in Item 1A “Risk Factors” below, or in information disclosed in public conference calls, the date and time of which are released beforehand.

Any forward-looking statement made by us in this annual report on Form 10-K is based only on information currently available to us and speaks only as of the date on which it is made. We undertake no obligation, and do not intend, to publicly update any forward-looking statement, whether written or oral, that may be made from time to time, or to review or confirm analysts’ expectations, or to provide interim reports or updates on the progress of any current financial quarter, in each case whether as a result of new information, future developments, or otherwise.

Available Information

Our 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 available free of charge on our website, www.illumina.com. The information on our website is not incorporated by reference into this report. Such reports are made available as soon as reasonably practicable after filing with, or furnishing to, the SEC. The SEC also maintains an Internet site at www.sec.gov that contains reports, proxy and information statements, and other information regarding issuers that electronically file with the SEC. Copies of our annual report on Form 10-K will be made available, free of charge, upon written request.

Illumina, 24sure, BaseSpace, BlueFish, BlueFuse, BlueGnome, Clarity LIMS, CSPro, DesignStudio, Durascript, Epicentre, Genetic Energy, GenomeStudio, Globin-Zero, GoldenGate, HiSeq, iHope, Illumina Propel Certified, IllumiNotes, Infinium, iScan, iSelect, iSeq, MiniSeq, MiSeq, MiSeqDx, MiSeq Dx, MyGenome by Illumina, NextBio, Nextera, NextSeq, NovaSeq, Powered by Illumina, Ribo-Zero, SeqMonitor, SureCell, TruGenome, TruSeq, TruSight, Understand Your Genome, UYG, verifi, Verinata, Verinata Health, VeriSeq, the pumpkin orange color, and the Genetic Energy streaming bases design are trademarks or registered trademarks of Illumina, Inc.

Unless the context requires otherwise, references in this annual report on Form 10-K to “Illumina,” the “Company,” “we,” “us,” and “our” refer to Illumina, Inc. and its subsidiaries.

PART I

ITEM 1. *Business.*

Overview

We are the global leader in sequencing- and array-based solutions for genetic analysis. Our products and services serve customers in a wide range of markets, enabling the adoption of genomic solutions in research and clinical settings. We were incorporated in California in April 1998 and reincorporated in Delaware in July 2000. Our principal executive offices are located at 5200 Illumina Way, San Diego, California 92122. Our telephone number is (858) 202-4500.

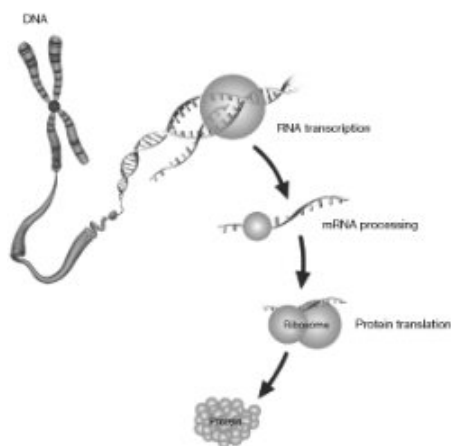
Our customers include leading genomic research centers, academic institutions, government laboratories, and hospitals, as well as pharmaceutical, biotechnology, commercial molecular diagnostic laboratories, and consumer genomics companies.

Our portfolio of integrated sequencing and microarray systems, consumables, and analysis tools is designed to accelerate and simplify genetic analysis. This portfolio addresses the range of genomic complexity, price points, and throughput, enabling customers to select the best solution for their research or clinical challenge.

We have also enabled, or invested in, early-stage companies that are pursuing promising genomics-related technologies. For example, GRAIL, Inc. (GRAIL), formed in 2016, was created to develop a blood test for early-stage cancer detection; and Helix Holdings I, LLC (Helix) was established in 2015 to enable individuals to explore their genetic information by providing sequencing and services for consumers through third-party partners. Helix is a consolidated variable interest entity (VIE), and GRAIL was deconsolidated in February 2017.

Genetics Primer

The instruction set for all living cells is encoded in deoxyribonucleic acid, or DNA. The complete set of DNA for any organism is referred to as its genome. DNA contains small regions called genes, which comprise a string of nucleotide bases labeled A, C, G, and T, representing adenine, cytosine, guanine, and thymine, respectively. These nucleotide bases occur in a precise order known as the DNA sequence. When a gene is “expressed,” a copy of a portion of its DNA sequence called messenger RNA (mRNA) is used as a template to direct the synthesis of a particular protein. Proteins, in turn, direct all cellular function. The illustration below is a simplified gene expression schematic.



Variations among organisms are due, in large part, to differences in their DNA sequences. Changes can result from insertions, deletions, inversions, translocations, or duplications of nucleotide bases. These changes may result in certain genes becoming overexpressed (excessive protein production), underexpressed (reduced protein production), or silenced altogether, sometimes triggering changes in cellular function. These changes can be the result of heredity, but most often they occur at random. The most common form of variation in humans is called a single nucleotide polymorphism (SNP), which is a base change in a single position in a DNA sequence. Another type of variation, copy number variations (CNVs), occur when there are fewer or more copies of certain genes, segments of a gene, or stretches of DNA.

In humans, genetic variation accounts for many of the physical differences we see (e.g., height, hair, eye color, etc.). Genetic variations also can have medical consequences affecting disease susceptibility, including predisposition to complex genetic diseases such as cancer, diabetes, cardiovascular disease, and Alzheimer's disease. They can affect individuals' response to certain drug treatments, causing them to respond well, experience adverse side effects, or not respond at all.

Scientists are studying these variations and their consequences in humans, as well as in a broad range of animals, plants, and microorganisms. Such research takes place in government, university, pharmaceutical, biotechnology, and agrigenomics laboratories around the world, where scientists expand our knowledge of the biological functions essential for life. Beginning at the genetic level, our tools are used to elucidate the correlation between gene sequence and biological processes. Researchers who investigate human, viral, and bacterial genetic variation to understand the mechanisms of disease are enabling the development of more effective diagnostics and therapeutics. They also provide greater insight into genetic variation in plants (e.g., food and biofuel crops) and animals (e.g., livestock and domestic), enabling improvements in crop yields and animal breeding programs.

By empowering genetic analysis and facilitating a deeper understanding of genetic variation and function, our tools advance disease research, drug development, and the creation of molecular diagnostic tests. We believe that this will trigger a fundamental shift in the practice of medicine and health care, and that the increased emphasis on preventive and predictive molecular medicine will usher in the era of precision health care.

Our Principal Markets

Our organization is structured to target the markets and customers outlined below.

Life Sciences

Historically, our core business has been in the life sciences research market. This includes laboratories associated with universities, research centers, and government institutions, along with biotechnology and pharmaceutical companies. Researchers at these institutions use our products and services for basic and translational research across a spectrum of scientific applications, including targeted, exome, and whole-genome sequencing; genetic variation; gene expression; epigenetics; and metagenomics. Next-generation sequencing (NGS) technologies are being adopted due to their declining costs per sample and their ability to sequence large sample sizes quickly and accurately, generating vast amounts of high-quality data. Both private and public funding drive this research, along with global initiatives to characterize genetic variation.

Our products also serve various applied markets including consumer genomics and agrigenomics. For example, in consumer genomics, our customers use our technologies to provide personalized genetic data and analysis to individual consumers. In agrigenomics, government and corporate researchers use our products and services to explore the genetic and biological basis for productivity and nutritional constitution in crops and livestock. Researchers can identify natural and novel genetic variation and deploy genome-wide marker-based applications to accelerate breeding and production of healthier and higher-yielding crops and livestock.

Clinical Genomics

We are focused on enabling translational and clinical markets through the introduction of best-in-class sequencing instruments and reagents. Further, we are developing sample-to-answer solutions to catalyze adoption in the clinical setting, including in reproductive and genetic health and oncology. In reproductive health, our primary focus is driving noninvasive prenatal testing (NIPT) adoption globally through our technology, which identifies fetal chromosomal abnormalities by analyzing cell-free DNA in maternal blood. Our NGS technology is also accelerating rare and undiagnosed disease research to discover the genetic causes of inherited disorders by assessing many genes simultaneously. Using NGS can reduce costs compared to traditional methods of disease diagnosis, which are often expensive and inconclusive while requiring extensive testing.

Cancer is a disease of the genome, and the goal of cancer genomics is to identify genomic changes that transform a normal cell into a cancerous one. Understanding these genomic changes will improve diagnostic accuracy, increase understanding of the prognosis, and enable oncologists to target therapies to individuals. Customers in the translational and clinical oncology markets use our products to perform research that may help identify individuals who are genetically predisposed to cancer. Customers also utilize our technology to identify the molecular changes in a tumor so that physicians can tailor treatment based on the genetic variation. We believe that circulating tumor DNA (ctDNA) will become an important clinical tool for managing oncology patients during all stages of tumor progression. Our technology is being used to research the implications of ctDNA in treatment determination, treatment monitoring, minimal residual disease, and asymptomatic

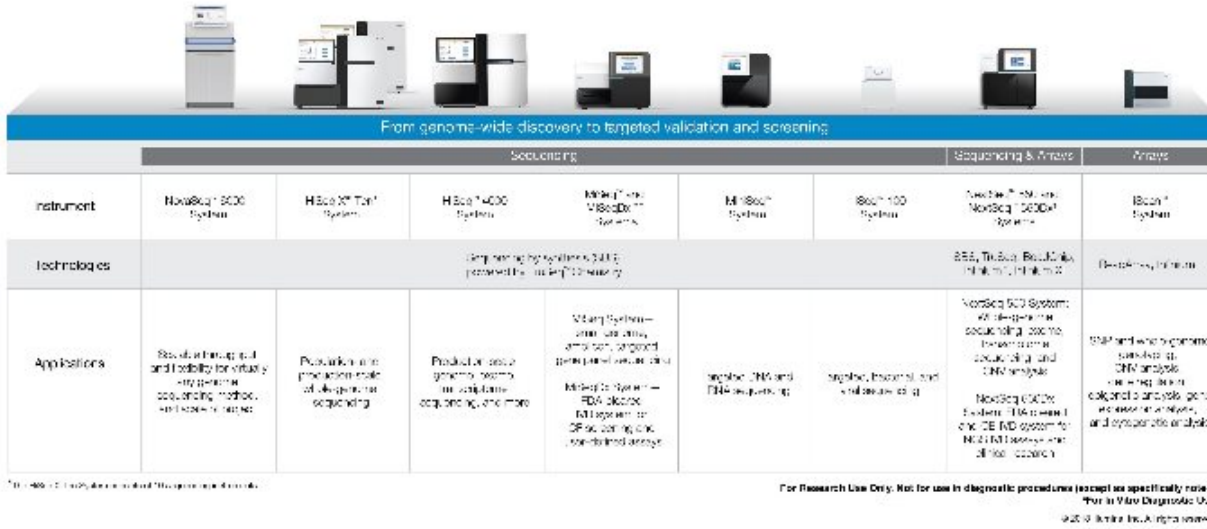
screening. For example, we have invested in, and partnered with GRAIL, which we formed to develop a blood-based test for early-stage cancer detection that is enabled by our sequencing technology.

Our Principal Products and Technologies

Our unique technology platforms support the scale of experimentation necessary for population-scale studies, genome-wide discovery, target selection, and validation studies (see Figure 1 below). Customers use our products to analyze the genome at all levels of complexity, from targeted panels to whole-genome sequencing. A large and dynamic Illumina user community has published tens of thousands of customer-authored scientific papers using our technologies. Through rapid innovation, we are changing the economics of genetic research, enabling projects that were previously considered impossible, and supporting clinical advances towards precision medicine.

Most of our product sales consist of instruments and consumables (which include reagents, flow cells, and microarrays) based on our proprietary technologies. For the fiscal years ended December 31, 2017, January 1, 2017, and January 3, 2016, instrument sales comprised 19%, 20%, and 27%, respectively, of total revenues, and consumable sales represented 64%, 64%, and 58%, respectively, of total revenues.

Figure 1: Illumina Platform Overview:



Sequencing

DNA sequencing is the process of determining the order of nucleotide bases (A, C, G, or T) in a DNA sample. Our portfolio of sequencing platforms represents a family of systems that we believe set the standard for productivity, cost-effectiveness, and accuracy among NGS technologies. Customers use our platforms to perform whole-genome, de novo, exome and RNA sequencing, and targeted resequencing of specific gene regions and genes.

Whole-genome sequencing determines the complete DNA sequence of an organism. In de novo sequencing, the goal is to sequence and analyze a sample without using information from prior sequencing of that species. In targeted resequencing, a portion of the sequence of an organism is compared to a standard or reference sequence from previously sequenced samples to identify genetic variation. Understanding the similarities and differences in DNA sequence between and within species helps us understand the function of the structures encoded in the DNA.

Our DNA sequencing technology is based on our proprietary reversible terminator-based sequencing chemistry, referred to as sequencing by synthesis (SBS) biochemistry. SBS tracks the addition of labeled nucleotides as the DNA chain is copied in a massively parallel fashion. Our SBS sequencing technology provides researchers with a broad range of applications and the ability to sequence even large mammalian genomes in a few days rather than weeks or years.

Our sequencing platforms can generate between 500 megabases (Mb) and 6.0 terabases (Tb) (equivalent to approximately 48 human genomes) of genomic data in a single run, depending on the instrument and application. There are different price

points per gigabase (Gb) for each instrument, and for different applications, which range from small-genome, amplicon, and targeted gene-panel sequencing to population-scale whole human genome sequencing. Since we launched our first sequencing system in 2007, our systems have reduced the cost of sequencing by more than a factor of 10,000. In addition, the sequencing time per Gb has dropped by a factor of approximately 12,000.

Our BaseSpace Informatics Suite cloud platform plays a critical role in supporting our sequencing applications. BaseSpace Suite integrates directly with our sequencing instruments, allowing customers to manage their biological sample and sequencing runs, process and analyze the raw genomic data, and derive meaningful results. It facilitates data sharing, provides data-storage solutions and streamlines analysis through a growing number of applications developed by us and the bioinformatics community.

For the fiscal years ended December 31, 2017, January 1, 2017, and January 3, 2016, sequencing revenue comprised 83%, 84%, and 86%, respectively, of total revenues.

Arrays

Arrays are used for a broad range of DNA and RNA analysis applications, including SNP genotyping, CNV analysis, gene expression analysis, and methylation analysis, and enable the detection of millions of known genetic markers on a single array.

Our BeadArray technology combines microscopic beads and a substrate in a proprietary manufacturing process to produce arrays that can perform many assays simultaneously. This facilitates large-scale analysis of genetic variation and biological function in a unique, high-throughput, cost-effective, and flexible manner. Using our BeadArray technology, we achieve high-throughput analysis via a high density of test sites per array and the ability to format arrays in various configurations. To serve the needs of multiple markets and market segments, we can vary the size, shape, and format of the substrate into which the beads self-assemble and create specific bead types for different applications. Our iScan System and our NextSeq 550 System can be used to image arrays.

For the fiscal years ended December 31, 2017, January 1, 2017, and January 3, 2016, array revenue comprised 17%, 16%, and 14%, respectively, of total revenues.

Consumables

We have developed various library preparation and sequencing kits to simplify workflows and accelerate analysis. Our sequencing applications include whole-genome sequencing kits, which sequence entire genomes of any size and complexity, and targeted resequencing kits, which can sequence exomes, specific genes, RNA or other genomic regions of interest. Our sequencing kits maximize the ability of our customers to characterize the target genome accurately and are sold in various configurations, addressing a wide range of applications.

Customers use Illumina array-based genotyping consumables for a wide range of analyses, including diverse species, disease-related mutations, and genetic characteristics associated with cancer. Customers can select from a range of human, animal, and agriculturally relevant genome panels or create their own custom arrays to investigate millions of genetic markers targeting any species.

Our Services

We provide whole-genome sequencing, genotyping, NIPT, and product support services. Human whole-genome sequencing services are provided through our CLIA-certified, CAP-accredited laboratory. Using our services, customers can perform whole-genome sequencing projects and microarray projects (including large-scale genotyping studies and whole-genome association studies). We also provide NIPT services through our partner laboratories that direct samples to us on a test send-out basis in our CLIA-certified, CAP-accredited laboratory. In addition, we also offer support services to customers who have purchased our products.

Intellectual Property

We have an extensive intellectual property portfolio. As of February 1, 2018, we own or have exclusive licenses to 719 issued U.S. patents and 473 pending U.S. patent applications, including 32 allowed applications that have not yet issued as patents. Our issued and pending patents cover various aspects of our arrays, assays, oligo synthesis, sequencing technology, instruments, digital microfluidics, software, bioinformatics, and chemical-detection technologies, and have terms that expire

between 2018 and 2038. We continue to file new patent applications to protect the full range of our technologies. We have filed or have been granted counterparts for many of these patents and applications in foreign countries.

We protect trade secrets, know-how, copyrights, and trademarks. Our success depends in part on obtaining patent protection for our products and processes, preserving trade secrets, patents, copyrights and trademarks, operating without infringing the proprietary rights of third parties, and acquiring licenses for technology or products. In addition, we invest in technological innovation, and we seek beneficial licensing opportunities to develop and maintain our competitive position.

We are party to various exclusive and nonexclusive license agreements and other arrangements with third parties that grant us rights to use key aspects of our sequencing and array technologies, assay methods, chemical detection methods, reagent kits, and scanning equipment. Our exclusive licenses expire with the termination of the underlying patents, which will occur between 2018 and 2032. We have additional nonexclusive license agreements with various third parties for other components of our products. In most cases, the agreements remain in effect over the term of the underlying patents, may be terminated at our request without further obligation, and require that we pay customary royalties.

Research and Development

Illumina has historically made substantial investments in research and development. Our research and development efforts prioritize continuous innovation coupled with product evolution.

Research and development expenses for the fiscal years ended December 31, 2017, January 1, 2017, and January 3, 2016 were \$546 million, \$504 million, and \$401 million, respectively. We expect research and development expense to increase during 2018 to support business growth and continuing expansion in research and product-development efforts.

Marketing and Distribution

We market and distribute our products directly to customers in North America, Europe, Latin America, and the Asia-Pacific region. In each of these areas, dedicated sales, service, and application-support personnel are expanding and supporting their respective customer bases. In addition, we sell through life-science distributors in certain markets within Europe, the Asia-Pacific region, Latin America, the Middle East, and South Africa. We expect to continue increasing our sales and distribution resources during 2018 and beyond as we launch new products and expand our potential customer base.

Manufacturing

We manufacture sequencing and array platforms and reagent kits. In 2017, we continued to increase our manufacturing capacity to meet customer demand. To address increasing product complexity and volume, we continue to automate manufacturing processes to accelerate throughput and improve quality and yield. We are committed to providing medical devices and related services that consistently meet customer and applicable regulatory requirements. We adhere to access and safety standards required by federal, state, and local health ordinances, such as standards for the use, handling, and disposal of hazardous substances. Our key manufacturing and distribution facilities operate under a quality management system certified to ISO 13485.

Raw Materials

Our manufacturing operations require a wide variety of raw materials, electronic and mechanical components, chemical and biochemical materials, and other supplies. Multiple commercial sources provide many of our components and supplies, but there are some raw materials and components that we obtain from single-source suppliers. To manage potential risks arising from single-source suppliers, we believe that we could redesign our products using alternative components or for use with alternative reagents, if necessary. In addition, while we attempt to keep our inventory at minimal levels, we purchase incremental inventory as circumstances warrant to protect our supply chain. If the capabilities of our suppliers and component manufacturers are limited or stopped, due to disasters, quality, regulatory, or other reasons, it could negatively impact our ability to manufacture our products.

Competition

Although we believe that our products and services provide significant advantages over products and services currently available from other sources, we expect continued intense competition. Our competitors offer products and services for sequencing, SNP genotyping, gene expression, and molecular diagnostics markets. They include companies such as Agilent Technologies, Inc., BGI, Oxford Nanopore Technologies Limited, Pacific Biosciences of California, Inc., QIAGEN N.V., Roche

Holding AG., and Thermo Fisher Scientific, Inc., among others. Some of these companies have or will have substantially greater financial, technical, research, and other resources than we do, along with larger, more established marketing, sales, distribution, and service organizations. In addition, they may have greater name recognition than we do in the markets we address, and in some cases a larger installed base of systems. We expect new competitors to emerge and the intensity of competition to increase. To compete effectively, we must scale our organization and infrastructure appropriately and demonstrate that our products have superior throughput, cost, and accuracy.

Segment and Geographic Information

We have two reportable segments: Illumina's core operations (Core Illumina) and one segment related to the combined activities of the consolidated VIEs, GRAIL and Helix (Consolidated VIEs). Following the GRAIL deconsolidation on February 28, 2017, the Consolidated VIEs no longer include GRAIL. Prior to 2016, the combined results of operations of the Consolidated VIEs were not material.

We currently sell our products to a number of customers outside the United States, including customers in other areas of North America, Latin America, Europe, and the Asia-Pacific region. Shipments to customers outside the United States totaled \$1.2 billion, or 45% of total revenues, during fiscal 2017, compared to \$1.1 billion, or 46%, and \$1.0 billion, or 46%, in fiscal 2016 and 2015, respectively. The U.S. dollar has been determined to be the functional currency of our international operations due to the primary activities of our foreign subsidiaries. We expect that sales to international customers will continue to be an important and growing source of revenue. See note "11. Segment Information, Geographic Data, and Significant Customers" in Part II, Item 8 of this report for further information concerning our foreign and domestic operations.

Backlog

Our backlog was approximately \$935 million and \$650 million as of December 31, 2017 and January 1, 2017, respectively. Generally, our backlog consists of orders believed to be firm as of the balance sheet date. However, we may allow customers to make product substitutions as we launch new products. The timing of shipments depends on several factors, including agreed upon shipping schedules, which may span multiple quarters, and whether the product is catalog or custom. We expect approximately two-thirds of our backlog as of December 31, 2017, to be shipped within the fiscal year ending December 30, 2018. Although we generally recognize revenue upon the transfer of title to a customer, some customer agreements or applicable accounting treatments might require us to defer the recognition of revenue beyond title transfer.

Environmental Matters

We are committed to the protection of our employees and the environment. Our operations require the use of hazardous materials that subject us to various federal, state, and local environmental and safety laws and regulations. We believe that we are in material compliance with current applicable laws and regulations. However, we could be held liable for damages and fines should contamination of the environment or individual exposures to hazardous substances occur. In addition, we cannot predict how changes in these laws and regulations, or the development of new laws and regulations, will affect our business operations or the cost of compliance.

Government Regulation

As we expand product lines to address the diagnosis of disease, regulation by governmental authorities in the United States and other countries will become an increasingly significant factor in development, testing, production, and marketing. Products that we develop in the molecular diagnostic markets, depending on their intended use, may be regulated as medical devices or in vitro diagnostic products (IVDs) by the FDA and comparable agencies in other countries. In the United States, certain of our products may require FDA clearance following a pre-market notification process, also known as a 510(k) clearance, or premarket approval (PMA) from the FDA before marketing. The usually shorter 510(k) clearance process, which we used for the FDA-cleared assays that are run on our FDA-regulated MiSeqDx instrument, generally takes from three to six months after submission, but it can take significantly longer. The longer PMA process is much more costly and uncertain. It generally takes from 9 to 18 months after a complete filing, but it can take significantly longer and requires conducting clinical studies that are generally more extensive than those required for 510(k) clearance. All of the products that are currently regulated by the FDA as medical devices and IVDs are also subject to the FDA Quality System Regulation (QSR). Obtaining the requisite regulatory approvals, including the FDA quality system inspections that are required for PMA approval, can be expensive and may involve considerable delay.

We cannot be certain which of our planned molecular diagnostic products will be subject to the shorter 510(k) clearance process and, in fact, some of our products will need to go through the PMA process. The regulatory approval process for such

products may be significantly delayed, may be significantly more expensive than anticipated, and may conclude without such products being approved by the FDA. Without timely regulatory approval, we will not be able to launch or successfully commercialize such products.

Changes to the current regulatory framework, including the imposition of additional or new regulations, could arise at any time during the development or marketing of our products. This may negatively affect our ability to obtain or maintain FDA or comparable regulatory clearance or approval of our products. In addition, the FDA may introduce new requirements that may change the regulatory requirements for us or our customers, or both.

If our products labeled as “For Research Use Only. Not for use in diagnostic procedures,” or RUO, are used, or could be used, for the diagnosis of disease, the regulatory requirements related to marketing, selling, and supporting such products could be uncertain. This is true even if such use by our customers occurs without our consent. If the FDA or other regulatory authorities assert that any of our RUO products are subject to regulatory clearance or approval, our business, financial condition, or results of operations could be adversely affected.

Illumina products sold as medical devices or IVDs in Europe will be regulated under the In Vitro Diagnostics Directive (98/79/EC). A new regulation, the in vitro Diagnostic Medical Devices Regulation (EU) 2017/746, the IVDR, has been released and will become fully enforceable in 2020. These regulations include requirements for both presentation and review of performance data and quality-system requirements.

Certain of our diagnostic products are currently available through laboratories that are certified under the Clinical Laboratory Improvements Amendments (CLIA) of 1988. These products are commonly called “laboratory developed tests,” or LDTs. For a number of years, the FDA has exercised its regulatory enforcement discretion not to regulate LDTs as medical devices if created and used within a single laboratory. However, the FDA is reexamining this regulatory approach and changes to the agency’s handling of LDTs could impact our business in ways that cannot be predicted at this time. In October 2014, the FDA published two draft guidance documents suggesting an approach for registration and listing of laboratories and assays along with a framework for regulation of LDTs by the FDA based on risk to patients rather than whether the LDTs were made by a conventional manufacturer or a single laboratory. The draft framework guidance includes pre-market review for higher-risk LDTs, including many used to guide treatment decisions, as well as companion diagnostics that have entered the market as LDTs. We cannot predict the nature or extent of the FDA’s final guidance or regulation of LDTs, in general, or with respect to our or our customers’ LDTs, in particular.

Certification of CLIA laboratories includes standards in the areas of personnel qualifications, administration, and participation in proficiency testing, patient test management, and quality control procedures. CLIA also mandates that, for high complexity labs such as ours, to operate as a lab, we must have an accreditation by an organization recognized by CLIA such as the College of Pathologists (CAP), which we have obtained and must maintain. If we were to lose our CLIA certification or CAP accreditation, our business, financial condition, or results of operations could be adversely affected. In addition, state laboratory licensing and inspection requirements may also apply to our products, which, in some cases, are more stringent than CLIA requirements.

Employees

As of December 31, 2017, we had more than 6,200 employees. We consider our employee relations to be positive. Our success will depend in large part upon our ability to attract and retain employees. In addition, we employ a number of temporary and contract employees. We face competition in this regard from other companies, research and academic institutions, government entities, and other organizations.

ITEM 1A. Risk Factors.

Our business is subject to various risks, including those described below. In addition to the other information included in this report, the following issues could adversely affect our operating results or our stock price.

Our continued growth is dependent on continuously developing and commercializing new products.

Our target markets are characterized by rapid technological change, evolving industry standards, changes in customer needs, existing and emerging competition, strong price competition, and frequent new product introductions. Accordingly, our continued growth depends on developing and commercializing new products and services, including improving our existing products and services, in order to address evolving market requirements on a timely basis. If we fail to innovate or adequately invest in new technologies, our products and services will become dated, and we could lose our competitive position in the

markets that we serve as customers purchase new products offered by our competitors. We believe that successfully introducing new products and technologies in our target markets on a timely basis provides a significant competitive advantage because customers make an investment of time in selecting and learning to use a new product and may be reluctant to switch once that selection is made.

To the extent that we fail to introduce new and innovative products, or such products are not accepted in the market or suffer significant delays in development, we may lose market share to our competitors, which will be difficult or impossible to regain. An inability, for technological or other reasons, to successfully develop and introduce new products on a timely basis could reduce our growth rate or otherwise have an adverse effect on our business. In the past, we have experienced, and are likely to experience in the future, delays in the development and introduction of new products. There can be no assurance that we will keep pace with the rapid rate of change in our markets or that our new products will adequately meet the requirements of the marketplace, achieve market acceptance, or compete successfully with competing technologies. Some of the factors affecting market acceptance of new products and services include:

- availability, quality, and price relative to competing products and services;
- the functionality and performance of new and existing products and services;
- the timing of introduction of new products or services relative to competing products and services;
- scientists' and customers' opinions of the utility of new products or services;
- citation of new products or services in published research;
- regulatory trends and approvals; and
- general trends in life sciences research and applied markets.

We may also have to write off excess or obsolete inventory if sales of our products are not consistent with our expectations or the market requirements for our products change due to technical innovations in the marketplace.

Our success depends upon the continued emergence and growth of markets for analysis of genetic variation and biological function.

Our products are designed for use in the life sciences, diagnostic, agricultural, pharmaceutical, and consumer genomics industries. The usefulness of our technologies depends in part upon the availability of genetic data and its usefulness in clinical, research, and consumer applications. We are focusing on markets for analysis of genetic variation or biological function, namely sequencing, genotyping, and gene expression profiling. These markets are relatively new and emerging, and they may not develop as quickly as we anticipate, or reach what we expect to be their full potential. Other methods of analysis of genetic variation and biological function may emerge and displace the methods we are developing. Also, researchers may not be able to successfully analyze raw genetic data or be able to convert raw genetic data into valuable information. In addition, factors affecting research and development spending generally, such as changes in the regulatory environment affecting life sciences and pharmaceutical companies, and changes in government programs that provide funding to companies and research institutions, could harm our business. If useful genetic data is not available or if our target markets do not develop in a timely manner, demand for our products may grow at a slower rate than we expect.

If we do not successfully manage the development, manufacturing, and launch of new products or services, including product transitions, our financial results could be adversely affected.

We face risks associated with launching new products and pre-announcing products and services when the products or services have not been fully developed or tested. In addition, we may experience difficulty in managing or forecasting customer reactions, purchasing decisions, transition requirements or programs with respect to newly-launched products (or products in development), which could adversely affect sales of our existing products. For instance, in 2017, we announced and launched our NovaSeq 6000 instrument system, which was developed using our new sequencing architecture, and in 2018 we launched our iSeq 100 instrument system, which combines CMOS sensor technology with our proprietary sequencing technology. If our products and services are not able to deliver the performance or results expected by our target markets or are not delivered on a timely basis, our reputation and credibility may suffer. If we encounter development challenges or discover errors in our products late in our development cycle, we may delay the product launch date. The expenses or losses associated with unsuccessful product development or launch activities or a lack of market acceptance of our new products could adversely affect our business, financial condition, or results of operations.

As we announce future products or integrate new products into our portfolio, such as new instruments or instrument platforms, we face numerous risks relating to product transitions and the evolution of our product portfolio. We may be unable to accurately forecast new product demand and the impact of new products on the demand for current or established products. We may experience challenges relating to managing excess and obsolete inventories, managing new or higher product cost structures, and managing different sales and support requirements. Announcements of currently planned or other new products may cause customers to defer or stop purchasing our current or established products until new products become available. In addition, customers may defer or stop purchasing our current or established products as they assess the features and technological characteristics of new products, as compared to our current or established products, before making a financial commitment. If customers elect to purchase newly-introduced products rather than established products, revenue recognition on such purchases may be delayed because the availability of newly-introduced products is generally constrained (compared to established products) as we scale-up manufacturing, sales, and support requirements for newly-introduced products. Our failure to effectively manage the evolution of our product portfolio, including product transitions or introductions, could adversely affect our business, financial condition, or results of operations.

We face intense competition, which could render our products obsolete, result in significant price reductions, or substantially limit the volume of products that we sell.

We compete with life sciences companies that design, manufacture, and market products for analysis of genetic variation and biological function and other applications using a wide range of competing technologies. We anticipate that we will continue to face increased competition as existing companies develop new or improved products and as new companies enter the market with new technologies. One or more of our competitors may render one or more of our technologies obsolete or uneconomical. Some of our competitors have greater financial and personnel resources, broader product lines, more focused product lines, a more established customer base, and more experience in research and development than we do. Furthermore, life sciences, clinical genomics, and pharmaceutical companies, which are our potential customers and strategic partners, could also develop competing products. We believe that customers in our markets display a significant amount of loyalty to their initial supplier of a particular product; therefore, it may be difficult to generate sales to potential customers who have purchased products from competitors. To the extent we are unable to be the first to develop or supply new products, our competitive position may suffer.

The market for molecular diagnostics products is currently limited and highly competitive, with several large companies already having significant market share, intellectual property portfolios, and regulatory expertise. For example, the market for noninvasive prenatal testing is rapidly developing, and if our competitors are able to develop and commercialize products superior to or less expensive than ours, our business could be adversely impacted. Established diagnostic companies also have an installed base of instruments in several markets, including clinical and reference laboratories, which could deter acceptance of our products. In addition, some of these companies have formed alliances with genomics companies that provide them access to genetic information that may be incorporated into their diagnostic tests, potentially creating a competitive advantage for them.

We and our competitors also compete on the basis of price. As the cost of analyzing genetic variation and biological function falls over time, as we expect, we cannot be sure that the demand for related products and services will increase proportionately. In the future, if the demand for our products and services proves to be more insensitive to lower sequencing costs than we expect, our business, financial condition, and results of operations will be adversely affected.

We depend on third-party manufacturers and suppliers for some of our products, or sub-assemblies, components, and materials used in our products, and if shipments from these manufacturers or suppliers are delayed or interrupted, or if the quality of the products, components, or materials supplied do not meet our requirements, we may not be able to launch, manufacture, or ship our products in a timely manner, or at all.

The complex nature of our products requires customized, precision-manufactured sub-assemblies, components, and materials that currently are available from a limited number of sources, and, in the case of some sub-assemblies, components, and materials, from only a single source. If deliveries from these vendors are delayed or interrupted for any reason, or if we are otherwise unable to secure a sufficient supply, we may not be able to obtain these sub-assemblies, components, or materials on a timely basis or in sufficient quantities or at satisfactory qualities, or at all, in order to meet demand for our products. We may need to enter into contractual relationships with manufacturers for commercial-scale production of some of our products, in whole or in part, or develop these capabilities internally, and there can be no assurance that we will be able to do this on a timely basis, in sufficient quantities, or on commercially reasonable terms. In addition, the lead time needed to establish a relationship with a new supplier can be lengthy, and we may experience delays in meeting demand in the event we must switch to a new supplier. The time and effort required to qualify a new supplier could result in additional costs, diversion of resources,

or reduced manufacturing yields, any of which would negatively impact our operating results. Accordingly, we may not be able to establish or maintain reliable, high-volume manufacturing at commercially reasonable costs or at all. In addition, the manufacture or shipment of our products may be delayed or interrupted if the quality of the products, sub-assemblies, components, or materials supplied by our vendors does not meet our requirements. Current or future social and environmental regulations or critical issues, such as those relating to the sourcing of conflict minerals from the Democratic Republic of the Congo or the need to eliminate environmentally sensitive materials from our products, could restrict the supply of components and materials used in production or increase our costs. Any delay or interruption to our manufacturing process or in shipping our products could result in lost revenue, which would adversely affect our business, financial condition, or results of operations.

If defects are discovered in our products, we may incur additional unforeseen costs, our products may be subject to recalls, customers may not purchase our products, our reputation may suffer, and ultimately our sales and operating earnings could be negatively impacted.

Our products incorporate complex, precision-manufactured mechanical parts, electrical components, optical components, and fluidics, as well as computer software, any of which may contain errors or failures, especially when first introduced. In the course of conducting our business, we must adequately address quality issues associated with our products and services, including defects in our engineering, design, and manufacturing processes, as well as defects in third-party components included in our products. In addition, new products or enhancements may contain undetected errors or performance problems that, despite testing, are discovered only after commercial shipment. Defects or errors in our products may discourage customers from purchasing our products. The costs incurred in correcting any defects or errors may be substantial and could adversely affect our operating margins. Identifying the root cause of quality issues, particularly those affecting reagents and third-party components, may be difficult, which increases the time needed to address quality issues as they arise, and increases the risk that similar problems could recur. Because our products are designed to be used to perform complex genomic analysis, we expect that our customers will have an increased sensitivity to such defects. If we do not meet applicable regulatory or quality standards, our products may be subject to recall, and, under certain circumstances, we may be required to notify applicable regulatory authorities about a recall. If our products are subject to recall or shipment holds, our reputation, business, financial condition, or results of operations could be adversely affected.

As we develop, market, or sell diagnostic tests, we may encounter delays in receipt, or limits in the amount, of reimbursement approvals and public health funding, which will impact our ability to grow revenues in the healthcare market.

Physicians and patients may not order diagnostic tests that we develop, market, sell, or enable such as our prenatal tests, unless third-party payors, such as managed care organizations as well as government payors such as Medicare and Medicaid and governmental payors outside of the United States, pay a substantial portion of the test price. Third-party payors are often reluctant to reimburse healthcare providers for the use of medical tests that involve new technologies or provide novel diagnostic information. In addition, third-party payors are increasingly limiting reimbursement coverage for medical diagnostic products and, in many instances, are exerting pressure on diagnostic product suppliers to reduce their prices. Reimbursement by a payor may depend on a number of factors, including a payor's determination that tests using our technologies are:

- not experimental or investigational;
- medically necessary;
- appropriate for the specific patient;
- cost-effective;
- supported by peer-reviewed publications; and
- included in clinical practice guidelines.

Since each third-party payor often makes reimbursement decisions on an individual patient basis, obtaining such approvals is a time-consuming and costly process that requires us to provide scientific and clinical data supporting the clinical benefits of each of our products. As a result, there can be no assurance that reimbursement approvals will be obtained. This process can delay the broad market introduction of new products, and could have a negative effect on our results of operations. As a result, third-party reimbursement may not be consistent or financially adequate to cover the cost of diagnostic products that we develop, market, or sell. This could limit our ability to sell our products or cause us to reduce prices, which would adversely affect our results of operations.

Even if our tests are being reimbursed, third-party payors may withdraw their coverage policies, cancel their contracts with our customers at any time, review and adjust the rate of reimbursement, require co-payments from patients, or stop paying for our tests, which would reduce our revenues. In addition, insurers, including managed care organizations as well as government payors such as Medicare and Medicaid, have increased their efforts to control the cost, utilization, and delivery of healthcare services. These measures have resulted in reduced payment rates and decreased utilization for the clinical laboratory industry. Reductions in the reimbursement rate of payors may occur in the future. Reductions in the prices at which our tests are reimbursed could have a negative impact on our results of operations.

Litigation, other proceedings, or third-party claims of intellectual property infringement could require us to spend significant time and money and could prevent us from selling our products or services.

Our success depends in part on our non-infringement of the patents or proprietary rights of third parties. Third parties have asserted and may in the future assert that we are employing their proprietary technology without authorization. As we enter new markets or introduce new products, we expect that competitors will likely claim that our products infringe their intellectual property rights as part of a business strategy to impede our successful competition. In addition, third parties may have obtained and may in the future obtain patents allowing them to claim that the use of our technologies infringes these patents. We could incur substantial costs and divert the attention of our management and technical personnel in defending ourselves against any of these claims. Any adverse ruling or perception of an adverse ruling in defending ourselves against these claims could have an adverse impact on our stock price, which may be disproportionate to the actual impact of the ruling itself. Furthermore, parties making claims against us may be able to obtain injunctive or other relief, which effectively could block our ability to develop further, commercialize, or sell products or services, and could result in the award of substantial damages against us. In the event of a successful infringement claim against us, we may be required to pay damages and obtain one or more licenses from third parties or be prohibited from selling certain products or services. In addition, we may be unable to obtain these licenses at a reasonable cost, if at all. We could therefore incur substantial costs related to royalty payments for licenses obtained from third parties, which could negatively affect our gross margins and earnings per share. In addition, we could encounter delays in product introductions while we attempt to develop alternative methods or products. Defense of any lawsuit or failure to obtain any of these licenses on favorable terms could prevent us from commercializing products, and the prohibition of sale of any of our products or services could adversely affect our ability to grow or maintain profitability.

Reduction or delay in research and development budgets and government funding may adversely affect our revenue.

The timing and amount of revenues from customers that rely on government and academic research funding may vary significantly due to factors that can be difficult to forecast, and there remains significant uncertainty concerning government and academic research funding worldwide. Funding for life science research has increased more slowly during the past several years compared to previous years and has declined in some countries. Government funding of research and development is subject to the political process, which is inherently fluid and unpredictable. Other programs, such as defense, entitlement programs, or general efforts to reduce budget deficits could be viewed by governments as a higher priority. These budgetary pressures may result in reduced allocations to government agencies that fund research and development activities, such as the U.S. National Institute of Health, or NIH. Past proposals to reduce budget deficits have included reduced NIH and other research and development allocations. Any shift away from the funding of life sciences research and development or delays surrounding the approval of government budget proposals may cause our customers to delay or forego purchases of our products, which could adversely affect our business, financial condition, or results of operations.

Our acquisitions expose us to risks that could adversely affect our business, and we may not achieve the anticipated benefits of acquisitions of businesses or technologies.

As part of our strategy to develop and identify new products, services, and technologies, we have made, and may continue to make, acquisitions of technologies, products, or businesses. Acquisitions involve numerous risks and operational, financial, and managerial challenges, including the following, any of which could adversely affect our business, financial condition, or results of operations:

- difficulties in integrating new operations, technologies, products, and personnel;
- lack of synergies or the inability to realize expected synergies and cost-savings;
- difficulties in managing geographically dispersed operations;

- underperformance of any acquired technology, product, or business relative to our expectations and the price we paid;
- negative near-term impacts on financial results after an acquisition, including acquisition-related earnings charges;
- the potential loss of key employees, customers, and strategic partners of acquired companies;
- claims by terminated employees and shareholders of acquired companies or other third parties related to the transaction;
- the issuance of dilutive securities, assumption or incurrence of additional debt obligations or expenses, or use of substantial portions of our cash;
- diversion of management's attention and company resources from existing operations of the business;
- inconsistencies in standards, controls, procedures, and policies;
- the impairment of intangible assets as a result of technological advancements, or worse-than-expected performance of acquired companies; and
- assumption of, or exposure to, known or unknown contingent liabilities or liabilities that are difficult to identify or accurately quantify.

In addition, the successful integration of acquired businesses requires significant efforts and expense across all operational areas, including sales and marketing, research and development, manufacturing, finance, legal, and information technologies. There can be no assurance that any of the acquisitions we make will be successful or will be, or will remain, profitable. Our failure to successfully address the above risks may prevent us from achieving the anticipated benefits from any acquisition in a reasonable time frame, or at all.

If we are unable to increase our manufacturing or service capacity and develop and maintain operation of our manufacturing or service capability, we may not be able to launch or support our products or services in a timely manner, or at all.

We continue to increase our manufacturing and service capacity to meet the anticipated demand for our products. Although we have significantly increased our manufacturing and service capacity and we believe we have plans in place sufficient to ensure we have adequate capacity to meet our current business plans, there are uncertainties inherent in expanding our manufacturing and service capabilities, and we may not be able to sufficiently increase our capacity in a timely manner. For example, manufacturing and product quality issues may arise as we increase production rates at our manufacturing facilities and launch new products. Also, we may not manufacture the right product mix to meet customer demand, especially as we introduce new products. As a result, we may experience difficulties in meeting customer, collaborator, and internal demand, in which case we could lose customers or be required to delay new product introductions, and demand for our products could decline. Additionally, in the past, we have experienced variations in manufacturing conditions and quality control issues that have temporarily reduced or suspended production of certain products. Due to the intricate nature of manufacturing complex instruments, consumables, and products that contain DNA and enzymes, we may encounter similar or previously unknown manufacturing difficulties in the future that could significantly reduce production yields, impact our ability to launch or sell these products (or to produce them economically), or prevent us from achieving expected performance levels, any of which could adversely affect our business, financial condition, or results of operations.

An interruption in our ability to manufacture our products or an inability to obtain key components or raw materials due to a catastrophic disaster or infrastructure could adversely affect our business.

We currently manufacture in a limited number of locations. Our manufacturing facilities are located in San Diego and the San Francisco Bay Area in California; Madison, Wisconsin; and Singapore. These areas are subject to natural disasters such as earthquakes, wildfires, or floods. If a natural disaster were to damage one of our facilities significantly or if other events were to cause our operations to fail, we may be unable to manufacture our products, provide our services, or develop new products. In addition, if the capabilities of our suppliers and component manufacturers are limited or stopped, due to disasters, quality, regulatory, or other reasons, it could negatively impact our ability to manufacture our products.

Many of our manufacturing processes are automated and are controlled by our custom-designed laboratory information management system (LIMS). Additionally, the decoding process in our array manufacturing requires significant network and

storage infrastructure. If either our LIMS system or our networks or storage infrastructure were to fail for an extended period of time, our ability to manufacture our products on a timely basis could be adversely impacted and we could be prevented from achieving our expected shipments in any given period.

If we lose our key personnel or are unable to attract and retain additional personnel, we may be unable to achieve our goals.

Our future success depends upon the continuing services of members of our senior management team and scientific and engineering personnel. The loss of their services could adversely impact our ability to achieve our business objectives. In addition, the continued growth of our business depends on our ability to hire additional qualified personnel with expertise in molecular biology, chemistry, biological information processing, software, engineering, sales, marketing, and technical support. We compete for qualified management and scientific personnel with other life science and technology companies, universities, and research institutions. Competition for these individuals, particularly in the San Diego and San Francisco areas, is intense, and the turnover rate can be high. Moreover, changes in immigration policies, laws and regulations in the United States or other jurisdictions may make it more difficult for us to hire and retain members of management and scientific and engineering personnel. Failure to attract and retain management and scientific and engineering personnel could prevent us from pursuing collaborations or developing our products or technologies. Additionally, integration of acquired companies and businesses can be disruptive, causing key employees of the acquired business to leave. Further, we use share-based compensation, including restricted stock units and performance stock units to attract key personnel, incentivize them to remain with us, and align their interests with ours by building long-term stockholder value. If our stock price decreases, the value of these equity awards decreases and, therefore, reduces a key employee's incentive to stay.

Any inability to effectively protect our proprietary technologies could harm our competitive position.

The proprietary positions of companies developing tools for the life sciences, genomics, forensics, agricultural, and pharmaceutical industries, including our proprietary position, generally are uncertain and involve complex legal and factual questions. Our success depends to a large extent on our ability to develop proprietary products and technologies and to obtain patents and maintain adequate protection of our intellectual property in the United States and other countries. The laws of some foreign countries do not protect proprietary rights to the same extent as the laws of the United States, and many companies have encountered significant challenges in establishing and enforcing their proprietary rights outside of the United States. These challenges can be caused by the absence of rules and methods for the establishment and enforcement of intellectual property rights outside of the United States.

We will be able to protect our proprietary rights from unauthorized use by third parties only to the extent that our proprietary technologies are covered by valid and enforceable patents or are effectively maintained as trade secrets. Any finding that our patents or applications are unenforceable could harm our ability to prevent others from practicing the related technology, and a finding that others have inventorship or ownership rights to our patents and applications could require us to obtain certain rights to practice related technologies, which may not be available on favorable terms, if at all. Furthermore, as issued patents expire, we may lose some competitive advantage as others develop competing products, and, as a result, we may lose revenue.

In addition, our existing patents and any future patents we obtain may not be sufficiently broad to prevent others from practicing our technologies or from developing competing products and may therefore fail to provide us with any competitive advantage. We may need to initiate lawsuits to protect or enforce our patents, or litigate against third-party claims, which would be expensive, and, if we lose, may cause us to lose some of our intellectual property rights and reduce our ability to compete in the marketplace. Furthermore, these lawsuits may divert the attention of our management and technical personnel. There is also the risk that others may independently develop similar or alternative technologies or design around our patented technologies. In that regard, certain patent applications in the United States may be maintained in secrecy until the patents issue, and publication of discoveries in the scientific or patent literature tend to lag behind actual discoveries by several months.

We also rely upon trade secrets and proprietary know-how protection for our confidential and proprietary information, and we have taken security measures to protect this information. These measures, however, may not provide adequate protection for our trade secrets, know-how, or other confidential information.

Our strategic investments and joint ventures may result in losses.

We periodically make strategic investments in various public and private companies with businesses or technologies that may complement our business. In addition, we periodically form companies, such as Helix, that remain consolidated within our financial statements but receive substantial funding from third-party investors who are granted certain control and

governance rights. The market values of these strategic investments may fluctuate due to market conditions and other conditions over which we have no control. Other-than-temporary declines in the market price and valuations of the securities that we hold in other companies would require us to record losses related to our investment. This could result in future charges to our earnings. It is uncertain whether or not we will realize any long-term benefits associated with these strategic investments.

Security breaches, including with respect to cyber-security, and other disruptions could compromise our information, products, and services and expose us to liability, which could cause our business and reputation to suffer.

In the ordinary course of our business, we collect and store sensitive data, including intellectual property, our proprietary business information (and that of our customers), and personally identifiable information of our customers and employees, in our data centers and on our networks. The secure maintenance of this information is important to our operations and business strategy. Despite our security measures, our information technology and infrastructure may be vulnerable to cyber-attacks by hackers or breached due to employee error, malfeasance, or other disruptions. As a leader in the field of genetic analysis, we may face cyber-attacks that attempt to penetrate our network security, including our data centers; sabotage or otherwise disable our research, products, and services, including instruments at our customers' sites; misappropriate our or our customers' and partners' proprietary information, which may include personally identifiable information; or cause interruptions of our internal systems and services. Any such breach could compromise our networks and the information stored there could be accessed, publicly disclosed, lost, or stolen. Any such access, disclosure, or other loss of information could result in legal claims or proceedings, liability under laws that protect the privacy of personal information, and damage to our reputation.

Our products, if used for the diagnosis of disease, could be subject to government regulation, and the regulatory approval and maintenance process for such products may be expensive, time-consuming, and uncertain both in timing and in outcome.

Our products are not subject to FDA clearance or approval if they are not intended to be used for the diagnosis, treatment or prevention of disease. However, as we expand our product line to encompass products that are intended to be used for the diagnosis of disease, such as our FDA-regulated MiSeqDx, certain of our products will become subject to regulation by the FDA, or comparable international agencies, including requirements for regulatory clearance or approval of such products before they can be marketed. Such regulatory approval processes or clearances may be expensive, time-consuming, and uncertain, and our failure to obtain or comply with such approvals and clearances could have an adverse effect on our business, financial condition, or operating results. In addition, changes to the current regulatory framework, including the imposition of additional or new regulations, could arise at any time during the development or marketing of our products, which may negatively affect our ability to obtain or maintain FDA or comparable regulatory approval of our products, if required.

Molecular diagnostic products are regulated as medical devices by the FDA and comparable international agencies and may require either clearance from the FDA following the 510(k) pre-market notification process or premarket approval from the FDA, in each case prior to marketing. Obtaining the requisite regulatory approvals can be expensive and may involve considerable delay. If we fail to obtain, or experience significant delays in obtaining, regulatory approvals for molecular diagnostic products that we develop, we may not be able to launch or successfully commercialize such products in a timely manner, or at all.

In addition, if our products labeled as "For Research Use Only. Not for use in diagnostic procedures," or RUO, are used, or could be used, for the diagnosis of disease, the regulatory requirements related to marketing, selling, and supporting such products could change or be uncertain, even if such use by our customers is without our consent. If the FDA or other regulatory authorities assert that any of our RUO products are subject to regulatory clearance or approval, our business, financial condition, or results of operations could be adversely affected.

If the FDA requires in the future that any of our LDT products be subject to regulatory clearance or approval, our business, financial condition, or results of operations could be adversely affected.

Certain of our diagnostic products are currently available through laboratories that are certified under the Clinical Laboratory Improvements Amendments (CLIA) of 1988. These products are commonly called "laboratory developed tests," or LDTs. For a number of years, the FDA has exercised its regulatory enforcement discretion not to regulate LDTs as medical devices if created and used within a single laboratory. However, the FDA has been reconsidering its enforcement discretion policy and has commented that regulation of LDTs may be warranted because of the growth in the volume and complexity of testing services utilizing LDTs. In October 2014, the FDA published two draft guidance documents suggesting an approach for registration and listing of laboratories and assays along with a framework for regulation of LDTs by the FDA based on risk to patients rather than whether the LDTs were made by a conventional manufacturer or a single laboratory. The draft framework

guidance includes pre-market review for higher-risk LDTs, including many used to guide treatment decisions, as well as companion diagnostics that have entered the market as LDTs. We cannot predict the nature or extent of the FDA's final guidance or regulation of LDTs, in general, or with respect to our LDTs, in particular. If the FDA requires in the future that LDT products are subject to regulatory clearance or approval, our business, financial condition, or results of operations could be adversely affected.

If product or service liability lawsuits are successfully brought against us, we may face reduced demand for our products and incur significant liabilities.

Our products and services are used for sensitive applications, and we face an inherent risk of exposure to product or service liability claims if our products or services are alleged to have caused harm, resulted in false negatives or false positives, or do not perform in accordance with specifications. Product liability claims filed against us or against third parties to whom we may have an obligation could be costly and time-consuming to defend and result in substantial damages or reputational risk. We cannot be certain that we would be able to successfully defend any product or service liability lawsuit brought against us. Regardless of merit or eventual outcome, product or service liability claims may result in:

- decreased demand for our products;
- injury to our reputation;
- increased product liability insurance costs;
- costs of related litigation; and
- substantial monetary awards to plaintiffs.

Although we carry product and service liability insurance, if we become the subject of a successful product or service liability lawsuit, our insurance may not cover all substantial liabilities, which could have an adverse effect on our business, financial condition, or results of operations.

Doing business internationally creates operational and financial risks for our business.

Conducting and launching operations on an international scale requires close coordination of activities across multiple jurisdictions and time zones and consumes significant management resources. If we fail to coordinate and manage these activities effectively, including the risks noted below, our business, financial condition, or results of operations could be adversely affected. We have sales offices located internationally throughout Europe, the Asia-Pacific region, and Brazil, as well as manufacturing facilities in Singapore. Shipments to customers outside the United States comprised 45% , 46% , and 46% of our total revenue for fiscal years 2017, 2016, and 2015, respectively.

During 2017, a significant portion of our international sales were denominated in foreign currencies while the majority of our purchases of raw materials were denominated in U.S. dollars. Changes in the value of the relevant currencies may affect the cost of certain items required in our operations. Changes in currency exchange rates may also affect the relative prices at which we are able to sell products in the same market. Our revenues from international customers may be negatively impacted as increases in the U.S. dollar relative to our international customers' local currency could make our products more expensive, impacting our ability to compete. Our costs of materials from international suppliers may increase if, in order to continue doing business with us, they raise their prices as the value of the U.S. dollar decreases relative to their local currency. Foreign policies and actions regarding currency valuation could result in actions by the United States and other countries to offset the effects of such fluctuations. Recent global financial conditions have led to a high level of volatility in foreign currency exchange rates and that level of volatility may continue, which could adversely affect our business, financial condition, or results of operations.

In addition to the foregoing risks, international operations entail the following risks:

- longer payment cycles and difficulties in collecting accounts receivable outside of the United States;
- longer sales cycles due to the volume of transactions taking place through public tenders;
- challenges in staffing and managing foreign operations;
- tariffs and other trade barriers;

- unexpected changes in legislative or regulatory requirements of foreign countries into which we sell our products;
- difficulties in obtaining export licenses or in overcoming other trade barriers and restrictions resulting in delivery delays; and
- significant taxes or other burdens of complying with a variety of foreign laws.

Additionally, we must comply with complex foreign and U.S. laws and regulations, such as the U.S. Foreign Corrupt Practices Act, the U.K. Bribery Act, and other local laws prohibiting corrupt payments to governmental officials, anti-competition regulations and sanctions imposed by the U.S. Office of Foreign Assets Control and other similar laws and regulations. Violations of these laws and regulations could result in fines and penalties, criminal sanctions, restrictions on our business conduct and on our ability to offer our products in one or more countries, and could also materially affect our brand, our ability to attract and retain employees, our international operations, our business and our operating results. Although we have implemented policies and procedures designed to ensure compliance with these laws and regulations, there can be no assurance that our employees, contractors, or agents will not violate our policies.

We are subject to risks related to taxation in multiple jurisdictions.

We are subject to income taxes in both the United States and numerous foreign jurisdictions. Significant judgments based on interpretations of existing tax laws or regulations are required in determining the provision for income taxes. Our effective income tax rate could be adversely affected by various factors, including, but not limited to, changes in the mix of earnings in tax jurisdictions with different statutory tax rates, changes in the valuation of deferred tax assets and liabilities, changes in existing tax policies, laws, regulations, or rates, changes in the level of non-deductible expenses (including share-based compensation), location of operations, changes in our future levels of research and development spending, mergers and acquisitions, or the result of examinations by various tax authorities. Although we believe our tax estimates are reasonable, if the U.S. Internal Revenue Service or other taxing authority disagrees with the positions taken on our tax returns, we could have additional tax liability, including interest and penalties. If material, payment of such additional amounts upon final adjudication of any disputes could have a material impact on our results of operations and financial position.

Our operating results may vary significantly from period to period, and we may not be able to sustain operating profitability.

Our revenue is subject to fluctuations due to the timing of sales of high-value products and services, the effects of new product launches and related promotions, the timing and availability of our customers' funding, the impact of seasonal spending patterns, the timing and size of research projects our customers perform, changes in overall spending levels in the life sciences industry, and other unpredictable factors that may affect customer ordering patterns. Given the difficulty in predicting the timing and magnitude of sales for our products and services, we may experience quarter-to-quarter fluctuations in revenue resulting in the potential for a sequential decline in quarterly revenue. While we anticipate future growth, there is some uncertainty as to the timing of revenue recognition on a quarterly basis. This is because a substantial portion of our quarterly revenue is typically recognized in the last month of a quarter and because the pattern for revenue generation during that month is normally not linear, with a concentration of orders in the final weeks of the quarter. In light of that, our revenue cut-off and recognition procedures, together with our manufacturing and shipping operations, may experience increased pressure and demand during the time period shortly before the end of a fiscal quarter.

A large portion of our expenses are relatively fixed, including expenses for facilities, equipment, and personnel. To meet the anticipated growth in our business, we may incur fixed expenses, such as costs related to facility expansions, before we generate revenue sufficient to fully support such expenses. In addition, we expect operating expenses to continue to increase significantly in absolute dollars, and we expect that our research and development and selling and marketing expenses will increase at a higher rate in the future as a result of the development and launch of new products. Accordingly, our ability to sustain profitability will depend in part on the rate of growth, if any, of our revenue and on the level of our expenses, and if revenue does not grow as anticipated, we may not be able to maintain annual or quarterly profitability. Any significant delays in the commercial launch of our products, unfavorable sales trends in our existing product lines, or impacts from the other factors mentioned above, could adversely affect our future revenue growth or cause a sequential decline in quarterly revenue. In addition, non-cash share-based compensation expense and expenses related to prior and future acquisitions are also likely to continue to adversely affect our future profitability. Due to the possibility of significant fluctuations in our revenue and expenses, particularly from quarter to quarter, we believe that quarterly comparisons of our operating results are not a good indication of our future performance. If our operating results fluctuate or do not meet the expectations of stock market analysts and investors, our stock price could decline.

From time to time, we receive large orders that have a significant effect on our operating results in the period in which the order is recognized as revenue. The timing of such orders is difficult to predict, and the timing of revenue recognition from such orders may affect period-to-period changes in net sales. As a result, our operating results could vary materially from quarter to quarter based on the receipt of such orders and their ultimate recognition as revenue.

We may not be able to convert our order backlog into revenue.

Our backlog consists of orders believed to be firm as of the balance sheet date. However, we may allow customers to make product substitutions as we launch new products. We may not receive revenue from some of these orders, and the order backlog we report may not be indicative of our future revenue. Many events can cause an order to be delayed or not completed at all, some of which may be out of our control. If we delay fulfilling customer orders, or if customers reconsider their orders, those customers may seek to cancel or modify their orders with us. Customers may otherwise seek to cancel or delay their orders even if we are prepared to fulfill them. If our orders in backlog do not result in sales, our operating results may suffer.

Disruption of critical information technology systems or material breaches in the security of our systems could have an adverse effect on our operations, business, customer relations, and financial condition.

Information technology (IT) systems help us operate efficiently, interface with customers, maintain financial accuracy and efficiency, and accurately produce our financial statements. IT systems are used extensively in virtually all aspects of our business, including product manufacturing and supply chain, sales forecast, order fulfillment and billing, customer service, logistics, and management of financial reports and data. Our success depends, in part, on the continued and uninterrupted performance of our IT systems. IT systems may be vulnerable to damage from a variety of sources, including telecommunications or network failures, power loss, natural disasters, human acts, terrorist attacks, computer viruses, computer denial-of-service attacks, unauthorized access to customer or employee data or company trade secrets, and other attempts to harm our systems. Certain of our systems are not redundant, and our disaster recovery planning is not sufficient for every eventuality. Despite any precautions we may take, such problems could result in, among other consequences, disruption of our operations, which could harm our reputation and financial results.

If we do not allocate and effectively manage the resources necessary to build and sustain the proper IT infrastructure, we could be subject to transaction errors, processing inefficiencies, the loss of customers, business disruptions, or the loss of or damage to intellectual property through security breach. If our data management systems do not effectively collect, store, process, and report relevant data for the operation of our business, whether due to equipment malfunction or constraints, software deficiencies, or human error, our ability to effectively plan, forecast, and execute our business plan and comply with applicable laws and regulations will be impaired. Any such impairment could adversely affect our reputation, financial condition, results of operations, cash flows, and the timeliness with which we report our internal and external operating results.

As we continuously adjust our work-flow and business practices and add additional functionality to our enterprise resource planning software and other software applications, problems could arise that we have not foreseen, including interruptions in service, loss of data, or reduced functionality. Such problems could adversely impact our ability to provide quotes, take customer orders, and otherwise run our business in a timely manner. In addition, if our new systems fail to provide accurate and increased visibility into pricing and cost structures, it may be difficult to improve or maximize our profit margins. As a result, our results of operations and cash flows could be adversely affected.

Changes in accounting standards and subjective assumptions, estimates, and judgments by management related to complex accounting matters could significantly affect our financial results or financial condition.

Generally accepted accounting principles and related accounting pronouncements, implementation guidelines, and interpretations with regard to a wide range of matters that are relevant to our business, such as revenue recognition, asset impairment and fair value determinations, inventories, business combinations and intangible asset valuations, and litigation, are highly complex and involve many subjective assumptions, estimates, and judgments. In particular, accounting rules related to companies that we form together with, or that receive substantial funding from, third-party investors, such as Helix, are highly complex and involve many subjective assumptions, estimates, and judgments. Changes in these rules or their interpretation or changes in underlying assumptions, estimates, or judgments could significantly change our reported or expected financial performance or financial condition.

Ethical, legal, and social concerns related to the use of genetic information could reduce demand for our products or services.

Our products may be used to provide genetic information about humans, agricultural crops, other food sources, and other living organisms. The information obtained from our products could be used in a variety of applications, which may have underlying ethical, legal, and social concerns regarding privacy and the appropriate uses of the resulting information, including preimplantation genetic screening of embryos, prenatal genetic testing, genetic engineering or modification of agricultural products, or testing genetic predisposition for certain medical conditions, particularly for those that have no known cure. Governmental authorities could, for social or other purposes, call for limits on or regulation of the use of genetic testing or prohibit testing for genetic predisposition to certain conditions, particularly for those that have no known cure. Similarly, such concerns may lead individuals to refuse to use genetics tests, even if permissible. These and other ethical, legal, and social concerns about genetic testing may limit market acceptance of our technology for certain applications or reduce the potential markets for our technology, either of which could have an adverse effect on our business, financial condition, or results of operations.

Conversion of our outstanding convertible notes may result in losses.

As of December 31, 2017, we had \$633 million aggregate principal amount of convertible notes due 2019, and \$517 million aggregate principal amount of convertible notes due 2021 outstanding. The notes are convertible into cash, and if applicable, shares of our common stock under certain circumstances, including trading price conditions related to our common stock. Upon conversion, we are required to record a gain or loss for the difference between the fair value of the notes to be extinguished and their corresponding net carrying value. The fair value of the notes to be extinguished depends on our current incremental borrowing rate. The net carrying value of our notes has an implicit interest rate of 2.9% with respect to convertible notes due 2019, and 3.5% with respect to convertible notes due 2021. If our incremental borrowing rate at the time of conversion is lower than the implied interest rate of the notes, we will record a loss in our consolidated statement of income during the period in which the notes are converted.

Our Certificate of Incorporation and Bylaws include anti-takeover provisions that may make it difficult for another company to acquire control of us or limit the price investors might be willing to pay for our stock.

Certain provisions of our Certificate of Incorporation and Bylaws could delay the removal of incumbent directors and could make it more difficult to successfully complete a merger, tender offer, or proxy contest involving us. Our Certificate of Incorporation has provisions that give our Board the ability to issue preferred stock and determine the rights and designations of the preferred stock at any time without stockholder approval. The rights of the holders of our common stock will be subject to, and may be adversely affected by, the rights of the holders of any preferred stock that may be issued in the future. The issuance of preferred stock, while providing flexibility in connection with possible acquisitions and other corporate purposes, could have the effect of making it more difficult for a third party to acquire, or of discouraging a third party from acquiring, a majority of our outstanding voting stock. In addition, the staggered terms of our board of directors could have the effect of delaying or deferring a change in control.

In addition, certain provisions of the Delaware General Corporation Law (DGCL), including Section 203 of the DGCL, may have the effect of delaying or preventing changes in the control or management of Illumina. Section 203 of the DGCL provides, with certain exceptions, for waiting periods applicable to business combinations with stockholders owning at least 15% and less than 85% of the voting stock (exclusive of stock held by directors, officers, and employee plans) of a company.

The above factors may have the effect of deterring hostile takeovers or otherwise delaying or preventing changes in the control or management of Illumina, including transactions in which our stockholders might otherwise receive a premium over the fair market value of our common stock.

ITEM 1B. *Unresolved Staff Comments.*

None.

ITEM 2. Properties.

The following table summarizes the facilities we lease as of December 31, 2017, including the location and size of each principal facility, and their designated use. We believe our facilities are adequate for our current and near-term needs, and will be able to locate additional facilities as needed.

Location	Approximate Square Feet	Operation	Lease Expiration Dates
San Diego, CA	1,218,000	R&D, Manufacturing, Warehouse, Distribution, and Administrative	2018 – 2031
San Francisco Bay Area, CA	616,000	R&D, Manufacturing, Warehouse, and Administrative	2018 – 2025
Singapore	395,000	R&D, Manufacturing, Warehouse, Distribution, and Administrative	2018 – 2025
Cambridge, United Kingdom*	92,000	R&D, Manufacturing, and Administrative	2020 – 2024
Eindhoven, the Netherlands	42,000	Distribution and Administrative	2020
Madison, WI*	73,000	R&D, Manufacturing, Warehouse, Distribution, and Administrative	2018 – 2019
Other*	78,000	Administrative	2018 – 2022

*Excludes approximately 309,000 square feet for which the leases do not commence until 2018 and beyond.

ITEM 3. Legal Proceedings.

We are involved in various lawsuits and claims arising in the ordinary course of business, including actions with respect to intellectual property, employment, and contractual matters. In connection with these matters, we assess, on a regular basis, the probability and range of possible loss based on the developments in these matters. A liability is recorded in the financial statements if it is believed to be probable that a loss has been incurred and the amount of the loss can be reasonably estimated. Because litigation is inherently unpredictable and unfavorable results could occur, assessing contingencies is highly subjective and requires judgments about future events. We regularly review outstanding legal matters to determine the adequacy of the liabilities accrued and related disclosures. The amount of ultimate loss may differ from these estimates. Each matter presents its own unique circumstances, and prior litigation does not necessarily provide a reliable basis on which to predict the outcome, or range of outcomes, in any individual proceeding. Because of the uncertainties related to the occurrence, amount, and range of loss on any pending litigation or claim, we are currently unable to predict their ultimate outcome, and, with respect to any pending litigation or claim where no liability has been accrued, to make a meaningful estimate of the reasonably possible loss or range of loss that could result from an unfavorable outcome. In the event opposing litigants in outstanding litigations or claims ultimately succeed at trial and any subsequent appeals on their claims, any potential loss or charges in excess of any established accruals, individually or in the aggregate, could have a material adverse effect on our business, financial condition, results of operations, and/or cash flows in the period in which the unfavorable outcome occurs or becomes probable, and potentially in future periods.

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

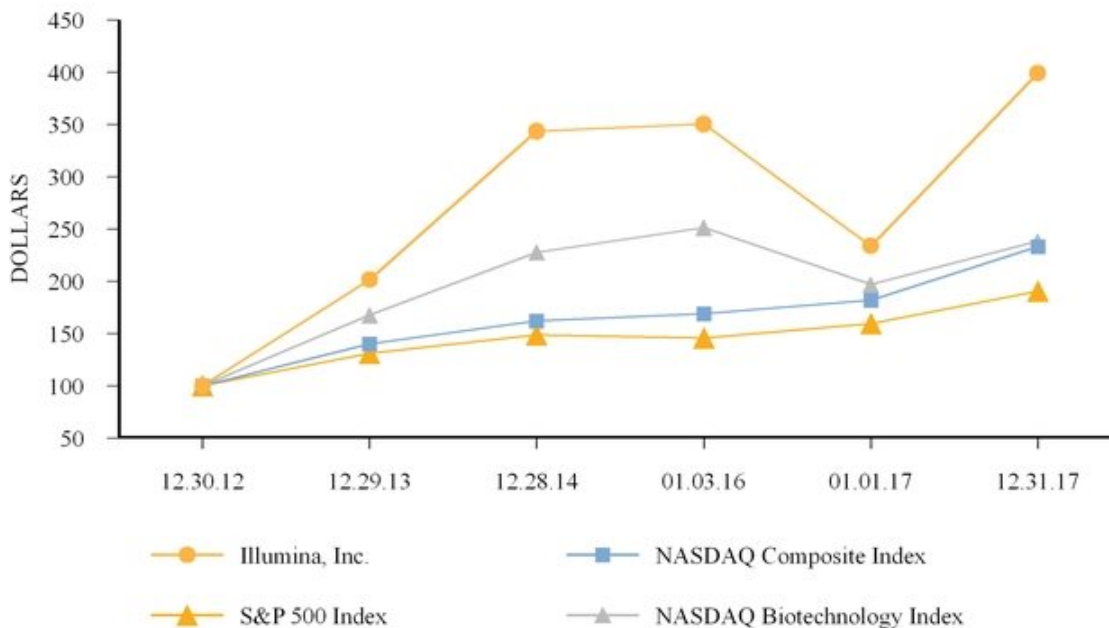
Our common stock has been quoted on The NASDAQ Global Select Market under the symbol “ILMN” since July 28, 2000. Prior to that time, there was no public market for our common stock. The following table sets forth, for the fiscal periods indicated, the quarterly high and low sales prices per share of our common stock as reported on The NASDAQ Global Select Market.

	2017		2016	
	High	Low	High	Low
First Quarter	\$ 174.32	\$ 128.16	\$ 188.25	\$ 130.37
Second Quarter	\$ 189.48	\$ 167.16	\$ 178.77	\$ 127.10
Third Quarter	\$ 214.34	\$ 167.98	\$ 182.67	\$ 132.65
Fourth Quarter	\$ 230.72	\$ 198.21	\$ 186.88	\$ 119.37

Stock Performance Graph

The graph below compares the cumulative total stockholder returns on our common stock for the last five fiscal years with the cumulative total stockholder returns on the NASDAQ Composite Index, the NASDAQ Biotechnology Index, and the S&P 500 Index for the same period. The graph assumes that \$100 was invested on December 30, 2012 in our common stock and in each index and that all dividends were reinvested. No cash dividends have been declared on our common stock. Stockholder returns over the indicated period should not be considered indicative of future stockholder returns.

Compare 5-Year Cumulative Total Return among Illumina, NASDAQ Composite Index, NASDAQ Biotechnology Index, and S&P 500 Index



Holders

As of February 9, 2018 , we had 163 record holders of our common stock.

Dividends

We have never paid cash dividends and have no present intention to pay cash dividends in the foreseeable future. The indentures for our 0% convertible senior notes due 2019 and 0.5% convertible senior notes due in 2021, which notes are convertible into cash and, in certain circumstances, shares of our common stock, require us to increase the conversion rate applicable to the notes if we pay any cash dividends.

Purchases of Equity Securities by the Issuer

On May 4, 2017, our Board of Directors authorized a share repurchase program to repurchase \$250 million of outstanding common stock. The repurchases may be completed under a 10b5-1 plan or at management's discretion. The following table summarizes shares repurchased pursuant to this program during the three months ended December 31, 2017 (in thousands except for price per share):

<u>Period</u>	<u>Total Number of Shares Purchased (1)</u>	<u>Average Price Paid per Share</u>	<u>Total Number of Shares Purchased as Part of Publicly Announced Programs</u>	<u>Approximate Dollar Value of Shares that May Yet Be Purchased Under the Programs</u>
October 2, 2017 - October 29, 2017	368	\$ 203.99	368	\$ 100,000
October 30, 2017 - November 26, 2017	—	—	—	\$ 100,000
November 27, 2017 - December 31, 2017	—	—	—	\$ 100,000
Total	<u>368</u>	<u>\$ 203.99</u>	<u>368</u>	<u>\$ 100,000</u>

(1) All shares purchased during the three months ended December 31, 2017 , were made in open-market transactions under a 10b5-1 plan.

Sales of Unregistered Securities

None during the fiscal quarter ended December 31, 2017 .

ITEM 6. Selected Financial Data.

The following table sets forth selected historical consolidated financial data for each of our last five fiscal years during the period ended December 31, 2017. This information should be read in conjunction with the consolidated financial statements and notes thereto included in in Part II, Item 8 of this report.

Statement of Income Data

	Years Ended				
	December 31, 2017 (52 weeks)	January 1, 2017 (52 weeks)	January 3, 2016 (53 weeks)	December 28, 2014 (52 weeks)	December 29, 2013 (52 weeks)
	(In millions, except per share data)				
Total revenue	\$ 2,752	\$ 2,398	\$ 2,220	\$ 1,861	\$ 1,421
Income from operations	\$ 606	\$ 587	\$ 613	\$ 515	\$ 134
Consolidated net income	\$ 678	\$ 428	\$ 458	\$ 353	\$ 125
Net income attributable to Illumina stockholders	\$ 726	\$ 463	\$ 462	\$ 353	\$ 125
Net income attributable to Illumina stockholders for earnings per share	\$ 725	\$ 454	\$ 462	\$ 353	\$ 125
Earnings per share attributable to Illumina stockholders:					
Basic	\$ 4.96	\$ 3.09	\$ 3.19	\$ 2.61	\$ 1.00
Diluted	\$ 4.92	\$ 3.07	\$ 3.10	\$ 2.37	\$ 0.90
Shares used in calculating earnings per share:					
Basic	146	147	145	136	125
Diluted	148	148	149	149	140

Balance Sheet Data

	December 31, 2017	January 1, 2017	January 3, 2016	December 28, 2014	December 29, 2013
	(In millions)				
Cash, cash equivalents and short-term investments	\$ 2,145	\$ 1,559	\$ 1,386	\$ 1,338	\$ 1,166
Total assets	\$ 5,257	\$ 4,281	\$ 3,688	\$ 3,340	\$ 3,019
Long-term debt	\$ 1,182	\$ 1,056	\$ 1,016	\$ 987	\$ 839
Redeemable noncontrolling interests	\$ 220	\$ 44	\$ 33	—	—
Total stockholders' equity	\$ 2,749	\$ 2,270	\$ 1,849	\$ 1,463	\$ 1,533

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

Our Management's Discussion and Analysis of Financial Condition and Results of Operations (MD&A) will help readers understand our results of operations, financial condition, and cash flow. It is provided in addition to the accompanying consolidated financial statements and notes. This MD&A is organized as follows:

- *Business Overview and Outlook* . High level discussion of our operating results and significant known trends that affect our business.
- *Results of Operations* . Detailed discussion of our revenues and expenses.
- *Liquidity and Capital Resources* . Discussion of key aspects of our statements of cash flows, changes in our financial position, and our financial commitments.
- *Off-Balance Sheet Arrangements* . We have no off-balance sheet arrangements.
- *Contractual Obligations*. Tabular disclosure of known contractual obligations as of December 31, 2017 .

- *Critical Accounting Policies and Estimates* . Discussion of significant changes we believe are important to understanding the assumptions and judgments underlying our financial statements.
- *Recent Accounting Pronouncements*.

This MD&A discussion contains forward-looking statements that involve risks and uncertainties. See “Special Note Regarding Forward-Looking Statements” preceding Item 1 of this report for additional factors relating to such statements. See “Risk Factors” in Item 1A of this report for a discussion of certain risk factors applicable to our business, financial condition, and results of operations. Operating results are not necessarily indicative of results that may occur in future periods.

Business Overview and Outlook

We have two reportable segments: Illumina’s core operations (Core Illumina) and one segment related to the combined activities of our consolidated VIEs, GRAIL and Helix (Consolidated VIEs). Following the GRAIL deconsolidation on February 28, 2017, our Consolidated VIEs no longer include GRAIL. For information on GRAIL and Helix, refer to note “11. Segment Information, Geographic Data, and Significant Customers” in Part II, Item 8 of this report.

We are the global leader in sequencing- and array-based technologies for genetic analysis, serving customers in a wide range of markets, enabling the adoption of genomic solutions in research and clinical settings.

Our customers include leading genomic research centers, academic institutions, government laboratories, and hospitals, as well as pharmaceutical, biotechnology, commercial molecular diagnostic laboratories, and consumer genomics companies.

Our portfolio of integrated systems, consumables, and analysis tools is designed to accelerate and simplify genetic analysis. This portfolio addresses the range of genomic complexity, price points, and throughput, enabling customers to select the best solution for their research or clinical challenge.

Consolidated financial highlights include the following:

- Net revenue increased 15% in 2017 over 2016 due to the growth in sales of our sequencing consumables and genotyping services, as well as the launch of our NovaSeq platform, partially offset by lower shipments of our HiSeq instruments. We expect our revenue to continue to increase in 2018 .
- Gross profit as a percentage of revenue (gross margin) decreased to 66.4% in 2017 from 69.5% in 2016 . The gross margin decrease was driven by a variety of factors, including impairment of an acquired intangible asset, an increase in lower-margin array services mix, inventory reserves related to product transitions, and lower instrument margin from the NovaSeq introduction. Our gross margin in future periods will depend on several factors, including: market conditions that may impact our pricing power; sales mix changes among consumables, instruments, and services; product mix changes between established products and new products; excess and obsolete inventories; royalties; our cost structure for manufacturing operations relative to volume; and product support obligations.
- Income from operations as a percentage of revenue decreased to 22.0% in 2017 compared to 24.5% in 2016 primarily due to lower gross margins. We expect research and development and selling, general and administrative expenses to continue to grow.
- In accordance with the Tax Cuts and Jobs Act that was enacted on December 22, 2017 (U.S. Tax Reform), we have recorded a provision for income taxes of \$150 million. The impact of U.S. Tax Reform primarily represents our provisional estimates of the one-time transition tax on earnings of certain foreign subsidiaries that were previously tax deferred, and the impact of revaluing our U.S. deferred tax assets and liabilities based on the rates at which they are expected to be recognized in the future. For U.S. federal purposes the corporate statutory income tax rate was reduced from 35% to 21%, effective for our 2018 tax year. The provisional impact of U.S. Tax Reform is our current best estimate based on a preliminary review of the new law and is subject to revision based on our existing accounting for income taxes policy as further information is gathered, and interpretation and analysis of the tax legislation evolves. The Securities and Exchange Commission has issued rules allowing for a measurement period of up to one year after the enactment date of U.S. Tax Reform to finalize the recording of the related tax impacts. Any future changes to our provisional estimated impact of U.S. Tax Reform will be included as an adjustment to the provision for income taxes.

Our effective tax rate was 35.0% and 23.7% in 2017 and 2016 , respectively. The effective tax rate in 2017 was primarily impacted by the mix of earnings in jurisdictions with lower statutory tax rates than the U.S. federal statutory tax rate, such as in Singapore and the United Kingdom, and excess tax benefits related to share-based compensation. Such impacts were offset primarily by the provisional estimated impact of U.S. Tax Reform of \$150 million.

Our future effective tax rate may vary from the U.S. federal statutory tax rate due to the mix of earnings in tax jurisdictions with different statutory tax rates and the other factors discussed in the risk factor “We are subject to risks related to taxation in multiple jurisdictions” in Part I Item 1A “Risk Factors” of this report. We may also be adversely impacted in the future if the tax court opinion regarding the exclusion of stock compensation from cost-sharing charges is overturned. Based on our initial interpretation and analysis of U.S. Tax Reform and projected future financial results, we anticipate that our effective tax rate will trend lower than the U.S. federal statutory tax rate in the future due to the portion of our earnings that will be subject to lower statutory tax rates. As further information is gathered, and interpretation and analysis of the tax legislation evolves, we will update our estimate of the future effective tax rate.

- We ended 2017 with cash, cash equivalents, and short-term investments totaling \$2.1 billion , of which approximately \$1.1 billion was held by our foreign subsidiaries.

This overview and outlook provides a high-level discussion of our operating results and significant known trends that affect our business. We believe that an understanding of these trends is important to understanding our financial results for the periods reported herein as well as our future financial performance. This summary is not intended to be exhaustive, nor is it intended to be a substitute for the detailed discussion and analysis provided elsewhere in this report.

Results of Operations

To enhance comparability, the following table sets forth audited consolidated statement of operations data for the years ended December 31, 2017, January 1, 2017, and January 3, 2016, stated as a percentage of total revenue.

	2017	2016	2015
Revenue:			
Product revenue	83.2 %	84.7 %	85.2 %
Service and other revenue	16.8	15.3	14.8
Total revenue	100.0	100.0	100.0
Cost of revenue:			
Cost of product revenue	24.7	22.3	22.1
Cost of service and other revenue	7.6	6.4	6.0
Amortization of acquired intangible assets	1.3	1.8	2.1
Total cost of revenue	33.6	30.5	30.2
Gross profit	66.4	69.5	69.8
Operating expense:			
Research and development	19.8	21.0	18.1
Selling, general and administrative	24.6	24.4	23.2
Legal contingencies	—	(0.4)	0.9
Total operating expense	44.4	45.0	42.2
Income from operations	22.0	24.5	27.6
Other income (expense):			
Interest income	0.7	0.4	0.2
Interest expense	(1.3)	(1.4)	(1.9)
Cost-method investment gain, net	—	—	0.7
Other income (expense), net	16.5	(0.1)	(0.3)
Total other income (expense), net	15.9	(1.1)	(1.3)
Income before income taxes	37.9	23.4	26.3
Provision for income taxes	13.3	5.6	5.7
Consolidated net income	24.6	17.8	20.6
Add: Net loss attributable to noncontrolling interests	1.8	1.5	0.2
Net income attributable to Illumina stockholders	26.4 %	19.3 %	20.8 %

Percentages may not recalculate due to rounding

Our fiscal year is the 52 or 53 weeks ending the Sunday closest to December 31, with quarters of 13 or 14 weeks ending the Sunday closest to March 31, June 30, September 30, and December 31. Fiscal year 2017 and 2016 were 52 weeks, and fiscal year 2015 was 53 weeks.

Revenue

(Dollars in millions)	2017 - 2016				2016 - 2015		
	2017	2016	Change	% Change	2015	Change	% Change
Product revenue	\$ 2,289	\$ 2,032	\$ 257	13%	\$ 1,891	\$ 141	7%
Service and other revenue	463	366	97	27	329	37	11
Total revenue	\$ 2,752	\$ 2,398	\$ 354	15%	\$ 2,220	\$ 178	8%

Product revenue consists primarily of revenue from sales of consumables and instruments. Service and other revenue consists primarily of sequencing and genotyping service revenue as well as instrument service contract revenue. Total revenue primarily relates to Core Illumina for all periods presented.

2017 Compared to 2016

Revenue increased \$354 million , or 15% , to \$2,752 million in 2017 compared to \$2,398 million in 2016 .

Consumables revenue increased \$210 million , or 14% , to \$1,753 million in 2017 compared to \$1,543 million in 2016 , driven by growth in the sequencing instrument installed base.

Instrument revenue increased \$46 million , or 10% , to \$515 million in 2017 compared to \$469 million in 2016 , primarily due to shipments of our NovaSeq instrument introduced in Q1 2017, partially offset by lower shipments of our HiSeq and HiSeq X instruments.

Service and other revenue increased \$97 million , or 27% , to \$463 million in 2017 compared to \$366 million in 2016 , driven by revenue from genotyping services and extended instrument service contracts associated with a larger sequencing installed base.

2016 Compared to 2015

Revenue increased \$178 million , or 8% , to \$2,398 million in 2016 compared to \$2,220 million in 2015 .

Consumables revenue increased \$264 million , or 21% , to \$1,543 million in 2016 compared to \$1,279 million in the prior year, driven by growth in the sequencing instrument installed base.

Instrument revenue decreased \$126 million , or 21% , to \$469 million in 2016 compared to \$595 million in the prior year, primarily due to lower shipments of our high-throughput platforms.

Service and other revenue increased \$37 million , or 11% , to \$366 million in 2016 compared to \$329 million in the prior year, driven by revenue from genotyping services and instrument service contracts associated with a larger sequencing installed base, partially offset by our NIPT customers shifting to in-house testing on our sequencers.

Gross Margin

(Dollars in millions)	2017 - 2016				2016 - 2015		
	2017	2016	Change	% Change	2015	Change	% Change
Total gross profit	\$ 1,826	\$ 1,666	\$ 160	10%	\$ 1,549	\$ 117	8%
Total gross margin	66.4%	69.5%			69.8%		

2017 Compared to 2016

Gross margin decreased to 66.4% in 2017 compared to 69.5% in 2016. The gross margin decrease was driven by a variety of factors, including an \$18 million impairment of an acquired intangible asset, an increase in lower-margin array services mix, inventory reserves related to product transitions, and lower instrument margin from the NovaSeq introduction.

2016 Compared to 2015

Gross margin decreased to 69.5% compared to 69.8% in the prior year. Gross margin decreased primarily due to our increased manufacturing capacity, which was partially offset by a greater mix of sequencing consumables.

Operating Expense

(Dollars in millions)	2017 - 2016				2016 - 2015		
	2017	2016	Change	% Change	2015	Change	% Change
Research and development	\$ 546	\$ 504	\$ 42	8 %	\$ 401	\$ 103	26 %
Selling, general and administrative	674	584	90	15	516	68	13
Legal contingencies	—	(9)	9	(100)	19	(28)	(147)
Total operating expense	\$ 1,220	\$ 1,079	\$ 141	13 %	\$ 936	\$ 143	15 %

2017 Compared to 2016

Research and development (R&D) expense increased by \$42 million , or 8% , in 2017 from 2016 . Core Illumina R&D expense increased by \$58 million , or 13% , primarily due to increased headcount as we continue to invest in the research and development of new products and enhancements to existing products. R&D expense of our Consolidated VIEs decreased by \$16 million , primarily due to the deconsolidation of GRAIL in Q1 2017, partially offset by growth in Helix's operations.

Selling, general and administrative (SG&A) expense increased by \$90 million , or 15% in 2017 from 2016 . Core Illumina SG&A expense increased by \$73 million , or 13% , primarily due to increased headcount and facilities investment to support the continued growth and scale of our operations. SG&A expense of our Consolidated VIEs increased by \$17 million due to marketing expenses related to Helix's July 2017 platform launch and increased headcount, as well as performance-based compensation related to the GRAIL Series B financing. These results were partially offset by the deconsolidation of GRAIL in Q1 2017.

Legal contingencies in 2016 represent a reversal of previously recorded expense related to the settlement of patent litigation.

2016 Compared to 2015

Research and development expense increased by \$103 million , or 26% , in 2016 from 2015 . Core Illumina R&D expense increased by \$60 million, or 15%, primarily due to increased headcount and outside services as we continue to invest in the development of new products as well as enhancements to existing products. Our Consolidated VIEs contributed \$43 million to the increase, primarily due to \$34 million incurred by GRAIL.

Selling, general and administrative expense increased by \$68 million , or 13% , in 2016 from 2015 . Core Illumina SG&A expense increased \$45 million, or 9%, primarily due to headcount and facilities investment to support the continued growth and scale of our operations, as well as outside services. GRAIL and Helix contributed \$14 million and \$9 million to the increase, respectively.

Legal contingencies in 2016 represent a reversal of prior year expense related to the settlement of patent litigation.

Other Income (Expense), Net

(Dollars in millions)	2017 - 2016				2016 - 2015		
	2017	2016	Change	% Change	2015	Change	% Change
Interest income	\$ 19	\$ 10	\$ 9	90 %	\$ 5	\$ 5	100 %
Interest expense	(37)	(33)	(4)	12	(43)	10	(23)
Cost-method investment gain, net	—	—	—	—	16	(16)	(100)
Other income (expense), net	455	(3)	458	(15,267)	(8)	5	(63)
Total other income (expense), net	\$ 437	\$ (26)	\$ 463	(1,781)%	\$ (30)	\$ 4	(13)%

Other income (expense), net primarily relates to Core Illumina for all periods presented.

2017 Compared to 2016

Interest income increased in 2017 compared to 2016 as a result of higher yields on our investments and higher savings and money market balances. Interest expense consisted primarily of accretion of discount on our convertible senior notes.

Other income (expense), net, increased in 2017 compared to 2016 primarily due to a \$453 million gain recorded on the deconsolidation of GRAIL in Q1 2017 and an increase in net foreign exchange gains.

2016 Compared to 2015

Interest income increased in 2016 compared to 2015 as a result of higher yields on our investments and higher savings and money market balances. Interest expense consisted primarily of accretion of discount on our convertible senior notes. The decrease in interest expense in 2016 compared to 2015 was due to a lower outstanding principal balance on the 2016 Notes, which matured in March 2016.

Cost-method investment gain, net in 2015 consisted primarily of gains on dispositions of cost-method investments, partially offset by impairment charges on other investments.

Other expense, net, in 2015 consisted primarily of \$4 million in net foreign exchange losses and \$4 million in loss on extinguishment of debt.

Provision for Income Taxes

(Dollars in millions)	2017 - 2016				2016 - 2015		
	2017	2016	Change	% Change	2015	Change	% Change
Income before income taxes	\$ 1,043	\$ 561	\$ 482	86%	\$ 583	\$ (22)	(4)%
Provision for income taxes	365	133	232	174	125	8	6
Consolidated net income	\$ 678	\$ 428	\$ 250	58%	\$ 458	\$ (30)	(7)%
Effective tax rate	35.0%	23.7%			21.6%		

2017 Compared to 2016

Our effective tax rate was 35.0% and 23.7% in 2017 and 2016, respectively. The effective tax rate in 2017 was primarily impacted by the mix of earnings in jurisdictions with lower statutory tax rates than the U.S. federal statutory tax rate, such as in Singapore and the United Kingdom, and excess tax benefits related to share-based compensation. Such impacts were offset primarily by the provisional estimated impact of U.S. Tax Reform of \$150 million. The impact of U.S. Tax Reform primarily represents our provisional estimates of the one-time transition tax on earnings of certain foreign subsidiaries that were previously tax deferred, and the impact of revaluing our U.S. deferred tax assets and liabilities based on the statutory rates at which they are expected to be recognized in the future, which for federal purposes was reduced from 35% to 21%. In 2016, the variance from the U.S. federal statutory tax rate of 35% was primarily attributable the mix of earnings in jurisdictions with lower statutory rates from the U.S. federal statutory rate, such as in Singapore and the United Kingdom, partially offset by the tax impact associated with the investment in our consolidated variable interest entities.

2016 Compared to 2015

Our effective tax rate was 23.7% and 21.6% in 2016 and 2015, respectively. In 2016, the variance from the U.S. federal statutory tax rate of 35% was primarily attributable the mix of earnings in jurisdictions with lower statutory rates from the U.S. federal statutory rate, such as in Singapore and the United Kingdom, partially offset by the tax impact associated with the investment in our consolidated variable interest entities. In 2015, the variance from the U.S. federal statutory tax rate of 35% was primarily attributable to a discrete tax benefit of \$25 million, related to the exclusion of stock compensation from prior period cost-sharing charges as a result of a tax court opinion in which an unrelated third party was successful in challenging such charges. The decrease from the U.S. federal statutory tax rate also resulted from the mix of earnings in jurisdictions with lower statutory tax rates than the U.S. federal statutory tax rate, such as in Singapore and the United Kingdom.

Liquidity and Capital Resources

At December 31, 2017, we had approximately \$1.2 billion in cash and cash equivalents, of which approximately \$826 million was held by our foreign subsidiaries. Cash and cash equivalents held by our consolidated VIEs as of December 31, 2017 were \$18 million. Cash and cash equivalents decreased by \$490 million from last year, due to the factors described in the "Cash Flow Summary" below. Our primary source of liquidity, other than our holdings of cash, cash equivalents, and investments, has been cash flows from operations. Our ability to generate cash from operations provides us with the financial flexibility we need to meet operating, investing, and financing needs. It is our intention to indefinitely reinvest the historical earnings of our foreign subsidiaries generated prior to 2017. For the year ended December 31, 2017, we asserted that \$869 million of foreign earnings generated in 2017 would not be indefinitely invested.

Historically, we have liquidated our short-term investments and/or issued debt and equity securities to finance our business needs as a supplement to cash provided by operating activities. As of December 31, 2017, we had \$920 million in short-term investments. Short-term investments held by our foreign subsidiaries as of December 31, 2017 were approximately \$305 million. Our short-term investments include marketable securities consisting of U.S. government-sponsored entities, corporate debt securities, and U.S. Treasury securities.

We anticipate that our current cash, cash equivalents, and short-term investments, together with cash provided by operating activities are sufficient to fund our near-term capital and operating needs for at least the next 12 months. Operating needs include the planned costs to operate our business, including amounts required to fund working capital and capital expenditures. Our primary short-term needs for capital, which are subject to change, include:

- support of commercialization efforts related to our current and future products, including expansion of our direct sales force and field support resources both in the United States and abroad;
- acquisitions of equipment and other fixed assets for use in our current and future manufacturing and research and development facilities;
- the continued advancement of research and development efforts;
- potential strategic acquisitions and investments;
- potential early repayment of debt obligations as a result of conversions;
- the expansion needs of our facilities, including costs of leasing and building out additional facilities;
- repurchases of our outstanding common stock; and
- the one-time transition tax on earnings of certain foreign subsidiaries that were previously tax deferred in accordance with the Tax Cuts and Jobs Act (U.S. Tax Reform) that was enacted on December 22, 2017.

Our convertible senior notes due 2019 and 2021 were not convertible as of December 31, 2017.

On May 4, 2017, our Board of Directors authorized a share repurchase program to repurchase \$250 million of outstanding common stock. The repurchases may be completed under a 10b5-1 plan or at management's discretion. Authorizations to repurchase \$100 million of our common stock remained available as of December 31, 2017.

Certain noncontrolling Helix investors may require Illumina to redeem all noncontrolling interests in cash at the then approximate fair market value. Such redemption right is exercisable at the option of certain noncontrolling interest holders after January 1, 2021, provided that a bona fide pursuit of the sale of Helix has occurred and an initial public offering of Helix has not been completed. The fair value of the redeemable noncontrolling interests related to Helix as of December 31, 2017, was \$220 million.

We have \$83 million remaining in our capital commitment to a venture capital investment fund as of December 31, 2017.

We expect that our revenue and the resulting operating income, as well as the status of each of our new product development programs, will significantly impact our cash management decisions.

Our future capital requirements and the adequacy of our available funds will depend on many factors, including:

- our ability to successfully commercialize and further develop our technologies and create innovative products in our markets;
- scientific progress in our research and development programs and the magnitude of those programs;
- competing technological and market developments; and
- the need to enter into collaborations with other companies or acquire other companies or technologies to enhance or complement our product and service offerings.

Cash Flow Summary

(In millions)	2017	2016	2015
Net cash provided by operating activities	\$ 875	\$ 779	\$ 786
Net cash used in investing activities	(214)	(515)	(107)
Net cash used in financing activities	(176)	(296)	(545)
Effect of exchange rate changes on cash and cash equivalents	5	(2)	(1)
Net increase (decrease) in cash and cash equivalents	<u>\$ 490</u>	<u>\$ (34)</u>	<u>\$ 133</u>

Operating Activities

Net cash provided by operating activities in 2017 primarily consisted of net income of \$678 million and net changes in net operating assets and liabilities of \$195 million. We also had \$2 million in net non-cash adjustments to net income, consisting of a gain on deconsolidation of GRAIL of \$453 million, depreciation and amortization expenses of \$156 million, share-based compensation of \$164 million, deferred income taxes of \$81 million, impairment of intangible assets of \$23 million, and accretion of debt discount of \$30 million. Cash flow impact from changes in net operating assets and liabilities were primarily driven by an increase in other long-term liabilities of \$160 million related primarily to estimated taxes associated with the U.S. tax reform as well as increases in accrued liabilities, inventory, and accounts receivable.

Net cash provided by operating activities in 2016 consisted of net income of \$428 million plus net adjustments of \$396 million partially offset by net changes in net operating assets and liabilities of \$45 million. The primary non-cash expenses added back to net income included depreciation and amortization expenses of \$141 million, share-based compensation of \$129 million, deferred income taxes of \$94 million, and accretion of debt discount of \$30 million. These non-cash add-backs were partially offset by a gain on litigation settlement of \$11 million. Cash flow impact from changes in net operating assets and liabilities were primarily driven by an increase in inventory and a decrease in accrued liabilities.

Net cash provided by operating activities in 2015 consisted of net income of \$458 million plus net adjustments of \$368 million partially offset by net changes in net operating assets and liabilities of \$40 million. The primary non-cash expenses added back to net income included share-based compensation of \$133 million, depreciation and amortization expenses of \$127 million, deferred income taxes of \$81 million, and accretion of debt discount of \$39 million. These non-cash add-backs were partially offset by a \$16 million in cost-method investment gain. Cash flow impact from changes in net operating assets included increases in accounts receivable, inventory, and prepaid expenses and other current assets, partially offset by increases in accounts payable, and accrued liabilities.

Investing Activities

Net cash used in investing activities totaled \$214 million in 2017. We purchased \$742 million of available-for-sale securities and \$643 million of our available-for-sale securities matured or were sold during the period. We received \$278 million from the sale of a portion of our ownership interest in GRAIL. In connection with the sale, we removed \$52 million in cash from our consolidated balance sheet as a result of the deconsolidation. We paid \$29 million for strategic investments and invested \$310 million in capital expenditures primarily associated with our investment in facilities.

Net cash used in investing activities totaled \$515 million in 2016. We purchased \$895 million of available-for-sale securities and \$683 million of our available-for-sale securities matured or were sold during the period. We also paid net cash of \$18 million for acquisitions, \$14 million for strategic investments, \$11 million for intangibles, and invested \$260 million in capital expenditures primarily associated with facilities, and the purchase of manufacturing, research and development equipment.

Net cash used in investing activities totaled \$107 million in 2015. We purchased \$797 million of available-for-sale securities and \$876 million of our available-for-sale securities matured or were sold during the period. We also paid net cash of \$37 million for acquisitions and invested \$143 million in capital expenditures primarily associated with machinery and equipment, facilities, and information technology equipment and systems primarily related to our enterprise resource planning system implementation.

Financing Activities

Net cash used in financing activities totaled \$176 million in 2017 . We used \$251 million to repurchase our common stock and \$68 million to pay taxes related to net share settlement of equity awards. We received \$71 million in proceeds from the issuance of common stock through the exercise of stock options and the sale of shares under our employee stock purchase plan. Contributions from noncontrolling interest owners were \$79 million . Additionally, \$9 million was used by Helix to repay financing obligations.

Net cash used in financing activities totaled \$296 million in 2016. We used \$100 million to pay taxes related to net share settlement of equity awards, \$29 million to pay acquisition-related contingent consideration and \$249 million to repurchase our common stock. We used \$66 million to repay financing obligations and received \$47 million in proceeds from the issuance of common stock through the exercise of stock options and the sale of shares under our employee stock purchase plan. Contributions from noncontrolling interest owners were \$89 million.

Net cash used in financing activities totaled \$545 million in 2015. We used \$127 million to pay taxes related to net share settlement of equity awards, and \$274 million to repurchase our common stock. We used \$245 million to repay financing obligations and received \$72 million in proceeds from the issuance of common stock through the exercise of stock options and the sale of shares under our employee stock purchase plan. Contributions from noncontrolling interest owners were \$32 million.

Off-Balance Sheet Arrangements

We do not participate in any transactions that generate relationships with unconsolidated entities or financial partnerships, such as entities often referred to as structured finance or special purpose entities, which would have been established for the purpose of facilitating off-balance sheet arrangements or other contractually narrow or limited purposes. During the fiscal year ended December 31, 2017 , we were not involved in any “off-balance sheet arrangements” within the meaning of the rules of the Securities and Exchange Commission.

Contractual Obligations

Contractual obligations represent future cash commitments and liabilities under agreements with third parties, and exclude orders for goods and services entered into in the normal course of business that are not enforceable or legally binding. The following table represents our contractual obligations as of December 31, 2017 , aggregated by type (in millions):

Contractual Obligation	Payments Due by Period(1)				
	Total	Less Than 1 Year	1 – 3 Years	3 – 5 Years	More Than 5 Years
Debt obligations(2)	\$ 1,159	\$ 3	\$ 637	\$ 519	\$ —
Operating leases	752	55	118	111	468
Build-to-suit leases	294	22	40	42	190
Purchase obligations(3)	107	27	80	—	—
Amounts due under executive deferred compensation plan	33	33	—	—	—
Total	\$ 2,345	\$ 140	\$ 875	\$ 672	\$ 658

(1) The table excludes \$79 million of uncertain tax positions, a \$150 million provisional estimate of the one-time transition tax related to U.S. Tax Reform, \$220 million of redeemable noncontrolling interest, and \$83 million of capital commitments for the Venture Fund as the timing and amounts of the settlement remained uncertain as of December 31, 2017 . See note “9. Income Taxes” and note “2. Balance Sheet Account Details” in Part II, Item 8 of this report for further discussions.

(2) Debt obligations include the principal amount of our convertible senior notes due 2019 and 2021, as well as interest payments to be made under the notes. Although these notes mature in 2019 and 2021, respectively, they may be converted into cash and shares of our common stock prior to maturity if certain conditions are met. Any conversion prior to maturity can result in repayments of the principal amounts sooner than the scheduled repayments as indicated in the table. See note “5. Debt and Other Commitments” in Part II, Item 8 of this report for further discussion.

- (3) In the normal course of business, we enter into agreements to purchase goods or services that are not cancelable without penalty, primarily related to licensing and supply arrangements. See note “5. Debt and Other Commitments” in Part II, Item 8 of this report for further discussion.

Critical Accounting Policies and Estimates

The preparation of financial statements in accordance with U.S. generally accepted accounting principles requires management to make estimates and assumptions that affect the amounts reported in our consolidated financial statements and accompanying notes. Management bases its estimates on historical experience, market and other conditions, and various other assumptions it believes to be reasonable. Although these estimates are based on management’s best knowledge of current events and actions that may impact us in the future, the estimation process is, by its nature, uncertain given that estimates depend on events over which we may not have control. If market and other conditions change from those that we anticipate, our consolidated financial statements may be materially affected. In addition, if our assumptions change, we may need to revise our estimates, or take other corrective actions, either of which may also have a material effect on our consolidated financial statements.

We believe that the following critical accounting policies and estimates have a higher degree of inherent uncertainty and require our most significant judgments. In addition, had we used estimates different from any of these, our consolidated financial statements could have been materially different from those presented. Members of our senior management have discussed the development and selection of our critical accounting policies and estimates, and our disclosure regarding them, with the audit committee of our board of directors. Our accounting policies are more fully described in note “1. Organization and Significant Accounting Policies” in Part II, Item 8 of this report.

Revenue Recognition

Our revenue is generated primarily from the sale of products and services. Product revenue primarily consists of sales of instruments and consumables used in genetic analysis. Service and other revenue primarily consists of revenue generated from genotyping and sequencing services and instrument service contracts. The timing of revenue recognition and the amount of revenue recognized in each case depends upon a variety of factors, including the specific terms of each arrangement and the nature of our deliverables and obligations. Determination of the appropriate amount of revenue recognized involves significant judgment and estimates.

We recognize revenue when persuasive evidence of an arrangement exists, delivery has occurred or services have been rendered, the seller’s price to the buyer is fixed or determinable, and collectibility is reasonably assured. In instances where final acceptance of the product or system is required, revenue is deferred until all the acceptance criteria have been met. We occasionally offer discounts on newly introduced products to recent customers of existing products. Where applicable, we defer a portion of revenue on the sales of existing products in recognition of the promotional discounts until the delivery of new products. All revenue is recorded net of discounts and sales taxes collected on behalf of governmental authorities.

Revenue from product sales is recognized generally upon transfer of title to the customer, provided that no significant obligations remain and collection of the receivable is reasonably assured. Revenue from instrument service contracts is recognized as the services are rendered, typically evenly over the contract term. Revenue from genotyping and sequencing services is recognized when earned, which is generally at the time the genotyping or sequencing analysis data is made available to the customer or agreed-upon milestones are reached.

In order to assess whether the price is fixed or determinable, we evaluate whether an arrangement is cancellable or subject to future changes in price, deliverables, or other terms. If it is determined that the price is not fixed or determinable, we defer revenue recognition until the price becomes fixed or determinable. We assess collectibility based on a number of factors, including past transaction history with, and the creditworthiness of, the customer. If we determine that collection of a payment is not reasonably assured, revenue recognition is deferred until receipt of payment.

We regularly enter into contracts where revenue is derived from multiple deliverables including products or services. These products or services are generally delivered within a short time frame, approximately three to six months, after the contract execution date. Revenue recognition for contracts with multiple deliverables is based on the individual units of accounting determined to exist in the contract. A delivered item is considered a separate unit of accounting when the delivered item has value to the customer on a stand-alone basis. Items are considered to have stand-alone value when they are sold separately by any vendor or when the customer could resell the item on a stand-alone basis.

For transactions with multiple deliverables, consideration is allocated at the inception of the contract to all deliverables based on their relative selling price. The relative selling price for each deliverable is determined using vendor-specific objective evidence (VSOE) of selling price or third-party evidence of selling price if VSOE does not exist. If neither VSOE nor third-party evidence exists, we use best estimate of the selling price for the deliverable.

In order to establish VSOE of selling price, we must regularly sell the product or service on a standalone basis with a substantial majority priced within a relatively narrow range. VSOE of selling price is usually the midpoint of that range. If there are not a sufficient number of standalone sales and VSOE of selling price cannot be determined, then we consider whether third-party evidence can be used to establish selling price. Due to the lack of similar products and services sold by other companies within the industry, we have rarely established selling price using third-party evidence. If neither VSOE nor third-party evidence of selling price exists, we determine our best estimate of selling price using average selling prices over a rolling 12-month period coupled with an assessment of current market conditions. If the product or service has no history of sales or if the sales volume is not sufficient, we rely upon prices set by our pricing committee adjusted for applicable discounts. We recognize revenue for delivered elements only when we determine there are no uncertainties regarding customer acceptance.

In certain markets, we sell products and provide services to customers through distributors that specialize in life science products. In most sales through distributors, the product is delivered directly to customers. In cases where the product is delivered to a distributor, revenue recognition is deferred until acceptance is received from the distributor, and/or the end-user, if required by the applicable sales contract. The terms of sales transactions through distributors are consistent with the terms of direct sales to customers. These transactions are accounted for in accordance with our revenue recognition policy described herein.

Investments

We invest in various types of securities, including debt securities in government-sponsored entities, corporate debt securities, and U.S. Treasury securities. As of December 31, 2017, we had \$920 million in short-term investments. In accordance with the accounting standard for fair value measurements, we classify our investments as Level 1, 2, or 3 within the fair value hierarchy. Fair values determined by Level 1 inputs utilize quoted prices (unadjusted) in active markets for identical assets that we have the ability to access. Fair values determined by Level 2 inputs utilize data points that are observable such as quoted prices, interest rates and yield curves. Fair values determined by Level 3 inputs utilize unobservable data points for the asset.

As discussed in note "4. Fair Value Measurements" in Part II, Item 8 of this report, a majority of our security holdings have been classified as Level 2. These securities have been initially valued at the transaction price and subsequently valued utilizing a third-party service provider who assesses the fair value using inputs other than quoted prices that are observable either directly or indirectly, such as yield curve, volatility factors, credit spreads, default rates, loss severity, current market and contractual prices for the underlying instruments or debt, broker and dealer quotes, as well as other relevant economic measures. We perform certain procedures to corroborate the fair value of these holdings, and in the process, we apply judgment and estimates that if changed, could significantly affect our statement of financial positions.

Allowance for Doubtful Accounts

We maintain an allowance for doubtful accounts for estimated losses resulting from the inability of our customers to make required payments. We evaluate the collectibility of our accounts receivable based on a combination of factors. We regularly analyze customer accounts, review the length of time receivables are outstanding, review historical loss rates and assess current economic trends that may impact the level of credit losses in the future. Our allowance for doubtful accounts has generally been adequate to cover our actual credit losses. However, since we cannot reliably predict future changes in the financial stability of our customers, we may need to increase our reserves if the financial conditions of our customers deteriorate.

Inventory Valuation

Inventories are stated at lower of cost or net realizable value. We record adjustments to inventory for potentially excess, obsolete, or impaired goods in order to state inventory at net realizable value. We must make assumptions about future demand, market conditions, and the release of new products that will supersede old ones. We regularly review inventory for excess and obsolete products and components, taking into account product life cycles, quality issues, historical experience, and usage forecasts. Our gross inventory totaled \$375 million and the cumulative adjustment for potentially excess and obsolete inventory was \$42 million at December 31, 2017. Historically, our inventory adjustment has been adequate to cover our losses. However, if actual market conditions are less favorable than anticipated, additional inventory adjustments could be required.

Contingencies

We are involved in various lawsuits and claims arising in the ordinary course of business, including actions with respect to intellectual property, employment, and contractual matters. In connection with these matters, we assess, on a regular basis, the probability and range of possible loss based on the developments in these matters. A liability is recorded in the financial statements if it is believed to be probable that a loss has been incurred and the amount of the loss can be reasonably estimated. Because litigation is inherently unpredictable and unfavorable resolutions could occur, assessing contingencies is highly subjective and requires judgments about future events. We regularly review outstanding legal matters to determine the adequacy of the liabilities accrued and related disclosures in consideration of many factors, which include, but are not limited to, past history, scientific and other evidence, and the specifics and status of each matter. We may change our estimates if our assessment of the various factors changes and the amount of ultimate loss may differ from our estimates, resulting in a material effect on our business, financial condition, results of operations, and/or cash flows.

Business Combinations

Under the acquisition method of accounting, we allocate the fair value of the total consideration transferred to the tangible and identifiable intangible assets acquired and liabilities assumed based on their estimated fair values on the date of acquisition. The fair values assigned, defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between willing market participants, are based on estimates and assumptions determined by management. We record the excess consideration over the aggregate fair value of tangible and intangible assets, net of liabilities assumed, as goodwill. These valuations require us to make significant estimates and assumptions, especially with respect to intangible assets.

In connection with certain of our acquisitions, additional contingent consideration is earned by the sellers upon completion of certain future performance milestones. In these cases, a liability is recorded on the acquisition date for an estimate of the acquisition date fair value of the contingent consideration by applying the income approach utilizing variable inputs such as anticipated future cash flows, risk-free adjusted discount rates, and nonperformance risk. Any change in the fair value of the contingent consideration subsequent to the acquisition date is recognized in acquisition-related (gain) expense, net, a component of operating expenses, in our consolidated statements of income. This method requires significant management judgment, including the probability of achieving certain future milestones and discount rates. Future changes in our estimates could result in expenses or gains.

Management typically uses the discounted cash flow method to value our acquired intangible assets. This method requires significant management judgment to forecast future operating results and establish residual growth rates and discount factors. The estimates we use to value and amortize intangible assets are consistent with the plans and estimates that we use to manage our business and are based on available historical information and industry estimates and averages. If the subsequent actual results and updated projections of the underlying business activity change compared with the assumptions and projections used to develop these values, we could experience impairment charges. In addition, we have estimated the economic lives of certain acquired assets and these lives are used to calculate depreciation and amortization expense. If our estimates of the economic lives change, depreciation or amortization expenses could be accelerated or slowed.

Intangible Assets and Other Long-Lived Assets — Impairment Assessments

We regularly perform reviews to determine if the carrying values of our long-lived assets are impaired. A review of identifiable intangible assets and other long-lived assets is performed when an event occurs indicating the potential for impairment. If indicators of impairment exist, we assess the recoverability of the affected long-lived assets and compare their fair values to the respective carrying amounts.

In order to estimate the fair value of identifiable intangible assets and other long-lived assets, we estimate the present value of future cash flows from those assets. The key assumptions that we use in our discounted cash flow model are the amount and timing of estimated future cash flows to be generated by the asset over an extended period of time and a rate of return that considers the relative risk of achieving the cash flows, the time value of money, and other factors that a willing market participant would consider. Significant judgment is required to estimate the amount and timing of future cash flows and the relative risk of achieving those cash flows.

Assumptions and estimates about future values and remaining useful lives are complex and often subjective. They can be affected by a variety of factors, including external factors such as industry and economic trends, and internal factors such as changes in our business strategy and our internal forecasts. For example, if our future operating results do not meet current forecasts or if we experience a sustained decline in our market capitalization that is determined to be indicative of a reduction in fair value of our reporting unit, we may be required to record future impairment charges for purchased intangible assets. Impairment charges could materially decrease our future net income and result in lower asset values on our balance sheet.

Share-Based Compensation

We are required to measure and recognize compensation expense for all share-based payments based on estimated fair value. We estimate the fair value of stock options granted and stock purchases under our employee stock purchase plan using the Black-Scholes-Merton (BSM) option-pricing model. The fair value of our restricted stock units is based on the market price of our common stock on the date of grant.

The determination of fair value of share-based awards requires the use of certain estimates and highly judgmental assumptions that affect the amount of share-based compensation expense recognized in our consolidated statements of income. These include estimates of the expected volatility of our stock price, expected life of an award, expected dividends, the risk-free interest rate, and forecast of our future financial performance, in the case of performance stock units. We determine the volatility of our stock price by equally weighing the historical and implied volatility of our common stock. The historical volatility of our common stock over the most recent period is generally commensurate with the estimated expected life of our stock awards, adjusted for the impact of unusual fluctuations not reasonably expected to recur, and other relevant factors. Implied volatility is calculated from the implied market volatility of exchange-traded call options on our common stock. The expected life of an award is based on historical forfeiture experience, exercise activity, and on the terms and conditions of the stock awards. We determined expected dividend yield to be 0% given we have never declared or paid any cash dividends on our common stock and we currently do not anticipate paying such cash dividends. The risk-free interest rate is based upon U.S. Treasury securities with remaining terms similar to the expected term of the share-based awards. We update our forecast of future financial performance periodically, which impacts our estimate of the number of shares to be issued pursuant to the outstanding performance stock units. We amortize the fair value of share-based compensation on a straight-line basis over the requisite service periods of the awards. If any of the assumptions used change significantly, share-based compensation expense may differ materially from what we have recorded in the current period.

Warranties

We generally provide a one-year warranty on instruments. Additionally, we provide a warranty on consumables through the expiration date, which generally ranges from six to twelve months after the manufacture date. We establish an accrual for estimated warranty expenses based on historical experience as well as anticipated product performance. We periodically review the adequacy of our warranty reserve, and adjust, if necessary, the warranty percentage and accrual based on actual experience and estimated costs to be incurred. If our estimates of warranty obligation change or if actual product performance is below our expectations, we may incur additional warranty expense.

Income Taxes

Our provision for income taxes, deferred tax assets and liabilities, and reserves for unrecognized tax benefits reflect our best assessment of estimated future taxes to be paid. Significant judgments and estimates based on interpretations of existing tax laws or regulations in the United States and the numerous foreign jurisdictions where we are subject to income tax are required in determining our provision for income taxes. Changes in tax laws, statutory tax rates, and estimates of our future taxable income could impact the deferred tax assets and liabilities provided for in the consolidated financial statements and would require an adjustment to the provision for income taxes.

In accordance with the Tax Cuts and Jobs Act that was enacted on December 22, 2017 (U.S. Tax Reform), we have recorded a provision for income taxes of \$150 million. The impact of U.S. Tax Reform primarily represents our provisional estimates of the one-time transition tax on earnings of certain foreign subsidiaries that were previously tax deferred, and the

impact of revaluing our U.S. deferred tax assets and liabilities based on the rates at which they are expected to reverse in the future. For U.S. federal purposes the corporate statutory income tax rate was reduced from 35% to 21%, effective for our 2018 tax year. The provisional impact of U.S. Tax Reform is our current best estimate based on a preliminary review of the new law and is subject to revision based on our existing accounting for income taxes policy as further information is gathered, and interpretation and analysis of the tax legislation evolves. The Securities and Exchange Commission has issued rules allowing for a measurement period of up to one year after the enactment date of U.S. Tax Reform to finalize the recording of the related tax impacts. Any future changes to our provisional estimated impact of U.S. Tax Reform will be included as an adjustment to the provision for income taxes.

Deferred tax assets are regularly assessed to determine the likelihood they will be recovered from future taxable income. A valuation allowance is established when we believe it is more likely than not the future realization of all or some of a deferred tax asset will not be achieved. In evaluating our ability to recover deferred tax assets within the jurisdiction which they arise, we consider all available positive and negative evidence. Factors reviewed include the cumulative pre-tax book income for the past three years, scheduled reversals of deferred tax liabilities, our history of earnings and reliability of our forecasts, projections of pre-tax book income over the foreseeable future, and the impact of any feasible and prudent tax planning strategies.

We recognize the impact of a tax position in our financial statements only if that position is more likely than not of being sustained upon examination by taxing authorities, based on the technical merits of the position. Tax authorities regularly examine our returns in the jurisdictions in which we do business and we regularly assess the tax risk of our return filing positions. Due to the complexity of some of the uncertainties, the ultimate resolution may result in payments that are materially different from our current estimate of the tax liability. These differences, as well as any interest and penalties, will be reflected in the provision for income taxes in the period in which they are determined.

Recent Accounting Pronouncements

For summary of recent accounting pronouncements applicable to our consolidated financial statement see note “1. Organization and Summary of Significant Accounting Policies” in Part II, Item 8, Notes to Consolidated Financial Statements, which is incorporated herein by reference.

ITEM 7A. *Quantitative and Qualitative Disclosures About Market Risk.*

Interest Rate Sensitivity

Our investment portfolio is exposed to market risk from changes in interest rates. The fair market value of fixed-rate securities may be adversely impacted by fluctuations in interest rates while income earned on floating rate securities may decline as a result of decreases in interest rates. Under our current policies, we do not use interest rate derivative instruments to manage exposure to interest rate changes. We attempt to ensure the safety and preservation of our invested principal funds by limiting default risk, market risk, and reinvestment risk. We mitigate default risk by investing in investment-grade securities. We have historically maintained a relatively short average maturity for our investment portfolio, and we believe a hypothetical 100 basis point adverse move in interest rates along the entire interest rate yield curve would not materially affect the fair value of our interest-sensitive financial instruments.

Changes in interest rates may impact gains or losses from the conversion of our outstanding convertible senior notes. In June 2014, we issued \$633 million aggregate principal amount of 0% convertible senior notes due 2019 (2019 Notes) and \$517 million aggregate principal amount of 0.5% convertible senior notes due 2021 (2021 Notes). At our election, the notes are convertible into cash, shares of our common stock, or a combination of cash and shares of our common stock under certain circumstances, including trading price conditions related to our common stock. If the trading price of our common stock reaches a price at 130% above the conversion price, the notes will become convertible. Upon conversion, we are required to record a gain or loss for the difference between the fair value of the debt to be extinguished and its corresponding net carrying value. The fair value of the debt to be extinguished depends on our then-current incremental borrowing rate. If our incremental borrowing rate at the time of conversion is higher or lower than the implied interest rate of the notes, we will record a gain or loss in our consolidated statement of income during the period in which the notes are converted. The implicit interest rates for the 2019 and 2021 Notes were 2.9% and 3.5%, respectively. An incremental borrowing rate that is a hypothetical 100 basis points lower than the implicit interest rate upon conversion of \$100 million aggregate principal amount of each of the 2019 and 2021 Notes would result in losses of approximately \$2 million and \$3 million, respectively.

Foreign Currency Exchange Risk

We conduct a portion of our business in currencies other than our U.S. dollar functional currency. These transactions give rise to monetary assets and liabilities that are denominated in currencies other than the U.S. dollar. The value of these monetary assets and liabilities are subject to changes in currency exchange rates from the time the transactions are originated until settlement in cash. Our foreign currency exposures are primarily concentrated in the euro, Yen, Australian dollar, and Canadian dollar. Both realized and unrealized gains or losses on the value of these monetary assets and liabilities are included in the determination of net income.

We use forward exchange contracts to manage foreign currency risks related to monetary assets and liabilities denominated in currencies other than the U.S. dollar. We only use derivative financial instruments to reduce foreign currency exchange rate risks; we do not hold any derivative financial instruments for trading or speculative purposes. We primarily use forward exchange contracts to hedge foreign currency exposures, and they generally have terms of one month or less. Realized and unrealized gains or losses on the value of financial contracts entered into to hedge the exchange rate exposure of these monetary assets and liabilities are also included in the determination of net income, as they have not been designated for hedge accounting. These contracts, which settle monthly, effectively fix the exchange rate at which these specific monetary assets and liabilities will be settled, so that gains or losses on the forward contracts offset the gains or losses from changes in the value of the underlying monetary assets and liabilities. As of December 31, 2017, the total notional amount of outstanding forward contracts in place for foreign currency purchases was \$88 million.

ITEM 8. *Financial Statements and Supplementary Data.*

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Directors and Stockholders of Illumina, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Illumina, Inc. (the Company) as of December 31, 2017 and January 1, 2017, the related consolidated statements of income, comprehensive income, stockholders' equity, and cash flows for each of the three fiscal years in the period ended December 31, 2017, and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2017 and January 1, 2017, and the results of its operations and its cash flows for each of the three fiscal years in the period ended December 31, 2017, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2017, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated February 12, 2018 expressed an unqualified opinion thereon.

Adoption of ASU No. 2016-09

As discussed in Note 1 to the consolidated financial statements, the Company changed its method of accounting for share-based payment transactions in 2017 due to the adoption of the amendments to the FASB Accounting Standards Codification resulting from Accounting Standards Update (ASU) No. 2016-09, *Compensation - Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting*, effective January 2, 2017.

Basis for Opinion

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

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

/s/ E RNST & Y OUNG LLP

We have served as the Company's auditor since 1998.

San Diego, California
February 12, 2018

ILLUMINA, INC.
CONSOLIDATED BALANCE SHEETS
(in millions, except par value)

	December 31, 2017	January 1, 2017
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 1,225	\$ 735
Short-term investments	920	824
Accounts receivable, net	411	381
Inventory	333	300
Prepaid expenses and other current assets	91	78
Total current assets	2,980	2,318
Property and equipment, net	931	713
Goodwill	771	776
Intangible assets, net	175	243
Deferred tax assets, net	88	123
Other assets	312	108
Total assets	\$ 5,257	\$ 4,281
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 160	\$ 138
Accrued liabilities	432	342
Build-to-suit lease liability	144	223
Long-term debt, current portion	10	2
Total current liabilities	746	705
Long-term debt	1,182	1,056
Other long-term liabilities	360	206
Commitments and contingencies		
Redeemable noncontrolling interests	220	44
Stockholders' equity:		
Preferred stock, \$0.01 par value, 10 million shares authorized; no shares issued and outstanding at December 31, 2017 and January 1, 2017	—	—
Common stock, \$0.01 par value, 320 million shares authorized; 191 million shares issued and 147 million outstanding at December 31, 2017; 189 million shares issued and 146 million outstanding at January 1, 2017	2	2
Additional paid-in capital	2,833	2,733
Accumulated other comprehensive loss	(1)	(1)
Retained earnings	2,256	1,485
Treasury stock, 44 million shares and 43 million shares at cost at December 31, 2017 and January 1, 2017, respectively	(2,341)	(2,022)
Total Illumina stockholders' equity	2,749	2,197
Noncontrolling interests	—	73
Total stockholders' equity	2,749	2,270
Total liabilities and stockholders' equity	\$ 5,257	\$ 4,281

See accompanying notes to consolidated financial statements.

ILLUMINA, INC.
CONSOLIDATED STATEMENTS OF INCOME
(In millions, except per share amounts)

	Years Ended		
	December 31, 2017	January 1, 2017	January 3, 2016
Revenue:			
Product revenue	\$ 2,289	\$ 2,032	\$ 1,891
Service and other revenue	463	366	329
Total revenue	2,752	2,398	2,220
Cost of revenue:			
Cost of product revenue	679	534	491
Cost of service and other revenue	208	155	134
Amortization of acquired intangible assets	39	43	46
Total cost of revenue	926	732	671
Gross profit	1,826	1,666	1,549
Operating expense:			
Research and development	546	504	401
Selling, general and administrative	674	584	516
Legal contingencies	—	(9)	19
Total operating expense	1,220	1,079	936
Income from operations	606	587	613
Other income (expense):			
Interest income	19	10	5
Interest expense	(37)	(33)	(43)
Cost-method investment gain, net	—	—	16
Other income (expense), net	455	(3)	(8)
Total other income (expense), net	437	(26)	(30)
Income before income taxes	1,043	561	583
Provision for income taxes	365	133	125
Consolidated net income	678	428	458
Add: Net loss attributable to noncontrolling interests	48	35	4
Net income attributable to Illumina stockholders	\$ 726	\$ 463	\$ 462
Net income attributable to Illumina stockholders for earnings per share	\$ 725	\$ 454	\$ 462
Earnings per share attributable to Illumina stockholders:			
Basic	\$ 4.96	\$ 3.09	\$ 3.19
Diluted	\$ 4.92	\$ 3.07	\$ 3.10
Shares used in computing earnings per share:			
Basic	146	147	145
Diluted	148	148	149

See accompanying notes to consolidated financial statements.

ILLUMINA, INC.
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(In millions)

	Years Ended		
	December 31, 2017	January 1, 2017	January 3, 2016
Consolidated net income	\$ 678	\$ 428	\$ 458
Unrealized (loss) gain on available-for-sale securities, net of deferred tax	—	(1)	1
Total consolidated comprehensive income	678	427	459
Add: Comprehensive loss attributable to noncontrolling interests	48	35	4
Comprehensive income attributable to Illumina stockholders	\$ 726	\$ 462	\$ 463

See accompanying notes to consolidated financial statements.

ILLUMINA, INC.
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(In millions)

	Illumina Stockholders									Total Stockholders' Equity
	Common Stock		Additional Paid-In Capital	Accumulated Other Comprehensive (Loss) Income		Retained Earnings	Treasury Stock		Noncontrolling Interests	
	Shares	Amount	Capital	(Loss)	Income	Earnings	Shares	Amount	Interests	
Balance as of December 28, 2014	181	\$ 2	\$ 2,173	\$	(1)	\$ 560	(38)	\$ (1,271)	\$ —	\$ 1,463
Net income	—	—	—	—	—	462	—	—	—	462
Unrealized gain on available-for-sale securities, net of deferred tax	—	—	—	—	1	—	—	—	—	1
Issuance of common stock, net of repurchases	6	—	70	—	—	—	(2)	(402)	—	(332)
Share-based compensation	—	—	133	—	—	—	—	—	—	133
Net incremental tax benefit related to share-based compensation	—	—	126	—	—	—	—	—	—	126
Adjustment to the carrying value of redeemable noncontrolling interests	—	—	(4)	—	—	—	—	—	—	(4)
Balance as of January 3, 2016	187	2	2,498	—	—	1,022	(40)	(1,673)	—	1,849
Net income (loss)	—	—	—	—	—	463	—	—	(14)	449
Unrealized loss on available-for-sale securities, net of deferred tax	—	—	—	—	(1)	—	—	—	—	(1)
Issuance of common stock, net of repurchases	2	—	47	—	—	—	(3)	(349)	—	(302)
Share-based compensation	—	—	129	—	—	—	—	—	—	129
Net incremental tax benefit related to share-based compensation	—	—	87	—	—	—	—	—	—	87
Adjustment to the carrying value of redeemable noncontrolling interests	—	—	(21)	—	—	—	—	—	—	(21)
Vesting of redeemable equity awards	—	—	(2)	—	—	—	—	—	—	(2)
Issuance of subsidiary shares in business combination	—	—	2	—	—	—	—	—	—	2
Issuance of treasury stock	—	—	3	—	—	—	—	—	—	3
Contributions from noncontrolling interest owners	—	—	—	—	—	—	—	—	80	80
Proceeds from early exercise of equity awards from a subsidiary	—	—	—	—	—	—	—	—	7	7
Tax impact of deemed dividend from GRAIL	—	—	(10)	—	—	—	—	—	—	(10)
Balance as of January 1, 2017	189	2	2,733	—	(1)	1,485	(43)	(2,022)	73	2,270
Net income (loss)	—	—	—	—	—	726	—	—	(7)	719
Issuance of common stock, net of repurchases	2	—	71	—	—	—	(1)	(319)	—	(248)
Share-based compensation	—	—	164	—	—	—	—	—	—	164
Adjustment to the carrying value of redeemable noncontrolling interests	—	—	(136)	—	—	—	—	—	—	(136)
Vesting of redeemable equity awards	—	—	(13)	—	—	—	—	—	—	(13)
Cumulative-effect adjustment from adoption of ASU 2016-09	—	—	3	—	—	45	—	—	—	48
Deconsolidation of GRAIL	—	—	11	—	—	—	—	—	(66)	(55)
Balance as of December 31, 2017	191	\$ 2	\$ 2,833	\$	(1)	\$ 2,256	(44)	\$ (2,341)	\$ —	\$ 2,749

See accompanying notes to consolidated financial statements.

ILLUMINA, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(In millions)

	Years Ended		
	December 31, 2017	January 1, 2017	January 3, 2016
Cash flows from operating activities:			
Consolidated net income	\$ 678	\$ 428	\$ 458
Adjustments to reconcile net income to net cash provided by operating activities:			
Gain on deconsolidation of GRAIL	(453)	—	—
Depreciation expense	110	90	73
Amortization of intangible assets	46	51	54
Share-based compensation expense	164	129	133
Accretion of debt discount	30	30	39
Deferred income tax expense	81	94	81
Impairment of intangible assets	23	—	—
Cost-method investment gain, net	—	—	(16)
Gain on litigation settlement	—	(11)	—
Other	1	13	4
Changes in operating assets and liabilities:			
Accounts receivable	(26)	3	(96)
Inventory	(33)	(30)	(81)
Prepaid expenses and other current assets	8	(1)	(11)
Other assets	(5)	(7)	(2)
Accounts payable	10	(2)	46
Accrued liabilities	81	(24)	99
Other long-term liabilities	160	16	5
Net cash provided by operating activities	875	779	786
Cash flows from investing activities:			
Purchases of available-for-sale securities	(742)	(895)	(797)
Sales of available-for-sale securities	322	543	582
Maturities of available-for-sale securities	321	140	294
Net cash paid for acquisitions	—	(18)	(37)
Proceeds from sale of GRAIL securities	278	—	—
Deconsolidation of GRAIL cash	(52)	—	—
Net purchases of strategic investments	(29)	(14)	(6)
Purchases of property and equipment	(310)	(260)	(143)
Cash paid for intangible assets	(2)	(11)	—
Net cash used in investing activities	(214)	(515)	(107)
Cash flows from financing activities:			
Payments on financing obligations	(9)	(66)	(245)
Payments on acquisition-related contingent consideration liability	(3)	(29)	(3)
Proceeds from issuance of debt	5	5	—
Common stock repurchases	(251)	(249)	(274)
Taxes paid related to net share settlement of equity awards	(68)	(100)	(127)
Proceeds from issuance of common stock	71	47	72
Proceeds from early exercise of equity awards from a subsidiary	—	7	—
Contributions from noncontrolling interest owners	79	89	32
Net cash used in financing activities	(176)	(296)	(545)

ILLUMINA, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS — (Continued)
(In thousands)

	Years Ended		
	December 31, 2017	January 1, 2017	January 3, 2016
Effect of exchange rate changes on cash and cash equivalents	5	(2)	(1)
Net increase (decrease) in cash and cash equivalents	490	(34)	133
Cash and cash equivalents at beginning of year	735	769	636
Cash and cash equivalents at end of year	<u>\$ 1,225</u>	<u>\$ 735</u>	<u>\$ 769</u>
Supplemental cash flow information:			
Cash paid for income taxes	<u>\$ 149</u>	<u>\$ 60</u>	<u>\$ 17</u>

See accompanying notes to consolidated financial statements.

ILLUMINA, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Unless the context requires otherwise, references in this report to “Illumina,” “we,” “us,” the “Company,” and “our” refer to Illumina, Inc. and its consolidated subsidiaries.

1. Organization and Summary of Significant Accounting Policies

Organization and Business

Illumina, Inc. is a provider of sequencing- and array-based solutions, which serves customers in a broad range of markets, enabling the adoption of genomic solutions in research and clinical settings. Our customers include leading genomic research centers, academic institutions, government laboratories, and hospitals, as well as pharmaceutical, biotechnology, agrigenomics, commercial molecular diagnostic laboratories, and consumer genomics companies.

Basis of Presentation

The consolidated financial statements have been prepared in conformity with U.S. generally accepted accounting principles and include our accounts and our wholly-owned subsidiaries, majority-owned or controlled companies, and variable interest entities (VIEs) for which we are the primary beneficiary. All intercompany transactions and balances have been eliminated in consolidation.

We evaluate our ownership, contractual and other interests in entities that are not wholly-owned by us to determine if these entities are VIEs, and, if so, whether we are the primary beneficiary of the VIE. In determining whether we are the primary beneficiary of a VIE and therefore required to consolidate the VIE, we apply a qualitative approach that determines whether we have both (1) the power to direct the activities of the VIE that most significantly impact the VIE’s economic performance and (2) the obligation to absorb losses of, or the rights to receive benefits from, the VIE that could potentially be significant to that VIE. We continuously assess whether we are the primary beneficiary of a VIE as changes to existing relationships or future transactions may result in the consolidation or deconsolidation, as the case may be, of such VIE. We have not provided financial or other support during the periods presented to our VIEs that we were not previously contractually required to provide.

The equity method is used to account for investments in which we have the ability to exercise significant influence, but not control, over the investee. Such investments are recorded within other assets, and the share of net income or losses of equity investments is recognized on a one quarter lag in other income (expense), net.

Redeemable Noncontrolling Interests

Noncontrolling interests represent the portion of equity (net assets) in a consolidated entity that is not wholly-owned by us that is not attributable, directly or indirectly, to us. Noncontrolling interests with embedded contingent redemption features, such as put rights, that are not solely within our control are considered redeemable noncontrolling interests. Redeemable noncontrolling interests are presented outside of stockholders’ equity on the consolidated balance sheets.

Fiscal Year

Our fiscal year is 52 or 53 weeks ending the Sunday closest to December 31, with quarters of 13 or 14 weeks ending the Sunday closest to March 31, June 30, September 30, and December 31. The years ended December 31, 2017 and January 1, 2017 were 52 weeks and the year ended January 3, 2016 was 53 weeks.

Reclassifications

Certain prior period amounts have been reclassified to conform to the current period presentation.

Use of Estimates

The preparation of financial statements requires that management make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues, expenses, and related disclosures of contingent assets and liabilities. Actual results could differ from those estimates.

ILLUMINA, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Recently Adopted Accounting Pronouncements

In March 2016, the Financial Accounting Standards Board issued Accounting Standard Update (ASU) 2016-09, Compensation - Stock Compensation (Topic 718), which aims to simplify the accounting for share-based payment transactions, including accounting for income taxes, classification on the statement of cash flows, accounting for forfeitures, and classification of awards as either liabilities or equity. This ASU was effective for us beginning in the first quarter of 2017.

This new standard increases the volatility of net income by requiring excess tax benefits from share-based payment arrangements to be classified as discrete items within the provision for income taxes, rather than recognizing excess tax benefits in additional paid-in capital. Upon adoption in Q1 2017, we recorded \$45 million, net, to retained earnings, primarily related to unrealized tax benefits associated with share-based compensation. During the year ended December 31, 2017, excess tax benefits of \$52 million were reflected as a component of the provision for income taxes. Also, as a result of the adoption of this new standard, we made an accounting policy election to recognize forfeitures as they occur and will no longer estimate expected forfeitures.

In addition, excess income tax benefits from share-based compensation arrangements are classified as cash flow from operations, rather than cash flow from financing activities. We elected to apply the cash flow classification guidance retrospectively and reclassified \$91 million and \$127 million from financing activity to operating activity for the years ended January 1, 2017 and January 3, 2016, respectively.

Recently Issued Accounting Pronouncements

In May 2014, the Financial Accounting Standards Board issued ASU 2014-09, *Revenue from Contracts with Customers (Topic 606)*. The new standard is based on the principle that revenue should be recognized in an amount that reflects the consideration to which the entity expects to be entitled in exchange for the transfer of promised goods or services.

ASU 2014-09 and all subsequent amendments (collectively, the “new standards”) may be applied using either the full retrospective method, in which case the standard would be applied to each prior reporting period presented, or the modified retrospective method, in which case the cumulative effect of applying the standard would be recognized at the date of initial application. We will adopt the standards beginning the first quarter of 2018 using the modified retrospective method.

We have completed our assessment of the new standards and are finalizing the new required disclosures. Overall, we do not expect the timing of revenue recognition under the new standards to be materially different from our current revenue recognition policy. Based on our analysis of open contracts as of December 31, 2017, the cumulative effect of applying the new standards is not material.

In January 2016, the Financial Accounting Standards Board issued ASU 2016-01, *Financial Instruments - Overall (Subtopic 825-10)*, which requires equity investments (other than those accounted for under the equity method or those that result in consolidation) to be measured at fair value, with changes in fair value recognized in net income. A measurement alternative may be elected for equity investments that do not have readily determinable fair values. Under the alternative, equity investments are measured at cost, less any impairment, plus or minus changes resulting from observable price changes in orderly transactions for an identical or similar investment of the same issuer. ASU 2016-01 will be effective for us beginning in the first quarter of 2018.

We expect to elect the measurement alternative for our cost-method investments. This election is applied prospectively and does not result in an adjustment to retained earnings. We anticipate that the adoption of ASU 2016-01 may increase the volatility of other income and expense, net, as a result of any remeasurement of our cost-method investments.

In February 2016, the Financial Accounting Standards Board issued Accounting Standard Update (ASU) 2016-02, *Leases (Topic 842)*. The new standard requires lessees to recognize most leases on their balance sheet as lease liabilities with corresponding right-of-use assets and eliminates certain real estate-specific provisions. ASU 2016-02 will be effective for us beginning in the first quarter of 2019. ASU 2016-02 will be adopted on a modified retrospective transition basis for leases existing at, or entered into after, the beginning of the earliest comparative period presented in the financial statements. We are currently evaluating the impact of ASU 2016-02 on the consolidated financial statements.

ILLUMINA, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

In June 2016, the FASB issued Accounting Standards Update (ASU) 2016-13, *Financial Instruments - Credit Losses: Measurement of Credit Losses on Financial Instruments*, which amends the impairment model by requiring entities to use a forward-looking approach based on expected losses to estimate credit losses on certain types of financial instruments, including trade receivables and available for sale debt securities. The ASU is effective for us beginning in the first quarter of 2020, with early adoption permitted. We are currently evaluating the impact of ASU 2016-13 on the consolidated financial statements.

Concentrations of Risk

We operate in markets that are highly competitive and rapidly changing. Significant technological changes, shifting customer needs, the emergence of competitive products or services with new capabilities, and other factors could negatively impact our operating results. A portion of our customers consist of university and research institutions that management believes are, to some degree, directly or indirectly supported by the United States Government. A significant change in current research funding, particularly with respect to the U.S. National Institutes of Health, could have an adverse impact on future revenues and results of operations.

We are also subject to risks related to our financial instruments including cash and cash equivalents, investments, and accounts receivable. Most of our cash and cash equivalents as of December 31, 2017 were deposited with U.S. financial institutions, either domestically or with their foreign branches. Our investment policy restricts the amount of credit exposure to any one issuer to 5% of the portfolio or 5% of the total issue size outstanding at the time of purchase and to any one industry sector, as defined by Clearwater Analytics (Industry Sector Report), to 30% of the portfolio at the time of purchase. There is no limit to the percentage of the portfolio that may be maintained in debt securities in U.S. government-sponsored entities, U.S. Treasury securities, and money market funds.

We require customized products and components that currently are available from a limited number of sources. We source certain key products and components included in our products from single vendors.

We perform regular reviews of customer activity and associated credit risks and do not require collateral or enter into netting arrangements. Shipments to customers outside the United States comprised 45%, 46%, and 46% of total revenue for the years ended December 31, 2017, January 1, 2017, and January 3, 2016, respectively. Customers outside the United States represented 48% of gross trade accounts receivable balance at both December 31, 2017 and January 1, 2017.

International sales entail a variety of risks, including currency exchange fluctuations, longer payment cycles, and greater difficulty in accounts receivable collection. We are also subject to general geopolitical risks, such as political, social and economic instability, and changes in diplomatic and trade relations. The risks of international sales are mitigated in part by the extent to which sales are geographically distributed. We have historically not experienced significant credit losses from investments and accounts receivable.

Fair Value Measurements

The fair value of assets and liabilities are based on the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. Valuation techniques used to measure fair value maximize the use of observable inputs and minimize the use of unobservable inputs. We use a fair value hierarchy with three levels of inputs, of which the first two are considered observable and the last unobservable, to measure fair value:

- *Level 1* — Quoted prices in active markets for identical assets or liabilities.
- *Level 2* — Inputs, other than Level 1, that are observable, either directly or indirectly, such as quoted prices for similar assets or liabilities; quoted prices in markets that are not active; or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.
- *Level 3* — Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

The carrying amounts of financial instruments such as cash and cash equivalents, accounts receivable, prepaid expenses and other current assets, accounts payable, and accrued liabilities, excluding acquisition-related contingent consideration liabilities, approximate the related fair values due to the short-term maturities of these instruments.

ILLUMINA, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Functional Currency

The U.S. dollar is the functional currency of our international operations. We re-measure foreign subsidiaries' monetary assets and liabilities to the U.S. dollar and record the net gains or losses resulting from re-measurement in other income (expense), net in the consolidated statements of income.

Acquisitions

All assets acquired and liabilities assumed, including contingent consideration and all contractual contingencies, are measured at fair value as of the acquisition date. Contingent purchase consideration to be settled in cash are re-measured to estimated fair value at each reporting period with the change in fair value recorded in selling, general and administrative expenses. In addition, in-process research and development (IPR&D) is capitalized and either amortized over the life of the product upon commercialization, or impaired if the project is abandoned. Post-acquisition adjustments in deferred tax asset valuation allowances and liabilities for uncertain tax positions are recorded in current period income tax expense.

Cash Equivalents and Short-Term Investments

Cash equivalents are comprised of short-term, highly-liquid investments with maturities of 90 days or less at the date of purchase.

Short-term investments consist predominantly of debt securities in U.S. government-sponsored entities, corporate debt securities, and U.S. Treasury securities. We classify short-term investments as available-for-sale at the time of purchase and evaluate such classification as of each balance sheet date. All short-term investments are recorded at estimated fair value. Unrealized gains and losses for available-for-sale securities are included in accumulated other comprehensive income, a component of stockholders' equity. We evaluate our investments to assess whether those with unrealized loss positions are other than temporarily impaired. Impairments are considered to be other than temporary if they are related to deterioration in credit risk or if it is likely that the securities will be sold before the recovery of their cost basis. Realized gains, losses, and declines in value judged to be other than temporary are determined based on the specific identification method and are reported in interest income in the consolidated statements of income.

Accounts Receivable

Trade accounts receivable are recorded at the net invoice value and are not interest bearing. Receivables are considered past due based on the contractual payment terms. We reserve specific receivables if collectibility is no longer reasonably assured. We also reserve a percentage of trade receivable balance based on collection history and current economic trends that might impact the level of future credit losses. These reserves are re-evaluated on a regular basis and adjusted as needed. Once a receivable is deemed to be uncollectible, such balance is charged against the reserve.

Inventory

Inventory is stated at the lower of cost or net realizable value, on a first-in, first-out basis. Inventory includes raw materials and finished goods that may be used in the research and development process and such items are expensed as consumed or expired. Provisions for slow-moving, excess, and obsolete inventories are estimated based on product life cycles, quality issues, historical experience, and usage forecasts.

Property and Equipment

Property and equipment are stated at cost, subject to review for impairment, and depreciated over the estimated useful lives of the assets, using the straight-line method. Depreciation of leasehold improvements is recorded over the shorter of the lease term or the estimated useful life of the related assets. Amortization of assets that are recorded under capital leases are included in depreciation expense. Maintenance and repairs are expensed as incurred. When assets are sold, or otherwise disposed of, the cost and related accumulated depreciation are removed from the accounts and any gain or loss is included in operating expense.

ILLUMINA, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Costs incurred to develop internal-use software during the application development stage are recorded as computer software costs, at cost. Costs incurred in the development of such internal-use software, including external direct costs of materials and services and applicable compensation costs of employees devoted to specific software application development are capitalized. Cost incurred outside of the application development stage are expensed as incurred.

The estimated useful lives of the major classes of property and equipment are generally as follows:

	Estimated Useful Lives
Building and leasehold improvements	4 to 30 years
Machinery and equipment	3 to 5 years
Computer hardware and software	3 to 7 years
Furniture and fixtures	7 years

Leases

Leases are reviewed and classified as capital or operating at their inception. Additionally, we evaluate whether we are the accounting owner during the construction period when we are involved in the construction of leased assets. For leases where we are the deemed accounting owner during the construction period, we record project construction costs paid or reimbursed by the landlord as construction in progress and a corresponding build-to-suit lease liability. For operating leases, rent expense is recorded on a straight-line basis over the term of the lease, which includes the construction build-out period and lease extension periods, if appropriate. The difference between rent payments and straight-line rent expense is recorded as deferred rent in accrued liabilities and other long-term liabilities. Lease incentives are amortized on a straight-line basis over the lease term as a reduction to rent expense. Leasehold improvements are capitalized and amortized over the shorter of the lease term or expected useful lives.

Goodwill, Intangible Assets and Other Long-Lived Assets

Goodwill, which has an indefinite useful life, represents the excess of cost over fair value of net assets acquired. Goodwill is reviewed for impairment at least annually during the second quarter, or more frequently if an event occurs indicating the potential for impairment. During the goodwill impairment review, we assess qualitative factors to determine whether it is more likely than not that the fair value of our reporting unit is less than the carrying amount, including goodwill. The qualitative factors include, but are not limited to, macroeconomic conditions, industry and market considerations, and the overall financial performance. If, after assessing the totality of these qualitative factors, we determine that it is not more likely than not that the fair value of our reporting unit is less than the carrying amount, then no additional assessment is deemed necessary. Otherwise, we proceed to perform the two-step test for goodwill impairment. The first step involves comparing the estimated fair value of the reporting unit with the carrying value, including goodwill. If the carrying amount of the reporting unit exceeds the fair value, the second step of the goodwill impairment test is performed to determine the amount of loss, which involves comparing the implied fair value of the goodwill to the carrying value of the goodwill. We may also elect to bypass the qualitative assessment in a period and elect to proceed to perform the first step of the goodwill impairment test. We performed the annual assessment for goodwill impairment in the second quarter of 2017, noting no impairment.

Our identifiable intangible assets are typically comprised of acquired core technologies, licensed technologies, customer relationships, license agreements, and trade names. The cost of identifiable intangible assets with finite lives is generally amortized on a straight-line basis over the assets' respective estimated useful lives.

We regularly perform reviews to determine if any event has occurred that may indicate that intangible assets with finite useful lives and other long-lived assets are potentially impaired. If indicators of impairment exist, an impairment test is performed to assess the recoverability of the affected assets by determining whether the carrying amount of such assets exceeds the undiscounted expected future cash flows. If the affected assets are not recoverable, we estimate the fair value of the assets and record an impairment loss if the carrying value of the assets exceeds the fair value. Factors that may indicate potential impairment include a significant decline in our stock price and market capitalization compared to the net book value, significant changes in the ability of a particular asset to generate positive cash flows for our strategic business objectives, and the pattern of utilization of a particular asset.

ILLUMINA, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

During the year ended December 31, 2017, we performed a recoverability test when the planned use of a finite-lived acquired intangible asset changed, resulting in an impairment charge of \$18 million recorded in cost of product revenue. Also, during the year ended December 31, 2017, we recorded a \$5 million impairment charge of in-process research and development as the project had no future alternative use. Such impairments were recorded within the Core Illumina reportable segment. See further discussion of our segments in note “11. Segment Information, Geographic Data, and Significant Customers.”

Derivatives

We are exposed to foreign exchange rate risks in the normal course of business. We enter into foreign exchange contracts to manage foreign currency risks related to monetary assets and liabilities that are denominated in currencies other than the U.S. dollar. These foreign exchange contracts are carried at fair value in other current assets or accrued liabilities and are not designated as hedging instruments. Changes in the value of the derivatives are recognized in other income (expense), net, along with the re-measurement gain or loss on the foreign currency denominated assets or liabilities.

As of December 31, 2017, we had foreign exchange forward contracts in place to hedge exposures in the euro, Japanese yen, Australian dollar, and Canadian dollar. As of December 31, 2017 and January 1, 2017, the total notional amount of outstanding forward contracts in place for foreign currency purchases was \$88 million and \$69 million, respectively.

Warranties

We generally provide a one-year warranty on instruments. Additionally, a warranty on consumables is provided through the expiration date, which generally ranges from six to twelve months after the manufacture date. At the time revenue is recognized, an accrual is established for estimated warranty expenses based on historical experience as well as anticipated product performance. We periodically review the warranty reserve for adequacy and adjust the warranty accrual, if necessary, based on actual experience and estimated costs to be incurred. Warranty expense is recorded as a component of cost of product revenue.

Revenue Recognition

Revenue is generated primarily from the sale of products and services. Product revenue primarily consists of sales of instruments and consumables used in genetic analysis. Service and other revenue primarily consists of revenue generated from genotyping and sequencing services and instrument service contracts.

Revenue is recognized when persuasive evidence of an arrangement exists, delivery has occurred or services have been rendered, the seller's price to the buyer is fixed or determinable, and collectibility is reasonably assured. In instances where final acceptance of the product or system is required, revenue is deferred until all the acceptance criteria have been met. We occasionally offer discounts on newly-introduced products to recent customers of existing products. Where applicable, a portion of revenue is deferred on the sales of existing products in recognition of the promotional discounts until the delivery of new products. All revenue is recorded net of discounts and sales taxes collected on behalf of governmental authorities.

Revenue from product sales is recognized generally upon transfer of title to the customer, provided that no significant obligations remain and collection of the receivable is reasonably assured. Revenue from instrument service contracts is recognized as the services are rendered, typically evenly over the contract term. Revenue from genotyping and sequencing services is recognized when earned, which is generally at the time the genotyping or sequencing analysis data is made available to the customer or agreed-upon milestones are reached.

In order to assess whether the price is fixed or determinable, we evaluate whether an arrangement is cancellable or subject to future changes in price, deliverables, or other terms. If it is determined that the price is not fixed or determinable, revenue recognition is deferred until the price becomes fixed or determinable. The collectibility is assessed based on a number of factors, including past transaction history with, and the creditworthiness of, the customer. If the collection of a payment is not determined to be reasonably assured, revenue recognition is deferred until receipt of payment.

We regularly enter into contracts where revenue is derived from multiple deliverables including products or services. These products or services are generally delivered within a short time frame, approximately three to six months, after the contract execution date. Revenue recognition for contracts with multiple deliverables is based on the individual units of accounting determined to exist in the contract. A delivered item is considered a separate unit of accounting when the delivered

ILLUMINA, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

item has value to the customer on a stand-alone basis. Items are considered to have stand-alone value when they are sold separately by any vendor or when the customer could resell the item on a stand-alone basis.

For transactions with multiple deliverables, consideration is allocated at the inception of the contract to all deliverables based on their relative selling price. The relative selling price for each deliverable is determined using vendor-specific objective evidence (VSOE) of selling price or third-party evidence of selling price if VSOE does not exist. If neither VSOE nor third-party evidence exists, our best estimate of the selling price is used for the deliverable.

In order to establish VSOE of selling price, the product or service must be regularly sold on a stand-alone basis with a substantial majority priced within a relatively narrow range. VSOE of selling price is usually the midpoint of that range. If there are not a sufficient number of stand-alone sales and VSOE of selling price cannot be determined, we consider whether third-party evidence can be used to establish selling price. Due to the lack of similar products and services sold by other companies within the industry, we have rarely established selling price using third-party evidence. If neither VSOE nor third-party evidence of selling price exists, we determine our best estimate of selling price using average selling prices over a rolling 12 -month period coupled with an assessment of current market conditions. If the product or service has no history of sales or if the sales volume is not sufficient, we rely upon prices set by our pricing committee adjusted for applicable discounts. Revenue for delivered elements is recognized only when there are no uncertainties regarding customer acceptance.

In certain markets, products and services are sold to customers through distributors that specialize in life science products. In most sales through distributors, the product is delivered directly to customers. In cases where the product is delivered to a distributor, revenue recognition is deferred until acceptance is received from the distributor, and/or the end-user, if required by the applicable sales contract. The terms of sales transactions through distributors are consistent with the terms of direct sales to customers. These transactions are accounted for in accordance with our revenue recognition policy described herein.

Share-Based Compensation

Share-based compensation expense is incurred related to restricted stock, Employee Stock Purchase Plan (ESPP), and stock options.

Restricted stock units (RSU) and performance stock units (PSU) are both considered restricted stock. The fair value of restricted stock is determined by the closing market price of our common stock on the date of grant. Share-based compensation expense is recognized based on the fair value on a straight-line basis over the requisite service periods of the awards. PSU represents a right to receive a certain number of shares of common stock based on the achievement of corporate performance goals and continued employment during the vesting period. At each reporting period, we reassess the probability of the achievement of such corporate performance goals and any additional expenses resulting from an adjustment in the estimated shares to be released are treated as a cumulative catch-up in the period of adjustment.

The Black-Scholes-Merton option-pricing model is used to estimate the fair value of stock awards under ESPP. The model assumptions include expected volatility, term, dividends, and the risk-free interest rate. The expected volatility is determined by equally weighing the historical and implied volatility of our common stock. The historical volatility is generally commensurate with the estimated expected term of the stock awards, adjusted for the impact of unusual fluctuations and other relevant factors. The implied volatility is calculated from the implied market volatility of exchange-traded call options on our common stock. The expected term of an award is based on historical forfeiture experience, exercise activity, and on the terms and conditions of the stock awards. The expected dividend yield is determined to be 0% given that we have never declared or paid cash dividends on our common stock and do not anticipate paying such cash dividends. The risk-free interest rate is based upon U.S. Treasury securities with remaining terms similar to the expected term of the share-based awards.

Forfeitures are accounted for as incurred as reversal of any share-based compensation expense related to awards that will not vest.

Shipping and Handling Expenses

Shipping and handling expenses are included in cost of product revenue.

Research and Development

ILLUMINA, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Research and development expenses include personnel expenses, contractor fees, license fees, facilities costs, and utilities. Expenditures relating to research and development are expensed in the period incurred.

Advertising Costs

Advertising costs are expensed as incurred. Advertising costs were \$30 million, \$20 million, and \$19 million for the years ended December 31, 2017, January 1, 2017, and January 3, 2016, respectively.

Income Taxes

The provision for income taxes is computed using the asset and liability method, under which deferred tax assets and liabilities are recognized for the expected future tax consequences of temporary differences between the financial reporting and tax bases of assets and liabilities, and for the expected future tax benefit to be derived from tax loss and credit carryforwards. Deferred tax assets and liabilities are determined using the enacted tax rates in effect for the years in which those tax assets are expected to be realized. The effect of a change in tax rates on deferred tax assets and liabilities is recognized in the provision for income taxes in the period that includes the enactment date.

Deferred tax assets are regularly assessed to determine the likelihood they will be recovered from future taxable income. A valuation allowance is established when we believe it is more likely than not the future realization of all or some of a deferred tax asset will not be achieved. In evaluating the ability to recover deferred tax assets within the jurisdiction which they arise, we consider all available positive and negative evidence. Factors reviewed include the cumulative pre-tax book income for the past three years, scheduled reversals of deferred tax liabilities, history of earnings and reliable forecasting, projections of pre-tax book income over the foreseeable future, and the impact of any feasible and prudent tax planning strategies.

The impact of a tax position is recognized in the financial statements only if that position is more likely than not of being sustained upon examination by taxing authorities, based on the technical merits of the position. Any interest and penalties related to uncertain tax positions will be reflected in income tax expense.

Earnings per Share

Basic earnings per share attributable to Illumina stockholders is computed based on the weighted average number of common shares outstanding during the period. Diluted earnings per share attributable to Illumina stockholders is computed based on the sum of the weighted average number of common shares and potentially dilutive common shares outstanding during the period. Per-share earnings of our VIEs are included in the consolidated basic and diluted earnings per share computations based on our share of the VIE's securities.

Potentially dilutive common shares consist of shares issuable under convertible senior notes and equity awards. Convertible senior notes have a dilutive impact when the average market price of our common stock exceeds the applicable conversion price of the respective notes. Potentially dilutive common shares from equity awards are determined using the average share price for each period under the treasury stock method. In addition, proceeds from exercise of equity awards and the average amount of unrecognized compensation expense for equity awards are assumed to be used to repurchase shares.

The following table presents the calculation of weighted average shares used to calculate basic and diluted earnings per share (in millions):

	Years Ended		
	December 31, 2017	January 1, 2017	January 3, 2016
Weighted average shares outstanding	146	147	145
Effect of potentially dilutive common shares from:			
Convertible senior notes	—	—	2
Equity awards	2	1	2
Weighted average shares used in calculating diluted earnings per share	148	148	149

ILLUMINA, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Accumulated Other Comprehensive Loss

Comprehensive income is comprised of net income and other comprehensive income. Accumulated other comprehensive loss on the consolidated balance sheets at December 31, 2017 and January 1, 2017 includes accumulated foreign currency translation adjustments and unrealized gains and losses on the available-for-sale securities.

The components of accumulated other comprehensive income (loss) are as follows (in millions):

	December 31, 2017	January 1, 2017
Foreign currency translation adjustments	\$ 1	\$ 1
Unrealized loss on available-for-sale securities, net of deferred tax	(2)	(2)
Total accumulated other comprehensive loss	\$ (1)	\$ (1)

2. Balance Sheet Account Details

Short-Term Investments

The following is a summary of short-term investments (in millions):

	December 31, 2017			January 1, 2017		
	Amortized Cost	Gross Unrealized Losses	Estimated Fair Value	Amortized Cost	Gross Unrealized Losses	Estimated Fair Value
Available-for-sale securities:						
Debt securities in government-sponsored entities	\$ 67	\$ —	\$ 67	\$ 34	\$ —	\$ 34
Corporate debt securities	423	(2)	421	478	(2)	476
U.S. Treasury securities	433	(1)	432	316	(2)	314
Total available-for-sale securities	\$ 923	\$ (3)	\$ 920	\$ 828	\$ (4)	\$ 824

Contractual maturities of available-for-sale debt securities as of December 31, 2017 are as follows (in millions):

	Estimated Fair Value
Due within one year	\$ 686
After one but within five years	234
Total	\$ 920

We have the ability, if necessary, to liquidate any of our cash equivalents and short-term investments in order to meet our liquidity needs in the next 12 months. Accordingly, those investments with contractual maturities greater than one year from the date of purchase nonetheless are classified as short-term on the accompanying consolidated balance sheets.

Strategic Investments

As of December 31, 2017 and January 1, 2017, the aggregate carrying amounts of our cost-method investments in non-publicly traded companies were \$250 million and \$57 million, respectively, included in other assets. Revenue recognized from transactions with such companies were \$127 million, \$56 million, and \$61 million for the years ended December 31, 2017, January 1, 2017, and January 3, 2016, respectively.

Cost-method investments are assessed for impairment quarterly. We determine that it is not practicable to estimate the fair value of the cost-method investments on a regular basis and do not reassess the fair value of cost-method investments unless there are identified events or changes in circumstances that may have a significant adverse effect on the fair value of the investments. No material impairment losses were recorded during the years ended December 31, 2017, January 1, 2017, and January 3, 2016.

During the year ended January 3, 2016, we recognized an \$18 million gain on the dispositions of cost-method investments.

We invest in a venture capital investment fund (the Fund) with a capital commitment of \$100 million that is callable over ten years, of which \$83 million remains as of December 31, 2017. Our investment in the Fund is accounted for as an equity method investment. The carrying amounts included in other assets were \$16 million and \$10 million as of December 31, 2017, and January 1, 2017, respectively.

Accounts Receivable

Accounts receivable, net consist of the following (in millions):

	December 31, 2017	January 1, 2017
Trade accounts receivable, gross	\$ 414	\$ 385
Allowance for doubtful accounts	(3)	(4)

Total accounts receivable, net	\$	411	\$	381
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Inventory

Inventory consists of the following (in millions):

		December 31, 2017		January 1, 2017
Raw materials	\$	93	\$	102
Work in process		188		161
Finished goods		52		37
Total inventory	\$	333	\$	300

Property and Equipment

Property and equipment, net consists of the following (in millions):

		December 31, 2017		January 1, 2017
Leasehold improvements	\$	331	\$	270
Machinery and equipment		316		274
Computer hardware and software		185		156
Furniture and fixtures		34		24
Building		155		9
Construction in progress		326		307
Total property and equipment, gross		1,347		1,040
Accumulated depreciation		(416)		(327)
Total property and equipment, net	\$	931	\$	713

Property and equipment, net included non-cash expenditures of \$117 million, \$220 million and \$24 million for the years ended December 31, 2017, January 1, 2017 and January 3, 2016, respectively, which were excluded from the consolidated statements of cash flows. Such non-cash expenditures included \$79 million, \$193 million and \$10 million recorded under build-to-suit lease accounting for the years ended December 31, 2017, January 1, 2017 and January 3, 2016, respectively.

ILLUMINA, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Goodwill

Changes to goodwill balance from January 3, 2016 through December 31, 2017 are as follows (in millions):

	Goodwill
Balance as of January 3, 2016	\$ 753
Acquisitions	23
Balance as of January 1, 2017	776
GRAIL deconsolidation	(5)
Balance as of December 31, 2017	\$ 771

In January 2016, we closed two acquisitions consisting of \$18 million in upfront cash payments, equity instruments, and certain contingent consideration provisions.

Accrued Liabilities

Accrued liabilities consist of the following (in millions):

	December 31, 2017	January 1, 2017
Accrued compensation expenses	\$ 177	\$ 112
Deferred revenue, current portion	130	121
Accrued taxes payable	50	32
Customer deposits	20	20
Other, including warranties (a)	55	57
Total accrued liabilities	\$ 432	\$ 342

(a) Changes in reserve for product warranties from December 28, 2014 through December 31, 2017 are as follows (in millions):

	Warranty Reserve
Balance as of December 28, 2014	\$ 16
Additions charged to cost of revenue	28
Repairs and replacements	(27)
Balance as of January 3, 2016	17
Additions charged to cost of revenue	21
Repairs and replacements	(25)
Balance as of January 1, 2017	13
Additions charged to cost of revenue	26
Repairs and replacements	(22)
Balance as of December 31, 2017	\$ 17

ILLUMINA, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Investments in Consolidated Variable Interest Entities

Helix Holdings I, LLC

In July 2015, we obtained a 50% voting equity ownership interest in Helix Holdings I, LLC (Helix), a limited liability company formed with unrelated third-party investors to pursue the development and commercialization of a marketplace for consumer genomics. We determined that Helix is a variable interest entity as the holders of the at-risk equity investments as a group lack the power to direct the activities of Helix that most significantly impact Helix's economic performance. Additionally, we determined that we have (a) unilateral power over one of the activities that most significantly impacts the economic performance of Helix through its contractual arrangements and no one individual party has unilateral power over the remaining significant activities of Helix and (b) the obligation to absorb losses of and the right to receive benefits from Helix that are potentially significant to Helix. As a result, we are deemed to be the primary beneficiary of Helix and are required to consolidate Helix.

As contractually committed, we contributed certain perpetual licenses, instruments, intangibles, initial laboratory setup, and discounted supply terms in exchange for voting equity interests in Helix. Such contributions are recorded at their historical basis as they remain within the control of Illumina. Helix is financed through cash contributions made by the third-party investors in exchange for voting equity interests in Helix.

Certain noncontrolling Helix investors may require us to redeem all noncontrolling interests in cash at the then approximate fair market value. Such redemption right is exercisable at the option of certain noncontrolling interest holders after January 1, 2021, provided that a bona fide pursuit of the sale of Helix has occurred and an initial public offering of Helix has not been completed. The fair value of the redeemable noncontrolling interests is considered a Level 3 instrument.

As the contingent redemption is outside of the control of Illumina, the redeemable noncontrolling interests in Helix are classified outside of stockholders' equity on the accompanying consolidated balance sheets. The balance of the redeemable noncontrolling interests is reported at the greater of its carrying value after receiving its allocation of Helix's profits and losses or its estimated redemption value at each reporting date. As of December 31, 2017, the noncontrolling shareholders and Illumina each held 50% of Helix's outstanding voting equity interests.

The assets and liabilities of Helix are not significant to our financial position as of December 31, 2017. Helix has an immaterial impact on our consolidated statements of income and cash flows for the fiscal year ended December 31, 2017.

As of December 31, 2017, the accompanying consolidated balance sheet includes \$18 million of cash and cash equivalents attributable to Helix that will be used to settle their respective obligations and will not be available to settle obligations of Illumina.

GRAIL, Inc.

In January 2016, we obtained a majority equity ownership interest in GRAIL, a company formed with unrelated third-party investors to develop a blood test for early-stage cancer detection. We determined that GRAIL was a variable interest entity as the entity lacked sufficient equity to finance its activities without additional support. Additionally, we determined that we had (a) control of GRAIL's board of directors, which had unilateral power over the activities that most significantly impacted the economic performance of GRAIL and (b) the obligation to absorb losses of, and the right to receive benefits from, GRAIL that were potentially significant to GRAIL. As a result, we were deemed to be the primary beneficiary of GRAIL and were required to consolidate GRAIL.

In January 2016, GRAIL completed its Series A convertible preferred stock financing, raising \$120 million, of which we invested \$40 million. Additionally, Illumina and GRAIL executed a long-term supply agreement in which we contributed employees and discounted supply terms in exchange for 113 million shares of GRAIL's Class B common stock. Such contributions were recorded at their historical basis as they remained within the control of Illumina. The \$80 million received by GRAIL from unrelated third-party investors upon issuance of its Series A convertible preferred stock was classified as noncontrolling interests in stockholders' equity on the consolidated balance sheet.

In June 2016, GRAIL authorized for issuance 98 million shares of Series A-1 convertible preferred stock, all of which were issued to Illumina in exchange for Illumina's 98 million shares of GRAIL Class B common stock. As a result of the

ILLUMINA, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

exchange, we recorded a \$10 million deemed dividend, net of tax of \$10 million, through equity, which was eliminated in consolidation.

Deconsolidation of GRAIL

On February 28, 2017, GRAIL completed the initial close of its Series B preferred stock financing, raising over \$900 million, in which we did not participate. Concurrent with the financing, GRAIL repurchased from Illumina 35 million shares of its Series A preferred stock and approximately 34 million shares of its Series A-1 preferred stock for an aggregate purchase price of \$278 million. At this time, we ceased to have a controlling financial interest in GRAIL and our equity ownership was reduced from 52% to 19%. Additionally, our voting interest was reduced to 13%, and we no longer had representation on GRAIL's board of directors. As a result, we deconsolidated GRAIL's financial statements effective February 28, 2017 and account for the remaining retained investment as a cost-method investment. During the three months ended July 2, 2017, we purchased approximately 3 million Series B preferred shares for \$14 million resulting in an ownership of approximately 17% of GRAIL's outstanding stock and a 12% voting interest. As of December 31, 2017, we hold \$185 million in other assets related to this investment, which consists of 5 million Series A preferred shares, and approximately 3 million Series B preferred shares and 78 million Class A common shares of GRAIL.

The operations of GRAIL from January 2, 2017 up to February 28, 2017, the date of deconsolidation, are included in the accompanying consolidated statements of income for the year ended December 31, 2017. During this period, we absorbed approximately 50% of GRAIL's losses based upon our proportional ownership of GRAIL's common stock.

On February 28, 2017, we recorded a pretax gain of \$453 million included in other income (expense), net, of which \$159 million relates to the remeasurement of our retained equity interest to its fair value. The pretax gain on deconsolidation includes (i) the consideration received from GRAIL for its repurchase of a portion of our ownership interest, (ii) the derecognition of the carrying amounts of GRAIL's assets and liabilities, (iii) the derecognition of the noncontrolling interest related to GRAIL, and (iv) the recording of our remaining interest in GRAIL at fair value. This fair value measurement of our remaining interest was derived using the market approach. Significant estimates and assumptions required for this valuation included, but were not limited to, various Black-Scholes option-pricing model assumptions as of the date of deconsolidation and estimated discounts for lack of marketability related to the equity securities. These unobservable inputs, which represent a Level 3 measurement, are supported by little or no market activity and reflect our own assumptions in measuring fair value.

In connection with the deconsolidation of GRAIL, the parties amended their long-term supply agreement, including the discounted supply terms. The repurchase and supply arrangements, which were entered into concurrently, contain various elements and, as such, are deemed to be an arrangement with multiple deliverables as defined under the respective authoritative accounting guidance. We determined that each of the elements, which include the purchase obligation, the purchase right, and services to be provided in accordance with the long-term supply agreement, were at, or approximated, fair value on a stand-alone basis, and therefore, there was no discount to allocate among the deliverables. As such, none of the deconsolidation gain was allocated to these elements.

ILLUMINA, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Redeemable Noncontrolling Interests

The activity of the redeemable noncontrolling interests from December 28, 2014 through December 31, 2017 is as follows (in millions):

	Redeemable Noncontrolling Interests
Balance as of December 28, 2014	\$ —
Cash contributions	57
Amount held in escrow by third party	(24)
Net loss attributable to noncontrolling interests	(4)
Adjustment up to the redemption value	4
Balance as of January 3, 2016	33
Cash contributions	9
Vesting of redeemable equity awards	2
Net loss attributable to noncontrolling interests	(21)
Adjustment up to the redemption value	21
Balance as of January 1, 2017	44
Amount released from escrow	79
Vesting of redeemable equity awards	13
Net loss attributable to noncontrolling interests	(41)
Adjustment up to the redemption value	136
Deconsolidation of GRAIL	(11)
Balance as of December 31, 2017	\$ 220

3. Intangible Assets

Intangible assets, excluding goodwill, include acquired licensed and core technologies, customer relationships, license agreements, trade name, and in-process research and development (IPR&D). Amortization for the intangible assets that have finite useful lives is generally recorded on a straight-line basis over their useful lives.

A summary of the finite-lived identifiable intangible assets is as follows (in millions):

	December 31, 2017			January 1, 2017		
	Gross Carrying Amount	Accumulated Amortization	Intangibles, Net	Gross Carrying Amount	Accumulated Amortization	Intangibles, Net
Licensed technologies	\$ 95	\$ (74)	\$ 21	\$ 95	\$ (64)	\$ 31
Core technologies	300	(161)	139	328	(142)	186
Customer relationships	32	(25)	7	33	(22)	11
License agreements	14	(8)	6	14	(7)	7
Trade name	7	(5)	2	5	(3)	2
Total finite-lived intangible assets, net	\$ 448	\$ (273)	\$ 175	\$ 475	\$ (238)	\$ 237

ILLUMINA, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

The estimated annual amortization of finite-lived intangible assets for the next five years is shown in the following table (in millions). Actual amortization expense to be reported in future periods could differ from these estimates as a result of acquisitions, divestitures, and asset impairments, among other factors.

	Estimated Annual Amortization
2018	\$ 36
2019	32
2020	24
2021	21
2022	17
Thereafter	45
Total	\$ 175

4. Fair Value Measurements

Fair value hierarchy for assets and liabilities measured at fair value on a recurring basis as of December 31, 2017 and January 1, 2017 are as follows (in millions):

	December 31, 2017				January 1, 2017			
	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Assets:								
Money market funds (cash equivalent)	\$ 957	\$ —	\$ —	\$ 957	\$ 386	\$ —	\$ —	\$ 386
Debt securities in government-sponsored entities	—	67	—	67	—	34	—	34
Corporate debt securities	—	421	—	421	—	476	—	476
U.S. Treasury securities	432	—	—	432	314	—	—	314
Deferred compensation plan assets	—	35	—	35	—	31	—	31
Total assets measured at fair value	\$ 1,389	\$ 523	\$ —	\$ 1,912	\$ 700	\$ 541	\$ —	\$ 1,241
Liabilities:								
Acquisition-related contingent consideration liabilities	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ 4	\$ 4
Deferred compensation liability	—	33	—	33	—	29	—	29
Total liabilities measured at fair value	\$ —	\$ 33	\$ —	\$ 33	\$ —	\$ 29	\$ 4	\$ 33

We hold available-for-sale securities that consist of highly-liquid, investment-grade debt securities. We consider information provided by our investment accounting and reporting service provider in the measurement of fair value of our debt securities. The investment service provider provides valuation information from an industry-recognized valuation service. Such valuations may be based on trade prices in active markets for identical assets or liabilities (Level 1 inputs) or valuation models using inputs that are observable either directly or indirectly (Level 2 inputs), such as quoted prices for similar assets or liabilities, yield curve, volatility factors, credit spreads, default rates, loss severity, current market and contractual prices for the underlying instruments or debt, broker and dealer quotes, as well as other relevant economic measures. Our deferred compensation plan assets consist primarily of investments in life insurance contracts carried at cash surrender value, which reflects the net asset value of the underlying publicly traded mutual funds. We perform control procedures to corroborate the fair value of our holdings, including comparing valuations obtained from our investment service provider to valuations reported by our asset custodians, validating pricing sources and models, and reviewing key model inputs, if necessary.

The fair value of any contingent consideration liabilities is reassessed on a quarterly basis using the income approach. Assumptions used to estimate the acquisition date fair value of the contingent consideration include discount rates ranging from 4% to 6% and the probability of achieving certain milestones. The fair value measurement of the contingent consideration is based on significant inputs not observed in the market (Level 3 inputs). Significant inputs used in the measurement include probabilities of achieving the remaining milestones and the discount rates, which depend on the milestone risk profiles. The

ILLUMINA, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

changes in fair value of the contingent consideration during the years ended December 31, 2017, January 1, 2017, and January 3, 2016 were due to changes in the estimated payments and discounting periods.

Changes in estimated fair value of contingent consideration liabilities from December 28, 2014 through December 31, 2017 are as follows (in millions):

	Contingent Consideration Liability (Level 3 Measurement)
Balance as of December 28, 2014	\$ 44
Change in estimated fair value, recorded in selling, general and administrative expenses	(6)
Cash payments	(3)
Balance as of January 3, 2016	35
Additional liability recorded as a result of a current period acquisition	5
Change in estimated fair value, recorded in selling, general and administrative expenses	(1)
Cash payments	(35)
Balance as of January 1, 2017	4
Change in estimated fair value, recorded in selling, general and administrative expenses	(1)
Cash payments	(3)
Balance as of December 31, 2017	\$ —

5. Debt and Other Commitments

Summary of debt obligations

Debt obligations consist of the following (dollars in millions):

	December 31, 2017	January 1, 2017
Principal amount of 2019 Notes outstanding	\$ 633	\$ 633
Principal amount of 2021 Notes outstanding	517	517
Unamortized discount of liability component	(75)	(105)
Net carrying amount of liability component	1,075	1,045
Obligations under financing leases	113	9
Other	4	4
Less: current portion	(10)	(2)
Long-term debt	\$ 1,182	\$ 1,056
Carrying value of equity component, net of issuance costs	\$ 161	\$ 161
Fair value of outstanding notes (Level 2)	\$ 1,305	\$ 1,108
Weighted average remaining amortization period of discount on the liability component	2.8 years	3.6 years

ILLUMINA, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

0% Convertible Senior Notes due 2019 (2019 Notes) and 0.5% Convertible Senior Notes due 2021 (2021 Notes)

In June 2014, we issued \$633 million aggregate principal amount of 0% convertible senior notes due 2019 (2019 Notes) and \$517 million aggregate principal amount of 0.5% convertible senior notes due 2021 (2021 Notes) in an offering conducted in accordance with Rule 144A under the Securities Act of 1933, as amended. The Notes were issued at 100% of par value. The net proceeds from the issuance, after deducting the offering expenses payable by us, was \$1,132 million. We used the net proceeds plus cash on hand to repurchase a portion of the outstanding 2016 Notes in privately negotiated transactions concurrently with the issuance of the 2019 and 2021 Notes.

Both the 2019 and 2021 Notes will be convertible into cash, shares of common stock, or a combination of cash and shares of common stock, at our election, based on an initial conversion rate, subject to adjustment, of 3.9318 shares per \$1,000 principal amount of the notes (which represents an initial conversion price of approximately \$254.34 per share), only in the following circumstances and to the following extent: (1) during the five business-day period after any 10 consecutive trading day period (the measurement period) in which the trading price per 2019 and 2021 Note for each day of such measurement period was less than 98% of the product of the last reported sale price of our common stock and the conversion rate on each such day; (2) during any calendar quarter (and only during that quarter) after the calendar quarter ending September 30, 2014, if the last reported sale price of our common stock for 20 or more trading days in the period of 30 consecutive trading days ending on the last trading day of the immediately preceding calendar quarter exceeds 130% of the applicable conversion price in effect on the last trading day of the immediately preceding calendar quarter; (3) upon the occurrence of specified events described in the indenture for the 2019 and 2021 Notes; and (4) at any time on or after March 15, 2019 for the 2019 Notes, or March 15, 2021 for the 2021 Notes, through the second scheduled trading day immediately preceding the maturity date.

As noted in the indentures for the 2019 and 2021 Notes, it is our intent and policy to settle conversions through combination settlement, which essentially involves repayment of an amount of cash equal to the “principal portion” and delivery of the “share amount” in excess of the conversion value over the principal portion in shares of common stock. In general, for each \$1,000 in principal, the “principal portion” of cash upon settlement is defined as the lesser of \$1,000 and the conversion value during the 20 -day observation period. The conversion value is the sum of the daily conversion value which is the product of the effective conversion rate divided by 20 days and the daily volume weighted average price (VWAP) of our common stock. The “share amount” is the cumulative “daily share amount” during the observation period, which is calculated by dividing the daily VWAP into the difference between the daily conversion value (i.e., conversion rate x daily VWAP) and \$1,000.

The 2019 Notes carry no coupon interest. We pay 0.5% interest per annum on the principal amount of the 2021 Notes, payable semiannually in arrears in cash on June 15 and December 15 of each year, beginning on December 15, 2014. The 2019 and 2021 Notes mature on June 15, 2019 and June 15, 2021, respectively. If a designated event, as defined in the indentures for the 2019 and 2021 Notes, such as acquisition, merger, or liquidation, occurs prior to the maturity date, subject to certain limitations, holders of the notes may require us to repurchase all or a portion of their notes for cash at a repurchase price equal to 100% of the principal amount of the notes to be repurchased, plus any accrued and unpaid interest to, but excluding, the repurchase date.

The liability and equity components of the 2019 and 2021 Notes are accounted for in accordance with authoritative guidance for convertible debt instruments that may be settled in cash upon conversion. The guidance requires the carrying amount of the liability component to be estimated by measuring the fair value of a similar liability that does not have an associated conversion feature. Because we have no outstanding non-convertible public debt, we determined that market-traded senior, unsecured corporate bonds represent a similar liability to the convertible senior notes without the conversion option. Based on market data available for publicly traded, senior, unsecured corporate bonds issued by companies in the same industry as us, and with similar maturities to the 2019 and 2021 Notes, we estimated the implied interest rates of our 2019 and 2021 Notes to be 2.9% and 3.5%, respectively, assuming no conversion option. Assumptions used in the estimate represent what market participants would use in pricing the liability component, including market interest rates, credit standing, and yield curves, all of which are defined as Level 2 observable inputs. The estimated implied interest rates were applied to the 2019 and 2021 Notes, which resulted in a fair value of the liability component in aggregate of \$972 million upon issuance, calculated as the present value of implied future payments based on the \$1,150 million aggregate principal amount. The \$161 million difference between the cash proceeds of \$1,133 million and the estimated fair value of the liability component was recorded in additional paid-in capital as the 2019 and 2021 Notes are not considered redeemable.

ILLUMINA, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

As a policy election under applicable guidance related to the calculation of diluted net income per share, we elected the combination settlement method as our stated settlement policy and applied the treasury stock method in the calculation of the potential dilutive impact of the 2019 and 2021 Notes. Neither the 2019 nor the 2021 Notes were convertible as of December 31, 2017, and had no dilutive impact during the year ended December 31, 2017. If the 2019 and 2021 Notes had been converted as of December 31, 2017, the if-converted value would not exceed the principal amount.

0.25% Convertible Senior Notes due 2016

In 2011, we issued \$920 million aggregate principal amount of 0.25% convertible senior notes due 2016 (2016 Notes) with a maturity date of March 15, 2016. The effective rate of the liability component was estimated to be 4.5%. Based upon meeting the stock trading price conversion requirement during the three months ended March 30, 2014, the 2016 Notes became convertible on April 1, 2014 through, and including, March 11, 2016. All notes were converted by March 11, 2016.

Leases

We lease office and manufacturing facilities under various non-cancellable lease agreements. Facility leases generally provide for periodic rent increases, and many contain escalation clauses and renewal options. Certain leases require us to pay property taxes and routine maintenance. We are headquartered in San Diego, California and lease facilities in San Diego and the San Francisco Bay Area in California; Madison, Wisconsin; Morrisville, North Carolina; Australia; Brazil; Canada; China; France; Japan; Singapore; the Netherlands; South Korea; and the United Kingdom.

We evaluate whether we are the accounting owner of leased assets during the construction period when we are involved in the construction of leased assets. As of December 31, 2017, we are considered the owner of two construction projects for accounting purposes only under build-to-suit lease accounting due to certain indemnification obligations related to the construction. As of December 31, 2017 and January 1, 2017, we recorded \$144 million and \$223 million, respectively, in project construction costs paid or reimbursed by the landlord as construction in progress and a corresponding build-to-suit lease liability.

During the year ended December 31, 2017, construction of a build-to-suit property was completed. We concluded that we do not qualify for “sale-leaseback” treatment and the lease is accounted for as a financing obligation. Accordingly, \$104 million of construction in progress and build-to-suit lease liability were reclassified to building asset and obligations under financing leases, respectively.

On February 28, 2017, GRAIL was deconsolidated, as further described in note “2. Balance Sheet Account Details”, and \$58 million of construction in progress and the corresponding build-to-suit lease liability were removed.

As of December 31, 2017, annual future minimum payments of our operating leases and build-to-suit leases, which include those leases accounted for as a financing obligation, were as follows (in millions):

	Operating Leases	Sublease Income	Net Operating Leases	Build-to-suit Leases
2018	\$ 55	\$ (9)	\$ 46	\$ 22
2019	60	(10)	50	20
2020	58	(10)	48	20
2021	57	(10)	47	21
2022	54	(11)	43	21
Thereafter	468	(16)	452	190
Total minimum lease payments	<u>\$ 752</u>	<u>\$ (66)</u>	<u>\$ 686</u>	<u>\$ 294</u>

Rent expense was \$46 million, \$46 million, and \$39 million for the years ended December 31, 2017, January 1, 2017, and January 3, 2016, respectively. As of December 31, 2017 and January 1, 2017, the deferred rent balance related to our operating leases was \$115 million and \$107 million, respectively, of which the long-term portion of \$113 million and \$104 million, respectively, were recorded in other long-term liabilities.

ILLUMINA, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Facility exit obligations were recorded upon vacating our former headquarters in 2011. Changes in the facility exit obligation from December 28, 2014 through December 31, 2017, are as follows (in millions):

	Facility Exit Obligation
Balance as of December 28, 2014	\$ 38
Adjustment to facility exit obligation	(5)
Accretion of interest expense	2
Cash payments	(13)
Balance as of January 3, 2016	22
Accretion of interest expense	1
Cash payments	(4)
Balance as of January 1, 2017	19
Accretion of interest expense	1
Cash payments	(3)
Balance as of December 31, 2017	<u>\$ 17</u>

Purchase Obligations

In the normal course of business, we enter into agreements to purchase goods or services that are not cancelable without penalty, primarily related to licensing and supply arrangements. For those agreements with variable terms, we do not estimate the total obligation beyond any minimum quantities or pricing as of the reporting date. Licensing agreements under which we commit to minimum royalty payments, some of which are subject to adjustment, may be terminated prior to the expiration of underlying intellectual property under certain circumstances. Annual minimum payments for noncancelable purchase obligations as of December 31, 2017 are as follows (in millions):

	Minimum Payments
2018	\$ 27
2019	60
2020	20
Total	<u>\$ 107</u>

6. Share-based Compensation Expense

Share-based compensation expense for all stock awards consists of the following (in millions):

	Years Ended		
	December 31, 2017	January 1, 2017	January 3, 2016
Cost of product revenue	\$ 12	\$ 9	\$ 10
Cost of service and other revenue	2	2	2
Research and development	51	42	42
Selling, general and administrative	99	76	79
Share-based compensation expense before taxes	164	129	133
Related income tax benefits	(48)	(41)	(39)
Share-based compensation expense, net of taxes	<u>\$ 116</u>	<u>\$ 88</u>	<u>\$ 94</u>

ILLUMINA, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

The assumptions used for the specified reporting periods and the resulting estimates of weighted-average fair value per share for stock purchased under the ESPP are as follows:

	Years Ended		
	December 31, 2017	January 1, 2017	January 3, 2016
Risk-free interest rate	0.50% - 1.22%	0.40% - 0.50%	0.07% - 0.33%
Expected volatility	29% - 44%	40% - 44%	29% - 38%
Expected term	0.5 - 1.0 year	0.5 - 1.0 year	0.5 - 1.0 year
Expected dividends	0%	0%	0%
Weighted-average grant-date fair value per share	\$ 46.81	\$ 48.29	\$ 53.92

As of December 31, 2017, approximately \$394 million of total unrecognized compensation cost related to restricted stock and ESPP shares issued to date are expected to be recognized over a weighted-average period of approximately 2.7 years.

7. Stockholders' Equity

The 2015 Stock and Incentive Compensation Plan (the 2015 Stock Plan) and the New Hire Stock and Incentive Plan allow for the issuance of stock options, restricted stock units and awards, and performance stock units. As of December 31, 2017, approximately 5.3 million shares remained available for future grants under the 2015 Stock Plan. There is no set number of shares reserved for issuance under the New Hire Stock and Incentive Plan.

Restricted Stock

We issue restricted stock units (RSU) and performance stock units (PSU), which are both considered restricted stock. We grant restricted stock pursuant to the 2015 Stock Plan and satisfy such grants through the issuance of new shares. RSU are share awards that, upon vesting, will deliver to the holder shares of our common stock. RSU generally vest over a four-year period with equal vesting on anniversaries of the grant date. We issue PSU for which the number of shares issuable at the end of a three-year performance period can reach up to 150% of the shares approved in the award based on our performance relative to specified earnings per share targets and continued employment through the vesting period.

A summary of restricted stock activity and related information from December 28, 2014 through December 31, 2017 is as follows (in thousands, except per share amounts):

	Restricted Stock Units (RSU)	Performance Stock Units (PSU)(1)	Weighted-Average Grant- Date Fair Value per Share	
			RSU	PSU
Outstanding at December 28, 2014	2,841	1,257	\$ 92.35	\$ 96.21
Awarded	756	194	\$ 184.10	\$ 183.29
Vested	(1,138)	(741)	\$ 75.29	\$ 60.80
Cancelled	(253)	(127)	\$ 99.50	\$ 99.30
Outstanding at January 3, 2016	2,206	583	\$ 131.80	\$ 169.41
Awarded	1,245	172	\$ 132.47	\$ 113.56
Vested	(928)	(199)	\$ 105.49	\$ 148.99
Cancelled	(230)	(96)	\$ 139.74	\$ 163.05
Outstanding at January 1, 2017	2,293	460	\$ 141.80	\$ 158.66
Awarded	879	238	\$ 207.38	\$ 191.53
Vested	(861)	(92)	\$ 131.62	\$ 189.09
Cancelled	(226)	(64)	\$ 149.03	\$ 173.83
Outstanding at December 31, 2017	2,085	542	\$ 172.92	\$ 166.15

(1) The number of units reflect the estimated number of shares to be issued at the end of the performance period.

ILLUMINA, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Pre-tax intrinsic values and fair value of vested restricted stock are as follows (in millions):

	Years Ended		
	December 31, 2017	January 1, 2017	January 3, 2016
Pre-tax intrinsic value of outstanding restricted stock:			
RSU	\$ 456	\$ 294	\$ 423
PSU	\$ 118	\$ 59	\$ 112
Fair value of restricted stock vested:			
RSU	\$ 113	\$ 98	\$ 86
PSU	\$ 17	\$ 30	\$ 45

Stock Options

Stock option activity from December 28, 2014 through December 31, 2017 is as follows:

	Options (in thousands)	Weighted- Average Exercise Price
Outstanding at December 28, 2014	3,211	\$ 34.74
Exercised	(1,529)	\$ 28.54
Cancelled	(83)	\$ 10.31
Outstanding at January 3, 2016	1,599	\$ 41.95
Exercised	(552)	\$ 29.41
Cancelled	(2)	\$ 46.35
Outstanding at January 1, 2017	1,045	\$ 48.56
Exercised	(723)	\$ 49.31
Outstanding and exercisable at December 31, 2017	322	\$ 46.93

The weighted-average remaining life of options outstanding and exercisable is 3.0 years as of December 31, 2017 .

The aggregate intrinsic value of options outstanding and options exercisable as of December 31, 2017 was \$55 million . Aggregate intrinsic value represents the product of the number of options outstanding multiplied by the difference between our closing stock price per share on the last trading day of the fiscal period, which was \$218.49 as of December 29, 2017 , and the exercise price. Total intrinsic value of options exercised was \$101 million , \$71 million , and \$256 million for the years ended December 31, 2017 , January 1, 2017 , and January 3, 2016 , respectively.

Employee Stock Purchase Plan

A total of 15.5 million shares of our common stock have been reserved for issuance under our 2000 Employee Stock Purchase Plan, or ESPP. The ESPP permits eligible employees to purchase common stock at a discount through payroll deductions during defined offering periods. The price at which stock is purchased under the ESPP is equal to 85% of the fair market value of the common stock on the first of the offering period or purchase date, whichever is lower. The initial offering period commenced in July 2000.

Approximately 0.3 million , 0.2 million , and 0.2 million shares were issued under the ESPP during the years ended December 31, 2017 , January 1, 2017 , and January 3, 2016 , respectively. As of December 31, 2017 and January 1, 2017 , there were approximately 14.0 million and 14.3 million shares available for issuance under the ESPP, respectively.

ILLUMINA, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Share Repurchases

On July 28, 2016, our Board of Directors authorized a new share repurchase program, which superseded all prior and available repurchase authorizations, to repurchase \$250 million of outstanding common stock. During Q1 2017, we repurchased the remaining shares, completing the program.

On May 4, 2017, our Board of Directors authorized an additional share repurchase program to repurchase \$250 million of outstanding common stock. The repurchases may be completed under a 10b5-1 plan or at management's discretion.

During the years ended December 31, 2017, January 1, 2017, and January 3, 2016, we repurchased approximately 1.4 million shares for \$251 million, 1.8 million shares for \$249 million, and 1.7 million shares for \$274 million, respectively. Authorizations to repurchase \$100 million of our common stock remained available as of December 31, 2017.

8. Legal Proceedings

We are involved in various lawsuits and claims arising in the ordinary course of business, including actions with respect to intellectual property, employment, and contractual matters. In connection with these matters, we assess, on a regular basis, the probability and range of possible loss based on the developments in these matters. A liability is recorded in the financial statements if it is believed to be probable that a loss has been incurred and the amount of the loss can be reasonably estimated. Because litigation is inherently unpredictable and unfavorable results could occur, assessing contingencies is highly subjective and requires judgments about future events. We regularly review outstanding legal matters to determine the adequacy of the liabilities accrued and related disclosures. The amount of ultimate loss may differ from these estimates. Each matter presents its own unique circumstances, and prior litigation does not necessarily provide a reliable basis on which to predict the outcome, or range of outcomes, in any individual proceeding. Because of the uncertainties related to the occurrence, amount, and range of loss on any pending litigation or claim, we are currently unable to predict their ultimate outcome, and, with respect to any pending litigation or claim where no liability has been accrued, to make a meaningful estimate of the reasonably possible loss or range of loss that could result from an unfavorable outcome. In the event that opposing litigants in outstanding litigations or claims ultimately succeed at trial and any subsequent appeals on their claims, any potential loss or charges in excess of any established accruals, individually or in the aggregate, could have a material adverse effect on our business, financial condition, results of operations, and/or cash flows in the period in which the unfavorable outcome occurs or becomes probable, and potentially in future periods.

Enzo

On July 1, 2016, we entered into a Settlement and License Agreement with Enzo Life Sciences, Inc. (Enzo) that settled all claims in the litigation. Pursuant to the terms of the Settlement and License Agreement, we paid Enzo a one-time payment of \$21 million for release of past damages claimed and a fully paid-up non-exclusive license to U.S. Patent No. 7,064,197. None of the parties made any admission of liability in entering into the Settlement and License Agreement. We allocated the \$21 million settlement on a relative fair value basis, resulting in \$12 million capitalized as an intangible asset and a corresponding gain recorded in legal contingencies for the value of the license, which will be amortized over a period of 7 years on a straight-line basis. The remaining \$9 million related to past damages claimed. The fair value of the license and past damages was estimated using a discounted cash flow model, and is considered to be a Level 3 measurement.

9. Income Taxes

The income before income taxes summarized by region is as follows (in millions):

	Years Ended		
	December 31, 2017	January 1, 2017	January 3, 2016
United States	\$ 458	\$ 120	\$ 218
Foreign	585	441	365
Total income before income taxes	\$ 1,043	\$ 561	\$ 583

ILLUMINA, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

The provision for income taxes consists of the following (in millions):

	Years Ended		
	December 31, 2017	January 1, 2017	January 3, 2016
Current:			
Federal	\$ 259	\$ 71	\$ 106
State	21	10	18
Foreign	51	45	46
Total current provision	<u>331</u>	<u>126</u>	<u>170</u>
Deferred:			
Federal	36	16	(11)
State	—	(5)	(32)
Foreign	(2)	(4)	(2)
Total deferred expense (benefit)	<u>34</u>	<u>7</u>	<u>(45)</u>
Total tax provision	<u>\$ 365</u>	<u>\$ 133</u>	<u>\$ 125</u>

The provision for income taxes reconciles to the amount computed by applying the federal statutory rate to income before taxes as follows (in millions):

	Years Ended		
	December 31, 2017	January 1, 2017	January 3, 2016
Tax at federal statutory rate	\$ 365	\$ 196	\$ 204
State, net of federal benefit	19	10	9
Research and other credits	(12)	(13)	(20)
Change in valuation allowance	12	5	(4)
Impact of foreign operations	(130)	(86)	(42)
Cost sharing adjustment	—	(7)	(25)
Investments in consolidated variable interest entities	(3)	25	1
Impact of U.S. Tax Reform	150	—	—
Stock compensation	(41)	3	2
Other	5	—	—
Total tax provision	<u>\$ 365</u>	<u>\$ 133</u>	<u>\$ 125</u>

In accordance with the Tax Cuts and Jobs Act that was enacted on December 22, 2017 (U.S. Tax Reform), we have recorded a provision for income taxes of \$150 million. The impact of U.S. Tax Reform primarily represents our provisional estimates of the one-time transition tax on earnings of certain foreign subsidiaries that were previously tax deferred, and the impact of revaluing our U.S. deferred tax assets and liabilities based on the rates at which they are expected to reverse in the future. For U.S. federal purposes the corporate statutory income tax rate was reduced from 35% to 21%, effective for our 2018 tax year. The provisional impact of U.S. Tax Reform is our current best estimate based on a preliminary review of the new law and is subject to revision based on our existing accounting for income taxes policy as further information is gathered and interpretation and analysis of the tax legislation evolves. The Securities and Exchange Commission has issued rules allowing for a measurement period of up to one year after the enactment date of U.S. Tax Reform to finalize the recording of the related tax impacts. Any future changes to our provisional estimated impact of U.S. Tax Reform will be included as an adjustment to the provision for income taxes.

We continue to evaluate the impacts of U.S. Tax Reform as we interpret the legislation, including the newly enacted global intangible low-taxed income (GILTI) provisions which subject our foreign earnings to a minimum level of tax. Because of the complexities of the new legislation, we have not elected an accounting policy for GILTI at this time. Recent FASB guidance indicates that accounting for GILTI either as part of deferred taxes or as a period cost are both acceptable methods.

ILLUMINA, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Once further information is gathered and interpretation and analysis of the tax legislation evolves we will make an appropriate accounting method election.

The impact of foreign operations primarily represents the difference between the actual provision for income taxes for our legal entities that operate primarily in jurisdictions that have statutory tax rates lower than the U.S. federal statutory tax rate of 35% . The most significant tax benefits from foreign operations were from our earnings in Singapore and the United Kingdom, which had statutory tax rates of 17% and 19.25% , respectively, in the year ended December 31, 2017 . The impact of foreign operations also includes the U.S. foreign tax credit impact of non-U.S. earnings and uncertain tax positions related to foreign items.

Significant components of deferred tax assets and liabilities are as follows (in millions):

	December 31, 2017	January 1, 2017
Deferred tax assets:		
Net operating losses	\$ 18	\$ 20
Tax credits	57	43
Other accruals and reserves	25	24
Stock compensation	19	38
Deferred rent	28	38
Cost sharing adjustment	21	32
Other amortization	12	16
Lease obligation	27	—
Investments	13	6
Other	26	32
Total gross deferred tax assets	246	249
Valuation allowance on deferred tax assets	(25)	(18)
Total deferred tax assets	221	231
Deferred tax liabilities:		
Purchased intangible amortization	(26)	(53)
Convertible debt	(18)	(37)
Property and equipment	(44)	(17)
Investments	(40)	—
Other	(5)	(1)
Total deferred tax liabilities	(133)	(108)
Deferred tax assets, net	\$ 88	\$ 123

A valuation allowance is established when it is more likely than not the future realization of all or some of the deferred tax assets will not be achieved. The evaluation of the need for a valuation allowance is performed on a jurisdiction-by-jurisdiction basis, and includes a review of all available positive and negative evidence. Based on the available evidence as of December 31, 2017 , we were not able to conclude it is more likely than not certain deferred tax assets will be realized. Therefore, a valuation allowance of \$25 million was recorded against certain U.S. and foreign deferred tax assets.

As of December 31, 2017 , we had net operating loss carryforwards for federal and state tax purposes of \$10 million and \$136 million , respectively, which will begin to expire in 2019 and 2018 , respectively, unless utilized prior. We also had state tax credit carryforwards of \$95 million , which will begin to expire in 2022 , unless utilized prior.

Pursuant to Section 382 and 383 of the Internal Revenue Code, utilization of net operating losses and credits may be subject to annual limitations in the event of any significant future changes in its ownership structure. These annual limitations may result in the expiration of net operating losses and credits prior to utilization. The deferred tax assets as of December 31, 2017 are net of any previous limitations due to Section 382 and 383.

ILLUMINA, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Our manufacturing operations in Singapore operate under various tax holidays and incentives that begin to expire in 2018. These tax holidays and incentives resulted in a \$49 million, \$32 million, and \$23 million decrease to the provision for income taxes for the years ended December 31, 2017, January 1, 2017, and January 3, 2016, respectively. These tax holidays and incentives resulted in an increase in diluted earnings per share attributable to Illumina stockholders of \$0.33, \$0.22, and \$0.16, for the years ended December 31, 2017, January 1, 2017, and January 3, 2016, respectively.

It is our intention to indefinitely reinvest the historical earnings of our foreign subsidiaries generated prior to 2017 to ensure sufficient working capital and to expand existing operations outside the United States. Accordingly, U.S. and foreign income and withholding taxes have not been provided on \$1.1 billion of undistributed earnings of foreign subsidiaries as of December 31, 2017. In the event we are required to repatriate funds from outside of the United States, such repatriation would be subject to local laws, customs, and tax consequences. For the year ended December 31, 2017, we asserted that \$869 million of foreign earnings generated in 2017 would not be indefinitely reinvested, and accordingly, recorded a deferred tax liability of \$5 million.

The following table summarizes the gross amount of our uncertain tax positions (in millions):

	December 31, 2017	January 1, 2017	January 3, 2016
Balance at beginning of year	\$ 65	\$ 56	\$ 52
Increases related to prior year tax positions	2	—	2
Decreases related to prior year tax positions	—	(2)	(1)
Increases related to current year tax positions	14	13	11
Decreases related to lapse of statute of limitations	(2)	(2)	(8)
Balance at end of year	<u>\$ 79</u>	<u>\$ 65</u>	<u>\$ 56</u>

Included in the balance of uncertain tax positions as of December 31, 2017 and January 1, 2017, were \$70 million and \$55 million, respectively, of net unrecognized tax benefits that, if recognized, would reduce the effective income tax rate in future periods.

Any interest and penalties related to uncertain tax positions are reflected in the provision for income taxes. We recognized expense of \$1 million, expense of \$1 million, and income of \$0.2 million during the years ended December 31, 2017, January 1, 2017, and January 3, 2016, respectively, related to potential interest and penalties on uncertain tax positions. We recorded a liability for potential interest and penalties of \$8 million and \$6 million as of December 31, 2017 and January 1, 2017, respectively.

Tax years 1997 to 2016 remain subject to future examination by the major tax jurisdictions in which we are subject to tax. Given the uncertainty of potential adjustments from examination as well as the potential expiration of the statute of limitations, it is reasonably possible that the balance of unrecognized tax benefits could change significantly over the next 12 months. However, at this time, an estimate of the range of reasonably possible adjustments to the balance of unrecognized tax benefits cannot be determined given the number of matters and the number of years that are potentially subject to examination.

10. Employee Benefit Plans

Retirement Plan

We have a 401(k) savings plan covering substantially all of our employees in the United States. Our contributions to the plan are discretionary. During the years ended December 31, 2017, January 1, 2017, and January 3, 2016, we made matching contributions of \$17 million, \$14 million, and \$12 million, respectively.

Deferred Compensation Plan

The Illumina, Inc. Deferred Compensation Plan (the Plan) allows senior level employees to contribute up to 80% of their base salary and 100% of their variable cash compensation, and members of the board of directors to contribute up to 100% of their director fees and equity awards. Under the Plan, we credit the participants' contributions with earnings that reflect the performance of certain independent investment funds. On a discretionary basis, we may also make employer contributions to participant accounts in any amount determined by us. The vesting schedules of employer contributions are at the sole

ILLUMINA, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

discretion of the Compensation Committee. However, all employer contributions shall become 100% vested upon the occurrence of the participant's disability, death or retirement or a change in control of Illumina. The benefits under this plan are unsecured. Participants are generally eligible to receive payment of their vested benefit at the end of their elected deferral period or after termination of their employment for any reason or at a later date to comply with the restrictions of Section 409A.

We also established a rabbi trust for the benefit of the participants under the Plan, and have included the assets of the rabbi trust in the consolidated balance sheets. As of December 31, 2017 and January 1, 2017, the assets of the trust were \$35 million and \$31 million, respectively, and our liabilities were \$33 million and \$29 million, respectively. The assets and liabilities are classified as other assets and accrued liabilities, respectively, on the consolidated balance sheets. Changes in the values of the assets held by the rabbi trust are recorded in other income (expense), net in the consolidated statements of income, and changes in the values of the deferred compensation liabilities are recorded in cost of revenue or operating expenses.

11. Segment Information, Geographic Data, and Significant Customers

We have two reportable segments: Illumina's core operations (Core Illumina) and one segment related to the combined activities of the consolidated VIEs, GRAIL and Helix (Consolidated VIEs). Following the GRAIL deconsolidation on February 28, 2017, the Consolidated VIEs no longer include GRAIL. Prior to 2016, the combined results of operations of the Consolidated VIEs were not material.

We report segment information based on the management approach. This approach designates the internal reporting used by the Chief Operating Decision Maker ("CODM") for making decisions and assessing performance as the source of our reportable segments. The CODM allocates resources and assesses the performance of each operating segment using information about its revenue and income (loss) from operations. Based on the information used by the CODM, we have determined its reportable segments as follows:

Core Illumina :

Core Illumina's products and services serve customers in the research, clinical and applied markets, and enable the adoption of a variety of genomic solutions. Core Illumina includes all of our operations, excluding the results of its consolidated VIEs.

Consolidated VIEs:

Helix : Helix was established to enable individuals to explore their genetic information by providing affordable sequencing and database services for consumers through third-party partners, driving the creation of an ecosystem of consumer applications.

GRAIL : GRAIL was created to develop a blood test for early-stage cancer detection. GRAIL was in the early stages of developing this test and as such, had no revenues through the date of deconsolidation.

Management evaluates the performance of our operating segments based upon income (loss) from operations. We do not allocate expenses between segments. Core Illumina sells products and provides services to GRAIL and Helix in accordance with contractual agreements between the entities.

ILLUMINA, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

The following table presents the operating performance of each reportable segment (in millions):

	Years Ended		
	December 31, 2017	January 1, 2017	January 3, 2016
Revenue:			
Core Illumina	\$ 2,754	\$ 2,428	\$ 2,220
Consolidated VIEs	6	—	—
Eliminations	(8)	(30)	—
Consolidated revenue	<u>\$ 2,752</u>	<u>\$ 2,398</u>	<u>\$ 2,220</u>
Depreciation and amortization:			
Core Illumina	\$ 153	\$ 138	\$ 127
Consolidated VIEs	6	4	—
Eliminations	(3)	(1)	—
Consolidated depreciation and amortization	<u>\$ 156</u>	<u>\$ 141</u>	<u>\$ 127</u>
Income (loss) from operations:			
Core Illumina	\$ 696	\$ 684	\$ 621
Consolidated VIEs	(92)	(81)	(8)
Eliminations	2	(16)	—
Consolidated income from operations	<u>\$ 606</u>	<u>\$ 587</u>	<u>\$ 613</u>

Other income (expense), net primarily relate to Core Illumina and we do not allocate income taxes to our segments.

The following table presents the total assets and capital expenditures of each reportable segment (in millions):

	Years Ended		
	December 31, 2017	January 1, 2017	January 3, 2016
Total assets:			
Core Illumina	\$ 5,223	\$ 4,167	\$ 3,658
Consolidated VIEs	45	180	31
Eliminations	(11)	(66)	(1)
Consolidated total assets	<u>\$ 5,257</u>	<u>\$ 4,281</u>	<u>\$ 3,688</u>
Capital expenditures:			
Core Illumina	\$ 306	\$ 238	\$ 142
Consolidated VIEs	4	22	1
Consolidated capital expenditures	<u>\$ 310</u>	<u>\$ 260</u>	<u>\$ 143</u>

ILLUMINA, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

The following table represents revenue by geographic area for the years ended December 31, 2017, January 1, 2017, and January 3, 2016 (in millions):

	Years Ended		
	December 31, 2017	January 1, 2017	January 3, 2016
United States	\$ 1,511	\$ 1,294	\$ 1,207
Europe	632	553	527
Greater China (a)	292	—	—
Asia-Pacific (a)	222	456	380
Other markets	95	95	106
Total	<u>\$ 2,752</u>	<u>\$ 2,398</u>	<u>\$ 2,220</u>

(a) Revenue for the Greater China region, which includes China, Taiwan, and Hong Kong, became material for the year ended December 31, 2017. Therefore, such revenue is reported separately and the Asia-Pacific region no longer includes the Greater China region. Greater China region revenue is included in the Asia-Pacific region for the years ended January 1, 2017, and January 3, 2016.

Revenue is attributable to geographic area based on the region of destination.

The majority of our revenue consists of sales of consumables and instruments. For the years ended December 31, 2017, January 1, 2017, and January 3, 2016, consumable sales represented 64%, 64%, and 58%, respectively, of total revenue and instrument sales comprised 19%, 20%, and 27%, respectively, of total revenue. Our customers include leading genomic research centers, academic institutions, government laboratories, and hospitals, as well as pharmaceutical, biotechnology, agrigenomics, commercial molecular diagnostic laboratories, and consumer genomics companies. We had no customers that provided more than 10% of total revenue in the years ended December 31, 2017, January 1, 2017, and January 3, 2016.

Net long-lived assets exclude goodwill and other intangible assets since they are not allocated on a geographic basis. We had net long-lived assets, consisting of property and equipment, in the following regions as of December 31, 2017 and January 1, 2017 (in millions):

	December 31, 2017	January 1, 2017
United States	\$ 828	\$ 636
Singapore	54	44
United Kingdom	43	28
Other countries	6	5
Total	<u>\$ 931</u>	<u>\$ 713</u>

ILLUMINA, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

12. Quarterly Financial Information (unaudited)

The following financial information reflects all normal recurring adjustments, which are, in the opinion of management, necessary for a fair statement of the results and cash flows of interim periods. All quarters for fiscal years 2017 and 2016 ended December 31, 2017 and January 1, 2017 were 13 weeks. Summarized quarterly data for fiscal years 2017 and 2016 are as follows (in millions, except per share amounts):

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
2017				
Total revenue	\$ 598	\$ 662	\$ 714	\$ 778
Gross profit	\$ 368	\$ 434	\$ 482	\$ 542
Consolidated net income	\$ 348	\$ 120	\$ 152	\$ 58
Net income attributable to Illumina stockholders (a)	\$ 367	\$ 128	\$ 163	\$ 68
Earnings per share attributable to Illumina stockholders:				
Basic	\$ 2.50	\$ 0.87	\$ 1.12	\$ 0.47
Diluted	\$ 2.48	\$ 0.87	\$ 1.11	\$ 0.46
2016				
Total revenue	\$ 572	\$ 600	\$ 607	\$ 619
Gross profit	\$ 397	\$ 424	\$ 426	\$ 419
Consolidated net income	\$ 88	\$ 116	\$ 117	\$ 108
Net income attributable to Illumina stockholders	\$ 90	\$ 120	\$ 129	\$ 124
Earnings per share attributable to Illumina stockholders:				
Basic	\$ 0.61	\$ 0.83	\$ 0.88	\$ 0.84
Diluted	\$ 0.60	\$ 0.82	\$ 0.87	\$ 0.84

Certain amounts may not recalculate using the rounded amounts provided.

(a) First quarter of 2017 includes the results of GRAIL through February 28, 2017, the date of deconsolidation. Refer to note “2. Balance Sheet Account Details” for further discussions.

ITEM 9. Changes In and Disagreements with Accountants on Accounting and Financial Disclosure.

None.

ITEM 9A. Controls and Procedures.

We design our internal controls to provide reasonable assurance that (1) our transactions are properly authorized; (2) our assets are safeguarded against unauthorized or improper use; and (3) our transactions are properly recorded and reported in conformity with U.S. generally accepted accounting principles. We also maintain internal controls and procedures to ensure that we comply with applicable laws and our established financial policies.

Based on management’s evaluation (under the supervision and with the participation of our chief executive officer (CEO) and chief financial officer (CFO)), as of the end of the period covered by this report, our CEO and CFO concluded that our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the Exchange Act)), are effective to provide reasonable assurance that information required to be disclosed by us in reports that we file or submit under the Exchange Act is recorded, processed, summarized, and reported within the time periods specified in SEC rules and forms, and is accumulated and communicated to management, including our principal executive officer and principal financial officer, as appropriate, to allow timely decisions regarding required disclosure.

During the fourth quarter of 2017, we continued to monitor and evaluate the operating effectiveness of key controls. There were no changes in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) of the Exchange Act) that materially affected or are reasonably likely to materially affect internal control over financial reporting.

MANAGEMENT'S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Exchange Act Rules 13a-15(f). Because of its inherent limitations, internal control over financial reporting may not prevent or detect all misstatements. Therefore, even those systems determined to be effective can provide only reasonable assurance with respect to financial statement preparation and presentation.

We conducted an evaluation of the effectiveness of our internal control over financial reporting based on the framework in Internal Control — Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework). Based on our evaluation under the framework in Internal Control — Integrated Framework, our management concluded that our internal control over financial reporting was effective as of December 31, 2017. The effectiveness of our internal control over financial reporting as of December 31, 2017 has been audited by Ernst & Young LLP, an independent registered public accounting firm, as stated in their report which is included herein.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Directors and Stockholders of Illumina, Inc.

Opinion on Internal Control over Financial Reporting

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

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of Illumina, Inc. as of December 31, 2017 and January 1, 2017, the related consolidated statements of income, comprehensive income, stockholders' equity, and cash flows for each of the three fiscal years in the period ended December 31, 2017, and the related notes of the Company and our report dated February 12, 2018 expressed an unqualified opinion thereon.

Basis for Opinion

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

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

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

Definition and Limitations of Internal Control Over Financial Reporting

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

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

/s/ E RNST & Y OUNG LLP

San Diego, California
February 12, 2018

ITEM 9B. *Other Information.*

None.

PART III

ITEM 10. *Directors, Executive Officers, and Corporate Governance.*

(a) Identification of Directors. Information concerning our directors is incorporated by reference from the section entitled “Proposal One: Election of Directors,” “Information About Directors,” “Director Compensation,” and “Board of Directors and Corporate Governance” to be contained in our definitive Proxy Statement with respect to our 2018 Annual Meeting of Stockholders to be filed with the SEC no later than May 1, 2018 .

(b) Identification of Executive Officers. Information concerning our executive officers is incorporated by reference from the section entitled “Executive Officers” to be contained in our definitive Proxy Statement with respect to our 2018 Annual Meeting of Stockholders to be filed with the SEC no later than May 1, 2018 .

(c) Compliance with Section 16(a) of the Exchange Act. Information concerning compliance with Section 16(a) of the Securities Exchange Act of 1934 is incorporated by reference from the section entitled “Section 16(a) Beneficial Ownership Reporting Compliance” to be contained in our definitive Proxy Statement with respect to our 2018 Annual Meeting of Stockholders to be filed with the SEC no later than May 1, 2018 .

(d) Information concerning the audit committee financial expert as defined by the SEC rules adopted pursuant to the Sarbanes-Oxley Act of 2002 is incorporated by reference from the section entitled “Board of Directors and Corporate Governance” to be contained in our definitive Proxy Statement with respect to our 2018 Annual Meeting of Stockholders to be filed with the SEC no later than May 1, 2018 .

Code of Conduct

We have a code of conduct for our directors, officers, and employees, which is available on our website at www.illumina.com in the Corporate Governance portal of the Investor Information section under “Company.” A copy of the Code of Conduct is available in print free of charge to any stockholder who requests a copy. Interested parties may address a written request for a printed copy of the Code of Ethics to: Corporate Secretary, Illumina, Inc., 5200 Illumina Way, San Diego, California 92122. We intend to satisfy the disclosure requirement regarding any amendment to, or a waiver from, a provision of the Code of Ethics for our principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions, by posting such information on our website. The information on, or that can be accessed from, our website is not incorporated by reference into this report.

ITEM 11. *Executive Compensation.*

Information concerning executive compensation is incorporated by reference from the sections entitled “Compensation Discussion and Analysis,” “Director Compensation,” and “Executive Compensation” to be contained in our definitive Proxy Statement with respect to our 2018 Annual Meeting of Stockholders to be filed with the SEC no later than May 1, 2018 .

ITEM 12. *Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.*

Information concerning the security ownership of certain beneficial owners and management and information covering securities authorized for issuance under equity compensation plans is incorporated by reference from the sections entitled “Stock Ownership of Principal Stockholders and Management,” “Executive Compensation,” and “Equity Compensation Plan Information” to be contained in our definitive Proxy Statement with respect to our 2018 Annual Meeting of Stockholders to be filed with the SEC no later than May 1, 2018 .

ITEM 13. *Certain Relationships and Related Transactions, and Director Independence.*

Information concerning certain relationships and related transactions, and director independence is incorporated by reference from the sections entitled “Proposal One: Election of Directors,” “Information About Directors,” “Director Compensation,” “Executive Compensation,” and “Certain Relationships and Related Party Transactions” to be contained in our definitive Proxy Statement with respect to our 2018 Annual Meeting of Stockholders to be filed with the SEC no later than May 1, 2018 .

ITEM 14. *Principal Accountant Fees and Services.*

Information concerning principal accountant fees and services is incorporated by reference from the sections entitled “Proposal Two: Ratification of Appointment of Independent Registered Public Accounting Firm” and “Independent Registered Public Accountants” to be contained in our definitive Proxy Statement with respect to our 2018 Annual Meeting of Stockholders to be filed with the SEC no later than May 1, 2018 .

PART IV

ITEM 15. *Exhibits, Financial Statement Schedules.*

1. *Financial Statements:* See “Index to Consolidated Financial Statements” in Part II, Item 8 of this report.
2. *Financial Statement Schedule:* All financial schedules have been omitted as the required information is not applicable, not material, or because the information required is included in the consolidated financial statements and notes thereto included in Part II, Item 8 of this report.
3. *Exhibits:* The exhibits listed in the accompanying index to exhibits are filed or incorporated by reference as part of this report.

INDEX TO EXHIBITS

Exhibit Number	Exhibit Description	Incorporated by Reference				Filed Herewith
		Form	File Number	Exhibit	Filing Date	
3.1	Amended and Restated Certificate of Incorporation	8-K	000-30361	3.1	9/23/2008	
3.2	Amended and Restated Bylaws	8-K	001-35406	3.2	1/11/2017	
4.1	Specimen Common Stock Certificate	S-1/A	333-33922	4.1	7/3/2000	
4.2	Indenture related to the 0% Convertible Senior Notes due 2019, dated as of June 11, 2014, between Illumina and The Bank of New York Mellon Trust Company, N.A., as trustee	8-K	001-35406	4.1	6/11/2014	
4.3	Indenture related to the 0.5% Convertible Senior Notes due 2021, dated as of June 11, 2014, between Illumina and The Bank of New York Mellon Trust Company, N.A., as trustee	8-K	001-35406	4.2	6/11/2014	
4.4	First Supplemental Indenture related to the 0.5% Convertible Senior Notes due 2021, dated as of August 27, 2014, between Illumina and The Bank of New York Mellon Trust Company, N.A., as trustee	10-Q	001-35406	4.1	10/29/2014	
+10.1	Form of Indemnification Agreement between Illumina and each of its directors and executive officers	10-Q	000-30361	10.55	7/25/2008	
+10.2	Amended and Restated Change in Control Severance Agreement between Illumina and Jay T Flatley, dated October 22, 2008	10-K	000-30361	10.33	2/26/2009	
+10.3	Form of Change in Control Severance Agreement between Illumina and each of its executive officers	10-K	000-30361	10.34	2/26/2009	
+10.4	2000 Employee Stock Purchase Plan, as amended and restated through February 2, 2012	10-K	001-35406	10.4	2/24/2012	
+10.5	New Hire Stock and Incentive Plan, as amended and restated through October 28, 2009	10-K	000-30361	10.7	2/26/2010	
10.6	License Agreement, effective as of May 6, 1998, between Tufts University and Illumina	10-Q	000-30361	10.5	5/3/2007	
+10.7	The Solexa Unapproved Company Share Option Plan	8-K	000-30361	99.3	11/26/2007	
+10.7	The Solexa Share Option Plan for Consultants	8-K	000-30361	99.4	11/26/2007	
+10.8	Solexa Limited Enterprise Management Incentive Plan	8-K	000-30361	99.5	11/26/2007	
+10.9	Amended and Restated Solexa 2005 Equity Incentive Plan	10-K	000-30361	10.25	2/26/2009	
+A29.10	Amended and Restated Solexa 1992 Stock Option Plan	10-K	000-30361	10.26	2/26/2009	
+10.11	2015 Stock and Incentive Plan					X
+10.12	Form of Restricted Stock Unit Agreement for Employees Under 2015 Stock and Incentive Plan					X

INDEX TO EXHIBITS — (Continued)

Exhibit Number	Exhibit Description	Incorporated by Reference				Filed Herewith
		Form	File Number	Exhibit	Filing Date	
10.13	Amended and Restated Lease between BMR-9885 Towne Centre Drive LLC and Illumina for the 9885 Towne Centre Drive property, dated January 26, 2007	10-Q	000-30361	10.41	5/3/2007	
10.14	Lease between BMR-9885 Towne Centre Drive LLC and Illumina for the 9865 Towne Centre Drive property, dated January 26, 2007	10-Q	000-30361	10.42	5/3/2007	
10.15	Amended and Restated Lease Agreement, dated March 27, 2012, between ARE-SD Region No. 32, LLC and Illumina	10-Q		10.1	5/3/2012	
10.16	First Amendment to Amended and Restated Lease Agreement, dated March 27, 2012, between ARE-SD Region No. 32, LLC and Illumina	10-K	001-35406	10.23	2/18/2015	
10.17	Second Amendment to Amended and Restated Lease Agreement, dated March 27, 2012, between ARE-SD Region No. 32, LLC and Illumina	10-K	001-35406	10.24	2/18/2015	
10.18	Amended and Restated Second Amendment to Amended and Restated Lease Agreement, dated March 27, 2012, between ARE-SD Region No. 32, LLC and Illumina					X
+10.19	Deferred Compensation Plan, effective December 1, 2007	14D-9	005-60457	99(e)(6)	2/7/2012	
10.20	Lease between BMR-Lincoln Centre LP and Illumina, dated December 30, 2014	10-K	001-35406	10.26	2/18/2015	
10.21	Pooled Patents Agreement between Illumina and Sequenom, Inc., dated December 2, 2014 (with certain confidential portions omitted)	10-K	001-35406	10.27	2/18/2015	
10.22	First Amendment to Pooled Patents Agreement between Illumina and Sequenom, Inc., effective as of April 21, 2016					X
10.23	Second Amendment to Pooled Patents Agreement between Illumina and Sequenom, Inc., effective as of April 17, 2017					X
10.24	Third Amendment to Pooled Patents Agreement between Illumina and Sequenom, Inc., effective as of August 28, 2017 (with certain confidential portions omitted)					X
10.25	Agreement for Lease between Granta Park Park Jco 1 Limited and Illumina, dated June 25, 2015	10-Q	001-35406	10.1	7/31/2015	
10.26	Third Amendment to Lease between ARE-SD Region No. 32, LLC and Illumina, dated September 2, 2015	10-K	001-35406	10.29	3/2/2016	

INDEX TO EXHIBITS — (Continued)

Exhibit Number	Exhibit Description	Incorporated by Reference				Filed Herewith
		Form	File Number	Exhibit	Filing Date	
10.27	First Amendment to Lease between BMR-Lincoln Center LP and Illumina, dated February 23, 2016	10-K	001-35406	10.30	3/2/2016	
10.28	Fourth Amendment to Lease between ARE-SD Region No. 32, LLC and Illumina, dated April 14, 2016	10-K	001-35406	10.28	2/14/2017	
10.29	Second Amendment to Lease between BMR-Lincoln Center LP and Illumina dated August 15, 2016	10-K	001-35406	10.29	2/14/2017	
10.30	Deed of Variation to the Agreement for Lease between Granta Park Jco 1 Limited and Illumina dated October 24, 2016	10-K	001-35406	10.30	2/14/2017	
10.31	Separation Agreement and General Release of All Claims between Illumina and Christian Henry	10-K	001-35406	10.31	2/14/2017	
21.1	Subsidiaries of Illumina					X
23.1	Consent of Independent Registered Public Accounting Firm					X
24.1	Power of Attorney (included on the signature page)					X
31.1	Certification of Francis A. deSouza pursuant to Section 302 of the Sarbanes-Oxley Act of 2002					X
31.2	Certification of Sam A. Samad pursuant to Section 302 of the Sarbanes-Oxley Act of 2002					X
32.1	Certification of Francis A. deSouza pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002					X
32.2	Certification of Sam A. Samad pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002					X
101.INS	XBRL Instance Document					X
101.SCH	XBRL Taxonomy Extension Schema					X
101.CAL	XBRL Taxonomy Extension Calculation Linkbase					X
101.LAB	XBRL Taxonomy Extension Label Linkbase					X
101.PRE	XBRL Taxonomy Extension Presentation Linkbase					X
101.DEF	XBRL Taxonomy Extension Definition Linkbase					X

+ Management contract or corporate plan or arrangement

Supplemental Information

No Annual Report to stockholders or proxy materials has been sent to stockholders as of the date of this report. The Annual Report to stockholders and proxy material will be furnished to our stockholders after the filing of this Annual Report on Form 10-K and we will furnish such material to the SEC at that time.

SIGNATURES

Pursuant to the requirements of the 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, on February 12, 2018 .

ILLUMINA , I NC.

By

/s/ F RANCIS A. DE S OUZA

Francis A. deSouza
President and Chief Executive Officer

February 12, 2018

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENT, that each person whose signature appears below constitutes and appoints Francis A. deSouza and Sam A. Samad, and each or any one of them, his or her true and lawful attorney-in-fact and agent, with full power of substitution and resubstitution, for him and in his or her name, place and stead, in any and all capacities, to sign any and all amendments to this Annual Report on Form 10-K, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or any of them, or their, his, or her substitutes or substitute, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, this Annual Report on Form 10-K has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

<u>/s/ FRANCIS A. DE SOUZA</u> Francis A. deSouza	President, Chief Executive Officer, and Director (Principal Executive Officer)	February 12, 2018
<u>/s/ SAM A. SAMAD</u> Sam A. Samad	Senior Vice President and Chief Financial Officer (Principal Financial Officer)	February 12, 2018
<u>/s/ KAREN MCGINNIS</u> Karen McGinnis	Vice President and Chief Accounting Officer (Principal Accounting Officer)	February 12, 2018
<u>/s/ JAY T. FLATLEY</u> Jay T. Flatley	Executive Chairman of the Board of Directors	February 12, 2018
<u>/s/ FRANCES A. ARNOLD</u> Frances Arnold	Director	February 12, 2018
<u>/s/ A. BLAINE BOWMAN</u> A. Blaine Bowman	Director	February 12, 2018
<u>/s/ CAROLINE D. DORSA</u> Caroline D. Dorsa	Director	February 12, 2018
<u>/s/ KARIN EASTHAM</u> Karin Eastham	Director	February 12, 2018
<u>/s/ ROBERT S. EPSTEIN</u> Robert S. Epstein	Director	February 12, 2018
<u>/s/ GARY S. GUTHART</u> Gary S. Guthart, Ph.D.	Director	February 12, 2018
<u>/s/ PHILIP W. SCHILLER</u> Philip W. Schiller	Director	February 12, 2018
<u>/s/ JOHN W. THOMPSON</u> John W. Thompson	Director	February 12, 2018

ILLUMINA, INC.

2015 STOCK AND INCENTIVE PLAN

(as adopted by the Board of Directors of the Company on January 29, 2015, and approved by the Company's stockholders on May 27, 2015)

1. Purposes of the Plan. The purposes of this 2015 Stock and Incentive Plan are to attract and retain the best available personnel for positions of substantial responsibility, to provide additional incentive to Service Providers, and to promote the success of the Company's business. Options granted under the Plan may be Incentive Stock Options or Nonstatutory Stock Options, as determined by the Administrator at the time of grant. Stock Awards (including Stock Grants, Stock Units and Stock Appreciation Rights) and Cash Awards may also be granted under the Plan.

2. Definitions. As used herein, the following definitions shall apply:

- (a) "Administrator" means the Board or any of its Committees as shall be administering the Plan, in accordance with Section 4 hereof.
- (b) "Affiliate" means shall have the meaning ascribed to such term in Rule 12b-2 promulgated under the Exchange Act. The Board shall have the authority to determine the time or times at which "Affiliate" status is determined within the foregoing definition.
- (c) "Applicable Laws" means the requirements relating to the administration of equity incentive plans, the grant of Awards and the issuance of Shares under U.S. state corporate laws, U.S. federal and state securities laws, the Code, the Nasdaq Global Select Market or any other Nasdaq Stock Market, stock exchange or quotation system on which the Common Stock is listed or quoted and the applicable laws or regulations of any other country or jurisdiction where Awards are granted under the Plan, as such laws, rules, regulations and requirements shall be in place from time to time.
- (d) "Award" means an Option, a Stock Award or a Cash Award granted in accordance with the terms of the Plan.
- (e) "Award Agreement" means a Stock Award Agreement, Cash Award Agreement and/or Option Agreement, which may be in written or electronic format, in such form and with such terms and conditions as may be specified by the Administrator, evidencing the terms and conditions of an individual Award. Each Award Agreement is subject to the terms and conditions of the Plan.
- (f) "Board" means the Board of Directors of the Company.
- (g) "Cash Award" means a bonus opportunity awarded under Section 14 pursuant to which a Participant may become entitled to receive an amount based on the satisfaction of such performance criteria as are specified in the agreement or other documents evidencing the Award (the "Cash Award Agreement").
- (h) "Code" means the U.S. Internal Revenue Code of 1986, as amended. All references herein to specific sections of the Code shall include any successor provisions of the Code or corresponding sections of any future U.S. federal tax code.
- (i) "Committee" means a committee of Directors appointed by the Board in accordance with Section 4 hereof.
- (j) "Common Stock" means the common stock of the Company, par value \$0.01 per share, and such other securities of the Company that may be substituted for the Common Stock pursuant to Section 16.
- (k) "Company" means Illumina, Inc., a Delaware corporation.
- (l) "Consultant" means any natural person, including an advisor, who renders bona-fide services to the Company or a Parent or an Affiliate of the Company, and which services are not in connection with the offer or sale of securities in a capital-raising transaction and do not directly or indirectly promote or maintain a market for the Company's securities.
- (m) "Corporate Transaction" means any of the following:
 - (i) any merger or consolidation in which the Company shall not be the surviving entity (or survives only as a subsidiary of another entity whose stockholders did not own all or substantially all of the Common Stock in substantially the same proportions as immediately prior to such transaction),
 - (ii) the sale of all or substantially all of the Company's assets to any other person or entity (other than a wholly-owned subsidiary),
 - (iii) the acquisition of beneficial ownership of more than 50% of the outstanding shares of Common Stock by any person or entity (including a "group" as defined by or under Section 13(d)(3) of the Exchange Act); or
 - (iv) a contested election of Directors, as a result of which or in connection with which the persons who were Directors before such election or their nominees (the "Incumbent Directors") cease to constitute a majority of the Board; provided, however, that if the election, or nomination for election by the Company's stockholders, of any new Director was approved by a vote of at least

fifty percent (50%) of the Incumbent Directors, such new Director shall be considered as an Incumbent Director.

Notwithstanding anything to the contrary in the foregoing, a transaction shall not constitute a Corporate Transaction if it is effected for the purpose of changing the place of incorporation or form of organization of the ultimate parent entity (including where the Company is succeeded by an issuer incorporated under the laws of another state, country or foreign government for such purpose and whether or not the Company remains in existence following such transaction) where all or substantially all of the persons or group that beneficially own all or substantially all of the combined voting power of the Company's voting securities immediately prior to the transaction beneficially own all or substantially all of the combined voting power of the Company in substantially the same proportions of their ownership after the transaction.

- (n) " *Director* " means a member of the Board.
- (o) " *Disability* " means that the Participant would qualify to receive benefit payments under the long-term disability policy, as it may be amended from time to time, of the Company or the Affiliate of the Company to which the Participant provides services regardless of whether the Participant is covered by such policy. If the Company or the Affiliate of the Company to which the Participant provides services does not have a long-term disability policy in place, " *Disability* " means that a Participant is unable to carry out the responsibilities and functions of the position held by the Participant by reason of any medically determined physical or mental impairment for a period of not less than ninety (90) consecutive days. A Participant shall not be considered to have incurred a Disability unless he or she furnishes proof of such impairment sufficient to satisfy the Administrator in its discretion. Notwithstanding the foregoing, for purposes of Incentive Stock Options granted under the Plan, " *Disability* " means that the Participant is disabled within the meaning of Section 22(e)(3) of the Code.
- (p) " *Effective Date* " means the date on which the Company's stockholders approve the Plan.
- (q) " *Employee* " means any person, including Officers and Inside Directors, employed by the Company or any Parent or Affiliate of the Company. An Employee shall not be deemed to cease Employee status by reason of (i) any leave of absence approved by the Company or any Parent or Affiliate of the Company or (ii) transfers between locations of the Company or between the Company, its Parent, or any Affiliate of the Company, or any successor. For purposes of Incentive Stock Options, no such leave may exceed ninety days, unless reemployment upon expiration of such leave is guaranteed by statute or contract. If reemployment upon expiration of a leave of absence approved by the Company is not so guaranteed, then three (3) months following the 91st day of such leave any Incentive Stock Option held by the Optionee shall cease to be treated as an Incentive Stock Option and shall be treated for tax purposes as a Nonstatutory Stock Option. Neither service as Director nor payment of a director's fee by the Company shall be sufficient to constitute "employment" by the Company.
- (r) " *Exchange Act* " means the U.S. Securities Exchange Act of 1934, as amended.
- (s) " *Fair Market Value* " means, as of any date, the value of a Share determined as follows:
 - (i) if the Common Stock is listed on any established stock exchange or traded on a national market system, including without limitation the Nasdaq Global Select Market, the Nasdaq Global Market or the Nasdaq Capital Market of The Nasdaq Stock Market, the Fair Market Value of a Share shall be the closing selling price for such stock (or the closing bid, if no sales were reported) as quoted on such exchange or system on the day of determination, as reported in *The Wall Street Journal* or such other source as the Administrator deems reliable;
 - (ii) if the Common Stock is regularly quoted by a recognized securities dealer or other quotation system but selling prices are not reported, the Fair Market Value of a Share shall be the mean between the high bid and low asked prices for the Common Stock on the day of determination (or if no sales occurred on such date, then on the date immediately prior to such date on which sales prices are reported), as reported in *The Wall Street Journal* or such other source as the Administrator deems reliable; or
 - (iii) in the absence of an established market for the Common Stock, the Fair Market Value shall be determined in good faith by the Administrator to be reasonable and in compliance with Section 409A of the Code to the extent the Awards are intended to be exempt from or in compliance with Section 409A of the Code.

Notwithstanding the foregoing, for income tax and/or social security reporting purposes under U.S. federal, state, local or non-US law and for such other purposes as the Administrator deems appropriate, including, without limitation, where Fair Market Value is used in reference to exercise, vesting, settlement or payout of an Award, the Fair Market Value shall be determined by the Company in accordance with uniform and nondiscriminatory standards adopted by it from time to time. In all cases, the determination of Fair Market Value by the Company shall be conclusive and binding on all persons.

- (t) “ *Immediate Family* ” means any child, stepchild, grandchild, parent, stepparent, grandparent, spouse, former spouse, sibling, niece, nephew, mother-in-law, father-in-law, son-in-law, daughter-in-law, brother-in-law, or sister-in-law (including adoptive relationships), a trust in which these persons have more than fifty percent of the beneficial interest, a foundation in which these persons (or the Participant) control the management of assets, and any other entity in which these persons (or the Participant) own more than fifty percent of the voting interests.
 - (u) “ *Incentive Stock Option* ” means an Option intended to qualify as an incentive stock option within the meaning of Section 422 of the Code and the regulations promulgated thereunder and as designated in the applicable Option Agreement.
 - (v) “ *Inside Director* ” means a Director who is an Employee.
 - (w) “ *Nonstatutory Stock Option* ” means an Option not intended to qualify as an Incentive Stock Option and/or as designated in the applicable Option Agreement, or an Incentive Stock Option that fails to so qualify.
 - (x) “ *Notice of Grant* ” means a written or electronic notice evidencing certain terms and conditions of an individual Award. The Notice of Grant is part of the Award Agreement.
 - (y) “ *Officer* ” means a person who is an executive officer of the Company within the meaning of Section 16 of the Exchange Act and the rules and regulations promulgated thereunder.
 - (z) “ *Option* ” means an Incentive Stock Option or a Nonstatutory Stock Option granted pursuant to the Plan.
 - (aa) “ *Option Agreement* ” means an agreement between the Company and an Optionee evidencing the terms and conditions of an individual Option grant. The Option Agreement is subject to the terms and conditions of the Plan.
 - (ab) “ *Optioned Shares* ” means the Shares subject to an Option.
 - (ac) “ *Optionee* ” means the holder of an outstanding Option granted under the Plan.
 - (ad) “ *Outside Director* ” means a Director who is not an Employee.
 - (ae) “ *Parent* ” means a “parent corporation,” whether now or hereafter existing, as defined in Section 424(e) of the Code or any successor provision.
 - (af) “ *Participant* ” means any holder of one or more Options, Stock Awards or Cash Awards, or the Shares issuable or issued pursuant to such Awards, under the Plan.
 - (ag) “ *Performance Period* ” means one or more periods of time, which may be of varying and overlapping durations, as the Administrator may select, over which the attainment of one or more Qualifying Performance Goals will be measured for the purpose of determining a Participant’s right to, and the payment of, a Qualifying Performance-Based Award.
 - (ah) “ *Plan* ” means this 2015 Stock and Incentive Plan, as amended from time to time.
 - (ai) “ *Predecessor Plan* ” means the Illumina, Inc. 2000 Stock Plan, as amended; the Illumina, Inc. 2005 Stock and Incentive Plan, as amended and restated; the 2005 Solexa Equity Incentive Plan; and the Verinata Health, Inc. 2008 Stock Plan.
 - (aj) “ *Qualified Performance-Based Compensation* ” means any compensation that is intended to constitute “qualified performance-based compensation” as described in Section 162(m)(4)(C) of the Code.
 - (ak) “ *Qualifying Performance-Based Award* ” means an Award that is intended to constitute Qualified Performance-Based Compensation and is granted pursuant to Section 16 hereof.
 - (al) “ *Qualifying Performance Criteria* ” means any one or more of the following performance criteria for purposes of establishing the Qualifying Performance Goal(s), either individually, alternatively or in any combination, applied to either the Company as a whole or to a business unit, Parent, Affiliate of the Company or business segment of the Company or an Affiliate of the Company, either individually, alternatively or in any combination, and measured over the Performance Period, on an absolute basis or relative to a pre-established target, to previous years’ results or to a designated comparison group, in each case as specified by the Administrator in the Qualifying Performance-Based Award: (i) cash flow; (ii) earnings (including gross margin, earnings before interest and taxes, earnings before taxes, and net earnings); (iii) earnings per share; (iv) growth in earnings or earnings per share; (v) stock price; (vi) return on equity or average stockholders’ equity; (vii) total stockholder return; (viii) return on capital; (ix) return on assets or net assets; (x) return on investment; (xi) revenue; (xii) income or net income; (xiii) operating income or net operating income; (xiv) operating profit or net operating profit; (xv) operating margin; (xvi) return on operating revenue; (xvii) market share; (xviii) contract awards or backlog; (xix) overhead or other expense reduction; (xx) growth in stockholder value relative to the moving average of the S&P 500 Index or a peer group index; (xxi) credit rating; (xxii) strategic plan development and implementation (including individual performance objectives that relate to achievement of the Company’s or any business unit’s strategic plan); and (xxiii) improvement in workforce diversity.
 - (am) “ *Qualifying Performance Goals* ” means, for a Performance Period, the goals established in writing by the Administrator for the Performance Period based upon the Qualifying Performance Criteria. Depending on the Qualifying Performance Criteria used to establish such Qualifying Performance Goals, the Qualifying
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Performance Goals may be expressed in terms of overall Company performance, the performance of an Affiliate of the Company, the performance of a division or a business unit of the Company or an Affiliate of the Company, or the performance of an individual. The Administrator, in its discretion, may, to the extent consistent with, and within the time prescribed by, Section 162(m) of the Code, appropriately adjust or modify the calculation of Qualifying Performance Goals for such Performance Period in order to prevent the dilution or enlargement of the rights of Participants (a) in the event of, or in anticipation of, any unusual or extraordinary corporate item, transaction, event (including arising from litigation), or development, or (b) in recognition of, or in anticipation of, any other unusual or nonrecurring events affecting the Company, or the financial statements of the Company, or in response to, or in anticipation of, changes in applicable laws, regulations, accounting principles, or business conditions.

- (an) " *Rule 16b-3* " means Rule 16b-3 of the Exchange Act, as the same may be amended from time to time, or any successor to Rule 16b-3, as in effect when discretion is being exercised with respect to the Plan.
 - (ao) " *Service Provider* " means (i) an individual rendering services to the Company or any Parent or Affiliate of the Company in the capacity of an Employee or Consultant or (ii) an individual serving as a Director.
 - (ap) " *Share* " means a share of the Common Stock, as adjusted in accordance with Section 16 hereof.
 - (aq) " *Stock Appreciation Right* " means a right to receive cash and/or Shares based on a change in the Fair Market Value of a specific number of Shares granted under Section 13 hereof.
 - (ar) " *Stock Award* " means a Stock Grant, a Stock Unit or a Stock Appreciation Right granted under Sections 12 or 13 below or other similar awards granted under the Plan (including phantom stock rights).
 - (as) " *Stock Award Agreement* " means a written agreement, the form(s) of which shall be approved from time to time by the Administrator, between the Company and a holder of a Stock Award evidencing the terms and conditions of an individual Stock Award grant. Each Stock Award Agreement shall be subject to the terms and conditions of the Plan.
 - (at) " *Stock Grant* " means the award of a certain number of Shares granted under Section 12 below.
 - (au) " *Stock Unit* " means a bookkeeping entry representing an amount equivalent to the Fair Market Value of one Share, payable in cash, property or Shares. Stock Units represent an unfunded and unsecured obligation of the Company, except as otherwise explicitly provided for by the Administrator.
 - (av) " *Subsidiary* " means a "subsidiary corporation," whether now or hereafter existing, as defined in Section 424(f) of the Code, or any successor provision.
 - (aw) " *Withholding Taxes* " means the federal, state and local income and employment taxes, any taxes imposed by a jurisdiction outside of the United States or any other taxes or contributions required to be withheld, to which the holder of an Award may be subject in connection with any aspect of an Award or Shares issued or issuable pursuant to an Award.
3. *Stock Subject to the Plan.*
- (a) Subject to the provisions of Section 16 hereof, the maximum aggregate number of Shares that may be issued and sold pursuant to Awards granted under the Plan shall be the sum of (i) 2,700,000 Shares, plus (ii) any Shares which as of the Effective Date are available for issuance under the Predecessor Plans and which following the Effective Date are not issued under the Predecessor Plans (including Shares that are subject to awards outstanding under the Predecessor Plans that expire, are cancelled or otherwise terminate unexercised, or Shares that otherwise would have reverted to the share reserve of the Predecessor Plans following the Effective Date). Anything in the foregoing to the contrary notwithstanding, the maximum aggregate number of Shares that may be issued pursuant to the exercise of Incentive Stock Options shall in no event exceed 8,000,000.
 - (b) The Shares may be authorized, but unissued, or reacquired Shares, including Shares repurchased by the Company on the open market.
 - (c) If an outstanding Award expires or terminates for any reason prior to the Shares subject thereto having been issued in full, the unpurchased or unissued Shares which were subject thereto shall become available for future grant or sale under the Plan (unless the Plan has terminated); *provided, however*, that Shares that have actually been issued under the Plan pursuant to an Award shall not be returned to the Plan and shall not become available for future distribution under the Plan, except that if unvested Shares are repurchased by the Company at their original purchase price or otherwise forfeited to the Company in connection with termination of a Participant's status as a Service Provider, such Shares shall become available for future grant under the Plan or as a result of the cancellation of an Award. Notwithstanding the provisions of this Section 3(c), no Shares may again be optioned, granted or awarded if such action would cause an Incentive Stock Option to fail to qualify as an incentive stock option under Section 422 of the Code. Notwithstanding the first sentence of this Section 3(c), the following Shares shall be counted against the maximum number of Shares available for issuance pursuant to Section 3(a) hereof and shall not be returned to the Plan: (i) Shares covered by an Award which are surrendered in payment of the Award exercise or purchase price or in satisfaction of obligations for Withholding Taxes incident to the exercise of an Award; (ii) Shares that are not
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issued or delivered as a result of the net settlement of an outstanding Award; or (iii) Shares that are repurchased on the open market with the proceeds of the exercise of an Option.

- (d) To the extent permitted by Applicable Law or any stock exchange rule, Shares issued in assumption of, or in substitution for, any outstanding awards of any entity acquired in any form of combination by the Company or any Affiliate of the Company shall not be counted against Shares available for grant pursuant to this Plan. Additionally, to the extent permitted by Applicable Law or any stock exchange rule, in the event that a company acquired by (or combined with) the Company or an Affiliate of the Company has shares available under a pre-existing plan approved by stockholders and not adopted in contemplation of such acquisition or combination, the shares available for grant pursuant to the terms of such pre-existing plan (as adjusted, to the extent appropriate, using the exchange ratio or other adjustment or valuation ratio or formula used in such acquisition or combination to determine the consideration payable to the holders of common stock of the entities party to such acquisition or combination) may, at the discretion of the Administrator, be used for Awards under the Plan in lieu of awards under the applicable pre-existing plan of the other company and shall not reduce the Shares authorized for grant under the Plan; *provided* that Awards using such available shares shall not be made after the date awards or grants could have been made under the terms of the pre-existing plan, absent the acquisition or combination, and shall only be made to individuals who were not employees or directors of the Company or any Affiliate of the Company prior to such acquisition or combination.

4. Administration of the Plan.

(a) Procedure.

- (i) *Multiple Administrative Bodies*. Different Committees with respect to different groups of Service Providers may administer the Plan.
- (ii) *Section 162(m)*. To the extent that the Administrator determines it to be desirable to qualify Awards granted hereunder as Qualified Performance-Based Compensation, the Award shall be administered by a Committee comprised solely of two or more “outside directors” within the meaning of Section 162(m) of the Code.
- (iii) *Rule 16b-3*. To the extent desirable to qualify transactions hereunder as exempt under Rule 16b-3, the transactions contemplated hereunder shall be structured to satisfy the requirements for exemption under Rule 16b-3 and shall be granted by a Committee comprised solely of “non-employee directors” within the meaning of Rule 16b-3(b)(3) under the Exchange Act or by the Board.
- (iv) *Other Administration*. Other than as provided above, the Plan shall be administered by (A) the Board, (B) a Committee, which committee shall be constituted to satisfy Applicable Laws or (C) subject to the Applicable Laws, one or more officers of the Company to whom the Board or Committee has delegated the power to grant Awards to persons eligible to receive Awards under the Plan provided such grantees may not be officers or Directors.

(b) *Powers of the Administrator*. Subject to the provisions of the Plan, and in the case of a Committee, subject to the specific duties delegated by the Board to such Committee, the Administrator shall have the authority, in its discretion:

- (i) to determine the Fair Market Value of the Common Stock in accordance with Section 2(r) of the Plan;
- (ii) to select the Service Providers to whom Awards may be granted hereunder;
- (iii) to determine the number of Shares or amount of cash to be covered by each Award granted hereunder;
- (iv) to approve forms of Award Agreements for use under the Plan;
- (v) to determine the terms and conditions, not inconsistent with the terms of the Plan, of any Award granted hereunder, which terms and conditions include, but are not limited to, the exercise price and/or purchase price (if applicable), the time or times when Awards may be exercised (which may be based on performance criteria), the vesting schedule, any vesting and/or exercisability acceleration or waiver of forfeiture restrictions, the acceptable forms of consideration, the term and any restriction or limitation regarding any Award or the Shares relating thereto, based in each case on such factors as the Administrator, in its sole discretion, shall determine and may be established at the time an Award is granted or thereafter;
- (vi) to construe and interpret the terms of the Plan and Awards granted pursuant to the Plan;
- (vii) to prescribe, amend and rescind rules and regulations relating to the Plan, including rules and regulations relating to sub-plans established for the purpose of satisfying applicable foreign laws or facilitating compliance with Applicable Laws or to take advantage of special tax treatment available under Applicable Laws;
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- (viii) to modify or amend each Award, including the discretionary authority to extend the post-termination exercisability or purchase period of Awards longer than is originally provided for in the Award Agreement, provided that any amendment that materially and adversely impacts the rights of a Participant under an Award shall not become effective without the Participant's consent unless the amendment is necessary or desirable, as determined in the sole discretion of the Administrator, to facilitate compliance with Applicable Laws or as contemplated in Section 25 hereof;
 - (ix) to allow Participants to satisfy Withholding Tax obligations by electing to have the Company withhold from the Shares to be issued upon exercise or settlement of an Award that number of Shares having a market value equal to the minimum amount required to be withheld or such other amount that will not result in adverse accounting consequences to the Company. All elections by a Participant to have Shares withheld for this purpose shall be made in such form and under such conditions as the Administrator may deem necessary or advisable;
 - (x) to authorize any person to execute on behalf of the Company any instrument required to effect the grant of an Award previously granted by the Administrator; and
 - (xi) to make all other determinations deemed necessary or advisable for administering the Plan.
- (c) *Effect of Administrator's Decision*. The Administrator's decisions, determinations and interpretations shall be final and binding on all Participants and any other holders of Options, Stock Awards, Cash Awards or Shares issued under the Plan.
5. *Eligibility*. Nonstatutory Stock Options and Stock Awards may be granted to Service Providers. Incentive Stock Options and Cash Awards may be granted only to Employees. A Service Provider who is subject to taxation in the U.S. and who is providing services to an Affiliate of the Company may be granted Options or Stock Appreciation Rights under this Plan only if the Affiliate qualifies as an "eligible issuer of service recipient stock" within the meaning of the Treasury Regulations promulgated under Section 409A of the Code.
6. *Limitations*.
- (a) Each Option shall be designated in the Option Agreement as either an Incentive Stock Option or a Nonstatutory Stock Option. However, notwithstanding designation as an Incentive Stock Option, no installment under such an Option shall qualify for favorable tax treatment as an Incentive Stock Option if (and to the extent) the aggregate Fair Market Value of the Shares (determined at the date of grant) for which such installment first becomes exercisable hereunder would, when added to the aggregate value (determined as of the respective date or dates of grant) of the Shares or other securities for which such Option or any other Incentive Stock Options granted to Optionee prior to the date of grant (whether under the Plan or any other plan of the Company or any Parent or Subsidiary of the Company) first become exercisable during the same calendar year, exceed One Hundred Thousand Dollars (\$100,000) in the aggregate. Should such One Hundred Thousand Dollar (\$100,000) limitation be exceeded in any calendar year, the Option shall nevertheless become exercisable for the excess Optioned Shares in such calendar year as a Nonstatutory Stock Option. For purposes of this Section 6(a), Incentive Stock Options shall be taken into account in the order in which they were granted.
 - (b) Neither the Plan nor any Award shall confer upon a Participant any right with respect to continuing the Participant's relationship as a Service Provider, nor shall they interfere in any way with the Participant's right or the right of the Company, its Parent or any Affiliate of the Company, as applicable, to terminate such relationship at any time, with or without cause.
 - (c) Where an Award is intended to constitute Qualified Performance-Based Compensation, the following limitations shall apply to grants of Options, Stock Appreciation Rights, and other Stock Awards:
 - (i) No Service Provider shall be granted, in any fiscal year of the Company, Options covering more than 750,000 Shares, subject to adjustment as provided in Section 16 below.
 - (ii) No Service Provider shall be granted, in any fiscal year of the Company, Stock Appreciation Rights covering more than 750,000 Shares, subject to adjustment as provided in Section 16 below.
 - (iii) No Service Provider shall be granted, in any fiscal year of the Company, any other Stock Awards covering more than 375,000 Shares, subject to adjustment as provided in Section 16 below.
 - (iv) However, in connection with his or her commencement of Service Provider status, an individual may be granted Options covering up to an additional 1,500,000 Shares, Stock Appreciation Rights covering up to an additional 1,500,000 Shares, and other Stock Awards covering up to an additional 750,000 Shares during the fiscal year in which such commencement occurs, which shall not count against the limit set forth in subsections (i) through (iii) above, and which shall be subject to adjustment as provided in Section 16 below.
7. *Term of Plan*. The Plan shall become effective on the Effective Date. Unless the Plan is terminated earlier pursuant to Section 18 hereof, the Plan shall terminate on January 29, 2025. Anything in the foregoing to the contrary notwithstanding, no Incentive Stock Options may be granted under the Plan after January 29, 2025. All Awards outstanding at
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the time the Plan terminates shall continue to have force and effect in accordance with the provisions of the applicable Award Agreement.

8. Term of Option. The term of each Option shall be stated in the Option Agreement; provided, however, that the term shall be no more than ten (10) years from the date of grant or such shorter term as may be provided in the Option Agreement. Moreover, in the case of an Incentive Stock Option granted to an Optionee who, at the time the Incentive Stock Option is granted, owns stock representing more than ten percent (10%) of the total combined voting power of all classes of stock of the Company or any Parent or Subsidiary, the term of the Incentive Stock Option shall be five (5) years from the date of grant or such shorter term as may be provided in the Option Agreement.

9. Option Exercise Price and Consideration.

- (a) Exercise Price. The per Share exercise price for the Shares to be issued pursuant to exercise of an Option shall be determined by the Administrator, subject to the following:
- (i) In the case of an Incentive Stock Option:
 - (A) granted to an Employee who, at the time the Incentive Stock Option is granted, owns stock representing more than ten percent (10%) of the voting power of all classes of stock of the Company or any Parent or Subsidiary, the per Share exercise price shall be no less than 110% of the Fair Market Value per Share on the date of grant.
 - (B) granted to any Employee other than an Employee described in paragraph (A) immediately above, the per Share exercise price shall be no less than 100% of the Fair Market Value per Share on the date of grant.
 - (ii) In the case of a Nonstatutory Stock Option, the per Share exercise price shall be no less than 100% of the Fair Market Value per Share on the date of grant for Options that are intended to be exempt from Section 409A of the Code.
- (b) Waiting Period and Exercise Dates. At the time an Option is granted, the Administrator shall fix the period within which the Option may be exercised and shall determine any conditions (including any vesting conditions) that must be satisfied before the Option may be exercised.
- (c) Form of Consideration. The Administrator shall determine the acceptable form of consideration for exercising an Option, including the method of payment. Such consideration may consist entirely of:
- (i) cash;
 - (ii) check;
 - (iii) other Shares which, in the case of Shares acquired directly or indirectly from the Company, (A) have been owned by the Optionee for more than six (6) months on the date of surrender (if it is required to eliminate or reduce accounting charges incurred by the Company in connection with the Option, or such other period (if any) required to so eliminate or reduce such charges), and (B) have a market value on the date of surrender equal to the aggregate exercise price of the Shares as to which said Option shall be exercised; consideration received through a special sale and remittance procedure pursuant to which the Optionee shall concurrently provide irrevocable instructions to (A) a Company-designated brokerage firm to effect the immediate sale of the purchased Shares and remit to the Company, out of the sale proceeds available on the settlement date, sufficient funds to cover the aggregate exercise price payable for the purchased Shares plus all Withholding Taxes required to be withheld by the Company by reason of such exercise and (B) the Company to have purchased Shares issued directly to such brokerage firm in order to complete the sale;
 - (v) by a "net exercise" arrangement pursuant to which the number of Shares issuable upon exercise of the Option shall be reduced by the largest whole number of Shares having an aggregate Fair Market Value that does not exceed the aggregate exercise price (plus Withholding Taxes, if applicable) and any remaining balance of the aggregate exercise price (and/or applicable tax withholdings) not satisfied by such reduction in the number of whole Shares to be issued shall be paid by the Participant in cash or other form of payment approved by the Administrator.
 - (vi) a reduction in the amount of any Company liability to the Optionee;
 - (vii) any combination of the foregoing methods of payment; or
 - (viii) such other consideration and method of payment for the issuance of Optioned Shares as determined by the Administrator and to the extent permitted by Applicable Laws.
- (d) No Repricings of Options or Stock Appreciation Rights. Other than as contemplated in Section 16(a) of the Plan, the exercise price of an Option may not be reduced without stockholder approval. Except as provided in Section 16(a), without prior stockholder approval, in no event may the Administrator exercise its discretion to reduce the exercise price of outstanding Options or Stock Appreciation Rights to an exercise price that is less than the original exercise price or effect repricing through cancellation and re-grants at an exercise price that is less than the original exercise price of such Options or Stock Appreciation Right or cancellation of Options or Stock Appreciation Rights in exchange for cash or another Award at a time when
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the Option or Stock Appreciation Right has an exercise price that is higher than the Fair Market Value of a Share.

10. Exercise of Option.

(a) *Procedure for Exercise; Rights as a Stockholder.*

- (i) Any Option granted hereunder shall be exercisable according to the terms of the Plan and at such times and under such conditions as determined by the Administrator and set forth in the Option Agreement. An Option may not be exercised for a fraction of a Share.
- (ii) An Option shall be deemed exercised when the Company or an agent designated by the Company receives: (A) written or electronic notice of exercise (in accordance with the Option Agreement) from the person entitled to exercise the Option, and (B) full payment for the Optioned Shares with respect to which the Option is exercised and (C) satisfaction of any Withholding Taxes. Full payment may consist of any consideration and method of payment authorized by the Administrator and permitted by the Plan and shall be set forth in the Option Agreement. Shares issued upon exercise of an Option shall be issued in the name of the Optionee or, if requested by the Optionee and determined by the Company to be in compliance with or necessary under Applicable Laws, in the name of the Optionee and his or her spouse. Until the Shares are issued (as evidenced by the appropriate entry on the books of the Company or of a duly authorized transfer agent of the Company), no right to vote or receive dividends or any other rights as a stockholder shall exist with respect to the Optioned Shares, notwithstanding the exercise of the Option. The Company shall issue (or cause to be issued) such Shares promptly after the Option is exercised. No adjustment will be made for a dividend or other right for which the record date is prior to the date the Shares are issued, except as provided in Section 16 hereof.
- (iii) Exercising an Option in any manner shall decrease the number of Optioned Shares thereafter available, both for purposes of the Plan and for sale under the Option, by the number of Shares as to which the Option is exercised.

(b) *Termination of Optionee's Relationship as a Service Provider.* If an Optionee ceases to be a Service Provider, other than upon the Optionee's death or Disability, such Optionee may exercise his or her Option for a period of three (3) months measured from the date of termination, or such longer period of time as specified in the Option Agreement, to the extent that the Option is vested on the date of termination (but in no event later than the expiration of the term of the Option as set forth in the Option Agreement); *provided, however*, that, unless otherwise provided by the Administrator in the Option Agreement, any Officer or Outside Director (as of the date of termination) may exercise his or her Option for a period of twelve (12) months measured from the date of termination, or such other period of time as specified in the Option Agreement, to the extent that the Option is vested on the date of termination (but in no event later than the expiration of the term of the Option as set forth in the Option Agreement). If, on the date of termination, the Optionee is not vested as to his or her entire Option, the Option shall immediately terminate as to all the Optioned Shares covered by the unvested portion of the Option, and those Optioned Shares shall revert immediately to the Plan, unless otherwise provided in the Option Agreement. To the extent the Optionee does not, within the post-termination time period determined pursuant to this Section 10(b), exercise the Option for the Optioned Shares in which Optionee is vested at the time of such termination of Service Provider status, the Option shall terminate with respect to those vested Optioned Shares at the end of such period, and those Optioned Shares shall revert to the Plan.

(c) *Disability of Optionee.* If an Optionee ceases to be a Service Provider as a result of the Optionee's Disability, the Optionee may exercise his or her Option within twelve (12) months of termination, or such other period of time as specified in the Option Agreement, to the extent the Option is vested on the date of termination (but in no event later than the expiration of the term of such Option as set forth in the Option Agreement). If, on the date of termination, the Optionee is not vested as to his or her entire Option, the Option shall immediately terminate as to the Optioned Shares covered by the unvested portion of the Option, and those Optioned Shares shall revert immediately to the Plan unless otherwise provided in the Option Agreement. To the extent the Optionee does not, within the post-termination time period determined pursuant to this Section 10(c), exercise the Option for the Optioned Shares in which Optionee is vested at the time of such termination of Service Provider status, the Option shall terminate with respect to those vested Optioned Shares at the end of such period, and those Optioned Shares shall revert to the Plan.

(d) *Death of Optionee.* If an Optionee dies while a Service Provider, the Option may be exercised within twelve (12) months following Optionee's death, or such other period of time as specified in the Option Agreement, to the extent that the Option is vested on the date of death (but in no event later than the expiration of the term of such Option as set forth in the Option Agreement) by the Optionee's designated beneficiary, provided the Administrator has permitted a beneficiary designation and a beneficiary has been designated prior to Optionee's death in a form acceptable to the Administrator. If the Administrator has not permitted

a beneficiary designation or no beneficiary has been designated by the Optionee, then such Option may be exercised by the personal representative of the Optionee's estate or by the person(s) to whom the Option is transferred pursuant to the Optionee's will or in accordance with the laws of descent and distribution. If, at the time of death, the Optionee is not vested as to his or her entire Option, the Option shall immediately terminate as to the Optioned Shares covered by the unvested portion of the Option, and those Optioned Shares shall immediately revert to the Plan unless otherwise provided in the Option Agreement. To the extent the Option is not, within the post-termination time period determined pursuant to this Section 10(d), exercised for the Optioned Shares in which Optionee is vested at the time of such termination of Service Provider status, the Option shall terminate with respect to those vested Optioned Shares, and those Optioned Shares shall revert to the Plan.

11. Limited Transferability of Options . An Option generally may not be sold, pledged, assigned, hypothecated, transferred, or disposed of in any manner other than by will or by the laws of descent or distribution and may be exercised, during the lifetime of the Optionee, only by the Optionee; provided however that, if permitted by the Administrator, Nonstatutory Stock Options may be transferred by instrument to an *inter vivos* or testamentary trust in which the Nonstatutory Stock Options are to be passed to beneficiaries upon the death of the trustor (settlor) or by gift or pursuant to domestic relations orders to Immediate Family Members of the Optionee. If permitted by the Administrator, the Optionee may designate one or more persons as the beneficiary or beneficiaries of his or her outstanding Options, and those Options shall, in accordance with such designation, automatically be transferred to such beneficiary or beneficiaries upon the Optionee's death while holding those Options. Such beneficiary or beneficiaries or Immediate Family Member to whom an Option has been transferred shall take the transferred Options subject to all the terms and conditions of the applicable agreement evidencing each such transferred Option, including (without limitation) the limited time period during which the Option may be exercised following the Optionee's death.

12. Stock Grants and Stock Unit Awards . Each Stock Award Agreement reflecting the issuance of a Stock Grant or Stock Unit shall be in such form and shall contain such terms and conditions as the Administrator shall deem appropriate. The terms and conditions of such agreements may change from time to time, and the terms and conditions of separate agreements need not be identical, but each such agreement shall include (through incorporation of provisions hereof by reference in the agreement or otherwise) the substance of each of the following provisions:

- (a) Consideration . A Stock Grant or Stock Unit may be awarded in consideration for such property or services as is permitted under Applicable Law, including for past services actually rendered to the Company, a Parent or an Affiliate of the Company for its benefit.
- (b) Vesting . Shares of Common Stock awarded under an agreement reflecting a Stock Grant and a Stock Unit award may, but need not, be subject to a share repurchase option, forfeiture restriction or other conditions in favor of the Company in accordance with a vesting or lapse schedule to be determined by the Administrator.
- (c) Termination of Participant's Relationship as a Service Provider . In the event a Participant's relationship as a Service Provider terminates, the Company may reacquire any or all of the Shares held by the Participant which have not vested or which are otherwise subject to forfeiture or other conditions as of the date of termination under the terms of the Stock Award Agreement.
- (d) Transferability . Except as determined by the Administrator, no rights to acquire Shares under a Stock Grant or a Stock Unit shall be assignable or otherwise transferable by the Participant except by will or by the laws of descent and distribution. To the extent and under such terms and conditions as determined by the Administrator and provided such transfer is consistent with securities offerings registered on a Form S-8, a Participant may assign or transfer a Stock Grant or a Stock Unit without consideration to an Immediate Family Member; provided that such Immediate Family Member shall be bound by and subject to all of the terms and conditions of the Plan and the Stock Award Agreement relating to the transferred Award and shall execute an agreement satisfactory to the Company evidencing such obligations; and provided further that such Participant shall remain bound by the terms and conditions of the Plan.
- (e) Dividends . Any dividends that are distributed with respect to a Stock Grant that vests based on the attainment of performance goals shall be accumulated and subject to restrictions and risk of forfeiture to which the underlying Stock Grant is subject.
- (f) No Stockholder Rights . Until the Shares are issued (as evidenced by the appropriate entry on the books of the Company or of a duly authorized transfer agent of the Company), no right to vote or receive dividends or any other rights as a stockholder shall exist with respect to the Shares subject to a Stock Unit. No adjustment shall be made for a dividend or other right for which the record date is prior to the date the Shares are issued, except as provided in Section 16 hereof.

13. Stock Appreciation Rights .

- (a) General . Stock Appreciation Rights may be granted either alone, in addition to, or in tandem with other Awards granted under the Plan. The Administrator may grant Stock Appreciation Rights to eligible Participants subject to terms and conditions not inconsistent with this Plan and determined by the
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Administrator. The specific terms and conditions applicable to the Participant shall be provided for in the Stock Award Agreement. Stock Appreciation Rights shall be exercisable, in whole or in part, at such times as the Administrator shall specify in the Stock Award Agreement, except as provided below.

- (b) *Exercise Price* . The exercise price per Share subject to a Stock Appreciation Right shall be determined by the Administrator, provided that the exercise price per Share shall not be less than 100% of the Fair Market Value of a Share on the date of grant for Stock Appreciation Rights that are intended to be exempt from Section 409A of the Code.
- (c) *Term* . The term of any Stock Appreciation Right granted under the Plan shall not exceed ten years.
- (d) *Exercise of Stock Appreciation Right* . Upon the exercise of a Stock Appreciation Right, in whole or in part, the Participant shall be entitled to a payment in an amount equal to the excess of the Fair Market Value on the date of exercise of a fixed number of Shares covered by the exercised portion of the Stock Appreciation Right, over the Fair Market Value on the grant date of the Shares covered by the exercised portion of the Stock Appreciation Right (or such other amount calculated with respect to Shares subject to the award as the Administrator may determine). The amount due to the Participant upon the exercise of a Stock Appreciation Right shall be paid in such form of consideration as determined by the Administrator and may be in cash, Shares or a combination thereof, over the period or periods specified in the Stock Award Agreement. A Stock Award Agreement may place limits on the amount that may be paid over any specified period or periods upon the exercise of a Stock Appreciation Right, on an aggregate basis or as to any Participant. A Stock Appreciation Right shall be considered exercised when the Company receives written notice of exercise in accordance with the terms of the Stock Award Agreement from the person entitled to exercise the Stock Appreciation Right.
- (e) *Transferability* . Except as determined by the Administrator, no Stock Appreciation Rights shall be assignable or otherwise transferable by the Participant except by will or by the laws of descent and distribution. To the extent and under such terms and conditions as determined by the Administrator and provided such transfer is consistent with securities offerings registered on a Form S-8, a Participant may assign or transfer a Stock Appreciation Right without consideration to an Immediate Family Member; provided that such Immediate Family Member shall be bound by and subject to all of the terms and conditions of the Plan and the Stock Award Agreement relating to the transferred Stock Appreciation Right and shall execute an agreement satisfactory to the Company evidencing such obligations; and provided further that such Participant shall remain bound by the terms and conditions of the Plan.

14. *Cash Awards* . Each Cash Award will confer upon the Participant the opportunity to earn a future payment tied to the level of achievement with respect to one or more Qualifying Performance Goals established for a Performance Period.

- (a) *Terms and Conditions* . Each Cash Award shall contain provisions regarding (i) the target and maximum amount payable to the Participant as a Cash Award, (ii) the Qualifying Performance Goal that shall determine the amount of payment, (iii) the Performance Period as to which the Qualifying Performance Goal shall be measured for determining the amount of any payment, (iv) the timing and form of any payment earned by virtue of the attainment level of the Qualifying Performance Goal, (v) restrictions on the alienation or transfer of the Cash Award prior to actual payment, (vi) forfeiture provisions, and (vii) such further terms and conditions (including, without limitation, the effect that a termination as a Service Provider shall have on any Cash Award) and in each case not inconsistent with the Plan, as may be determined from time to time by the Administrator.
- (b) *Maximum Amount* . The maximum amount payable as a Cash Award may be a multiple of the target amount payable, but the maximum amount payable pursuant to a Cash Award for any fiscal year to any Participant shall not exceed U.S. \$3,000,000.
- (c) *Qualifying Performance-Based Award* . The Cash Awards shall be subject to the terms and conditions of Section 15 hereof applicable to Awards that are intended to be Qualifying Performance-Based Awards.

15. *Qualifying Performance-Based Awards* . Any Stock Award (other than a Stock Appreciation Right or any other Stock Award having a purchase price equal to 100% of the Fair Market Value on the date such award is made) or Cash Award that is intended to be as Qualified Performance-Based Compensation shall be subject to the provisions of this Section 15.

- (a) *Procedures with Respect to Performance-Based Awards* . To the extent necessary to comply with the Qualified Performance-Based Compensation requirements of Section 162(m)(4)(C) of the Code, with respect to any Award granted under Section 12 or 14, no later than ninety (90) days following the commencement of any fiscal year in question or any other designated fiscal period or period of service (or such other time as may be required or permitted by Section 162(m) of the Code), the Administrator, in writing (a) select the Qualifying Performance Criteria applicable to the Performance Period, (b) shall establish the Qualifying Performance Goals, and amounts of such Awards, as applicable, which may be earned for such Performance Period, and (c) shall specify the relationship between Qualifying Performance Criteria and the Qualifying
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Performance Goals and the amounts of such Awards, as applicable, to be earned for such Performance Period. Following the completion of each Performance Period, the Administrator shall certify in writing whether the applicable Qualifying Performance Goals have been achieved for such Performance Period. In determining the amount earned under an Award, the Administrator shall have the right to reduce or eliminate (but not to increase) the amount payable at a given level of performance to take into account additional factors that the Administrator may deem relevant to the assessment of individual or corporate performance for the Performance Period.

16. *Adjustments Upon Changes in Capitalization, Dissolution or Corporate Transaction .*

- (a) *Changes in Capitalization .* Subject to any required action by the stockholders of the Company, (i) the number, class or kind of shares which have been authorized for issuance under the Plan but as to which no Awards have yet been granted or which have been returned to the Plan upon cancellation or expiration of an Award, (ii) the maximum numbers of Shares that may be granted under Awards to any Service Provider during any fiscal year as set forth in Section 6(c) and (iii) the number, class or kind of shares as well as the price per Share subject to each outstanding Award, shall be proportionately adjusted for any increase or decrease in the number of issued Shares resulting from a stock split, reverse stock split, stock dividend or other distribution (whether in the form of cash, Shares, other securities, or other property other than a regular cash dividend that does not affect the Share or the value of the Shares), recapitalization, reorganization, merger, consolidation, split-up, spin-off, combination, repurchase, reclassification of the Common Stock, or exchange of Shares or other securities of the Company, or any increase or decrease in the number of issued Shares effected without receipt of consideration by the Company, or other change in the corporate structure of the Company affecting the Shares or their value; *provided, however*, that conversion of any convertible securities of the Company shall not be deemed to have been “effected without receipt of consideration.” Such adjustment shall be made by the Administrator, whose determination in that respect shall be final, binding and conclusive. Except as expressly provided herein, no issuance by the Company of shares of stock of any class, or securities convertible into shares of stock of any class, shall affect, and no adjustment by reason thereof shall be made with respect to, the number or price of Shares.
- (b) *Dissolution or Liquidation .* In the event of the proposed dissolution or liquidation of the Company, the Administrator shall notify each Participant as soon as practicable prior to the effective date of such proposed transaction. The Administrator in its discretion may (but need not) provide for a Participant to have the right to exercise his or her Option or Stock Award until ten (10) days prior to such transaction as to all of the Shares covered thereby, including Shares as to which the Option or Stock Award would not otherwise be exercisable. In addition, the Administrator may (but need not) provide that any Company repurchase option applicable to any unvested Shares purchased upon exercise of an Option or issued under a Stock Award shall lapse as to all such Shares, provided the proposed dissolution or liquidation takes place at the time and in the manner contemplated. To the extent it has not been previously exercised, an Award will terminate immediately prior to the consummation of such proposed action.
- (c) *Corporate Transaction .*
- (i) In the event of a Corporate Transaction, as determined by the Board or the Administrator, the Board or the Administrator may, in its discretion, (i) provide for the assumption or substitution of, or adjustment to, each outstanding Award; (ii) accelerate the vesting of Options and accelerate the vesting and/or terminate any restrictions on Cash Awards or Stock Awards; and/or (iii) provide for termination of Awards as a result of the Corporate Transaction on such terms and conditions as it deems appropriate, including providing for the cancellation of Awards for a cash payment to the Participant. For the purposes of this paragraph, the Award shall be considered assumed if, following the Corporate Transaction, the Award confers the right to purchase or receive, for each Share or amount of cash covered by the Award immediately prior to the Corporate Transaction, the consideration (whether stock, cash, or other securities or property) received in the Corporate Transaction by holders of Common Stock for each Share held on the effective date of the Corporate Transaction (and if holders were offered a choice of consideration, the type of consideration chosen by the holders of a majority of the outstanding Shares); *provided, however*, that if such consideration received in the Corporate Transaction is not solely common stock of the successor corporation or its parent, the Administrator may, with the consent of the successor corporation, provide for the consideration to be received upon the exercise of the Award, for each Share covered by the Award, to be solely common stock of the successor corporation or its parent equal in fair market value to the per share consideration received by holders of Shares in the Corporate Transaction.
- (ii) Notwithstanding the foregoing, as may be determined by the Administrator, any such adjustment shall not (i) cause an Award which is exempt from Section 409A of the Code to become subject to
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Section 409A of the Code or (ii) cause an Award subject to Section 409A of the Code not to comply with the requirements of Section 409A of the Code.

17. *Date of Grant*. The date of grant of an Award shall be, for all purposes, the date on which the Administrator takes all corporation actions necessary to approve the grant of such Award. A Notice of Grant shall be provided to each Participant within a reasonable time after the date of such grant.
 18. *Amendment and Termination of the Plan*. The Board may at any time amend, alter, suspend or terminate the Plan. However, the Company shall obtain stockholder approval of any Plan amendment to the extent necessary and desirable to comply with Applicable Laws. In addition, no amendment, alteration, suspension or termination of the Plan shall impair the rights of any Participant under any grant theretofore made, unless mutually agreed otherwise between the Participant and the Administrator, which agreement must be in writing and signed by the Participant and the Company, provided that amendments to facilitate compliance with Applicable Laws, as determined in the sole discretion of the Administrator as otherwise contemplated in Section 25 may be made without the consent of the Participant. Termination of the Plan shall not affect the Administrator's ability to exercise the powers granted to it hereunder with respect to Awards granted under the Plan prior to the date of such termination.
 19. *Conditions Upon Issuance of Shares*. Awards shall not be granted and Shares shall not be issued pursuant to the exercise, vesting or settlement of an Award unless the grant of the Award, the exercise, vesting or settlement of such Award and the issuance and delivery of such Shares shall comply with Applicable Laws and shall be further subject to the approval of counsel for the Company with respect to such compliance.
 20. *Inability to Obtain Authority*. If the Company is unable or if it is impractical for the Company to obtain authority from any regulatory body having jurisdiction (including under Section 19), which authority is deemed by the Company's counsel to be necessary to the lawful grant of Awards and issuance and sale of any Shares hereunder, the Company shall be relieved of any liability in respect of the failure to grant such Awards or issue or sell such Shares as to which such requisite authority shall not have been obtained.
 21. *Reservation of Shares*. The Company, during the term of this Plan, will at all times reserve and keep available such number of Shares as shall be sufficient to satisfy the requirements of the Plan.
 22. *Stockholder Approval*. If required by Applicable Laws, continuance of the Plan shall be subject to approval by the *stockholders* of the Company within twelve (12) months after the date the Plan is adopted or after any amendment requiring stockholder approval is made. Such stockholder approval shall be obtained in the manner and to the degree required under Applicable Laws.
 23. *Withholding Taxes*. The Company or any Affiliate of the Company, as applicable, shall have the authority and the right to deduct or withhold, or to require a Participant to remit to the Company, an amount sufficient to satisfy the obligation for Withholding Taxes with respect to any taxable or tax withholding event concerning a Participant arising as a result of the Participant's participation in the Plan or to take such other action as may be necessary or appropriate in the opinion of the Company or an Affiliate of the Company, as applicable, to satisfy withholding obligations for the payment of Withholding Taxes by one or a combination of the following: (a) withholding from the Participant's wages or other cash compensation; (b) withholding from the proceeds of sale of Shares underlying an Award, either through a voluntary sale or a mandatory sale arranged by the Company on the Participant's behalf, without need of further authorization; or (iii) in the Administrator's sole discretion, by withholding Shares otherwise issuable under an Award (or allowing the return of Shares) sufficient, as determined by the Administrator in its sole discretion, to satisfy such Withholding Taxes. No Shares shall be delivered pursuant to an Award to any Participant or other person until the Participant or such other person has made arrangements acceptable to the Administrator to satisfy the obligations for Withholding Taxes with respect to any taxable or tax withholding event concerning the Participant or such other person arising as a result of an Award.
 24. *Fractional Shares*. No fractional Shares shall be issued and the Administrator shall determine, in its discretion, whether cash shall be given in lieu of fractional shares or whether such fractional shares shall be eliminated by rounding up or down as appropriate.
 25. *Section 409A*. Except as provided in Section 26 hereof, to the extent that the Administrator determines that any Award granted under the Plan is subject to Section 409A of the Code, the Award Agreement evidencing such Award shall incorporate the terms and conditions required by Section 409A of the Code. To the extent applicable, the Plan and Award Agreements shall be interpreted in accordance with Section 409A of the Code and U.S. Department of Treasury regulations and other interpretive guidance issued thereunder, including without limitation any such regulations or other guidance that may be issued after the date the Plan became effective. Notwithstanding any provision of the Plan to the contrary, in the event that following the date an Award is granted the Award determines that the Award may be subject to Section 409A of the Code and related Department of Treasury guidance (including such Department of Treasury guidance as may be issued after the date the Plan became effective), the Administrator may adopt such amendments to the Plan and the applicable Award Agreement or adopt other policies and procedures (including amendments, policies and procedures with retroactive effect), or take any other actions, including amendments or actions that would result in a reduction to the benefits payable under an Award, in each case, without the consent of the Participant, that the Administrator determines are necessary or appropriate to (a) exempt the Award from Section 409A of the Code and/or preserve the intended tax treatment of the benefits provided with respect to the Award, or (b) comply with the requirements of Section 409A of the Code and related
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Department of Treasury guidance and thereby avoid the application of any penalty taxes under such Section or mitigate any additional tax, interest and/or penalties or other adverse tax consequences that may apply under Section 409A of the Code if compliance is not practical.

26. *No Representations or Covenants with respect to Tax Qualification*. Although the Company may endeavor to (a) qualify an Award for favorable or specific tax treatment under the laws of the United States or jurisdictions outside of the United States (*e.g.* , incentive stock options under Section 422 of the Code or French-qualified stock options) or (b) avoid adverse tax treatment (*e.g.* , under Section 409A of the Code), the Company makes no representation to that effect and expressly disavows any covenant to maintain favorable or avoid unfavorable tax treatment, anything to the contrary in this Plan, including Section 26 hereof, notwithstanding. The Company shall be unconstrained in its corporate activities without regard to the potential negative tax impact on holders of Awards under the Plan. Nothing in this Plan or in an Award Agreement shall provide a basis for any person to take any action against the Company or any affiliate of the Company based on matters covered by Section 409A of the Code, including the tax treatment of any Awards, and neither the Company nor any affiliate will have any liability under any circumstances to the Participant or any other party if the Award that is intended to be exempt from, or compliant with, Section 409A of the Code, is not so exempt or compliant or for any action taken by the Administrator with respect thereto.

27. *Clawback/Recovery*. All Awards granted under the Plan will be subject to recoupment in accordance with any clawback policy that the Company is required to adopt pursuant to the listing standards of any national securities exchange or association on which the Company's securities are listed or as is otherwise required by the Dodd-Frank Wall Street Reform and Consumer Protection Act or other Applicable Laws. In addition, the Administrator may impose such other clawback, recovery or recoupment provisions on an Award as the Administrator determines necessary or appropriate, including, without limitation, a reacquisition right in respect of previously-acquired Shares or other cash or property upon the occurrence of cause (as determined by the Administrator).

ILLUMINA, INC.
2015 STOCK AND INCENTIVE PLAN
RESTRICTED STOCK UNIT AGREEMENT FOR EMPLOYEES

This RESTRICTED STOCK UNIT AGREEMENT (this “ Agreement ”) made as of _____ between Illumina, Inc., a Delaware corporation (the “ Company ”), and _____ (the “ Participant ”), is made pursuant to the terms of the Company’s 2015 Stock and Incentive Plan (the “ Plan ”).

Section 1. Definitions. Capitalized terms used in this Agreement, including Appendices A and B, but not defined shall have the meanings set forth in the Plan.

Section 2. Restricted Stock Unit Award. The Company hereby confirms the grant to the Participant of an award (the “ Award ”) of restricted Stock Units (the “ RSUs ”). The RSUs are notional, non-voting units of measurement based on the Fair Market Value of the Common Stock, which will entitle the Participant to receive a payment, subject to the terms of the Plan and this Agreement (including, if applicable, Appendices A and B) in Common Stock on or as soon as practicable after the applicable Vesting Date (as defined below) but in no event later than thirty (30) days after the applicable Vesting Date.

The number of RSUs subject to this Award and the effective date of such grant are as follows:

Number of RSUs Granted:
Date of Grant:
Grant Number:

Section 3. Vesting Requirements. A percentage of the Award will vest, if not previously forfeited, in the amounts and on the respective dates as set forth below, subject to the Participant’s continued employment with the Company or any of its Subsidiaries through such respective vesting dates (the “ Vesting Dates ”).

<u>Vesting Date</u>	<u>Shares Vesting on Such Date</u>
<u>Vest Period 1</u>	Number of Shares
<u>Vest Period 2</u>	Number of Shares
<u>Vest Period 3</u>	Number of Shares
<u>Vest Period 4</u>	Number of Shares

Section 4. Termination of Employment. In the event of the termination of the Participant’s employment with the Company or any of its Subsidiaries for any reason, any unvested portion of any Award shall be immediately forfeited and automatically cancelled without further action of the Company. No Shares shall be issued or issuable with respect to any portion of the Award that terminates unvested and is forfeited.

Section 5. Payment of RSUs.

(a) General. Payment in respect of the RSUs hereunder shall be made in Common Stock, on or as soon as practicable after the respective Vesting Date, but in no event later than thirty (30) days after the applicable Vesting Date. The number of Shares to be distributed in respect of the RSUs will be determined in accordance with the terms of this Agreement, including, if applicable, Appendices A and B, and the Plan.

(b) Withholding. The Participant hereby authorizes the Company to satisfy the obligations with regard to all income or withholding taxes (including federal, state and local tax) (the “Tax-Related Items”) by withholding otherwise deliverable Shares with respect to RSUs, provided, however, that (i) the Company shall only withhold the amount of Shares necessary to satisfy the minimum withholding amount or such other amount determined by the Company as not resulting in negative accounting consequences for the Company, and (ii) a fraction of one Share may be withheld to satisfy such Tax-Related Items. Subject to the provisions of this Section 5(b), the Participant will be deemed to have been issued the full number of Shares subject to the vested Award, notwithstanding that a number of the Shares are held back solely for the purpose of paying the Tax-Related Items due as a result of any aspect of the Award. If Shares are withheld pursuant to the foregoing provisions of this Section 5(b), then the amount of the Tax-Related Items equal to the value of a fraction of a Share shall be satisfied either by (i) the Participant through a payment to the Company by way of cash, check or other cash equivalent acceptable to the Company equal in value to such fraction of a Share, (ii) express authorization from the Participant to the Company to deduct such amount equal to such value from any amount then or thereafter payable by the Company to the Participant, or (iii) the Company withholding one additional share and the fractional cash amount in excess of the amount due for Tax-Related Items added to the Participant’s federal taxes withheld. Notwithstanding the foregoing, the Compensation Committee of the Board of Directors that administers the Plan and the RSUs may, in its sole discretion and without any further authorization by the Participant, elect to satisfy the obligations with regard to the Tax Related Items by requiring that the Participant pay in whole or in part, by way of cash, check or other cash equivalent acceptable to the Company any amount of the Tax Related Items. If the Participant shall fail to advance any payment under this Section 5 after a request by the Company, the Company is hereby expressly authorized by the Participant to deduct, in the Company’s discretion, any required payment for the Tax Related Items from any amount then or thereafter payable by the Company to the Participant.

Section 6. Restrictions on Transfer. No portion of the Award may be sold, assigned, transferred, encumbered, hypothecated or pledged in any way by the Participant, other than to the Company as a result of forfeiture of the Award as provided herein, unless and until the payment of the RSUs in accordance with Section 5(a) hereof.

Section 7. Limitation of Rights. The Participant shall not have any privileges of a shareholder of the Company with respect to the Common Stock payable hereunder, including without limitation any right to vote such Common Stock or to receive dividends or other distributions in respect thereof, until the date of the issuance to the Participant of a share certificate evidencing such Common Stock.

Section 8. Counterparts. This Agreement may be executed in counterparts, each of which shall be deemed to be an original but all of which together shall constitute one and the same instrument.

Section 9. Binding Effect. This Agreement shall be binding upon and inure to the benefit of the legatees, distributees, and personal representatives of the Participant and the successors of the Company.

Section 10. Entire Agreement. The Plan and this Agreement constitute the entire agreement of the parties with respect to the subject matter hereof and supersede in their entirety all prior undertakings and agreements of the Company and the Participant with respect to the subject matter hereof, and may not be modified adversely to the Participant’s interest except by means of a writing signed by the Company and Participant.

Section 11. Severability. The provisions of this Agreement are severable and if any one or more provisions are determined to be illegal or otherwise unenforceable, in whole or in part, the remaining provisions shall nevertheless be binding and enforceable.

Section 12. Electronic Delivery. The Company has complete discretion to deliver by electronic means any documents related to current or future RSUs that may be granted under the Plan and to request the Participant's consent to participate in the Plan by electronic means. The Participant hereby consents to receive such documents by electronic delivery and, if requested, to agree to participate in the Plan through an on-line or electronic system established and maintained by the Company or a third party designated by the Company.

Section 13. Non-U.S. Employees. Notwithstanding any provisions in this Agreement or the Plan, if the Participant resides in country outside the United States or is otherwise subject to the law of country other than the United States, the RSU grant shall be subject to the additional terms and conditions set forth in Appendix A to this Agreement and to any special terms and conditions set forth in Appendix B to this Agreement for the Participant's country of residence, if any. Moreover, if the Participant relocates to one of the countries included in Appendix B, the special terms and conditions for such country will apply to the Participant, to the extent the Company determines that the application of such terms and conditions is necessary or advisable in order to comply with local law or facilitate the administration of the Plan. The Appendices A and B constitute part of this Agreement.

In addition, the Company reserves the right to impose other requirements on the RSUs and any Shares acquired under the Plan, to the extent the Company determines it is necessary or advisable in order to comply with local law or facilitate the administration of the Plan, and to require the Participant to sign any additional agreements or undertakings that may be necessary to accomplish the foregoing.

By the Participant's acknowledgement and acceptance of this agreement through the Participant's Stock Plan account with the Company's designated broker/stock plan service provider and the signature of the Company's representative below, the Participant and the Company agree that this Award is granted under and governed by the terms and conditions of the Plan and this Agreement, including, if applicable, Appendices A and B. The Participant has reviewed the Plan and this Agreement, including, if applicable, Appendices A and B, in their entirety, has had an opportunity to obtain the advice of counsel prior to executing this Agreement and fully understands all provisions of the Plan and this Agreement. The Participant hereby agrees to accept as binding, conclusive and final all decisions or interpretations of the Compensation Committee of the Board of Directors of the Company upon any questions relating to the Plan and this Agreement, including, if applicable, Appendices A and B. The Participant further agrees to notify the Vice President of Human Resources or his/her designee(s) at 5200 Illumina Way, San Diego, California USA 92122, in writing upon any change in the residence address indicated below.

PARTICIPANT:

Name
Address
City, State
Country

ILLUMINA, INC.

AMENDED AND RESTATED SECOND AMENDMENT TO LEASE

THIS AMENDED AND RESTATED SECOND AMENDMENT TO LEASE AMENDS, RESTATES AND SUPERSEDES IN ITS ENTIRETY THAT CERTAIN SECOND AMENDMENT TO LEASE DATED AUGUST 12, 2014, BY AND BETWEEN TENANT (AS DEFINED BELOW) AND LANDLORD (AS DEFINED BELOW).

THIS AMENDED AND RESTATED SECOND AMENDMENT TO LEASE (this “ **Second Amendment** ”) is made as of March 12, 2015, by and between **ARE-SD REGION NO. 32, LLC** , a Delaware limited liability company (“ **Landlord** ”), and **ILLUMINA, INC.** , a Delaware corporation (“ **Tenant** ”).

RECITALS

A. Landlord and Tenant are now parties to that certain Amended and Restated Lease Agreement dated as of March 27, 2012, as amended by that certain First Amendment to Lease dated as of May 23, 2013 (as amended, the “ **Lease** ”). Pursuant to the Lease, Tenant leases certain premises consisting of approximately 497,078 rentable square feet (“ **Original Premises** ”) located at 5200 Illumina Way, San Diego, California (“ **Project** ”). The Original Premises are more particularly described in the Lease. Capitalized terms used herein without definition shall have the meanings defined for such terms in the Lease.

B. Landlord and Tenant desire, subject to the terms and conditions set forth below, to amend the Lease to, among other things, expand the size of the Original Premises by adding approximately 295,609 rentable square feet of space to be located in a to be constructed building at the Project, as shown as Building 6 on **Exhibit A** .

NOW, THEREFORE, in consideration of the foregoing Recitals, which are incorporated herein by this reference, the mutual promises and conditions contained herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Landlord and Tenant hereby agree as follows:

1. **Building 6** . In addition to the Original Premises, commencing on the Building 6 Commencement Date (as defined below), Landlord leases to Tenant, and Tenant leases from Landlord, that certain to be constructed building to be located at the Project shown on **Exhibit A** attached to this Second Amendment, containing approximately 295,609 rentable square feet of space (the “ **Building 6** ”).
2. **Delivery** . Landlord shall be responsible for Landlord’s Work (as defined in the Building 6 Work Letter attached to this Second Amendment as **Exhibit B**).

Landlord shall deliver Building 6 to Tenant for the commencement of the construction of the Building 6 Tenant Improvements (as defined in the Building 6 Work Letter) on the Building Shell Delivery Date (“ **Delivery** ” or “ **Deliver** ”) which Landlord shall use reasonable efforts to cause to occur on or before December 18, 2015 (“ **Target Building 6 Delivery Date** ”). The “ **Building Shell Delivery Date** ” shall be the date that (a) Tenant is notified accurately by Landlord or the general contractor for Building 6 that construction of the Building Shell (as defined in the Building 6 Work Letter) is at a point where Building 6 has a substantially waterproof roof in place (but such roof shall not be watertight at that time), and (b) Landlord and Tenant reasonably determine that Building 6 is in a condition reasonably acceptable for the commencement and continuing construction of the Building 6 Tenant Improvements, subject to reasonable coordination between Landlord and Tenant taking into account Landlord’s continued construction of the Building Shell during Tenant’s construction of the Tenant Improvements. If Landlord fails to timely Deliver Building 6, Landlord shall not be liable to Tenant for any loss or damage resulting therefrom except as expressly provided for below, and the Lease, as amended herein, shall not be void or voidable. If Landlord does not Deliver Building 6 within 120 days of the Target Building 6 Delivery Date (“ **Abatement Trigger Date** ”) for any reason other than Force Majeure and Tenant Delays (as defined below), then Tenant shall receive (i) a 1 day abatement of Base Rent otherwise payable by Tenant for Building 6 for every 1 full day after the Abatement Trigger Date that the Building Shell Delivery Date does not occur through the date that is 60 days after the Abatement Trigger Date, and (ii) a 2 day abatement of Base Rent otherwise payable by Tenant for Building 6 for every 1 full day after the date that is 60 days after the Abatement Trigger Date that the Building Shell Delivery Date does not occur. As used herein, the term “ **Tenant Delay** ” shall mean: (i) any delay caused by Tenant in connection with the design, permitting or construction of the Building Shell that actually causes a delay of the Building Shell Delivery Date beyond the date that Delivery would have otherwise occurred but for such delay; (ii) any interference by Tenant with Landlord’s construction of the Building Shell including, without limitation, in each case, (A) delays arising from changes requested by Tenant to the specifications for the Building Shell set forth in Schedule 1 to the Building 6 Work Letter (“ **Base Shell Changes** ”), (B) Tenant’s failure to provide Landlord with any information required from

Tenant for the normal progression of Landlord's design, permitting and construction of the Building Shell in accordance with the detailed schedule of key milestones attached to this Second Amendment as **Exhibit F** and so as not to delay Landlord's substantial completion of Building 6, and/or (C) Tenant's failure to reasonably coordinate Tenant's construction of the Building 6 Tenant Improvements with Landlord. Notwithstanding anything to the contrary contained herein, Tenant shall be solely responsible for all costs incurred by Landlord in connection with any Base Shell Changes; provided, however, nothing contained herein shall obligate Landlord to agree to make any such requested changes.

Landlord hereby agrees to permit Tenant early access, at Tenant's sole risk and expense, to Building 6 33 days prior to the Building Shell Delivery Date (" **Early Access Date** ") to commence performing the Building 6 Tenant Improvements, provided that (i) Tenant's access and work is coordinated with Landlord's architect and general contractor and complies with the Lease and all other reasonable restrictions and conditions Landlord may impose, and (ii) all such access and work by Tenant shall be during normal business hours or otherwise at such other times as are reasonably designated by Landlord. Notwithstanding the foregoing, any such entry and work by Tenant and any Tenant Party shall comply with all established safety practices of Landlord's contractor, and Tenant and any Tenant Party shall not unreasonably interfere with the performance of Landlord's Work. Landlord shall have the right to exclude Tenant and any Tenant Party from Building 6 if such interference is not resolved by Tenant in a manner reasonably acceptable to Landlord within 1 day after Landlord's written notice to Tenant. Landlord agrees to use reasonable efforts to cooperate with Tenant in Tenant's performance of Tenant's Work; provided, however, that in no event shall Landlord have any obligation to incur any additional or overtime costs in connection with such cooperation with Tenant.

The " **Building 6 Commencement Date** " shall be the date of Delivery. The " **Building 6 Rent Commencement Date** " shall be October 15, 2016, regardless of whether or not Tenant has completed the Building 6 Tenant Improvements; provided, however, that such date shall be deemed extended by one (1) day for each day of delay in achieving Substantial Completion of the Building 6 Tenant Improvements due to (i) Force Majeure delays, or (ii) delays caused by Landlord's breach of its obligations under this Second Amendment which actually cause a delay of Tenant's Work, provided that no such delay shall be deemed to have commenced unless Tenant has provided Landlord with written notice of such delay. Such October 15, 2016 date shall also be deemed extended one (1) day for each day beyond the Target Building 6 Delivery Date that Landlord fails, for any reason other than Tenant Delays, to deliver the Building Shell to Tenant in the condition required pursuant to the second sentence of the second paragraph of this Section 2. Upon the request of Landlord, Tenant shall execute and deliver a factually correct written acknowledgment of the Early Access Date, the Building Shell Delivery Date, the Building 6 Commencement Date and the Building 6 Rent Commencement Date in substantially the form of the "Acknowledgement of Commencement Date" attached to the Lease as **Exhibit D** ; provided, however, Tenant's failure to execute and deliver such acknowledgment shall not affect Landlord's or Tenant's rights hereunder.

Tenant acknowledges that Landlord shall require access to Building 6 following the Building Shell Delivery Date in order to complete the construction of the Building Shell. Landlord and its contractors and agents shall have the right to enter Building 6 following the Building Shell Delivery Date to complete the Building Shell. Tenant agrees to coordinate such entry with Landlord but Tenant acknowledges that Landlord's completion of the Building Shell may adversely affect Tenant's construction of the Building 6 Tenant Improvements (as defined in the Building 6 Work Letter). Landlord shall reasonably cooperate with Tenant in order to minimize such adverse effects.

Except as set forth in the Building 6 Work Letter: (i) Tenant shall accept Building 6 in its condition as of the Building Shell Delivery Date; (ii) except as otherwise provided in the Building 6 Work Letter, Landlord shall have no obligation for any defects in Building 6. Any occupancy of Building 6 by Tenant before the Building 6 Commencement Date shall be subject to all of the terms and conditions of the Lease, excluding the obligation to pay Base Rent.

Tenant agrees and acknowledges that neither Landlord nor any agent of Landlord has made any representation or warranty with respect to the suitability of Building 6 for the conduct of Tenant's business, and Tenant waives any implied warranty that Building 6 is suitable for the Permitted Use.

3. **Definition of Premises** . Commencing on the Building 6 Commencement Date, the defined term " **Premises** " on page 1 of the Lease shall be deleted in its entirety and replaced with the following:
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“ **Premises:** That certain portion of the Project consisting of (i) a building containing approximately 171,340 rentable square feet (“ **Building 1** ”), (ii) a building containing approximately 159,272 rentable square feet (“ **Building 2** ”), (iii) a central plant building containing approximately 15,969 rentable square feet (referred to herein as the “ **Central Plant Building** ” or “ **Building 3** ”), (iv) that certain office/laboratory building containing approximately 127,373 rentable square feet (“ **Building 4** ”), (v) that certain tenant activity center building containing approximately 23,124 rentable square feet (referred to herein as the “ **Activity Center** ” or “ **Building 5** ”), and (vi) that certain building containing approximately 295,609 rentable square feet (“ **Building 6** ”). Building 1, Building 2, Building 3, Building 4, Building 5, Building 6 and the Central Plant are all as shown on **Exhibit A** . Building 1, Building 2, Building 3, Building 4, Building 5 and Building 6 are collectively referred to herein as the “ **Buildings** ”.”

As of the Building 6 Commencement Date, **Exhibit A** to the Lease shall be amended to include Building 6 as shown on **Exhibit A** attached to this Second Amendment.

4. **Rentable Area of Premises and Project** . Commencing on the Building 6 Commencement Date, the defined terms “ **Rentable Area of Premises** ” and “ **Rentable Area of Project** ” on page 1 of the Lease shall be deleted in their entirety and replaced with the following:
“ **Rentable Area of Premises:** 792,687 rentable square feet”

“ **Rentable Area of Project:** 792,687 rentable square feet”

5. **Base Rent** .

a. **Original Premises** . Tenant shall continue to pay Base Rent for the Original Premises as provided for in the Lease through the expiration date of the Lease.

b. **Building 6** . Commencing on the Building 6 Rent Commencement Date, Tenant shall pay Base Rent for Building 6 in the amount of \$1.38 per rentable square foot of Building 6 per month. Base Rent payable for Building 6 shall be increased on every other anniversary of the Building 6 Rent Commencement Date (each a “ **Building 6 Adjustment Date** ”) by multiplying the Base Rent payable with respect Building 6 immediately before such Building 6 Adjustment Date by the Bi-Annual Rent Adjustment Percentage and adding the resulting amount to the Base Rent payable with respect to Building 6 immediately before such Building 6 Adjustment Date.

6. **Tenant's Share of Operating Expenses** . Tenant shall be required to pay all Operating Expenses with respect to Building 6 and Tenant's Share of Operating Expenses shall continue to be 100%. Attached hereto as **Exhibit G** is an estimate of the Operating Expenses for Building 6. Tenant acknowledges and agrees that Building 6 has not been constructed and has no operating history and, as such, **Exhibit G** is merely an estimate and Tenant waives any claims that Tenant may have against Landlord (and Landlord shall have no liability) for such estimate not being correct, including, without limitation, as a result of any incorrect assumptions, errors, inaccuracies and/or omissions. For the avoidance of any doubt, nothing contained in this Second Amendment is intending to limit or reduce the Operating Expenses which Tenant is required to pay for the Project (including, without limitation, Building 6) prior to the Building 6 Commencement Date.

7. **Re-Measurement** .

a. **Original Premises** . Landlord and Tenant agree that the rentable square footage of the Original Premises set forth in the Lease (and this Second Amendment) is conclusively deemed to be the rentable square footage of the Original Premises and, notwithstanding anything to the contrary contained in the Lease, the rentable square footage of the Original Premises shall not be subject to re-measurement.

b. **Building 6** . Landlord and Tenant agree that the rentable square footage of Building 6 is conclusively deemed to be 295,609 rentable square feet and, notwithstanding anything to the contrary contained in the Lease or this Second Amendment, the rentable square footage of Building 6 shall not be subject to re-measurement.

8. **Parking** .

a. Section 10 of the Lease is hereby deleted in its entirety and replaced with the following:

“10. **Parking** . Subject to all matters of record, Force Majeure, a Taking (as defined in Section 19 below), the PID Permit and the exercise by Landlord of its rights hereunder, Tenant shall have the right to use all of the parking spaces at the Project for the first 36 months after the Initial Commencement Date. Tenant's right to use all of the parking spaces at the Project shall be extended for so long as all of Tenant's Expansion Rights (as defined in Section 39) continue in full force and effect. All of Tenant's parking rights under this Lease shall, during the Base Term, be at no additional cost to Tenant, except as provided for herein. Notwithstanding anything to the contrary contained herein, Landlord and Tenant acknowledge and agree that all parking at the Project (including, without limitation, the number of parking spaces available in the Parking

Structure(s) (as defined below) and in the balance of the Project) shall be required at all times to satisfy all Legal Requirements for the Project.

Notwithstanding anything to the contrary contained in this Lease, Tenant may only elect to exercise any of its Extension Rights under Section 40 with respect to less than all of the Buildings, if, as of the commencement date of the applicable Extension Term, (i) there are at least 3 parking spaces per 1,000 rentable square feet available for each Building with respect to which Tenant does not extend the Term of the Lease and those parking spaces are in close proximity to the applicable Building, and (ii) there are sufficient parking spaces available for each Building with respect to which Tenant has elected to extend the Term of the Lease to comply with applicable Legal Requirements (but in no event no less than 2.5 parking spaces per 1,000 rentable square feet). Tenant agrees to indemnify, defend, save and hold Landlord harmless from and against any and all Claims (including, without limitation, from any Governmental Authority) at any time(s) (including, without limitation, during the construction of any Building(s) and/or Parking Structure(s)) in connection with there not being sufficient parking spaces at the Project as may be required by applicable Legal Requirements.

If Tenant's Expansion Rights expire and/or Landlord commences constructing any new buildings at the Project (" **New Construction** "), Tenant shall, subject to the provisions of this Section 10, have the right, in common with other tenants of the Project pro rata in accordance with the rentable area of the Premises and the rentable areas of the Project occupied by such other tenants, to park in those areas designated for non-reserved parking, subject in each case to Landlord's commercially reasonable rules and regulations; provided, however, that Landlord may reduce the allocation to Tenant to less than Tenant's pro rata share if Tenant's pro rata share would result in any Building(s) at the Project not being leased in their entirety by Tenant having less than 3 parking space per 1,000 rentable square feet. Landlord may allocate parking spaces among Tenant and other tenants in the Project as described above if Landlord determines that parking facilities are becoming crowded. If Landlord commences New Construction, Tenant may elect to mark as reserved or separate and secure its parking from the balance of the Project, in which case, Landlord shall reasonably cooperate with Tenant to effectuate, if possible and at Tenant's sole cost and expense, such a separation of Tenant's parking in a manner reasonably acceptable to Landlord and Tenant. Landlord shall not be responsible for enforcing Tenant's parking rights against any third parties, including other tenants of the Project."

b. Notwithstanding anything to the contrary contained in Section 10 of the Lease, the number of parking spaces allocated to Tenant for Building 6 (and/or any other Expansion Buildings) shall be reduced by the number of parking spaces which Landlord reasonably determines cannot be constructed or used as a result of any generator(s), not to exceed 2 generators, and/or any HVAC pad(s)/enclosure(s) constructed in connection with the Tenant's use of Building 6 (and/or any other Expansion Buildings). Tenant acknowledges and agrees that the location and screening (and related landscaping with respect to) any such generator(s) and/or HVAC pad(s)/enclosure(s) shall be subject to Landlord's prior written approval (not to be unreasonably withheld, conditioned or delayed) and Tenant shall be responsible for bearing all costs in connection foregoing; provided, however, that Tenant may use the Building 6 TI Allowance to pay for the same in connection with Building 6.

c. All costs and expenses related to any off-site parking, shuttles and/or any other measures required to satisfy parking requirements at the Project (including, without limitation all Legal Requirements with respect to the number of required parking spaces) during the construction of Building 6 or any other improvements at the Project shall be borne by Tenant and shall be the sole responsibility of Tenant.

Upon completion of the P1 Parking Structure, Tenant shall have the exclusive right to use the entire P1 Parking Structure during any period when Tenant is leasing both Building 4 and Building 6 in their entirety. Tenant shall, at any and all times during the Base Term and, if applicable, any Extension Term(s) where Tenant is leasing both Building 4 and Building 6 in their entirety, be responsible for all of the Operating Expenses and any other costs actually incurred by Landlord or Tenant in connection with the P1 Parking Structure (including, without limitation, any all Taxes). If, at any time during the Base Term and, if applicable, any Extension Term(s), Tenant only leases one of such Buildings or only a portion of either such Building, Tenant shall (i) only be entitled to such applicable Building's pro rata share of the spaces in the P1 Parking Structure (with pro rata share being calculated based on rentable square footage of both Buildings), and Landlord may designate which other Building(s) or tenants may utilize the balance of the P1 Parking Structure, and (ii) only be responsible for the applicable Building's pro rata share of the Operating Expenses in connection with the P1 Parking Structure.

9. **Permitted Use.** In addition to the Permitted Use (as provided for on the first page of the Lease), Tenant shall be entitled to use Building 6 for manufacturing purposes in compliance with applicable Legal Requirements.

Notwithstanding anything to the contrary contained in the Lease or that certain letter agreement between Landlord and Tenant dated May 10, 2013 (“**Letter Agreement**”), Tenant shall be entitled to use Building 5 and the amphitheater adjacent to Building 5, subject to the terms and conditions of the Lease and the Letter Agreement, for lectures, concerts, plays, fundraising activities and/or similar events conducted by or for certain businesses, non-profit entities and/or individuals, whether or not they are engaged in the health and life sciences industry.

10. **Alterations**. Section 12 of the Lease is hereby amended as follows:

a. The language in clause (vi) in the second sentence of the first paragraph of Section 12 which reads as follows “(vi) do not involve a use of the Premises that is inconsistent with the current use of the Premises, without Landlord’s prior approval if the cost of any such Alteration (excluding carpeting and painting) does not exceed \$100,000 and the aggregate cost of all such Alterations (excluding carpeting and painting) in any 12 month period does not exceed \$300,000” is hereby deleted in its entirety and replaced with the following:

“(vi) do not involve a use of the Premises that is inconsistent with the current use of the Premises, without Landlord’s prior approval, and if the cost of any such Alteration (excluding carpeting and painting) does not exceed \$400,000 per occurrence and the aggregate cost of all such Alterations (excluding carpeting and painting) in any 12 month period does not exceed \$2,000,000.”

b. Notwithstanding anything to the contrary contained in the third to last sentence of the second paragraph of Section 12 of the Lease, in no event shall Tenant be required to pay to Landlord any plan review, coordination, scheduling or supervision fee in connection with any Notice-Only Alterations.

11. **Extension Right**. For the avoidance of doubt, the Extension Rights granted to Tenant pursuant to Section 40(a) of the Lease shall apply to Building 6. Notwithstanding anything to the contrary contained in Section 40(a), if Tenant elects to exercise any Extension Right(s) for Building 6 pursuant to Section 40(a), upon the commencement of the applicable Extension Term, Base Rent for Building 6 shall be payable at the Building 6 Market Rate (as defined below). Base Rent for Building 6 shall thereafter be adjusted on each anniversary of the commencement date of such Extension Term by a percentage as determined by Landlord and agreed to by Tenant at the time the Building 6 Market Rate is determined (or as part of the determination of Building 6 Market Rate as provided in Section 40(b) if the parties are unable to agree on the Building 6 Market Rate). As used herein, “**Building 6 Market Rate**” shall mean the rate that comparable landlords of comparable buildings have accepted in current transactions from non-equity (i.e., not being offered equity in the buildings), nonrenewal, non-expansion and nonaffiliated tenants of similar financial strength for space of comparable size, quality (based on the Building Shell and the depreciated amount of the Building 6 Tenant Improvements paid for with the Building 6 TI Allowance (assuming a 38-year amortization schedule) and the land value for Building 6 agreed upon by the parties (for the avoidance of doubt, the “land value” for Building 6 shall mean that portion of the Project allocated to or required for Building 6 along with the parking required pursuant to applicable Legal Requirements in connection with Building 6 (which may include the land upon which the P1 Parking Structure is located) and not any excess land), parking spaces allocated to Building 6 and floor height in first class office/research and development buildings (with a manufacturing component, if applicable), as applicable, in the University Towne Center area of San Diego for a comparable term, with the determination of the Building 6 Market Rate to take into account all relevant factors, including tenant inducements, leasing commissions, allowances or concessions, if any. If the allowances, free rent and/or other economic concessions granted with respect to Building 6 pursuant to this Section 11 differ from those granted in the comparable transactions, an adjustment to the applicable Building 6 Market Rate shall be made on a basis consistent with the adjustments commonly made in the market for comparable differences in concession packages. For the avoidance of doubt, in no event shall the Building 6 Market Rate include the cost of any tenant improvements or other alterations to Building 6 paid for solely by Tenant.

12. **Early Termination Right**. For the avoidance of doubt, if Tenant elects to exercise its Termination Right pursuant to Section 42 of the Lease, the lease with respect to Building 6 shall also terminate on the Termination Date and the Early Termination Payment payable by Tenant shall also include (i) an amount equal to 6 months of Rent with respect to Building 6 at the amount payable with respect to Building 6 by Tenant as of the date that Tenant delivers the Termination Notice to Landlord, and (ii) an amount equal to, as calculated by Landlord and provided to Tenant within 10 business days after Tenant delivers a written request therefor to Landlord, (1) the unamortized Building 6 TI Allowance, and (2) all of the unamortized third party leasing commissions paid by Landlord in connection with Tenant’s lease of Building 6, which amounts in this clause 12(ii) shall be subject to verification by Tenant.

13. **Right to Expand**. Section 39 of the Lease is hereby deleted in its entirety and replaced with the following:

“39. **Right to Expand** .

(a) **Expansion in the Project** . Subject to the provisions of this Section 39, Tenant shall have the right, but not the obligation, on or before December 31, 2022 (“ **Expansion Right Expiration Date** ”) to expand the Premises (the “ **Expansion Rights** ”) to include up to 3 to be constructed buildings (and any related subterranean and other parking) at the Project as shown on the Master Site Plan (as defined below) (“ **Building 7** ”, “ **Building 8** ” and “ **Building 9** ”, as and if applicable), all upon the terms and conditions in this Section 39; provided, however, that all of the Expansion Requirements (as defined below) are met each time Tenant exercises an Expansion Right. Building 7, Building 8 and Building 9 shall each be individually referred to herein as an “ **Expansion Building** ” and collectively as the “ **Expansion Buildings** ”. Landlord shall endeavor to cause the Expansion Building(s) to be constructed in the locations shown on the Master Site Plan, and **Exhibit H** to the Lease shall no longer apply.

Landlord is processing a Community Plan Amendment (“ **CPA** ”) and PID Permit Amendment with the City of San Diego (“City”) to increase the development intensity for the Project site (as measured by gross floor area or authorized “average daily vehicle trips” (“ **ADT** ”)) necessary to allow for the development of the Expansion Buildings (collectively, “ **Additional Entitlements** ”). Landlord shall have no obligation to continue to attempt to process the Additional Entitlements after August 15, 2016, nor shall Landlord be required to incur costs and expenses in excess of \$1,265,000 in connection with processing the Additional Entitlements. Following the earlier to occur of the City’s approval of the Additional Entitlements (and all applicable periods for filing a legal challenge to the Additional Entitlements have expired) and August 15, 2016, Landlord shall cause a site plan to be developed in accordance with Landlord’s requirements but after consultation with Tenant (“ **Master Site Plan** ”), which shall be reflective of the Additional Entitlements approved by the City together with any existing remaining entitlements at the Project. The Master Site Plan shall include, without limitation, the size, rentable square footage and location of the Expansion Building(s) and related parking. Notwithstanding the foregoing, Landlord and Tenant shall mutually agree prior to completion of the Master Site Plan and specify on the Master Site Plan the order in which Tenant may exercise its Expansion Rights with respect to the Expansion Building(s) by identifying the Expansion Buildings as Building 7, Building 8 and Building 9, as applicable, and Tenant shall not have the right to elect to exercise an Expansion Right for a later numbered Expansion Building if Tenant has not previously or concurrently therewith exercised an Expansion Right with respect to the immediately preceding Expansion Building number. Landlord and Tenant acknowledge and agree that, notwithstanding the foregoing, the Master Site Plan may provide for one or two Expansion Buildings utilizing all of the Buildable Entitlements (as defined below) rather than three Expansion Buildings contemplated above; provided, however, in no event shall any Expansion Building on the Master Site Plan contain less than 100,000 rentable square feet of laboratory and/or office space. Landlord and Tenant acknowledge and agree that the Master Site Plan may be subject to changes requested or required by the City of San Diego. Notwithstanding anything to the contrary contained in this Lease, Tenant acknowledges that Additional Entitlements have not been approved by the City and, in the event the City does not approve the Additional Entitlements on terms and conditions acceptable to Landlord in its sole and absolute (but good faith) discretion, Landlord shall have the right at any time, in Landlord’s sole and absolute (but good faith) discretion but after consultation with Tenant, to amend the Expansion Rights (including the number of Expansion Buildings) to which Tenant is entitled under this Lease in a manner reasonably acceptable to Landlord and reflective of the actual entitlements and development intensity approved by the City. Landlord agrees that, while Tenant’s Expansion Rights remain in effect, Landlord shall not transfer any development intensity associated with the Additional Entitlements approved by the City to any other sites or projects. Landlord is seeking Additional Entitlements that will yield up to 459,245 additional rentable square feet. Notwithstanding anything to the contrary contained herein, if Tenant’s Expansion Rights are no longer in effect (e.g. because Tenant does not pay Land Rent other than as a result of Tenant having made the One Time Land Rent Payment (as defined below) to Landlord), Landlord may at any time(s) freely transfer any development intensity associated with the Additional Entitlements to and other sites or projects. Notwithstanding the foregoing, Landlord may freely transfer any development intensity associated with the Additional Entitlements in excess of those required to develop 459,245 rentable square feet of Expansion Building(s) to any other sites or projects. Upon Tenant’s written request from time to time during the Term, Landlord shall provide to Tenant updated information regarding the status of the Additional Entitlements, including, but not limited to, material correspondence between Landlord and any governmental authority regarding such entitlements.

Landlord shall, on or before May 8, 2015, provide Tenant with an accounting of any costs and expenses incurred by Landlord in connection with processing the Additional Entitlements and a budget for estimated future costs and expenses. Thereafter, Landlord shall within a reasonable period, after written request from

Tenant each month, provide Tenant with an accounting of the costs and expenses incurred by Landlord in the preceding month in connection with processing the Additional Entitlements.

Notwithstanding anything to the contrary contained in the Lease, Tenant shall have the right to notify Landlord in writing ("Waiver Notice") at any time prior to August 16, 2016, that Tenant has no interest in Landlord processing the Additional Entitlement for Tenant's benefit, in which case (i) Tenant shall be required to promptly reimburse Landlord for all of the third party costs and expenses incurred by Landlord in connection with Landlord processing the Additional Entitlements up to the date that is 30 days after Landlord's receipt of Tenant's Waiver Notice up to \$1,265,000 (unless Tenant previously approved in writing costs and expenses in excess of such amount, in which case Tenant shall be required to also reimburse Landlord for such excess costs and expenses approved by Tenant), (ii) Tenant shall not be responsible for paying any additional costs thereafter incurred by Landlord in connection with processing the Additional Entitlements, (iii) Landlord may, at Landlord's sole cost and expense and in its sole and absolute discretion, elect to continue to process the Additional Entitlements, (iv) Landlord shall have the right at any time(s) to (x) freely transfer any development intensity associated with any existing and/or Additional Entitlements to any other sites or projects and/or (y) if Tenant does not pay Land Rent as and when required, Landlord shall be free to construct additional building(s) at the Project and lease all or any portion of such new building(s) to any third party(ies) (except as provided in Section 44(r)) upon any terms and conditions acceptable to Landlord, and (v) Tenant's remaining Expansion Rights under this Section 39 shall terminate.

As used in this Lease, "**Expansion Requirements**" shall mean that all of the following requirements are satisfied: (i) Tenant is not in material Default under any provision of the Lease; (ii) Tenant has a credit rating of "BBB-" or better from Standard & Poor's Corporation, or "Baa3" or better from Moody's Investors Service, Inc. (or in each case any successor thereof), or, in the event that Tenant does not have a credit rating at that time, Tenant has a net worth (as determined in accordance with GAAP) that is not less than the Minimum Net Worth Amount; and (iii) Illumina, Inc., a Delaware corporation, or any entity leasing or subleasing the Premises pursuant to a Permitted Assignment, is the tenant occupying and operating out of at least 70% of the Premises under this Lease.

Subject to the terms and conditions of this Section 39, if Tenant elects to exercise an Expansion Right with respect to any Expansion Building(s), Tenant shall, on or before the Expansion Right Expiration Date, deliver written notice to Landlord of its election to exercise such Expansion Right (each, an "**Expansion Notice**"), which Expansion Notice shall identify the Expansion Building(s) with respect to which Tenant is exercising its Expansion Right (each an "**Identified Expansion Building**") along with a deposit in the amount of \$100,000 multiplied by the number of Identified Expansion Buildings identified in the Expansion Notice for use by Landlord for the initial costs actually incurred by Landlord in connection with the initial design and pricing (collectively, "**Initial Costs**") for each Identified Expansion Building ("**Expansion Deposit**"). Landlord agrees to contribute up to \$100,000 for the Initial Costs associated with each Identified Expansion Building following the exhaustion of Tenant's applicable Expansion Deposit for such Identified Expansion Building (evidence of which exhaustion/contribution shall be provided to Tenant upon Tenant's written request from time to time in the form of a detailed line item statement).

Notwithstanding anything to the contrary contained herein, Tenant acknowledges and agrees that (i) Landlord shall have no obligation to commence the design and/or construction of any Expansion Building prior to Tenant delivering an Expansion Notice and an Expansion Deposit with respect to such Expansion Building to Landlord, (ii) in no event shall Tenant have the right to exercise an Expansion Right with respect to any later numbered Expansion Building if Tenant has not previously or concurrently therewith exercised an Expansion Right with respect to the Expansion Building number immediate preceding it (e.g. Tenant cannot elect to exercise an Expansion Right for Building 8 if Tenant has not exercised an Expansion Right for Building 7) and Landlord shall have the right, in Landlord's sole and absolute discretion, to elect not to construct any later numbered Expansion Building(s) for Tenant if Tenant elects as provided for in this Lease to rescind its Expansion Notice with respect to an earlier numbered Expansion Building (e.g., Landlord can elect not to construct Building 8 if Tenant rescinds its Expansion Notice for Building 7), (iii) in no event shall Tenant have the right under any circumstances to exercise an Expansion Right with respect to less than all of the rentable square footage of an Expansion Building, (iv) the site plan including, without limitation, the number of floors, rentable square footages, configuration and locations of the Expansion Buildings within the Project are not guaranteed and are subject to change by Landlord in the exercise of Landlord's reasonable discretion; provided, however, that so long as all of Tenant's Expansion Rights remain in full force and effect under this Section 39, any such changes made by Landlord shall not materially and adversely impact: (A) the use of the Expansion Buildings

for the Permitted Use, (B) Tenant's ability to access the Premises, (C) Tenant's parking rights under Section 10, or (D) the total square footage available to Tenant for expansion of the Premises pursuant to this Section 39(a), and (v) Landlord's obligation to develop each Expansion Building on receipt of the applicable Expansion Notice is expressly conditioned upon and subject to, and with Landlord having no liability for the failure of any of such conditions (except as otherwise expressly provided herein), Landlord's ability to obtain, on terms and conditions reasonably acceptable to Landlord, all governmental approvals necessary to permit the design and construction of the applicable Expansion Building, the reasonable availability of materials and labor and all other conditions outside of Landlord's reasonable control. If Tenant exercises its Expansion Rights hereunder with respect to any Expansion Building and does not exercise any of its rescission rights under Section 39(c) with respect thereto, Landlord agrees to use reasonable and diligent efforts to pursue and obtain as contemplated under this Lease and the applicable work letter the necessary governmental approvals to permit the design and construction of such Expansion Building.

(b) **Land Rent** . Commencing on the Building 6 Rent Commencement Date and continuing thereafter on the first day of each month during the Base Term and each Extension Term, Tenant shall be required to pay rent to Landlord ("**Land Rent**") in an amount which results in Landlord receiving in equal monthly installments a 7.5% per annum return on the then Building Entitlement Value. Notwithstanding the foregoing, Land Rent shall be abated until December 31, 2018, and Tenant shall not be required to commence paying Land Rent until January 1, 2019. The Building Entitlement Value shall be increased on each Building 6 Adjustment Date by multiplying the Building Entitlement Value immediately before such Building 6 Adjustment Date by the Bi-Annual Rent Adjustment Percentage and adding the resulting amount to the Building Entitlement Value immediately before such Building 6 Adjustment Date.

As used herein, (i) "**Building Entitlement Value**" shall mean (x) \$8,009,437 (which is the amount Landlord and Tenant have agreed to use as the value of any remaining Buildable Entitlements as of January 26, 2015 (with both parties recognizing that there is no guaranty as to the actual number of Buildable Entitlements which will remain)) after taking into account the estimated number of Buildable Entitlements being utilized for the construction of Building 6 plus (y) an amount equal to all of the actual third party costs and expenses incurred by Landlord in connection with Landlord processing the Additional Entitlements with the City, with such costs and expenses not to exceed \$1,265,000 without Tenant's prior written approval, and (ii) "**Buildable Entitlements**" shall mean the amount of rentable square footage that can be developed on the site based on the development intensity authorized by the Additional Entitlements.

Each time Tenant elects to exercise an Expansion Right for an Expansion Building, the Building Entitlement Value shall, for purposes of calculating Land Rent, be reduced on the Expansion Building Rent Commencement Date for such Expansion Building by the value on a per rentable square foot basis of the Buildable Entitlements (the "**Per Square Foot Value**") being utilized for such Expansion Building. The Per Square Foot Value shall be determined by dividing the Building Entitlement Value by the actual number of Buildable Entitlements which have been irrevocably granted to the Project, and except for the bi-annual increases provided for in the first paragraph of this Section 39(b) the same shall not be subject to change after August 15, 2016. The value of the Buildable Entitlements being utilized for the applicable Expansion Building shall be calculated by multiplying the Per Square Value of the Building Entitlements by the amount of rentable square feet being utilized for such Expansion Building. Notwithstanding anything to the contrary contained herein, the Building Entitlement Value shall not be subject to adjustment except as provided for in first sentence of this paragraph and/or if Tenant pays to Landlord the One Time Land Rent Payment.

The Land Rent exhibit which is attached as **Exhibit H** to the Second Amendment is intended to illustrate how Landlord and Tenant arrived at the determination of current Building Entitlement Value of \$8,009,437 and with both parties agreeing that such amount shall not be adjusted even if the remaining Buildable Entitlements after taking into account the Buildable Entitlements being utilized for the construction of Building 6 is substantially more or less than 143,920 rentable square feet. Tenant acknowledges and agrees that there is no assurance that, even after Landlord has incurred costs and expenses (up to potentially \$1,265,000) to attempt to obtain the Additional Entitlements (and which result in an increase in the Building Entitlement Value) that Landlord will receive any of the Additional Entitlements reflected on **Exhibit H** to the Amended and Restated Second Amendment as Anticipated Additional FAR and, as such, the \$20.19 Per Square Foot Value of the Building Entitlements reflected on the last line of such exhibit may never be achieved.

Notwithstanding the foregoing, if Tenant so elects, Tenant shall have the right, at any time after August 15, 2016 but upon not less than 30 days advance written notice to Landlord, to pay to Landlord the then full Building Entitlement Value in a single cash payment (the "**One Time Land Rent Payment**") in which case

Tenant shall not be required to continuing paying Land Rent but Tenant shall not forfeit those rights under this Section 39 which Tenant would otherwise forfeit if Tenant ceased paying Land Rent.

Notwithstanding anything to the contrary contained herein, if (other than a result of Tenant having paid the One Time Land Rent Payment to Landlord) Tenant does not pay (or ceases to pay) Land Rent when required under this Lease, (i) Tenant shall be required to promptly reimburse Landlord for all of the third party costs and expenses incurred by Landlord in connection with Landlord processing the Additional Entitlements up to \$1,265,000 (unless Tenant approved in writing costs and expenses in excess of such amount in which case Tenant shall be required to also reimburse Landlord for such excess costs and expenses approved by Tenant), (ii) Tenant's remaining Expansion Rights shall terminate and Tenant shall have no further rights under this Section 39, and (iii) Landlord shall have the right at any time(s) to freely transfer any development intensity associated with the Additional Entitlements to any other sites or projects and/or develop any new building(s) at the Project and lease all or any portion of such new building(s) to any third party(ies) (except as provided in Section 44(r)) upon any terms and conditions acceptable to Landlord. If Tenant fails to pay (or ceases to pay) Land Rent, Tenant shall not have the right to thereafter elect to resume paying Land Rent.

In addition, if Tenant elects to exercise an Extension Right for less than the entire Premises, Landlord shall have the right at any time(s) to develop any new building(s) at the Project and lease all or any portion of such new building(s) to any third party(ies) (except as provided in Section 44(r)) upon any terms and conditions acceptable to Landlord.

(c) **Rescission Rights .**

(i) **Initial Rescission Right .** Following receipt of each Expansion Notice, Landlord shall deliver to Tenant a detailed written line item estimate on the part of Landlord of the Project Costs (as defined below) for the Identified Expansion Building ("**Initial Project Cost Estimate**") along with a corresponding estimate of the initial monthly Base Rent which would be due for the applicable Identified Expansion Building ("**Initial Base Rent Estimate**"). Tenant shall have the right ("**Initial Rescission Right**") to rescind the applicable Expansion Notice by delivery to Landlord of a written rescission notice ("**Initial Rescission Notice**") on or before the date that is 15 business days after Landlord's delivery to Tenant of the Initial Project Cost Estimate and Initial Base Rent Estimate for the Identified Expansion Building if (and only if) the Initial Base Rent Estimate for the Identified Expansion Building for the first year of the Base Term for such Identified Expansion Building exceeds \$3.00 per rentable square foot per month ("**Cap Amount**"). The Cap Amount provided for in the preceding sentence applies if the first year of the Base Term for the Identified Expansion Building is reasonably estimated by Landlord to commence within 24 months after the Initial Commencement Date, and the Cap Amount shall thereafter be increased by the Bi-Annual Rent Adjustment Percentage on every other anniversary of the Initial Commencement Date. The Initial Rescission Right shall only apply, depending on when the Base Term for the Identified Expansion Building is reasonably estimated by Landlord to commence, if the Initial Base Rent Estimate exceeds the Cap Amount (as adjusted). If Tenant fails to timely deliver the Initial Rescission Notice to Landlord, Tenant shall be deemed to have waived its Initial Rescission Right. If Tenant delivers the Initial Rescission Notice to Landlord pursuant to this paragraph, Tenant's Expansion Right with respect to the Identified Expansion Building shall terminate and be of no further force or effect, in which case Tenant shall have no further rights under Section 39 with respect to such Identified Expansion Building but Tenant shall nonetheless be required to pay Land Rent until the expiration of the Base Term.

(ii) **Final Rescission Right .** Following Tenant's waiver of its Initial Rescission Right and the development by Landlord of preliminary plans for such Identified Expansion Building, Landlord shall prepare a RFP for 3 general contractors reasonably acceptable to Landlord and Tenant who will each be requested to respond with their fee and general conditions based on the Expansion Building Preliminary Plans. Landlord and Tenant shall use reasonable efforts to agree upon one of the bids ("**Contractor's Initial Bid**") for the purposes of developing a revised estimate of the Project Costs. Based on the Contractor's Initial Bid, Landlord shall deliver to Tenant a revised written estimate on the part of Landlord of the Project Costs for the Identified Expansion Building ("**Revised Project Cost Estimate**"). Tenant shall have a final right ("**Final Rescission Right**") to rescind the applicable Expansion Notice by delivery to Landlord of a written rescission notice ("**Final Rescission Notice**") on or before (i) the date that is 15 business days after Landlord's delivery to Tenant of the Revised Project Cost Estimate for the Identified Expansion Building if (and only if) the Revised Project Cost Estimate exceeds the Initial Project Cost Estimate by more than 20%, or (ii) the date that is 5 business days after Landlord selection of such Contractor's Initial Bid for the purposes of developing the Revised Project Cost Estimate if Tenant was unwilling to agree to use the Contractor's Initial Bid selected by Landlord for the purposes of developing a revised estimate of the Project Costs. If Tenant fails to timely deliver the Final Rescission Notice to Landlord, Tenant shall be deemed to have waived its Final Rescission Right. If Tenant

delivers the Final Rescission Notice to Landlord pursuant to this paragraph, Tenant's Expansion Right with respect to the Identified Expansion Building shall terminate and be of no further force or effect, in which case Tenant shall have no further rights under Section 39 with respect to such Identified Expansion Building, but Tenant shall nonetheless be required to pay Land Rent until the expiration of the Base Term.

(iii) **Effect of Multiple Rescissions** . Notwithstanding anything to the contrary contained in this Lease, if Tenant's exercises a second Initial Rescission Right and/or a second Final Rescission Right under this Lease, Tenant shall be solely responsible (without any contribution from Landlord) for all Initial Costs and other related costs incurred by Landlord in connection with all future exercises by Tenant of any of its Expansion Rights.

(iv) **Acknowledgement** . If Tenant elects to exercise either its Initial Rescission Right or its Final Rescission Right with respect to any Identified Expansion Building, Landlord shall return to Tenant any unused portion, if any, of the Expansion Deposit delivered by Tenant to Landlord with respect to such Identified Expansion Building. Tenant acknowledges and agrees that the Initial Project Cost Estimates and the Revised Project Cost Estimate provided by Landlord and the Contractor's Initial Bid delivered pursuant to the provisions of Section 39(c)(i) and (ii) are merely estimates and are not a guaranty of actual Project Costs and/or the amount of Base Rent which will be payable for any Identified Expansion Building and Landlord shall have no liability to Tenant in connection therewith nor shall Tenant have any additional rescission rights beyond those expressly provided for in Section 39(c)(i) and (ii) .

(d) **Lease Terms for Expansion Building(s)** . Tenant acknowledges and agrees that if Tenant leases any Expansion Building(s) pursuant to this Section 39 , all of the terms and conditions of this Lease shall apply to the leasing of such Expansion Building, except that: (i) the definitions on page 1 of this Lease shall be amended as necessary to document and reflect the addition of the applicable Expansion Building to the Project; (ii) Tenant shall be required to pay annual Base Rent in equal monthly installments for the first 12 months following the Expansion Building Rent Commencement Date (as defined below) for the applicable Expansion Building at a rate which provides Landlord with an annual return on all Project Costs for such Expansion Building which is the greater of (A) 300 basis points above the 10-year U.S. Treasury yield as of the date that Landlord receives the applicable Expansion Notice, and (B) 8.5%, and such return shall be subject to increases as provided for in Section 4 hereof by the Bi-Annual Rent Adjustment Percentage on every other anniversary of the applicable Expansion Building Rent Commencement Date; (iii) the Base Term of the Lease with respect to the applicable Expansion Building shall expire on the same day as the Base Term with respect to the original Premises; provided, however, that each time Tenant exercises its Expansion Right with respect to any Expansion Building during the last 120 months of the Base Term, the Base Term for the entire Premises shall be extended each time to the date that is 120 months after the Expansion Building Rent Commencement Date for the applicable Expansion Building; (iv) Landlord shall be responsible for the construction of tenant improvements in each Expansion Building desired by Tenant which improvements shall be of a fixed and permanent nature approved by Landlord (" **Expansion Building Tenant Improvements** ") and shall be required to satisfy the requirements set forth on **Exhibit K** , and the parties shall enter into a work letter for the Expansion Building and Expansion Building Tenant Improvements reasonably acceptable to both parties and based substantially on the form of work letter attached hereto as **Exhibit J** (each, an " **Expansion Building Work Letter** ") with Tenant receiving a tenant improvement allowance from Landlord in the amount of \$60 per rentable square foot of the applicable Expansion Building (\$7.50 per rentable square foot of which may be used for Tenant's cabling and Tenant's furniture, fixtures and equipment within the applicable Expansion Building) which shall be disbursed as provided for in the applicable Expansion Building Work Letter; and (v) the " **Expansion Building Rent Commencement Date** " shall be the date that is 60 days after the Substantial Completion of the Building Shell and the Substantial TI Completion of the Expansion Building Tenant Improvements (all as defined in the Expansion Building Work Letter), and Tenant shall commence paying Base Rent and Operating Expenses for the Expansion Building on such date.

As used in this Lease, " **Project Costs** " shall mean the sum of all of the actual, documented costs incurred by Landlord through Project Close-Out in connection with the acquisition, design and construction of the applicable Expansion Building, the Parking Structure and all related improvements including, without limitation: (i) the value of the land on which the applicable Expansion Building is being constructed (which for purposes hereof the parties agree is equal to the then value of the Buildable Entitlements being utilized for the applicable Expansion Building as calculated pursuant to Section 39(b)); (ii) architectural, engineering, construction and development cost and fees; (iii) other soft and legal costs; (iv) a development fee to Landlord equal to 3% of the hard Project Costs; (v) Landlord's carry costs related to the applicable Expansion Building from the initiation of construction of such Expansion Building until the applicable Expansion Building Rent Commencement Date; (vi) the \$60 per rentable square foot tenant improvement allowance granted by Landlord for the applicable Expansion Building Tenant Improvements plus Landlord's carry costs related to the applicable Expansion Building Tenant Improvements from the initiation of construction of the applicable Expansion

Building Tenant Improvements until the applicable Expansion Building Rent Commencement Date; (vii) infrastructure costs, assessments, impact fees, site preparation costs, testing, labor and materials to construct the applicable Expansion Building and the Parking Structure and related infrastructure and improvements, permit fees, costs associated with obtaining the PID Permit amendment and necessary entitlement or re-entitlements, if necessary, and any other governmental fees, sales taxes and fees payable to contractors, project landscaping, water, gas and electrical fees and related miscellaneous costs, and builder's risk insurance and other insurance related costs, (viii) leasing commissions, if any, payable to a broker solely in its capacity as the broker representing Tenant in connection with the applicable Expansion Right and, unless Tenant has notified Landlord in writing otherwise, such broker shall be Cushman & Wakefield of San Diego, Inc., but only if Steve Rosetta is the broker at Cushman & Wakefield of San Diego, Inc., representing Tenant in connection with the applicable Expansion Right and further provided however, that Landlord and Tenant's broker (whether Cushman & Wakefield of San Diego, Inc., or any other brokerage company) shall have entered into a commission agreement with respect to such commission which agreement is in form and content acceptable to Landlord and such broker, each in their respective sole and absolute discretion, (ix) Landlord's carry costs related to the Parking Structure from the initiation of construction of such Parking Structure until the Project Close-Out; (x) Landlord's contribution towards the Initial Costs for such Expansion Building, and (xi) Landlord's reasonable financing costs (or reasonable imputed market rate financing costs) with respect to all of the foregoing. Landlord shall not incur any Project Costs not contemplated by this Lease and/or any applicable work letter without Tenant's prior written approval. Tenant shall have the right to audit Project Costs within 180 days after the Project Close-Out and if Tenant discovers errors and Landlord and Tenant are unable to resolve such dispute within 30 days after the expiration of such 180 day period, it shall be resolved by arbitration by a single arbitrator with the qualifications and experience appropriate to resolve the matter and appointed pursuant to and acting in accordance with the rules of the American Arbitration Association.

As used herein, " **Parking Structure** " shall mean, all as elected by Landlord in its sole discretion, one or more levels of subterranean parking and/or one or more parking structures each of which may be constructed in one or more phases with the same or different numbers of tiers in each phase. Landlord shall have right, after taking into consideration potential limitations or difficulties on construction of future parking at the Project if additional buildings beyond the applicable Expansion Building were in the future to be constructed, require the construction in connection with any Expansion Building of more subterranean and/or other parking levels and spaces than are required under applicable Legal Requirements to satisfy the PID Permit and other applicable requirements for the then Premises and the additional rentable square footage of such Expansion Building. Each Parking Structure shall generally comply with the requirements set forth on **Exhibit O** attached hereto. Landlord shall use reasonable efforts to notify Tenant of its elections with respect to the applicable Parking Structure(s) within a reasonable time after Tenant exercises its Expansion Right for an Expansion Building. If Landlord elects to construct any Parking Structure(s) in phases, all of the Project Costs incurred in connection with each such phase of the applicable Parking Structure(s) shall be attributable to the applicable Expansion Building being constructed by Landlord. For example, if Landlord elects in connection with Tenant's exercise of the Expansion Right for Building 7 to construct a Parking Structure with only 2 tiers, all of the Project Costs in connection with such Parking Structure shall be included in the definition of Project Costs for Building 8 and used to calculate Base Rent for Building 8, and, if Tenant thereafter elects to exercise its Expansion Right for Building 8, and Landlord elects to construct additional tiers and/or a new Parking Structure at that time, all of the Project Costs in connection with such additional tiers and/or new Parking Structure shall be included in the definition of Project Costs for Building 8 and used to calculate Base Rent for Building 7. Notwithstanding anything to the contrary contained herein, if Tenant properly exercises its rescission rights as provided for in this Lease, any elections made by Landlord pursuant to this paragraph shall not be binding on Landlord if Landlord so elects and Landlord shall be free to make new elections if Tenant thereafter exercises any of its Expansion Rights.

As used in this Lease, " **Project Close-Out** " shall mean the first date following the final completion of the applicable Expansion Building by Landlord that (i) all contractors, subcontractors, suppliers, architects and others who supplied labor or materials have been paid in full and all liens are released; (ii) the architect or general contractor for the applicable Expansion Building have issued any certificate(s) of completion as may be required by Landlord; (iii) all punch list items have been completed; and (iv) the contractors and architect have provided all close out documentation required by Landlord; provided, however, that in no event shall such date be deemed to occur until the applicable Expansion Building Rent Commencement Date.

(e) **Construction of Expansion Buildings** . In addition to the foregoing, the following provisions shall apply with respect to the design and construction of each Expansion Building:

(A) **Building Shell** . Notwithstanding anything to the contrary contained in this Section 39, Landlord's construction obligation with respect to the each Expansion Building shall be limited to an obligation to construct, subject to the other provisions of this Section 39, and to deliver to Tenant the Expansion Building upon Substantial Completion of the Building Shell and upon Substantial TI Completion of the Expansion Building Tenant Improvements. As used in this Lease, "**Building Shell**" shall mean a warm shell containing the warm shell requirements set forth in the Expansion Building Requirements attached hereto as **Exhibit I** . As used in this Lease, "**Building Shell/TI Delivery Date**" shall mean the date that Tenant is notified in writing that the Building Shell has been Substantially Completed (and is in fact Substantially Completed).

(B) **Architects and Contractors** . After the selection of the general contractor as provided for in the Expansion Building Work Letter, Landlord shall enter into a guaranteed maximum price contract with the selected general contractor.

(C) **Plans** . Tenant acknowledges that certain plans and other information that may be made available to Tenant pursuant to the provisions of this Section 39 and any Expansion Building Work Letter constitute information that Landlord considers confidential and, upon request from Landlord, Tenant and Landlord **shall** execute a confidentiality and non-disclosure agreement reasonably acceptable to each party with respect to such confidential information.

(D) **Budget** . The cost information related to the design and construction of each Expansion Building shall be shared with Tenant on a so called "open book basis". Tenant shall have the right to approve (which approval shall not be unreasonably withheld, conditioned or delayed) any material changes to the final budget prior to Landlord entering into the guaranteed maximum price contract with the general contractor for the Building Shell. Notwithstanding anything to the contrary contained herein or in the Expansion Building Work Letter, Landlord shall have the right to include a contingency of up to 10% in the budget and in the guaranteed maximum price contract with the general contractor. In addition, the budget for each Expansion Building shall also include a payment for the development fee provided for as part of the Project Costs. Landlord shall not be entitled to any reimbursement of any fees, overhead, travel, salaries or costs of Landlord's personnel in connection with the construction of the Expansion Building unless they are defined as direct Project Cost.

(E) **Schedule** . Landlord's proposed construction schedule shall be included as part of the Expansion Building Work Letter. Landlord shall use reasonable efforts to cause the Building Shell to be Substantially Completed within 24 months after the building permit for the shell and core construction of the applicable Shell Building has been issued by the applicable Governmental Authority). If the Building Shell/TI Delivery Date has not occurred within such 24 month period, Tenant shall have no right to terminate this Lease with respect to the Expansion Building nor shall Landlord have any liability to Tenant for any loss or damage resulting therefrom except that Tenant shall be entitled to occupy such Expansion Building following the Expansion Building Rent Commencement Date without the obligation to pay Base Rent 1 day for each day following the expiration of such 24 month period until the Building Shell/TI Delivery Date. If the Building Shell/TI Delivery Date has not occurred within 30 months after the building permit for the shell and core construction of the applicable Shell Building has been issued by the applicable Governmental Authority, Tenant shall have the right to elect to either (i) continue to receive the Base Rent abatement provided for in the preceding sentence, or (ii) terminate this Lease only with respect to the applicable Expansion Building by written notice to Landlord, in which case, except as provided for in the last sentence of the first paragraph of Section 39(b), Landlord shall not have any further duties or obligations to Tenant under this Lease with respect to the applicable Expansion Building and Tenant shall have no further expansion rights with respect to such Expansion Building and Landlord shall be free to lease it to any third party(ies) on any terms and conditions acceptable to Landlord. If Tenant does not elect to terminate this Lease with respect to the applicable Expansion Building pursuant to subsection (ii) of the immediately preceding sentence within 10 business days after the expiration of such 30 month period, such right to terminate this Lease with respect to applicable Expansion Building shall be waived, this Lease with respect to the applicable Expansion Building shall remain in full force and effect, and Tenant shall be deemed to have elected to proceed under subsection (i) above. Notwithstanding anything to the contrary contained herein, Tenant acknowledges and agrees that any Tenant Delays (as defined in Expansion Building Work Letter) and/or delays caused by Force Majeure shall extend the dates set forth in this paragraph for Landlord's performance of its obligations on a day for day basis; provided, however, that in no event may any delays caused by Force Majeure extend the dates set forth in this paragraph for Landlord's performance of its obligations by more than 90 days in the aggregate except in the case of any matter covered by the provisions of Sections 18 and 19 hereof.

(F) **Acknowledgment** . Upon the request of either Landlord or Tenant, the parties shall execute and deliver a written factually correct acknowledgment of the Building Shell/TI Delivery Date, the Expansion Building Rent Commencement Date, the Base Rent for the Expansion Building and the expiration date of the Base Term as and when such are established in the form substantially similar to the form of the "Acknowledgement of Commencement Date" attached to this Lease as **Exhibit D** ; provided, however, the failure by either party to execute and deliver such acknowledgment shall not affect the other party's rights hereunder.

(f) **Tenant Default** . Notwithstanding anything to the contrary contained herein, Landlord shall have the right to suspend performance of all or any of Landlord's obligations under this Section 39 during any period that Tenant is in material Default under this Lease and such period of suspension shall constitute a delay caused by Tenant; provided that Landlord has notified Tenant in writing of Landlord's intention to suspend performance due to such Default.

(g) **Amended Lease** . Landlord and Tenant shall enter into a lease amendment or lease agreement acceptable to both Landlord and Tenant for each Expansion Building setting forth the lease terms and the rental of such Expansion Building consistent with those set forth in this Section 39 .

(h) **Termination** . The Expansion Right shall, at Landlord's option, terminate and be of no further force or effect even after Tenant's due and timely exercise of the Expansion Right, if, after such exercise, but prior to the commencement date of the Base Term of the lease of the applicable Expansion Building, there is any material Default by Tenant under the Lease.

(i) **Rights Personal** . The Expansion Rights are personal to Tenant and are not assignable without Landlord's consent, which may be granted or withheld in Landlord's sole discretion separate and apart from any consent by Landlord to an assignment of Tenant's interest in the Lease, except that they may be assigned in connection with any Permitted Assignment of this Lease.

(j) **No Extensions** . The period of time within which any Expansion Right may be exercised shall not be extended or enlarged by reason of Tenant's inability to exercise the Expansion Right.

14. **Signage** . Notwithstanding anything to the contrary contained in the Lease, Landlord shall have the right to have the name and logo of Landlord (or any affiliate designated by Landlord) ("**Landlord's Signage** ") included on all Project Monument Signs off Nobel Drive and/or Judicial Drive now or in the future located at the Project, as more particularly shown on **Exhibit E** attached hereto. All of Landlord's Signage shall be of a size, color, type and location reasonably acceptable to Landlord and Tenant, and Tenant agree to cooperate with Landlord in connection with the design, installation and maintenance of Landlord's Signage. The cost of placing Landlord's Signage on the Project Monument Signs shall be borne by Landlord.

15. **Brokers** . Landlord and Tenant each represents and warrants that it has not dealt with any broker, agent or other person (collectively, "**Broker** ") in connection with the transaction reflected in this Second Amendment and that no Broker brought about this transaction, other than Cushman & Wakefield. Landlord and Tenant each hereby agrees to indemnify and hold the other harmless from and against any claims by any Broker claiming a commission or other form of compensation by virtue of having dealt with Tenant or Landlord, as applicable, with regard to this leasing transaction. Landlord shall be responsible for all commissions due to Cushman & Wakefield arising out of the execution of this Second Amendment in accordance with the terms of a separate written agreement between Cushman & Wakefield and Landlord.

16. **Disclosure** . For purposes of Section 1938 of the California Civil Code, as of the date of this Amendment, Tenant acknowledges having been advised by Landlord that the Project has not been inspected by a certified access specialist.

17. **Miscellaneous** .

a. This Second Amendment is the entire agreement between the parties with respect to the subject matter hereof and supersedes all prior and contemporaneous oral and written agreements and discussions. This Second Amendment may be amended only by an agreement in writing, signed by the parties hereto.

b. This Second Amendment is binding upon and shall inure to the benefit of the parties hereto, and their respective successors and assigns.

c. This Second Amendment may be executed in any number of counterparts, each of which shall be deemed an original, but all of which when taken together shall constitute one and the same instrument. The signature page of any counterpart may be detached therefrom without impairing the legal effect of the signature(s) thereon provided such signature page is attached to any other counterpart identical thereto except having additional signature pages executed by other parties to this Second Amendment attached thereto.

d. Except as amended and/or modified by this Second Amendment, the Lease is hereby ratified and confirmed and all other terms of the Lease shall remain in full force and effect, unaltered and unchanged by this Second Amendment. In the event of any conflict between the provisions of this Second Amendment and the provisions of the Lease, the provisions of this Second Amendment shall prevail. Whether or not specifically

amended by this Second Amendment, all of the terms and provisions of the Lease are hereby amended to the extent necessary to give effect to the purpose and intent of this Second Amendment.

[Signatures are on the next page.]

IN WITNESS WHEREOF , the parties hereto have executed this Second Amendment as of the day and year first above written.

TENANT:

ILLUMINA, INC. ,
a Delaware corporation

By: /s/ Marc Stapley
Its: Sr. VP & CFO

LANDLORD:

ARE-SD REGION NO. 32, LLC ,
a Delaware limited liability company

By: ALEXANDRIA REAL ESTATE EQUITIES, L.P.,
a Delaware limited partnership, managing member

By: ARE-QRS CORP.,
a Maryland corporation,
general partner

By: /s/ Gary Dean
Its: VP RE Legal Affairs

First Amendment to Pooled Patents Agreement

This First Amendment to the Pooled Patents Agreement (the “**First Amendment**”) is effective as of the date of last signature found below between Illumina, Inc., a Delaware corporation having a place of business at 5200 Illumina Way, San Diego, CA 92122 (“**Illumina**”) and Sequenom, Inc., a Delaware corporation, having a place of business at 3595 John Hopkins Court, San Diego CA 92121 (“**Sequenom**”). Sequenom and Illumina may be referred to herein as “**Party**” or “**Parties**.”

WHEREAS, the Parties entered into the Pooled Patents Agreement, dated December 2, 2014 (“**Agreement**”);

WHEREAS, the Parties have been discussing a lowering of Test Fees in accordance with Section 3.2(c)(iii), and on March 25, 2016 the Parties reached agreement in accordance with Sections 3.2(c)(iii)(1) and (3) (such date referred to as the “**Lowering Date**”);

WHEREAS, the Parties desire to amend the Agreement to implement their agreement reached on the Lowering Date; and

WHEREAS, for good and valuable consideration, the Parties agree to amend the Agreement as follows:

1. Schedule 1 is deleted in its entirety and replaced with the attached new Schedule 1.
 2. Section 7.1(b)(xi) is hereby deleted in its entirety and replaced with the following:
“(xi) any agreement entered into by Sequenom or any Affiliate of Sequenom prior to the Effective Date granting rights under any Sequenom Patent (prior to assignment and novation of the CUHK Licenses (2008/2011)) includes an obligation for the grantee to pay Test Fees to Sequenom or such Affiliate that are in an amount that is materially consistent with (or higher than) the Test Fee amounts (based on currency exchange rates in effect on the Effective Date) set forth on Schedule 1 (excluding Section 5 and the additional \$20 fee pursuant to Section 3 of Schedule 1);”
 3. Section 7.1(c)(v) is hereby deleted in its entirety and replaced with the following:
“(v) it intends to continue prosecuting the ongoing disputes it has with Existing Illumina Litigants in a manner that, if successful, would lead to an obligation, on each such Existing Illumina Litigant that intends to perform on a going forward basis an NIPT LDT Test that is covered by a Valid Issued Claim under the Illumina Patents (excluding the CUHK Patents), to take a license under such Illumina Patents in exchange for consideration payable to Illumina that is consistent with the Test Fee amounts set forth on Schedule 1 (excluding Section 5 and the additional \$20 fee pursuant to Section 3 of Schedule 1);”
 4. Section 7.1(c)(ix) is hereby deleted in its entirety and replaced with the following:
“(ix) except as set forth on Schedule 7.1(c)(ix), any agreement entered into by Illumina or any Affiliate of Illumina prior to the Effective Date granting rights under any Illumina Patent (excluding the CUHK Patents) includes an obligation for the grantee to pay Test Fees to Illumina or such Affiliate that are materially consistent with (or higher than) the Test Fee amounts (based on currency exchange rates in effect on the Effective Date) set forth on Schedule 1 (excluding Section 5 and the additional \$20 fee pursuant to Section 3 of Schedule 1);”
 5. Schedule 7.1(c)(ix) is hereby deleted in its entirety and replaced with the following:
“Two Existing Illumina Licensees (each an Illumina Technology Partner) are currently paying volume-based Test Fees to Illumina that are at or higher than the volume-based Test Fee amounts set forth on Schedule 1 (excluding Section 5 and the additional \$20 fee pursuant to Section 3 of Schedule 1), however, as of the Effective Date, each such licensee is subject to a volume-based Test Fee schedule that would permit that licensee to pay Test Fees in an amount that is below the Test Fee amount on Schedule 1 (excluding Section 5)
-

at such time (if ever) it achieves a certain cumulative volume and thereafter until (1) December, 2016, for one licensee or (2) January 2017, for the other licensee.

Except as expressly modified herein, the Agreement shall remain in full force and effect in accordance with its terms. All capitalized terms not defined in this First Amendment shall have the meaning ascribed to them in the Agreement.

IN WITNESS WHEREOF , the Parties have signed this First Amendment as of the dates indicated below.

ILLUMINA

By: /s/ Jeff Eidel
Name: Jeffrey Eidel
Title: VP Corporate Development
Date: April 20, 2016

SEQUENOM

By: /s/ Dereck Tatman
Name: Dereck Tatman
Title: SR VP Business Development
Date: April 21, 2016

Second Amendment to Pooled Patents Agreement

This Second Amendment to the Pooled Patents Agreement (the “ **Second Amendment** ”) is effective as of the date of last signature found below (“ **Second Amendment Effective Date** ”) between Illumina, Inc., a Delaware corporation having a place of business at 5200 Illumina Way, San Diego, CA 92122 (“ **Illumina** ”) and Sequenom, Inc., a Delaware corporation, having a place of business at 3595 John Hopkins Court, San Diego CA 92121 (“ **Sequenom** ”). Sequenom and Illumina may be referred to herein as “ **Party** ” or “ **Parties** .”

WHEREAS, the Parties entered into the Pooled Patents Agreement, dated December 2, 2014, as amended via a First Amendment dated April 21, 2016 (“ **Agreement** ”);

WHEREAS, the Parties have been discussing a lowering of Test Fees in accordance with Section 3.2(c)(iii), and have now reached agreement in accordance with Sections 3.2(c)(iii)(1) and (3);

WHEREAS, the Parties desire to amend the Agreement to permit lower Test Fees to be paid by certain companies, as identified herein; and

WHEREAS, for good and valuable consideration, the Parties agree to amend the Agreement as follows:

1. Section 3.5(b)(i) is deleted in its entirety and replaced with:

(i) Adjustment Due to Average Test Fee Collected. The Minimum Payments set forth in Section 3.5(a) are based on an average annual Test Fee collected by Illumina and Sequenom in the amount of \$72 per NIPT Test. If the average Test Fee collected for a calendar year is lower than \$72 per NIPT Test by 5% or more, then the Minimum Payment for the calendar year shall be adjusted downward by multiplying the then current Minimum Payment amount by the quotient of the average Test Fee actually collected and subject to sharing between Illumina and Sequenom during that calendar year divided by seventy-two dollars ($\{\text{minimum payment amount}\} \times \{\text{average Test Fee for immediately preceding calendar year}\} / \72).

2. Schedule 1 is deleted in its entirety and replaced with the attached new Schedule 1.
3. Schedules 1A and 1B are added to the Agreement after Schedule 1 and before Schedule 2.

Except as expressly modified herein, the Agreement shall remain in full force and effect in accordance with its terms. All capitalized terms not defined in this Second Amendment shall have the meaning ascribed to them in the Agreement.

[Remainder of Page Intentionally Left Blank. Signature Page to Follow]

IN WITNESS WHEREOF , the Parties have signed this Second Amendment as of the dates indicated below.

ILLUMINA

By: /s/ Jeff Eidel
Name: Jeff Eidel
Title: VP, Corporate & Business Development
Date: April 14, 2017

SEQUENOM

By: /s/ Eric Lindblom
Name: Eric Lindblom
Title: SVP
Date: April 17, 2017

Third Amendment to Pooled Patents Agreement

This Third Amendment to the Pooled Patents Agreement (the “ **Third Amendment** ”) is effective as of the date of last signature found below (“ **Third Amendment Effective Date** ”) between Illumina, Inc., a Delaware corporation having a place of business at 5200 Illumina Way, San Diego, CA 92122 (“ **Illumina** ”) and Sequenom, Inc., a Delaware corporation, having a place of business at 3595 John Hopkins Court, San Diego CA 92121 (“ **Sequenom** ”). Sequenom and Illumina may be referred to herein as “ **Party** ” or “ **Parties** .”

WHEREAS, the Parties entered into the Pooled Patents Agreement, dated December 2, 2014, as amended via a First Amendment dated April 21, 2016 and via a Second Amendment dated April 17, 2017 (“ **Agreement** ”);

WHEREAS, the Parties desire to amend Schedule 1A of the Agreement to permit lower Test Fees to be paid by certain additional companies, as identified herein; and

WHEREAS, for good and valuable consideration, the Parties agree to amend the Agreement as follows:

1. Schedule 1A is amended to add the following entities:
[...***...]

Except as expressly modified herein, the Agreement shall remain in full force and effect in accordance with its terms. All capitalized terms not defined in this Third Amendment shall have the meaning ascribed to them in the Agreement.

IN WITNESS WHEREOF , the Parties have signed this Third Amendment as of the dates indicated below.

ILLUMINA

By: /s/ Jeff Eidel
Name: Jeff Eidel
Title: VP, Corporate & Business Development
Date: August 21, 2017

SEQUENOM

By: /s/ Eric Lindblom
Name: Eric Lindblom
Title: SVP, LabCorp.
Date: August 28, 2017

SUBSIDIARIES OF THE COMPANY

Name of Subsidiary	Jurisdiction	Doing Business As
Advanced Liquid Logic Inc.	Delaware	Advanced Liquid Logic Inc.
BlueGnome, Ltd.	United Kingdom	BlueGnome, Ltd.
Epicentre Technologies Corporation	Wisconsin	Epicentre Biotechnologies
GenoLogics Life Science Software Inc.	Canada	GenoLogics Life Science Software Inc.
Illumina Australia Pty. Ltd.	Australia	Illumina Australia Pty. Ltd.
Illumina Brasil Produtos de Biotecnologia Ltda.	Brazil	Illumina Brazil
Illumina Cambridge, Ltd.	United Kingdom	Illumina Cambridge, Ltd.
Illumina Canada, Inc.	Canada	Illumina Canada, Inc.
Illumina France Holding Sarl	France	Illumina France Holding Sarl
Illumina France Sarl	France	Illumina France Sarl
Illumina GmbH	Germany	Illumina GmbH
Illumina Hong Kong Limited	Hong Kong	Illumina Hong Kong Limited
Illumina Iceland ehf	Iceland	Illumina Iceland ehf
Illumina Italy S.r.l.	Italy	Illumina Italy S.r.l.
Illumina K.K. Japan	Japan	Illumina K.K. Japan
Illumina Netherlands B.V.	Netherlands	Illumina Netherlands B.V.
Illumina New Zealand Limited	New Zealand	Illumina New Zealand Limited
Illumina Singapore Pte. Ltd.	Singapore	Illumina Singapore Pte. Ltd
Illumina Trading (Shanghai) Co., Ltd.	China	Illumina Trading (Shanghai) Co., Ltd.
Illumina Switzerland GmbH	Switzerland	Illumina Switzerland GmbH
Illumina Europe Limited	United Kingdom	Illumina Europe Limited
Illumina Denmark ApS	Denmark	Illumina Denmark ApS
Illumina Productos de Espana, S.L.U.	Spain	Illumina Productos de Espana, S.L.U.
Illumina AB	Sweden	Illumina AB
NextBio	California	NextBio
Verinata Health, Inc.	Delaware	Verinata Health, Inc.

**All listed subsidiaries are wholly-owned, direct or indirect, subsidiaries of Illumina, Inc.

**As permitted under Rule 601 of Regulation S-K, we have omitted the names of subsidiaries, which if considered in the aggregate as a single subsidiary, would not constitute a “significant subsidiary” (as defined in Rule 1-02(w) of Regulation S-X) as of the end of the year covered by this report

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the following Registration Statements:

- (1) Registration Statements (Form S-3 Nos. 333-111496, 333-125100, 333-134012, 333-144953, 333-145408 and 333-168395) of Illumina, Inc.,
- (2) Registration Statement (Form S-4 No. 333-139111) of Illumina, Inc., and
- (3) Registration Statements (Form S-8 Nos. 333-42866, 333-69058, 333-88808, 333-104190, 333-114633, 333-124074, 333-125133, 333-129611, 333-134399, 333-140416, 333-147389, 333-151265, 333-159662, 333-168393, 333-188037, 333-190322 and 333-206215) of Illumina, Inc.;

of our reports dated February 12, 2018 , with respect to the consolidated financial statements and schedule of Illumina, Inc. and the effectiveness of internal control over financial reporting of Illumina, Inc. included in this Annual Report (Form 10-K) of Illumina, Inc. for the fiscal year ended December 31, 2017 .

/s/ Ernst & Young LLP

San Diego, California
February 12, 2018

CERTIFICATION OF FRANCIS A. DESOUZA PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Francis A. deSouza, certify that:

- 1 I have reviewed this Annual Report on Form 10-K of Illumina, Inc.;
- 2 Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
- 3 Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
- 4 The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
- 5 The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Dated: February 12, 2018

By: /s/ FRANCIS A. DE SOUZA

Francis A. deSouza

President and Chief Executive Officer

CERTIFICATION OF SAM A. SAMAD PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Sam A. Samad, certify that:

- 1 I have reviewed this Annual Report on Form 10-K of Illumina, Inc.;
- 2 Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
- 3 Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
- 4 The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
- 5 The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Dated: February 12, 2018

By: /s/ S AM A. S AMAD

Sam A. Samad

Senior Vice President and Chief Financial Officer

**CERTIFICATION OF FRANCIS A. DESOUZA PURSUANT TO 18 U.S.C. SECTION
1350, AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-
OXLEY ACT OF 2002**

In connection with the Annual Report of Illumina, Inc. (the "Company") on Form 10-K for the year ended December 31, 2017, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Francis A. deSouza, President and Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: February 12, 2018

By: /s/ FRANCIS A. DESOUZA

Francis A. deSouza

President and Chief Executive Officer

This certification accompanying the Report is not deemed filed with the Securities and Exchange Commission for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, or otherwise subject to the liabilities such Section, and is not to be incorporated by reference into any filing of the Company under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended (whether made before, on or after the date of the Report), irrespective of any general incorporation language contained in such filing.

**CERTIFICATION OF SAM A. SAMAD PURSUANT TO 18 U.S.C.
SECTION 1350, AS ADOPTED PURSUANT TO SECTION 906 OF THE
SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report of Illumina, Inc. (the "Company") on Form 10-K for the year ended December 31, 2017, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Sam A. Samad, Senior Vice President and Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: February 12, 2018

By: /s/ S AM A. S AMAD

Sam A. Samad

Senior Vice President and Chief Financial Officer

This certification accompanying the Report is not deemed filed with the Securities and Exchange Commission for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, or otherwise subject to the liabilities such Section, and is not to be incorporated by reference into any filing of the Company under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended (whether made before, on or after the date of the Report), irrespective of any general incorporation language contained in such filing.