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

FORM 10-K

(Mark One)

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

For the fiscal year ended December 31, 2016

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: 001-35907

QUINTILES IMS HOLDINGS, INC.

(Exact name of registrant as specified in its charter)

Delaware **(State or other jurisdiction of incorporation or organization)**		**27-1341991** **(I.R.S. Employer Identification Number)**

4820 Emperor Blvd., Durham, North Carolina 27703

and

83 Wooster Heights Road, Danbury, Connecticut 06810
(Address of principal executive offices and Zip Code)

(919) 998-2000 and (203) 448-4600
(Registrant's telephone number, including area code)

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

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

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

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

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

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding twelve 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.

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

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

The aggregate market value of the voting and non-voting common stock held by non-affiliates of the registrant, based upon the closing sale price as reported on the New York Stock Exchange on June 30, 2016, the last business day of the registrant's most recently completed second quarter, was approximately $5,770,018,162, (which does not give effect to the business combination of Quintiles Transnational Holdings Inc. and IMS Health Holdings, Inc. completed on October 3, 2016).

Indicate the number of shares outstanding of each of the issuer's classes of Common Stock, as of the latest practicable date.

Class	Number of Shares Outstanding
Common Stock $0.01 par value	235,719,111 shares outstanding as of February 9, 2017

Portions of the registrant's Proxy Statement for the 2017 Annual Meeting of Stockholders are incorporated herein by reference in Part III of this Annual Report on Form 10-K to the extent stated herein. Such proxy statement will be filed with the Securities and Exchange Commission within 120 days of the registrant's fiscal year ended December 31, 2016.

QUINTILES IMS HOLDINGS, INC.

FORM 10-K

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FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended ("Securities Act"), and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). Such forward-looking statements reflect, among other things, our current expectations, our forecasts and our anticipated results of operations, all of which are subject to known and unknown risks, uncertainties and other factors that may cause our actual results, performance or achievements, market trends, or industry results to differ materially from those expressed or implied by such forward-looking statements. Therefore, any statements contained herein that are not statements of historical fact may be forward-looking statements and should be evaluated as such. Without limiting the foregoing, the words "anticipates," "believes," "estimates," "expects," "intends," "may," "plans," "projects," "should," "targets," "will" and the negative thereof and similar words and expressions are intended to identify forward-looking statements. These forward-looking statements are subject to a number of risks, uncertainties and assumptions, including those described in Part I, Item 1A, "Risk Factors." We assume no obligation to update any such forward-looking information to reflect actual results or changes in the factors affecting such forward-looking information.

GENERAL

When we use the terms "QuintilesIMS," the "Company," "we," "us" or "our" in this Annual Report on Form 10-K, we mean Quintiles IMS Holdings, Inc. and its subsidiaries on a consolidated basis, unless we state or the context implies otherwise.

On October 3, 2016, Quintiles Transnational Holdings Inc. ("Quintiles") completed its previously announced merger of equals transaction (the "Merger") with IMS Health Holdings, Inc. ("IMS Health"). Pursuant to the terms of the merger agreement dated as of May 3, 2016 between Quintiles and IMS Health (the "Merger Agreement"), IMS Health was merged with and into Quintiles, and the separate corporate existence of IMS Health ceased, with Quintiles continuing as the surviving corporation. Immediately prior to the completion of the Merger, Quintiles reincorporated as a Delaware corporation. Quintiles changed its name to Quintiles IMS Holdings, Inc. At the effective time of the Merger, each issued and outstanding share of IMS Health common stock was automatically converted into 0.3840 of a share of the Company's common stock.

INDUSTRY AND MARKET DATA

This annual report on Form 10-K includes market data and forecasts with respect to the healthcare industry. In some cases, we rely on and refer to market data and certain industry forecasts that were obtained from third party surveys, market research, consultant surveys, publicly available information and industry publications and surveys that we believe to be reliable. However, we have not independently verified data from industry analyses and cannot guarantee their accuracy or completeness. We believe that data regarding the industry, market size and its market position and market share within such industry provide general guidance but are inherently imprecise. Other industry and market data included in this annual report are from QuintilesIMS analyses and have been identified accordingly, including, for example, QuintilesIMS Market Prognosis, which is a subscription-based service that provides five-year pharmaceutical market forecasts at the national, regional and global levels. We are a leading global information provider for the healthcare industry and we maintain databases, produce market analyses and deliver information to clients in the ordinary course of our business. Our information is widely referenced in the industry and used by governments, payers, academia, the life sciences industry, the financial community and others. Most of this information is available on a subscription basis. Other reports and information are available publicly through our QuintilesIMS Institute for Healthcare Informatics (the "QuintilesIMS Institute"). All such information is based upon our own market research, internal databases and published reports and has not been verified by any independent sources. Our estimates and assumptions involve risks and uncertainties and are subject to change based on various factors, including those discussed in the "Risk Factors" section. These and other factors could cause results to differ materially from those expressed in the estimates and assumptions.

TRADEMARKS AND SERVICE MARKS

We own or have rights to trademarks and service marks that we use in connection with the operation of our business, including QuintilesIMS, Quintiles, the Quintiles logo, IMS Health, IMS, the IMS logo, IMS One, MIDAS, One Key, Xponent, DDD, MD360 Provider Performance Management and E360. All other trademarks or service marks appearing in this annual report that are not identified as marks owned by us are the property of their respective owners.

Solely for convenience, the trademarks, service marks and trade names referred to in this annual report are listed without the ® , (sm) and (TM) symbols, but we will assert, to the fullest extent under applicable law, our rights or the rights of the applicable licensors to these trademarks, service marks and trade names. We do not intend our use or display of other companies' trademarks or service marks to imply an endorsement or sponsorship of us by such other companies.

PART I

Item 1. Business

Our Company

We are a leading worldwide integrated information and technology-enabled healthcare service provider, dedicated to helping our clients improve their clinical, scientific and commercial results. Formed through the merger of Quintiles and IMS Health, QuintilesIMS's over 50,000 employees conduct operations in more than 100 countries. Our broad range of healthcare information, technology and service solutions span the entire product lifecycle, from clinical to commercial operations, bringing clients an opportunity to realize the full potential of innovations and advanced healthcare outcomes.

Following the Merger, we have one of the largest and most comprehensive collections of healthcare information in the world, which includes more than 530 million comprehensive, longitudinal, anonymous patient records spanning sales, prescription and promotional data, medical claims, electronic medical records and social media. Our scaled and growing data set contains over 20 petabytes of proprietary data sourced from more than 100,000 data suppliers and covering over 800,000 data feeds globally. Based on this data, we deliver information and insights on over 85% of the world's pharmaceuticals, as measured by 2015 sales. We standardize, organize, structure and integrate this data by applying our sophisticated analytics and leveraging our global technology infrastructure. This helps our clients run their organizations more efficiently and make better decisions to improve their clinical, commercial and financial performance. The breadth of the intelligent, actionable information we provide is not comprehensively available from any other source and our scope of information would be difficult and costly for another party to replicate.

We leverage our proprietary information assets to develop clinical and commercial capabilities with a talented healthcare-focused workforce that enables us to grow our relationships with healthcare stakeholders throughout the life science's value chain. This set of capabilities includes:

- ***A leading healthcare-specific global IT infrastructure,*** representing what we believe is one of the largest and most sophisticated information technology infrastructures in healthcare. By processing over 65 billion healthcare transactions annually, our infrastructure connects complex healthcare data while applying a wide range of privacy, security, operational, legal and contractual protections for data in response to local law, supplier requirements and industry leading practices;
- ***Data-enriched clinical development,*** which improves clinical trial design, site identification and patient recruitment by empowering therapeutic, scientific, and domain experts with expansive levels of information, including product level tracking in 90 markets, and information about treatments and outcomes on more than 530 million anonymous patients;
- ***Robust real-world insights ecosystem,*** with sophisticated retrospective database analytics, prospective real-world data collection technology platforms and scientific expertise, which enables us to address critical healthcare issues of cost, value and patient outcomes;
- ***A growing set of proprietary commercial applications,*** which support our clients' sales operations, sales management, multi-channel marketing and performance management; and
- ***A staff of more than 50,000 employees*** across the globe, including approximately 16,000 Commercial Services employees, approximately 27,000 Research & Development Solutions employees and approximately 7,000 Integrated Engagement Services employees.

Our mission-critical relationships with our life science clients consist of four important decision-making processes related to their product portfolios: Research and Development, Pre-Launch, Launch and In-Market. We continue to develop software and services applications to further deepen our level of client integration by enabling our clients to enhance and/or automate many components of these key decision-making processes.

- Market opportunity assessment
- Project management and clinical monitoring
- Clinical trial support services
- Patient recruitment
- Clinical trial laboratory services
- Strategic clinical trial planning and design
- Drug pricing optimization
- Launch readiness
- Commercial planning
- Brand positioning
- Message testing
- Influence networks
- Territory design
- Market access
- Health technology assessment
- Commercial readiness
- Forecasting
- Resource allocation
- Contract sales force
- Observational studies
- Stakeholder engagement
- Commercial operations
- Sales force effectiveness
- Sales force alignment
- Multi-channel marketing
- Client relationship management
- Lifecycle management

We believe that a powerful component of our value proposition is the breadth and depth of intelligence we provide to help our clients address fundamental operational questions.

User	Illustrative Questions		
Research & Development	Which study centers have the target patients?	Are there enough patients for my clinical trial?	How long will trial enrollment take to hit target patient volumes?
Sales	Which providers generate the highest return on representative visit?	Does my sales representative drive appropriate prescribing?	How much should I pay my sales representative next month?
Marketing	What share of patients is appropriately treated?	Which underserved patient populations will benefit most from my new drug?	Is my brand gaining market share quickly enough to hit revenue forecasts?
Real-World Evidence/Pharmacovigilance	What is the likely impact of new therapies on costs and outcomes?	Are new therapies performing better against existing standards of care in real-world settings?	Does real-world data indicate adverse events not detected in clinical trials?

Our Market Opportunity

We compete in a market of greater than $230 billion consisting of outsourced research and development, real-world evidence and connected health and technology enabled commercial operations markets for the life sciences companies and the broader healthcare industry. The following sets forth our estimates for the size of our principal markets:

- ***Outsourced research and development :*** Biopharmaceutical spending on drug development totaled approximately $100 billion in 2016. Of that amount, we estimate that our addressable market (clinical development spending excluding preclinical spending) was approximately $56 billion. The portion of this addressable market that was outsourced in 2016, based on our estimates, was approximately $24 billion;
- ***Real-World Evidence and connected health:*** Total addressable market of approximately $80 billion based on 2016 sales that consists of two relatively equal parts. First, the market for Real-World Evidence of approximately $40 billion includes traditionally defined analytic platforms and implementation, medical and scientific analytic services, observation studies and market access. Second, the market for connected healthcare of approximately $40 billion includes areas such as revenue cycle management, payer analytics and clinical decision support services; and
- ***Technology enabled commercial operations:*** Total addressable market of approximately $50 billion based on 2016 sales that includes information, data warehousing, IT outsourcing, software applications and other services in the broader market for IT services. This addressable market also includes commercial services such as recruiting, training, deploying and managing global sales forces, channel management, patient engagement services, market access consulting, brand communication, advisory services, and health information analytics and technology consulting.

In deriving estimates of the size of the various markets described above, we review third-party sources, which include estimates and forecasts of spending in various market segments, in combination with internal QuintilesIMS research and analysis informed by our experience serving these market segments, as well as projected growth rates for each of these segments.

We believe there are six key trends affecting our end markets that will create increasing demand for research and development services and commercial solutions:

Growth and innovation in the life sciences industry. The life sciences industry is a large and critical part of the global healthcare system, and, according to the latest information available from the QuintilesIMS Market Prognosis service, is estimated to have generated approximately $1.1 trillion in revenue in 2016. According to our research, revenue growth in the life sciences industry globally is expected to range from 4% to 7% between 2017 and 2021. According to the QuintilesIMS Institute, it is estimated that spending on pharmaceuticals in emerging markets will expand at a 6-9% compound annual growth rate ("CAGR") through 2021. The growth of emerging markets is making these geographies strategically important to life sciences organizations and, consistent with their approach in the developed markets, we expect these organizations to apply a high degree of sophistication to their commercial operations in these countries. For global companies, this requires highly localized knowledge and information assets, the development of market access strategies and performance benchmarking. In addition, local players are learning that they need to compete on the basis of improved information and analytics.

***Growth in Research and Development*.** Spending trends in research and development are impacted as a result of several factors, including major biopharmaceutical companies' efforts to replenish revenues lost from the so-called "patent cliff" of recent years, increased access to capital by the small and midcap biotechnology industry, and recent increases in pharmaceutical approvals by regulatory authorities. The QuintilesIMS Institute also estimates that 225 new molecular entities ("NMEs") are expected to be approved between 2017 and 2021, compared to 184 between 2011 and 2015, and 146 between 2006 and 2010. We believe that further research and development spending, combined with the continued need for cost efficiency across the healthcare landscape, will continue to create opportunities for biopharmaceutical services companies, particularly those with a global reach and broad service offerings, to help biopharmaceutical companies with their pre- and post-launch solutions development and commercialization needs.

Increased Complexity in Research and Development. Biopharmaceutical companies face environments in which it has become increasingly difficult to operate. Improved standards of care in many therapeutic areas and the emergence of new types of therapies, such as biologics, genetically targeted therapies, gene and stem cell therapies, and other treatment modalities have led to more complex development and regulatory pathways. For example, the United States and European countries have recently released guidelines for the development of "biosimilar" products. We believe that our global clinical development capabilities, including our expertise in biomarkers and genomics and our global laboratory network, position us well to help biopharmaceutical companies manage the complexities inherent in an environment where this type of expertise is important.

Regulators require clinical trials involving local populations as part of the process for approving new pharmaceutical products, especially in certain Asian and emerging markets. Understanding the epidemiological and physiological differences in different ethnic populations and being able to conduct clinical trials locally in certain geographies will be important to pharmaceutical product growth strategies, both for multinational and local/regional biopharmaceutical companies. We believe that our global clinical development capabilities and unmatched presence in Asia and other emerging markets make us a strong partner for biopharmaceutical companies managing the complexities of international drug development.

Financial pressures driving the need for increased efficiency. Despite expected accelerating growth in the global life sciences market, we believe our clients will face increased operating margin pressure due to their changing product mix, pricing and reimbursement challenges, and rising costs of compliance. Product portfolios for life sciences companies have shifted toward specialty products with lower peak market sales potential than traditional primary care medicines. We believe that the need for biopharmaceutical companies to maximize productivity and lower costs across their processes from research and development through commercial

operations will cause them to look to partners as they enter into outsourcing arrangements to improve efficiency. Further, our clients are looking for new ways to simplify processes and drive operational efficiencies by using automation, consolidating vendors and adopting new technology options such as hosted and cloud-based applications. This provides opportunities for technology services vendors to capture and consolidate internal spending by providing lower-cost and variable-cost options that lower clients' research and development, selling, marketing and administrative costs.

Evolving need to integrate and structure expanding sources of data. Over the past decade, many health systems around the world have focused on digitizing medical records. While such records theoretically enhance access to data, relevant information is often unintegrated, unstructured, siloed in disparate software systems, or entered inconsistently. In addition, new sources of data from the internet, such as social media and information on limited patient pools, and information resulting from enhanced diagnostic technologies are creating new sources of healthcare data.

In order to derive valuable insights from existing and expanding sources of information, clients need access to statistically significant data sets organized into databases that can be queried and analyzed. For example, real-world evidence studies demonstrate practical and clinical efficacies, which we believe require the aggregation and integration of large clinical data sets across all care settings, types of therapies and patient cohorts. Longitudinal studies require analysis of anonymous patient diagnoses, treatments, procedures and laboratory test results to identify types of patients that will likely best respond to particular therapies. Finally, manufacturers also require the ability to analyze social media activity to identify the specific patient and advocacy groups that influence the adoption of new orphan drugs. This information is highly relevant to all healthcare stakeholders and we believe the opportunity to more broadly apply healthcare data can only be realized through structuring, organizing and integrating new and existing forms of data in conjunction with sophisticated analytics.

Need for demonstrated value in healthcare. Participants in the healthcare industry are focused on improving quality and reducing costs, both of which require assessment of quality and value of therapies and providers. As a result, physicians no longer make prescribing decisions in isolation, but rather in the context of guidance and rules from payers, integrated delivery networks and governments. We believe life sciences companies are working to bring alignment across constituents on the value of their treatments in order to successfully develop and commercialize new therapies.

There is increasing pressure on life sciences companies to support and justify the value of their therapies. Many new drugs that are being approved are more expensive than existing therapies, and will likely receive heightened scrutiny by regulators and payers to determine whether the existing treatment options would be sufficient. Additionally, many new specialty drugs are molecular-based therapies and require a more detailed understanding of clinical factors and influencers that demonstrate therapeutic value. As a result, leading life sciences companies are utilizing more sophisticated outcome research and data analytics services.

We believe we are well positioned to take advantage of these global trends in healthcare. Beyond our proprietary information assets, we have developed key capabilities to assess opportunities to develop and commercialize therapies, support and defend the value of medicines and help our clients operate more efficiently through the application of insight-driven decision-making and cost-efficient technology solutions.

Our Growth Strategy

We believe we are well positioned for continued growth across the markets we serve. Our strategy for achieving growth includes:

Continue to innovate by leveraging our information, technology and service capabilities. As a leader in the development and commercialization of new pharmaceutical therapies, we can empower our therapeutic,

scientific and domain experts with expansive levels of information including product level tracking in 90 markets and information about treatments and outcomes on more than 530 million anonymous patients. Further, we have the ability to optimize the clinical trial process and enable our clients to reduce costs and get their products to market more quickly by running their clinical trials more efficiently and effectively through more informed site selection and faster patient recruitment practices.

Build upon our extensive client relationships . We have a diversified base of over 5,000 clients in over 100 countries, and through the Merger have expanded our client value proposition to address a broader market for research and development and commercial operations which we estimate to be $230 billion in 2016. Through the combined offerings of research and development and commercial services we built a platform that allows us to be a more complete partner to our clients.

Expand portfolio through strategic acquisitions. We have and expect to continue to acquire assets and businesses that strengthen our value proposition to clients. We have developed an internal capability to source, evaluate and integrate acquisitions that have created value for stockholders. As the global healthcare landscape evolves, we expect that there will be a growing number of acquisition opportunities across the life sciences, payer and provider sectors. We expect to continue to invest in or explore opportunities for strategic acquisitions to grow our platform and enhance our ability to provide more services to our clients.

Expand the penetration of our offerings to the broader healthcare marketplace. We believe that substantial opportunities exist to expand penetration of our addressable market and further integrate our offerings in a broader cross-section of the healthcare marketplace, particularly connected healthcare.

Our Offerings

We offer hundreds of distinct services, applications and solutions to help our clients make critical decisions and perform better. Following the Merger, we now have three operating segments: Commercial Solutions, Research & Development Solutions and Integrated Engagement Services. Their offerings complement each other and can provide enhanced value to our clients when delivered together, with each driving demand for the other.

For financial information regarding our segments, see Part II, Item 7 “Management’s Discussion and Analysis of Financial Condition and Results of Operations—Consolidated Results of Operations-Segment Results of Operations and Note 22 to our audited consolidated financial statements included elsewhere in this Annual Report on Form 10-K.

Please refer to Note 21 to our audited consolidated financial statements included elsewhere in this Annual Report on Form 10-K for further details regarding our foreign and domestic operations in 2016, 2015 and 2014. For a discussion of risks attendant to our foreign operations, see “Risk Factors — Our business is subject to international economic, political and other risks that could negatively affect our results of operations and financial condition.”

Our principal Commercial Solutions offerings include:

National information offerings. Our national offerings comprise unique services in more than 80 countries that provide consistent country level performance metrics related to sales of pharmaceutical products, prescribing trends, medical treatment and promotional activity across multiple channels including retail, hospital and mail order. These solutions are an integral part of critical processes in life science companies around the world and are also used extensively by the investment and financial sectors that deal with life science companies.

Sub-national information offerings. Our sub-national offerings comprise unique services in more than 60 countries that provide a consistent measurement of sales or prescribing activity at the regional, zip code and individual prescriber level (depending on regulation in the relevant country). These solutions are used extensively, with a majority of pharmaceutical sales organizations within these countries dependent on these services to set goals, determine resourcing, measure performance and calculate compensation.

OneKey. Our widely used reference database that tracks more than 14 million healthcare professionals in more than 70 countries, providing a comprehensive view of health care practitioners that is critical for the commercial success of our clients' marketing and sales initiatives.

Real-World Insights . We enable clients to use anonymous patient-level data to understand treatments, outcomes, and costs to inform and advance healthcare decision making. With patient privacy and security safeguards, we offer data assets that integrate medical claims, prescriptions, electronic medical records, biomarkers and government statistics as needed for research requirements. Our proprietary technologies and advanced analytic skills enable us to help payer, government, and biopharmaceutical clients manage and use this information to understand the effectiveness and economic efficiency of drugs in real-world use.

Technology solutions . We provide an extensive range of cloud-based applications and associated implementation services. SaaS solutions support a wide range of commercial and regulatory processes, including multi-channel marketing, customer relationship management ("CRM"), performance management, incentive compensation, territory alignment, roster management, call planning, compliance reporting and master data management. These solutions are used by healthcare companies to manage, optimize and execute their commercial strategies in an orchestrated manner while addressing their regulatory obligations. Using proprietary algorithms, we combine our country-level data, healthcare expertise and therapeutic knowledge in over 100 countries to create our Global Market Insight family of offerings such as MIDAS, Analytics Link and Disease Insights, which provides a leading source of insight into international market dynamics and are used by most large pharmaceutical companies.

Workflow analytics and consulting services. We provide a broad set of strategic and implementation consulting services, including advanced analytics and commercial processes outsourcing services to help the commercial operations of life sciences companies successfully transform their commercial models, engage more effectively with the healthcare stakeholders and reduce their operating costs. We also help our client's R&D function to address strategic challenges in the drug development process. Our global teams leverage local market knowledge, deep scientific and therapeutic area expertise and our global information resources to assist our clients with R&D strategy, portfolio, brand and commercial strategy, as well as pricing and market access and launch excellence.

Our principal Research & Development Solutions offerings include:

Project Management and Clinical Monitoring. Drawing upon our years of experience, our site databases, our site relationships and our highly trained staff, Clinical Solutions & Services enables the efficient conduct and coordination of multi-site clinical trials (generally Phase II-IV). Clinical Solutions & Services' service offerings include protocol design, feasibility and operational planning, site start up and patient recruitment.

Clinical Trial Support Services. Each clinical trial requires a number of concurrent services and data streams. We offer a broad range of functional services and consultation to support clinical trials through specialized expertise that help clients efficiently collect, analyze and report the quality data and evidence they need to gain regulatory approval.

Q 2 *Solutions.* We provide our clients globally scaled end-to-end clinical trial laboratory and research services through our majority-owned joint venture with Quest Diagnostics Incorporated ("Quest") which was formed on July 1, 2015. We offer clinical trial, genomic, and bioanalytical laboratory service offerings within the joint venture, which is referred to as Q 2 Solutions.

Strategic Planning and Design. Through our strategic planning and design services, we offer consultation services to improve decisions and performance including portfolio, program and protocol planning and design, biomarker consultation, benefit-risk management, regulatory affairs, biostatistics, modeling and simulation, and personalized medicine.

Our Research & Development Solutions segment is the world's largest provider of biopharmaceutical development services. We are positioned at the intersection of business services and healthcare. We use the breadth and depth of our service offerings, our global footprint and our therapeutic, scientific and analytics expertise to help biopharmaceutical companies, as well as other healthcare clients to be more successful in an increasingly complex healthcare environment.

Our Research & Development Solutions backlog was $9.5 billion at December 31, 2016 as compared to $8.9 billion at December 31, 2015. We expect $2.9 billion of this to convert to revenue over the next 12 months. See Part II, Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations – Backlog and Net New Business Reporting" for more detail.

Our principal Integrated Engagement Services offerings include:

Health Care Provider Engagement Services. We partner with biopharmaceutical companies and other life sciences providers (e.g., medical device companies) to develop and deploy tailored stakeholder engagement solutions, including contract sales and market access professionals, which maximize brand value at all stages of the product lifecycle from initial market entry to brands nearing patent expiry.

Patient Engagement Services. Our nurse-based programs directly engage with patients to help improve their disease and medication understanding through interventional and non-interventional support, while also providing assistance in navigating complex reimbursement coverage issues. Our patient engagement services combine insight from clinical trials and social listening, behavioral design, personal and innovative eHealth multichannel interactions across multiple sites (e.g., the physician's office, hospital, pharmacy, home), that act as an extension of the Health Care Provider prescribed treatment course which can lead to improved adherence and better overall outcomes.

Medical Affairs Services. We provide a range of scientific strategy and medical affairs services to help biopharmaceutical companies plan and transition from the clinical trial setting to commercialization. Beginning in the clinical trial stage, our services can deploy educators to clinical trial sites to accelerate patient recruitment and improve retention, assist in translation of complex clinical trial data into a compelling scientific platform and publication strategy, and, provide field medical teams to facilitate scientific engagement with key opinion leaders and healthcare decision makers, before and after product approval.

Our Clients

Sales to companies in life sciences, including pharmaceutical companies, biotechnology companies, device and diagnostic companies, and consumer health companies, accounted for the majority of our revenues. Nearly all of the top 100 global pharmaceutical and biotechnology companies, measured by revenue, are clients, and many of these companies subscribe to reports and services in many countries. Other clients include payers, government and regulatory agencies, providers, pharmaceutical distributors, and pharmacies. Our client base is broad in scope and enables us to avoid dependence on any single client. No single client accounted for 10% or more of our combined company revenues in 2016, 2015 or 2014.

Our Competition

Our Commercial Solutions business competes with a broad and diverse set of businesses. While we believe no competitor provides the combination of geographical reach and breadth of its services, we generally compete in the countries in which we operate with other information, analytics, technology, services and consulting companies, as well as with the in-house capabilities of our clients. Also, we compete with certain government agencies, private payers and other healthcare stakeholders that provide their data directly to others. In addition to country-by-country competition, we have a number of regional and global competitors in the marketplace as well. Our offerings compete with various firms, including Accenture, Cognizant Technology Solutions, Covance, Deloitte, Evidera, GfK, LexisNexis Risk Solutions, IBM, Infosys, inVentiv Health, Kantar Health, McKinsey, Nielsen, OptumInsight, Parexel, Press Ganey, RTI Health Solutions, Symphony Health Solutions, Synovate

Healthcare, The Advisory Board, Trizetto, Veeva, Verisk, and ZS Associates. We also compete with a broad range of new entrants and start-ups that are looking to bring new technologies and business models to healthcare information services and technology services.

The markets for Research & Development Solutions offerings are highly competitive, and we compete against traditional contract research organizations ("CROs"), the in-house research and development departments of biopharmaceutical companies, universities and teaching hospitals. Among the traditional CROs, there are several-hundred small, limited-service providers, several medium-sized firms and only a few full-service companies with global capabilities. Consolidation among CROs likely will result in greater competition among the larger CROs for customers, clinical personnel and acquisition candidates. Our primary competitors include Pharmaceutical Product Development, Inc., PAREXEL International Corporation, ICON plc, inVentiv Health, Inc., INC Research, PRA International, and Covance Inc., the drug development business of Laboratory Corporation of America Holdings, among others. Competitive factors include: previous experience and relationships; medical and scientific experience in specific therapeutic areas; the quality of contract research; speed to completion; the ability to organize and manage large scale clinical trials on a global basis; the ability to manage large and complex medical databases; the ability to provide statistical, regulatory and consulting services; the ability to recruit investigators and patients expeditiously; the ability to deploy and integrate IT systems to improve the efficiency of contract research; risk and reward sharing; the ability to form strategic alliances; a global presence with strategically located facilities and breadth of service offerings; financial strength and stability; and price.

The market for our Integrated Engagement Services competes in the post-approval arena. We compete against the in-house sales and marketing departments of biopharmaceutical companies, other contract pharmaceutical sales and service organizations and consulting firms. Integrated Engagement Services' primary competitor in the United States is Publicis. Outside of the United States, Integrated Engagement Services typically competes against single country or more regionally focused service providers, such as United Drug plc, inVentiv, EPS Corporation and CMIC HOLDINGS Co., Ltd in Japan. The primary competitive factors affecting Integrated Engagement Services are breadth of service offering and ability to deploy in an integrated manner, quality and track record, i.e. the proven ability to quickly assemble, train and manage large qualified teams on a global footprint and price. Also, we compete with certain government agencies, private payers and other healthcare stakeholders that provide their data directly to others.

Government Regulation

Many aspects of our businesses are regulated by federal and state laws, rules and regulations. Accordingly, we maintain a comprehensive compliance program and we believe we operate our business in substantial compliance with all existing legal requirements material to the operation of our businesses. There are, however, significant uncertainties involving the application of various legal requirements, the violation of which could result in, among other things, sanctions. See "Part I—Item 1A—Risk Factors" for additional detail.

Good Clinical Practice

Good Clinical Practice ("GCP") regulations and guidelines contain the industry standards for the conduct of clinical trials with respect to the integrity of the data and safety of the research subjects. The United States Food and Drug Administration ("FDA"), the European Medicines Agency ("EMA"), Japan's Ministry of Health, Labour and Welfare and many other regulatory authorities require that study results and data submitted to such authorities be based on clinical trials conducted in accordance with GCP provisions. Records for clinical trials must be maintained for specified periods for inspection by the FDA and other regulators.

Regulation of Drugs, Biologics and Medical Devices

In the United States, pharmaceutical, biological and medical device products are subject to extensive regulation by the FDA. The Federal Food, Drug, and Cosmetic Act ("FDC Act"), the Public Health Service Act ("PHS Act"), and other federal and state statutes and regulations, govern, among other things, the research, development, testing, manufacture, storage, recordkeeping, approval, labeling, promotion and marketing, distribution, post-approval monitoring and reporting, sampling, and import and export of pharmaceutical,

biological and medical device products. Failure to comply with applicable United States requirements may subject a company to a variety of administrative or judicial sanctions, such as FDA refusal to approve a pending new drug application ("NDA") for a new drug, a biologics license application ("BLA") for a new biological product pre-market approval ("PMA") or clearance for a new medical device, warning or untitled letters, product recalls, product seizures, total or partial suspension of production or distribution, injunctions, fines, civil penalties, and criminal prosecution.

Regulation of Patient Information

Our information management services relate to the diagnosis and treatment of disease and are, therefore, subject to substantial governmental regulation. In addition, the confidentiality of patient-specific information and the circumstances under which such patient-specific records may be released for inclusion in our databases or used in other aspects of our business is heavily regulated. Federal, state and foreign governments are contemplating or have proposed or adopted additional legislation governing the possession, use and dissemination of personal data, such as personal health information and personal financial data, as well as security breach notification rules for loss or theft of such data. Additional legislation or regulation of this type might, among other things, require us to implement new security measures and processes or bring within the legislation or regulation de-identified health or other personal data, each of which may require substantial expenditures or limit our ability to offer some of our services.

In particular, personal health-related information is recognized in many countries such as the United States, the European Union, or EU, and several countries in Asia, as a special, sensitive category of personal information, subject to additional mandatory protections. Violations of data protection regulations are subject to administrative penalties, civil money penalties and criminal prosecution, including corporate fines and personal liability.

Regulation of Promotion, Marketing and Distribution of Pharmaceutical Products and Medical Devices

Our services are subject to detailed and comprehensive regulation in each geographic market in which we operate. Such regulation relates, among other things, to the distribution of drug samples, the marketing and promotion of approved products, the qualifications of sales representatives and the use of healthcare professionals in sales functions.

In the United States, our services are subject to numerous federal and state laws pertaining to promotional activities involving pharmaceutical products and medical devices, such as the FDA's regulations against "off-label promotion," which require sales representatives to restrict promotion of the approved product they are detailing to the approved labeling for the product, and the Prescription Drug Marketing Act which imposes licensing, personnel record keeping, packaging, labeling, product handling and facility storage and security requirements. Other federal and state laws prohibit manufacturers, suppliers and providers from offering, giving or receiving kickbacks or other remuneration in connection with ordering or recommending the purchase or rental of healthcare items and services. The sale or distribution of pharmaceutical products and devices is also governed by the United States Federal Trade Commission Act and state consumer protection laws. We are subject to similar regulations currently in effect in the other countries where we offer Integrated Healthcare Services.

We are also subject to various laws and regulations that may apply to certain drug and device promotional practices, including, among others, various aspects of the Medicare program. Violations of these laws and regulations may result in criminal and/or civil penalties, including possibly as an "aider and abettor."

Regulation of Laboratories

Our United States "central" laboratories are subject to licensing and regulation under federal, state and local laws relating to hazard communication and employee right-to-know regulations, and the safety and health of laboratory employees. Additionally, our United States laboratories are subject to applicable federal and state laws and regulations and licensing requirements relating to the handling, storage and disposal of hazardous waste, radioactive materials and laboratory specimens, including the regulations of the Environmental Protection Agency, the Nuclear Regulatory Commission, the Department of Transportation, the National Fire Protection Agency and the United States Drug Enforcement Administration ("DEA"). The use of controlled substances in testing for drugs with a potential for abuse is regulated in the United States by the DEA and by similar regulatory bodies in other parts of the world. Our United States laboratories using controlled substances for testing purposes are licensed by the DEA. The regulations of the United States Department of Transportation, Public Health Service and Postal Service apply to the surface and air transportation of laboratory specimens. Our laboratories also are subject to International Air Transport Association regulations, which govern international shipments of laboratory specimens. Furthermore, when the materials are sent to a foreign country, the transportation of such materials becomes subject to the laws, rules and regulations of such foreign country. Our laboratories outside the United States are subject to applicable national laws governing matters such as licensing, the handling and disposal of medical specimens, hazardous waste and radioactive materials, as well as the health and safety of laboratory employees.

In addition to its comprehensive regulation of safety in the workplace, the United States Occupational Safety and Health Administration has established extensive requirements relating to workplace safety for healthcare employers whose workers may be exposed to blood-borne pathogens such as HIV and the hepatitis B virus. Although we believe that we are currently in compliance in all material respects with such federal, state and local laws, failure to comply with such laws could subject us to denial of the right to conduct business, fines, criminal penalties and other enforcement actions.

Further, laboratories that analyze human blood or other biological samples for the diagnosis and treatment of clinical trial subjects must comply with Clinical Laboratory Improvement Amendments ("CLIA"), as well as requirements established by various states. The failure to meet these requirements may result in civil penalties and suspension or revocation of the CLIA certification.

Our Intellectual Property

In addition to our proprietary data sets described above, we develop and use a number of proprietary methodologies, analytics, systems, technologies and other intellectual property in the conduct of our business. We rely upon a combination of legal, technical, and administrative safeguards to protect our proprietary and confidential information and trade secrets, and patent, copyright and trademark laws to protect other intellectual property rights. We consider our trademark and related names, marks and logos to be of material importance to our business, and we have registered or applied for registration for certain of these trademarks including QuintilesIMS, Quintiles, IMS Health and IMS, in the United States and other jurisdictions and aggressively seek to protect them. Trademarks and service marks generally may be renewed indefinitely so long as they are in use and/or their registrations are properly maintained, and so long as they have not been found to have become generic. Although we believe the ownership of our patents, trademarks and service marks is an important factor in our business and that our success does depend in part on the ownership thereof, we rely primarily on the innovative skills, technical competence and marketing abilities of our employees.

Our Employees

As of December 31, 2016, we have over 50,000 employees worldwide. Almost all of these employees are full-time. None of our employees are covered by a collective bargaining agreement or are represented by a labor
union. Employees in certain locations outside of the United States are represented by works councils as required

by local laws. We believe that our relations with our employees are good and have been maintained in a normal and customary manner.

Available Information

Our website address is www.quintilesims.com , and our investor relations website is located at http://ir.quintilesims.com . Information on our website is not incorporated by reference herein. Copies of our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and our Proxy Statements for our annual meetings of stockholders, and any amendments to those reports, as well as Section 16 reports filed by our insiders, are available free of charge on our website as soon as reasonably practicable after we file the reports with, or furnish the reports to, the Securities and Exchange Commission ("SEC"). Our SEC filings are also available for reading and copying at the SEC's Public Reference Room at 100 F Street, NE, Washington, D.C. 20549. Information on the operation of the Public Reference Room may be obtained by calling the SEC at 1-800-SEC-0330. In addition, the SEC maintains an Internet site (http://www.sec.gov) containing reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC. Information on the SEC's website does not constitute part of this report. Also posted on our website are our certificate of incorporation and by-laws, the charters for our Audit Committee, Leadership Development and Compensation Committee and Nominating and Governance Committee, our Corporate Governance Guidelines, and our Code of Conduct governing our directors, officers and employees. Copies of our SEC reports and corporate governance information are available in print upon the request of any stockholder to our Investor Relations Department. Within the time period required by the SEC and the New York Stock Exchange ("NYSE"), we will post on our website any amendment to the Code of Business Conduct or the Code of Ethics for Chief Executive Officer and Senior Financial Officers or any waiver of either such policy applicable to any of our senior financial officers, executive officers or directors.

Item 1A. Risk Factors

RISK FACTORS

We operate in a rapidly changing environment that involves a number of risks, some of which are beyond our control. You should consider carefully the risks and uncertainties described below together with the other information included in this Annual Report on Form 10-K, including our consolidated financial statements and related notes included elsewhere in this Annual Report on Form 10-K, in evaluating our company. The occurrence of any of the following risks may materially and adversely affect our business, financial condition, results of operations and future prospects.

Risks Relating to Our Business

The potential loss or delay of our large contracts or of multiple contracts could adversely affect our results.

Most of our Research & Development Solutions clients can terminate our contracts upon 30 to 90 days notice. Our clients may delay, terminate or reduce the scope of our contracts for a variety of reasons beyond our control, including but not limited to:

- decisions to forego or terminate a particular clinical trial;
- lack of available financing, budgetary limits or changing priorities;
- actions by regulatory authorities;
- production problems resulting in shortages of the drug being tested;
- failure of products being tested to satisfy safety requirements or efficacy criteria;
- unexpected or undesired clinical results for products;
- insufficient patient enrollment in a clinical trial;
- insufficient investigator recruitment;
- shift of business to a competitor or internal resources;
- product withdrawal following market launch; or
- shut down of manufacturing facilities.

As a result, contract terminations, delays and alterations are a regular part of our Research & Development Solutions business. In the event of termination, our contracts often provide for fees for winding down the project, but these fees may not be sufficient for us to maintain our margins, and termination may result in lower resource utilization rates. In addition, we may not realize the full benefits of our backlog of contractually committed services if our clients cancel, delay or reduce their commitments under our contracts with them, which may occur if, among other things, a client decides to shift its business to a competitor or revoke our status as a preferred provider. Thus, the loss or delay of a large contract or the loss or delay of multiple contracts could adversely affect our revenues and profitability. We believe the risk of loss or delay of multiple contracts potentially has greater effect where we are party to broader partnering arrangements with global biopharmaceutical companies.

We depend on third parties for data and support services. Our suppliers or providers might restrict our use of or refuse to license data or provide services, which could lead to our inability to access certain data or provide certain services and, as a result, materially and adversely affect our operating results and financial condition.

Each of our Commercial Solutions information services is derived from data we collect from third parties. These data suppliers are numerous and diverse, reflecting the broad scope of information that we collect and use in our business.

Although we typically enter into long-term contractual arrangements with many of these suppliers of data, at the time of entry into a new contract or renewal of an existing contract, suppliers may increase restrictions on our use of such data, increase the price they charge us for data or refuse altogether to license the data to us. In addition, during the term of any data supply contract, suppliers may fail to adhere to our data quality control standards or fail to deliver data. Further, although no single individual data supplier is material to our business, if a number of suppliers collectively representing a significant amount of data that we use for one or more of our services were to impose additional contractual restrictions on our use of or access to data, fail to adhere to our quality-control standards, repeatedly fail to deliver data or refuse to provide data, now or in the future, our ability to provide those services to our clients could be materially adversely impacted, which may harm our operating results and financial condition.

Additionally, we depend on third parties for support services to our business. Such support services include, but are not limited to, third-party transportation providers, suppliers of drugs for patients participating in clinical trials, suppliers of kits for use in our clinical trial laboratories business, suppliers of reagents for use in our testing equipment and providers of maintenance contracts for our equipment. The failure of any of these third parties to adequately provide the critical support services could have a material adverse effect on our business.

If we fail to perform our services in accordance with contractual requirements, regulatory standards and ethical considerations, we could be subject to significant costs or liability and our reputation could be harmed.

In connection with our Research & Development Solutions business, we contract with biopharmaceutical companies to perform a wide range of services to assist them in bringing new drugs to market. Our services include monitoring clinical trials, data and laboratory analysis, electronic data capture, patient recruitment and other related services. Such services are complex and subject to contractual requirements, regulatory standards and ethical considerations. For example, we must adhere to regulatory requirements such as the FDA and current GCP, Good Laboratory Practice and Good Manufacturing Practice requirements. If we fail to perform our services in accordance with these requirements, regulatory agencies may take action against us for failure to comply with applicable regulations governing clinical trials or sales and marketing practices. Such actions may include sanctions, such as injunctions or failure of such regulatory authorities to grant marketing approval of products, delay, suspension or withdrawal of approvals, license revocation, product seizures or recalls, operational restrictions, civil or criminal penalties or prosecutions, damages or fines. Clients may also bring claims against us for breach of our contractual obligations and patients in the clinical trials and patients taking drugs approved on the basis of those clinical trials may bring personal injury claims against us for negligence. Any such action could have a material adverse effect on our results of operations, financial condition and reputation.

Such consequences could arise if, among other things, the following occur:

Improper performance of our services. The performance of clinical development services is complex and time-consuming. For example, we may make mistakes in conducting a clinical trial that could negatively impact

or obviate the usefulness of the clinical trial or cause the results of the clinical trial to be reported improperly. If the clinical trial results are compromised, we could be subject to significant costs or liability, which could have an adverse impact on our ability to perform our services. As examples:

- non-compliance generally could result in the termination of ongoing clinical trials or sales and marketing projects or the disqualification of data for submission to regulatory authorities;
- compromise of data from a particular clinical trial, such as failure to verify that informed consent was obtained from patients, could require us to repeat the clinical trial under the terms of our contract at no further cost to our client, but at a substantial cost to us; and
- breach of a contractual term could result in liability for damages or termination of the contract.

Large clinical trials can cost up to hundreds of millions of dollars, and while we endeavor to contractually limit our exposure to such risks, improper performance of our services could have an adverse effect on our financial condition, damage our reputation and result in the cancellation of current contracts by or failure to obtain future contracts from the affected client or other clients.

Investigation of clients. From time to time, one or more of our clients are audited or investigated by regulatory authorities or enforcement agencies with respect to regulatory compliance of their clinical trials, programs or the marketing and sale of their drugs. In these situations, we have often provided services to our clients with respect to the clinical trials, programs or activities being audited or investigated, and we are called upon to respond to requests for information by the authorities and agencies. There is a risk that either our clients or regulatory authorities could claim that we performed our services improperly or that we are responsible for clinical trial or program compliance. If our clients or regulatory authorities make such claims against us and prove them, we could be subject to damages, fines or penalties. In addition, negative publicity regarding regulatory compliance of our clients' clinical trials, programs or drugs could have an adverse effect on our business and reputation.

Insufficient client funding to complete a clinical trial. As noted above, clinical trials can cost hundreds of millions of dollars. There is a risk that we may initiate a clinical trial for a client, and then the client becomes unwilling or unable to fund the completion of the clinical trial. In such a situation, notwithstanding the client's ability or willingness to pay for or otherwise facilitate the completion of the clinical trial, we may be ethically bound to complete or wind down the clinical trial at our own expense.

Security breaches and unauthorized use of our IT systems and information, or the IT systems or information in the possession of our vendors, could expose us, our clients, our data suppliers or others to risk of loss.

We rely upon the security of our computer and communications systems infrastructure to protect us from cyberattacks and unauthorized access. Cyberattacks can include malware, computer viruses, hacking or other significant disruption of our computer, communications and related systems. Although we take steps to manage and avoid these risks and to prevent their recurrence, our preventive and remedial actions may not be successful. Such attacks, whether successful or unsuccessful, could result in our incurring costs related to, for example, rebuilding internal systems, defending against litigation, responding to regulatory inquiries or actions, paying damages or fines, or taking other remedial steps with respect to third parties. Publicity about vulnerabilities and attempted or successful incursions could damage our reputation with clients and data suppliers and reduce demand for our services.

We also store proprietary and sensitive information in connection with our business, which could be compromised by a cyberattack. To the extent that any disruption or security breach results in a loss or damage to our data, an inappropriate disclosure of proprietary or sensitive information, an inability to access data sources, or an inability to process data or provide our offerings to our clients, it could cause significant damage to our

reputation, affect our relationships with our data suppliers and clients (including loss of suppliers and clients), lead to claims against us and ultimately harm our business. We may be required to incur significant costs to alleviate, remedy or protect against damage caused by these disruptions or security breaches in the future. We may also face inquiry or increased scrutiny from government agencies as a result of any such disruption or breach. While we have insurance coverage for certain instances of a cyber security breach, our coverage may not be sufficient if we suffer a significant attack or multiple attacks. Any such breach or disruption could have a material adverse effect on our operating results and our reputation as a provider of mission-critical services.

Some of our vendors have significant responsibility for the security of certain of our data centers and computer-based platforms. Also, our data suppliers have responsibility for security of their own computer and communications environments. These third parties face risks relating to cyber security similar to ours, which could disrupt their businesses and therefore materially impact ours. Accordingly, we are subject to any flaw in or breaches to their computer and communications systems or those that they operate for us, which could result in a material adverse effect on our business, operations and financial results.

Failure to meet productivity objectives under our internal business transformation initiatives could adversely impact our competitiveness and harm our operating results.

We are pursuing business transformation initiatives to update technology, increase innovation and obtain operating efficiencies. As part of these initiatives, we seek to improve our productivity, flexibility, quality, functionality and cost savings by investing in the development and implementation of global platforms and integration of our business processes and functions to achieve economies of scale. For example, we hired and trained more than 500 people to form a center of excellence ("COE") in Manila, The Philippines for standardizing and cleaning data received from data suppliers, developed updated tools for standardizing and cleaning data, are moving local standardizing and cleaning from countries around the world to the Manila COE, and retired local standardizing and cleaning systems. These various initiatives may not yield their intended gains, which may impact our competitiveness and our ability to meet our growth objectives and, as a result, materially and adversely affect our business, operating results and financial condition.

If we are unsuccessful at investing in growth opportunities, our business could be materially and adversely affected.

We continue to invest significantly in growth opportunities, including the development and acquisition of new data, technologies and services to meet our clients' needs. For example, we are expanding our services and technology offerings, such as the development of a cloud-based platform with a growing number of applications to support commercial operations for life sciences companies (e.g., multi-channel marketing, marketing campaign management, customer relationship management, incentive compensation management, targeting and segmentation, performance management and other applications). We also continue to invest significantly in growth opportunities in emerging markets, such as the development, launch and enhancement of services in China, India, Russia, Turkey and other countries. We believe healthcare spending in these emerging markets will continue to grow over the next five years, and we consider our presence in these markets to be an important focus of our growth strategy.

There is no assurance that our investment plans or growth strategy will be successful or will produce a sufficient or any return on our investments. Further, if we are unable to develop new technologies and services, clients do not purchase our new technologies and services, our new technologies and services do not work as intended or there are delays in the availability or adoption of our new technologies and services, then we may not be able to grow our business or growth may occur slower than anticipated. Additionally, although we expect continued growth in healthcare spending in emerging markets, such spending may occur more slowly or not at all, and we may not benefit from our investments in these markets.

We plan to fund growth opportunities with cash from operations or from future financings. There can be no assurance that those sources will be available in sufficient amounts to fund future growth opportunities when needed.

Any of the foregoing could have a material and adverse effect on our operating results and financial condition.

Data protection, privacy and similar laws restrict access, use and disclosure of information, and failure to comply with or adapt to changes in these laws could materially and adversely harm our business.

Patient health information is among the most sensitive of personal information and it is critical that information about an individual's healthcare is properly protected from inappropriate access, use and disclosure. Laws restricting access, use and disclosure of such information include the Health Insurance Portability and Accountability Act of 1996 ("HIPAA"), the European Union ("EU") Data Protection Directive (which will be superseded by the General Data Protection Regulation), Canada's Personal Information Protection and Electronic Documents Act and other data protection, privacy and similar national, state/provincial and local laws. We have established frameworks, models, processes and technologies to manage privacy for many data types, from a variety of sources, and under myriad privacy and data protection laws worldwide. In addition, we rely on our data suppliers to deliver information to us in a form and in a manner that complies with applicable privacy and data protection laws. These laws are complex and there is no assurance that the safeguards and controls employed by us or our data suppliers will be sufficient to prevent a breach of these laws, or that claims will not be filed against us or our data suppliers despite such safeguards and controls. For example, in February 2014, a group of individuals filed a civil lawsuit in Korea against IMS Health Korea Ltd., our wholly-owned subsidiary ("IMS Korea"), the Korean Pharmaceutical Association ("KPA"), and a KPA affiliate that supplies data to IMS Korea. The lawsuit alleges the KPA affiliate collected plaintiffs' personal information without the necessary consent in violation of applicable privacy laws and transferred such information to IMS Korea for sale to clients. In addition, in July 2015, indictments were issued by the Seoul Central District Prosecutors' Office in South Korea against IMS Korea and two of its employees, among others, alleging improper handling of sensitive health information in violation of applicable privacy laws. Alleged or actual failure to comply with such laws may result in, among other things, negative publicity, damage to our reputation, civil and criminal liability, data being blocked from use or liability under contractual provisions.

Laws and expectations relating to privacy continue to evolve, and we continue to adapt to changing needs. Nevertheless, changes in these laws (including newly released interpretations of these laws by courts and regulatory bodies) may limit our data access, use and disclosure, and may require increased expenditures by us or may dictate that we not offer certain types of services. Any of the foregoing may have a material adverse impact on our ability to provide services to our clients or maintain our profitability.

There is ongoing concern from privacy advocates, regulators and others regarding data protection and privacy issues, and the number of jurisdictions with data protection and privacy laws has been increasing. Also, there are ongoing public policy discussions regarding whether the standards for de-identified, anonymous or pseudonomized health information are sufficient, and the risk of re-identification sufficiently small, to adequately protect patient privacy. These discussions may lead to further restrictions on the use of such information. There can be no assurance that these initiatives or future initiatives will not adversely affect our ability to access and use data or to develop or market current or future services.

Data protection, privacy and similar laws protect more than patient information, and although they vary by jurisdiction, these laws can extend to employee information, business contact information, provider information and other information relating to identifiable individuals. Failure to comply with these laws may result in, among other things, civil and criminal liability, negative publicity, damage to our reputation and liability under contractual provisions. In addition, compliance with such laws may require increased costs to us or may dictate that we not offer certain types of services.

The occurrence of any of the foregoing could impact our ability to provide the same level of service to our clients, require us to modify our offerings or increase our costs, which could materially and adversely affect our operating results and financial condition.

Current and proposed laws and regulations regarding the protection of personal data could result in increased risks of liability or increased cost to us or could limit our service offerings.

The confidentiality, collection, use and disclosure of personal data, including clinical trial patient-specific information, are subject to governmental regulation generally in the country that the personal data were collected or used. For example, United States federal regulations under Health Insurance Portability and Accountability Act of 1996 ("HIPAA") and as amended in 2014 by the Health Information Technology for Economic and Clinical Health ("HITECH") Act, require individuals' written authorization, in addition to any required informed consent, before Protected Health Information may be used for research. We are both directly and indirectly affected by the privacy provisions surrounding individual authorizations because many investigators with whom we are involved in clinical trials are directly subject to them as a HIPAA "covered entity" and because we obtain identifiable health information from third parties that are subject to such regulations. As there are some instances where we are a HIPAA "business associate" of a "covered entity," we can also be directly liable for mishandling protected health information. Under HIPAA's enforcement scheme, we can be subject to up to $1.5 million in annual civil penalties for each HIPAA violation.

In the EU personal data includes any information that relates to an identified or identifiable natural person with health information carrying additional obligations, including obtaining the explicit consent from the individual for collection, use or disclosure of the information. In addition, we are subject to EU rules with respect to cross-border transfers of such data out of the EU. The United States, the EU and its member states, and other countries where we have operations, such as Japan, South Korea, Malaysia, the Philippines, Russia and Singapore, continue to issue new privacy and data protection rules and regulations that relate to personal data and health information. Failure to comply with certain certification/registration and annual re-certification/registration provisions associated with these data protection and privacy regulations and rules in various jurisdictions, or to resolve any serious privacy complaints, could subject us to regulatory sanctions, criminal prosecution or civil liability. Federal, state and foreign governments are contemplating or have proposed or adopted additional legislation governing the collection, possession, use or dissemination of personal data, such as personal health information, and personal financial data as well as security breach notification rules for loss or theft of such data. Additional legislation or regulation of this type might, among other things, require us to implement new security measures and processes or bring within the legislation other personal data, each of which may require substantial expenditures or limit our ability to offer some of our services. Additionally, if we violate applicable laws, regulations or duties relating to the use, privacy or security of personal data, we could be subject to civil liability or criminal prosecution, be forced to alter our business practices and suffer reputational harm.

Our success depends on our ability to protect our intellectual property rights.

Our success depends, in part, upon our ability to develop, use and protect our proprietary methodologies, analytics, systems, technologies and other intellectual property. Existing laws of the various countries in which we provide services or solutions offer only limited protection of our intellectual property rights, and the protection in some countries may be very limited. We rely upon a combination of trade secrets, confidentiality policies, nondisclosure, invention assignment and other contractual arrangements, and patent, copyright and trademark laws, to protect our intellectual property rights. These laws are subject to change at any time and certain agreements may not be fully enforceable, which could further restrict our ability to protect our innovations. Our intellectual property rights may not prevent competitors from independently developing services similar to or duplicative of ours. Further, the steps we take in this regard might not be adequate to prevent or deter infringement or other misappropriation of our intellectual property by competitors, former employees or other third parties, and we might not be able to detect unauthorized use of, or take appropriate and timely steps to enforce, our intellectual property rights.

Our ability to obtain, protect and enforce our intellectual property rights is subject to general litigation or third-party opposition risks, as well as the uncertainty as to the scope of protection, registrability, patentability, validity and enforceability of our intellectual property rights in each applicable country. Governments may adopt regulations, and government agencies or courts may render decisions, requiring compulsory licensing of intellectual property rights. When we seek to enforce our intellectual property rights we may be subject to claims that the intellectual property rights are invalid or unenforceable. Litigation may be necessary in the future to enforce our intellectual property rights and to protect our confidential and proprietary information. Litigation brought to protect and enforce our intellectual property rights could be costly, time consuming and distracting to management and could result in the impairment or loss of portions of our intellectual property rights. Furthermore, our efforts to enforce our intellectual property rights may be met with defenses, counterclaims and countersuits attacking the validity and enforceability of our intellectual property rights. Our inability to protect our proprietary technology against unauthorized copying or use, as well as any costly litigation or diversion of our management's attention and resources, could delay further sales or the implementation of our solutions, impair the functionality of our solutions, delay introductions of new solutions, result in our substituting inferior or more costly technologies into our solutions, or injure our reputation and harm our operating results and financial condition.

Depending on the circumstances, we might need to grant a specific client greater rights in intellectual property developed in connection with a contract than we otherwise generally do. In certain situations, we might forego all rights to the use of intellectual property we create, which would limit our ability to reuse that intellectual property for other clients. Any limitation on our ability to provide a service or solution could cause us to lose revenue-generating opportunities and require us to incur additional expenses to develop or license new or modified solutions for future projects.

The theft or unauthorized use or publication of our trade secrets and other confidential business information could reduce the differentiation of our services and harm our business; the value of our investment in development or business acquisitions could be reduced; and third parties might make claims against us related to losses of their confidential or proprietary information. In addition, we may not be able to discover or determine the extent of any unauthorized use of our proprietary rights. Third parties that license our proprietary rights also may take actions that diminish the value of our proprietary rights or reputation. The protection of our intellectual property may require the expenditure of significant financial and managerial resources. Moreover, the steps we take to protect our intellectual property may not adequately protect our rights or prevent third parties from infringing or misappropriating our proprietary rights. These incidents and claims could harm our business, reduce revenue, increase expenses and harm our reputation.

We may be subject to claims by others that we are infringing on their intellectual property rights.

Third parties may assert claims that we or our clients infringe their intellectual property rights and these claims, with or without merit, could be expensive to litigate, cause us to incur substantial costs and divert management resources and attention in defending the claim. In some jurisdictions, plaintiffs can also seek injunctive relief that may limit the operation of our business or prevent the marketing and selling of our services that infringe on the plaintiff's intellectual property rights. To resolve these claims, we may enter into licensing agreements with restrictive terms or significant fees, stop selling, be required to implement costly redesigns to the affected services, or pay damages to satisfy contractual obligations to others. If we do not resolve these claims in advance of a trial, there is no guarantee that we will be successful in court. These outcomes may have a material adverse impact on our business, operating results and financial condition.

In addition, certain contracts with our suppliers or clients contain provisions whereby we indemnify, subject to certain limitations, the counterparty for damages suffered as a result of claims related to intellectual property infringement and the use of our data. Claims made under these provisions could be expensive to litigate and could result in significant payments.

We rely on licenses from third parties to certain technology and intellectual property rights for some of our services and the licenses we currently have could terminate or expire.

Some of our Commercial Solutions services rely on technology or intellectual property rights owned and controlled by others. Our licenses to this technology or these intellectual property rights could be terminated or could expire. We may be unable to replace these licenses in a timely manner. Failure to renew these licenses, or renewals of these licenses on less advantageous terms, could harm our operating results and financial condition.

Our financial results may be adversely affected if we underprice our contracts, overrun our cost estimates or fail to receive approval for or experience delays in documenting change orders.

Most of our Research & Development Solutions contracts are either fee for service contracts or fixed-fee contracts. Our past financial results have been, and our future financial results may be, adversely impacted if we initially underprice our contracts or otherwise overrun our cost estimates and are unable to successfully negotiate a change order. Change orders typically occur when the scope of work we perform needs to be modified from that originally contemplated by our contract with the client. Modifications can occur, for example, when there is a change in a key clinical trial assumption or parameter or a significant change in timing. Where we are not successful in converting out-of-scope work into change orders under our current contracts, we bear the cost of the additional work. Such underpricing, significant cost overruns or delay in documentation of change orders could have a material adverse effect on our business, results of operations, financial condition or cash flows.

The relationship of backlog to revenues varies over time.

Backlog, on an "as-contracted" basis, represents future revenues for our Research & Development Solutions business from work not yet completed or performed under signed binding commitments and signed contracts. Once work begins on a project, revenue is recognized over the duration of the project. Projects may be terminated or delayed by the client or delayed by regulatory authorities for reasons beyond our control. To the extent projects are delayed, the timing of our revenue could be affected. In the event that a client cancels a contract, we typically would be entitled to receive payment for all services performed up to the cancellation date and subsequent client-authorized services related to terminating the canceled project. Typically, however, we have no contractual right to the full amount of the revenue reflected in our backlog in the event of a contract cancellation. The duration of the projects included in our backlog, and the related revenue recognition, range from a few weeks to many years. Our backlog may not be indicative of our future revenues from our Research & Development Solutions business, and we may not realize all the anticipated future revenue reflected in our backlog. A number of factors may affect backlog, including:

- the size, complexity and duration of the projects;
- the cancellation or delay of projects; and
- change in the scope of work during the course of a project.

Although an increase in backlog will generally result in an increase in revenues to be recognized over time (depending on the level of cancellations), an increase in backlog at a particular point in time does not necessarily correspond directly to an increase in revenues during a particular period. Computing backlog on an "as-contracted basis" rather than an "as awarded" basis may result in additions to the backlog later in the sales cycle than using the "as awarded" basis and may result in different rates of conversion from backlog to revenue than experienced using the "as awarded" basis. The extent to which contracts in backlog will result in revenue depends on many factors, including but not limited to delivery against projected schedules, the need for scope changes (change orders), contract cancellations and the nature, duration, size, complexity and phase of the contracts, each of which factors can vary significantly from time to time.

The rate at which our backlog converts to revenue may vary over time for a variety of reasons. The revenue recognition on larger, more global projects could be slower than on smaller, less global projects for a variety of

reasons, including but not limited to an extended period of negotiation between the time the project is awarded to us and the actual execution of the contract, as well as an increased timeframe for obtaining the necessary regulatory approvals. Additionally, the increased complexity of clinical trials and the need to enroll precise patient populations could extend the length of clinical trials causing revenue to be recognized over a longer period of time. Further, delayed projects will remain in backlog, unless otherwise canceled by the client, and will not generate revenue at the rate originally expected. Thus, the relationship of backlog to realized revenues may vary over time.

Our business depends on the continued effectiveness and availability of our information systems, including the information systems we use to provide our services to our clients, and failures of these systems may materially limit our operations.

Due to the global nature of our business and our reliance on information systems to provide our services, we intend to increase our use of web-enabled and other integrated information systems in delivering our services. We also provide access to similar information systems to certain of our clients in connection with the services we provide them. As the breadth and complexity of our information systems continue to grow, we will increasingly be exposed to the risks inherent in the development, integration and ongoing operation of evolving information systems, including:

- disruption, impairment or failure of data centers, telecommunications facilities or other key infrastructure platforms;
- security breaches of, cyberattacks on and other failures or malfunctions in our critical application systems or their associated hardware; and
- excessive costs, excessive delays or other deficiencies in systems development and deployment.

The materialization of any of these risks may impede the processing of data, the delivery of databases and services, and the day-to-day management of our business and could result in the corruption, loss or unauthorized disclosure of proprietary, confidential or other data. While we have disaster recovery plans in place, they might not adequately protect us in the event of a system failure. While many of our operations have disaster recovery plans in place, we currently do not have excess or standby computer processing or network capacity everywhere in the world to avoid disruption in the receipt, processing and delivery of data in the event of a system failure. Despite any precautions we take, damage from fire, floods, hurricanes, power loss, telecommunications failures, computer viruses, break-ins and similar events at our various computer facilities could result in interruptions in the flow of data to our servers and from our servers to our clients. Corruption or loss of data may result in the need to repeat a clinical trial at no cost to the client, but at significant cost to us, the termination of a contract or damage to our reputation.

In addition, any failure by our computer environment to provide sufficient processing or network capacity to transfer data could result in interruptions in our service. In the event of a delay in the delivery of data, we could be required to transfer our data collection operations to an alternative provider of server hosting services. Such a transfer could result in significant delays in our ability to deliver services to our clients, and increase our costs. Additionally, significant delays in system enhancements or inadequate performance of new or upgraded systems once completed could damage our reputation and harm our business. Finally, long-term disruptions in the infrastructure caused by events such as natural disasters, the outbreak of war, the escalation of hostilities and acts of terrorism, particularly involving cities in which we have offices, could adversely affect our businesses. Although we carry property and business interruption insurance, our coverage might not be adequate to compensate us for all losses that may occur.

We have continued to undertake significant programs to optimize business processes with respect to our services. Our inability to effectively manage the implementation and adapt to new processes designed into new or upgraded systems in a timely and cost-effective manner may result in disruption to our business and negatively affect our operations.

We have entered into agreements with certain vendors to provide systems development and integration services that develop or license to us the IT platform for programs to optimize our business processes. If such vendors fail to perform as required or if there are substantial delays in developing, implementing and updating the IT platform, our client delivery may be impaired, and we may have to make substantial further investments, internally or with third parties, to achieve our objectives. Additionally, our progress may be limited by parties with existing or claimed patents who seek to enjoin us from using preferred technology or seek license payments from us. Meeting our objectives is dependent on a number of factors which may not take place as we anticipate, including obtaining adequate technology-enabled services, creating IT-enabled services that our clients will find desirable and implementing our business model with respect to these services. Also, increased IT-related expenditures may negatively impact our profitability.

We may experience challenges with the acquisition, development, enhancement or deployment of technology necessary for our business.

We operate in businesses that require sophisticated computer systems and software for data collection, data processing, cloud-based platforms, analytics, cryptography, statistical projections and forecasting, mobile computing, social media analytics and other applications and technologies, particularly our Commercial Solutions business. We seek to address our technology risks by increasing our reliance on the use of innovations by cross-industry technology leaders and adapt these for our biopharmaceutical and healthcare industry clients. Some of these technologies supporting the industries we serve are changing rapidly and we must continue to adapt to these changes in a timely and effective manner at an acceptable cost. We also must continue to deliver data to our clients in forms that are easy to use while simultaneously providing clear answers to complex questions. There can be no guarantee that we will be able to develop, acquire or integrate new technologies, that these new technologies will meet our clients' needs or achieve expected investment goals, or that we will be able to do so as quickly or cost-effectively as our competitors. Significant technological change could render our services obsolete. Moreover, the introduction of new services embodying new technologies could render existing services obsolete. Our continued success will depend on our ability to adapt to changing technologies, manage and process ever-increasing amounts of data and information and improve the performance, features and reliability of our services in response to changing client and industry demands. We may experience difficulties that could delay or prevent the successful design, development, testing, introduction or marketing of our services. New services, or enhancements to existing services, may not adequately meet the requirements of current and prospective clients or achieve any degree of significant market acceptance. Any of these failures could have a material adverse effect on our operating results and financial condition.

Consolidation in the industries in which our clients operate may reduce the volume of services purchased by consolidated clients following an acquisition or merger, which could materially harm our operating results and financial condition.

Mergers or consolidations among our clients have in the past and could in the future reduce the number of our clients and potential clients. When companies consolidate, overlapping services previously purchased separately are usually purchased only once by the combined entity, leading to loss of revenue. Other services that were previously purchased by one of the merged or consolidated entities may be deemed unnecessary or cancelled. If our clients merge with or are acquired by other entities that are not our clients, or that use fewer of our services, they may discontinue or reduce their use of our services. There can be no assurance as to the degree to which we may be able to address the revenue impact of such consolidation. Any of these developments could materially harm our operating results and financial condition.

We may be adversely affected by client or therapeutic concentration.

Although we did not have any client that represented 10% or more of our revenues in 2016, 2015 and 2014, we derive the majority of our revenues from a number of large clients. If any large client decreases or terminates its relationship with us, our business, results of operations or financial condition could be materially adversely affected.

Additionally, conducting multiple clinical trials for different clients in a single therapeutic class involving drugs with the same or similar chemical action has in the past and may in the future adversely affect our business if some or all of the clinical trials are canceled because of new scientific information or regulatory judgments that affect the drugs as a class or if industry consolidation results in the rationalization of drug development pipelines. Similarly, marketing and selling drugs for different biopharmaceutical companies with similar chemical actions subjects us to risk if new scientific information or regulatory judgment prejudices the drugs as a class, which may lead to compelled or voluntary prescription limitations or withdrawal of some or all of such drugs from the market.

Our business is subject to international economic, political and other risks that could negatively affect our results of operations and financial condition.

We have significant operations in countries that may require complex arrangements to deliver services throughout the world for our clients. Additionally, we have established operations in locations remote from our most developed business centers. As a result, we are subject to heightened risks inherent in conducting business internationally, including the following:

- required compliance with a variety of local laws and regulations which may be materially different than those to which we are subject in the United States or which may change unexpectedly; for example, conducting a single clinical trial across multiple countries is complex, and issues in one country, such as a failure to comply with local regulations or restrictions, may affect the progress of the clinical trial in the other countries, for example, by limiting the amount of data necessary for a clinical trial to proceed, resulting in delays or potential cancellation of contracts, which in turn may result in loss of revenue;
- the United States or foreign countries could enact legislation or impose regulations or other restrictions, including unfavorable labor regulations, tax policies or economic sanctions, which could have an adverse effect on our ability to conduct business in or expatriate profits from the countries in which we operate, including hiring, retaining and overseeing qualified management personnel for managing operations in multiple countries, differing employment practices and labor issues, and tax-related risks, including the imposition of taxes and the lack of beneficial treaties, that result in a higher effective tax rate for us;
- foreign countries are expanding or may expand their regulatory framework with respect to patient informed consent, protection and compensation in clinical trials, which could delay or inhibit our ability to conduct clinical trials in such jurisdictions;
- the regulatory or judicial authorities of foreign countries may not enforce legal rights and recognize business procedures in a manner in which we are accustomed or would reasonably expect;
- local, economic, political and social conditions, including potential hyperinflationary conditions, political instability, and potential nationalization, repatriation, expropriation, price controls or other restrictive government actions, including changes in political and economic conditions may lead to changes in the business environment in which we operate, as well as changes in foreign currency exchange rates;
- immigration laws are subject to legislative change and varying standards of application and enforcement due to political forces, economic conditions or other events and local immigration laws may require us to meet certain other legal requirements as a condition to obtaining or maintaining entry visas, which may impact our ability to provide services to our clients;
- potential violations of local laws or anti-bribery laws, such as the United States Foreign Corrupt Practices Act (“FCPA”), and the UK Bribery Act, may cause difficulty in managing foreign operations, as well as significant consequences to us if those laws are violated;
- clients in foreign jurisdictions may have longer payment cycles, and it may be more difficult to collect receivables in foreign jurisdictions; and

- natural disasters, pandemics or international conflict, including terrorist acts, could interrupt our services, endanger our personnel or cause project delays or loss of clinical trial materials or results.

These risks and uncertainties could negatively impact our ability to, among other things, perform large, global projects for our clients. Furthermore, our ability to deal with these issues could be affected by applicable United States laws and the need to protect our assets. Any such risks could have an adverse impact on our financial condition and results of operations.

Exchange rate fluctuations may affect our results of operations and financial condition.

Because a large portion of our revenues and expenses are denominated in currencies other than the United States dollar and our financial statements are reported in United States dollars, changes in foreign currency exchange rates could significantly affect our results of operations and financial condition. Exchange rate fluctuations between local currencies and the United States dollar create risk in several ways, including:

- *Foreign Currency Translation Risk* . The revenue and expenses of our foreign operations are generally denominated in local currencies and translated into United States dollars for financial reporting purposes. Accordingly, exchange rate fluctuations will affect the translation of foreign results into United States dollars for purposes of reporting our consolidated results.
- *Foreign Currency Transaction Risk* . We are subject to foreign currency transaction risk for fluctuations in exchange rates during the period of time between the consummation and cash settlement of a transaction. We earn revenue from our service contracts over a period of several months and, in some cases, over several years. Accordingly, exchange rate fluctuations during this period may affect our profitability with respect to such contracts.

We may limit these risks through exchange rate fluctuation provisions stated in our service contracts, or we may hedge our transaction risk with foreign currency exchange contracts or options. We have not, however, hedged all of our foreign currency transaction risk, and we may experience fluctuations in financial results from our operations outside the United States and foreign currency transaction risk associated with our service contracts.

Due to the global nature of our business, we may be exposed to liabilities under the United States Foreign Corrupt Practices Act and various non-United States anti-corruption laws, and any allegation or determination that we violated these laws could have a material adverse effect on our business.

We are required to comply with the FCPA and other United States and non-United States anti-corruption laws, which prohibit companies from engaging in bribery including corruptly or improperly offering, promising, or providing money or anything else of value to non-United States officials and certain other recipients. In addition, the FCPA imposes certain books, records, and accounting control obligations on public companies and other issuers. We operate in parts of the world in which corruption can be common and compliance with anti-bribery laws may conflict with local customs and practices. Our global operations face the risk of unauthorized payments or offers being made by employees, consultants, sales agents, and other business partners outside of our control or without our authorization. It is our policy to implement safeguards to prohibit these practices by our employees and business partners with respect to our operations. However, irrespective of these safeguards, or as a result of monitoring compliance with such safeguards, it is possible that we or certain other parties may discover or receive information at some point that certain employees, consultants, sales agents, or other business partners may have engaged in corrupt conduct for which we might be held responsible. Violations of the FCPA or other non-United States anti-corruption laws may result in restatements of, or irregularities in, our financial statements as well as severe criminal or civil sanctions, and we may be subject to other liabilities, which could negatively affect our business, operating results and financial condition. In some cases, companies that violate the FCPA may be debarred by the United States government and/or lose their United States export privileges. Changes in anti-corruption laws or enforcement priorities could also result in increased compliance requirements and related costs which could adversely affect our business, financial condition and results of operations. In

addition, the United States or other governments may seek to hold us liable for successor liability FCPA violations or violations of other anti-corruption laws committed by companies in which we invest or that we acquired or will acquire.

We face risks related to sales to government entities.

We derive a portion of our revenue from sales to government entities in the United States. In general, our contracts with United States government entities are terminable at will by the government entity at any time. Government demand and payment for our services may be affected by public-sector budgetary cycles and funding authorizations. Government contracts are subject to oversight, including special rules on accounting, expenses, reviews and security. Failure to comply with these rules could result in civil and criminal penalties and sanctions, including termination of contracts, fines and suspensions, or debarment from future business with the United States government. As a result, failure to comply with these rules could have an adverse effect on our future business, reputation, operating results and financial condition.

If we are unable to successfully develop and market new services or enter new markets, our growth, results of operations or financial condition could be adversely affected.

A key element of our growth strategy is the successful development and marketing of new services or entering new markets that complement or expand our existing business. As we develop new services or enter new markets, including services targeted at participants in the broader healthcare industry, we may not have or adequately build the competencies necessary to perform such services satisfactorily, may not receive market acceptance for such services or may face increased competition. If we are unable to succeed in developing new services, entering new markets or attracting a client base for our new services or in new markets, we will be unable to implement this element of our growth strategy, and our future business, reputation, results of operations and financial condition could be adversely affected.

Our Research & Development Solutions business could subject us to potential liability that may adversely affect our results of operations and financial condition.

Our Research & Development Solutions business involves the testing of new drugs on patients in clinical trials and, if marketing approval is granted, the availability of these drugs to be prescribed to patients. Our involvement in the clinical trials and development process creates a risk of liability for personal injury to or death of patients, particularly those with life-threatening illnesses, resulting from adverse reactions to the drugs administered during testing or after product launch, respectively. For example, we have from time to time been sued and may be sued in the future by individuals alleging personal injury due to their participation in clinical trials and seeking damages from us under a variety of legal theories. Although we maintain the types and amounts of insurance we view as customary in the industries and countries in which we operate, if we are required to pay damages or incur defense costs in connection with any personal injury claim that is outside the scope of indemnification agreements we have with our clients, if any indemnification agreement is not performed in accordance with its terms or if our liability exceeds the amount of any applicable indemnification limits or available insurance coverage, our financial condition, results of operations and reputation could be materially and adversely affected. We maintain professional liability insurance, including liability for completed operations coverage. In the future, we may not be able to get adequate insurance for these types of risks at reasonable rates.

We also contract with physicians to serve as investigators in conducting clinical trials. If the investigators commit errors or make omissions during a clinical trial that result in harm to clinical trial patients or after a clinical trial to a patient using the drug after it has received regulatory approval, claims for personal injury or liability damages may result. Additionally, if the investigators engage in fraudulent behavior, clinical trial data may be compromised, which may require us to repeat the clinical trial or subject us to liability. We do not believe we are legally responsible for the medical care rendered by such third-party investigators, and we would

vigorously defend any claims brought against us. However, it is possible we could be found liable for claims with respect to the actions of third-party investigators, which may adversely affect our financial condition, results of operations and reputation.

Some of our Research & Development Solutions services involve direct interaction with clinical trial subjects or volunteers and operation of Phase I clinical facilities, which could create potential liability that may adversely affect our results of operations and financial condition.

We operate facilities where Phase I clinical trials are conducted, which ordinarily involve testing an investigational drug on a limited number of healthy individuals, typically 20 to 80 persons, to determine such drug's basic safety. Failure to operate such a facility in accordance with applicable regulations could result in that facility being shut down, which could disrupt our operations. Additionally, we face risks associated with adverse events resulting from the administration of such drugs to healthy volunteers and the professional malpractice of medical care providers. Occasionally, physicians employed at our Phase I clinical facilities act as principal investigators in later-phase clinical trials at those same facilities. We also directly employ nurses and other trained employees who assist in implementing the testing involved in our clinical trials, such as drawing blood from healthy volunteers. Any professional malpractice or negligence by such investigators, nurses or other employees could potentially result in liability to us in the event of personal injury to or death of a healthy volunteer in clinical trials. This liability, particularly if it were to exceed the limits of any indemnification agreements and insurance coverage we may have, may adversely affect our financial condition, results of operations and reputation.

Our Integrated Engagement Services business could result in liability to us if a drug causes harm to a patient. While we are generally indemnified and insured against such risks, we may still suffer financial losses.

When we market drugs under contract for a biopharmaceutical company, we could suffer liability for harm allegedly caused by those drugs, either as a result of a lawsuit against the biopharmaceutical company to which we are joined, a lawsuit naming us or any of our subsidiaries or an action launched by a regulatory body. While we are generally indemnified by the biopharmaceutical company for the action of the drugs we market on its behalf, and we carry insurance to cover harm caused by our negligence in performing services, it is possible that we could nonetheless incur financial losses, regulatory penalties or both. In particular, any claim could result in potential liability for us if the claim is outside the scope of the indemnification agreement we have with the biopharmaceutical company, the biopharmaceutical company does not abide by the indemnification agreement as required or the liability exceeds the amount of any applicable indemnification limits or available insurance coverage. Such a finding could have an adverse impact on our financial condition, results of operations and reputation. Furthermore, negative publicity associated with harm caused by drugs we helped to market could have an adverse effect on our business and reputation.

Our insurance may not cover all of our indemnification obligations and other liabilities associated with our operations.

We maintain insurance designed to provide coverage for ordinary risks associated with our operations and our ordinary indemnification obligations. The coverage provided by such insurance may not be adequate for all claims we may make or may be contested by our insurance carriers. If our insurance is not adequate or available to pay liabilities associated with our operations, or if we are unable to purchase adequate insurance at reasonable rates in the future, our profitability may be adversely impacted.

If we are unable to attract suitable investigators and patients for our clinical trials, our clinical development business might suffer.

The timely recruitment of investigators and patients for clinical trials is essential to our Research & Development Solutions business. Investigators are typically located at hospitals, clinics or other sites and supervise

the administration of the investigational drug to patients during the course of a clinical trial. Patients generally include people from the communities in which the clinical trials are conducted. Our clinical development business could be adversely affected if we are unable to attract suitable and willing investigators or patients for clinical trials on a consistent basis. For example, if we are unable to engage investigators to conduct clinical trials as planned or enroll sufficient patients in clinical trials, we might need to expend additional funds to obtain access to resources or else be compelled to delay or modify the clinical trial plans, which may result in additional costs to us.

If we lose the services of key personnel or are unable to recruit additional qualified personnel, our business could be adversely affected.

Our success substantially depends on the collective performance, contributions and expertise of our personnel including senior management and key personnel, qualified professional, scientific and technical operating staff and qualified sales representatives for our contract sales services. There is significant and increasing competition for qualified personnel, particularly those with higher educational degrees, such as a medical degree, a Ph.D. or an equivalent degree, or relevant experience in the industry and in the locations in which we operate. In addition, the departure of our key employees, or our inability to continue to identify, attract and retain qualified personnel or replace any departed personnel in a timely fashion, may impact our ability to grow our business and compete effectively in our industry and may negatively affect our ability to meet financial and operational goals.

Disruptions in the credit and capital markets and unfavorable general economic conditions could negatively affect our business, results of operations and financial condition.

Disruptions in the credit and capital markets could have negative effects on our business that may be difficult to predict or anticipate, including the ability of our clients, vendors, contractors and financing sources to meet their contractual obligations. Although we are unable to quantify the impact it has had on us, we are aware of a limited number of instances in our Research & Development Solutions business during the past several years where cancellations, changes in scope and failure to pay timely were attributable, at least in part, to difficulty in our clients' ability to obtain financing. In the future such actions by our clients could, if they involve a significant amount of business with us, have a material adverse effect on our results of operations.

Our effective income tax rate may fluctuate, which may adversely affect our operations, earnings and earnings per share.

Our effective income tax rate is influenced by our projected profitability in the various taxing jurisdictions in which we operate. Changes in the distribution of profits and losses among taxing jurisdictions may have a significant impact on our effective income tax rate, which in turn could have an adverse effect on our net income and earnings per share. Factors that may affect our effective income tax rate include, but are not limited to:

- the requirement to exclude from our quarterly worldwide effective income tax calculations losses in jurisdictions where no income tax benefit can be recognized;
- actual and projected full year pre-tax income;
- changes in the valuation of deferred tax assets and liabilities;
- the repatriation of foreign earnings to the United States;
- changes in tax laws in various taxing jurisdictions;
- audits by taxing authorities; and
- the establishment of valuation allowances against deferred income tax assets if we determined that it is more likely than not that future income tax benefits will not be realized.

These changes may cause fluctuations in our effective income tax rate that could adversely affect our results of operations and cause fluctuations in our earnings and earnings per share. Additional information regarding our income taxes is presented in Note 18 to our audited consolidated financial statements included in this Annual Report on Form 10-K.

Our relationships with existing or potential clients who are in competition with each other may adversely impact the degree to which other clients or potential clients use our services, which may adversely affect our results of operations.

The biopharmaceutical industry is highly competitive, with biopharmaceutical companies each seeking to persuade payers, providers and patients that their drug therapies are better and more cost-effective than competing therapies marketed or being developed by competing firms. In addition to the adverse competitive interests that biopharmaceutical companies have with each other, biopharmaceutical companies also have adverse interests with respect to drug selection and reimbursement with other participants in the healthcare industry, including payers and providers. Biopharmaceutical companies also compete to be first to market with new drug therapies. We regularly provide services to biopharmaceutical companies who compete with each other, and we sometimes provide services or funding to such clients regarding competing drugs in development. Our existing or future relationships with our biopharmaceutical clients may therefore deter other biopharmaceutical clients from using our services or may result in our clients seeking to place limits on our ability to serve other biopharmaceutical industry participants in connection with drug development activities. In addition, our further expansion into the broader healthcare market may adversely impact our relationships with biopharmaceutical clients, and such clients may elect not to use our services, reduce the scope of services that we provide to them or seek to place restrictions on our ability to serve clients in the broader healthcare market with interests that are adverse to theirs. A loss of clients or reductions in the level of revenues from a client could have a material adverse effect on our results of operations, business and prospects.

If we are unable to successfully identify, acquire and integrate existing businesses, services and technologies, our business, results of operations and financial condition could be adversely impacted.

We anticipate that a portion of our future growth may come from acquiring existing businesses, services or technologies. The success of any acquisition will depend upon, among other things, our ability to effectively integrate acquired personnel, operations, services and technologies into our business and to retain the key personnel and clients of our acquired businesses. In addition, we may be unable to identify suitable acquisition opportunities or obtain any necessary financing on commercially acceptable terms. We may also spend time and money investigating and negotiating with potential acquisition targets but not complete the transaction. Any future acquisition could involve other risks, including, among others, the assumption of additional liabilities and expenses, difficulties and expenses in connection with integrating the acquired companies and achieving the expected benefits, issuances of potentially dilutive securities or interest-bearing debt, loss of key employees of the acquired companies, transaction costs, diversion of management's attention from other business concerns and, with respect to the acquisition of foreign companies, the inability to overcome differences in foreign business practices, language and customs. Our failure to identify potential acquisitions, complete targeted acquisitions and integrate completed acquisitions could have a material adverse effect on our business, financial condition and results of operations.

Investments in our clients' businesses or drugs and our related commercial rights strategies could have a negative impact on our financial performance.

We may enter into arrangements with our clients or other drug companies in which we take on some of the risk of the potential success or failure of their businesses or drugs, including making strategic investments in our clients or other drug companies, providing financing to clients or other drug companies or acquiring an interest in the revenues from clients' drugs or in entities developing a limited number of drugs. Our financial results would be adversely affected if these investments or the underlying drugs result in losses or do not achieve the level of success that we anticipate and/or our return or payment from the drug investment or financing is less than our direct and indirect costs with respect to these arrangements.

Our results of operations may be adversely affected if we fail to realize the full value of our goodwill and intangible assets.

We assess the realizability of our indefinite-lived intangible assets and goodwill annually and conduct an interim evaluation whenever events or changes in circumstances, such as operating losses or a significant decline in earnings associated with the acquired business or asset, indicate that these assets may be impaired. For example, we recognized $28 million of impairment losses during the year ended December 31, 2016, for goodwill and intangible assets in our Encore reporting unit. Our ability to realize the value of the goodwill and indefinite-lived intangible assets will depend on the future cash flows of the businesses we have acquired, which in turn depend in part on how well we have integrated these businesses into our own business. If we are not able to realize the value of the goodwill and indefinite-lived intangible assets, we may be required to incur material charges relating to the impairment of those assets. Such impairment charges could materially and adversely affect our operating results and financial condition.

We face risks arising from the restructuring of our operations.

From time to time, we have adopted restructuring plans to improve our operating efficiency through various means such as reduction of overcapacity, elimination of non-billable support roles or other realignment of resources. In addition, we have provided guidance of cost synergies of annualized savings exiting 2019 of $200 million in connection with the Merger. Restructuring presents significant potential risks of events occurring that could adversely affect us, including:

- actual or perceived disruption of service or reduction in service standards to clients;
- the failure to preserve supplier relationships and distribution, sales and other important relationships and to resolve conflicts that may arise;
- loss of sales as we reduce or eliminate staffing on non-core services;
- diversion of management attention from ongoing business activities; and
- the failure to maintain employee morale and retain key employees.

Further, any such restructuring would result in charges that, if material, could harm our results of operations and significantly reduce our cash position or increase debt. In addition, we may incur certain unforeseen costs once any restructuring activities are implemented. Further, if we determine to effect any restructuring, we can give no assurance that any projected cost reductions resulting from such restructuring activities will be achieved within the expected timeframe, or at all.

Because of these and other factors, we cannot predict whether we will realize the purpose and anticipated benefits of these measures and, if we do not, our business and results of operations may be adversely affected.

Additionally, there may be delays in implementing the restructuring activities or a failure to achieve the anticipated levels of cost savings and efficiency as a result of the restructuring activities, each of which could materially and adversely impact our business and results of operations. Further restructuring or reorganization activities may also be required in the future beyond what is currently planned, which could further enhance the risks associated with these activities.

Risks Relating to Our Industry

The biopharmaceutical services industry is highly competitive.

The biopharmaceutical services industry is highly competitive. Our business often competes with other biopharmaceutical services companies, internal discovery departments, development departments, sales and marketing departments, information technology departments and other departments within our clients, some of

which could be considered large biopharmaceutical services companies in their own right with greater resources than ours. We also compete with universities, teaching hospitals, governments agencies and others. If we do not compete successfully, our business will suffer. The industry is highly fragmented, with numerous smaller specialized companies and a handful of companies with global capabilities similar to certain of our own capabilities. Increased competition has led to price and other forms of competition, such as acceptance of less favorable contract terms, that could adversely affect our operating results. There are few barriers to entry for companies considering offering any one or more of the services we offer. Because of their size and focus, these companies might compete effectively against us, which could have a material adverse impact on our business.

Our future growth and success will depend on our ability to successfully compete with other companies that provide similar services in the same markets, some of which may have financial, marketing, technical and other advantages. We also expect that competition will continue to increase as a result of consolidation among these various companies. Large technology companies with substantial resources, technical expertise and greater brand power could also decide to enter or further expand in the markets where our business operates and compete with us. If one or more of our competitors or potential competitors were to merge or partner with another of our competitors, or if a new entrant emerged with substantial resources, the change in the competitive landscape could adversely affect our ability to compete effectively. We compete on the basis of various factors, including breadth and depth of services, reputation, reliability, quality, innovation, security, price and industry expertise and experience. In addition, our ability to compete successfully may be impacted by the growing availability of health information from social media, government health information systems and other free or low-cost sources. For example, the United Kingdom's National Health Service started releasing large volumes of data beginning in December 2011 at little or no charge, reducing the demand for our information services derived from similar data. In addition, consolidation or integration of wholesalers, retail pharmacies, health networks, payers or other healthcare stakeholders may lead any of them to provide information services directly to clients or indirectly through a designated service provider, resulting in increased competition from firms that may have lower costs to market (e.g., no data supply costs). Any of the above may result in lower demand for our services, which could result in a material adverse impact on our operating results and financial condition.

Outsourcing trends in the biopharmaceutical industry and changes in aggregate spending and research and development budgets could adversely affect our operating results and growth rate.

Economic factors and industry trends that affect biopharmaceutical companies affect our Research & Development Solutions business. Biopharmaceutical companies continue to seek long-term strategic collaborations with global contract research organizations with favorable pricing terms. Competition for these collaborations is intense and we may decide to forego an opportunity or we may not be selected, in which case a competitor may enter into the collaboration and our business with the client, if any, may be limited. In addition, if the biopharmaceutical industry reduces its outsourcing of clinical trials and sales and marketing projects or such outsourcing fails to grow at projected rates, our operations and financial condition could be materially and adversely affected. We may also be negatively impacted by consolidation and other factors in the biopharmaceutical industry, which may slow decision making by our clients or result in the delay or cancellation of clinical trials. Our commercial services may be affected by reductions in new drug launches and increases in the number of drugs losing patent protection. All of these events could adversely affect our business, results of operations or financial condition.

Our business may be materially and adversely impacted by factors affecting the biopharmaceutical and healthcare industries.

The vast majority of our revenue is generated from sales to the biopharmaceutical and healthcare industries. The clients we serve in these industries are commonly subject to financial pressures, including, but not limited to, increased costs, reduced demand for their products, reductions in pricing and reimbursement for products and services, formulary approval and placement, government approval to market their products and limits on the manner by which they market their products, loss of patent exclusivity (whether due to patent

expiration or as a result of a successful legal challenge) and the proliferation of or changes to regulations applicable to these industries. To the extent our clients face such pressures, or they change how they utilize our offerings, the demand for our services, or the prices our clients are willing to pay for those services, may decline. Any such decline could have a material adverse effect on our business, operating results and financial condition.

We may be affected by healthcare reform and potential additional reforms.

The United States Congress continues to consider healthcare reform legislation and impose health industry cost containment measures, which may significantly impact the biopharmaceutical industry. In addition, numerous government bodies are considering or have adopted various healthcare reforms and may undertake, or are in the process of undertaking, efforts to control growing healthcare costs through legislation, regulation and voluntary agreements with medical care providers and biopharmaceutical companies. We are uncertain as to the effects of these recent reforms on our business and are unable to predict what legislative proposals, if any, will be adopted in the future. If regulatory cost containment efforts limit the profitability of new drugs, our clients may reduce their research and development spending or promotional, marketing and sales expenditures, which could reduce the business they outsource to us. Similarly, if regulatory requirements are relaxed or simplified drug approval procedures are adopted, the demand for our services could decrease.

Foreign and domestic government bodies may also adopt healthcare legislation or regulations that are more burdensome than existing regulations. For example, product safety concerns and recommendations by the Drug Safety Oversight Board could change the regulatory environment for drug products, and new or heightened regulatory and licensing requirements may increase our expenses or limit or delay our ability to offer some of our services. Additionally, new or heightened regulatory requirements may have a negative impact on the ability of our clients to conduct industry-sponsored clinical trials, which could reduce the need for our services.

Actions by government regulators or clients to limit a prescription's scope or withdraw an approved drug from the market could adversely affect our business and result in a loss of revenues.

Government regulators have the authority, after approving a drug, to regulate or limit its scope of prescription or withdraw it from the market completely based on safety concerns. Similarly, clients may act to voluntarily limit the scope of prescription of drugs or withdraw them from the market. In the past, we have provided services with respect to drugs that have been limited and/or withdrawn. If we are providing services to clients for drugs that are limited or withdrawn, we may be required to narrow the scope of or terminate our services with respect to such drugs, which would prevent earning the full amount of revenues anticipated under the related service contracts with negative impacts to our financial results.

If we do not keep pace with rapid technological changes, our services may become less competitive or obsolete.

The biopharmaceutical industry is subject to rapid technological changes. Our current competitors or other businesses might develop technologies or services that are more effective or commercially attractive than, or render obsolete, our current or future technologies and services. If our competitors introduce superior technologies or services and if we cannot make enhancements to remain competitive, our competitive position would be harmed. If we are unable to compete successfully, we may lose clients or be unable to attract new clients, which could lead to a decrease in our revenue and financial condition.

Laws restricting biopharmaceutical sales and marketing practices may adversely impact demand for our services.

There have been a significant number of laws, legislative initiatives and regulatory actions over the years that seek to limit biopharmaceutical sales and marketing practices. For example, three states in 2006 and 2007 passed laws restricting the use of prescriber identifiable information for the purpose of promoting branded

prescription medicines. Although these laws were subsequently declared to be unconstitutional based on a decision of the U.S. Supreme Court in Sorrell v. IMS Health in 2011, we are unable to predict whether, and in what form, other initiatives may be introduced or actions taken at the state or Federal levels to limit biopharmaceutical sales and marketing practices. In addition, while we will continue to seek to adapt our services to comply with the requirements of these laws (to the extent applicable to our services), if enacted, there can be no assurance that our efforts to adapt our offerings will be successful and provide the same financial contribution to us. There can also be no assurance that future legislative initiatives will not adversely affect our ability to develop or market current or future offerings, or that any future laws will not diminish the demand for our services, all of which could, over time, result in a material adverse impact on our operating results and financial condition.

Our Research & Development Solutions clients face intense competition from lower cost generic products, which may lower the amount that they spend on our services.

Our Research & Development Solutions clients face increasing competition from lower cost generic products, which in turn may affect their ability to pursue research and development activities with us. In the United States, EU and Japan, political pressure to reduce spending on prescription drugs has led to legislation and other measures which encourages the use of generic products. In addition, proposals emerge from time to time in the United States and other countries for legislation to further encourage the early and rapid approval of generic drugs. Loss of patent protection for a product typically is followed promptly by generic substitutes, reducing our clients' sales of that product and their overall profitability. Availability of generic substitutes for our clients' drugs may adversely affect their results of operations and cash flow, which in turn may mean that they would not have surplus capital to invest in research and development and drug commercialization, including in our services. If competition from generic products impacts our clients' finances such that they decide to curtail our services, our revenues may decline and this could have a material adverse effect on our business.

Risks Relating to Our Indebtedness

Restrictions imposed in the Senior Secured Credit Facilities and other outstanding indebtedness, including the indentures governing Quintiles IMS Holdings, Inc. outstanding notes, may limit our ability to operate our business and to finance our future operations or capital needs or to engage in other business activities.

The terms of the Senior Secured Credit Facilities restrict QuintilesIMS and its restricted subsidiaries from engaging in specified types of transactions. These covenants restrict the ability of QuintilesIMS and its restricted subsidiaries, among other things, to:

- incur liens;
- make investments and loans;
- incur indebtedness or guarantees;
- issue preferred stock of a restricted subsidiary;
- issue disqualified equity;
- engage in mergers, acquisitions and asset sales;
- declare dividends, make payments or redeem or repurchase equity interests;
- alter the business QuintilesIMS and its restricted subsidiaries conduct;
- make restricted payments;
- enter into agreements limiting restricted subsidiary distributions;

- prepay, redeem or purchase certain indebtedness; and
- engage in certain transactions with affiliates.

In addition, the revolving credit facility and the new term loans under our senior secured credit facility require QuintilesIMS to comply with a quarterly maximum senior secured net leverage ratio test and minimum interest coverage ratio test, which become more restrictive over time. QuintilesIMS's ability to comply with these financial covenants can be affected by events beyond our control, and QuintilesIMS may not be able to satisfy them. Additionally, the restrictions contained in the indentures governing the outstanding notes could also limit our ability to plan for or react to market conditions, meet capital needs or make acquisitions or otherwise restrict our activities or business plans.

A breach of any of these covenants could result in a default under the Senior Secured Credit Facilities or the indentures governing the outstanding notes, which could trigger acceleration of our indebtedness and may result in the acceleration of or default under any other debt to which a cross-acceleration or cross-default provision applies, which could have a material adverse effect on our business, operations and financial results. In the event of any default under the Senior Secured Credit Facilities, the applicable lenders could elect to terminate borrowing commitments and declare all borrowings and loans outstanding, together with accrued and unpaid interest and any fees and other obligations, to be due and payable. In addition, or in the alternative, the applicable lenders could exercise their rights under the security documents entered into in connection with the Senior Secured Credit Facilities. QuintilesIMS and the other subsidiary guarantors have pledged substantially all of their tangible and intangible assets (subject to customary exceptions) as collateral under the Senior Secured Credit Facilities, including the stock and the assets of certain of our current and future wholly owned United States subsidiaries and a portion of the stock of certain of our non-United States subsidiaries.

If we were unable to repay or otherwise refinance these borrowings and loans when due, the applicable lenders could proceed against the collateral granted to them to secure that indebtedness, which could force us into bankruptcy or liquidation. In the event the applicable lenders accelerate the repayment of our borrowings, we and our subsidiaries may not have sufficient assets to repay that indebtedness. Any acceleration of amounts due under the credit agreement governing the Senior Secured Credit Facilities or the exercise by the applicable lenders of their rights under the security documents would likely have a material adverse effect on us.

Despite our level of indebtedness, we are able to incur more debt and undertake additional obligations. Incurring such debt or undertaking such additional obligations could further exacerbate the risks to our financial condition.

Although our credit agreement, which governs the senior credit facilities of our wholly owned subsidiary through which we conduct our operations, Quintiles IMS Incorporated ("OpCo"), contains restrictions on the incurrence of additional indebtedness, these restrictions are subject to a number of qualifications and exceptions and the indebtedness incurred in compliance with these restrictions could increase. In addition, the receivables financing agreement for our special purpose subsidiary, Quintiles Funding, LLC ("Quintiles Funding") limits borrowing based on the amount of receivables purchased by Quintiles Funding from certain of our other subsidiaries, but when supported by the value of such purchased receivables, the debt under our receivables financing facility can increase.

While the credit agreement also contains restrictions on our and our restricted subsidiaries' ability to make loans and investments, these restrictions are subject to a number of qualifications and exceptions, and the investments incurred in compliance with these restrictions could be substantial.

Restrictive covenants in our other indebtedness may limit our flexibility in our current and future operations, particularly our ability to respond to changes in our business or to pursue our business strategies.

The terms contained in certain of our indebtedness, including credit facilities and any future indebtedness of ours, may include a number of restrictive covenants that impose significant operating and financial restrictions, including restrictions on our and our restricted subsidiaries' ability to take actions that we believe may be in our interest. These agreements, among other things, limit our ability to:

- incur additional debt;
- provide guarantees in respect of obligations of other persons;
- issue redeemable stock and preferred stock;
- pay dividends or distributions or redeem or repurchase capital stock;
- prepay, redeem or repurchase debt;
- make loans, investments and capital expenditures;
- enter into transactions with affiliates;
- create or incur liens;
- make distributions from our subsidiaries;
- sell assets and capital stock of our subsidiaries;
- make acquisitions; and
- consolidate or merge with or into, or sell substantially all of our assets to, another person.

A breach of the covenants or restrictions under the agreements governing our other indebtedness could result in a default under the applicable indebtedness. Such default may allow the creditors to accelerate the related debt and may result in the acceleration of any other debt to which a cross-acceleration or cross-default provision applies. In the event our lenders and noteholders accelerate the repayment of our borrowings, we cannot assure that we and our subsidiaries would have sufficient assets to repay such indebtedness.

Our financial results, our substantial indebtedness and our credit ratings could adversely affect the availability and terms of future financing.

Interest rate fluctuations may affect our results of operations and financial condition.

Because we have variable rate debt, fluctuations in interest rates affect our business. We attempt to minimize interest rate risk and lower our overall borrowing costs through the utilization of derivative financial instruments, primarily interest rate caps and swaps. We have entered into interest rate caps and swaps with financial institutions that have reset dates and critical terms that match those of our senior secured term loan credit facility. Accordingly, any change in market value associated with the interest rate caps and swaps is offset by the opposite market impact on the related debt. Because we do not attempt to hedge all of our variable rate debt, we may incur higher interest costs for the portion of our variable rate debt which is not hedged.

Risks Relating to Ownership of Our Common Stock

The parties to the Shareholders Agreement continue to have significant influence over us after the Merger, including control over decisions that require the approval of stockholders, which could limit the ability of other stockholders to influence the outcome of matters submitted to stockholders for a vote.

As of February 9, 2017, certain of the largest post-merger stockholders own approximately 41.4% of the outstanding shares of our common stock. These stockholders are parties to a Shareholders Agreement dated May 3, 2016 (the "Shareholders Agreement") that superseded and replaced the Quintiles' Amended and Restated Shareholders Agreement dated February 5, 2015 and the Quintiles' Second Amended and Restated Registration Rights Agreement, dated May 14, 2013, as amended and the IMS Health Amended and Restated Shareholders Agreement dated as of April 9, 2014.

The parties to the Shareholders Agreement, other than Dr. Dennis Gillings and certain of his affiliates (the "DG Shareholders") (who have agreed separately to vote in favor of the merger and the transactions contemplated thereby), have agreed to vote for individuals designated to the Surviving Corporation board of directors upon completion of the Merger as follows:

- Ari Bousbib (as our Chief Executive Officer);
- one individual designated by the TPG-Q Funds and the TPG-I Funds (collectively "TPG Shareholders") (until the time at which the TPG Shareholders beneficially own, as a group, less than 5% of our outstanding common stock);
- another individual designated by the TPG Shareholders (until the earlier of (i) the seven year anniversary of completion of the merger and (ii) time at which the TPG Shareholders beneficially own, as a group, 5% or more but less than 12% of our outstanding common stock);
- one individual designated by each of Bain Capital Investors, LLC ("Bain Capital"), the LGP Shareholders and the CPP Shareholder (each until the earlier of (i) the day after our 2018 annual meeting of stockholders or (ii) the time at which such stockholder group beneficially owns less than 2.5% of our outstanding common stock);
- four individuals who are non-stockholder, independent directors; and
- until the Company's 2018 annual meeting of stockholders, the vacancy resulting from Thomas H. Pike's resignation may be filled by remaining Quintiles Nominees (as defined in the Shareholders Agreement).

The Shareholders Agreement provides that we will use our best efforts to cause Dr. Gillings to be elected as the Lead Director through our 2018 annual meeting of stockholders and to be elected as a director so that he may serve as a director until the day after our 2021 annual meeting of stockholders (provided that the DG Shareholders, as a group, continue to beneficially own at least 2.5% of our outstanding common stock), including using its best efforts to support his nomination for the slate of director nominees for a three-year term at our 2017 and 2020 annual meetings of stockholders.

As a result, the parties to the Shareholders Agreement potentially have the ability to influence decisions of our company to enter into any corporate transaction (and the terms thereof), any change in the composition of our board of directors and any transaction that requires stockholder approval regardless of whether others believe that such change or transaction is in the best interests of our company. Additionally, the parties to the Shareholders Agreement are in the business of making investments in companies and may from time to time acquire and hold interests in businesses that compete directly or indirectly with us. One or more of the parties to the Shareholders Agreement may also pursue acquisition opportunities that may be complementary to our businesses and, as a result, those acquisition opportunities may not be available to us. So long as the parties to the Shareholders Agreement continue to own a significant amount of our equity, if they exercise their stockholder rights collectively, they will be able to significantly influence our decisions.

Provisions of the corporate governance documents of QuintilesIMS could make an acquisition of QuintilesIMS difficult and may prevent attempts by its stockholders to replace or remove its management, even if beneficial to its stockholders.

In addition to the beneficial ownership of a large percentage of QuintilesIMS common stock by the parties to the Shareholders Agreement, our certificate of incorporation and Delaware bylaws and the General Corporation Law of Delaware ("DGCL") contain provisions that could make it difficult for a third party to acquire QuintilesIMS even if doing so might be beneficial to its stockholders, including:

- the division of the board of directors into three classes and the election of each class for three-year terms;
- subject to the Shareholders Agreement, the sole ability of the board of directors to fill a vacancy created by the death or resignation of a director or the expansion of the board of directors;
- advance notice requirements for stockholder proposals and director nominations;
- limitations on the ability of stockholders to call special meetings and to take action by written consent;
- the approval of holders of at least seventy-five percent (75%) of the outstanding shares of QuintilesIMS entitled to vote on any amendment, alteration, change, addition or repeal of the Delaware bylaws is required to amend, alter, change, add to or repeal the Delaware bylaws;
- the required approval of holders of at least seventy-five percent (75%) of the outstanding shares of QuintilesIMS to remove directors, which removal may only be for cause, subject to different requirements in the case of directors elected by a voting group of stockholders and the terms of the Shareholders Agreement; and
- the ability of the board of directors to issue new series of, and designate the terms of, preferred stock, without stockholder approval, which could be used to, among other things, institute a rights plan that would have the effect of significantly diluting the stock ownership of a potential hostile acquirer, likely preventing acquisitions that have not been approved by the board of directors.

In addition, QuintilesIMS is subject to Section 203 of the DGCL regulating corporate takeovers, although our board of directors adopted a resolution approving the Merger pursuant to which shares of common stock were acquired, by among others, the TPG Shareholders. Section 203, subject to certain exceptions, prohibits a Delaware corporation from engaging in any "business combination" with any "interested stockholder" for a period of three years following the date that such stockholder became an interested stockholder unless:

- prior to such date, the board of directors of the corporation approved either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder;
- upon consummation of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding those shares owned by persons who are directors and also officers, and employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or
- on or subsequent to such date, the business combination is approved by the board of directors and authorized at an annual or special meeting of stockholders, and not by written consent, by the affirmative vote of at least two-thirds of the outstanding voting stock that is not owned by the interested stockholder.

In general, Section 203 defines "business combination" to include mergers or consolidations between a Delaware corporation and an interested stockholder, transactions with an interested stockholder involving the

assets or stock of the corporation or its majority-owned subsidiaries and transactions which increase an interested stockholder's percentage ownership of stock. In general, Section 203 defines an "interested stockholder" as any entity or person beneficially owning 15% or more of the outstanding voting stock of the corporation and any entity or person affiliated with or controlling or controlled by such entity or person. These provisions may frustrate or prevent any attempts by stockholders to replace members of the board of directors. Because QuintilesIMS's board is responsible for appointing the members of management, these provisions could in turn affect any attempt to replace current members of management. As a result, stockholders of QuintilesIMS may lose their ability to sell their stock for a price in excess of the prevailing market price due to these protective measures, and efforts by stockholders to change the direction or management of QuintilesIMS may be unsuccessful.

Our operating results and share price may be volatile, which could cause the value of our stockholders' investments to decline.

Our quarterly and annual operating results may fluctuate in the future, and such fluctuations may be significant. In addition, securities markets worldwide have experienced, and are likely to continue to experience, significant price and volume fluctuations. This market volatility, as well as general economic, market or political conditions, could subject the market price of our shares to wide price fluctuations regardless of our operating performance. Our operating results and the trading price of our shares may fluctuate in response to various factors, including:

- market conditions in the broader stock market;
- actual or anticipated fluctuations in our quarterly and annual financial and operating results;
- introduction of new services by us or our competitors;
- issuance of new or changed securities analysts' reports or recommendations;
- sales, or anticipated sales, of large blocks of our stock;
- additions or departures of key personnel;
- regulatory or political developments;
- litigation and governmental investigations;
- changing economic conditions; and
- exchange rate fluctuations.

These and other factors, many of which are beyond our control, may cause our operating results and the market price for our shares to fluctuate substantially. While we believe that operating results for any particular quarter are not necessarily a meaningful indication of future results, fluctuations in our quarterly operating results could limit or prevent investors from readily selling their shares and may otherwise negatively affect the market price and liquidity of our shares. In addition, in the past, when the market price of a stock has been volatile, holders of that stock have sometimes instituted securities class action litigation against the company that issued the stock. If any of our stockholders brought a lawsuit against us, we could incur substantial costs defending the lawsuit. Such a lawsuit could also divert the time and attention of our management from our business, which could significantly harm our profitability and reputation.

There may be sales of a substantial amount of our common stock by our current stockholders, and these sales could cause the price of our common stock to fall.

As of February 9, 2017, there were 235,719,111 shares of common stock outstanding. Approximately 41.4% of the outstanding shares of our common stock is held by parties to the Shareholders Agreement).

Sales of substantial amounts of our common stock in the public market, or the perception that such sales will occur, could adversely affect the market price of our common stock and make it difficult for us to raise funds through securities offerings in the future. For example, as restrictions on resale end, the market price of our common stock could decline if the holders of currently restricted shares sell them or are perceived by the market as intending to sell them.

Stockholders that are a party to the Shareholders Agreement may require us to register their shares for resale under the federal securities laws, subject to certain requirements. Under the Shareholders Agreement, we are required to pay the registration expenses associated with the registration of such shares, not including the underwriting discounts, commissions and transfer taxes. Registration of those shares would allow those stockholders to immediately resell their shares in the public market. Any such sales or the anticipation of such sales may cause the market price of our common stock to decline.

In addition, we may use our cash, cash generated from operations or dispositions of assets or businesses and/or proceeds from any new financing arrangements or issuances of debt or equity securities to repurchase shares, including the repurchase of shares from our stockholders that are a party to the Shareholders Agreement.

Since we have no current plans to pay regular cash dividends on our common stock, stockholders may not receive any return on investment unless they sell their common stock for a price greater than that which they paid for it.

Although we have previously declared dividends to our stockholders prior to our initial public offering in May 2013, we do not currently anticipate paying any regular cash dividends on our common stock. Any decision to declare and pay dividends in the future will be made at the discretion of our Board and will depend on, among other things, our results of operations, financial condition, cash requirements, contractual restrictions and other factors that our Board may deem relevant. In addition, our ability to pay dividends is, and may be, limited by covenants of existing and any future outstanding indebtedness we or our subsidiaries incur, including under our existing credit facilities. Therefore, any return on investment in our common stock is solely dependent upon the appreciation of the price of our common stock on the open market, which may not occur.

Our certificate of incorporation contains a provision renouncing any interest and expectancy in certain corporate opportunities identified by certain of our affiliates, even if such corporate opportunities are ones that we might reasonably be deemed to have pursued or had the ability or desire to pursue.

Our certificate of incorporation provides that our company renounces any interest or expectancy in the business opportunities of the TPG Shareholders, the Bain Shareholders, CPP Investment Board Private Holdings Inc. (“CPP Shareholder”), and Leonard Green & Partners, L.P. (“LGP Shareholders”), and their affiliates (other than our company and our subsidiaries) and all of their respective partners, principals, directors, officers, members, managers, managing directors and/or employees, and each such person will have no obligation to offer us such opportunities. This provision applies to these stockholders (and associated parties) only for so long as a nominee designated by the stockholder under the Shareholders Agreement continues to serve on the board. Stockholders are deemed to have notice of and have consented to this provision of our certificate of incorporation.

Therefore, a director or officer of our company who also serves as a director, officer, member, manager, or employee of such stockholders may pursue certain business opportunities, including acquisitions, that may be complementary to its business and, as a result, such opportunities may not be available to us. These potential conflicts of interest could have a material adverse effect on the business, financial condition, results of operations, or prospects of our company if attractive corporate opportunities are allocated by such stockholders to themselves or their other affiliates instead of to us.

Risks Relating to the Merger

QuintilesIMS may be unable to fully realize the competitive and operating synergies that are projected to be achieved through the combination of Quintiles' services and IMS Health's offerings.

Part of the strategic rationale for the Merger is the opportunity for us to potentially drive additional revenue and earnings through the utilization by Quintiles of IMS Health's data assets and capabilities in accelerating clinical trials. However, the utilization of data in the two companies' markets is still evolving and subject to a number of risks and uncertainties, including the following:

- government regulatory agencies and legislative bodies, including agencies and legislatures regulating the use of personal data, may impose new conditions or restrictions which affect our use of IMS Health data;
- Our clients may decide that they will not award additional business to QuintilesIMS based on its data capabilities;
- implementation of any operational plans to create new data services and solutions for our clients will likely be complex and technically challenging to implement, and may be subject to delays and cost overruns and there is no assurance that the implementation can be carried out effectively;
- clinical research is a complex and evolving area, and creating effective approaches involving the use of third party data to drive more effective and efficient research outcomes is difficult and challenging; and
- third parties outside of the control of the Company (including suppliers, regulators, and clients) may impose restrictions or conditions which affect the projected data synergies arising from the transaction.

We are unable to predict the extent to which these factors will inhibit our business plans and any one of them could result in decreased or delays in our performance.

We may fail to realize all of the anticipated benefits of the Merger or those benefits may take longer to realize than expected. We may also encounter significant difficulties in integrating the two businesses.

Our ability to realize the anticipated benefits of the transaction will depend, to a large extent, on our ability to integrate the two businesses. The combination of two independent businesses is a complex, costly and time-consuming process. As a result, we are required to devote significant management attention and resources to integrating their business practices and operations. The integration process may disrupt the businesses and, if implemented ineffectively, would restrict the realization of the full-expected benefits. The failure to meet the challenges involved in integrating the two businesses and to realize the anticipated benefits of the transaction could cause an interruption of or a loss of momentum in, the activities of QuintilesIMS and could adversely affect the results of operations of QuintilesIMS.

In addition, the overall integration of the businesses may result in material unanticipated problems, expenses, liabilities, competitive responses, loss of client relationships, and diversion of management's attention. The difficulties of combining the operations of the companies include, among others:

- difficulties in achieving anticipated cost savings, synergies, business opportunities and growth prospects from the combination;
- difficulties in the integration of the companies' businesses;
- difficulties in managing the expanded operations of a significantly larger and more complex company;
- challenges in attracting and retaining key personnel; and
- potential unknown liabilities and unforeseen increased expenses or delays associated with the merger.

Many of these factors will be outside of our control and any one of them could result in increased costs, decreases in the amount of expected revenues and diversion of management's time and energy, which could materially impact our business, financial condition and results of operations. In addition, even if the operations of the businesses of Quintiles and IMS Health are integrated successfully, the full benefits of the transaction may not be realized, including the synergies, cost savings or sales or growth opportunities that are expected. These benefits may not be achieved within the anticipated time frame, or at all. Further, additional unanticipated costs may be incurred in the integration of the businesses of Quintiles and IMS Health. All of these factors could negatively impact our earnings per share, decrease or delay the expected accretive effect of the transaction and negatively impact the price of our shares. As a result, there is no assurance that the combination of Quintiles and IMS Health will result in the realization of the full benefits anticipated from the Merger.

The future results of QuintilesIMS will suffer if we do not effectively manage its expanded operations following the completion of the Merger.

Following the completion of the Merger, the size of the business of QuintilesIMS increased significantly beyond the current size of either Quintiles' or IMS Health's business. Our future success depends, in part, upon our ability to manage this expanded business, which poses substantial challenges for management, including challenges related to the management and monitoring of new operations and associated increased costs and complexity. If we are unsuccessful in managing our integrated operations, or if we do not realize the expected operating efficiencies, cost savings and other benefits currently anticipated from the Merger, the operations and financial condition of QuintilesIMS could be adversely affected and we may not be able to take advantage of business development opportunities.

If the Merger does not qualify as a reorganization under Section 368(a) of the Internal Revenue Code, IMS Health and the IMS Health stockholders may be required to pay substantial United States federal income taxes.

It was a condition of the Merger that legal opinions from tax counsel were received that the Merger will be treated for United States federal income tax purposes as a "reorganization" within the meaning of Section 368(a) of the Internal Revenue Code. These opinions were based on certain assumptions and representations as to factual matters from Quintiles and IMS Health, as well as certain covenants and undertakings by Quintiles and IMS Health. If any of the assumptions, representations, covenants or undertakings is incorrect, incomplete, inaccurate or is violated in any material respect, the validity of the conclusions reached by tax counsel would be jeopardized. Additionally, an opinion of counsel is not binding on the Internal Revenue Service ("IRS") or any court, so there can be no certainty that the IRS will not challenge the conclusions reflected in the opinions or that a court will not sustain such a challenge. If the IRS or a court determines that the Merger should not be treated as a "reorganization," a holder of IMS Health common stock that is a United States holder would generally recognize a gain or loss upon the exchange of IMS Health common stock for QuintilesIMS common stock pursuant to the Merger. In addition, if the Merger is not treated as a "reorganization," IMS Health would recognize a gain or loss, measured generally by the difference between the fair market value of IMS Health's assets and IMS Health's adjusted tax basis in such assets.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

As of December 31, 2016, we had approximately 273 offices located in approximately 82 countries. Our executive headquarters are located adjacent to Research Triangle Park, North Carolina, and in Danbury, Connecticut. We own facilities in Barcelona, Spain; Buenos Aires, Argentina; Caracas, Venezuela; Los Ruices, Venezuela; Lisbon, Portugal and Bangalore, India. All of our other offices are leased. Our properties are

geographically distributed to meet our worldwide operating requirements, and none of our properties are individually material to our business operations. Many of our leases have an option to renew, and we believe that we will be able to successfully renew expiring leases on terms satisfactory to us. We believe that our facilities are adequate for our operations and that suitable additional space will be available if needed.

Item 3. Legal Proceedings

We are involved in a variety of legal and tax proceedings, claims and litigation that arise from time to time in the ordinary course of business. These actions may be commenced by various parties, including competitors, clients, current or former employees, government agencies or others. We record a provision with respect to a proceeding, claim or litigation when it is probable that a liability has been incurred and the amount of the loss can be reasonably estimated. However, even in instances where we have recorded an estimated liability, we are unable to predict with certainty the final outcome of the matter or whether resolution of the matter will materially affect our operating results, financial position or cash flows. As additional information becomes available, we adjust our assessment and estimates of such liabilities accordingly.

Further, we routinely enter into agreements with our suppliers to acquire data and with our clients to sell data, all in the normal course of business. In these agreements, we sometimes agree to indemnify and hold harmless the other party for any damages such other party may suffer as a result of potential intellectual property infringement and other claims related to the use of the data. We have not accrued liability with respect to these matters, as the exposure is considered remote.

Based on our review of the latest information available, management does not expect the impact of pending legal and tax proceedings, claims and litigation, either individually or in the aggregate, to have a material adverse effect on our operating results, financial position or cash flows. However, one or more unfavorable outcomes in any claim or litigation against us could have a material adverse effect for the period in which it is resolved. The following is a summary of the more significant legal matters involving the company.

Our wholly-owned subsidiary, IMS Government Solutions Inc., is primarily engaged in providing services under contracts with the United States government. United States government contracts are subject to extensive legal and regulatory requirements and, from time to time, agencies of the United States government have the ability to investigate whether contractors' operations are being conducted in accordance with such requirements. IMS Government Solutions discovered potential noncompliance with various contract clauses and requirements under its General Services Administration Contract (the "GSA Contract") which was awarded in 2002 to its predecessor company, Synchronous Knowledge Inc. (Synchronous Knowledge Inc. was acquired by IMS Health in May 2005). The potential noncompliance arose from two primary areas: first, at the direction of the government, work performed under one task order was invoiced under another task order without the appropriate modifications to the orders being made; and second, personnel who did not meet strict compliance with the labor categories component of the qualification requirements of the GSA Contract were assigned to contracts. Upon discovery of the potential noncompliance, we began remediation efforts, promptly disclosed the potential noncompliance to the United States government, and were accepted into the Department of Defense Voluntary Disclosure Program. We filed a Voluntary Disclosure Program Report on August 29, 2008. We are currently unable to determine the outcome of all of these matters pending the resolution of the Voluntary Disclosure Program process and the ultimate liability arising from these matters could exceed our current reserves.

On February 13, 2014, a group of approximately 1,200 medical doctors and 900 private individuals filed a civil lawsuit with the Seoul Central District Court against IMS Korea and two other defendants, KPA and the Korean Pharmaceutical Information Center ("KPIC"). The civil lawsuit alleges KPA and KPIC collected their personal information in violation of applicable privacy laws without the necessary consent through a software system installed on pharmacy computer systems in Korea, and that personal information was transferred to IMS Korea and sold to pharmaceutical companies. The plaintiffs are claiming damages in the aggregate amount of approximately $6 million plus interest. We believe the lawsuit is without merit, reject plaintiffs' claims and intend to vigorously defend our position.

On July 23, 2015, indictments were issued by the Seoul Central District Prosecutors' Office in South Korea against 24 individuals and companies alleging improper handling of sensitive health information in violation of, among others, South Korea's Personal Information Protection Act. IMS Korea and two of its employees were among the individuals and organizations indicted. Although there is no assertion that IMS Korea used patient identified health information in any of its offerings, prosecutors allege that certain of IMS Korea's data suppliers should have obtained patient consent when they converted sensitive patient information into non-identified data and that IMS Korea had not taken adequate precautions to reduce the risk of re-identification. We believe the indictment is without merit, that we acted in compliance with all applicable laws at all times and intend to vigorously defend our position.

For additional information, see Note 13 to our audited consolidated financial statements included elsewhere in this Annual Report on Form 10-K and "Risk factors—Risks Related to our Business—Litigation or regulatory proceedings could have a material adverse effect on our operating results and financial condition."

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 for Common Stock

Our common stock trades on the NYSE under the symbol "Q." The following table sets forth the high and low sales prices per share of our common stock as reported by the NYSE for the periods indicated.

	High	Low
Fiscal Year 2015		
First Quarter	$ 69.97	$ 56.46
Second Quarter	$ 73.82	$ 63.63
Third Quarter	$ 80.45	$ 67.47
Fourth Quarter	$ 72.68	$ 63.62

	High	Low
Fiscal Year 2016		
First Quarter	$ 67.92	$ 55.01
Second Quarter	$ 71.44	$ 61.21
Third Quarter	$ 81.26	$ 65.01
Fourth Quarter	$ 81.45	$ 70.10

Holders of Record

On February 9, 2017, we had approximately 60 stockholders of record as reported by our transfer agent. Holders of record are defined as those stockholders whose shares are registered in their names in our stock records and do not include beneficial owners of common stock whose shares are held in the names of brokers, dealers or clearing agencies.

Dividend Policy

We do not currently intend to pay dividends on our common stock, and no dividends were declared or paid in 2016 or 2015. However, we expect to reevaluate our dividend policy on a regular basis and may, subject to compliance with the covenants contained in our credit facilities and other considerations, determine to pay dividends in the future. The declaration, amount and payment of any future dividends on shares of our common stock will be at the sole discretion of our Board, which may take into account general and economic conditions, our financial condition and results of operations, our available cash and current and anticipated cash needs, capital requirements, contractual, legal, tax and regulatory restrictions, the implications of the payment of dividends by us to our stockholders or by our subsidiaries to us, and any other factors that our Board may deem relevant. Our long-term debt arrangements contain usual and customary restrictive covenants that, among other things, place limitations on our ability to declare dividends. For additional information regarding these restrictive covenants, see Part II, Item 7 "Management's Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources" and Note 11 to our audited consolidated financial statements included elsewhere in this Annual Report on Form 10-K.

Recent Sales of Unregistered Securities

We did not sell any unregistered equity securities in 2016.

Purchases of Equity Securities by the Issuer

On October 30, 2013, our Board approved an equity repurchase program ("Repurchase Program") authorizing the repurchase of up to $125 million of either our common stock or vested in-the-money employee stock options, or a combination thereof. During 2015, our Board increased the share repurchase authorization under the Repurchase Program by $600 million, which increased the total amount that has been authorized under the Repurchase Program to $725 million. On November 1, 2016, our Board increased the stock repurchase authorization under the Repurchase Program by $1.5 billion, which increased the total amount that has been authorized under the Repurchase Program to $2.225 billion. The Repurchase Program does not obligate us to repurchase any particular amount of common stock or vested in-the-money employee stock options, and it could be modified, extended, suspended or discontinued at any time. The timing and amount of repurchases are determined by our management based on a variety of factors such as the market price of our common stock, our corporate requirements, and overall market conditions. Purchases of our common stock may be made in open market transactions effected through a broker-dealer at prevailing market prices, in block trades, or in privately negotiated transactions. We may also repurchase shares of our common stock pursuant to a trading plan meeting the requirements of Rule 10b5-1 under the Exchange Act, which would permit shares of our common stock to be repurchased when we might otherwise be precluded from doing so by law. Repurchases of vested in-the-money employee stock options were made through transactions between us and our employees (other than our executive officers, who were not eligible to participate in the program), and this aspect of the Repurchase Program expired in November 2013. The Repurchase Program for common stock does not have an end date.

From inception through December 31, 2016, we have repurchased a total of $1,678 million of our securities under the Repurchase Program, consisting of $59 million of stock options and $1,619 million of common stock. As of December 31, 2016, we have remaining authorization to repurchase up to $547 million of our common stock under the Repurchase Program. In addition, from time to time, we have repurchased and may continue to repurchase common stock through private or other transactions outside of the Repurchase Program. For additional information regarding our equity repurchases, see Part II, Item 7 "Management's Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources" and Note 14 to our audited consolidated financial statements included elsewhere in this Annual Report on Form 10-K.

The following table summarizes the equity repurchase program activity for the three months ended December 31, 2016 and the approximate dollar value of shares that may yet be purchased pursuant to the Repurchase Program:

Period	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Approximate Dollar Value of Shares That May Yet Be Purchased Under the Plans or Programs
		(in millions, except per share data)		
October 1, 2016 – October 31, 2016	—	$ —	—	$ 47
November 1, 2016 – November 30, 2016	7.4	$ 78.13	7.4	$ 967
December 1, 2016 – December 31, 2016	5.4	$ 77.41	5.4	$ 547
	12.8		12.8	

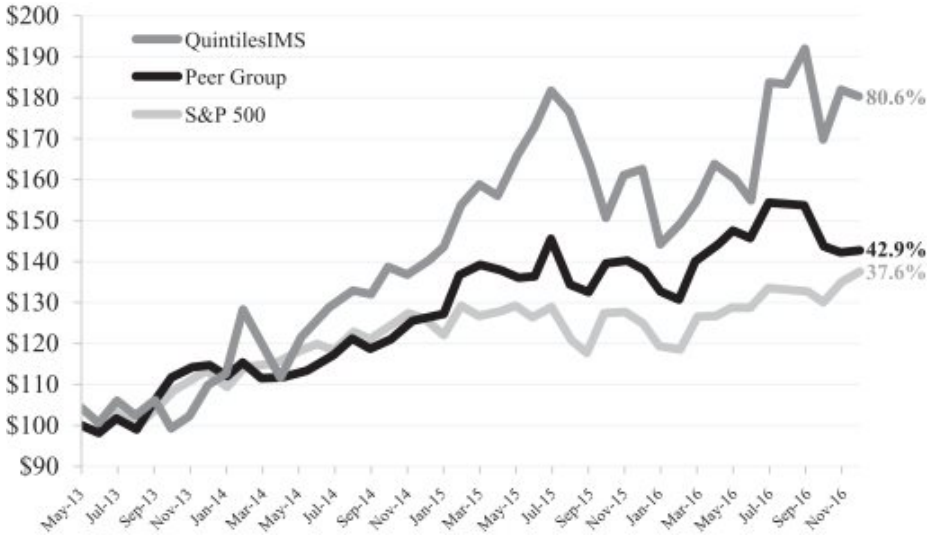
During the year ended December 31, 2016, we repurchased 14.3 million shares of our common stock at an average market price per share of $76.57 for an aggregate purchase price of $1,098 million under the Repurchase Program.

Stock Performance Graph

This performance graph shall not be deemed "filed" for purposes of Section 18 of the Exchange Act, or incorporated by reference into any filing of Quintiles IMS Holdings, Inc. under the Exchange Act or under the Securities Act, except as shall be expressly set forth by specific reference in such filing.

The following graph shows a comparison from May 9, 2013 (the date our common stock commenced trading on the NYSE) through December 31, 2016 of the cumulative total return for our common stock, the Standard & Poor's 500 Stock Index ("S&P 500") and a select peer group. The peer group consists of Cerner Corporation, Charles River Laboratories, Inc., Dun & Bradstreet Corporation, Equifax Inc., ICON plc, IHS Markit Ltd., INC Research Holdings, Laboratory Corporation of America Holdings, Nielsen N.V., Parexel International Corporation, Inc., PRA Health Sciences, Inc., Thomson Reuters Corporation and Verisk Analytics, Inc. The companies in our peer group are publicly traded information services, information technology or contract research companies, and thus share similar business model characteristics to QuintilesIMS, or provide services to similar customers as QuintilesIMS. Many of these companies are also used by our compensation committee for purposes of compensation benchmarking.

The graph assumes that $100 was invested in QuintilesIMS, the S&P 500 and the peer group as of the close of market on May 9, 2013, assumes the reinvestments of dividends, if any. The S&P 500 and our peer group are included for comparative purposes only. They do not necessarily reflect management's opinion that the S&P 500 and our peer group are an appropriate measure of the relative performance of the stock involved, and they are not intended to forecast or be indicative of possible future performance of our common stock.



	5/9/2013	12/31/2013	12/31/2014	12/31/2015	12/31/2016
Q	$ 100	$ 110	$ 140	$ 163	$ 181
Peer Group	$ 100	$ 116	$ 143	$ 151	$ 143
S&P 500	$ 100	$ 114	$ 127	$ 126	$ 138

Item 6. Selected Financial Data

We have derived the following consolidated statements of income data for 2016, 2015 and 2014 and consolidated balance sheet data as of December 31, 2016 and 2015 from our audited consolidated financial

statements included elsewhere in this Annual Report on Form 10-K. We have derived the following consolidated statements of income data for 2013 and 2012 and consolidated balance sheet data as of December 31, 2014, 2013 and 2012 from our audited consolidated financial statements not included in this Annual Report on Form 10-K. You should read the consolidated financial data set forth below in conjunction with our consolidated financial statements and related notes included elsewhere in this Annual Report on Form 10-K and the information under Part II, Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations." On October 3, 2016, we completed a merger of equals transaction with IMS Health. Pursuant to the terms of the merger agreement dated as of May 3, 2016 between Quintiles and IMS Health, IMS Health was merged with and into Quintiles, and the separate corporate existence of IMS Health ceased, with Quintiles continuing as the surviving corporation. We have included the results of operations of acquired businesses, including IMS Health, from the date of acquisition. As a result, our period to period results of operations vary depending on the dates and sizes of the acquisitions. Accordingly, this selected financial data is not necessarily comparable or indicative of our future results. You should read this selected consolidated financial data in conjunction with our audited consolidated financial statements and related footnotes included elsewhere in this Annual Report on Form 10-K.

	Year Ended December 31,				
(in millions, except per share data)	**2016 (5)**	**2015**	**2014**	**2013**	**2012**
Statement of Income Data:					
Revenues	**$ 5,364**	$ 4,326	$ 4,165	$ 3,808	$ 3,692
Reimbursed expenses	**1,514**	1,411	1,295	1,291	1,173
Total revenues	**6,878**	5,737	5,460	5,099	4,865
Costs of revenue, exclusive of depreciation and amortization	**3,236**	2,705	2,664	2,452	2,443
Costs of revenue, reimbursed expenses	**1,514**	1,411	1,295	1,291	1,173
Selling, general and administrative expenses	**1,011**	815	781	772	736
Depreciation and amortization	**289**	128	121	108	98
Restructuring costs	**71**	30	9	14	19
Merger related costs (1)	**87**	—	—	—	—
Impairment charges (2)	**28**	2	—	—	—
Income from operations	**642**	646	590	462	396
Interest expense, net	**140**	97	97	119	132
Loss on extinguishment of debt	**31**	8	—	20	1
Other (income) expense, net	**(8)**	2	(8)	—	(4)
Income before income taxes and equity in earnings (losses) of unconsolidated affiliates	**479**	539	501	323	267
Income tax expense (3)	**345**	159	149	96	93
Income before equity in earnings (losses) of unconsolidated affiliates	**134**	380	352	227	174
Equity in earnings (losses) of unconsolidated affiliates	**(4)**	8	5	(1)	3
Net income	**130**	388	357	226	177
Net (income) loss attributable to non-controlling interests	**(15)**	(1)	—	1	1
Net income attributable to Quintiles IMS Holdings, Inc.	**$ 115**	$ 387	$ 357	$ 227	$ 178

(in millions, except per share data)	Year Ended December 31, 2016 (5)	2015	2014	2013	2012
Earnings per share attributable to common stockholders:					
Basic	**$ 0.77**	$ 3.15	$ 2.78	$ 1.83	$ 1.53
Diluted	**$ 0.76**	$ 3.08	$ 2.72	$ 1.77	$ 1.51
Cash dividends declared per common share	**$ —**	$ —	$ —	$ —	$ 4.91
Weighted average common shares outstanding:					
Basic	**149.1**	123.0	128.0	124.1	115.7
Diluted	**152.0**	125.6	131.1	127.9	117.8

(in millions)	Year Ended December 31, 2016 (5)	2015	2014	2013	2012
Statement of Cash Flow Data:					
Net cash provided by (used in):					
Operating activities	**$ 860**	$ 476	$ 433	$ 393	$ 336
Investing activities	**1,731**	(67)	(173)	(236)	(132)
Financing activities	**(2,284)**	(249)	(130)	71	(147)
Other Financial Data:					
Capital expenditures	**$ (164)**	$ (78)	$ (83)	$ (88)	$ (71)
Cash dividend paid to common stockholders	**—**	—	—	—	(568)

(in millions)	As of December 31, 2016 (5)	2015	2014	2013	2012
Balance Sheet Data:					
Cash and cash equivalents	**$ 1,198**	$ 977	$ 867	$ 777	$ 568
Investments in debt, equity and other securities	**53**	33	35	40	36
Trade accounts receivable and unbilled services, net	**1,707**	1,166	975	924	745
Property and equipment, net	**406**	188	190	200	194
Total assets	**21,208**	3,926	3,296	3,054	2,476
Total long-term liabilities	**9,643**	2,668	2,528	2,239	2,526
Total debt and capital leases (4)	**7,219**	2,501	2,306	2,061	2,445
Total stockholders' equity (deficit)	**8,860**	(336)	(704)	(667)	(1,359)

(1) Merger related costs include the direct and incremental costs associated with our merger with IMS Health Holdings, Inc., on October 3, 2016 (the "Merger").
(2) In 2016, we recognized $28 million of impairment losses for other than temporary declines in fair value of goodwill ($23 million) and identifiable intangible assets ($5 million) in our Encore reporting unit. In 2015, we wrote down $2 million related to long-lived assets.

(3) Income tax expense in 2016 includes $252 million related to a change in our indefinitely reinvested assertion on our cumulative foreign earnings as a result of the Merger.
(4) Excludes $19 million, $33 million, $22 million, $28 million and $47 million of unamortized discounts and debt issuance costs as of December 31, 2016, 2015, 2014, 2013 and 2012.
(5) Includes the acquisition of IMS Health effective October 3, 2016.

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

You should read the following discussion and analysis of our financial condition and results of operations together with our consolidated financial statements and the related notes included elsewhere in this Annual Report on Form 10-K. Some of the information contained in this discussion and analysis or set forth elsewhere in this Annual Report, including information with respect to our plans and strategy for our business, includes forward-looking statements that involve risks and uncertainties. You should read the "Risk Factors" section of this Annual Report for a discussion of important factors that could cause actual results to differ materially from the results described in or implied by the forward-looking statements contained in the following discussion and analysis.

Overview

Quintiles IMS Holdings, Inc. ("QuintilesIMS", the "Company", "we", "our" and/or "us") is a leading worldwide integrated information and technology-enabled healthcare service provider, dedicated to helping its clients improve their clinical, scientific and commercial results. Formed through the merger (the "Merger") of Quintiles Transnational Holdings Inc. ("Quintiles") and IMS Health Holdings, Inc. ("IMS Health") on October 3, 2016, QuintilesIMS's more than 50,000 employees conduct operations in over 100 countries. Companies seeking to improve real-world patient outcomes through treatment innovations, care provision and access can utilize our broad range of healthcare information, technology and service solutions to drive new insights and approaches. Our solutions span clinical to commercial, bringing our clients an opportunity to realize the full potential of innovations and advanced healthcare outcomes.

Following the merger with IMS Health, we manage our business through three reportable segments, Commercial Solutions (substantially IMS Health's legacy businesses plus Quintiles' legacy Real-World Late Phase, Payer/Provider and Advisory businesses), Research & Development Solutions (substantially Quintiles' legacy Product Development segment) and Integrated Engagement Services (substantially Quintiles' legacy Integrated Healthcare Services segment). Historical segment reporting has been revised to reflect these changes to the Company's segment structure.

For a description of our service offerings within our segments, refer to "Business" within Part I, Item 1, of this Annual Report of Form 10-K.

Industry Outlook

For information about the industry outlook and markets that we operate in, refer to "Our Market Outlook" within Part I, Item I of this Annual Report on Form 10-K.

Business Combinations

We have completed and will continue to consider strategic business combinations to enhance our capabilities and offerings in certain areas. In October 2016, we completed the merger with IMS Health to better serve our clients across their entire product lifecycle by (i) improving clinical trial design, recruitment, and execution; (ii) creating real-world information solutions based on the use of medicines by actual patients in normal situations; and (iii) increasing the efficiency of healthcare companies' commercial organizations through enhanced analytics and outsourcing services. In July 2015, we combined our global clinical trials laboratory operations in our Research & Development Solutions segment with the clinical trials laboratory operations of Quest with the resulting combined business referred to as Q ^{2} Solutions. We own 60% of Q ^{2} Solutions and Quest owns the remaining 40%.

These transactions were accounted for as business combinations and the acquired results of operations are included in our consolidated financial information since the acquisition date with a non-controlling interest for

the portion which we do not own. See Note 15 to our audited consolidated financial statements included elsewhere in this Annual Report on Form 10-K for additional information with respect to these business combinations.

Sources of Revenue

Total revenues are comprised of revenues from the provision of our services and revenues from reimbursed expenses that are incurred while providing our services. We do not have any material product revenues. Our segment revenues expressed as a percent of 2016 revenues (excluding reimbursed expense revenue) are as follows:

Commercial Solutions	20.4%
Research & Development Solutions	64.7%
Integrated Engagement Services	14.9%

Reimbursed expenses are comprised primarily of payments to physicians (investigators) who oversee clinical trials and travel expenses for our clinical monitors principally within our Research & Development Solutions segment and travel expenses for our sales representatives within our Integrated Engagement Services segment. Reimbursed expenses may fluctuate from period-to-period due, in part, to where we are in the lifecycle of the many contracts that are in progress at a particular point in time. As reimbursed expenses are pass-through costs to our clients with little to no profit and we believe that the fluctuations from period-to-period are not meaningful to our underlying performance, we do not provide any analysis of the fluctuations in these items or their impact on our financial results. We have collection risk on contractually reimbursable expenses, and, from time to time, are unable to obtain reimbursement from the client for costs incurred. When such an expense is not reimbursed, it is classified as costs of revenue on the consolidated statements of income.

Costs and Expenses

Our costs and expenses are comprised primarily of our costs of revenue, reimbursed expenses and selling, general and administrative expenses. Costs of revenue include compensation and benefits for billable employees and personnel involved in production, data management and delivery, and the costs of acquiring and processing data for our information offerings; costs of staff directly involved with delivering technology-related services offerings and engagements, related accommodations and the costs of data purchased specifically for technology services engagements; and other expenses directly related to service contracts such as courier fees, laboratory supplies, professional services and travel expenses. As noted above, reimbursed expenses are comprised principally of payments to investigators who oversee clinical trials and travel expenses for our clinical monitors and sales representatives. Selling, general and administrative expenses include costs related to sales, marketing, and administrative functions (including human resources, legal, finance and general management) for compensation and benefits, travel, professional services, training and expenses for information technology (“IT”), facilities and depreciation and amortization.

Foreign Currency Translation

In 2016, approximately 36% of our revenues were denominated in currencies other than the United States dollar. Because a large portion of our revenues and expenses are denominated in currencies other than the United States dollar and our financial statements are reported in United States dollars, changes in foreign currency exchange rates can significantly affect our results of operations. The revenue and expenses of our foreign operations are generally denominated in local currencies and translated into United States dollars for financial reporting purposes. Accordingly, exchange rate fluctuations will affect the translation of foreign results into United States dollars for purposes of reporting our consolidated results. As a result, we believe that providing the

impact of fluctuations in foreign currency rates on certain financial results can facilitate the analysis of period-to-period comparisons of business performance that excludes the effects of foreign currency rate fluctuations. The constant currency information assumes the same foreign currency exchange rates that were in effect for the comparable prior-year period were used in translation of the current period results.

Consolidated Results of Operations

Year ended December 31, 2016 compared to the year ended December 31, 2015 and the year ended December 31, 2015 compared to the year ended December 31, 2014

Summary Results of Operations

The following tables present a summary of our results of operations:

(in millions)	Year Ended December 31, 2015	Change		Year Ended December 31, 2016
		Currency Impact	Constant Currency	
Revenues	$ 4,326	$ (6)	$ 1,044	**$ 5,364**
Costs of revenue	2,705	(35)	566	**3,236**
Selling, general and administrative expenses	815	(19)	215	**1,011**
Depreciation and amortization	128	(3)	164	**289**
Restructuring costs	30	1	40	**71**
Merger related costs	—	(1)	88	**87**
Impairment charges	2	—	26	**28**
Income from operations	$ 646	$ 51	$ (55)	**$ 642**

(in millions)	Year Ended December 31, 2014	Change		Year Ended December 31, 2015
		Currency Impact	Constant Currency	
Revenues	$ 4,165	$ (211)	$ 372	$ 4,326
Costs of revenue	2,664	(196)	237	2,705
Selling, general and administrative expenses	781	(37)	71	815
Depreciation and amortization	121	(4)	11	128
Restructuring costs	9	(4)	25	30
Impairment charges	—	—	2	2
Income from operations	$ 590	$ 30	$ 26	$ 646

Consolidated Results of Operations

For information regarding our results of operations for Commercial Solutions, Research & Development Solutions and Integrated Engagement Services, refer to "Segment Results of Operations" later in this section.

Revenues

	Year Ended December 31,			Change			
				2016 vs. 2015		2015 vs. 2014	
(dollars in millions)	2016	2015	2014	$	%	$	%
Revenues	**$ 5,364**	$ 4,326	$ 4,165	**$ 1,038**	24.0%	**$ 161**	3.9%

2016 compared to 2015

In 2016, our revenues increased $1,038 million, or 24.0%, as compared to the same period in 2015. This increase was comprised of constant currency revenue growth of approximately $1,044 million, or 24.1%, and a negative impact of approximately $6 million from the effects of foreign currency fluctuations. The constant currency revenue growth was comprised of a $774 million increase in Commercial Solutions, which includes $806 million from the merger with IMS Health, partially offset by a decline in the legacy service offerings, a $336 million increase in Research & Development Solutions, which includes the incremental impact from the businesses that Quest contributed to Q 2 Solutions, and a $66 million decrease in Integrated Engagement Services. The revenue contributed by the Merger in 2016 was negatively impacted by approximately $55 million as a result of adjusting the acquired IMS Health unearned income to fair value as required by purchase accounting.

2015 compared to 2014

In 2015, our revenues increased $161 million, or 3.9%, as compared to 2014. This increase was comprised of constant currency revenue growth of approximately $372 million, or 8.9%, and a negative impact of approximately $211 million from the effects of foreign currency fluctuations. The constant currency revenue growth was comprised of a $98 million increase in Commercial Solutions, which includes the impact from the Encore acquisition which closed in July 2014, a $239 million increase in Research & Development Solutions, which includes the incremental impact from the businesses that Quest contributed to Q 2 Solutions, and a $35 million increase in Integrated Engagement Services.

Costs of Revenue, exclusive of Depreciation and Amortization

	Year Ended December 31,		
(dollars in millions)	2016	2015	2014
Costs of revenue	**$ 3,236**	$ 2,705	$ 2,664
% of revenues	**60.3%**	62.5%	64.0%

2016 compared to 2015

When compared to 2015, costs of revenue in 2016 increased $531 million. This increase included a constant currency increase in expenses of approximately $566 million, or 20.9%, partially offset by a positive impact of approximately $35 million from the effects of foreign currency fluctuations. The constant currency growth was comprised of a $406 million increase in Commercial Solutions, which includes $438 million from the merger with IMS Health, partially offset by a decline in the legacy service offerings, a $220 million increase in Research & Development Solutions, which includes the incremental impact from the businesses that Quest contributed to Q 2 Solutions, and a $60 million decrease in Integrated Engagement Services.

2015 compared to 2014

When compared to 2014, costs of revenue in 2015 increased $41 million. This increase included a constant currency increase in expenses of approximately $238 million, or 8.9%, partially offset by a positive impact of approximately $197 million from the effects of foreign currency fluctuations. The constant currency growth was comprised of a $71 million increase in Commercial Solutions, which included the impact from the Encore acquisition which closed in July 2014, a $146 million increase in Research & Development Solutions, which included the incremental impact from the businesses that Quest contributed to Q 2 Solutions, and a $21 million increase in Integrated Engagement Services.

The decrease in costs of revenue as a percent of revenues for 2015 was primarily as a result of an improvement in constant currency profit margin in the Commercial Solutions, Research & Development Solutions and Integrated Engagement Services segments (as more fully described in the segment discussion later in this section). For 2015, this constant currency profit margin expansion was partially offset by the effect from a higher proportion of consolidated revenues being contributed by our lower margin Integrated Engagement Services segment when compared to 2014 as well as a negative impact from foreign currency fluctuations.

Selling, General and Administrative Expenses, exclusive of Depreciation and Amortization

	Year Ended December 31,		
(dollars in millions)	**2016**	**2015**	**2014**
Selling, general and administrative expenses	**$ 1,011**	$ 815	$ 781
% of revenues	**18.8%**	18.8%	18.8%

2016 compared to 2015

The $196 million increase in selling, general and administrative expenses in 2016 included a constant currency increase of $215 million, or 26.4%, partially offset by a positive impact of approximately $19 million from the effects of foreign currency fluctuations. The constant currency growth was comprised of a $151 million increase in Commercial Solutions, which includes $158 million from the merger with IMS Health, partially offset by a decline in the legacy service offerings, a $32 million increase in Research & Development Solutions, which includes the incremental impact from the businesses that Quest contributed to Q 2 Solutions, a $3 million increase in Integrated Engagement Services, and a $29 million increase in general corporate and unallocated expenses, which includes $37 million from the merger with IMS Health. The constant currency increase in general corporate and unallocated expenses in 2016 was primarily due to higher stock-based compensation expense.

2015 compared to 2014

The $34 million increase in selling, general and administrative expenses in 2015 included a constant currency increase of $74 million, or 9.5%, partially offset by a positive impact of approximately $42 million from the effects of foreign currency fluctuations. The constant currency growth was comprised of a $14 million increase in Commercial Solutions, which included the impact from the Encore acquisition which closed in July 2014, a $40 million increase in Research & Development Solutions, which included the incremental impact from the businesses that Quest contributed to Q 2 Solutions, a $4 million increase in Integrated Engagement Services, and a $14 million increase in general corporate and unallocated expenses. The constant currency increase in general corporate and unallocated expenses in 2015 was primarily due to higher stock-based compensation expense and costs associated with the Q 2 Solutions transaction.

Depreciation and Amortization

(dollars in millions)	Year Ended December 31, 2016	2015	2014
Depreciation and amortization	**$ 289**	$ 128	$ 121
% of revenues	**5.4%**	3.0%	2.9%

2016 compared to 2015

The $161 million increase in depreciation and amortization in 2016 was primarily the result of the merger with IMS Health.

2015 compared to 2014

The $7 million increase in depreciation and amortization in 2015 included a constant currency increase of $11 million, or 9.0%, partially offset by a positive impact of approximately $4 million from the effects of foreign currency fluctuations. The constant currency growth was primarily due to the incremental impact from the businesses that Quest contributed to Q ^{2} Solutions.

Restructuring Costs

(in millions)	Year Ended December 31, 2016	2015	2014
Restructuring costs	**$ 71**	$ 30	$ 9

During 2016, we recognized $71 million of restructuring charges, net of reversals for changes in estimates, under our existing restructuring plans. The remaining actions under these plans are expected to occur throughout 2017, and are expected to consist of severance, facility closure and other exit-related costs.

During 2015, we recognized $30 million of restructuring charges, net of reversals for changes in estimates, associated with both the February 2015 restructuring plan and the Q ^{2} Solutions restructuring plan.

During 2014, we recognized $9 million of restructuring charges, net of reversals for changes in estimates, which was primarily related to our 2014 restructuring plans.

Merger Related Costs

(in millions)	Year Ended December 31, 2016	2015	2014
Merger related costs	**$ 87**	$ —	$ —

During 2016 we recognized $87 million of merger related costs. Merger related costs include the direct and incremental costs associated with the Merger such as (i) investment banking, legal, accounting and consulting fees, (ii) incremental compensation costs triggered under change in control provisions in executive employment agreements, (iii) compensation and related costs of employees 100% dedicated to merger-related integration activities and (iv) severance and other termination costs associated with employees whose positions became redundant as a result of the Merger.

Impairment Charges

(in millions)	Year Ended December 31, 2016	2015	2014
Impairment charges	**$ 28**	$ 2	$ —

During 2016, we recognized $28 million of impairment losses for other than temporary declines in fair value of goodwill ($23 million) and identifiable intangible assets ($5 million) in our Encore reporting unit. See Note 17 to our audited consolidated financial statements included elsewhere in this Annual Report on Form 10-K for additional information with respect to impairment charges. During the fourth quarter of 2015, we exited a training facility in Japan, resulting in a $2 million impairment of the land and building.

Interest Income and Interest Expense

(in millions)	Year Ended December 31, 2016	2015	2014
Interest income	**$ (4)**	$ (4)	$ (4)
Interest expense	**$ 144**	$ 101	$ 101

Interest income included interest received primarily from bank balances and investments.

Interest expense during 2016 was higher than 2015 due to an increase in the average debt outstanding, primarily as a result of the debt acquired from the Merger.

Interest expense during 2015 reflects the increase in the average debt outstanding, primarily as a result of the $275 million term loan that was issued under the receivables financing facility in December 2014 and our new senior secured credit agreement and senior notes, both of which are described in Liquidity and Capital Resources. This increase was offset by a decrease in the average rate of interest incurred on our debt as compared to 2014.

Loss on Extinguishment of Debt

(in millions)	Year Ended December 31, 2016	2015	2014
Loss on extinguishment of debt	**$ 31**	$ 8	$ —

In the fourth quarter of 2016, we recognized a $31 million loss on extinguishment of debt related to the refinancing of our senior secured credit facilities. The loss on extinguishment of debt included an $8 million call premium, $9 million of unamortized debt issuance costs and $14 million of unamortized discount.

In May 2015, we recognized an $8 million loss on extinguishment of debt related to the refinancing of our senior secured credit facilities. The loss on extinguishment of debt included $1 million of unamortized debt issuance costs, $1 million of unamortized discount and $6 million of related fees and expenses.

See "—Liquidity and Capital Resources" for more information on these transactions.

Other (Income), Expense Net

(in millions)	Year Ended December 31, 2016	2015	2014
Other (income), expense net	**$ (8)**	$ 2	$ (8)

Other (income) expense, net for 2016 primarily consisted of a gain on the sale of a cost basis investment partially offset by foreign currency net losses.

Other (income), expense net for 2015 primarily consisted of $6 million of expense related to the change in fair value of contingent consideration related to an acquisition, partially offset by $5 million of foreign currency net gains.

Other (income), expense net for 2014 included income of approximately $9 million due to changes in the estimated fair value of contingent consideration from an acquisition as well as a gain from the sale of marketable equity securities of approximately $5 million, partially offset by other expenses, primarily consisting of $5 million of foreign currency net losses.

Income Tax Expense

(dollars in millions)	Year Ended December 31, 2016	2015	2014
Income tax expense	**$ 345**	$ 159	$ 149
Effective income tax rate	**72.0%**	29.5%	29.7%

The increase in the 2016 effective income tax rate was due to a change in our permanent reinvestment assertion on the majority of our cumulative foreign earnings. Due to the Merger, we reevaluated our indefinite reinvestment assertion based on the need for cash in the United States, including funding the Repurchase Program and potential acquisitions. Accordingly, we changed our assertion with respect to $2,801 million of foreign earnings, including $1,865 million of IMS Health's previously undistributed historical foreign earnings. We intend to use these acquired foreign earnings to fund cash needs in the United States. Deferred income taxes of $625 million were recorded in 2016 related to non-indefinitely reinvested foreign earnings. Of that amount, $373 million was recorded through purchase accounting related to IMS Health's historical foreign earnings and the remainder of $252 million was recorded through deferred income tax expense.

The decrease in the 2015 effective income tax rate was due to an income tax benefit related to the reversal of uncertain tax positions for tax years whose statute of limitations expired in 2015 and also a change in the relative mix of the profitability between taxing jurisdictions. These benefits were partially offset by additional income tax expense related to an increase in the amount of current year earnings of our foreign subsidiaries not considered permanently reinvested.

Equity in Earnings (Losses) of Unconsolidated Affiliates

(in millions)	Year Ended December 31, 2016	2015	2014
Equity in (losses) earnings of unconsolidated affiliates	**$ (4)**	$ 8	$ 5

Equity in earnings (losses) of unconsolidated affiliates primarily included (losses) earnings from our investment in NovaQuest Pharma Opportunities Fund III, L.P. ("Fund III"). The earnings from Fund III in 2014 were partially offset by losses and write-downs incurred on another equity method investment.

Net (Income) Loss Attributable to Non-controlling Interests

(in millions)	Year Ended December 31, 2016	2015	2014
Net income attributable to non-controlling interests	**$ (15)**	$ (1)	$ —

Net income attributable to non-controlling interests in 2016 and 2015 primarily included Quest's interest in Q 2 Solutions.

Segment Results of Operations

Revenues and profit by segment are as follows (dollars in millions):

	Segment Revenues			Segment Profit			Segment Profit Margin		
	2016	2015	2014	2016	2015	2014	2016	2015	2014
Commercial Solutions	**$ 1,096**	$ 323	$ 230	**$ 236**	$ 19	$ 4	**21.5%**	5.9%	1.7%
Research & Development Solutions	**3,472**	3,159	3,050	**942**	824	744	**27.1%**	26.1%	24.4%
Integrated Engagement Services	**796**	844	885	**75**	78	78	**9.4%**	9.2%	8.8%
Total	**5,364**	4,326	4,165	**1,253**	921	826	**23.4%**	21.3%	19.8%
General corporate and unallocated				**(136)**	(115)	(106)			
Depreciation and amortization				**(289)**	(128)	(121)			
Restructuring costs				**(71)**	(30)	(9)			
Merger related costs				**(87)**	—	—			
Impairment charges				**(28)**	(2)	—			
Consolidated	**$ 5,364**	$ 4,326	$ 4,165	**$ 642**	$ 646	$ 590			

Certain costs are not allocated to our segments and are reported as general corporate and unallocated expenses. These costs primarily consist of stock-based compensation, and expenses for corporate overhead functions such as senior leadership, finance, human resources, information technology, facilities and legal. We do not allocate depreciation and amortization, restructuring costs, merger related costs or impairment charges to our segments.

Commercial Solutions

(dollars in millions)	2016	2015	2014	Change 2016 vs. 2015		Change 2015 vs. 2014	
Revenues	**$ 1,096**	$ 323	$ 230	**$ 773**	239.3%	$ 93	40.4%
Costs of revenue	**644**	239	174	**405**	169.5	65	37.4
as a percentage of revenues	***58.8%***	*74.0%*	*75.7%*				
Selling, general and administrative expenses	**216**	65	52	**151**	232.3	13	25.0
as a percentage of revenues	***19.7%***	*20.1%*	*22.6%*				
Segment profit	**$ 236**	$ 19	$ 4	**$ 217**	1,142.1%	$ 15	375.0%
as a percentage of revenues	***21.5%***	*5.9%*	*1.7%*				

Revenues

2016 compared to 2015

Commercial Solutions' revenues were $1,096 million in 2016, an increase of $773 million over 2015, which includes the incremental impact from the Merger of $806 million. The constant currency revenue increase was due to the incremental impact from the Merger and from growth in real-world and late phase research services, partially offset by lower revenues from payer provider and advisory services. The revenue contributed by the Merger in 2016 was negatively impacted by approximately $55 million as a result of adjusting the acquired IMS Health unearned income to fair value as required by purchase accounting.

2015 compared to 2014

Commercial Solutions' revenues were $323 million in 2015, an increase of $93 million, or 40.4%, over 2014. This increase was comprised of constant currency revenue growth of $98 million, or 42.7%, including $44 million from the Encore acquisition which closed in July 2014, partially offset by a negative impact of approximately $5 million due to the effects of foreign currency fluctuations. The increase in constant currency revenues was due to the impact from the Encore acquisition which closed in July 2014, as well as growth in real-world and late phase research services, partially offset by lower revenue from advisory services.

Costs of Revenue, exclusive of Depreciation and Amortization

2016 compared to 2015

Commercial Solutions' costs of revenue increased approximately $405 million in 2016. This increase was comprised of a $407 million constant currency increase, which includes $438 million from the Merger, offset by lower costs in payer provider and advisory services due to lower revenue volumes, and $2 million due to the negative effects of foreign currency fluctuations.

2015 compared to 2014

Commercial Solutions' costs of revenue increased approximately $65 million in 2015. This increase was comprised of a $71 million constant currency increase, or 41.1%, partially offset by a reduction of $6 million from the positive effects of foreign currency fluctuations. The constant currency increase for 2015 was due to the impact of the Encore acquisition and costs to support the growth in real-world and late phase research services.

Selling, General and Administrative Expenses, exclusive of Depreciation and Amortization

2016 compared to 2015

Commercial Solutions' selling, general and administrative expenses increased approximately $151 million in 2016 as compared to 2015. This increase was primarily due to $158 million from the Merger, an increase in bad debt expense and cost reductions in various other areas.

2015 compared to 2014

Commercial Solutions' selling, general and administrative expenses increased approximately $13 million, or 25.0%, in 2015 as compared to 2014. This increase was comprised of a $14 million constant currency increase, or 26.9%, partially offset by a reduction of $1 million from the positive effects of foreign currency fluctuations. The constant currency increase was primarily due to the impact from the Encore acquisition which closed in July 2014.

Research & Development Solutions

(dollars in millions)	2016	2015	2014	Change 2016 vs. 2015		Change 2015 vs. 2014	
Revenues	**$ 3,472**	$ 3,159	$ 3,050	**$ 313**	9.9%	$ 109	3.6%
Costs of revenue	**1,953**	1,779	1,764	**174**	9.8	15	0.9
as a percentage of revenues	***56.3%***	*56.3%*	*57.8%*				
Selling, general and administrative expenses	**577**	556	542	**21**	3.8	14	2.6
as a percentage of revenues	***16.6%***	*17.6%*	*17.8%*				
Segment profit	**$ 942**	$ 824	$ 744	**$ 118**	14.3%	$ 80	10.8%
as a percentage of revenues	***27.1%***	*26.1%*	*24.4%*				

Backlog and Net New Business

Beginning with the third quarter of 2016, we began reporting net new business and backlog on an as-contracted basis (signed binding commitments and signed contracts during the period). We only report backlog and net new business for the Research & Development Solutions segment on a rolling basis for the last twelve months. Previously, net new business included non-binding written awards, which was consistent with industry practice. We believe the as-contracted method is a more precise approach as it requires a higher threshold and less judgment for backlog inclusion. Net new business totaled $4.3 billion for both the 12 months ended December 31, 2016 and 2015. Ending backlog was $9.5 billion at December 31, 2016, and we expect $2.9 billion of this backlog to convert to revenue in the next 12 months.

Net new business under sole provider arrangements is recorded over the life of the arrangement as projects are awarded. Consistent with our methodology for calculating net new business during a particular period, backlog represents, at a particular point in time, future service revenues from work not yet completed or performed under signed contracts. Once work begins on a project, service revenues are recognized over the duration of the project. Net new business and backlog denominated in foreign currencies are valued each month using the actual average foreign exchange rates in effect during the month.

We believe that backlog and net new business may not be consistent indicators of future revenues because they have been and likely will be affected by a number of factors, including the variable size and duration of projects, many of which are performed over several years, cancellations, and changes to the scope of work during the course of projects. Projects that have been delayed remain in backlog, but the timing of the revenue generated may differ from the timing originally expected. Additionally, projects may be terminated or delayed by the customer or delayed by regulatory authorities. In the event that a client cancels a contract, we typically would be entitled to receive payment for all services performed up to the cancellation date and subsequent client-authorized services related to terminating the canceled project. However, we typically do not have a contractual right to the full amount of the revenue reflected in our backlog or net new business contracts in the event of cancellation. For more details regarding risks related to our backlog, see Part I, Item IA, "Risk Factors—The relationship of backlog to revenues varies over time."

Revenues

2016 compared to 2015

Research & Development Solutions' revenues were $3,472 million in 2016, an increase of $313 million, or 9.9%, over 2015. This increase was comprised of constant currency revenue growth of $335 million, or 10.6%, partially offset by a negative impact of approximately $22 million from the effects of foreign currency fluctuations. The constant currency revenue growth primarily included volume-related increases in our services and the incremental impact from the businesses that Quest contributed to Q 2 Solutions.

The volume-related revenue growth was related to increases in revenue from both our clinical solutions and services and our clinical trial support services. This growth was due largely to execution on the higher backlog in place as we entered the year. The 2016 growth was negatively impacted by $17 million of non-recurring revenue recognized in the second quarter of 2015 related to the early close out of a client arrangement. The constant currency revenue growth in 2016 was negatively impacted by $27 million of foreign currency exchange rate adjustments associated with client contracts and losses on foreign exchange forward contracts.

2015 compared to 2014

Research & Development Solutions' revenues were $3,159 million in 2015, an increase of $109 million, or 3.6%, over 2014. This increase was comprised of constant currency revenue growth of $239 million, or 7.8%, partially offset by a negative impact of approximately $130 million from the effects of foreign currency fluctuations. The constant currency revenue growth included a volume-related increase in our services and the incremental impact from the businesses that Quest contributed to Q 2 Solutions.

The volume-related revenue growth was related to an increase in revenue from both clinical solutions and services and clinical trial support services. This growth was due largely to execution on the higher backlog in place as we entered the year. In addition, we recognized $17 million of revenue in the second quarter of 2015 as a result of the release of deferred revenue upon the early close out of a client arrangement. The constant currency revenue growth in 2015 was negatively impacted by contract cancellations in 2014 as well as $28 million of foreign currency exchange rate adjustments associated with client contracts and losses on foreign exchange forward contracts

Costs of Revenue, exclusive of Depreciation and Amortization

2016 compared to 2015

Research & Development Solutions' costs of revenue increased approximately $174 million in 2016 over 2015. This increase included constant currency growth of $219 million, or 12.3%, which includes the incremental impact from the businesses that Quest contributed to Q2 Solutions, partially offset by $45 million from the positive effects of foreign currency fluctuations.

The constant currency costs of revenue growth was primarily due to the impact from the Q 2 Solutions transaction and an increase in compensation and related expenses. The increase in compensation and related expenses resulted from (i) an increase in billable headcount resulting from the higher volume of constant currency revenue, (ii) our continued investment in our global delivery network ("GDN") which is a coordinated global delivery model that enables us to provide standardized, centrally-managed services from seven hub locations across five countries, (iii) annual merit increases and (iv) an increase in competition for qualified personnel in certain markets. The constant currency growth for 2016 also included a $12 million reserve for certain potentially non-reimbursable expenses. These increases in cost were partially offset by $17 million of expense recognized in the second quarter of 2015 related to the early close out of a client arrangement that did not recur in 2016 and a $15 million increase in the benefit from research and development credits received in Europe.

2015 compared to 2014

Research & Development Solutions' costs of revenue increased approximately $15 million in 2015 over 2014. This increase included a constant currency increase of $146 million, or 8.3%, which included the incremental impact from the businesses that Quest contributed to Q 2 Solutions, partially offset by $131 million from the positive effects of foreign currency fluctuations.

The constant currency costs of revenue growth was primarily due to the impact from the Q 2 Solutions transaction and an increase in compensation and related expenses. The increase in compensation and related expenses resulted from an increase in billable headcount as a result of the ramp up of new projects as well as annual merit increases and an increase in competition for qualified personnel in certain markets. Also contributing to the constant currency increase was $17 million of expense recognized in the second quarter of 2015 as a result of the release of deferred contract costs upon the early close out of a client arrangement. Costs of revenue growth was partially offset by an $8 million increase in the benefit from research and development credits received in Europe. As a percent of revenues, Research & Development Solutions' costs of revenue were 56.3% and 57.8% in 2015 and 2014, respectively. The decrease in costs of revenue as a percentage of revenues reflected a favorable impact from the effects of foreign currency fluctuations and a closer alignment of resources with project requirements, including cost efficiencies gained from restructuring actions taken in prior years, which more than offset the impact of the constant currency costs of revenue growth noted above.

Selling, General and Administrative Expenses, exclusive of Depreciation and Amortization

2016 compared to 2015

Research & Development Solutions' selling, general and administrative expenses increased approximately $21 million, or 3.8%, in 2016 as compared to 2015. This increase was caused by constant currency growth of $32 million, partially offset by a reduction of $11 million from foreign currency fluctuations. As a percent of revenues, Research & Development Solutions' selling, general and administrative expenses were 16.6% and 17.6% in 2016 and 2015, respectively. The constant currency increase was primarily due to the incremental impact from the businesses that Quest contributed to Q 2 Solutions, higher compensation and related expenses due to annual merit increases and an increase in headcount and an increase in bad debt expense.

2015 compared to 2014

Research & Development Solutions' selling, general and administrative expenses increased approximately $14 million, or 2.6%, in 2015 as compared to 2014. This increase was primarily caused by a constant currency increase of $40 million, which included the incremental impact from the businesses that Quest contributed to Q 2 Solutions, partially offset by a reduction of $26 million from the positive effects of foreign currency fluctuations. As a percent of revenues, Research & Development Solutions' selling, general and administrative expenses were 17.6% and 17.8% in 2015 and 2014, respectively. The constant currency increase was primarily due to the incremental impact from the businesses that Quest contributed to Q 2 Solutions, higher compensation and related expenses due to annual merit increases and an increase in headcount.

Integrated Engagement Services

(dollars in millions)	2016	2015	2014	Change 2016 vs. 2015		Change 2015 vs. 2014	
Revenues	**$ 796**	$ 844	$ 885	**$ (48)**	(5.7)%	$(41)	(4.6)%
Costs of revenue	**639**	687	726	**(48)**	(7.0)	(39)	(5.4)
as a percentage of revenues	***80.3%***	*81.4%*	*82.0%*				
Selling, general and administrative expenses	**82**	79	81	**3**	3.8	(2)	(2.5)
as a percentage of revenues	***10.3%***	*9.4%*	*9.2%*				
Segment profit	**$ 75**	$ 78	$ 78	**$ (3)**	(3.8)%	$ —	0.0%
as a percentage of revenues	***9.4%***	*9.2%*	*8.8%*				

Revenues

2016 compared to 2015

Integrated Engagement Services' revenues were $796 million in 2016, a decrease of $48 million, or 5.7%, over 2015. This decrease was comprised of a constant currency revenue decrease of $67 million, or 7.9%, partially offset by a positive impact of approximately $19 million due to the effects of foreign currency fluctuations. The decline in constant currency revenues for 2016 was due to a decrease in commercial services in North America (primarily as a result of cancellations that occurred in 2015 and earlier this year), Japan and Europe. The decline in Europe was partially offset by a $10 million benefit from the acceleration of revenue due to a contract modification on a sales force arrangement that fixed a portion of the contract price that previously was not determinable until future sales-based royalties were known.

2015 compared to 2014

Integrated Engagement Services' revenues were $844 million in 2015, a decrease of $41 million, or 4.6%, over 2014. This decrease was comprised of constant currency revenue growth of $35 million, or 4.0%, partially offset by a negative impact of approximately $76 million due to the effects of foreign currency fluctuations. The increase in constant currency revenues was due to an increase in commercial services in North America, partially offset by a decline in Europe due to the loss of revenue from an agreement to distribute pharmaceutical products in Italy that ended in the fourth quarter of 2014.

Costs of Revenue, exclusive of Depreciation and Amortization

2016 compared to 2015

Integrated Engagement Services' costs of revenue decreased approximately $48 million in 2016. This decrease was comprised of a $60 million constant currency decrease, or 8.7%, partially offset by $11 million due to the positive effects of foreign currency fluctuations. The constant currency decrease for 2016 was due to a decrease in compensation and related expenses resulting from a decrease in billable headcount.

2015 compared to 2014

Integrated Engagement Services' costs of revenue decreased approximately $39 million in 2015. This increase was comprised of a $21 million constant currency increase, or 2.9%, more than offset by a reduction of $60 million from the positive effects of foreign currency fluctuations. The constant currency increase for 2015 was due to an increase in compensation and related expenses resulting from an increase in billable headcount

needed to support the higher volume of constant currency revenue and annual merit increases. These increases in compensation and related expenses were partially offset by a decline in other expenses directly related to the agreement to distribute pharmaceutical products in Italy, which ended in the fourth quarter of 2014.

Selling, General and Administrative Expenses, exclusive of Depreciation and Amortization

2016 compared to 2015

Integrated Engagement Services' selling, general and administrative expenses increased approximately $3 million in 2016 as compared to 2015. This increase was due to a higher level of bad debt expense.

2015 compared to 2014

Integrated Engagement Services' selling, general and administrative expenses decreased approximately $2 million in 2015 as compared to 2014. This decrease was comprised of a $4 million constant currency increase, or 5.0%, partially offset by a reduction of $6 million from the positive effects of foreign currency fluctuations. The constant currency increase was primarily due to an increase in compensation and related expenses.

Liquidity and Capital Resources

Overview

We assess our liquidity in terms of our ability to generate cash to fund our operating, investing and financing activities. Our principal source of liquidity is operating cash flows. In addition to operating cash flows, other significant factors that affect our overall management of liquidity include: capital expenditures, acquisitions, investments, debt service requirements, dividends, equity repurchases, adequacy of our revolving credit and receivables financing facilities and access to the capital markets.

We manage our worldwide cash requirements by monitoring the funds available among our subsidiaries and determining the extent to which those funds can be accessed on a cost effective basis. The repatriation of cash balances from certain of our subsidiaries could have adverse tax consequences; however, those balances are generally available without legal restrictions to fund ordinary business operations. We have and expect to transfer cash from those subsidiaries to the United States and to other international subsidiaries when it is cost effective to do so. Since the Merger, through December 31, 2016, we have transferred $615 million from foreign subsidiaries to the United States.

Due to the Merger, we reevaluated our indefinite reinvestment assertion based on the need for cash in the United States, including funding the Repurchase Program and potential acquisitions. Accordingly, we changed our assertion with respect to $2,801 million of foreign earnings, including $1,865 million of IMS Health's previously undistributed historical foreign earnings. We intend to use these acquired foreign earnings to fund cash needs in the United States.

We had a cash balance of $1,198 million at December 31, 2016 ($237 million of which was in the United States), an increase from $977 million at December 31, 2015.

Based on our current operating plan, we believe that our available cash and cash equivalents, future cash flows from operations and our ability to access funds under our revolving credit and receivables financing facilities will enable us to fund our operating requirements and capital expenditures and meet debt obligations for at least the next 12 months. We regularly evaluate our debt arrangements, as well as market conditions, and from time to time we may explore opportunities to modify our existing debt arrangements or pursue additional financing arrangements that could result in the issuance of new debt securities by us or our affiliates. For example, in September 2016, IMS Health issued approximately $1,750 million in senior notes (as discussed below) and we used the proceeds to repay certain outstanding indebtedness, including our senior secured credit facilities, following the Merger. We may use our existing cash, cash generated from operations or dispositions of assets or businesses and/or proceeds from any new financing arrangements or issuances of debt or equity

securities to repay or reduce some of our outstanding obligations, to repurchase shares from our stockholders or for other purposes. As part of our ongoing business strategy, we also continually evaluate new acquisition, expansion and investment possibilities or other strategic growth opportunities, as well as potential dispositions of assets or businesses, as appropriate, including dispositions that may cause us to recognize a loss on certain assets. Should we elect to pursue any such transaction, we may seek to obtain debt or equity financing to facilitate those activities. Our ability to enter into any such potential transactions and our use of cash or proceeds is limited to varying degrees by the terms and restrictions contained in our existing debt arrangements. We cannot provide assurances that we will be able to complete any such financing arrangements or other transactions on favorable terms or at all.

Equity Repurchases

Since 2013, we have repurchased approximately $2,093 million of our equity securities as discussed further below.

Equity Repurchase Program

On October 30, 2013, our Board approved the Repurchase Program authorizing the repurchase of up to $125 million of either our common stock or vested in-the-money employee stock options, or a combination thereof. During 2015, our Board increased the stock repurchase authorization under the Repurchase Program by $600 million, which increased the total amount that has been authorized under the Repurchase Program to $725 million. On November 1, 2016, our Board increased the stock repurchase authorization under the Repurchase Program by $1.5 billion, which increased the total amount that has been authorized under the Repurchase Program to $2.225 billion. The Repurchase Program does not obligate us to repurchase any particular amount of common stock or vested in-the-money employee stock options, and may be modified, extended, suspended or discontinued at any time. The Repurchase Program for common stock does not have an end date. In 2016, we repurchased 14.3 million shares of our common stock at an average market price per share of $76.57 for an aggregate purchase price of $1,098 million under the Repurchase Program. From inception through December 31, 2016, we have repurchased a total of $1,678 million of our securities under the Repurchase Program, consisting of $59 million of stock options and $1,619 million of common stock. As of December 31, 2016, we have remaining authorization to repurchase up to $547 million of our common stock under the Repurchase Program. On February 12, 2017, our Board increased this authorization by $1.0 billion. Additional information regarding the Repurchase Program is presented in Part II, Item 5 “Market for Registrant’s Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities” and Notes 14 and 27 to our audited consolidated financial statements included elsewhere in this Annual Report on Form 10-K.

In addition, from time to time, we have repurchased and may continue to repurchase common stock through private or other transactions outside of the Repurchase Program.

Other Equity Repurchases

On May 28, 2014, we completed the repurchase of 3.3 million shares of our common stock for $50.23 per share from TPG Quintiles Holdco, L.P., one of our existing stockholders, in a private transaction for an aggregate purchase price of approximately $165 million. The repurchase price per share of common stock was equal to 98% of the closing market price of our common stock on the NYSE on May 27, 2014 (which was $51.26). The repurchase of shares from our existing stockholder was authorized in compliance with our related party transactions approval policy. We funded this private repurchase transaction with cash on hand. This private repurchase transaction was separate from and in addition to the Repurchase Program.

On November 10, 2014, we completed the repurchase of 4.3 million shares of our common stock for $58.09 per share for an aggregate purchase price of approximately $250 million. We funded this repurchase transaction with a combination of cash on hand and a $150 million draw on our revolving credit facility which was subsequently repaid. This repurchase transaction was separate from and in addition to the Repurchase Program.

Debt

The following table presents a summary of debt refinancing activities just prior to and after the merger of Quintiles and IMS Health on October 3, 2016:

(in millions)	Legacy Quintiles	Legacy IMS Health	Refinancing Proceeds (Repayments)	QuintilesIMS
Senior Secured Credit Facilities:				
Term Loans A and B due through 2022	$ 1,389	$ —	$ (1,389)	$ —
Term Loans A due 2021	—	—	1,350	1,350
Term Loans B due 2021	—	2,516	—	2,516
Term Loans A due 2019	—	884	(884)	—
4.875% Senior Notes due 2023	800	—	—	800
5.0% Senior Notes due 2026	—	—	1,050	1,050
3.5% Senior Notes due 2024	—	—	698	698
4.125% Senior Notes due 2023	—	307	—	307
6.0% Senior Notes due 2020	—	500	(500)	—
Receivables financing facility due 2018	275	—	—	275
Revolving Credit Facility	—	298	(298)	—
Total debt refinancing activities	$ 2,464	$ 4,505	$ 27	$ 6,996

As of December 31, 2016, we had $7.2 billion of total indebtedness, excluding $656 million of additional available borrowings under our revolving credit facilities. The summary of debt refinancing activities presented in the above table do not reflect amounts drawn on our Revolving Credit Facility unrelated to the Merger during 2016. See Note 11 to our audited consolidated financial statements included elsewhere in the Annual Report on Form 10-K for additional details regarding our credit arrangements.

Senior Secured Credit Agreement and Senior Notes

At December 31, 2016, our senior secured credit facility provides financing of up to approximately $4,772 million, which consisted of $4,147 million principal amount of debt outstanding (as disclosed in Note 11 to our audited consolidated financial statements included elsewhere in the Annual Report on Form 10-K) and $625 million of commitments that expire in 2021. The revolving credit facility is comprised of a $450 million senior secured revolving facility available in U.S. Dollars, a $400 million senior secured revolving facility available in U.S. Dollars, Euros, Swiss Francs and other foreign currencies and a $150 million senior secured revolving facility available in U.S. Dollars and Yen. The term A loans and revolving credit facility mature in October 2021, while the term B loans mature in March 2021. Under certain circumstances, the maturity date of the term A loans and the senior secured revolving facility may be accelerated to 2020. We are required to make scheduled quarterly payments on the term A loans equal to 1.25% of the original principal amount, with the remaining balance paid at maturity. We are required to make scheduled quarterly payments on the term B loans equal to approximately 0.25% of the original principal amount, with the remaining balance paid at maturity. In addition, beginning with fiscal year ending December 31, 2017, we are required to apply 50% of excess cash flow (as defined in our senior secured credit facility), subject to a reduction to 25% or 0% depending upon our senior secured first lien net leverage ratio, for prepayment of the Term Loans, with any such prepayment to be applied toward principal payments due in subsequent quarters. We are also required to pay an annual commitment fee that ranges from 0.30% to 0.40% in respect of any unused commitments under the revolving credit facility. The senior secured credit facility is collateralized by substantially all of our assets and the assets of our material domestic subsidiaries including 100% of the equity interests of substantially all of our material domestic subsidiaries and 66% of the equity interests of substantially all of our first-tier material foreign subsidiaries and their domestic subsidiaries.

On October 3, 2016, we refinanced the term A loans due 2019 (approximately $884 million) assumed in the Merger with a term A loan facility due in 2021 for an aggregate principal amount of approximately $1,350 million comprised of both U.S. Dollar denominated term A loans and Euro denominated term A loans. Additionally, the revolving credit facility was refinanced to an aggregate principal amount equal to $1,000 million. The additional proceeds were used, in part, to fund the redemption on November 1, 2016 of $500 million of 6% Senior Notes due 2020 assumed in the Merger, at a redemption price equal to 101.5% of the aggregate outstanding principal amount plus accrued interest to the redemption date. We incurred a loss on extinguishment of debt of approximately $8 million related to the aggregate payments for make-whole premiums.

On September 28, 2016, IMS Health issued senior unsecured notes totaling principal amount of $1,750 million, which consisted of (i) $1,050 million of 5% senior notes due October 2026 (the "5% Dollar Notes") and (ii) €625 million of 3.5% senior notes due October 2024 (the "3.5% Euro Notes" and, together with the 5% Dollar Notes, the "2016 Notes"). The proceeds of the 2016 Notes, which we assumed upon closing of the Merger, were used on October 3, 2016 to repay in full ($1,389 million) the term loans outstanding under the Quintiles Transnational senior secured credit facilities. Interest on the 2016 Notes is payable semi-annually, beginning on April 15, 2017. The notes are guaranteed on a senior unsecured basis by our wholly-owned domestic restricted subsidiaries (excluding IMS Japan K.K.) and, subject to certain exceptions, each of our future domestic subsidiaries that guarantees our other indebtedness or indebtedness of any of the guarantors. The 5% Dollar Notes and the 3.5% Euro Notes may be redeemed, either together or separately, prior to their final stated maturity, subject to a customary make-whole premium, at any time prior to October 15, 2021 with respect to the 5% Dollar Notes and October 15, 2019 with respect to the 3.5% Euro Notes (in each case subject to a customary "equity claw" redemption right) and thereafter subject to annually declining redemption premiums at any time prior to October 15, 2024 with respect to the 5% Dollar Notes and October 15, 2021 with respect to the 3.5% Euro Notes.

We also assumed in the Merger €275 million aggregate principal amount of its 4.125% Senior Notes due in April 2023 (the "4.125% Senior Notes"). Interest on the 4.125% Senior Notes is payable semi-annually each year and commenced on October 1, 2015. The 4.125% Senior Notes are guaranteed on a senior unsecured basis by IMS Health's wholly-owned domestic subsidiaries that are guarantors under the senior secured credit facilities. We may redeem the 4.125% Senior Notes, in whole or in part, at any time prior to April 1, 2018 at a price equal to 100% of the principal amount thereof, plus accrued and unpaid interest, if any, to the date of redemption, plus a "make-whole" premium. On or after April 1, 2018, we may redeem all or a portion of the 4.125% Senior Notes at predetermined redemption prices set forth in the indenture governing the 4.125% Senior Notes plus accrued and unpaid interest to the date of redemption.

2015 Financing Transactions

On May 12, 2015, through its wholly-owned subsidiary, Quintiles Transnational, entered into new senior secured credit facilities, which consisted of a $500 million revolving credit facility and $1.45 billion of term loans. In addition, Quintiles Transnational issued $800 million of 4.875% senior secured notes due 2023 (the "4.875% Senior Notes") in a private placement. The term loans, in the amount of $1,389 million, were repaid in full on October 3, 2016, as discussed above. Interest on the 4.875% Senior Notes is paid semiannually on May 15 and November 15 of each year until maturity. The Senior Notes are unsecured senior obligations of QuintilesIMS and are effectively subordinated in right of payment to all secured obligations of QuintilesIMS, to the extent of the value of any collateral. Also on May 12, 2015, an outstanding term loan was repaid with proceeds from the new credit facilities entered into that day and we recognized an $8 million loss on extinguishment of debt, which included $1 million of unamortized debt issuance costs, $1 million of unamortized discount and $6 million of related fees and expenses.

Receivables Financing Facility

On December 5, 2014, we entered into a four-year arrangement to securitize certain of our accounts receivable. Under the receivables financing facility, certain of our accounts receivable are sold on a non-recourse basis by certain of our consolidated subsidiaries to another of our consolidated subsidiaries, a bankruptcy-remote

special purpose entity ("SPE"). The SPE obtained a term loan and revolving loan commitment from a third party lender, secured by liens on the assets of the SPE, to finance the purchase of the accounts receivable, which included a $275 million term loan and a $25 million revolving loan commitment. The revolving loan commitment may be increased by an additional $35 million as amounts are repaid under the term loan. QuintilesIMS has guaranteed the performance of the obligations of existing and future subsidiaries that sell and service the accounts receivable under the receivables financing facility. The assets of the SPE are not available to satisfy any of our obligations or any obligations of our subsidiaries. As of December 31, 2016, the full $25 million of revolving loan commitment was available under the receivables financing facility.

We used the proceeds from the term loan under the receivables financing facility to repay in full the amount outstanding on the then outstanding revolving credit facility under its then outstanding senior secured credit agreement ($150 million), to repay $25 million of the then outstanding Term Loan B-3, to pay related fees and expenses and the remainder was used for general working capital purposes.

Restrictive Covenants

Our debt agreements provide for certain covenants and events of default customary for similar instruments, including a covenant not to exceed a specified ratio of consolidated senior secured net indebtedness to Consolidated EBITDA, as defined in the senior secured credit facility and a covenant to maintain a specified minimum interest coverage ratio. If an event of default occurs under any of the Company's or the Company's subsidiaries' financing arrangements, the creditors under such financing arrangements will be entitled to take various actions, including the acceleration of amounts due under such arrangements, and in the case of the lenders under the revolving credit facility and New Term Loans, other actions permitted to be taken by a secured creditor. Our long-term debt arrangements contain usual and customary restrictive covenants that, among other things, place limitations on our ability to declare dividends. For additional information regarding these restrictive covenants, see Part II, Item 5 "Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities—Dividend Policy" and Note 11 to our audited consolidated financial statements included elsewhere in this Annual Report on Form 10-K. At December 31, 2016, the Company was in compliance with the financial covenants under the Company's financing arrangements.

Years ended December 31, 2016, 2015 and 2014

Cash Flow from Operating Activities

	Year Ended December 31,		
(in millions)	**2016**	**2015**	**2014**
Net cash provided by operating activities	**$ 860**	$ 476	$ 433

2016 compared to 2015

Cash provided by operating activities increased $384 million in 2016 as compared to 2015. The increase in cash provided by operating activities reflects the increase in net income as adjusted for non-cash items necessary to reconcile net income to cash provided by operating activities. Also contributing to the increase were lower payments for income taxes ($15 million), and lower cash used in days sales outstanding ("DSO") and accounts payable and accrued expenses. The lower cash used in DSO reflects a two-day increase in DSO in 2016 compared to a seven-day increase in DSO in 2015. DSO can shift significantly at each reporting period depending on the timing of cash receipts under contractual payment terms relative to the recognition of revenue over a project lifecycle.

2015 compared to 2014

Cash provided by operating activities increased $43 million in 2015 as compared to 2014. The increase in cash provided by operating activities primarily reflects the increase in net income as adjusted for non-cash items necessary to reconcile net income to cash provided by operating activities. Also contributing to the increase was an increase in accounts payable and accrued expenses ($59 million) as well as lower payments for interest ($12 million) and income taxes ($18 million). These improvements in operating cash flow were partially offset by higher cash used in DSO. The higher cash used in DSO reflects a seven-day increase in DSO in 2015 compared to a two-day increase in DSO in 2014.

Cash Flow from Investing Activities

	Year Ended December 31,		
(in millions)	**2016**	**2015**	**2014**
Net cash provided by (used in) investing activities	**$ 1,731**	$ (67)	$ (173)

2016 compared to 2015

Cash provided by investing activities increased $1,798 million in 2016 as compared 2015. This increase was primarily related to cash from the acquisition of businesses, including the merger with IMS Health ($1,887 million) partially offset by higher cash used for the acquisition of property, equipment and software ($86 million).

2015 compared to 2014

Cash used in investing activities decreased $106 million in 2015 as compared to 2014. This decrease was primarily related to cash acquired in the Q 2 Solutions transaction ($32 million) compared to cash used for the acquisition of businesses ($92 million) in 2014, partially offset by the termination of interest rate swaps in connection with the refinancing transaction in 2015 ($11 million) and higher cash used for investments.

Cash Flow from Financing Activities

	Year Ended December 31,		
(in millions)	**2016**	**2015**	**2014**
Net cash used in financing activities	**$ (2,284)**	$ (249)	$ (130)

2016 compared to 2015

Cash used in financing activities increased $2,035 million in 2016 as compared to 2015. The increase in cash used in financing activities was primarily related to lower net borrowing under our credit facilities ($1,488 million) and higher cash used to repurchase common stock ($582 million).

2015 compared to 2014

Cash used in financing activities increased $119 million in 2015 as compared to 2014. The increase in cash used in financing activities in 2015 was primarily related to higher cash used to repurchase common stock ($100 million) and lower cash provided by debt issuances, net of repayments ($75 million), partially offset by higher cash from stock issued under employee stock purchase and option plans ($29 million), and an increase in the excess income tax benefits from stock-based award activities ($19 million).

Contingencies

We are exposed to certain known contingencies that are material to our investors. The facts and circumstances surrounding these contingencies and a discussion of their effect on us are in Note 13 to our audited consolidated financial statements included elsewhere in this Annual Report on Form 10-K. These contingencies may have a material effect on our liquidity, capital resources or results of operations. In addition, even where our reserves are adequate, the incurrence of any of these liabilities may have a material effect on our liquidity and the amount of cash available to us for other purposes.

We believe that we have made appropriate arrangements in respect of the future effect on us of these known contingencies. We also believe that the amount of cash available to us from our operations, together with cash from financing, will be sufficient for us to pay any known contingencies as they become due without materially affecting our ability to conduct our operations and invest in the growth of our business.

Contractual Obligations and Commitments

Below is a summary of our future payment commitments by year under contractual obligations as of December 31, 2016 (in millions):

	2017	2018 - 2019	2020 - 2021	Thereafter	Total
Long-term debt, including interest (1)	$ 371	$ 991	$ 4,313	$ 3,070	$ 8,745
Operating leases	171	217	131	159	678
Data acquisition and telecommunication services	261	224	160	7	652
Purchase obligations (2)	28	20	4	—	52
Commitments to unconsolidated affiliates (3)	—	—	—	—	—
Benefit obligations (4)	33	42	47	141	263
Uncertain income tax positions (5)	2	—	—	—	2
Total	$ 866	$ 1,494	$ 4,655	$ 3,377	$ 10,392

(1) Interest payments on our debt are based on the interest rates in effect on December 31, 2016.
(2) Purchase obligations are defined as agreements to purchase goods or services that are enforceable and legally binding and that specify all significant terms, including fixed or minimum quantities to be purchased, fixed, minimum or variable pricing provisions and the approximate timing of the transactions.
(3) We are currently committed to invest $70 million in private equity funds. As of December 31, 2016, we have funded approximately $51 million of these commitments and we have approximately $19 million remaining to be funded.
(4) Amounts represent expected future benefit payments for our pension and postretirement benefit plans, as well as expected contributions for 2016 for our funded pension benefit plans. We made cash contributions totaling approximately $10 million to our defined benefit plans in 2016, and we estimate that we will make contributions totaling approximately $23 million in 2017. Due to the potential impact of future plan investment performance, changes in interest rates, changes in other economic and demographic assumptions and changes in legislation in foreign jurisdictions, we are not able to reasonably estimate the timing and amount of contributions that may be required to fund our defined benefit plans for periods beyond 2017.
(5) As of December 31, 2016, our liability related to uncertain income tax positions was approximately $75 million, $73 million of which has not been included in the above table as we are unable to predict when these liabilities will be paid due to the uncertainties in the timing of the settlement of the income tax positions.

Application of Critical Accounting Policies

Note 1 to the audited consolidated financial statements provided elsewhere in this Annual Report on Form 10-K describes the significant accounting policies used in the preparation of the consolidated financial statements. The preparation of our consolidated financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, and the disclosure of contingent assets and

liabilities at the date of the financial statements, as well as the reported amounts of revenues and expenses during the period. Our estimates are based on historical experience and various other assumptions we believe are reasonable under the circumstances. We evaluate our estimates on an ongoing basis and make changes to the estimates and related disclosures as experience develops or new information becomes known. Actual results may differ from those estimates.

We believe the following critical accounting policies affect our more significant judgments and estimates used in the preparation of our consolidated financial statements.

Revenue Recognition

We recognize revenue when all of the following conditions are satisfied: (1) there is persuasive evidence of an arrangement, (2) the service offering has been delivered to the client, (3) the collection of fees is probable and (4) the arrangement consideration is fixed or determinable. We do not recognize revenue with respect to start-up activities including contract and scope negotiation, feasibility analysis and conflict of interest review associated with contracts. The costs for these activities are expensed as incurred. For contracts in which portions of revenue are contingent upon the occurrence of uncertain future events we recognize the revenue only after it has been earned and the contingency has been resolved.

For arrangements that include multiple elements, arrangement consideration is allocated to units of accounting based on the relative selling price. The best evidence of selling price of a unit of accounting is vendor-specific objective evidence ("VSOE") which is the price we charge when the deliverable is sold separately. When VSOE is not available to determine selling price, we use relevant third-party evidence ("TPE") of selling price, if available. When neither VSOE nor TPE of selling price exists, we use our best estimate of selling price considering all relevant information that is available without undue cost and effort.

We derive the majority of our revenues in the Commercial Solutions segment from various information and technology service offerings. Our revenue arrangements may include multiple elements. A typical information offerings arrangement (primarily under fixed-price contracts) may include an ongoing subscription-based deliverable for which revenue is recognized ratably as earned over the contract period and/or a one-time delivery of data offerings for which revenue is recognized upon delivery, assuming all other criteria are met. Our subscription arrangements typically have terms ranging from one to three years and are generally non-cancelable and do not contain refund-type provisions. We also offer technology services offerings that enable our clients to make informed business decisions. Technology services offerings consist of a mix of small and large-scale services and consulting projects, multi-year outsourcing contracts and SaaS licenses. These arrangements typically have terms ranging from several weeks to three years, with a majority having terms of one year or less. Revenues for services engagements where deliverables occur ratably over time are recognized on a straight-line basis over the term of the arrangement. Revenues from time and material contracts are recognized as the services are provided. Revenues from fixed price ad hoc services and consulting contracts are recognized either over the contract term based on the ratio of the number of hours incurred for services provided during the period compared to the total estimated hours to be incurred over the entire arrangement (efforts based), or upon delivery (completed contract).

The majority of revenue in our Research & Development Solutions segment and Integrated Engagement Services segment is recognized based on objective contractual criteria and does not require significant estimates or judgments. However, at any point in time we are working on thousands of active client projects, which are governed by individual contracts. Most projects are customized based on the needs of the client, the type of services being provided, therapeutic indication of the drug, geographic locations and other variables. Project specific terms related to pricing, billing terms and the scope and type of services to be provided are generally negotiated and contracted on a project-by-project basis. Changes in the scope of work are common, especially under long-term contracts, and generally result in a change in contract value. In such situations, we enter into

negotiations for a contract amendment to reflect the change in scope and the related price. Depending on the complexity of the amendment, the negotiation process can take from a few weeks for a simple adjustment to several months for a complex amendment. Management may authorize the project team to commence work on activities outside the contract scope while we negotiate and finalize the contract amendment. In these limited cases, if we are not able to obtain a contract amendment from the client, our profit margin on the arrangement may be impacted. This result occurs because our costs of delivery are expensed as they are incurred, while revenue is not recognized unless the client has agreed to the changes in scope and renegotiated pricing terms, the contract value is amended and all other revenue recognition criteria are met. Most contracts are terminable upon 30 to 90 days notice by the client. Our risk of material loss in these situations is mitigated as these contracts generally require payment to us for expenses to wind down the clinical trial or project, fees earned to date and, in some cases, a termination fee or a payment of some portion of the fees or profits that could have been earned under the contract if it had not been terminated early. In addition, our contract terms provide for payment terms that generally correspond with performance of the services. Termination fees are included in revenues when realization is assured.

Accounts Receivable and Unbilled Services

Accounts receivable represents amounts billed to clients. Revenues recognized in excess of billings are classified as unbilled services. The realization of these amounts is based on the client's willingness and ability to pay us. We have an allowance for doubtful accounts based on management's estimate of probable losses we expect to incur resulting from a client failing to pay us. Our allowance for doubtful accounts, and losses from clients failing to pay us, have not been material to our results of operations. If any of these estimates change or actual results differs from expected results, then an adjustment is recorded in the period in which the amounts become reasonably estimable. These adjustments could have a material effect on our results of operations.

Investments in Unconsolidated Affiliates—Equity Method Investments

We have investments in unconsolidated affiliates that are accounted for under the equity method of accounting. Periodically, we review our investments for a decline in value which we believe may be other than temporary. Should we identify such a decline, we will record a loss through earnings to establish a new cost basis for the investment. These losses could have a material adverse effect on our results of operations.

Income Taxes

Certain items of income and expense are not recognized on our income tax returns and financial statements in the same year, which creates timing differences. The income tax effect of these timing differences results in (1) deferred income tax assets that create a reduction in future income taxes and (2) deferred income tax liabilities that create an increase in future income taxes. Recognition of deferred income tax assets is based on management's belief that it is more likely than not that the income tax benefit associated with certain temporary differences, income tax operating loss and capital loss carryforwards and income tax credits, would be realized. We recorded a valuation allowance to reduce our deferred income tax assets for those deferred income tax items for which it was more likely than not that realization would not occur. We determined the amount of the valuation allowance based, in part, on our assessment of future taxable income and in light of our ongoing income tax strategies. If our estimate of future taxable income or tax strategies changes at any time in the future, we would record an adjustment to our valuation allowance. Recording such an adjustment could have a material effect on our financial position.

Income tax expense is based on the distribution of profit before income tax among the various taxing jurisdictions in which we operate, adjusted as required by the income tax laws of each taxing jurisdiction. Changes in the distribution of profits and losses among taxing jurisdictions may have a significant impact on our effective income tax rate. We do not consider the undistributed earnings of most of our foreign subsidiaries to be

indefinitely reinvested outside of the United States. Accordingly, we have provided a deferred income tax liability related to those undistributed earnings. The associated foreign income taxes on our foreign earnings could be available as a credit in the United States on our income taxes. We recognize foreign tax credits to the extent that the recognition is supported by projected foreign source income.

Business Combinations

We use the acquisition method to account for business combinations, and accordingly, the identifiable assets acquired, the liabilities assumed and any non-controlling interest in the acquiree are recorded at their estimated fair values on the date of the acquisition. We use significant judgments, estimates and assumptions in determining the estimated fair value of assets acquired, liabilities assumed and non-controlling interest including expected future cash flows; discount rates that reflect the risk associated with the expected future cash flows; and estimated useful lives.

When a business combination involves contingent consideration, we recognize a liability equal to the estimated fair value of the contingent consideration obligation at the date of the acquisition. The estimate of fair value of a contingent consideration liability requires subjective assumptions to be made regarding future business results including revenues and net new business, discount rates that reflect the risk associated with the expected future cash flows and probabilities assigned to various potential business result scenarios. We reassess the estimated fair value of the contingent consideration each financial reporting period over the term of the arrangement. Any resulting changes are recognized in earnings and could have a material effect on our results of operations.

Goodwill, Tangible and Identifiable Intangible Assets

We have recorded and allocated to our reporting units the excess of the cost over the fair value of the net assets acquired, known as goodwill. The recoverability of the goodwill and indefinite-lived intangible assets are evaluated annually for impairment, or if and when events or circumstances indicate a possible impairment. We review the carrying values of other identifiable intangible assets if the facts and circumstances indicate a possible impairment. Goodwill and indefinite-lived intangible assets are not amortized, and other identifiable intangible assets are amortized over their estimated useful lives. We believe that the risk of an impairment to goodwill or indefinite-lived intangible assets is currently very low.

For goodwill, we perform a qualitative analysis to determine whether it is more likely than not that the estimated fair value of a reporting unit is less than its book value. This includes a qualitative analysis of macroeconomic conditions, industry and market considerations, internal cost factors, financial performance, fair value history and other company specific events. If this qualitative analysis indicates that it is more likely than not that estimated fair value is less than the book value for the respective reporting unit, we apply a two-step impairment test in which we determine whether the estimated fair value of the reporting unit is in excess of its carrying value. If the carrying value of the net assets assigned to the reporting unit exceeds the estimated fair value of the reporting unit, we perform the second step of the impairment test to determine the implied estimated fair value of the reporting unit’s goodwill. We determine the implied estimated fair value of goodwill by determining the present value of the estimated future cash flows for each reporting unit and comparing the reporting unit’s risk profile and growth prospects to selected, reasonably similar publicly traded companies. The inherent subjectivity of applying a discounted cash flow and market comparables approach to valuing our assets and liabilities could have a significant impact on our analysis. Any future impairment could have a material adverse effect on our financial condition or results of operations.

For indefinite-lived intangible assets, we perform a qualitative analysis to determine whether it is more likely than not that the estimated fair value of the indefinite-lived intangible asset is less than its carrying value. If this qualitative analysis indicates that it is more likely than not that the estimated fair value is less than the carrying value of the indefinite-lived intangible asset, we determine the estimated fair value of the indefinite-

lived intangible asset (trade name) by determining the present value of the estimated royalty payments on an after-tax basis that it would be required to pay the owner for the right to use such trade name. If the carrying amount exceeds the estimated fair value, an impairment loss is recognized in an amount equal to the excess. Any future impairment could have a material adverse effect on our financial condition or results of operations.

We review the carrying values of property and equipment if the facts and circumstances suggest that a potential impairment may have occurred. If this review indicates that carrying values will not be recoverable, as determined based on undiscounted cash flows over the remaining depreciation or amortization period, we will reduce carrying values to estimated fair value. The inherent subjectivity of our estimates of future cash flows could have a significant impact on our analysis. Any future write-offs of long-lived assets could have a material adverse effect on our financial condition or results of operations.

Stock-based Compensation

We measure compensation cost for most stock-based payment awards (stock options and stock appreciation rights) granted to employees and non-employee directors at fair value using the Black-Scholes-Merton option-pricing model. Stock-based compensation expense includes stock-based awards granted to employees and non-employee directors and has been reported in selling, general and administrative expenses in our consolidated statements of income based upon the classification of the individuals who were granted stock-based awards.

The Black-Scholes-Merton option-pricing model requires the use of subjective assumptions, including share price volatility, the expected life of the award, risk-free interest rate and the fair value of the underlying common shares on the date of grant. In developing our assumptions, we take into account the following:

- We calculate expected volatility based on reported data for selected reasonably similar publicly traded companies for which the historical information is available. We plan to continue to use the guideline peer group volatility information until the historical volatility of our common shares is relevant to measure expected volatility for future award grants;
- We determine the risk-free interest rate by reference to implied yields available from United States Treasury securities with a remaining term equal to the expected life assumed at the date of grant;
- We estimate the dividend yield to be zero as we do not currently anticipate paying any future dividends;
- We estimate the average expected life of the award based on our historical experience; and
- We estimate forfeitures based on our historical analysis of actual forfeitures.

Pensions and Other Postretirement Benefits

We provide retirement benefits to certain employees, including defined benefit pension plans and postretirement medical plans. The determination of benefit obligations and expense is based on actuarial models. In order to measure benefit costs and obligations using these models, critical assumptions are made with regard to the discount rate, expected return on plan assets, cash balance crediting rate, lump sum conversion rate and the assumed rate of compensation increases. In addition, retiree medical care cost trend rates are a key assumption used exclusively in determining costs for our postretirement health care and life insurance benefit plans. Management reviews these critical assumptions at least annually. Other assumptions involve demographic factors such as the turnover, retirement and mortality rates. Management reviews these assumptions periodically and updates them when its experience deems it appropriate to do so.

The discount rate is the rate at which the benefit obligations could be effectively settled and is determined annually by management. For United States plans, the discount rate is based on results of a modeling process in

which the plans' expected cash flow (determined on a projected benefit obligation basis) is matched with spot rates developed from a yield curve comprised of high-grade (Moody's Aa and above, or Standard and Poor's AA and above) non-callable corporate bonds to develop the present value of the expected cash flow, and then determining the single rate (discount rate) which when applied to the expected cash flow derives that same present value. In the United Kingdom specifically, the discount rate is set based on the yields on a universe of high quality non-callable corporate bonds denominated in the British Pound, appropriate to the duration of plan liabilities. For the other non-United States plans, the discount rate is based on the current yield of an index of high quality corporate bonds. As a sensitivity measure, a 25 basis point increase in the discount rate for either our United States plan or our United Kingdom plans, absent any offsetting changes in other assumptions, would result in less than $1 million increase in pension expense within the Consolidated Statements of Income.

Under the United States qualified retirement plan, participants have a notional retirement account that increases with pay and investment credits. The rate used to determine the investment credit (cash balance crediting rate) varies monthly. At retirement, the account is converted to a monthly retirement benefit.

In selecting an expected return on plan asset assumption, we consider the returns being earned by each plan investment category in the fund, the rates of return expected to be available for reinvestment and long-term economic forecasts for the type of investments held by the plan. The actual return on plan assets will vary from year to year versus this assumption. We believe it is appropriate to use long-term expected forecasts in selecting the expected return on plan assets. As such, there can be no assurance that our actual return on plan assets will approximate the long-term expected forecasts. As a sensitivity measure, a 25 basis point change in the expected return on assets ("EROA") assumption for our United States plan, absent any offsetting changes in other assumptions, would result in a less than $1 million increase or decrease in pension expense. For our United Kingdom plans, a 25 basis point change in the EROA assumption, absent any offsetting changes in other assumptions, would result in a less than $1 million increase or decrease in pension expense. While we believe that the assumptions used are reasonable, differences in actual experience or changes in assumptions may materially affect our pension and postretirement obligations and future expense.

We utilize a corridor approach to amortizing unrecognized gains and losses in the pension and postretirement plans. Amortization occurs when the accumulated unrecognized net gain or loss balance exceeds the criterion of 10% of the larger of the beginning balances of the projected benefit obligation or the market-related value of the plan assets. The excess unrecognized gain or loss balance is then amortized using the straight-line method over the average remaining service-life of active employees expected to receive benefits. At December 31, 2016, the weighted-average remaining service-life of active employees was approximately 13 years.

Foreign Currency

We have significant investments in non-United States countries. Therefore, changes in the value of foreign currencies affect our Consolidated Financial Statements when translated into United States Dollars. For all operations outside the United States where we have designated the local currency as the functional currency, assets and liabilities are translated using end-of-period exchange rates; revenues, expenses and cash flows are translated using average rates of exchange prevailing during the period the transactions occurred. Translation gains and losses are included as an adjustment to the accumulated other comprehensive income (loss) component of stockholders' deficit. In addition, gains and losses from foreign currency transactions, such as those resulting from the settlement and revaluation of third-party and intercompany foreign receivables and payables, are included in the determination of net income (loss).

For operations in countries that are considered to be highly inflationary or where the United States Dollar is designated as the functional currency, monetary assets and liabilities are remeasured using end-of-period exchange rates, whereas non-monetary accounts are remeasured using historical exchange rates, and all remeasurement and transaction adjustments are recognized in other expense (income), net.

Recently Issued Accounting Standards

Information relating to recently issued accounting standards is included in Note 1 to our audited consolidated financial statements included elsewhere in this Annual Report on Form 10-K.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

Market risk is the potential loss arising from adverse changes in market rates and prices. In the ordinary course of business, we are exposed to various market risks and we regularly evaluate our exposure to such changes. Our overall risk management strategy seeks to balance the magnitude of the exposure and the cost and availability of appropriate financial instruments. The following analyses present the sensitivity of our financial instruments to hypothetical changes that are reasonably possible over a one-year period.

Foreign Currency Exchange Rates

We transact business in more than 100 countries and are subject to risks associated with fluctuating foreign currency exchange rates. Our objective is to reduce earnings and cash flow volatility associated with foreign currency exchange rate movements. Accordingly, we enter into foreign currency forward contracts to minimize the impact of foreign exchange movements on non–functional currency assets and liabilities. We also enter into foreign currency forward contracts to hedge certain forecasted foreign currency cash flows related to service contracts and to hedge non-United States Dollar anticipated intercompany royalties. It is our policy to enter into foreign currency transactions only to the extent necessary to meet its objectives as stated above. We do not enter into foreign currency transactions for investment or speculative purposes. The principal currencies hedged are the Euro, the British Pound, the Japanese Yen, the Swiss Franc and the Canadian Dollar.

The contractual value of our foreign exchange derivative instruments, all of which were foreign exchange forward contracts, was approximately $489 million at December 31, 2016. The fair value of these contracts is subject to change as a result of potential changes in foreign exchange rates. We assess our market risk based on changes in foreign exchange rates utilizing a sensitivity analysis. The sensitivity analysis measures the potential loss in fair values based on a hypothetical 10% change in foreign currency exchange rates. The potential loss in fair value for foreign exchange forward contracts based on a hypothetical 10% decrease in the value of the United States Dollar or, in the case of non-dollar-related contracts, the currency being purchased, was $39 million at December 31, 2016. However, the change in the fair value of the foreign exchange forward contracts would likely be offset by a change in the fair value of the future service contract revenue, royalty or balance sheet exposure being hedged. The estimated fair values of the foreign exchange forward contracts were determined based on quoted market prices.

Exchange rate fluctuations affect the United States Dollar value of foreign currency revenue and expenses and may have a significant effect on our results. Excluding the impacts from any outstanding or future hedging transactions, a hypothetical 10% change in average exchange rates used to translate all foreign currencies to the United States Dollar would have impacted income before income taxes for 2016 by approximately $65 million. The actual impact of exchange rate movements in the future could differ materially from this hypothetical analysis, based on the mix of foreign currencies and the timing and magnitude of individual exchange rate movements.

Additionally commencing in 2016, we designated a portion of our foreign currency denominated debt as a hedge of our net investment in foreign subsidiaries to reduce the volatility in stockholders' equity caused by changes in the Euro exchange rate with respect to the United States Dollar. As of December 31, 2016, these borrowings (net of original issue discount) were €2,025 million ($2,131 million). A hypothetical 10% decrease in the value of the United States Dollar would lead to a potential loss in fair value of $213 million. However, this change in fair value would be offset by the change in fair value of the hedged portion of our net investment in foreign subsidiaries.

Interest Rates

Because we have variable rate debt, fluctuations in interest rates affect our business. We attempt to minimize interest rate risk and lower our overall borrowing costs through the utilization of derivative financial instruments, primarily interest rate caps and swaps. We have entered into interest rate caps and swaps with financial institutions that have reset dates and critical terms that match the underlying debt. Accordingly, any change in market value associated with the interest rate caps and swaps is offset by the opposite market impact on the related debt. As of December 31, 2016, we had approximately $4.4 billion of variable rate indebtedness and interest rate caps and swaps with a notional value of $1.9 billion. Because we do not attempt to hedge all of our variable rate debt, we may incur higher interest costs for the portion of our variable rate debt which is not hedged. Each quarter-point increase or decrease in the variable interest rate would result in our interest expense changing by approximately $6 million per year under our unhedged variable rate debt.

Marketable Securities

At December 31, 2016, we held investments in marketable equity securities. These investments are classified as either trading securities or available-for-sale securities and are recorded at fair value in the financial statements. These securities are subject to price risk. As of December 31, 2016, the fair value of these investments was $40 million based on the quoted market value of the securities. The potential loss in fair value resulting from a hypothetical decrease of 10% in quoted market values was approximately $4 million at December 31, 2016.

Item 8. Financial Statements and Supplementary Data

MANAGEMENT'S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

The management of Quintiles IMS Holdings, Inc. (the "Company") is responsible for establishing and maintaining adequate internal control over financial reporting. 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 pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with 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 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.

Management assessed the effectiveness of the Company's internal control over financial reporting as of December 31, 2016. In making this assessment, management used the framework established in Internal Control—Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). As a result of this assessment and based on the criteria in the COSO framework, management has concluded that, as of December 31, 2016, the Company's internal control over financial reporting was effective.

The effectiveness of the Company's internal control over financial reporting as of December 31, 2016 has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report which appears herein.

/s/ Ari Bousbib	/s/ Michael R. McDonnell
Ari Bousbib	Michael R. McDonnell
Chairman, Chief Executive Officer and President	*Executive Vice President and Chief Financial Officer*
(Principal Executive Officer *)*	(Principal Financial Officer)

February 16, 2017

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders of Quintiles IMS Holdings, Inc.:

In our opinion, the accompanying consolidated balance sheets and the related consolidated statements of income, comprehensive income, cash flows and stockholders' equity (deficit), present fairly, in all material respects, the financial position of Quintiles IMS Holdings, Inc. and its subsidiaries at December 31, 2016 and 2015, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2016 in conformity with accounting principles generally accepted in the United States of America. In addition, in our opinion, the financial statement schedules listed in the index appearing under Item 15(a)(2) present fairly, in all material respects, the information set forth therein when read in conjunction with the related consolidated financial statements. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2016, based on criteria established in Internal Control—Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The Company's management is responsible for these financial statements and financial statement schedules, 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 opinions on these financial statements, on the financial statement schedules, and on the Company's internal control over financial reporting based on our integrated audits. We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement and whether effective internal control over financial reporting was maintained in all material respects. Our audits of the financial statements included examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

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

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

/s/ PricewaterhouseCoopers LLP
Raleigh, North Carolina
February 16, 2017

QUINTILES IMS HOLDINGS, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF INCOME

(in millions, except per share data)	Year Ended December 31, 2016	2015	2014
Revenues	**$ 5,364**	$ 4,326	$ 4,165
Reimbursed expenses	**1,514**	1,411	1,295
Total revenues	**6,878**	5,737	5,460
Costs of revenue, exclusive of depreciation and amortization	**3,236**	2,705	2,664
Costs of revenue, reimbursed expenses	**1,514**	1,411	1,295
Selling, general and administrative expenses	**1,011**	815	781
Depreciation and amortization	**289**	128	121
Restructuring costs	**71**	30	9
Merger related costs	**87**	—	—
Impairment charges	**28**	2	—
Income from operations	**642**	646	590
Interest income	**(4)**	(4)	(4)
Interest expense	**144**	101	101
Loss on extinguishment of debt	**31**	8	—
Other (income), expense net	**(8)**	2	(8)
Income before income taxes and equity in (losses) earnings of unconsolidated affiliates	**479**	539	501
Income tax expense	**345**	159	149
Income before equity in (losses) earnings of unconsolidated affiliates	**134**	380	352
Equity in (losses) earnings of unconsolidated affiliates	**(4)**	8	5
Net income	**130**	388	357
Net (income) loss attributable to non-controlling interests	**(15)**	(1)	—
Net income attributable to Quintiles IMS Holdings, Inc.	**$ 115**	$ 387	$ 357
Earnings per share attributable to common stockholders:			
Basic	**$ 0.77**	$ 3.15	$ 2.78
Diluted	**$ 0.76**	$ 3.08	$ 2.72
Weighted average common shares outstanding:			
Basic	**149.1**	123.0	128.0
Diluted	**152.0**	125.6	131.1

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

QUINTILES IMS HOLDINGS, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

(in millions)	Year Ended December 31, 2016	2015	2014
Net income	**$ 130**	$ 388	$ 357
Comprehensive income adjustments:			
Unrealized (losses) gains on available-for-sale securities	**—**	—	(1)
Unrealized (losses) gains on derivative instruments, net of income taxes of $3, ($4) and ($2)	**(7)**	(9)	(5)
Defined benefit plan adjustments, net of income taxes of $11, $— and ($3)	**23**	—	(7)
Foreign currency translation, net of income taxes of $(9), ($5) and ($2)	**(513)**	(60)	(48)
Reclassification adjustments:			
Gains on marketable securities included in net income, net of income taxes of $—, $— and ($2)	**—**	—	(3)
Losses on derivative instruments included in net income, net of income taxes of $7, $6 and $4	**21**	12	5
Amortization of actuarial losses and prior service costs included in net income	**1**	1	—
Comprehensive (loss) income	**(345)**	332	298
Comprehensive loss (income) attributable to non-controlling interests	**1**	3	—
Comprehensive (loss) income attributable to Quintiles IMS Holdings, Inc.	**$ (344)**	$ 335	$ 298

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

QUINTILES IMS HOLDINGS, INC. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS

(in millions, except per share data)	December 31, 2016	2015
ASSETS		
Current assets:		
Cash and cash equivalents	**$ 1,198**	$ 977
Trade accounts receivable and unbilled services, net	**1,707**	1,166
Prepaid expenses	**123**	51
Deferred income taxes	**—**	101
Income taxes receivable	**34**	34
Investments in debt, equity and other securities	**40**	—
Other current assets and receivables	**235**	83
Total current assets	**3,337**	2,412
Property and equipment, net	**406**	188
Investments in debt, equity and other securities	**13**	33
Investments in unconsolidated affiliates	**69**	52
Goodwill	**10,727**	720
Other identifiable intangibles, net	**6,390**	368
Deferred income taxes	**89**	43
Deposits and other assets	**177**	110
Total assets	**$ 21,208**	$ 3,926
LIABILITIES AND STOCKHOLDERS' EQUITY (DEFICIT)		
Current liabilities:		
Accounts payable	**$ 250**	$ 145
Accrued expenses	**1,493**	761
Unearned income	**774**	585
Income taxes payable	**76**	35
Current portion of long-term debt and obligations held under capital leases	**92**	49
Other current liabilities	**20**	19
Total current liabilities	**2,705**	1,594
Long-term debt and obligations held under capital leases, less current portion	**7,108**	2,419
Deferred income taxes	**2,133**	66
Other liabilities	**402**	183
Total liabilities	**12,348**	4,262
Commitments and contingencies (Note 1)		
Stockholders' equity (deficit):		
Common stock and additional paid-in capital, 400.0 and 300.0 shares authorized at December 31, 2016 and 2015, respectively, $0.01 par value, 248.3 and 119.4 shares issued and outstanding at December 31, 2016 and 2015, respectively	**10,602**	9
Accumulated deficit	**(399)**	(462)
Treasury stock, at cost, 12.9 shares at December 31, 2016	**(1,000)**	—
Accumulated other comprehensive loss	**(570)**	(111)
Equity (deficit) attributable to Quintiles IMS Holdings, Inc.'s stockholders	**8,633**	(564)
Non-controlling interests	**227**	228
Total stockholders' equity (deficit)	**8,860**	(336)
Total liabilities and stockholders' equity (deficit)	**$ 21,208**	$ 3,926

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

QUINTILES IMS HOLDINGS, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS

(in millions)	Year Ended December 31, 2016	2015	2014
Operating activities:			
Net income	**$ 130**	$ 388	$ 357
Adjustments to reconcile net income to cash provided by operating activities:			
Depreciation and amortization	**289**	128	121
Amortization of debt issuance costs and discount	**30**	9	7
Amortization of accumulated other comprehensive loss on terminated interest rate swaps	**3**	8	—
Stock-based compensation	**80**	38	30
Impairment of goodwill, identifiable intangible and long-lived assets	**28**	2	—
Gain on disposals of property and equipment, net	**(1)**	(1)	(1)
Loss (Earnings) from unconsolidated affiliates	**8**	(8)	(4)
(Gain) Loss on investments, net	**(13)**	1	(5)
Provision for (benefit from) deferred income taxes	**135**	18	(6)
Excess income tax benefits from stock-based award activities	**(41)**	(39)	(20)
Changes in operating assets and liabilities:			
Accounts receivable and unbilled services	**(62)**	(246)	(79)
Prepaid expenses and other assets	**(8)**	15	(41)
Accounts payable and accrued expenses	**160**	104	46
Unearned income	**52**	54	20
Income taxes payable and other liabilities	**70**	5	8
Net cash provided by operating activities	**860**	476	433
Investing activities:			
Acquisition of property, equipment and software	**(164)**	(78)	(83)
Net cash assumed from (paid for) acquisition of businesses	**1,887**	32	(92)
Purchase of trading securities	**(40)**	—	—
Proceeds from corporate owned life insurance policies	**21**	—	—
Proceeds from sale of equity securities	**41**	—	6
Investments in unconsolidated affiliates, net of payments received	**(17)**	(12)	(4)
Termination of interest rate swaps	**—**	(11)	—
Other	**3**	2	—
Net cash provided by (used in) investing activities	**1,731**	(67)	(173)
Financing activities:			
Proceeds from issuance of debt	**466**	2,249	275
Payment of debt issuance costs	**(7)**	(22)	(1)
Repayment of debt	**(1,949)**	(2,057)	(30)
Proceeds from revolving credit facility	**172**	—	150
Repayment of revolving credit facility	**—**	—	(150)
Principal payments on capital lease obligations	**(2)**	(4)	(3)
Payment of contingent consideration	**(5)**	(3)	(3)
Stock issued under employee stock purchase and option plans	**97**	64	35
Repurchase of common stock	**(1,097)**	(515)	(415)
Repurchase of stock options	**—**	—	(8)
Excess income tax benefits from stock-based award activities	**41**	39	20
Net cash used in financing activities	**(2,284)**	(249)	(130)
Effect of foreign currency exchange rate changes on cash	**(86)**	(50)	(40)
Increase in cash and cash equivalents	**221**	110	90
Cash and cash equivalents at beginning of period	**977**	867	777
Cash and cash equivalents at end of period	**$ 1,198**	$ 977	$ 867

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

QUINTILES IMS HOLDINGS, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY (DEFICIT)

(in millions)	Common Stock Shares	Treasury Stock Shares	Common Stock	Additional Paid-In Capital	Accumulated Deficit	Treasury Stock	Accumulated Other Comprehensive (Loss) Income	Non-controlling Interests	Total
Balance, December 31, 2013	**129.6**	**—**	**$ 1**	**$ 477**	**$ (1,145)**	**$ —**	**$ —**	**$ —**	**$ (667)**
Issuance of common stock	2.1	—	—	35	—	—	—	—	35
Repurchase of common stock	(7.6)	—	—	(415)	—	—	—	—	(415)
Stock-based compensation	—	—	—	26	—	—	—	—	26
Income tax benefits from stock-based award activities	—	—	—	20	—	—	—	—	20
Net income	—	—	—	—	357	—	—	—	357
Unrealized loss on marketable securities, net of tax	—	—	—	—	—	—	(1)	—	(1)
Unrealized loss on derivative instruments, net of tax	—	—	—	—	—	—	(5)	—	(5)
Defined benefit plan adjustments, net of tax	—	—	—	—	—	—	(7)	—	(7)
Foreign currency translation, net of tax	—	—	—	—	—	—	(48)	—	(48)
Reclassification adjustments, net of tax	—	—	—	—	—	—	2	—	2
Balance, December 31, 2014	**124.1**	**—**	**1**	**143**	**(788)**	**—**	**(59)**	**—**	**(703)**
Issuance of common stock	3.1	—	—	65	—	—	—	—	65
Repurchase of common stock	(7.8)	—	—	(455)	(61)	—	—	—	(516)
Stock-based compensation	—	—	—	31	—	—	—	—	31
Income tax benefits from stock-based award activities	—	—	—	39	—	—	—	—	39
Q 2 Solutions business combination	—	—	—	423	—	—	—	—	423
Non-controlling interest related to Q 2 Solutions transaction	—	—	—	(231)	—	—	—	231	—
Deferred tax impact of the Q 2 Solutions transaction	—	—	—	(7)	—	—	—	—	(7)
Net income	—	—	—	—	387	—	—	1	388
Unrealized loss on derivative instruments, net of tax	—	—	—	—	—	—	(9)	—	(9)
Foreign currency translation, net of tax	—	—	—	—	—	—	(56)	(4)	(60)
Reclassification adjustments, net of tax	—	—	—	—	—	—	13	—	13
Balance, December 31, 2015	**119.4**	**—**	**1**	**8**	**(462)**	**—**	**(111)**	**228**	**(336)**
Issuance of common stock	**130.4**	**—**	**1**	**10,522**	**—**	**—**	**—**	**—**	**10,523**
Repurchase of common stock before October 3, 2016	**(1.5)**	**—**	**—**	**(46)**	**(52)**	**—**	**—**	**—**	**(98)**
Repurchase of common stock on or after October 3, 2016	**—**	**(12.9)**	**—**	**—**	**—**	**(1,000)**	**—**	**—**	**(1,000)**
Stock-based compensation	**—**	**—**	**—**	**76**	**—**	**—**	**—**	**—**	**76**
Income tax benefits from stock-based award activities	**—**	**—**	**—**	**41**	**—**	**—**	**—**	**—**	**41**
Investment by non-controlling interest	**—**	**—**	**—**	**(1)**	**—**	**—**	**—**	**—**	**(1)**
Net income	**—**	**—**	**—**	**—**	**115**	**—**	**—**	**15**	**130**
Unrealized gain on derivative instruments, net of tax	**—**	**—**	**—**	**—**	**—**	**—**	**(7)**	**—**	**(7)**
Defined benefit plan adjustments, net of tax	**—**	**—**	**—**	**—**	**—**	**—**	**23**	**—**	**23**
Foreign currency translation, net of tax	**—**	**—**	**—**	**—**	**—**	**—**	**(497)**	**(16)**	**(513)**
Reclassification adjustments, net of tax	**—**	**—**	**—**	**—**	**—**	**—**	**22**	**—**	**22**
Balance, December 31, 2016	**248.3**	**(12.9)**	**$ 2**	**$ 10,600**	**$ (399)**	**$ (1,000)**	**$ (570)**	**$ 227**	**$ 8,860**

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

QUINTILES IMS HOLDINGS, INC. AND SUBSIDIARIES
Notes to Consolidated Financial Statements

1. Summary of Significant Accounting Policies

The Company

Conducting business in more than 100 countries with over 50,000 employees, Quintiles IMS Holdings, Inc. (together with its subsidiaries, the "Company" or "QuintilesIMS") is a leading integrated information and technology-enabled healthcare service provider worldwide, dedicated to helping its clients improve their clinical, scientific and commercial results.

On October 3, 2016, Quintiles Transnational Holdings Inc. ("Quintiles") completed its previously announced merger of equals transaction (the "Merger") with IMS Health Holdings, Inc. ("IMS Health"). Pursuant to the terms of the merger agreement dated as of May 3, 2016 between Quintiles and IMS Health (the "Merger Agreement"), IMS Health was merged with and into Quintiles, and the separate corporate existence of IMS Health ceased, with Quintiles continuing as the surviving corporation (the "Surviving Corporation"). Immediately prior to the completion of the Merger, Quintiles reincorporated as a Delaware corporation. The Surviving Corporation changed its name to Quintiles IMS Holdings, Inc. At the effective time of the Merger, each issued and outstanding share of IMS Health common stock, par value $0.01 per share ("IMS Health common stock"), was automatically converted into 0.3840 of a share of the Company's common stock, par value $0.01 per share. In addition, immediately following the effective time of the Merger, Quintiles Transnational Corp ("Quintiles Corp."), a direct subsidiary of Quintiles, was merged with and into IMS Health Incorporated, following which IMS Health Incorporated will continue as a direct, wholly-owned subsidiary of the Surviving Corporation. See Note 15 for additional information regarding the Merger.

Reclassifications

Certain prior period amounts have been reclassified to conform to the current presentation, including the reclassification of depreciation and amortization from costs of revenue and selling, general and administrative expenses to a separate caption on the accompanying consolidated statements of income. These changes had no effect on previously reported total revenues, net income, comprehensive income, stockholders' deficit or cash flows.

Principles of Consolidation

The accompanying consolidated financial statements include the accounts and operations of the Company, its subsidiaries and investments in which the Company has control. Amounts pertaining to the non-controlling ownership interests held by third parties in the operating results and financial position of the Company's majority-owned subsidiaries are reported as non-controlling interests. Intercompany accounts and transactions have been eliminated in consolidation.

Use of Estimates

The preparation of financial statements in accordance with generally accepted accounting principles in the United States of America ("GAAP") requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, and the disclosure of contingent assets and liabilities, at the date of the financial statements, as well as the reported amounts of revenues and expenses during the period. These estimates are based on historical experience and various other assumptions believed reasonable under the circumstances. The Company evaluates its estimates on an ongoing basis and makes changes to the estimates and related disclosures as experience develops or new information becomes known. Actual results may differ from those estimates.

QUINTILES IMS HOLDINGS, INC. AND SUBSIDIARIES
Notes to Consolidated Financial Statements - Continued

Foreign Currencies

The Company's financial statements are reported in United States dollars and, accordingly, the Company's results of operations are impacted by fluctuations in exchange rates that affect the translation of its revenues and expenses denominated in foreign currencies into United States dollars for purposes of reporting its consolidated financial results. Assets and liabilities recorded in foreign currencies on the books of foreign subsidiaries are translated at the exchange rate on the balance sheet date. Revenues, costs and expenses are translated at average rates of exchange during the year. Translation adjustments resulting from this process are charged or credited to the accumulated other comprehensive income (loss) ("AOCI") component of stockholders' equity (deficit). The Company is subject to foreign currency transaction risk for fluctuations in exchange rates during the period of time between the consummation and cash settlement of a transaction. The Company earns revenue from its service contracts over a period of several months and, in some cases, over a period of several years. Accordingly, exchange rate fluctuations during this period may affect the Company's profitability with respect to such contracts.

For operations in countries that are considered to be highly inflationary or where the United States Dollar is designated as the functional currency, monetary assets and liabilities are remeasured using end-of-period exchange rates, whereas non-monetary accounts are remeasured using historical exchange rates, and all remeasurement and transaction adjustments are recognized in other expense (income), net. Other expense (income), net, includes foreign currency net losses (gains) for 2016, 2015 and 2014 of approximately $6 million, ($5) million and $5 million, respectively.

Cash Equivalents

The Company considers all highly liquid investments with an initial maturity of three months or less when purchased to be cash equivalents.

Investments in Marketable Securities

Investments in marketable securities are classified as either trading or available-for-sale and measured at fair market value. Realized and unrealized gains and losses on trading securities are included in other expense (income), net, on the accompanying consolidated statements of income. Realized gains and losses on available-for-sale securities are included in other expense (income), net, on the accompanying consolidated statements of income. Unrealized gains and losses, net of deferred income taxes, on available-for-sale securities are included in the AOCI component of stockholders' equity (deficit) until realized. Any gains or losses from the sales of investments or other-than-temporary declines in fair value are computed by specific identification.

Equity Method Investments

The Company's investments in and advances to unconsolidated affiliates are accounted for under the equity method if the Company exercises significant influence or has an investment in a limited partnership that is considered to be greater than minor. These investments and advances are classified as investments in and advances to unconsolidated affiliates on the accompanying consolidated balance sheets. The Company records its pro rata share of the earnings, adjusted for accretion of basis difference, of these investments in equity in earnings of unconsolidated affiliates on the accompanying consolidated statements of income. The Company reviews its investments in and advances to unconsolidated affiliates for impairment whenever events or changes in circumstances indicate that the carrying amounts may not be recoverable.

QUINTILES IMS HOLDINGS, INC. AND SUBSIDIARIES
Notes to Consolidated Financial Statements - Continued

Derivatives

The Company uses derivative instruments to manage exposures to interest rates and foreign currencies. Derivatives are recorded on the balance sheet at fair value at each balance sheet date utilizing pricing models for non-exchange-traded contracts. At inception, the Company designates whether or not the derivative instrument is an effective hedge of an asset, liability or firm commitment which is then classified as either a cash flow hedge or a fair value hedge. If determined to be an effective cash flow hedge, changes in the fair value of the derivative instrument are recorded as a component of AOCI until realized. The Company includes the impact from these hedges in the same line item as the hedged item on the consolidated statements of cash flows. Changes in fair value of effective fair value hedges are recorded in earnings as an offset to the changes in the fair value of the related hedged item. Hedge ineffectiveness, if any, is immediately recognized in earnings. Changes in the fair values of derivative instruments that are not an effective hedge are recognized in earnings. When it is probable that a hedged forecasted transaction will not occur, the Company discontinues hedge accounting for the affected portion of the forecasted transaction, and reclassifies gains or losses that were accumulated in AOCI to earnings in other expense (income), net for foreign exchange derivatives and interest expense for interest rate derivatives on the consolidated statements of income. Cash flows are classified consistent with the underlying hedged item. The Company has entered, and may in the future enter, into derivative contracts (caps, swaps, forwards, calls or puts, warrants, for example) related to its debt, investments in marketable equity securities and forecasted foreign currency transactions.

Billed and Unbilled Services and Unearned Income

In general, prerequisites for billings and payments are established by contractual provisions including predetermined payment schedules, which may or may not correspond to the timing of the performance of services under the contract. Unbilled services arise when services have been rendered for which revenue has been recognized but the clients have not been billed.

In some cases, payments received are in excess of revenue recognized. Payments received in advance of services being provided are deferred as unearned income on the consolidated balance sheet. As the contracted services are subsequently performed and the associated revenue is recognized, the unearned income balance is reduced by the amount of the revenue recognized during the period.

Allowance for Doubtful Accounts

The Company’s allowance for doubtful accounts is determined based on a variety of factors that affect the potential collectability of the related receivables, including length of time the receivables are past due, client credit ratings, financial stability of the client, specific one-time events and past client history. In addition, in circumstances where the Company is made aware of a specific client’s inability to meet its financial obligations, a specific allowance is established. The accounts are individually evaluated on a regular basis and reserves are established as deemed appropriate based on the above criteria.

Receivables Financing Facility

Advances received under the Company’s receivables financing facility are accounted for as borrowings secured by the receivables and included in net cash provided by financing activities. The Company services the collateralized accounts receivable and the cash flows for the underlying receivables are included in cash provided by operating activities. The collateralized accounts receivable are included in trade accounts receivable and unbilled services, net.

QUINTILES IMS HOLDINGS, INC. AND SUBSIDIARIES
Notes to Consolidated Financial Statements - Continued

Business Combinations

Business combinations are accounted for using the acquisition method of accounting. The identifiable assets acquired, the liabilities assumed, and any non-controlling interest in the acquiree are recorded at their estimated fair values on the date of the acquisition. Goodwill represents the excess of the purchase price over the estimated fair value of the net assets acquired, including the amount assigned to identifiable intangible assets. When a business combination involves contingent consideration, the Company recognizes a liability equal to the estimated fair value of the contingent consideration obligation at the date of the acquisition. Subsequent changes in the estimated fair value of the contingent consideration are recognized in earnings in the period of the change. Acquisition-related costs are expensed as incurred. The consolidated financial statements include the results of operations of business combinations since the acquisition date.

Long-Lived Assets

Property and equipment are stated at cost and are depreciated using the straight-line method over the shorter of the asset's estimated useful life or the lease term, if related to leased property, as follows:

Buildings and leasehold improvements	3 - 40 years
Equipment	3 - 10 years
Furniture and fixtures	5 - 10 years
Motor vehicles	3 - 5 years

Definite-lived identifiable intangible assets are amortized primarily using an accelerated method that reflects the pattern in which the Company expects to benefit from the use of the asset over its estimated remaining useful life as follows:

Trademarks and trade names	2 - 10 years
Contract backlog and client relationships	3 - 25 years
Software and related assets	2 - 9 years
Databases	1 - 5 years
Non-compete agreements and other	1 - 5 years

Goodwill and indefinite-lived identifiable intangible assets, which consist of certain trade names, are not amortized but evaluated for impairment annually, or more frequently if events or changes in circumstances indicate an impairment.

Included in software and related items is the capitalized cost of internal-use software used in supporting the Company's business. Qualifying costs incurred during the application development stage are capitalized and amortized over their estimated useful lives. Costs are capitalized from completion of the preliminary project stage and when it is considered probable that the software will be used to perform its intended function, up until the time the software is placed into service. The Company recognized $44 million, $38 million and $33 million of amortization expense in 2016, 2015 and 2014, respectively, related to software and related assets.

The carrying values of property, equipment and intangible and other long-lived assets are reviewed for recoverability if the facts and circumstances suggest that a potential impairment may have occurred. If this review indicates that carrying values will not be recoverable, as determined based on undiscounted cash flow

projections, the Company will record an impairment charge to reduce carrying values to estimated fair value. See Note 17 for information regarding the impairment charge recognized in 2016. During 2015, the Company recognized a $2 million impairment charge for long-lived assets related to a facility closure in Japan. There were no events, facts or circumstances in 2014 that resulted in any impairment charges to the Company's property, equipment, intangible or other long-lived assets.

Revenue Recognition

The Company recognizes revenue when all of the following conditions are satisfied: (1) there is persuasive evidence of an arrangement; (2) the service offering has been delivered to the client; (3) the collection of the fees is probable; and (4) the arrangement consideration is fixed or determinable. The Company's arrangements are primarily service contracts that range in duration from a few months to several years.

In some cases, contracts provide for consideration that is contingent upon the occurrence of uncertain future events. The Company recognizes contingent revenue when the contingency has been resolved and all other criteria for revenue recognition have been met. The Company treats cash payments to clients as incentives to induce the clients to enter into such a service agreement with the Company. The related asset is amortized as a reduction of revenue over the period the services are performed. The Company records revenues net of any tax assessments by governmental authorities, such as value added taxes, that are imposed on and concurrent with specific revenue generating transactions. The Company does not recognize revenue with respect to start-up activities including contract and scope negotiation, feasibility analysis and conflict of interest review associated with contracts. The costs for these activities are expensed as incurred.

For the arrangements that include multiple elements, arrangement consideration is allocated to units of accounting based on the relative selling price. The best evidence of selling price of a unit of accounting is vendor-specific objective evidence ("VSOE"), which is the price the Company charges when the deliverable is sold separately. When VSOE is not available to determine selling price, management uses relevant third-party evidence ("TPE") of selling price, if available. When neither VSOE nor TPE of selling price exists, management uses its best estimate of selling price considering all relevant information that is available without undue cost and effort.

The Company derives the majority of its revenues in the Commercial Solutions segment from various information and technology service offerings. A typical information offerings arrangement (primarily under fixed-price contracts) may include an ongoing subscription-based deliverable for which revenue is recognized ratably as earned over the contract period, and/or a one-time delivery of data offerings for which revenue is recognized upon delivery, assuming all other criteria are met. The Company's subscription arrangements typically have terms ranging from one to three years and are generally non-cancelable and do not contain refund-type provisions. Technology services offerings consist of a mix of small and large-scale services and consulting projects, multi-year outsourcing contracts and Software-as-a-Service ("SaaS") licenses. These arrangements typically have terms ranging from several weeks to three years, with a majority having terms of one year or less. Revenues for services engagements where deliverables occur ratably over time are recognized on a straight-line basis over the term of the arrangement. Revenues from time and material contracts are recognized as the services are provided. Revenues from fixed price ad hoc services and consulting contracts are recognized either over the contract term based on the ratio of the number of hours incurred for services provided during the period compared to the total estimated hours to be incurred over the entire arrangement (efforts based), or upon delivery (completed contract).

The majority of the Company's contracts within the Research & Development Solutions segment are service contracts for clinical research that represent a single unit of accounting. The Company recognizes

revenue on its clinical research services contracts as services are performed primarily on a proportional performance basis, generally using output measures that are specific to the service provided. Examples of output measures include among others, number of investigators enrolled, number of site initiation visits and number of monitoring visits completed. Revenue is determined by dividing the actual units of work completed by the total units of work required under the contract and multiplying that ratio by the total contract value. The total contract value, or total contractual payments, represents the aggregate contracted price for each of the agreed upon services to be provided. Changes in the scope of work are common, especially under long-term contracts, and generally result in a change in contract value. Once the client has agreed to the changes in scope and renegotiated pricing terms, the contract value is amended and revenue is recognized, as described above. To the extent that contracts involve multiple elements, the Company follows the allocation methodology described above and recognizes revenue for each unit of accounting on a proportional performance basis. Most contracts may be terminated upon 30 to 90 days notice by the client, however, in the event of termination, contract provisions typically require payment for services rendered through the date of termination, as well as for subsequent services rendered to close out the contract.

The Company derives the majority of its revenues in its Integrated Engagement Services segment on a fee-for-service basis to clients within the biopharmaceutical industry. Fees on these arrangements are billed based on a contractual per-diem or hourly rate basis and revenue is recognized primarily on a time and materials basis. Some of the Company's Integrated Engagement Services contracts are multiple element arrangements, with elements including recruiting, training and deployment of sales representatives. The nature of the terms of these multiple element arrangements will vary based on the customized needs of the Company's clients. For contracts that have multiple elements, the Company follows the allocation methodology described above and recognizes revenue for each unit of accounting on a time and materials basis. The Company's Integrated Engagement Services contracts sometimes include variable fees that are based on a percentage of service sales (royalty payments). The Company recognizes revenue on royalty payments when the variable components become fixed or determinable and all other revenue recognition criteria have been met, which generally only occurs upon the sale of the underlying service(s) and upon the Company's receipt of information necessary to make a reasonable estimate.

Reimbursed Expenses

The Company includes reimbursed expenses in total revenues and costs of revenue as the Company is deemed to be the primary obligor in the applicable arrangements. These costs include such items as payments to investigators and travel expenses for the Company's clinical monitors and sales representatives.

The Company has collection risk on contractually reimbursable expenses, and, from time to time, is unable to obtain reimbursement from the client for costs incurred. When such an expense is not reimbursed, it is classified as costs of revenue on the consolidated statements of income.

Expenses

Our costs and expenses are comprised primarily of our costs of revenue, reimbursed expenses and selling, general and administrative expenses. Costs of revenue include compensation and benefits for billable employees and personnel involved in production, data management and delivery, and the costs of acquiring and processing data for our information offerings; costs of staff directly involved with delivering technology-related services offerings and engagements, related accommodations and the costs of data purchased specifically for technology services engagements; and other expenses directly related to service contracts such as courier fees, laboratory supplies, professional services and travel expenses. As noted above, reimbursed expenses are comprised principally of payments to investigators who oversee clinical trials and travel expenses for our clinical monitors

and sales representatives. Selling, general and administrative expenses include costs related to sales, marketing, and administrative functions (including human resources, legal, finance and general management) for compensation and benefits, travel, professional services, training and expenses for information technology ("IT"), facilities and depreciation and amortization.

Concentration of Credit Risk

Financial instruments that subject the Company to credit risk primarily consist of cash and cash equivalents, marketable securities and accounts receivable. The Company maintains its cash and cash equivalent balances with high-quality financial institutions and, consequently, the Company believes that such funds are subject to minimal credit risk. Investment policies have been implemented that limit purchases of marketable securities to investment grade securities. Substantially all revenues for Commercial Solutions, Research & Development Solutions and Integrated Engagement Services are earned by performing services under contracts with various pharmaceutical, biotechnology, medical device and healthcare companies. The concentration of credit risk is equal to the outstanding accounts receivable and unbilled services balances, less the unearned income related thereto, and such risk is subject to the financial and industry conditions of the Company's clients. The Company does not require collateral or other securities to support client receivables. Credit losses have been immaterial and reasonably within management's expectations. No client accounted for 10.0% or more of consolidated revenues in 2016, 2015 or 2014.

Restructuring Costs

Restructuring costs, which primarily include termination benefits and facility closure costs, are recorded at estimated fair value. Key assumptions in determining the restructuring costs include the terms and payments that may be negotiated to terminate certain contractual obligations and the timing of employees leaving the Company.

Merger Related Costs

Merger related costs include the direct and incremental costs associated with business combinations including (i) acquisition related costs such as investment banking, legal, accounting and consulting fees (see Footnote 15), (ii) incremental compensation costs triggered under change in control provisions in executive employment agreements, (iii) compensation and related costs of employees 100% dedicated to merger-related integration activities and (iv) severance and other termination costs associated with redundant employees. During 2016, the Company recognized $87 million of merger related costs, which includes $36 million of acquisition related costs. All of these costs are related to the merger with IMS Health. Merger related costs for all other business combinations have been immaterial and are included within selling, general and administrative expenses on the consolidated statements of income.

Legal Costs

Legal costs are expensed as incurred.

Debt Fees

Fees incurred to issue debt are generally deferred and amortized as a component of interest expense over the estimated term of the related debt using the effective interest rate method.

Contingencies

The Company records accruals for claims, suits, investigations and proceedings when it is probable that a liability has been incurred and the amount of the loss can be reasonably estimated. The Company reviews claims,

suits, investigations and proceedings at least quarterly and records or adjusts accruals related to such matters to reflect the impact and status of any settlements, rulings, advice of counsel or other information pertinent to a particular matter. Legal costs associated with contingencies are charged to expense as incurred.

The Company is party to legal proceedings incidental to its business. While the outcome of these matters could differ from management's expectations, the Company does not believe the resolution of these matters has a reasonable possibility of having a material adverse effect to the Company's financial statements.

Income Taxes

Income tax expense includes United States federal, state and international income taxes. Certain items of income and expense are not reported in income tax returns and GAAP financial statements in the same year. The income tax effects of these differences are reported as deferred income taxes. Valuation allowances are provided to reduce the related deferred income tax assets to an amount which will, more likely than not, be realized. In addition, the Company does not consider the undistributed foreign earnings of most of its foreign subsidiaries to be permanently reinvested. To the extent undistributed foreign earnings are not permanently reinvested, the Company records deferred income taxes on these earnings. Interest and penalties related to unrecognized income tax benefits are recognized as a component of income tax expense as discussed further in Note 18.

Pensions and Other Postretirement Benefits

The Company provides retirement benefits to certain employees, including defined benefit pension plans and postretirement medical plans. The determination of benefit obligations and expense is based on actuarial models. In order to measure benefit costs and obligations using these models, critical assumptions are made with regard to the discount rate, expected return on plan assets, cash balance crediting rate, lump sum conversion rate and the assumed rate of compensation increases. In addition, retiree medical care cost trend rates are a key assumption used exclusively in determining costs for the Company's postretirement health care and life insurance benefit plans. Management reviews these critical assumptions at least annually. Other assumptions involve demographic factors such as the turnover, retirement and mortality rates. Management reviews these assumptions periodically and updates them when their experience deems it appropriate to do so.

The discount rate is the rate at which the benefit obligations could be effectively settled and is determined annually by management. For United States plans, the discount rate is based on results of a modeling process in which the plans' expected cash flow (determined on a projected benefit obligation basis) is matched with spot rates developed from a yield curve comprised of high-grade (Moody's Aa and above, or Standard and Poor's AA and above) non-callable corporate bonds to develop the present value of the expected cash flow, and then determining the single rate (discount rate) which when applied to the expected cash flow derives that same present value. In the United Kingdom specifically, the discount rate is set based on the yields on a universe of high quality non-callable corporate bonds denominated in the British Pound, appropriate to the duration of plan liabilities. For the non-United States plans, the discount rate is based on the current yield of an index of high quality corporate bonds.

The Company estimates the service and interest cost components of net periodic benefit cost for our United States and United Kingdom pension benefit plans by utilizing a full yield curve approach in the estimation of these components by applying the specific spot rates along the yield curve used in the determination of the benefit obligation to each of the underlying projected cash flows based on time until payment.

Under the United States qualified retirement plan, participants have a notional retirement account that increases with pay and investment credits. The rate used to determine the investment credit (cash balance crediting rate) varies monthly. At retirement, the account is converted to a monthly retirement benefit.

QUINTILES IMS HOLDINGS, INC. AND SUBSIDIARIES
Notes to Consolidated Financial Statements - Continued

In selecting an expected return on plan asset assumption, the Company considers the returns being earned by each plan investment category in the fund, the rates of return expected to be available for reinvestment and long-term economic forecasts for the type of investments held by the plan. The actual return on plan assets will vary from year to year versus this assumption. The Company believes it is appropriate to use long-term expected forecasts in selecting the expected return on plan assets. As such, there can be no assurance that the Company's actual return on plan assets will approximate the long-term expected forecasts. While the Company believes that the assumptions used are reasonable, differences in actual experience or changes in assumptions may materially affect its pension and postretirement benefit obligations and future expense.

The Company's estimated long-term rate of return on plan assets is based on the principles of capital market theory which maintain that over the long run, prudent investment risk taking is rewarded with incremental returns and that combining non-correlated assets can maximize risk adjusted portfolio returns. Long-term return estimates are developed by asset category based on actual class return data, historical relationships between asset classes and risk factors and peer plan data. Long-term return estimates for the Company's United Kingdom pension plans are developed by asset category based on actual class return data, historical relationships between asset classes and risk factors.

The Company utilizes a corridor approach to amortizing unrecognized gains and losses in the pension and postretirement benefit plans. Amortization occurs when the accumulated unrecognized net gain or loss balance exceeds the criterion of 10% of the larger of the beginning balances of the projected benefit obligation or the market-related value of the plan assets. The excess unrecognized gain or loss balance is then amortized using the straight-line method over the average remaining service-life of active employees expected to receive benefits.

Employee Stock Compensation

The Company accounts for stock-based compensation for stock options and stock appreciation rights under the fair value method and uses the Black-Scholes-Merton model to estimate the value of such stock-based awards granted to its employees and non-executive directors. Expected volatility is based upon the historical volatility of a peer group for a period equal to the expected term, as the Company does not have adequate history to calculate its own volatility and believes the expected volatility will approximate the historical volatility of the peer group. The Company does not currently anticipate paying dividends. The expected term represents the period of time the grants are expected to be outstanding. The risk-free interest rate is based on the United States Treasury yield curve in effect at the time of the grant.

The Company accounts for its stock-based compensation for restricted stock awards, restricted stock units and performance awards based on the closing market price of the Company's common stock on the date of grant.

Earnings Per Share

The calculation of earnings per share is based on the weighted average number of common shares or common stock equivalents outstanding during the applicable period. The dilutive effect of common stock equivalents is excluded from basic earnings per share and is included in the calculation of diluted earnings per share. Potentially dilutive securities include outstanding stock options and unvested restricted stock units, restricted stock and performance shares.

Employee equity share options, restricted stock units, restricted stock, performance shares and similar equity instruments granted by the Company are treated as potential common shares outstanding in computing diluted earnings per share. Diluted shares outstanding are calculated based on the average share price for each

fiscal period using the treasury stock method. Under the treasury stock method, the amount the employee must pay for exercising stock options, the amount of compensation cost for future service that the Company has not yet recognized, and the amount of benefits that would be recorded in additional paid-in capital when the award becomes deductible for tax purposes are assumed to be used to repurchase shares.

Treasury Stock

The Company records treasury stock purchases under the cost method. Upon reissuance of treasury stock, amounts in excess of the acquisition cost are credited to additional paid in capital. If the Company reissues treasury stock at an amount below its acquisition cost and additional paid in capital associated with prior treasury stock transactions is insufficient to cover the difference between the acquisition cost and the reissue price, this difference is recorded in retained earnings.

Recently Issued Accounting Standards

Accounting pronouncement adopted

In November 2015, the United States Financial Accounting Standards Board ("FASB") issued new accounting guidance which removed the requirement that deferred income tax assets and liabilities be classified as either current or non-current in a classified statement of financial position and instead requires deferred income tax assets and liabilities to be classified as non-current. The Company adopted this new accounting guidance prospectively on January 1, 2016.

Accounting pronouncements being evaluated

In August 2016, the FASB issued new accounting guidance which eliminates the diversity in practice related to the cash flow classification of certain cash receipts and payments, including debt prepayment or extinguishment payments, payments upon maturity of a zero coupon bond, payment of contingent liabilities arising from a business combination, proceeds from insurance settlements, distributions received from certain equity method investees, and cash flows related to beneficial interests obtained in a financial asset securitization. The new guidance designates the appropriate cash flow statement classification, including requirements to allocate certain components of these cash receipts and payments among operating, investing and financing activities. This new accounting guidance will be effective for the Company on January 1, 2018. Early adoption is permitted. The Company is currently evaluating the impact of this new accounting guidance on its consolidated financial statements.

In March 2016, the FASB issued new accounting guidance which simplifies several aspects of the accounting for employee stock-based payment transactions, including the accounting for income taxes, forfeitures, statutory tax withholding requirements, and the classification of excess income tax benefits on the statement of cash flows. The Company will adopt this new accounting guidance as required on January 1, 2017. Under the new accounting guidance, excess income tax benefits related to stock-based awards will be reflected as a reduction of income tax expense on the statements of income and as cash provided from operating activities on the statements of cash flows. Under existing guidance, these tax benefits are reflected directly in additional paid-in capital and as cash provided from financing activities. The Company recognized $41 million of such income tax benefits in 2016. The Company does not expect the adoption of this new accounting guidance to impact the recognition of its stock-based compensation expense or its presentation of cash flows related to employee taxes paid for withheld shares.

In February 2016, the FASB issued new accounting guidance which requires lessees to recognize almost all leases on their balance sheet as a right-of-use asset and a lease liability. The income statement will reflect lease

expense for operating leases, and amortization and interest expense for financing leases. The new accounting guidance will be effective for annual reporting periods beginning after December 15, 2018. Early adoption is permitted. The Company is currently evaluating the impact of this new accounting guidance on its consolidated financial statements.

In January 2016, the FASB issued new accounting guidance which modifies how entities measure equity investments and present changes in the fair value of financial liabilities. The new accounting guidance will be effective for annual reporting periods beginning after December 15, 2017. Early adoption of the presentation guidance is permitted; however, early adoption of the recognition and measurement guidance is not permitted. The adoption of this new accounting guidance is not expected to have a material effect on the Company's consolidated financial statements.

In May 2014, the FASB and the International Accounting Standards Board issued a converged standard on the recognition of revenue from contracts with clients. The objective of the new standard is to establish a single comprehensive revenue recognition model that is designed to create greater comparability of financial statements across industries and jurisdictions. Under the new standard, companies will recognize revenue to depict the transfer of goods or services to clients in amounts that reflect the consideration to which the company expects to be entitled in exchange for those goods or services. The new standard also will require expanded disclosures on revenue recognition, including information about changes in assets and liabilities that result from contracts with clients. The new standard allows for either a retrospective or prospective approach to transition upon adoption. The new standard will be effective for annual reporting periods beginning after December 15, 2017. Early adoption is permitted for annual reporting periods beginning after December 15, 2016. The Company is currently evaluating the impact of this new accounting guidance on its consolidated financial statements, the date of adoption and the transition approach to implement the new standard.

2. Accounts Receivable and Unbilled Services

Accounts receivable and unbilled services consist of the following (in millions):

	December 31,	
	2016	**2015**
Trade:		
Billed	**$ 998**	$ 554
Unbilled services	**723**	614
	1,721	1,168
Allowance for doubtful accounts	**(14)**	(2)
	$ 1,707	$ 1,166

3. Investments – Debt, Equity and Other Securities

Current

The Company's short-term investments in debt, equity and other securities consist primarily of trading investments in mutual funds that are measured at fair value with realized and unrealized gains and losses recorded in other expense (income), net, on the accompanying consolidated statements of income. Net realized and unrealized gains were approximately $3 million during the year ended December 31, 2016.

QUINTILES IMS HOLDINGS, INC. AND SUBSIDIARIES
Notes to Consolidated Financial Statements - Continued

Long-term

The Company's long-term investments in debt, equity and other securities consist primarily of cost method investments.

The Company is party to a joint venture with the Samsung Group to provide biopharmaceutical contract manufacturing services in South Korea. The Company's investment in the joint venture totaled $27 million at December 31, 2015. During the second quarter of 2016, the Company exercised its right to sell a portion of its ownership interest in the joint venture to the Samsung Group in exchange for approximately $26 million. As of December 31, 2016, the Company's investment in the joint venture totaled approximately $1 million (representing an ownership interest of less than 1%).

The Company reviews the carrying value of each individual investment at each balance sheet date to determine whether or not an other-than-temporary decline in fair value has occurred. The Company employs alternative valuation techniques including the following: (i) the review of financial statements, including assessments of liquidity, (ii) the review of valuations available to the Company prepared by independent third parties used in raising capital, (iii) the review of publicly available information including press releases and (iv) direct communications with the investee's management, as appropriate. If the review indicates that such a decline in fair value has occurred, the Company adjusts the carrying value to the estimated fair value of the investment and recognizes a loss for the amount of the adjustment.

4. Investments in and Advances to Unconsolidated Affiliates

The Company accounts for its investments in and advances to unconsolidated affiliates under the equity method of accounting and records its pro rata share of its losses or earnings from these investments in equity in earnings (losses) of unconsolidated affiliates. The following is a summary of the Company's investments in and advances to unconsolidated affiliates (in millions):

	December 31,	
	2016	**2015**
NovaQuest Pharma Opportunities Fund III, L.P.	**$ 43**	$ 40
NovaQuest Pharma Opportunities Fund IV, L.P.	**6**	2
Cenduit ™	**11**	9
Other	**9**	1
	$ 69	$ 52

NovaQuest Pharma Opportunities Funds

The Company has committed to invest up to $50 million as a limited partner in NovaQuest Pharma Opportunities Fund III, L.P. ("Fund III"). As of December 31, 2016, the Company has funded approximately $43 million and has approximately $7 million of remaining funding commitments. As of December 31, 2016 and 2015, the Company had a 10.9% ownership interest in Fund III.

The Company has committed to invest up to $20 million as a limited partner in NovaQuest Pharma Opportunities Fund IV, L.P. ("Fund IV"). As of December 31, 2016, the Company has funded approximately $8 million and has approximately $12 million of remaining funding commitments. As of December 31, 2016 and 2015, the Company had a 2.3% ownership interest in Fund IV.

QUINTILES IMS HOLDINGS, INC. AND SUBSIDIARIES
Notes to Consolidated Financial Statements - Continued

Cenduit™

In May 2007, the Company and Thermo Fisher Scientific Inc. ("Thermo Fisher") completed the formation of a joint venture, Cenduit™. The Company contributed its Interactive Response Technology operations in India and the United States. Thermo Fisher contributed its Fisher Clinical Services Interactive Response Technology operations in three locations — the United Kingdom, the United States and Switzerland. Additionally, each company contributed $4 million in initial capital. The Company and Thermo Fisher each own 50% of Cenduit™.

See Note 20 for information regarding related party transactions.

5. Variable Interest Entities

As of December 31, 2016, the Company's investments in unconsolidated variable interest entities ("VIEs") and its estimated maximum exposure to loss were as follows (in millions):

	Investments in Unconsolidated VIEs	Maximum Exposure to Loss
NovaQuest Pharma Opportunities Fund III, L.P.	$ 43	$ 51
NovaQuest Pharma Opportunities Fund IV, L.P.	6	18
	$ 49	$ 69

The Company's maximum exposure to loss on Fund III and Fund IV (collectively "the Funds") is limited to its investments and remaining funding commitments.

The Company has determined that the Funds are VIEs but that the Company is not the primary beneficiary as it does not have a controlling financial interest in either of the Funds. However, because the Company has determined that it has the ability to exercise significant influence, it accounts for its investments in the Funds under the equity method of accounting and records its pro rata share of the Funds' earnings and losses in equity in (losses) earnings of unconsolidated affiliates on the accompanying consolidated statements of income. The investment assets of unconsolidated VIEs are included in investments in and advances to unconsolidated affiliates on the accompanying consolidated balance sheets.

6. Derivatives

Foreign Exchange Risk Management

The Company transacts business in more than 100 countries and is subject to risks associated with fluctuating foreign exchange rates. The Company's objective is to reduce earnings and cash flow volatility associated with foreign exchange rate movements. Accordingly, the Company enters into foreign currency forward contracts to minimize the impact of foreign exchange movements on non-functional currency assets and liabilities ("Balance Sheet Hedging") to (i) hedge certain forecasted foreign exchange cash flows arising from service contracts ("Service Contract Hedging") and (ii) hedge non-United States Dollar anticipated intercompany royalties ("Royalty Hedging"). It is the Company's policy to enter into foreign currency transactions only to the extent necessary to meet its objectives as stated above. The Company does not enter into foreign currency transactions for investment or speculative purposes. The principal currencies hedged are the Euro, the British Pound, the Japanese Yen, the Swiss Franc and the Canadian Dollar.

Balance Sheet Hedging contracts entered into for balance sheet risk management purposes are not designated as hedges and are carried at fair value, with changes in the fair value recorded to other expense (income), net in the accompanying consolidated statements of income. These contracts do not subject the Company to material balance sheet risk because gains and losses on these derivatives are intended to offset gains and losses on the assets and liabilities being hedged.

QUINTILES IMS HOLDINGS, INC. AND SUBSIDIARIES
Notes to Consolidated Financial Statements - Continued

Service Contract Hedging and Royalty Hedging contracts are designated as hedges and are carried at fair value, with changes in the fair value recorded to AOCI. The change in fair value is reclassified from AOCI to earnings in the period in which the hedged transaction occurs. These contracts have various expiration dates through November 2017.

As of December 31, 2016, the Company had 62 open Service Contract Hedging and Royalty Hedging contracts to hedge certain forecasted foreign currency cash flow transactions occurring in 2017 with notional amounts totaling $300 million. As of December 31, 2015, the Company had 15 open Service Contract Hedging contracts to hedge certain forecasted foreign currency cash flow transactions occurring in 2016. For accounting purposes these hedges are deemed to be highly effective. As of December 31, 2016 and 2015, the Company had recorded gross unrealized gains (losses) of $1 million and ($5 million), respectively, related to these contracts. Upon expiration of the hedge instruments in 2017, the Company will reclassify the unrealized gains and losses on the derivative instruments included in AOCI into earnings. The unrealized gains (losses) are included in other current assets and liabilities on the accompanying consolidated balance sheets as of December 31, 2016 and 2015.

Interest Rate Risk Management

The Company purchases interest rate caps and has entered into interest rate swap agreements for purposes of managing its risk in interest rate fluctuations.

On June 9, 2011, the Company entered into six interest rate swaps which expired between September 30, 2013 and March 31, 2016, in an effort to limit its exposure to changes in the variable interest rate on its senior secured credit facilities. During May 2015, in conjunction with the debt refinancing described in Note 11, the Company terminated the remaining open interest rate swaps for a cash payment to the counterparty of $12 million, which included $1 million of accrued interest. Since the hedged forecasted cash transactions continued to be probable of occurring, the accumulated loss ($3 million at December 31, 2015) related to the terminated interest rate swaps in AOCI was reclassified to earnings as a component of interest expense in the same periods as the hedged forecasted transactions occurred over the first three months of 2016.

In April 2014, the IMS Health purchased United States Dollar denominated interest rate caps (“2014 Caps”) with a total notional value of $1 billion at strike rates ranging between 2% and 3%. These caps were effective at various times between April 2014 and April 2016, and expire at various times between April 2017 and April 2019. The total premiums paid were $21 million. The 2014 Caps are designated as cash flow hedges.

IMS Health also entered into United States Dollar and Euro denominated interest rate swap agreements in April 2014 (“2014 Swaps”) to hedge interest rate exposure on notional amounts of approximately $600 million of its borrowings. The 2014 Swaps were effective between April and June 2014, and expire at various times from March 2017 through March 2021. On these agreements, the Company pays a fixed rate ranging from 1.4% to 2.1% and receives a variable rate of interest equal to the greater of three-month United States Dollar London Interbank Offered Rate (“LIBOR”) or three-month Euro Interbank Offered Rate (“EURIBOR”), and 1%. The 2014 Swaps are designated as cash flow hedges.

On June 3, 2015, the Company entered into seven forward starting interest rate swaps (“2015 Swaps”) in an effort to limit its exposure to changes in the variable interest rate on its senior secured credit facilities. Interest on the swaps began accruing on June 30, 2016 and the interest rate swaps expire between March 31, 2017 and March 31, 2020. Payments on the 2015 Swaps, together with the variable rate of interest incurred on the underlying debt, result in a fixed rate of interest of 2.1% plus the applicable margin on the affected borrowings.

The critical terms of the 2014 Swaps and 2015 Swaps are substantially the same as the underlying borrowings. These interest rate swaps are being accounted for as cash flow hedges as these transactions were

executed to hedge the Company's interest payments, and for accounting purposes these hedges are deemed to be highly effective. As such, changes in the fair value of these derivative instruments are recorded as unrealized gains (losses) on derivatives included in AOCI. The fair value of these interest rate swaps represents the present value of the anticipated net payments the Company will make to the counterparty, which, when they occur, are reflected as interest expense on the consolidated statements of income. These interest rate swaps will result in a total debt mix of approximately 52% fixed rate debt and 48% variable rate debt, before the additional protection arising from the interest rate caps.

Net Investment Risk Management

Beginning in the 2016, the Company designated its foreign currency denominated debt as a hedge of its net investment in foreign subsidiaries to reduce the volatility in stockholders' equity caused by changes in the Euro exchange rate with respect to the United States Dollar. As of December 31, 2016, these borrowings (net of original issue discount) were €2,025 million ($2,131 million). The effective portion of foreign exchange gains or losses on the remeasurement of the debt is recognized in the cumulative translation adjustment component of AOCI with the related offset in long-term debt. Those amounts would be reclassified from AOCI to earnings upon the sale or substantial liquidation of these net investments. The amount of foreign exchange gains (losses) related to the net investment hedge included in cumulative translation adjustment for the year ended December 31, 2016 was $131 million.

The fair values of the Company's derivative instruments and the line items on the accompanying consolidated balance sheets to which they were recorded are summarized in the following table (in millions):

	Balance Sheet Classification	December 31, 2016			December 31, 2015		
		Assets	Liabilities	Notional	Assets	Liabilities	Notional
Derivatives designated as hedging instruments:							
Foreign exchange forward contracts	Other current assets and liabilities	**$ 11**	**$ 9**	**$ 300**	$ —	$ 5	$ 118
Interest rate swaps	Other current liabilities	**—**	**15**	**945**	—	6	440
Interest rate caps	Deposits and other assets	**1**	**—**	**1,000**	—	—	—
Derivatives not designated as hedging instruments:							
Foreign exchange forward contracts	Other current liabilities	**—**	**1**	**189**	—	—	—
Total derivatives		**$ 12**	**$ 25**		$ —	$ 11	

QUINTILES IMS HOLDINGS, INC. AND SUBSIDIARIES
Notes to Consolidated Financial Statements - Continued

The effect of the Company's cash flow hedging instruments on other comprehensive income (loss) is summarized in the following table (in millions):

	Year Ended December 31,		
	2016	2015	2014
Foreign exchange forward contracts	**$ 16**	$ (1)	$ (8)
Interest rate derivatives	**8**	6	10
Total	**$ 24**	$ 5	$ 2

The Company expects $2 million of pre-tax unrealized losses related to its foreign exchange contracts and interest rate derivatives included in AOCI at December 31, 2016 to be reclassified into earnings within the next twelve months.

7. Fair Value Measurements

The Company records certain assets and liabilities at fair value. Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants at the measurement date. A three-level fair value hierarchy that prioritizes the inputs used to measure fair value is described below. This hierarchy requires entities to maximize the use of observable inputs and minimize the use of unobservable inputs. The three levels of inputs used to measure fair value are as follows:

- Level 1—Quoted prices in active markets for identical assets or liabilities.
- Level 2—Observable inputs other than quoted prices included in Level 1, such as quoted prices for similar assets and liabilities in active markets; quoted prices for identical or similar assets and liabilities in markets that are not active; or other inputs that are observable or can be corroborated by observable market data.
- Level 3—Unobservable inputs that are supported by little or no market activity. This includes certain pricing models, discounted cash flow methodologies and similar techniques that use significant unobservable inputs.

The carrying values of cash, cash equivalents, accounts receivable and accounts payable approximated their fair values at December 31, 2016 and 2015 due to their short-term nature. At December 31, 2016 and 2015, the fair value of total debt approximated $7,298 million and $2,499 million, respectively, as determined under Level 2 measurements based on quoted prices for these financial instruments.

QUINTILES IMS HOLDINGS, INC. AND SUBSIDIARIES
Notes to Consolidated Financial Statements - Continued

Recurring Fair Value Measurements

The following table summarizes the fair value of the Company's financial assets and liabilities that are measured on a recurring basis as of December 31, 2016 (in millions):

	Level 1	Level 2	Level 3	Total
Assets:				
Trading securities	**$ 40**	**$ —**	**$ —**	**$ 40**
Derivatives	**—**	**12**	**—**	**12**
Total	**$ 40**	**$ 12**	**$ —**	**$ 52**
Liabilities:				
Derivatives	**$ —**	**$ 25**	**$ —**	**$ 25**
Contingent consideration	**—**	**—**	**18**	**18**
Total	**$ —**	**$ 25**	**$ 18**	**$ 43**

The following table summarizes the fair value of the Company's financial assets and liabilities that are measured on a recurring basis as of December 31, 2015 (in millions):

	Level 1	Level 2	Level 3	Total
Liabilities:				
Derivatives	$ —	$ 11	$ —	$ 11
Contingent consideration	—	—	4	4
Total	$ —	$ 11	$ 4	$ 15

Below is a summary of the valuation techniques used in determining fair value:

Marketable securities —The Company values trading and available-for-sale securities using the quoted market value of the securities held.

Derivatives —Derivatives consist of foreign exchange contracts and interest rate caps and swaps. The fair value of foreign exchange contracts is based on observable market inputs of spot and forward rates or using other observable inputs. The fair value of the interest rate caps and swaps is the estimated amount that the Company would receive or pay to terminate such agreements, taking into account market interest rates and the remaining time to maturities or using market inputs with mid-market pricing as a practical expedient for bid-ask spread.

Contingent consideration —The Company values contingent consideration related to business combinations using a weighted probability calculation of potential payment scenarios discounted at rates reflective of the risks associated with the expected future cash flows. Key assumptions used to estimate the fair value of contingent consideration include revenue, net new business and operating forecasts and the probability of achieving the specific targets.

QUINTILES IMS HOLDINGS, INC. AND SUBSIDIARIES
Notes to Consolidated Financial Statements - Continued

The following table summarizes the changes in Level 3 financial assets and liabilities measured on a recurring basis for the year ended December 31 (in millions):

	Contingent Consideration – Accrued Expenses		
	2016	2015	2014
Balance as of January 1	**$ 4**	$ 1	$ 13
Business combinations	**19**	—	—
Contingent consideration paid	**(4)**	(3)	(3)
Revaluations included in earnings and foreign currency translation adjustments	**(1)**	6	(9)
Balance as of December 31	**$ 18**	$ 4	$ 1

The revaluation for the contingent consideration is recognized in other expense (income), net on the accompanying consolidated statements of income.

Non-recurring Fair Value Measurements

Certain assets are carried on the accompanying consolidated balance sheets at cost and are not remeasured to fair value on a recurring basis. These assets include cost and equity method investments and loans that are written down to fair value for declines which are deemed to be other-than-temporary, and goodwill and identifiable intangible assets which are tested for impairment annually and when a triggering event occurs. See Note 17 for additional information.

As of December 31, 2016, assets carried on the balance sheet and not remeasured to fair value on a recurring basis totaled approximately $17,199 million and were identified as Level 3. These assets are comprised of cost and equity method investments of $82 million, goodwill of $10,727 million and other identifiable intangibles, net of $6,390 million.

Cost and Equity Method Investments —The inputs available for valuing investments in non-public portfolio companies are generally not easily observable. The valuation of non-public investments requires significant judgment by the Company due to the absence of quoted market values, inherent lack of liquidity and the long-term nature of such assets. When a triggering event occurs, the Company considers a wide range of available market data when assessing the estimated fair value. Such market data includes observations of the trading multiples of public companies considered comparable to the private companies being valued as well as publicly disclosed merger transactions involving comparable private companies. In addition, valuations are adjusted to account for company-specific issues, the lack of liquidity inherent in a non-public investment and the fact that comparable public companies are not identical to the companies being valued. Such valuation adjustments are necessary because in the absence of a committed buyer and completion of due diligence similar to that performed in an actual negotiated sale process, there may be company-specific issues that are not fully known that may affect value. Further, a variety of additional factors are reviewed by the Company, including, but not limited to, financing and sales transactions with third parties, current operating performance and future expectations of the particular investment, changes in market outlook and the third party financing environment. Because of the inherent uncertainty of valuations, estimated valuations may differ significantly from the values that would have been used had a ready market for the securities existed, and the differences could be material.

Goodwill —Goodwill represents the difference between the purchase price and the fair value of the identifiable tangible and intangible net assets resulting from business combinations. The Company performs a

qualitative analysis to determine whether it is more likely than not that the estimated fair value of a reporting unit is less than its book value. This includes a qualitative analysis of macroeconomic conditions, industry and market considerations, internal cost factors, financial performance, fair value history and other company specific events. If this qualitative analysis indicates that it is more likely than not that the estimated fair value is less than the book value for the respective reporting unit, the Company applies a two-step impairment test in which the Company determines whether the estimated fair value of the reporting unit is in excess of its carrying value. If the carrying value of the net assets assigned to the reporting unit exceeds the estimated fair value of the reporting unit, the Company performs the second step of the impairment test to determine the implied estimated fair value of the reporting unit's goodwill. The Company determines the implied estimated fair value of goodwill by determining the present value of the estimated future cash flows for each reporting unit and comparing the reporting unit's risk profile and growth prospects to selected, reasonably similar publicly traded companies. See Note 17 for additional information.

Definite-lived Intangible Assets —If a triggering event occurs, the Company determines the estimated fair value of definite-lived intangible assets by determining the present value of the expected cash flows. See Note 17 for additional information.

Indefinite-lived Intangible Asset —If a qualitative analysis indicates that it is more likely than not that the estimated fair value is less than the carrying value of an indefinite-lived intangible asset, the Company determines the estimated fair value of the indefinite-lived intangible asset (trade name) by determining the present value of the estimated royalty payments on an after-tax basis that it would be required to pay the owner for the right to use such trade name. If the carrying amount exceeds the estimated fair value, an impairment loss is recognized in an amount equal to the excess.

8. Property and Equipment

The major classes of property and equipment were as follows (in millions):

	December 31,	
	2016	2015
Land, buildings and leasehold improvements	**$ 333**	$ 187
Equipment	**338**	257
Furniture and fixtures	**72**	53
Motor vehicles	**26**	13
Property and equipment, gross	**769**	510
Less accumulated depreciation	**(363)**	(322)
Property and equipment, net	**$ 406**	$ 188

9. Goodwill and Identifiable Intangible Assets

As of December 31, 2016, the Company has approximately $6,390 million of identifiable intangible assets, of which approximately $127 million, relating to trade names, is deemed to be indefinite-lived and, accordingly,

QUINTILES IMS HOLDINGS, INC. AND SUBSIDIARIES
Notes to Consolidated Financial Statements - Continued

is not being amortized. Amortization expense associated with identifiable definite-lived intangible assets was as follows (in millions):

	Year Ended December 31,		
	2016	2015	2014
Amortization expense	**$ 210**	$ 67	$ 58

Estimated amortization expense for existing identifiable intangible assets is expected to be approximately $837 million, $858 million, $844 million, $788 million and $567 million for the years ending December 31, 2017, 2018, 2019, 2020 and 2021, respectively. Estimated amortization expense can be affected by various factors, including future acquisitions or divestitures of service and/or licensing and distribution rights or impairments.

The following is a summary of identifiable intangible assets (in millions):

	As of December 31, 2016			As of December 31, 2015		
	Gross Amount	Accumulated Amortization	Net Amount	Gross Amount	Accumulated Amortization	Net Amount
Definite-lived identifiable intangible assets:						
Client relationships and backlog	**$ 3,983**	**$ (125)**	**$ 3,858**	$ 224	$ (76)	$ 148
Trademarks, trade names and other	**384**	**(15)**	**369**	15	(6)	9
Databases	**1,742**	**(87)**	**1,655**	—	—	—
Software and related assets	**619**	**(247)**	**372**	279	(196)	83
Non-compete agreements	**9**	**—**	**9**	—	—	—
	$ 6,737	**$ (474)**	**$ 6,263**	$ 518	$ (278)	$ 240
Indefinite-lived identifiable intangible assets:						
Trade names	**$ 127**	**$ —**	**$ 127**	$ 128	$ —	$ 128

QUINTILES IMS HOLDINGS, INC. AND SUBSIDIARIES
Notes to Consolidated Financial Statements - Continued

The following is a summary of goodwill by segment for the years ended December 31, 2016 and 2015 (in millions):

	Commercial Solutions	Research & Development Solutions	Integrated Engagement Services	Consolidated
Balance as of December 31, 2014	$ 70	$ 346	$ 48	$ 464
Business combinations	—	262	—	262
Impact of foreign currency fluctuations and other	—	(6)	—	(6)
Balance as of December 31, 2015	70	602	48	720
Business combinations	**9,698**	**611**	**67**	**10,376**
Impairment	**(23)**	**—**	**—**	**(23)**
Impact of foreign currency fluctuations and other	**(330)**	**(17)**	**1**	**(346)**
Balance as of December 31, 2016	**$ 9,415**	**$ 1,196**	**$ 116**	**$ 10,727**

During the year ended December 31, 2016, the Company recorded impairment losses of $23 million. See Note 17 for additional information.

10. Accrued Expenses

	December 31,	
	2016	2015
Compensation, including bonuses, fringe benefits and payroll taxes	**$ 610**	$ 401
Restructuring	**102**	14
Interest	**42**	5
Client contract related	**502**	271
Professional fees	**69**	10
Other	**168**	60
	$ 1,493	$ 761

11. Credit Arrangements

The following is a summary of the Company's revolving credit facilities at December 31, 2016:

Facility	Interest Rates
$1,000 million (revolving credit facility)	LIBOR in the relevant currency borrowed plus a margin (Margin of 2.00% at December 31, 2016)
$25 million (receivables financing facility)	LIBOR Market Index Rate (0.77% at December 31, 2016) plus 0.85% to 1.35% depending upon the Company's debt rating
£10 million (approximately $12 million) general banking facility with a European headquartered bank	Bank's base rate (0.25% at December 31, 2016) plus 1%

QUINTILES IMS HOLDINGS, INC. AND SUBSIDIARIES
Notes to Consolidated Financial Statements - Continued

At December 31, 2016, there were bank guarantees totaling approximately £5 million (approximately $6 million) issued against the availability of the general banking facility with a European headquartered bank through their operations in the United Kingdom.

The following table summarizes the Company's debt at the dates indicated (dollars in millions):

	December 31,	
	2016	**2015**
Senior Secured Credit Facilities:		
Senior Secured Term A Loan due 2021—U.S. Dollar LIBOR at average floating rates of 3.00%	**$ 888**	$ —
Senior Secured Term A Loan due 2021—Euro LIBOR at average floating rates of 2.00%	**419**	—
Senior Secured Term B Loan due 2021—U.S. Dollar LIBOR at average floating rates of 3.50%	**1,700**	—
Senior Secured Term B Loan due 2021—Euro LIBOR at average floating rates of 3.75%	**765**	—
Term Loan A due 2020—LIBOR plus 1.75%, or 2.36%	**—**	829
Term Loan B due 2022—the greater of LIBOR or 0.75% plus 2.50%, or 3.25%	**—**	597
Revolving Credit Facility due 2021:		
U.S. Dollar denominated borrowings—U.S. Dollar LIBOR at average floating rates of 2.73%	**375**	—
5.0% Senior Notes due 2026—U.S. Dollar denominated	**1,050**	—
3.5% Senior Notes due 2024—Euro denominated	**658**	—
4.125% Senior Notes due 2023—Euro denominated	**289**	—
4.875% Senior Notes due 2023	**800**	800
Receivables financing facility due 2018—LIBOR plus 0.85%, or 1.62%	**275**	275
Principal amount of debt	**7,219**	2,501
Less: unamortized discount	**(12)**	(24)
Less: unamortized debt issuance costs	**(7)**	(9)
Less: current portion	**(92)**	(49)
Long-term debt	**$ 7,108**	$ 2,419

QUINTILES IMS HOLDINGS, INC. AND SUBSIDIARIES
Notes to Consolidated Financial Statements - Continued

Contractual maturities of long-term debt at December 31, 2016 are as follows (in millions):

2017	$ 92
2018	367
2019	92
2020	92
2021	3,781
Thereafter	2,795
	$ 7,219

Senior Secured Credit Agreement and Senior Notes

2016 Financing Transactions

At December 31, 2016, the Company's senior secured credit facility provides financing of up to approximately $4,772 million, which consisted of $4,147 million principal amount of debt outstanding (as detailed in the table above) and $625 million of commitments that expire in 2021. The revolving credit facility is comprised of a $450 million senior secured revolving facility available in U.S. Dollars, a $400 million senior secured revolving facility available in U.S. Dollars, Euros, Swiss Francs and other foreign currencies and a $150 million senior secured revolving facility available in U.S. Dollars and Yen. The term A loans and revolving credit facility mature in October 2021, while the term B loans mature in March 2021. Under certain circumstances, the maturity date of the term A loans and the senior secured revolving facility may be accelerated to 2020. The Company is required to make scheduled quarterly payments on the term A loans equal to 1.25% of the original principal amount, with the remaining balance paid at maturity. The Company is required to make scheduled quarterly payments on the term B loans equal to approximately 0.25% of the original principal amount, with the remaining balance paid at maturity. In addition, beginning with fiscal year ending December 31, 2017, the Company is required to apply 50% of excess cash flow (as defined in the Company's senior secured credit facility), subject to a reduction to 25% or 0% depending upon the Company's senior secured first lien net leverage ratio, for prepayment of the Term Loans, with any such prepayment to be applied toward principal payments due in subsequent quarters. The Company is also required to pay an annual commitment fee that ranges from 0.30% to 0.40% in respect of any unused commitments under the revolving credit facility. The senior secured credit facility is collateralized by substantially all of the assets of the Company and the assets of the Company's material domestic subsidiaries including 100% of the equity interests of substantially all of the Company's material domestic subsidiaries and 66% of the equity interests of substantially all of the first-tier material foreign subsidiaries of the Company and its domestic subsidiaries.

On October 3, 2016, the Company refinanced the term A loans due 2019 (approximately $884 million) assumed in the Merger with a term A loan facility due in 2021 for an aggregate principal amount of approximately $1,350 million comprised of both U.S. Dollar denominated term A loans and Euro denominated term A loans. Additionally, the revolving credit facility was refinanced to an aggregate principal amount equal to $1,000 million. The additional proceeds were used, in part, to fund the redemption on November 1, 2016 of $500 million of 6% Senior Notes due 2020 assumed in the Merger, at a redemption price equal to 101.5% of the aggregate outstanding principal amount plus accrued interest to the redemption date. The Company incurred a loss on extinguishment of debt of approximately $8 million related to the aggregate payments for make-whole premiums.

On September 28, 2016, IMS Health issued senior unsecured notes totaling principal amount of $1,750 million, which consisted of (i) $1,050 million of 5% senior notes due October 2026 (the "5% Dollar Notes") and

(ii) €625 million of 3.5% senior notes due October 2024 (the "3.5% Euro Notes" and, together with the 5% Dollar Notes, the "2016 Notes"). The proceeds of the 2016 Notes, which were assumed by the Company upon closing of the Merger, were used on October 3, 2016 to repay in full ($1,389 million) the term loans outstanding under the Quintiles Transnational senior secured credit facilities. Interest on the 2016 Notes is payable semi-annually, beginning on April 15, 2017. The notes are guaranteed on a senior unsecured basis by the Company's wholly-owned domestic restricted subsidiaries (excluding IMS Japan K.K.) and, subject to certain exceptions, each of the Company's future domestic subsidiaries that guarantees its other indebtedness or indebtedness of any of the guarantors. The 5% Dollar Notes and the 3.5% Euro Notes may be redeemed, either together or separately, prior to their final stated maturity, subject to a customary make-whole premium, at any time prior to October 15, 2021 with respect to the 5% Dollar Notes and October 15, 2019 with respect to the 3.5% Euro Notes (in each case subject to a customary "equity claw" redemption right) and thereafter subject to annually declining redemption premiums at any time prior to October 15, 2024 with respect to the 5% Dollar Notes and October 15, 2021 with respect to the 3.5% Euro Notes.

The Company also assumed in the Merger €275 million aggregate principal amount of 4.125% Senior Notes due in April 2023 (the "4.125% Senior Notes"). Interest on the 4.125% Senior Notes is payable semi-annually each year and commenced on October 1, 2015. The 4.125% Senior Notes are guaranteed on a senior unsecured basis by IMS Health's wholly-owned domestic subsidiaries that are guarantors under the senior secured credit facilities. The Company may redeem the 4.125% Senior Notes, in whole or in part, at any time prior to April 1, 2018 at a price equal to 100% of the principal amount thereof, plus accrued and unpaid interest, if any, to the date of redemption, plus a "make-whole" premium. On or after April 1, 2018, the Company may redeem all or a portion of the 4.125% Senior Notes at predetermined redemption prices set forth in the indenture governing the 4.125% Senior Notes plus accrued and unpaid interest to the date of redemption.

2015 Financing Transactions

On May 12, 2015, the Company through its wholly-owned subsidiary, Quintiles Transnational, entered into new senior secured credit facilities, which consisted of a $500 million revolving credit facility and $1.45 billion of term loans. In addition, Quintiles Transnational issued $800 million of 4.875% senior unsecured notes due 2023 (the "4.875% Senior Notes") in a private placement. The term loans, in the amount of $1,389 million, were repaid in full on October 3, 2016 as discussed above. Interest on the 4.875% Senior Notes is paid semiannually on May 15 and November 15 of each year until maturity. The Senior Notes are unsecured senior obligations of QuintilesIMS and are effectively subordinated in right of payment to all secured obligations of QuintilesIMS, to the extent of the value of any collateral. Also on May 12, 2015, an outstanding term loan was repaid with proceeds from the new credit facilities entered into that day and the Company recognized an $8 million loss on extinguishment of debt, which included $1 million of unamortized debt issuance costs, $1 million of unamortized discount and $6 million of related fees and expenses.

Receivables Financing Facility

On December 5, 2014, the Company entered into a four-year arrangement to securitize certain of its accounts receivable. Under the receivables financing facility, certain of the Company's accounts receivable are sold on a non-recourse basis by certain of its consolidated subsidiaries to another of its consolidated subsidiaries, a bankruptcy-remote special purpose entity ("SPE"). The SPE obtained a term loan and revolving loan commitment from a third party lender, secured by liens on the assets of the SPE, to finance the purchase of the accounts receivable, which included a $275 million term loan and a $25 million revolving loan commitment. The revolving loan commitment may be increased by an additional $35 million as amounts are repaid under the term loan. QuintilesIMS has guaranteed the performance of the obligations of existing and future subsidiaries that sell and service the accounts receivable under the receivables financing facility. The assets of the SPE are not

available to satisfy any of the Company's obligations or any obligations of its subsidiaries. As of December 31, 2016, $25 million of revolving loans were available under the receivables financing facility.

The Company used the proceeds from the term loan under the receivables financing facility to repay in full the amount outstanding on the then outstanding revolving credit facility ($150 million), to repay $25 million of the then outstanding Term Loan B-3, to pay related fees and expenses and the remainder was used for general working capital purposes.

Restrictive Covenants

The Company's debt agreements provide for certain covenants and events of default customary for similar instruments, including a covenant not to exceed a specified ratio of consolidated senior secured net indebtedness to Consolidated EBITDA, as defined in the Company's senior secured credit facility and a covenant to maintain a specified minimum interest coverage ratio. If an event of default occurs under any of the Company's or the Company's subsidiaries' financing arrangements, the creditors under such financing arrangements will be entitled to take various actions, including the acceleration of amounts due under such arrangements, and in the case of the lenders under the revolving credit facility and New Term Loans, other actions permitted to be taken by a secured creditor. Our long-term debt arrangements contain usual and customary restrictive covenants that, among other things, place limitations on our ability to declare dividends. For additional information regarding these restrictive covenants, see Part II, Item 5 "Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities—Dividend Policy" and Part II, Item 7 "Management's Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources" included elsewhere in this Annual Report on Form 10-K. At December 31, 2016, the Company was in compliance with the financial covenants under the Company's financing arrangements.

12. Leases

The Company leases facilities under operating leases, many of which contain renewal and escalation clauses. The Company also leases certain equipment under operating leases. The leases expire at various dates through 2029 with options to cancel certain leases at various intervals. Rental expenses under these agreements were $127 million, $109 million and $115 million in 2016, 2015 and 2014, respectively.

The following is a summary of future minimum payments under operating leases that have initial or remaining non-cancelable lease terms in excess of one year at December 31, 2016 (in millions):

	Operating Leases
2017	$ 171
2018	123
2019	94
2020	75
2021	56
Thereafter	159
Total minimum lease payments	$ 678

13. Contingencies

The Company and its subsidiaries are involved in legal and tax proceedings, claims and litigation arising in the ordinary course of business. Management periodically assesses the Company's liabilities and contingencies in

connection with these matters based upon the latest information available. For those matters where management currently believes it is probable that the Company will incur a loss and that the probable loss or range of loss can be reasonably estimated, the Company has recorded reserves in the consolidated financial statements based on its best estimates of such loss. In other instances, because of the uncertainties related to either the probable outcome or the amount or range of loss, management is unable to make a reasonable estimate of a liability, if any. However, even in many instances where the Company has recorded an estimated liability, the Company is unable to predict with certainty the final outcome of the matter or whether resolution of the matter will materially affect the Company's results of operations, financial position or cash flows. As additional information becomes available, the Company adjusts its assessments and estimates of such liabilities accordingly.

The Company routinely enters into agreements with its suppliers to acquire data and with its clients to sell data, all in the normal course of business. In these agreements, the Company sometimes agrees to indemnify and hold harmless the other party for any damages such other party may suffer as a result of potential intellectual property infringement and other claims related to the use of the data. The Company has not accrued a liability with respect to these matters, as the exposure is considered remote.

Based on its review of the latest information available, management does not expect the impact of pending legal and tax proceedings, claims and litigation, either individually or in the aggregate, to have a material adverse effect on the Company's results of operations, cash flows or financial position. However, one or more unfavorable outcomes in any claim or litigation against the Company could have a material adverse effect for the period in which it is resolved. The following is a summary of certain legal matters involving the Company.

The Company's wholly-owned subsidiary, IMS Government Solutions Inc. ("IMS Government Solutions"), is primarily engaged in providing services under contracts with the United States government. United States government contracts are subject to extensive legal and regulatory requirements and, from time to time, agencies of the United States government have the ability to investigate whether contractors' operations are being conducted in accordance with such requirements. IMS Government Solutions discovered potential noncompliance with various contract clauses and requirements under its General Services Administration Contract (the "GSA Contract") which was awarded in 2002 to its predecessor company, Synchronous Knowledge Inc. (Synchronous Knowledge Inc. was acquired by IMS Health in May 2005). The potential noncompliance arose from two primary areas: first, at the direction of the government, work performed under one task order was invoiced under another task order without the appropriate modifications to the orders being made; and second, personnel who did not meet strict compliance with the labor categories component of the qualification requirements of the GSA Contract were assigned to contracts. The Company is currently unable to determine the outcome of all of these matters pending the resolution of the Voluntary Disclosure Program process and the ultimate liability arising from these matters could exceed the Company's current reserves.

On February 13, 2014, a group of approximately 1,200 medical doctors and 900 private individuals filed a civil lawsuit with the Seoul Central District Court against IMS Korea and two other defendants, KPA and the Korean Pharmaceutical Information Center ("KPIC"). The civil lawsuit alleges KPA and KPIC collected their personal information in violation of applicable privacy laws without the necessary consent through a software system installed on pharmacy computer systems in Korea, and that personal information was transferred to IMS Korea and sold to pharmaceutical companies. The plaintiffs are claiming damages in the aggregate amount of approximately $6 million plus interest. The Company believes the lawsuit is without merit, rejects plaintiffs' claims and intends to vigorously defend its position.

On July 23, 2015, indictments were issued by the Seoul Central District Prosecutors' Office in South Korea against 24 individuals and companies alleging improper handling of sensitive health information in violation of, among others, South Korea's Personal Information Protection Act. IMS Korea and two of its employees were among the individuals and organizations indicted. Although there is no assertion that IMS Korea used patient identified health information in any of its offerings, prosecutors allege that certain of IMS Korea's data suppliers

should have obtained patient consent when they converted sensitive patient information into non-identified data and that IMS Korea had not taken adequate precautions to reduce the risk of re-identification. The Company believes the indictment is without merit, that it acted in compliance with all applicable laws at all times and intends to vigorously defend its position.

14. Stockholders' Equity (Deficit)

Preferred Stock

The Company is authorized to issue 1.0 million shares of preferred stock, $0.01 per share par value. No shares of preferred stock were issued and outstanding as of December 31, 2016 or 2015.

Equity Repurchases

Equity Repurchase Program

On October 30, 2013, the Company's Board of Directors (the "Board") approved an equity repurchase program (the "Repurchase Program") authorizing the repurchase of up to $125 million of either the Company's common stock or vested in-the-money employee stock options, or a combination thereof. During 2015, the Board increased the stock repurchase authorization under the Repurchase Program by $600 million, which increased the total amount that has been authorized under the Repurchase Program to $725 million. On November 1, 2016, the Board increased the stock repurchase authorization under the Repurchase Program by $1.5 billion, which increased the total amount that has been authorized under the Repurchase Program to $2.225 billion. The Repurchase Program does not obligate the Company to repurchase any particular amount of common stock or vested in-the-money employee stock options, and it could be modified, extended, suspended or discontinued at any time. The timing and amount of repurchases are determined by the Company's management based on a variety of factors such as the market price of the Company's common stock, the Company's corporate requirements, and overall market conditions. Purchases of the Company's common stock may be made in open market transactions effected through a broker-dealer at prevailing market prices, in block trades, or in privately negotiated transactions. The Company may also repurchase shares of its common stock pursuant to a trading plan meeting the requirements of Rule 10b5-1 under the Exchange Act, which would permit shares of the Company's common stock to be repurchased when the Company might otherwise be precluded from doing so by law. Repurchases of vested in-the-money employee stock options were made through transactions between the Company and its employees (other than its executive officers, who were not eligible to participate in the program), and this aspect of the Repurchase Program expired in November 2013. The Repurchase Program for common stock does not have an end date.

Below is a summary of the share repurchases made under the Repurchase Program (in millions, except per share data):

	Year Ended December 31,		
	2016	**2015**	**2014**
Number of shares of common stock repurchased	**14.3**	7.8	—
Aggregate purchase price	**$ 1,098**	$ 516	$ —
Average price per share	**$ 76.57**	$ 65.56	$ 47.51

From the plan's inception in October 2013 through December 31, 2016, the Company has repurchased a total of $1,678 million of its securities under the Repurchase Program, consisting of $59 million of stock options and $1,619 million of common stock. As of December 31, 2016, the Company has remaining authorization to repurchase up to $547 million of its common stock under the Repurchase Program. In addition, from time to time, the Company has repurchased and may continue to repurchase common stock through private or other transactions outside of the Repurchase Program.

Other Equity Repurchases

On May 28, 2014, the Company completed the repurchase of 3.3 million shares of its common stock for $50.23 per share from TPG Quintiles Holdco, L.P., one of its existing stockholders, in a private transaction for an aggregate purchase price of approximately $165 million. The repurchase price per share of common stock was equal to 98% of the closing market price of the Company's common stock on the New York Stock Exchange ("NYSE") on May 27, 2014 (which was $51.26). This repurchase of shares from its existing stockholder was authorized in compliance with the Company's related party transactions approval policy. The Company funded this private repurchase transaction with cash on hand. This private repurchase transaction was separate from and in addition to the Repurchase Program.

On November 10, 2014, the Company completed the repurchase of 4.3 million shares of its common stock for $58.09 per share, which was the price per share the underwriter paid to selling stockholders, for an aggregate purchase price of approximately $250 million. The Company funded this repurchase transaction with a combination of cash on hand and a $150 million draw on its revolving credit facility. This repurchase transaction was separate from and in addition to the Repurchase Program.

Non-controlling Interests

As discussed further in Note 15, the Company contributed businesses to a joint venture with Quest Diagnostics Incorporated ("Quest") that was recorded at book value (carryover basis) because the Company owns 60% of the joint venture and maintains control of these businesses. As a result, Quest's non-controlling interest in the joint venture, referred to as Q 2 Solutions, is equal to 40%. Quest's non-controlling interest was $227 million at December 31, 2016.

15. Business Combinations

IMS Health

On October 3, 2016, pursuant to the terms of the Merger Agreement, IMS Health merged with and into Quintiles, with Quintiles continuing as the Surviving Corporation. The combination of Quintiles and IMS Health capabilities and resources creates an information and technology enabled healthcare service provider with a full suite of end-to-end clinical and commercial offerings. The Merger was accounted for as a business combination with Quintiles considered the accounting and the legal acquirer. Immediately prior to the completion of the Merger, Quintiles reincorporated as a Delaware corporation. The Surviving Corporation changed its name to Quintiles IMS Holdings, Inc. At the effective time of the Merger, IMS Health common stock was automatically converted into 0.3840 of a share of the Company's common stock. In addition, IMS Health equity awards held by current employees and certain members of the former IMS Health board of directors were converted into the Company's equity awards after giving effect to the exchange ratio. The terms of these awards, including vesting provisions, are substantially consistent to those of the historical IMS Health equity awards. All of the Company's and IMS Health's performance units outstanding at the date of the Merger were converted into restricted stock units with service based vesting requirements. The merger consideration was approximately $10.4 billion (based on the closing price of the Company's common stock on October 3, 2016), and consisted of the fair value of the Company's common stock issued (approximately 126.6 million shares) in exchange for the IMS Health common stock as well as the fair value of the vested portion of the converted IMS Health equity awards. The Merger-date value of former IMS Health stock-based awards was valued using the Black-Scholes model and apportioned between Merger consideration (purchase price) and unearned compensation to be recognized in expense as earned in future periods based on remaining service periods. In connection with the IMS Health acquisition, the Company recorded goodwill, primarily attributable to the assembled workforce of IMS Health and the expected synergies, which was assigned to the Commercial Solutions segment ($9,688 million), the Research & Development Solutions segment ($533 million) and the Integrated Engagement Services segment ($67 million). The goodwill is not deductible for

income tax purposes. The Company's assessment of fair value and the purchase price accounting are preliminary and subject to change upon completion. Further adjustments may be necessary as additional information related to the fair values of assets acquired and liabilities assumed is assessed during the measurement period (up to one year from the acquisition date).

Quest

On July 1, 2015, the Company and Quest closed on a joint venture transaction that resulted in the combination of their respective global clinical trials laboratory operations. The joint venture transaction was effected through the creation of two primary new legal entities that the Company controls. Both the Company's and Quest's clinical trials laboratory operations were contributed to these new legal entities. The Company accounted for the contribution of the Quest businesses as a business combination. Quest was issued a 40% equity interest in the legal entities, the fair value of which was $423 million on July 1, 2015 (40% of the fair value of all operations contributed by both parties) and represents the purchase price paid by the Company for the clinical trials laboratory operations that Quest contributed to the joint venture transaction. The resulting combined capabilities are designed to provide its clients with globally scaled end-to-end clinical trials laboratory services and the combined business is referred to and marketed as Q 2 Solutions. The Company accounted for the contribution of the Quest businesses as a business combination and consolidated the related new legal entities in its financial statements with a non-controlling interest for the portion owned by Quest. The Company recorded goodwill, primarily attributable to assembled workforce and expected synergies. This business combination is part of the Research & Development Solutions segment and the resulting goodwill is not deductible for income tax purposes.

The following table summarizes the estimated fair value of the net assets acquired at the date of the acquisitions (in millions):

	IMS Health	Quest
Assets acquired:		
Cash and cash equivalents	$ 2,031	$ 32
Accounts receivable and unbilled services	528	6
Prepaid expenses	85	1
Other current assets	145	4
Property and equipment	247	16
Goodwill	10,288	262
Other identifiable intangibles	6,435	126
Deferred income tax asset – long-term	25	—
Other long-term assets	71	—
Liabilities assumed:		
Accounts payable and accrued expenses	(700)	(13)
Unearned income	(175)	—
Current portion of long-term debt	(88)	—
Other current liabilities	(45)	—
Long-term debt, less current portion	(6,070)	—
Deferred income tax liability – long-term	(2,104)	(10)
Other long-term liabilities	(248)	(1)
Net assets acquired	$ 10,425	$ 423

QUINTILES IMS HOLDINGS, INC. AND SUBSIDIARIES
Notes to Consolidated Financial Statements - Continued

The other identifiable intangible assets consisted of the following (in millions):

	IMS Health	Quest
Client relationships	$ 3,960	$ 74
Backlog	—	33
Trade names	385	19
Databases	1,820	—
Software	270	—
Total other identifiable intangibles	$ 6,435	$ 126
Amortized over a weighted average useful life (in years)	18	9

The acquired Quest trade name is an indefinite-lived intangible asset that is not amortized.

Acquisition Related Costs

Acquisition related costs include the direct and incremental costs associated with mergers and acquisitions such as investment banking, legal, accounting and consulting fees. The Company recognized approximately $36 million of acquisition related costs associated with the IMS Health merger during the year ended December 31, 2016, which are included with merger related costs on the consolidated statement of income. Acquisition related costs for all other acquisitions were immaterial and are not presented.

Unaudited Pro Forma Information

The following unaudited pro forma information presents the financial results as if the acquisition of IMS Health had occurred on January 1, 2015 with pro forma adjustments to give effect to (i) an increase in depreciation and amortization expense for fair value adjustments of property, plant and equipment and intangible assets, (ii) an increase in stock-based compensation expense resulting from the exchange of the vested IMS Health equity awards for the Company's equity awards, (iii) to present transaction costs in the 2015 period, (iv) to reflect the effect on revenue from the deferred revenue fair value adjustment in the 2015 period, and (v) the related income tax effects. The pro forma results do not include any anticipated cost synergies, costs or other effects of the planned integration of IMS Health. Accordingly, such pro forma amounts are not necessarily indicative of the results that actually would have occurred for the periods presented below had the IMS Health acquisition been completed on January 1, 2015, nor are they indicative of the future operating results of the Company.

The following table summarizes the pro forma results (in millions, except earnings per share):

	Year Ended December 31,	
	2016	2015
Revenues	**$ 7,784**	$ 7,180
Reimbursed expenses	**1,514**	1,411
Total revenues	**$ 9,298**	$ 8,591
Net income attributable to Quintiles IMS Holdings, Inc.	**$ 42**	$ 450
Earnings per share attributable to common stockholders:		
Basic	**$ 0.17**	$ 1.80
Diluted	**$ 0.17**	$ 1.76

QUINTILES IMS HOLDINGS, INC. AND SUBSIDIARIES
Notes to Consolidated Financial Statements - Continued

Pro forma information is not presented for any other acquisitions as the aggregate operations of the acquired businesses were not significant to the overall operations of the Company.

The Company's consolidated statements of income for the year ended December 31, 2016 included $806 million of revenues related to the IMS Health acquisition. Following the closing of the IMS Health acquisition, the Company began integrating IMS Health's operations. As a result, computing a separate measure of IMS Health's stand-alone profitability for periods after the acquisition date is impracticable.

Other Acquisitions

In addition to the merger with IMS Health, the Company also completed three unrelated individually immaterial acquisitions during 2016, all of which occurred during December 2016. The purchase price allocations for some of these acquisitions will be finalized after the completion of the valuation of certain intangible assets and any adjustments to the preliminary purchase price allocation are not expected to have a material impact on the Company's results of operations or financial position. During 2014, the Company completed one immaterial acquisition (Encore). In connection with the Encore acquisition in 2014, the Company recorded goodwill, primarily attributable to the assembled workforce of Encore and expected synergies, which was assigned to the Commercial Solutions segment and is deductible for income tax purposes. The accompanying consolidating financial statements include the results of the acquisitions subsequent to each respective closing date.

The following table provides certain financial information for these acquisitions, including the preliminary allocation of the purchase price to certain tangible and intangible assets acquired and goodwill (in millions):

	Amortization Period	2016	2014
Total purchase price, net of cash acquired (1)		**$ 136**	$ 92
Acquisition-related costs		**1**	1
Amounts recorded in the Consolidated Balance Sheets:			
Goodwill		**$ 88**	$ 63
Portion of goodwill deductible for income tax purposes		**—**	63
Intangible assets:			
Client relationships	6-10 years	**$ 31**	$ 9
Non-compete agreements	2-5 years	**9**	—
Backlog	1-2 years	**7**	1
Databases	2 years	**1**	—
Trade names	2-4 years	**—**	1
Software	3 years	**—**	3
Total intangible assets		**$ 48**	$ 14

(1) Total purchase price, net of cash acquired, includes contingent consideration and deferred purchase payments.

16. Restructuring

From time to time, the Company takes restructuring actions to adapt to changing market conditions. These actions include closing facilities, consolidating functional activities, eliminating redundant positions, aligning

resources with customer requirements and taking actions to improve process efficiencies. In 2016, the Company also acquired certain restructuring liabilities previously recorded by IMS Health.

During 2016, management approved restructuring plans to align its resources and reduce overcapacity. Also, in connection with the Merger, management approved a restructuring plan to reduce facility overcapacity and eliminate redundant roles. These actions are expected to continue throughout 2017 and are expected to consist of severance, facility closure and other exit-related costs. During 2016, the Company has recognized approximately $33 million of restructuring costs related to these restructuring plans.

During 2015, management approved a restructuring plan to align the Company's resources and reduce overcapacity. These actions are expected to continue throughout 2017 and consist of severance, facility closure and other exit-related costs. Since the start of this plan in 2015, the Company has recognized approximately $23 million of restructuring costs related to this plan. Also during 2015, in connection with consummating the joint venture transaction with Quest, a restructuring plan was approved to reduce facility overcapacity and eliminate redundant roles. These actions are expected to continue throughout 2017, and since the start of this plan in 2015, the Company has recognized approximately $10 million of restructuring costs related to this plan.

In 2014, management approved restructuring plans to better align resources with the Company's strategic direction. Since the start of these plans in 2014, the Company recognized approximately $11 million of restructuring costs related to these plans. All of the restructuring costs are related to severance and facility closure costs.

The following amounts were recorded for the restructuring plans (in millions):

	Severance and Related Costs	Exit Costs	Total
Balance at December 31, 2014	$ 5	$ 1	$ 6
Expense, net of reversals	30	1	31
Payments	(23)	(1)	(24)
Foreign currency translation	—	1	1
Balance at December 31, 2015	12	2	14
Expense, net of reversals	**60**	**3**	**63**
Acquisitions	**80**	**—**	**80**
Payments	**(48)**	**(2)**	**(50)**
Foreign currency translation and other	**(5)**	**—**	**(5)**
Balance at December 31, 2016	**$ 99**	**$ 3**	**$ 102**

The reversals were due to changes in estimates primarily resulting from the redeployment of staff and higher than expected voluntary terminations. Restructuring costs are not allocated to the Company's reportable segments as they are not part of the segment performance measures regularly reviewed by management. The Company expects the majority of the restructuring accruals at December 31, 2016 will be paid in 2017 and 2018.

17. Impairment Charges

During the third quarter of 2016 as part of its annual impairment review, the Company determined that it was more likely than not that the fair value of its Encore reporting unit was less than its carrying amount due to certain strategic initiatives not performing as expected, resulting in a decline in revenues. The Company

performed a quantitative analysis using the present value of the estimated future cash flows, which confirmed that the Encore reporting unit's goodwill was impaired. The Company proceeded to perform step two of its goodwill impairment assessment which resulted in the recognition of impairment losses of $23 million and $5 million for other-than-temporary declines in the fair value of goodwill and identifiable intangible assets, respectively.

18. Income Taxes

The components of income before income taxes and equity in earnings of unconsolidated affiliates are as follows (in millions):

	Year Ended December 31,		
	2016	2015	2014
Domestic	**$ (85)**	$ 68	$ 96
Foreign	**564**	471	405
	$ 479	$ 539	$ 501

The components of income tax expense attributable to continuing operations are as follows (in millions):

	Year Ended December 31,		
	2016	2015	2014
Current expense:			
Federal and state	**$ 64**	$ 51	$ 62
Foreign	**129**	109	95
	193	160	157
Deferred (benefit) expense:			
Federal and state	**166**	5	(5)
Foreign	**(14)**	(6)	(3)
	152	(1)	(8)
	$ 345	$ 159	$ 149

The differences between the Company's consolidated income tax expense attributable to continuing operations and the expense computed at the 35% United States statutory income tax rate were as follows (in millions):

	Year Ended December 31,		
	2016	2015	2014
Federal income tax expense at statutory rate	**$ 167**	$ 189	$ 175
Research and development	**(11)**	(13)	(17)
Foreign nontaxable interest income	**(8)**	(9)	(10)
United States taxes recorded on foreign earnings	**252**	38	19
Foreign rate differential	**(60)**	(49)	(31)
Other	**5**	3	13
	$ 345	$ 159	$ 149

QUINTILES IMS HOLDINGS, INC. AND SUBSIDIARIES
Notes to Consolidated Financial Statements - Continued

Due to the Merger, the Company reevaluated its indefinite reinvestment assertion based on the need for cash in the United States, including funding the Repurchase Program and potential acquisitions. Accordingly, the Company changed its assertion with respect to $2,801 million of foreign earnings, including $1,865 million of IMS Health's previously undistributed historical foreign earnings. The Company intends to use these acquired foreign earnings to fund cash needs in the United States. Deferred income taxes of $625 million were recorded in 2016 related to non-indefinitely reinvested foreign earnings. Of that amount, $373 million was recorded through purchase accounting related to IMS Health's historical foreign earnings and the remainder of $252 million was recorded through deferred income tax expense.

Undistributed earnings of the Company's foreign subsidiaries amounted to approximately $3,564 million at December 31, 2016. Approximately $2,894 million of this total is not considered to be indefinitely reinvested and would be taxable upon repatriation. The Company has recorded a deferred income tax liability, net of foreign tax credits that would be generated upon repatriation, of $590 million as of December 31, 2016, associated with those earnings based upon the United States federal income tax rate. Upon distribution of those earnings in the form of dividends or otherwise, the Company would be subject to both United States income taxes (subject to an adjustment for foreign tax credits, if available) and withholding taxes payable to the various countries in which the Company's foreign subsidiaries are located. If the approximately $670 million of indefinitely reinvested earnings were repatriated to the United States, it would generate an estimated $176 million of additional tax liability for the Company.

The income tax effects of temporary differences from continuing operations that give rise to significant portions of deferred income tax assets (liabilities) are presented below (in millions):

	December 31,	
	2016	**2015**
Deferred income tax assets:		
Net operating loss and capital loss carryforwards	**$ 242**	$ 26
Tax credit carryforwards	**267**	16
Accrued expenses and unearned income	**75**	23
Employee benefits	**273**	124
Other	**32**	13
	889	202
Valuation allowance for deferred income tax assets	**(153)**	(22)
Total deferred income tax assets	**736**	180
Deferred income tax liabilities:		
Undistributed foreign earnings	**(590)**	(37)
Amortization and depreciation	**(2,026)**	(53)
Other	**(164)**	(12)
Total deferred income tax liabilities	**(2,780)**	(102)
Net deferred income tax (liabilities) assets	**$ (2,044)**	$ 78

Due to the Merger, the Company recorded deferred tax liabilities related to intangible amortization recorded through purchase accounting in the amount of $2,308 million.

QUINTILES IMS HOLDINGS, INC. AND SUBSIDIARIES
Notes to Consolidated Financial Statements - Continued

Additionally, due to the Merger, the Company had federal, state and local, and foreign tax credit and tax loss carryforwards, the tax effect of which was $528 million as of December 31, 2016. Of this amount, $29 million has an indefinite carryforward period, and the remaining $499 million expires at various times beginning in 2017. Some of these losses are subject to limitations under the Internal Revenue Code, however, management expects all losses to be utilized during the carryforward periods.

In 2016, the Company increased its valuation allowance by $131 million to $153 million at December 31, 2016 from $22 million at December 31, 2015. This increase is a result of the Merger as IMS Health had $129 million of valuation allowances recorded as of the date of the Merger. The valuation allowance is primarily related to loss carryforwards in various foreign and state jurisdictions.

A reconciliation of the beginning and ending amount of gross unrecognized income tax benefits is presented below (in millions):

	Year Ended December 31,		
	2016	**2015**	**2014**
Balance at January 1	**$ 30**	$ 41	$ 55
IMS Health balance as of Merger	**37**	—	—
Additions based on tax positions related to the current year	**3**	2	3
Additions for income tax positions of prior years	**7**	9	1
Impact of changes in exchange rates	**(3)**	(1)	—
Reductions for income tax positions of prior years	**(1)**	(2)	(6)
Reductions due to the lapse of the applicable statute of limitations	**(9)**	(19)	(12)
Balance at December 31	**$ 64**	$ 30	$ 41

As of December 31, 2016, the Company had total gross unrecognized income tax benefits of $64 million associated with over 100 jurisdictions in which the Company conducts business that, if recognized, would reduce the Company's effective income tax rate.

The Company's policy for recording interest and penalties relating to uncertain income tax positions is to record them as a component of income tax expense in the accompanying consolidated statements of income. In 2016, 2015 and 2014, the amount of interest and penalties recorded as an addition/(reduction) to income tax expense in the accompanying consolidated statements of income was $2 million, ($2) million and $1 million, respectively. As of December 31, 2016 and 2015, the Company had accrued approximately $11 million and $3 million, respectively, of interest and penalties.

The Company believes that it is reasonably possible that a decrease of up to $6 million in gross unrecognized income tax benefits for federal, state and foreign exposure items may be necessary within the next 12 months due to lapse of statutes of limitations or uncertain tax positions being effectively settled. The Company believes that it is reasonably possible that a decrease of up to $2 million in gross unrecognized income tax benefits for foreign items may be necessary within the next 12 months due to payments. For the remaining uncertain income tax positions, it is difficult at this time to estimate the timing of the resolution.

The Company conducts business globally and, as a result, files income tax returns in the United States federal jurisdiction and various state and foreign jurisdictions. In the normal course of business, the Company is subject to examination by taxing authorities throughout the world. The following table summarizes the tax years

that remain open for examination by tax authorities in the most significant jurisdictions in which the Company operates:

United States	2013-2015
India	2006-2016
Japan	2011-2015
United Kingdom	2015
Switzerland	2012-2015

In certain of the jurisdictions noted above, the Company operates through more than one legal entity, each of which has different open years subject to examination. The table above presents the open years subject to examination for the most material of the legal entities in each jurisdiction. Additionally, it is important to note that tax years are technically not closed until the statute of limitations in each jurisdiction expires. In the jurisdictions noted above, the statute of limitations can extend beyond the open years subject to examination.

Due to the geographic breadth of the Company's operations, numerous tax audits may be ongoing throughout the world at any point in time. Income tax liabilities are recorded based on estimates of additional income taxes which may be due upon the conclusion of these audits. Estimates of these income tax liabilities are made based upon prior experience and are updated in light of changes in facts and circumstances. However, due to the uncertain and complex application of income tax regulations, it is possible that the ultimate resolution of audits may result in liabilities which could be materially different from these estimates. In such an event, the Company will record additional income tax expense or income tax benefit in the period in which such resolution occurs.

The Company had a tax holiday for Quintiles East Asia Pte. Ltd. in Singapore through June 2015. The income tax benefit of this holiday was approximately $2 million in both 2015 and 2014. The tax holiday increased earnings per share by approximately $0.02 in both 2015 and 2014.

19. Employee Benefit Plans

Pension and Postretirement Benefit Plans

The Company sponsors both funded and unfunded defined benefit pension plans. These plans provide benefits based on various criteria, including, but not limited to, years of service and salary. The Company also sponsors an unfunded postretirement benefit plan in the United States that provides health and prescription drug benefits to retirees who meet the eligibility requirements. The information presented herein includes the United States and Non-United States pension and postretirement benefit plans assumed in the merger with IMS Health on October 3, 2016. The Company uses a December 31 measurement date for all pension and postretirement benefit plans.

QUINTILES IMS HOLDINGS, INC. AND SUBSIDIARIES
Notes to Consolidated Financial Statements - Continued

The following table summarizes changes in the benefit obligation, the plan assets and the funded status of the pension benefit plans (in millions):

	Pension Benefits		
	United States Plans	Non-United States Plans	
	December 31		
	2016	2016	2015
Obligation and funded status:			
Change in benefit obligation			
Projected benefit obligation at beginning of year	$ —	$ 154	$ 147
Service costs	4	18	15
Interest cost	3	5	3
Expected return on plan assets	—	—	(3)
Actuarial gains	(30)	(8)	(2)
Business combinations	333	377	2
Benefits paid	(2)	(9)	(6)
Foreign currency fluctuations and other	—	(29)	(2)
Projected benefit obligation at end of year	308	508	154
Change in plan assets			
Fair value of plan assets at beginning of year	—	87	88
Actual return on plan assets	5	4	1
Contributions	1	9	6
Business combinations	308	284	2
Benefits paid	(2)	(9)	(6)
Foreign currency fluctuations and other	—	(27)	(4)
Fair value of plan assets at end of year	312	348	87
Funded status	$ 4	$ (160)	$ (67)

The following table summarizes the amounts recognized in the consolidated balance sheets related to the pension benefit plans (in millions):

	Pension Benefits		
	United States Plans	Non-United States Plans	
	December 31		
	2016	2016	2015
Deposits and other assets	$ 45	$ 13	$ 19
Accrued expenses	1	9	5
Other long-term liabilities	40	164	81
AOCI	29	(8)	(14)

QUINTILES IMS HOLDINGS, INC. AND SUBSIDIARIES
Notes to Consolidated Financial Statements - Continued

The following table summarizes the accumulated benefit obligation for all pension benefit plans (in millions):

	Pension Benefits		
	United States Plans	Non-United States Plans	
	December 31		
	2016	2016	2015
Accumulated benefit obligation	**$ 303**	**$ 469**	$ 139

The Company recorded $4 million of benefit obligation for other postretirement benefits in connection with the Merger. At December 31, 2016, the liability remained $4 million, with $1 million recorded in accrued expenses and $3 million included with other long-term liabilities.

The following table provides the information for pension plans with an accumulated benefit obligation in excess of plan assets and projected benefit obligations in excess of plan assets (in millions):

	Pension Benefits		
	United States Plans	Non-United States Plans	
	December 31		
	2016	2016	2015
Plans with accumulated benefit obligation in excess of plan assets:			
Accumulated benefit obligation	**$ 43**	**$ 409**	$ 83
Fair value of plan assets	**2**	**271**	8
Plans with projected benefit obligation in excess of plan assets:			
Projected benefit obligation	**44**	**444**	95
Fair value of plan assets	**2**	**271**	8

QUINTILES IMS HOLDINGS, INC. AND SUBSIDIARIES
Notes to Consolidated Financial Statements - Continued

The components of net periodic benefit cost changes in plan assets and benefit obligations recognized in other comprehensive loss were as follows (in millions):

	Pension Benefits			
	United States Plans	Non-United States Plans		
	Year Ended December 31,			
	2016	2016	2015	2014
Service cost	**$ 4**	**$ 18**	$ 15	$ 13
Interest cost	**3**	**5**	3	4
Expected return on plan assets	**(6)**	**(6)**	(3)	(4)
Amortization of actuarial losses	**—**	**1**	1	—
Amortization of prior service costs	—	—	—	—
Net periodic benefit cost	**1**	**18**	16	13
Other changes in plan assets and benefit obligations recognized in other comprehensive loss:				
Actuarial loss (gain) – current years	**(29)**	**(5)**	—	—
Prior service (cost) credit – current years	**—**	**0**	—	—
Amortization of actuarial losses	**—**	**(1)**	(1)	—
Amortization of prior service costs	—	—	—	—
Total recognized in other comprehensive loss	**(29)**	**(6)**	(1)	—
Total recognized in net periodic benefit cost and other comprehensive loss	**$ (28)**	**$ 12**	$ 15	$ 13

QUINTILES IMS HOLDINGS, INC. AND SUBSIDIARIES
Notes to Consolidated Financial Statements - Continued

The components of other changes in plan assets and benefit obligations recognized in other comprehensive loss related to the other postretirement benefits plan are de minimis. In addition, the amounts in AOCI that are expected to be recognized as components of net periodic benefit cost (credit) during 2017 for pension and other postretirement benefit plans are de minimis.

Assumptions

The weighted average assumptions used to determine net periodic benefit cost were as follows for the years ended December 31:

	Pension Benefits				Other Postretirement Benefits
	United States Plans	Non-United States Plans			
	2016	2016	2015	2014	2016
Discount rate	**3.62%**	**1.88%**	2.46%	3.01%	2.40%
Rate of compensation increases	**3.00%**	**5.27%**	4.32%	4.36%	—
Expected return on plan assets	**7.94%**	**4.26%**	4.05%	5.21%	—

The weighted average assumptions used to determine benefit obligations were as follows at December 31:

	Pension Benefits			Other Postretirement Benefits
	United States Plans	Non-United States Plans		
	2016	2016	2015	2016
Discount rate	**4.17%**	**1.68%**	2.50%	2.90%
Rate of compensation increases	**3.00%**	**5.17%**	4.37%	—

The discount rate represents the interest rate used to determine the present value of the future cash flows currently expected to be required to settle the Company's defined benefit plan obligations. The discount rates are derived using weighted average yield curves on AA-rated corporate bonds. The cash flows from the Company's expected benefit obligation payments are then matched to the yield curve to derive the discount rates. At December 31, 2016, the discount rate ranged from 2.90% to 4.23% for our United States pension plan and postretirement benefit plan. The discount rate for our United Kingdom pension plans decreased to 2.35% to 2.60% at December 31, 2016 from 3.80% at December 31, 2015. The United States and United Kingdom plans represent approximately 76% of the consolidated benefit obligation as of December 31, 2016. The discount rates in other non-U.S. countries ranged from 0.30% to 11.60% at December 31, 2016, compared to 0.75% to 10.80% at December 31, 2015.

The Company's assumption for the expected return on plan assets was determined by the weighted average of the long-term expected rate of return on each of the asset classes invested as of the balance sheet date. For plan assets invested in government bonds, the expected return was based on the yields on the relevant indices as of the balance sheet date. There is considerable uncertainty for the expected return on plan assets invested in equity and diversified growth funds. The expected rate of return on plan assets for the United States pension plans was 8.0%

at January 1, 2017. Outside the United States, the range of applicable expected rates of return was 0.8% to 9.0% as of January 1, 2017, compared to 4.2% to 9.0% as of January 1, 2016. The expected return on assets ("EROA") was $13 million and $4 million and the actual return on assets was $10 million and $1 million for the years ended December 31, 2016 and 2015, respectively.

Under the Company's United States qualified retirement plan, participants have a notional retirement account that increases with pay and investment credits. The rate used to determine the investment credit (cash balance crediting rate) varies monthly and is equal to 1/12th of the yield on 30-year U.S. Government Treasury Bonds, with a minimum of 0.25%. At retirement, the account is converted to a monthly retirement benefit.

At December 31, 2016, the Company's health care cost trend rate for the next seven years was assumed to be 7.0% and the assumed ultimate cost trend rate was 5%. The Company assumed that ultimate cost trend rate is reached in 2021.

Assumed health care cost trend rates could have a significant effect on the amounts reported for the health care plans. A one-percentage-point change in assumed health care cost trend rates at December 31, 2016 would have a de minimis effect on the total of service and interest cost and on the accumulated postretirement benefit obligation.

Plan Assets

The Company's pension plan weighted average asset allocations, by asset category, were as follows:

	Plan Assets at December 31,				
	United States Plans	Non-United States Plans		Total	
Asset Category	2016	2016	2015	2016	2015
Equity securities	**70.09%**	**46.09%**	25.22%	**57.43%**	25.22%
Debt securities	**24.94**	**14.42**	56.64	**19.39**	56.64
Real estate	**4.97**	**—**	—	**2.35**	—
Other	**—**	**39.49**	18.14	**20.83**	18.14
Total	**100.00%**	**100.00%**	100.00%	**100.00%**	100.00%

The target asset allocation for the Company's pension plans were as follows

Asset Category	United States Plans	Non-United States Plans	Total
Equity securities	60-80%	35-50%	45-65%
Debt securities	20-30%	10-20%	10-30%
Real estate	0-10%	—%	0-5%
Other	—%	30-45%	10-30%

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The following table summarizes United States plan assets measured at fair value (in millions):

	December 31, 2016			December 31, 2015		
Asset Category	**Level 1**	**Level 2**	**Total**	**Level 1**	**Level 2**	**Total**
Domestic equities	**$ 32**	**$ —**	**$ 32**	$ —	$ —	$ —
International equities	**20**	**—**	**20**	—	—	—
Corporate bonds	**46**	**—**	**46**	—	—	—
Real estate	**15**	**—**	**15**	—	—	—
Total assets in the fair value heirarchy	**113**	**—**	**113**	—	—	—
Common/collective trusts measured at net asset value ("NAV") (1)	**—**	**—**	**199**	—	—	—
Total	**$ 113**	**$ —**	**$ 312**	$ —	$ —	$ —

The following table summarizes non-United States plan assets measured at fair value (in millions):

	December 31, 2016			December 31, 2015		
Asset Category	**Level 1**	**Level 2**	**Total**	**Level 1**	**Level 2**	**Total**
International equities	**$ —**	**$ 57**	**$ 57**	$ —	$ 22	$ 22
Debt issued by national, state or local government	**2**	**48**	**50**	—	49	49
Diversified growth fund	**—**	**14**	**14**	—	15	15
Investments funds	**—**	**7**	**7**	—	—	—
Insurance contracts	**—**	**133**	**133**	—	—	—
Other	**—**	**6**	**6**	—	1	1
Total assets in the fair value heirarchy	**2**	**265**	**267**	—	87	87
Assets measured at NAV (1)	**—**	**—**	**81**	—	—	—
Total	**$ 2**	**$ 265**	**$ 348**	$ —	$ 87	$ 87

(1) Certain investments that are measured at fair value using the net asset value per share (or its equivalent) practical expedient have not been classified in the fair value hierarchy. The fair value amounts presented in the above plan asset tables are intended to permit reconciliation of the fair value of plan assets in the fair value hierarchy to the plan asset amounts presented in the above funded status table as of December 31, 2016 and 2015.

Investments in mutual funds are valued at quoted market prices. Investments in common/collective trusts and pooled funds are valued at the NAV as reported by the trust. The NAV is based on the fair value of the underlying investments held by the fund less its liabilities. Insurance contracts are valued at the amount of the benefit liability. The Company has no Level 3 assets that rely on unobservable inputs to measure fair value.

Investment Policies and Strategies

The Company invests primarily in a diversified portfolio of equity and debt securities that provide for long-term growth within reasonable and prudent levels of risk. The asset allocation targets established by the Company are strategic and applicable to the plan's long-term investing horizon. The portfolio is constructed and maintained to provide adequate liquidity to meet associated liabilities and minimize long-term expense and

provide prudent diversification among asset classes in accordance with the principles of modern portfolio theory. The plan employs a diversified mix of actively managed investments around a core of passively managed index exposures in each asset class. Within each asset class, rapid market shifts, changes in economic conditions or an individual fund manager's outlook may cause the asset allocation to fall outside the prescribed targets. The majority of the Company's plan assets are measured quarterly against benchmarks established by the Company's investment advisors and the Company's Asset Management Committee, who reviews actual plan performance and has the authority to recommend changes as deemed appropriate. Assets are rebalanced periodically to their strategic targets to maintain the plan's strategic risk/reward characteristics. The Company periodically conducts asset liability modeling studies to ensure that the investment strategy is aligned with the obligations of the plans and that the assets will generate income and capital growth to meet the cost of current and future benefits that the plans provide. The pension plans do not have investments in Company stock at December 31, 2016 or 2015.

The portfolio for the Company's United Kingdom pension plans seek to invest in a range of suitable assets of appropriate liquidity which will generate in the most effective manner possible, income and capital growth to ensure that there are sufficient assets to meet benefit payments when they fall due, while controlling the long-term costs of the plans and avoiding short-term volatility of investment returns. The plans seek to achieve these objectives by investing in a mixture of real (equities) and monetary (fixed interest) assets. It recognizes that the returns on real assets, while expected to be greater over the long-term than those on monetary assets, are likely to be more volatile. A mixture across asset classes should nevertheless provide the level of returns required by the plans. The trustee periodically conducts asset liability modeling exercises to ensure the investments are aligned with the appropriate benchmark to better reflect the plans' liabilities. The trustee also undertakes to review this benchmark on a regular basis.

Cash Flows

Contributions

The Company expects to contribute approximately $23 million in required contributions to its pension and postretirement benefit plans during fiscal 2017. The Company may make additional contributions into its pension plans in fiscal 2017 depending on, among other factors, how the funded status of those plans changes and in order to meet minimum funding requirements as set forth in employee benefit and tax laws, plus additional amounts the Company may deem to be appropriate.

Estimated future benefit payments and subsidy receipts

The following benefit payments (net of expected participant contributions) for pension benefits are expected to be paid as follows (in millions):

	Pension Benefits
2017	$ 29
2018	31
2019	34
2020	38
2021	42
Years 2022 through 2026	210
	$ 384

Benefit payments (net of expected participant contributions) for other postretirement benefits are expected to be de minimis over the periods presented.

Defined Contribution Plans

Defined contribution or profit sharing style plans are offered in Australia, Austria, Belgium, Bulgaria, Canada, the Czech Republic, Denmark, Finland, France, Germany, Greece, Hong Kong, Hungary, India, Ireland, Israel, Japan, Malaysia, the Netherlands, New Zealand, Poland, Slovakia, South Africa, Sweden, Switzerland, Taiwan, Thailand, the United States and the United Kingdom. In some cases these plans are required by local laws or regulations.

In the United States, the Company has 401(k) plans under which the Company matches employee deferrals at varying percentages and specified limits of the employee's salary. In 2016, 2015 and 2014, the Company expensed $39 million, $36 million and $31 million, respectively, related to matching contributions.

Certain key executives of the Company participate in an unfunded defined contribution executive retirement plan, assumed in the Merger, which was frozen to additional accruals for future service contributions in 2012. Participants continue to receive an annual investment credit based on the average of the annual yields at the end of each month on the AA-AAA rated 10 plus year maturity component of the Merrill Lynch United States Corporate Bond Master Index.

Other Plans

Plans accounted for as deferred compensation contracts

The Company provides certain executives with supplemental pension benefits in accordance with their individual employment arrangements. The above tables do not include the Company's expense or obligation associate with providing these benefits. The obligation related to these benefits was approximately $1 million for the year ended December 31, 2016, and the Company's expense for the year then ended was de minimis.

Plans accounted for as postretirement benefits

The Company provides certain executives with postretirement medical, dental and life insurance benefits. These benefits are individually negotiated arrangements in accordance with their individual employment arrangements. The above tables do not include the Company's expense or obligation associate with providing these benefits. The obligation related to these benefits was approximately $12 million for the year ended December 31, 2016, and the Company's expense for the year then ended was de minimis.

Stock Incentive Plans

Stock incentive plans provide incentives to eligible employees, officers and directors in the form of non-qualified stock options, incentive stock options, stock appreciation rights ("SARs"), restricted stock awards ("RSAs"), restricted stock units ("RSUs"), performance shares, performance units, covered annual incentive awards, cash-based awards and other stock-based awards, in each case subject to the terms of the stock incentive plans.

In addition, the Company assumed the equity incentive plans formerly related to IMS Health, the Quintiles IMS Holdings, Inc. 2014 Incentive and Stock Award Plan (the "2014 Equity Plan") and the Quintiles IMS Holdings, Inc. 2010 Equity Plan (the "2010 Equity Plan"). The 2014 Equity Plan provides for the grant of stock options, SARs, restricted and deferred stock (including RSUs), dividend equivalents, other stock-based awards

and performance awards. The 2010 Equity Plan expired on April 4, 2014 and no new awards were granted under the 2010 Equity Plan.

As provided for in the Merger agreement, (i) each option to purchase IMS Health common stock outstanding immediately prior to the effective time of the Merger was converted into an option to acquire shares of the Company's common stock, on substantially the same terms and conditions, adjusted by the 0.384 exchange ratio; and (ii) each stock-settled stock appreciation right of IMS Health outstanding immediately prior to the effective time of the Merger was converted into a stock-settled stock appreciation right corresponding to shares of Company common stock, on substantially the same terms and conditions, adjusted by the 0.384 exchange ratio. The fair value of those options and stock-settled stock appreciation rights was measured using the Black-Scholes model with the following assumptions: risk-free rate (0.87% – 1.49%); expected life (2.6 years – 7.6 years); dividend yield of zero; expected volatility (26% – 31%). Similarly, each IMS Health stock option, performance unit (assuming 100% of performance target), restricted stock award and restricted stock unit outstanding immediately prior to the effective time of the Merger was converted into a similar Company award, as appropriate, on substantially the same terms and conditions, at the 0.384 exchange ratio. The fair value of these awards was allocated to purchase price and unearned compensation, based on the past and future service conditions. The assumed awards related to the Merger have been identified as applicable, in the tables that follow.

The Company recognized stock-based compensation expense of $80 million, $38 million and $30 million in 2016, 2015 and 2014, respectively. Stock-based compensation expense is included in selling, general and administrative expenses on the accompanying consolidated statements of income. The associated future income tax benefit recognized was $24 million, $9 million and $8 million in 2016, 2015 and 2014, respectively. As of December 31, 2016, there was approximately $117 million of total unrecognized stock-based compensation expense related to outstanding non-vested stock-based compensation arrangements, which the Company expects to recognize over a weighted average period of 1.3 years.

As of December 31, 2016, there were 15.2 million shares available for future grants under all of the Company's stock incentive plans.

The Company used the following assumptions when estimating the value of the stock-based compensation for stock options and SARs issued as follows:

	Year Ended December 31,		
	2016	2015	2014
Expected volatility	**20 – 30%**	26 – 41%	26 – 43%
Weighted average expected volatility	**28%**	34%	36%
Expected dividends	**0.0%**	0.0%	0.0%
Expected term (in years)	**0.3 – 6.6**	3.7 – 6.7	1.5 – 6.7
Risk-free interest rate	**0.32 – 2.19%**	1.06 – 2.04%	0.28 – 2.21%

Stock Options

The option price is determined by the Board at the date of grant and the options expire 10 years from the date of grant. The vesting schedule for options granted to employees is either (i) 20% per year beginning on the first anniversary of the date of grant; (ii) 25% per year beginning on the first anniversary of the date of grant; or (iii) 33% on the third anniversary of the date of grant and 67% on the fourth anniversary of the date of grant. Options granted

to our non-employee directors vest either (i) 100% on the first anniversary of the date of grant; or (ii) 34% on the anniversary of the date of grant and 33% on the second and third anniversaries of the date of grant.

The Company's stock option activity in 2016 is as follows (in millions, except number of options and exercise price):

	Number of Options	Weighted Average Exercise Price	Aggregate Intrinsic Value
Outstanding at December 31, 2015	6,647,999	$ 38.04	$ 204
Granted	**783,700**	**$ 64.66**	
Assumed – Merger	**3,563,037**	**$ 19.05**	
Exercised	**(3,385,720)**	**$ 29.69**	
Canceled	**(357,677)**	**$ 51.21**	
Outstanding at December 31, 2016	**7,251,339**	**$ 34.83**	**$ 299**

The weighted average fair value per share of the options granted in 2016, 2015 and 2014 was $17.91, $21.96 and $18.72, respectively. The total intrinsic value of options exercised was approximately $155 million, $144 million and $77 million in 2016, 2015 and 2014, respectively. The Company received cash of approximately $101 million, $59 million and $33 million in 2016, 2015 and 2014, respectively, from options exercised.

Selected information regarding the Company's stock options as of December 31, 2016 is as follows:

Options Outstanding						Options Exercisable	
Number of Options	Exercise Price Range			Weighted Average Exercise Price	Weighted Average Remaining Life (in Years)	Number of Options	Weighted Average Exercise Price
1,160,999	$ 8.34	—	$ 14.63	$ 9.19	3.55	1,160,999	$ 9.19
1,167,220	$ 15.11	—	$ 23.70	$ 18.18	3.86	1,128,911	$ 18.16
1,216,960	$ 24.59	—	$ 26.05	$ 25.65	4.13	1,216,960	$ 25.65
1,299,632	$ 28.13	—	$ 40.00	$ 34.47	5.88	831,112	$ 33.84
1,620,603	$ 42.74	—	$ 64.67	$ 57.71	8.06	648,436	$ 57.64
785,925	$ 64.86	—	$ 77.11	$ 65.10	8.07	364,350	$ 65.02

The weighted average remaining contractual life of the options outstanding and exercisable as of December 31, 2016 is 5.6 years and 4.9 years, respectively. The total aggregate intrinsic value of the exercisable stock options and the stock options expected to vest as of December 31, 2016 was approximately $298 million.

Stock Appreciation Rights – Stock Settled

The exercise price of the stock-settled SARs ("SSRs") is equal to the closing market price of the Company's common stock as of the grant date and expire on the tenth anniversary of the date of grant. The SSRs are eligible to vest in equal increments of 25% on each of the first four anniversaries of the date of grant.

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The Company's SSR activity in 2016 is as follows (in millions, except number of SSRs and exercise price):

	Number of Options	Weighted Average Exercise Price	Aggregate Intrinsic Value
Outstanding at December 31, 2015	—	$ —	$ —
Assumed – Merger	**1,351,647**	**$ 62.13**	
Exercised	**(3,205)**	**$ 65.16**	
Canceled	**(35,120)**	**$ 61.72**	
Outstanding at December 31, 2016	**1,313,322**	**$ 62.13**	**$ 18**

Prior to 2016, the Company did not have SSRs. The total intrinsic value of SSRs exercised was approximately $0.04 million in 2016.

The weighted average remaining contractual life of the SSRs outstanding and exercisable as of December 31, 2016 is 8.6 years and 7.9 years, respectively. The total aggregate intrinsic value of the exercisable SSRs and the SSRs expected to vest as of December 31, 2016 was approximately $18 million.

Stock Appreciation Rights – Cash Settled

The Company's cash settled SARs ("CSRs") require the Company to settle in cash an amount equal to the difference between the fair value of the Company's common stock on the date of exercise and the grant price, multiplied by the number of CSRs being exercised. These awards either (i) vest 25% per year or (ii) vest 33% on the third anniversary of the date of grant and 67% on the fourth anniversary of the date of grant; or (iii) one-third per year beginning on the first anniversary of the date of grant.

The Company's CSR activity in 2016 is as follows (in millions, except number of CSRs and grant price):

	Number of CSRs	Weighted Average Grant Price	Aggregate Intrinsic Value
Outstanding at December 31, 2015	530,701	$ 50.46	$ 10
Granted	**40,400**	**$ 70.34**	
Exercised	**(55,600)**	**$ 44.49**	
Canceled	**(36,325)**	**$ 55.78**	
Outstanding at December 31, 2016	**479,176**	**$ 52.42**	**$ 11**

As of December 31, 2016, 2015 and 2014, the weighted average fair value per share of the CSRs granted was $34.25, $29.79 and $27.17, respectively. The Company paid approximately $2 million, $1 million and $0.4 million to settle exercised CSRs in 2016, 2015 and 2014, respectively.

The weighted average remaining contractual life of the CSRs outstanding and exercisable as of December 31, 2016 is 7.2 years and 6.6 years, respectively. The total aggregate intrinsic value of the exercisable CSRs and the CSRs expected to vest as of December 31, 2016 was approximately $11 million.

QUINTILES IMS HOLDINGS, INC. AND SUBSIDIARIES
Notes to Consolidated Financial Statements - Continued

Restricted Stock Units

The Company's RSUs will settle in shares of the Company's common stock within 45 days of the applicable vesting date. RSUs granted to employees vest either (i) 25% per year beginning on the first anniversary of the date of grant; (ii) one-third per year beginning on the first anniversary of the grant date; or (iii) 33% on the third anniversary of the date of grant and 67% on the fourth anniversary of the date of grant.

The Company's RSU activity in 2016 is as follows:

	Number of RSUs	Weighted Average Grant-Date Fair Value
Outstanding at December 31, 2015	359,553	$ 60.60
Granted	**494,681**	**$ 68.65**
Assumed – Merger	**1,054,567**	**$ 80.20**
Performance units converted to RSUs	**144,239**	**$ 64.77**
Vested	**(252,462)**	**$ 64.93**
Canceled	**(79,761)**	**$ 65.80**
Outstanding at December 31, 2016	**1,720,817**	**$ 74.40**

As of December 31, 2016, there are 1.7 million RSUs outstanding with an intrinsic value of approximately $131 million.

Performance Units

The Company awarded performance units that contain both service and performance based vesting criteria. Vesting occurs if the recipient remains employed and depends on the degree to which the Company achieves certain cumulative adjusted diluted earnings per share goals during a three-year performance period (as defined in the award agreements). The fair value of these awards is equal to the closing price of the Company's common stock on the grant date. All performance units outstanding at the date of the Merger were converted into time-based RSUs at 187% of target for performance units granted in 2015 and at 100% of target for performance units granted in 2016. Accordingly, as of December 31, 2016, there are no performance units outstanding.

The Company's performance units activity in 2016 is as follows:

	Number of Performance Units	Weighted Average Grant-Date Fair Value
Non-vested at December 31, 2015	49,667	$ 64.93
Granted	**119,839**	**$ 64.67**
Additional goal achievement shares	**12,727**	**$ 64.93**
Vested	**(59,830)**	**$ 64.79**
Canceled performance units converted to RSUs	**(122,403)**	**$ 64.74**
Non-vested at December 31, 2016	—	$ —

QUINTILES IMS HOLDINGS, INC. AND SUBSIDIARIES
Notes to Consolidated Financial Statements - Continued

Restricted Stock Awards

The restricted stock awards ("RSAs") issued during 2016 vest either (i) in equal increments of 50% on each of the second and fourth anniversaries of the grant date; or (ii) one-third per year beginning on the first anniversary of the date of grant.

The Company's RSA activity in 2016 is as follows:

	Number of RSAs	Weighted Average Grant-Date Fair Value
Outstanding at December 31, 2015	—	$ —
Granted	**86,356**	**$ 81.06**
Assumed – Merger	**367,053**	**$ 80.20**
Canceled	**(86,356)**	**$ 81.06**
Outstanding at December 31, 2016	**367,053**	**$ 80.20**

As of December 31, 2016, there are 0.4 million RSAs outstanding with an intrinsic value of approximately $28 million.

Employee Stock Purchase Plan

The Company sponsors an Employee Stock Purchase Plan ("ESPP") which allows eligible employees to authorize payroll deductions of up to 10% of their base salary to be applied toward the purchase of full shares of the Company's common stock on the last day of the offering period. Offering periods under the ESPP are six months in duration. Beginning April 1 and October 1 of each year. Participating employees purchase shares on the last day of each offering period at a discount of 15% of the closing price of the common stock on such date as reported on the NYSE. The aggregate number of shares of the Company's common stock that may be issued under the ESPP may not exceed 2.5 million shares and no one employee may purchase any shares under the ESPP having a collective fair market value greater than $25,000 in any one calendar year. During 2016, 2015 and 2014, the Company issued 0.1 million shares, 0.1 million shares and 0.05 million shares, respectively, of common stock for purchases under the ESPP. Effective as of December 31, 2016, the ESPP was discontinued and participant contributions under the ESPP ceased. The final purchase of shares under the ESPP occurred on December 31, 2016.

Other

The Company sponsors a supplemental non-qualified deferred compensation plan, covering certain management employees, and maintains other statutory indemnity plans as required by local laws or regulations.

20. Related Party Transactions

The Company reimbursed its former Executive Chairman, who retired effective December 31, 2015 but remains a director of the Company, for business-related travel services he provided for himself and other Company employees with the use of his own airplane. In 2015 and 2014, the Company expensed approximately $1 million and $2 million, respectively, for such business-related travel expenses. The Company's reimbursement obligations terminated effective December 31, 2015 in connection with its former Executive Chairman's retirement.

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In January 2010, the Company entered into a collaboration agreement with a related party, HUYA Bioscience International, LLC ("HUYA"), to fund up to $2 million of its research and development activity for a specific compound. Under the agreement, the Company had the potential to receive additional consideration which contractually would not exceed $17 million excluding interest if certain events had occurred. In February 2015, the Company and HUYA agreed to terminate the collaboration agreement. In connection with the termination, HUYA paid the Company $5 million to satisfy all of HUYA's various payment obligations under the collaboration agreement.

During 2016, 2015 and 2014, the Company entered into a number of contracts with HUYA, primarily in Asia, in which the Company will provide up to approximately $(8 million) net cancellations, $32 million and $0.4 million, respectively, of services on a fee for services basis at arm's length and at market rates. In 2016, 2015 and 2014, the Company provided approximately $6 million, $7 million and $2 million, respectively, of services under these agreements.

The Company has entered into other transactions with related parties including investments in and advances to unconsolidated affiliates which are discussed in Note 4.

21. Operations by Geographic Location

The table below presents the Company's operations by geographical location. The Company attributes revenues to geographical locations based upon where the services are performed. The Company's operations within each geographical region are further broken down to show each country which accounts for 10% or more of the totals (in millions):

	Year Ended December 31,		
	2016	**2015**	**2014**
Revenues:			
Americas:			
United States	**$ 2,145**	$ 1,788	$ 1,589
Other	**233**	185	195
Americas	**2,378**	1,973	1,784
Europe and Africa:			
United Kingdom	**461**	410	402
Other	**1,594**	1,237	1,275
Europe and Africa	**2,055**	1,647	1,677
Asia-Pacific:			
Japan	**587**	443	472
Other	**344**	263	232
Asia-Pacific	**931**	706	704
Revenues	**5,364**	4,326	4,165
Reimbursed expenses	**1,514**	1,411	1,295
Total revenues	**$ 6,878**	$ 5,737	$ 5,460

QUINTILES IMS HOLDINGS, INC. AND SUBSIDIARIES
Notes to Consolidated Financial Statements - Continued

	As of December 31,	
	2016	**2015**
Property, equipment and software, net:		
Americas:		
United States	**$ 430**	$ 170
Other	**25**	1
Americas	**455**	171
Europe and Africa:		
United Kingdom	**40**	46
Other	**214**	32
Europe and Africa	**254**	78
Asia-Pacific:		
Japan	**36**	13
Other	**34**	9
Asia-Pacific	**70**	22
Total property, equipment and software, net	**$ 779**	$ 271

22. Segments

The following table presents the Company's operations by reportable segment. The Company is managed through three reportable segments, Commercial Solutions, Research & Development Solutions and Integrated Engagement Services. Commercial Solutions provides mission critical information, technology solutions and real-world insights and services to our life science clients. Research & Development Solutions, which primarily serves biopharmaceutical clients, is engaged in research and development and provides clinical research and clinical trial services. Integrated Engagement Services provides contract sales to both biopharmaceutical clients and the broader healthcare market.

Certain costs are not allocated to the Company's segments and are reported as general corporate and unallocated expenses. These costs primarily consist of stock-based compensation and expenses for corporate overhead functions such as senior leadership, finance, human resources, information technology, facilities and legal. The Company does not allocate depreciation and amortization, restructuring costs, merger related costs or impairment charges to its segments. Revenues and costs for reimbursed expenses are not allocated to the Company's segments. Asset

information by segment is not presented, as this measure is not used by the chief operating decision maker to assess the performance of the Company. Information presented below is in millions:

	Year Ended December 31,		
	2016	2015	2014
Revenues			
Commercial Solutions	**$ 1,096**	$ 323	$ 230
Research & Development Solutions	**3,472**	3,159	3,050
Integrated Engagement Services	**796**	844	885
Total revenues	**5,364**	4,326	4,165
Costs of revenue			
Commercial Solutions	**644**	239	174
Research & Development Solutions	**1,953**	1,779	1,764
Integrated Engagement Services	**639**	687	726
Total costs of revenue	**3,236**	2,705	2,664
Selling, general and administrative expenses			
Commercial Solutions	**216**	65	52
Research & Development Solutions	**577**	556	542
Integrated Engagement Services	**82**	79	81
General corporate and unallocated	**136**	115	106
Total selling, general and administrative expenses	**1,011**	815	781
Segment profit			
Commercial Solutions	**236**	19	4
Research & Development Solutions	**942**	824	744
Integrated Engagement Services	**75**	78	78
Total segment profit	**1,253**	921	826
General corporate and unallocated	**(136)**	(115)	(106)
Depreciation and amortization	**(289)**	(128)	(121)
Restructuring costs	**(71)**	(30)	(9)
Merger related costs	**(87)**	—	—
Impairment charges	**(28)**	(2)	—
Total income from operations	**$ 642**	$ 646	$ 590

23. Earnings Per Share

The following table reconciles the basic to diluted weighted average shares outstanding (in millions):

	Year Ended December 31,		
	2016	2015	2014
Basic weighted average common shares outstanding	**149.1**	123.0	128.0
Effect of dilutive stock options and share awards	**2.9**	2.6	3.1
Diluted weighted average common shares outstanding	**152.0**	125.6	131.1

QUINTILES IMS HOLDINGS, INC. AND SUBSIDIARIES
Notes to Consolidated Financial Statements - Continued

The following table presents the weighted average number of outstanding stock-based awards not included in the computation of diluted earnings per share if they are subject to performance conditions or if the effect of including such stock-based awards in the computation would be anti-dilutive (in millions):

	Year Ended December 31,		
	2016	2015	2014
Shares subject to performance conditions	**0.1**	0.1	—
Shares subject to anti-dilutive stock-based awards	**1.1**	1.0	1.2
Total shares excluded from diluted earnings per share	**1.2**	1.1	1.2

The vesting of performance units is contingent upon the achievement of certain performance targets. The performance units are not included in diluted earnings per share until the performance targets have been met.

Stock-based awards will have a dilutive effect under the treasury method when the respective period's average market value of the Company's common stock exceeds the exercise proceeds.

24. Comprehensive Income

Below is a summary of the components of AOCI (in millions):

	Foreign Currency Translation	Marketable Securities	Derivative Instruments	Defined Benefit Plans	Income Taxes	Total
Balance at December 31, 2013	$ (6)	$ 6	$ (21)	$ (5)	$ 26	$ —
Other comprehensive (loss) income before reclassifications	(50)	(1)	(7)	(10)	7	(61)
Reclassification adjustments	—	(5)	9	—	(2)	2
Balance at December 31, 2014	(56)	—	(19)	(15)	31	(59)
Other comprehensive (loss) income before reclassifications	(61)	—	(13)	—	9	(65)
Reclassification adjustments	—	—	18	1	(6)	13
Balance at December 31, 2015	(117)	—	(14)	(14)	34	(111)
Other comprehensive (loss) income before reclassifications	**(506)**	**—**	**(4)**	**34**	**(5)**	**(481)**
Reclassification adjustments	**—**	**—**	**28**	**1**	**(7)**	**22**
Balance at December 31, 2016	**$ (623)**	**$ —**	**$ 10**	**$ 21**	**$ 22**	**$ (570)**

QUINTILES IMS HOLDINGS, INC. AND SUBSIDIARIES
Notes to Consolidated Financial Statements - Continued

Below is a summary of the (gains) losses reclassified from AOCI into the consolidated statements of income and the affected financial statement line item (in millions):

Reclassification Adjustments	Affected Financial Statement Line Item	Year Ended December 31, 2016	2015	2014
Marketable securities	Other expense (income), net	$ —	$ —	$ (5)
Income tax expense		—	—	(2)
Total net of income taxes		$ —	$ —	$ (3)
Derivative instruments:				
Interest rate swaps and caps	Interest expense	**6**	$ 12	$ 12
Foreign exchange forward contracts	Revenues	**19**	6	(3)
Foreign exchange forward contracts	Other expense (income), net	**3**	—	—
Total before income taxes		**28**	18	9
Income tax benefit		**7**	6	4
Total net of income taxes		**$ 21**	$ 12	$ 5
Defined benefit plans:				
Amortization of actuarial losses	See Note 19	**$ 1**	$ 1	$ —
Income tax benefit		**—**	—	—
Total net of income taxes		**$ 1**	$ 1	—

25. Supplemental Cash Flow Information

The following table presents the Company's supplemental cash flow information (in millions):

	Year Ended December 31, 2016	2015	2014
Supplemental Cash Flow Information:			
Interest paid	**$ 124**	$ 82	$ 94
Income taxes paid, net of refunds	**106**	121	139
Non-cash Investing Activities:			
Fair value of consideration transferred in connection with business combinations	**$ 10,425**	$ 423	$ —

QUINTILES IMS HOLDINGS, INC. AND SUBSIDIARIES
Notes to Consolidated Financial Statements - Continued

26. Quarterly Financial Data (Unaudited)

The following table summarizes the Company's unaudited quarterly results of operations (in millions, except per share data):

	2016			
	First Quarter	Second Quarter	Third Quarter	Fourth Quarter [2]
Revenues	**$ 1,108**	**$ 1,167**	**$ 1,136**	**$ 1,953**
Income from operations	**179**	**151**	**168**	**144**
Net income	**109**	**92**	**104**	**(175)**
Net (income) loss attributable to non-controlling interests	**(2)**	**(5)**	**(5)**	**(3)**
Net income attributable to Quintiles IMS Holdings, Inc.	**$ 107**	**$ 87**	**$ 99**	**$ (178)**
Basic earnings per share [1]	**$ 0.89**	**$ 0.73**	**$ 0.83**	**$ 0.74**
Diluted earnings per share [1]	**$ 0.88**	**$ 0.71**	**$ 0.82**	**$ 0.74**

	2015			
	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
Revenues	$ 1,030	$ 1,074	$ 1,093	$ 1,129
Income from operations	143	159	166	178
Net income	87	85	108	108
Net (income) loss attributable to non-controlling interests	—	—	2	(3)
Net income attributable to Quintiles IMS Holdings, Inc.	$ 87	$ 85	$ 110	$ 105
Basic earnings per share [1]	$ 0.69	$ 0.69	$ 0.91	$ 0.86
Diluted earnings per share [1]	$ 0.68	$ 0.67	$ 0.89	$ 0.85

[1] The sum of the quarterly per share amounts may not equal per share amounts reported for year-to-date periods. This is due to changes in the number of weighted average shares outstanding and the effects of rounding for each period.
[2] The fourth quarter of 2016 includes the results of operations of IMS Health since the date of the Merger on October 3, 2016.

27. Subsequent Event

On February 12, 2017, the Board increased the stock repurchase authorization under the Repurchase Program by $1.0 billion with approximately $1.5 billion remaining available for repurchases under the program. See Note 14 for additional information regarding the Repurchase Program.

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

None.

Item 9A. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

As required by Rule 13a-15 under the Exchange Act, as amended, we carried out an evaluation of the effectiveness of the design and operation of our disclosure controls and procedures under the supervision and with the participation of our management, including the Chief Executive Officer ("CEO") and Chief Financial Officer ("CFO"). There are inherent limitations to the effectiveness of any system of disclosure controls and procedures, including the possibility of human error and the circumvention or overriding of the controls and procedures. Accordingly, even effective disclosure controls and procedures can only provide reasonable assurance of achieving their control objectives. Based upon our evaluation, our CEO and CFO concluded that our disclosure controls and procedures were effective to provide reasonable assurance that information required to be disclosed by us in the reports that we file or submit under the Exchange Act, as amended, is recorded, processed, summarized and reported within the time periods specified in the applicable rules and forms, and that it is accumulated and communicated to our management, including our CEO and CFO, as appropriate, to allow timely decisions regarding required disclosure.

Management's Report on Internal Control over Financial Reporting

Our management's report on internal control over financial reporting is set forth in Part II, Item 8 of this Annual Report on Form 10-K and is incorporated herein by reference.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting during the quarter ended December 31, 2016 that materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information

None.

PART III

Item 10. Directors, Executive Officers and Corporate Governance

The information required by this item is set forth under the headings "Election of Directors," and "Security Ownership of Certain Beneficial Owners and Management – [Section 16(a) Beneficial Ownership Reporting Compliance]" in our 2017 Proxy Statement to be filed with the SEC within 120 days after December 31, 2016 in connection with the solicitation of proxies for our 2017 annual meeting of stockholders (the "2017 Proxy Statement") and is incorporated herein by reference.

Item 11. Executive Compensation

The information required by this item is set forth under the headings "Director Compensation," "Compensation Discussion and Analysis," "Compensation Committee Report," "Compensation of Named Executive Officers," and "Compensation Committee Interlocks and Insider Participation" in the 2017 Proxy Statement and is incorporated herein by reference.

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

The information required by this item is set forth under the headings "Securities Authorized for Issuance Under Equity Compensation Plan" and "Security Ownership of Certain Beneficial Owners and Management" in the 2017 Proxy Statement and is incorporated herein by reference.

Item 13. Certain Relationships and Related Transactions and Director Independence

The information required by this item is set forth under the headings "The Company's Corporate Governance," and "Ratification of the Appointment of the Independent Registered Public Accounting Firm" in the 2017 Proxy Statement and is incorporated herein by reference.

Item 14. Principal Accountant Fees and Services

The information required by this item is set forth under the headings "Proposal No. [5]: Ratification of the Appointment of the Independent Registered Public Accounting Firm—Fees Paid to Independent registered Public Accounting Firm" in the 2017 Proxy Statement and is incorporated herein by reference.

PART IV

Item 15. Exhibits and Financial Statement Schedules

(a) The following documents are filed as part of this report:

(1) FinancialStatements

The following consolidated financial statements of Quintiles IMS Holdings, Inc. and its subsidiaries, and the independent registered public accounting firm's report thereon, are included in Part II, Item 8 of this report:

(2) FinancialStatement Schedules

All other schedules are omitted, since the required information is not applicable or is not present in amounts sufficient to require submission of the schedule, or because the information required is included in the consolidated financial statements and notes thereto.

(3) Exhibits

The exhibits in the accompanying Exhibit Index following the signature page are filed or furnished as a part of this report and are incorporated herein by reference. The Company agrees to furnish to the SEC, upon request, copies of any long-term debt instruments that authorize an amount of securities constituting 10% or less of the total assets of Quintiles IMS Holdings, Inc. and its subsidiaries on a consolidated basis.

Item 16. Form 10-K Summary

None.

SIGNATURES

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

QUINTILES IMS HOLDINGS, INC.

By: /s/ Michael R. McDonnell
Name: Michael R. McDonnell
Title: Executive Vice President and Chief Financial Officer

Date: February 16, 2017

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant in the capacities and on the dates indicated.

Signature	Title	Date
/S/ ARI BOUSBIB Ari Bousbib	Chairman, Chief Executive Officer and President; Director (Principal Executive Officer)	February 16, 2017
/S/ MICHAEL R. MCDONNELL Michael R. McDonnell	Executive Vice President and Chief Financial Officer (Principal Financial Officer)	February 16, 2017
/S/ CHARLES E. WILLIAMS Charles E. Williams	Senior Vice President, Corporate Controller (Principal Accounting Officer)	February 16, 2017
/S/ DR. DENNIS B. GILLINGS, CBE Dr. Dennis B. Gillings, CBE	Lead Director	February 16, 2017
/S/ JOHN P. CONNAUGHTON John P. Connaughton	Director	February 16, 2017
/S/ JONATHAN J. COSLET Jonathan J. Coslet	Director	February 16, 2017
/S/ JOHN G. DANHAKL John G. Danhakl	Director	February 16, 2017
/S/ MICHAEL J. EVANISKO Michael J. Evanisko	Director	February 16, 2017
/S/ JAMES A. FASANO James A. Fasano	Director	February 16, 2017

Signature	Title	Date
/ S / J ACK M. G REENBERG Jack M. Greenberg	Director	February 16, 2017
/ S / J OHN M. L EONARD , M.D. John M. Leonard, M.D.	Director	February 16, 2017
/ S / R ONALD A. R ITTENMEYER Ronald A. Rittenmeyer	Director	February 16, 2017
/ S / T ODD B. S ISITSKY Todd B. Sisitsky	Director	February 16, 2017

(2) Financial Statement Schedules

Schedule I—Condensed Financial Information of Registrant

QUINTILES IMS HOLDINGS, INC. (PARENT COMPANY ONLY)
CONDENSED STATEMENTS OF INCOME

(in millions)	Year Ended December 31, 2016	2015	2014
Selling, general and administrative expenses	**$ —**	$ 1	$ 2
Merger related costs	**21**	—	—
Loss from operations	**(21)**	(1)	(2)
Interest income	**—**	—	—
Other expense, net	**—**	—	—
Loss before income taxes and equity in earnings of subsidiary	**(21)**	(1)	(2)
Income tax benefit	**(4)**	(1)	(1)
Loss before equity in earnings of subsidiary	**(17)**	—	(1)
Equity in earnings of subsidiary	**132**	387	357
Net income	**$ 115**	$ 387	$ 356

QUINTILES IMS HOLDINGS, INC. (PARENT COMPANY ONLY)
CONDENSED STATEMENTS OF COMPREHENSIVE INCOME

(in millions)	Year Ended December 31, 2016	2015	2014
Net income	**$ 115**	$ 387	$ 356
Comprehensive income adjustments:			
Unrealized (losses) gains on available-for-sale securities, net of income taxes	**—**	—	(1)
Unrealized (losses) gains on derivative instruments, net of income taxes of $3, ($4) and ($2)	**(7)**	(9)	(5)
Defined benefit plan adjustments, net of income taxes of $11, $— and ($3)	**23**	—	(7)
Foreign currency translation, net of income taxes of $(9), ($5) and ($2)	**(497)**	(56)	(48)
Reclassification adjustments:			
Gains on marketable securities included in net income, net of income taxes of $—, $— and ($2)	**—**	—	(3)
Losses on derivative instruments included in net income, net of income taxes of $7, $6 and $4	**21**	12	5
Amortization of actuarial losses and prior service costs included in net income, net of income taxes	**1**	1	—
Comprehensive (loss) income	**$ (344)**	$ 335	$ 297

QUINTILES IMS HOLDINGS, INC. (PARENT COMPANY ONLY)
CONDENSED BALANCE SHEETS

(in millions, except per share data)	December 31, 2016	December 31, 2015
ASSETS		
Current assets:		
Cash and cash equivalents	**$ 12**	$ 5
Income taxes receivable	**4**	—
Other current assets and receivables	**—**	—
Total current assets	**16**	5
Investment in subsidiary	**8,631**	—
Total assets	**$ 8,647**	$ 5
LIABILITIES AND STOCKHOLDERS' EQUITY (DEFICIT)		
Current liabilities:		
Accounts payable	**$ —**	$ —
Total current liabilities	**—**	—
Investment in subsidiary	**—**	569
Payable to subsidiary	**14**	—
Total liabilities	**14**	569
Commitments and contingencies		
Stockholders' equity (deficit):		
Common stock and additional paid-in capital, 400.0 and 300.0 shares authorized at December 31, 2016 and 2015, respectively, $0.01 par value, 248.3 and 119.4 shares issued and outstanding at December 31, 2016 and 2015, respectively	**10,602**	9
Accumulated deficit	**(399)**	(462)
Treasury stock, at cost, 12.9 shares at December 31, 2016	**(1,000)**	—
Accumulated other comprehensive loss	**(570)**	(111)
Total stockholders' equity (deficit)	**8,633**	(564)
Total liabilities and stockholders' equity (deficit)	**$ 8,647**	$ 5

QUINTILES IMS HOLDINGS, INC. (PARENT COMPANY ONLY)
CONDENSED STATEMENTS OF CASH FLOWS

(in millions)	Year Ended December 31, 2016	2015	2014
Operating activities:			
Net income	**$ 115**	$ 387	$ 356
Adjustments to reconcile net income to cash provided by operating activities:			
Subsidiary loss (income)	**91**	56	(27)
Change in operating assets and liabilities:			
Accounts receivable and unbilled services	**—**	—	3
Income taxes payable and other liabilities	**(5)**	—	(1)
Net cash provided by operating activities	**201**	443	331
Investing activities:			
Investment in subsidiary, net of dividends received	**791**	—	—
Net cash provided by investing activities	**791**	—	—
Financing activities:			
Stock issued under employee stock purchase and option plans	**97**	64	35
Repurchase of common stock	**(1,097)**	(515)	(415)
Repurchase of stock options	**—**	—	(8)
Intercompany with subsidiary	**15**	1	(3)
Net cash (used in) provided by financing activities	**(985)**	(450)	(391)
(Decrease) increase in cash and cash equivalents	**7**	(7)	(60)
Cash and cash equivalents at beginning of period	**5**	12	72
Cash and cash equivalents at end of period	**$ 12**	$ 5	$ 12

QUINTILES IMS HOLDINGS, INC. (PARENT COMPANY ONLY)
NOTES TO CONDENSED FINANCIAL STATEMENTS

The condensed parent company financial statements have been prepared in accordance with Rule 12-04, Schedule I of Regulation S-X as the restricted net assets of Quintiles IMS Holdings, Inc.'s (the "Company") wholly-owned subsidiary, Quintiles IMS Incorporated exceed 25% of the consolidated net assets of the Company. The ability of Quintiles IMS Incorporated to pay dividends may be limited due to the restrictive covenants in the agreements governing its credit arrangements.

These condensed parent company financial statements include the accounts of Quintiles IMS Holdings, Inc. on a standalone basis (the "Parent") and the equity method of accounting is used to reflect ownership interest in its subsidiary. Refer to the consolidated financial statements and notes presented elsewhere herein for additional information and disclosures with respect to these financial statements.

Since the Parent is part of a group that files a consolidated income tax return, in accordance with ASC 740, a portion of the consolidated amount of current and deferred income tax expense of the Company has been allocated to the Parent. The income tax benefit of $4 million, $1 million and $1 million in 2016, 2015 and 2014, respectively, represents the income tax benefit that will be or were already utilized in the Company's consolidated United States federal and state income tax returns. If the Parent was not part of these consolidated income tax returns, it would not be able to recognize any income tax benefit, as it generates no revenue against which the losses could be used on a separate filer basis.

Below is a summary of the dividends paid to the Parent by Quintiles IMS Incorporated in 2016, 2015 and 2014 (in millions):

	Amount
Paid in December 2016	$ 503
Paid in November 2016	422
Paid in June 2016	89
Total paid in 2016	$ 1,014
Paid in December 2015	$ 1
Paid in November 2015	223
Paid in May 2015	220
Total paid in 2015	$ 444
Paid in November 2014	$ 234
Paid in May 2014	87
Paid in January 2014	8
Total paid in 2014	$ 329

Schedule II—Valuation and Qualifying Accounts

Deferred Tax Asset Valuation Allowance

Information presented below is in millions:

	Balance at Beginning of Year	Additions		Deductions [b]	Balance at End of Year
		Charged to Expenses	Charged to Other Accounts [a]		
December 31, 2016	$ 22	$ 10	$ 129	$ (8)	$ 153
December 31, 2015	$ 25	$ 2	$ —	$ (5)	$ 22
December 31, 2014	$ 30	$ 11	$ —	$ (16)	$ 25

[a] Recorded through purchase accounting transaction.
[b] Impact of reductions recorded to expense and translation adjustments.

EXHIBIT INDEX

Exhibit Number	Exhibit Description	Filed Herewith	Incorporated by Reference			
			Form	File No.	Exhibit	Filing Date
2.1*	Agreement and Plan of Merger, dated as of May 3, 2016, by and between Quintiles Transnational Holdings Inc. and IMS Health Holdings, Inc. (which includes the Plan of Conversion dated as of May 3, 2016 as Exhibit A thereto).		8-K	001-35907	2.1	May 3, 2016
3.1	Second Amended and Restated Articles of Incorporation of Quintiles Transnational Holdings Inc.		S-1/A	333-186708	3.1	May 6, 2013
3.2	Third Amended and Restated Bylaws of Quintiles Transnational Holdings Inc.		S-3	333-199843	3.2	November 4, 2014
3.3	Articles of Conversion, as filed with the North Carolina Secretary of State on October 3, 2016.		8-K	001-35907	3.1	October 3, 2016
3.4	Certificate of Conversion, as filed with the Delaware Secretary of State on October 3, 2016.		8-K	001-35907	3.2	October 3, 2016
3.5	Amended and Restated Certificate of Incorporation, as filed with the Delaware Secretary of State on October 3, 2016.		8-K	001-35907	3.3	October 3, 2016
3.6	Amended and Restated Bylaws, effective October 3, 2016.		8-K	001-35907	3.4	October 3, 2016
4.1	Specimen Common Stock Certificate of Quintiles Transnational Holdings Inc.		S-1/A	333-186708	4.1	April 26, 2013
4.2	Second Amended and Restated Registration Rights Agreement, dated May 14, 2013, among Quintiles Transnational Holdings Inc. and the stockholders identified therein.		8-K	001-35907	4.1	May 15, 2013
4.3	Amendment No. 1, dated February 5, 2015, to Second Amended and Restated Registration Rights Agreement, dated May 14, 2013, among Quintiles Transnational Holdings Inc. and the stockholders identified therein.		8-K	001-35907	4.1	February 6, 2015
4.4	Indenture dated as of May 12, 2015, among Quintiles Transnational Corp., the subsidiary guarantors listed therein and U.S. Bank National Association as trustee.		8-K	001-35907	4.1	May 13, 2015
4.5	Form of 4.875% Rule 144A Senior Note due 2023 (incorporated by reference to Exhibit A to Exhibit 4.4).		8-K	001-35907	4.2	May 13, 2015
4.6	Form of 4.875% Regulation S Senior Note due 2023 (incorporated by reference to Exhibit A to Exhibit 4.4).		8-K	001-35907	4.3	May 13, 2015
4.7	Indenture, dated as of September 28, 2016, among Quintiles IMS Incorporated, the Guarantors listed therein and U.S. Bank National Association, as Trustee.		8-K	001-35907	4.1	October 3, 2016
4.8	Senior Note Indenture, dated as of October 24, 2012, among IMS Health Incorporated, as Issuer, the Guarantors party thereto, and Wells Fargo Bank, National Association, as Trustee.		IMS Health S-1	333-193159	4.9	January 2, 2014
4.9	Senior Note Indenture, dated as of March 30, 2015, among IMS Health Incorporated, as Issuer, the Guarantors party thereto, and Deutsche Trustee Company Limited, as Trustee.		IMS Health 10-Q	001-36381	4.1	May 15, 2015
10.1	Credit Agreement, dated June 8, 2011, among Quintiles Transnational Corp., as the Borrower, each lender from time to time party thereto, and JPMorgan Chase Bank, N.A., as Administrative Agent, Swing Line Lender and L/C Issuer.		S-1	333-186708	10.1	February 15, 2013

Exhibit Number	Exhibit Description	Filed Herewith	Incorporated by Reference			
			Form	File No.	Exhibit	Filing Date
10.2	Amendment No. 1, dated October 22, 2012, to Credit Agreement, dated June 8, 2011, among Quintiles Transnational Corp., as the Borrower, each lender from time to time party thereto, and JPMorgan Chase Bank, N.A., as Administrative Agent, Swing Line Lender and L/C Issuer.		S-1	333-186708	10.2	February 15, 2013
10.3	Amendment No. 2, dated December 20, 2012, to Credit Agreement, dated June 8, 2011, among Quintiles Transnational Corp., as the Borrower, each lender from time to time party thereto, and JPMorgan Chase Bank, N.A., as Administrative Agent, Swing Line Lender and L/C Issuer.		S-1	333-186708	10.3	February 15, 2013
10.4	Amendment No. 3, dated December 20, 2013, to Credit Agreement, dated June 8, 2011, among Quintiles Transnational Corp., as the Borrower, each lender from time to time party thereto, and JPMorgan Chase Bank, N.A., as Administrative Agent, Swing Line Lender and L/C Issuer.		8-K	001-35907	10.1	December 20, 2013
10.5	Amendment No. 4, dated November 7, 2014, to Credit Agreement, dated June 8, 2011, among Quintiles Transnational Corp., as the Borrower, each lender from time to time party thereto, and JPMorgan Chase Bank, N.A., as Administrative Agent, Swing Line Lender and L/C Issuer.		8-K	001-35907	10.1	November 10, 2014
10.6	Credit Agreement dated May 12, 2015, among Quintiles Transnational Corp., as the borrower, each lender from time to time party thereto, and JPMorgan Chase Bank, N.A., as Administrative Agent, a Swing Line Leader and an L/C Issuer		8-K	001-35907	10.1	May 13, 2015
10.7	Third Amended and Restated Credit Agreement, dated as of March 17, 2014, among IMS Health Incorporated, as the Parent Borrower, IMS AG, as a Borrower, IMS Japan K.K., as a Borrower, Healthcare Technology Intermediate Holdings, Inc., as Holdings, Bank of America, N.A. as Administrative Agent, Swing Line Lender and L/C Issuer, and the other lenders party thereto.		IMS Health S-1/A	333-193159	10.32	March 24, 2014
10.8	Amendment No. 1, dated May 11, 2015, to Third Amended and Restated Credit and Guaranty Agreement, dated as of March 17, 2014, among IMS Health Incorporated, as the Parent Borrower, IMS AG, as a Borrower, IMS Japan K.K., as a Borrower, Healthcare Technology Intermediate Holdings, Inc., as Holdings, Bank of America, N.A. as Administrative Agent, Swing Line Lender and L/C Issuer, and the other lenders party thereto.		IMS Health 10-Q	001-36381	10.1	May 15, 2015
10.9	Amendment No. 2, dated January 15, 2016, to Third Amended and Restated Credit and Guaranty Agreement, dated as of March 17, 2014, among IMS Health Incorporated, as the Parent Borrower, IMS AG, as a Borrower, IMS Japan K.K., as a Borrower, Healthcare Technology Intermediate Holdings, Inc., as Holdings, Bank of America, N.A. as Administrative Agent, Swing Line Lender and L/C Issuer, and the other lenders party thereto.		IMS Health 8-K	001-36381	10.1	January 21, 2016
10.10	Amendment No. 3 to Third Amended and Restated Credit Agreement, dated as of October 3, 2016, among Quintiles IMS Incorporated, IMS AG, IMS Japan K.K., Quintiles IMS Holdings, Inc., the Guarantors party thereto, Bank of America N.A., as Administrative Agent and Collateral Agent, and the other Lenders party thereto, the Incremental Term A-3 Lenders party thereto and the Incremental Revolving Credit Lenders party thereto.		8-K	001-35907	10.9	October 3, 2016

Exhibit Number	Exhibit Description	Filed Herewith	Incorporated by Reference			
			Form	File No.	Exhibit	Filing Date
10.11	Senior Note Purchase Agreement, dated September 14, 2016, between IMS Health Incorporated, a wholly owned subsidiary of IMS Health Holdings, Inc., and the representative of the initial purchasers named therein.		10-Q	001-35907	10.10	November 3, 2016
10.12	Amended and Restated Pledge and Security Agreement, dated as of March 17, 2014, among Healthcare Technology Intermediate Holdings, Inc., IMS Health Incorporated, each of the grantors party thereto, and Bank of America, N.A., as Administrative Agent.		IMS Health S-1/A	333-193159	10.33	March 24, 2014
10.13	U.S. Guaranty, dated as of March 17, 2014, among Healthcare Technology Intermediate Holdings, Inc., as Holdings, IMS Health Incorporated, as Parent Borrower, the other Guarantors party thereto from time to time, and Bank of America, N.A., as Administrative Agent.		IMS Health S-1/A	333-193159	10.34	March 24, 2014
10.14	Purchase and Sale Agreement, dated December 5, 2014, among Quintiles, Inc., as originator and initial servicer, Quintiles Laboratories, LLC, as originator, Quintiles Commercial US, Inc., as originator, and Quintiles Funding LLC, as buyer.		8-K	001-35907	10.1	December 8, 2014
10.15	Receivables Financing Agreement, dated December 5, 2014, among Quintiles Funding LLC, as borrower, Quintiles, Inc., as initial servicer, PNC Bank, N.A., as administrative agent and lender, and the additional persons from time to time party thereto as lenders.		8-K	001-35907	10.2	December 8, 2014
10.16	Assignment and Assumption Agreement, dated December 10, 2009, between Quintiles Transnational Corp. and Quintiles Transnational Holdings Inc.		S-1	333-186708	10.12	February 15, 2013
10.17	Amended and Restated Stockholders Agreement, dated February 5, 2015, among Quintiles Transnational Holdings Inc. and the stockholders identified therein.		8-K	001-35907	10.1	February 6, 2015
10.18	Stockholders Agreement, dated May 3, 2016, among Quintiles Transnational Holdings Inc. and the stockholders identified therein.		8-K	001-35907	10.4	May 3, 2016
10.19	Voting Agreement, dated May 3, 2016, by and among Quintiles Transnational Holdings Inc. and affiliates of TPG Global, LLC.		8-K	001-35907	10.1	May 3, 2016
10.20	Voting Agreement, dated May 3, 2016, by and between Quintiles Transnational Holdings Inc. and CPP Investment Board Private Holdings Inc.		8-K	001-35907	10.2	May 3, 2016
10.21	Voting Agreement, dated May 3, 2016, by and between Quintiles Transnational Holdings Inc. and Leonard Green & Partners, L.P.		8-K	001-35907	10.3	May 3, 2016
10.22	Share Repurchase Agreement, dated May 27, 2014, between Quintiles Transnational Holdings Inc. and TPG Quintiles Holdco, L.P.		8-K	001-35907	10.1	May 28, 2014
10.23†	Form of Director Indemnification Agreement.		S-1/A	333-186708	10.13	April 19, 2013
10.24	Form of Indemnification Agreement with each of the non-management directors of Quintiles IMS Holdings Inc.		8-K	001-35907	10.8	October 3, 2016
10.25†	Description of Independent Director Compensation, effective February 5, 2015.		8-K	001-35907	10.2	February 6, 2015
10.26†	Description of Independent Director Compensation, effective January 1, 2016.		10-K	001-35907	10.56	February 11, 2016

Exhibit Number	Exhibit Description	Filed Herewith	Incorporated by Reference			
			Form	File No.	Exhibit	Filing Date
10.27	Description of Non-Employee Director Compensation, effective as of January 1, 2017.	X				
10.28†	Form of Non-Competition, Non-Solicitation, Confidentiality and IP Agreement.		8-K	001-35907	10.2	October 19, 2015
10.29†	Quintiles Transnational Holdings Inc. Annual Management Incentive Plan.		S-1/A	333-186708	10.57	April 19, 2013
10.30†	Quintiles Transnational Holdings Inc. 2003 Stock Incentive Plan.		S-1	333-186708	10.14	February 15, 2013
10.31†	Form of Stock Option Award Agreement under the Quintiles Transnational Holdings Inc. 2003 Stock Incentive Plan.		S-1	333-186708	10.15	February 15, 2013
10.32†	Form of Restricted Stock Purchase Agreement under the Quintiles Transnational Holdings Inc. 2003 Stock Incentive Plan.		S-1	333-186708	10.16	February 15, 2013
10.33†	Quintiles Transnational Holdings Inc. 2008 Stock Incentive Plan.		S-1	333-186708	10.17	February 15, 2013
10.34†	Form of Stock Option Award Agreement for Senior Executives under the Quintiles Transnational Holdings Inc. 2008 Stock Incentive Plan.		S-1	333-186708	10.18	February 15, 2013
10.35†	Form of Stock Option Award Agreement for Non-Employee Directors under the Quintiles Transnational Holdings Inc. 2008 Stock Incentive Plan.		S-1	333-186708	10.19	February 15, 2013
10.36†	Quintiles Transnational Holdings Inc. 2013 Stock Incentive Plan.		S-1/A	333-186708	10.22	April 19, 2013
10.37†	Form of Award Agreement Awarding Nonqualified Stock Options to Employees under the Quintiles Transnational Holdings Inc. 2013 Stock Incentive Plan.		S-1/A	333-186708	10.23	April 19, 2013
10.38†	Form of Award Agreement Awarding Incentive Stock Options to Employees under the Quintiles Transnational Holdings Inc. 2013 Stock Incentive Plan.		10-Q	001-35907	10.2	May 1, 2014
10.39†	Form of Award Agreement Awarding Nonqualified Stock Options to Non-Employee Directors under the Quintiles Transnational Holdings Inc. 2013 Stock Incentive Plan.		S-1/A	333-186708	10.24	April 19, 2013
10.40†	Form of Award Agreement Awarding Stock Appreciation Rights under the Quintiles Transnational Holdings Inc. 2013 Stock Incentive Plan.		S-1/A	333-186708	10.56	April 19, 2013
10.41	Form of Award Agreement Awarding Stock Appreciation Rights under the Quintiles IMS Holdings, Inc. 2013 Stock Incentive Plan effective February 2017.	X				
10.42†	Form of Award Agreement Awarding Restricted Stock Units under the Quintiles Transnational Holdings Inc. 2013 Stock Incentive Plan prior to February 2015.		8-K	001-35907	10.1	November 26, 2013
10.43†	Form of Award Agreement Awarding Restricted Stock Units under the Quintiles Transnational Holdings Inc. 2013 Stock Incentive Plan effective February 2015.		10-K	001-35907	10.34	February 12, 2015
10.44†	Form of Award Agreement Awarding Performance Units under the Quintiles Transnational Holdings Inc. 2013 Stock Incentive Plan.		10-K	001-35907	10.35	February 12, 2015

Exhibit Number	Exhibit Description	Filed Herewith	Incorporated by Reference			
			Form	File No.	Exhibit	Filing Date
10.45	Form of Award Agreement Awarding Performance Shares under the Quintiles IMS Holdings, Inc. 2013 Stock Incentive Plan effective February 2017.	X				
10.46	Form of Restricted Stock Award Agreement under the Quintiles Transnational Holdings Inc. 2013 Stock Incentive Plan.		10-Q	001-35907	10.3	November 3, 2016
10.47	Form of Award Agreement Awarding Restricted Stock Units under the Quintiles IMS Holdings, Inc. 2013 Stock Incentive Plan effective February 2017.	X				
10.48	Quintiles IMS Holdings, Inc. Defined Contribution Executive Retirement Plan.		8-K	001-35907	10.7	October 3, 2016
10.49	IMS Health Incorporated Defined Contribution Executive Retirement Plan, as amended and restated.		IMS Health S-1	333-193159	10.10	January 2, 2014
10.50	First Amendment to the IMS Health Incorporated Retirement Excess Plan, dated March 17, 2009.		IMS Health S-1	333-193159	10.12	January 2, 2014
10.51	Second Amendment to the IMS Health Incorporated Retirement Excess Plan, dated December 8, 2009.		IMS Health S-1	333-193159	10.13	January 2, 2014
10.52	Third Amendment to the IMS Health Incorporated Retirement Excess Plan, dated April 5, 2011.		IMS Health S-1	333-193159	10.14	January 2, 2014
10.53	Fourth Amendment to the IMS Health Incorporated Retirement Excess Plan (effective May 3, 2016).		IMS Health 10-Q	001-36381	10.3	July 28, 2016
10.54	Quintiles IMS Holdings, Inc. 2010 Equity Incentive Plan.		8-K	001-35907	10.5	October 3, 2016
10.55	Healthcare Technology Holdings, Inc. 2010 Equity Incentive Plan, as amended and restated.		IMS Health S-1/A	333-193159	10.16	February 13, 2014
10.56	Form of IMS Time-and Performance-Based Stock Option Award Agreement under the 2010 Equity Incentive Plan.		IMS Health S-1	333-193159	10.17	January 2, 2014
10.57	Form of IMS Time-Based Stock Option Award Agreement under the 2010 Equity Incentive Plan.		IMS Health S-1	333-193159	10.18	January 2, 2014
10.58	Form of IMS Director Stock Option Award Agreement under the 2010 Equity Incentive Plan.		IMS Health S-1	333-193159	10.19	January 2, 2014
10.59	Form of IMS Restricted Stock Unit Award Agreement under the 2010 Equity Incentive Plan.		IMS Health S-1	333-193159	10.20	January 2, 2014
10.60	Form of IMS Director Restricted Stock Unit Award Agreement under the 2010 Equity Incentive Plan.		IMS Health S-1	333-193159	10.21	January 2, 2014
10.61	Form of IMS Rollover Stock Appreciation Right Award Agreement under the 2010 Equity Incentive Plan.		IMS Health S-1	333-193159	10.22	January 2, 2014

Exhibit Number	Exhibit Description	Filed Herewith	Incorporated by Reference			
			Form	File No.	Exhibit	Filing Date
10.62	IMS Health Incorporated Savings Equalization Plan, as amended and restated effective as of January 1, 2011.		IMS Health S-1	333-193159	10.15	January 2, 2014
10.63	2013 IMS Health Annual Incentive Compensation Plan.		IMS Health S-1	333-193159	10.6	January 2, 2014
10.64	Quintiles IMS Holdings, Inc. 2014 Incentive and Stock Award Plan.		8-K	001-35907	10.6	October 3, 2016
10.65	Form of IMS Stock Appreciation Rights Agreement under the 2014 Incentive and Stock Award Plan.		IMS Health 8-K	001-36381	10.1	February 10, 2015
10.66	Form of IMS Performance Share Award Agreement under the 2014 Incentive and Stock Award Plan.		IMS Health 8-K	001-36381	10.2	February 10, 2015x
10.67	2014 IMS Health Annual Incentive Plan.		IMS Health S-1/A	333-193159	10.30	March 10, 2014
10.68†	Quintiles Transnational Holdings Inc. Change of Control Severance Plan, which covers among others our executive officers.		8-K	001-35907	10.1	November 6, 2015
10.69	Quintiles IMS Incorporated Employee Protection Plan, effective January 1, 2017.	X				
10.70	IMS Health Incorporated Employee Protection Plan and Summary Plan Description (as Amended and Restated effective January 1, 2014).		IMS Health 10-Q	001-3681	10.1	July 28, 2016
10.71	First Amendment to the IMS Health Incorporated Employee Protection Plan and Summary Plan Description (effective June 1, 2016).		IMS Health 10-Q	001-3681	10.2	July 28, 2016
10.72†	Quintiles Transnational Corp. 401(k) Restoration Plan, effective January 1, 2016		8-K	001-35907	10.1	December 18, 2015
10.73†	Quintiles Transnational Holdings Inc. Employee Stock Purchase Plan.		S-8	333-193212	10.1	January 6, 2014
10.74†	First Amendment to Quintiles Transnational Holdings Inc. Employee Stock Purchase Plan.		10-K	001-35907	10.37	February 12, 2015
10.75†	Sub-Plan to the Employee Stock Purchase Plan, effective 2015.		10-Q	001-35907	10.1	July 29, 2015
10.76	Quintiles IMS Incorporated Savings Equalization Plan, effective December 31, 2016.	X				
10.77†	Quintiles Transnational Corp. Elective Deferred Compensation Plan, as amended and restated.		10-Q	001-35907	10.1	October 28, 2015
10.78	Quintiles IMS Holdings Inc. Non-Employee Director Deferral Plan, effective January 1, 2017.	X				
10.79	Amended and Restated Employment Agreement among IMS Health Holdings, Inc., IMS Health Incorporated and Ari Bousbib, dated February 12, 2014.		IMS Health S-1/A	333-193159	10.25	March 10, 2014

Exhibit Number	Exhibit Description	Filed Herewith	Incorporated by Reference			
			Form	File No.	Exhibit	Filing Date
10.80	Senior Management Nonstatutory Option Agreement between Healthcare Technology Holdings, Inc. and Ari Bousbib, dated December 1, 2010.		IMS Health S-1/A	333-193159	10.23	February 13, 2014
10.81	Senior Management Nonstatutory Option Agreement between Healthcare Technology Holdings, Inc. and Ari Bousbib, dated December 1, 2010.		IMS Health S-1/A	333-193159	10.24	February 13, 2014
10.82	Restricted Stock Unit Award Agreement between IMS Health Holdings, Inc. and Ari Bousbib dated February 12, 2014, incorporated herein by reference to Amendment 2 to the Company's Registration Statement on Form S-1 filed with the SEC on March 10, 2014.		IMS Health S-1/A	333-193159	10.29	March 10, 2014
10.83	Amendment No. 1, dated December 31, 2015, to Restricted Stock Unit Award Agreement between IMS Health Holdings, Inc. and Ari Bousbib dated February 12, 2014.		IMS Health 10-K	001-36381	10.33	February 19, 2016
10.84	Stock Appreciation Rights Agreement between IMS Health Holdings, Inc. and Ari Bousbib, dated February 10, 2015.		IMS Health 10-K	001-36381	10.34	February 19, 2016
10.85	Amendment No. 1, dated December 31, 2015, to Stock Appreciation Rights Agreement between IMS Health Holdings, Inc. and Ari Bousbib dated February 10, 2015.		IMS Health 10-K	001-36381	10.35	February 19, 2016
10.86	Restricted Stock Award Agreement between IMS Health Holdings, Inc. and Ari Bousbib dated December 31, 2015.		IMS Health 10-K	001-36381	10.36	February 19, 2016
10.87	Letter Agreement, dated May 3, 2016, between Quintiles Transnational Holdings Inc. and Ari Bousbib.		8-K	001-35907	10.6	May 3, 2016
10.88†	Executive Employment Agreement, dated September 25, 2003, among Dennis B. Gillings, Pharma Services Holding, Inc. and Quintiles Transnational Corp.		S-1	333-186708	10.26	February 15, 2013
10.89†	Assignment and Assumption Agreement, dated March 31, 2006, among Pharma Services Holding, Inc., Quintiles Transnational Corp., and Dennis B. Gillings.		S-1	333-186708	10.27	February 15, 2013
10.90†	Amendment, dated February 1, 2008, to Executive Employment Agreement, dated September 25, 2003, between Dennis B. Gillings and Quintiles Transnational Corp.		S-1	333-186708	10.28	February 15, 2013
10.91†	Agreement and Amendment, effective December 12, 2008, to Executive Employment Agreement, dated September 25, 2003, between Dennis B. Gillings and Quintiles Transnational Corp.		S-1	333-186708	10.29	February 15, 2013
10.92†	Third Amendment, dated December 31, 2008, to Executive Employment Agreement, dated September 25, 2003, between Dennis B. Gillings and Quintiles Transnational Corp.		S-1	333-186708	10.30	February 15, 2013
10.93†	Fourth Amendment, dated December 14, 2009, to Executive Employment Agreement, dated September 25, 2003, between Dennis B. Gillings and Quintiles Transnational Corp.		S-1	333-186708	10.31	February 15, 2013
10.94†	Fifth Amendment, dated April 18, 2013, to Executive Employment Agreement, dated September 25, 2003, between Dennis B. Gillings and Quintiles Transnational Corp.		S-1/A	333-186708	10.32	April 19, 2013

Exhibit Number	Exhibit Description	Filed Herewith	Incorporated by Reference			
			Form	File No.	Exhibit	Filing Date
10.95	Rollover Agreement, dated August 28, 2003, among Pharma Services Holding, Inc., Dennis B. Gillings, Joan H. Gillings, Susan Ashley Gillings, the Gillings Family Foundation, the Gillings Limited Partnership and the GFEF Limited Partnership.		S-1	333-186708	10.33	February 15, 2013
10.96	Amendment No. 1, dated September 23, 2003, to Rollover Agreement, dated August 28, 2003, among Pharma Services Holding, Inc., Dennis B. Gillings, Joan H. Gillings, Susan Ashley Gillings, the Gillings Family Foundation, the Gillings Limited Partnership and the GFEF Limited Partnership.		S-1	333-186708	10.34	February 15, 2013
10.97†	Stock Option Award Agreement, dated June 30, 2008, between Quintiles Transnational Corp. and Dennis B. Gillings.		S-1	333-186708	10.35	February 15, 2013
10.98	Letter Agreement, dated May 3, 2016, between Quintiles Transnational Holdings Inc. and Dennis B. Gillings, CBE.		8-K	001-35907	10.5	May 3, 2016
10.99†	Letter Agreement, dated October 14, 2015, between Michael McDonnell and Quintiles Transnational Corp.		8-K	001-35907	10.3	October 19, 2015
10.100†	Initial Award Agreement Awarding Restricted Stock Units to Michael McDonnell under the Quintiles Transnational Holdings Inc. 2013 Stock Incentive Plan.		10-K	001-35907	10.29	February 11, 2016
10.101	Letter agreement between the Company and Michael R. McDonnell effective on October 3, 2016.		8-K	001-35907	10.1	October 3, 2016
10.102†	Executive Employment Agreement, dated November 1, 2012, between James H. Erlinger III and Quintiles Transnational Corp.		10-K	001-35907	10.63	February 12, 2015
10.103	Letter agreement between the Company and James H. Erlinger III effective on October 3, 2016.		8-K	001-35907	10.2	October 3, 2016
10.104	Letter Agreement between the Company and W. Richard Staub, III, effective on December 1, 2016.	X				
10.105†	Executive Employment Agreement, effective April 30, 2012, between Thomas H. Pike and Quintiles Transnational Corp.		S-1	333-186708	10.36	February 15, 2013
10.106†	Subscription Agreement, effective May 31, 2012, between Thomas H. Pike and Quintiles Transnational Holdings Inc.		S-1	333-186708	10.37	February 15, 2013
10.107†	Stock Option Award Agreement, dated May 10, 2012, between Quintiles Transnational Holdings Inc. and Thomas H. Pike.		S-1	333-186708	10.38	February 15, 2013
10.108†	Stock Option Award Agreement, dated May 31, 2012, between Quintiles Transnational Holdings Inc. and Thomas H. Pike.		S-1	333-186708	10.39	February 15, 2013
10.109†	First Amendment, dated May 3, 2016, to Executive Employment Agreement, dated April 12, 2012, between Thomas H. Pike and Quintiles Transnational Corp.		8-K	001-35907	10.7	May 3, 2016
10.110	Second Amendment to Executive Employment Agreement, dated November 29, 2016, by and among Mr. Pike, Quintiles, Inc., and Quintiles IMS Holdings, Inc.		8-K	001-35907	10.1	November 30, 2016
10.111†	Executive Employment Agreement, effective July 30, 2010, between Kevin K. Gordon and Quintiles Transnational Corp.		S-1	333-186708	10.40	February 15, 2013

Exhibit Number	Exhibit Description	Filed Herewith	Incorporated by Reference			
			Form	File No.	Exhibit	Filing Date
10.112†	First Amendment to Employment Agreement, dated November 22, 2010, to Executive Employment Agreement, effective July 30, 2010, between Kevin K. Gordon and Quintiles Transnational Corp.		S-1	333-186708	10.41	February 15, 2013
10.113†	Second Amendment, dated October 14, 2015, to Executive Employment Agreement, effective July 30, 2010, between Kevin K. Gordon and Quintiles Transnational Corp.		8-K	001-35907	10.1	October 19, 2015
21.1	List of Subsidiaries of Quintiles IMS Holdings, Inc.	X				
23.1	Consent of PricewaterhouseCoopers LLP.	X				
31.1	Certification of Chief Executive Officer, pursuant to Rule 13a-14(a)/15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.	X				
31.2	Certification of Executive Vice President and Chief Financial Officer, pursuant to Rule 13a-14(a)/15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.	X				
32.1	Certification of Chief Executive Officer, 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 Executive Vice President and Chief Financial Officer, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.	X				
101	Interactive Data Files Pursuant to Rule 405 of Regulation S-T: (i) Consolidated Statements of Income, (ii) Consolidated Statements of Comprehensive Income, (iii) Consolidated Balance Sheets, (iv) Consolidated Statements of Cash Flows, and (v) Notes to Consolidated Financial Statements.	X				

† Indicates management contract or compensatory plan or arrangement.

* The Merger Agreement and the description thereof included herein have been included to provide investors and stockholders with information regarding the terms of the agreement. They are not intended to provide any other factual information about Quintiles or IMS Health or their respective subsidiaries or affiliates or stockholders. The representations, warranties and covenants contained in the Merger Agreement were made only for purposes of the Merger Agreement as of the specific dates therein, were solely for the benefit of the parties to the Merger Agreement, may be subject to limitations agreed upon by the contracting parties, including being qualified by confidential disclosures made for the purposes of allocating contractual risk among the parties to the Merger Agreement instead of establishing these matters as facts, and may be subject to standards of materiality applicable to the contracting parties that differ from those applicable to investors. Investors should not rely on the representations, warranties and covenants or any descriptions thereof as characterizations of the actual state of facts or condition of the parties thereto or any of their respective subsidiaries or affiliates. Moreover, information concerning the subject matter of representations and warranties may change after the date of the Merger Agreement, which subsequent information may or may not be fully reflected in public disclosures by Quintiles or IMS Health. Accordingly, investors should read the representations and warranties in the Merger Agreement not in isolation but only in conjunction with the other information about Quintiles or IMS Health and their respective subsidiaries that the respective companies include in reports, statements and other filings they make with the United States Securities and Exchange Commission.

Exhibit 10.27

DESCRIPTION OF NON-EMPLOYEE DIRECTOR COMPENSATION

Effective as of January 1, 2017, Quintiles IMS Holdings, Inc. (the "Company") revised its Non-Employee Director Compensation Program, which is applicable to those directors who (i) are not employees of the Company and (ii) are not affiliated with the sponsor shareholders pursuant to the Shareholders Agreement, dated as of May 3, 2016, among Quintiles IMS Holdings, Inc. and the shareholders identified therein (an "Independent Director").

Each Independent Director will receive an annual cash retainer of $100,000 to be paid quarterly and an equity retainer with a fair value of $200,000, which will be granted annually. Under the Non-Employee Director Compensation Program, the annual equity grant will be payable in fully vested restricted stock units.

The Company will pay (i) the chair of its Audit Committee a $30,000 annual retainer, (ii) the chair of its Leadership Development and Compensation Committee a $25,000 annual retainer, and (iii) the chair of its Nominating and Governance Committee a $20,000 annual retainer, each to be paid quarterly. The Company will pay (a) the members of its Audit Committee an additional $10,000 annual retainer, and (b) the members of its Leadership Development and Compensation and Nominating and Governance Committee an additional $5,000 annual retainer, each to be paid quarterly. The Company will reimburse reasonable travel expenses and other out-of-pocket costs incurred in connection with attendance at board of director meetings and committee meetings by each of the Independent Directors.

Exhibit 10.41

Name of Participant: _____

QUINTILES IMS HOLDINGS, INC.
2013 STOCK INCENTIVE PLAN

AWARD AGREEMENT
(Awarding Stock Appreciation Rights)

THIS AWARD AGREEMENT (this "Agreement") is made by and between Quintiles IMS Holdings, Inc., a Delaware corporation (the "Company"), and the Participant named above (the "Participant") pursuant to the provisions of the Quintiles IMS Holdings, Inc. 2013 Stock Incentive Plan (the "Plan"), which is incorporated herein by reference.

WITNESSETH:

WHEREAS, the Participant is providing, or has agreed to provide, services to the Company, or Affiliate or a Subsidiary of the Company, as an Employee, Director or Third Party Service Provider; and

WHEREAS, the Company considers it desirable and in its best interests that the Participant be given a personal stake in the Company's growth, development and financial success through the grant of Stock Appreciation Rights ("SARs") that may be exercised with respect to all or a portion of the number of whole common stock of the Company ("Shares") set forth on Exhibit A hereto, subject to the terms and conditions set forth in this Award Agreement and in the Plan.

NOW, THEREFORE, in consideration of the premises and the mutual agreements set forth herein, the parties agree as follows:

1. Grant of SAR. Pursuant to the Plan, the Company has granted to the Participant, on the grant date listed on Exhibit A hereto (the "Grant Date"), SARs that may be exercised with respect to all or a portion of the number of whole Shares set forth on Exhibit A hereto, subject to the terms and conditions set forth in this Agreement and in the Plan. For the avoidance of doubt, the total number of Shares underlying the SARs is subject to adjustment pursuant to Section 4.4 of the Plan. The future value of such Shares is unknown and cannot be predicted with certainty. If such Shares do not increase in value, the SAR will have no value. For purposes of this Agreement, "Employer" shall mean the Affiliate or Subsidiary that employs the Participant (to the extent the Participant is not directly employed by the Company).

2. Nature of SAR. The SARs provide to the Participant a right to receive, upon exercise of vested SARs in compliance with this Agreement, payment in Shares. The number of Shares that shall be delivered to the Participant upon a valid exercise of the SARs, before any reduction for withholding taxes in accordance with Section 15, shall be determined by multiplying (i) times (ii) and dividing the resulting product by (iii), where:

(i) is the number of SARs being exercised;

(ii) is the excess of (A) the Fair Market Value of one (1) Share on the date of exercise, over (B) the "Grant Price" per Share set forth on Exhibit A; and

(iii) is the Fair Market Value of one (1) Share on the date of exercise.

Unless otherwise determined by the Company, no fractional Shares will be issued in payment upon the exercise of the SARs.

3. Term of SAR. Subject to earlier termination under Section 5 hereof or pursuant to the Plan, the term of the SAR shall be the expiration date specified on Exhibit A hereto (the "Expiration Date").

4. Use of Certain Defined Terms. Capitalized terms used in this Agreement shall have the meaning specified in the Plan, unless a different meaning is specified herein. In the event of a conflict between the terms and conditions of this Agreement and the Plan, the Plan shall control, except as expressly provided in Section 4 herein. The terms set forth below shall have the following meanings:

(a) "Disability" shall mean: (i) If the Participant is a party to an employment or severance-benefit agreement that contains a definition of "Disability," the definition set forth in such agreement shall apply with respect to the Participant under the Plan for so long as such agreement is in effect; and (ii) otherwise, a disability that would entitle the Participant to long-term disability benefits under the Company's long-term disability plan in which the Participant participates.

(b) "Employment" shall mean the Participant's employment by, or service to, the Company or any of its Subsidiaries.

(c) "Retirement" shall mean retirement from active Employment after attaining age 65, or after attaining age 55 and completion of at least five (5) years of Employment with the Company or any of its subsidiaries (including any acquired entity with respect to which the Committee has determined to credit pre-acquisition service for this purpose.

5. Termination of SAR. Except as otherwise provided herein, the SAR shall terminate on the earliest to occur of the following:

(a) The Expiration Date.

(b) The 91 st day after termination of the Participant's service relationship for any reason other than one specified in (c) or (d) below.

(c) The 366 th day after termination of the Participant's service relationship as a result of the Participant's death, or a Disability, Retirement or redundancy that is approved by the Committee for this purpose.

(d) Termination of the Participant's service relationship by the Company for Cause, or of the Participant's service relationship by the Company or the Company or his or her Employer for reasons that would constitute Cause if the Participant were an employee.

6. Vesting Schedule. Except as set forth below or in the Plan, the SARs shall become vested on the vesting dates set forth on Exhibit A hereto, subject to the Participant's continued Employment through the applicable vesting date.

In no event will any portion of the SAR that is not vested and exercisable at the time of the termination of the Participant's service relationship become vested and exercisable following such termination. Further, notwithstanding any provision of the Plan or this Agreement to the contrary, in no event will any portion of the SAR that is not vested and exercisable immediately prior to the time of a Sale of the Company become vested and exercisable because of such event.

7. Exercise of SAR. The Participant may exercise vested SARs by giving notice (in such manner as is acceptable to the Company) to the Company of his or her election to exercise such SARs. This Notice shall set forth the number of Shares with respect to which the SAR is being exercised. For the avoidance of doubt, the Company may in its sole discretion establish alternative means to exercise vested SARs, including electronic forms using electronic signatures and interactive voice response systems using PIN numbers, in a manner directed by the Company, and the SARs shall be deemed to be exercised upon fulfillment of such alternative means.

Promptly following the date the SARs are exercised, payment shall be made to the Participant in Shares, in accordance with Section 2. Payment may be made by issuance of Shares in the name of the Participant and delivery of such Shares to the Participant or, in the discretion of the Company, by issuance and delivery of such Shares to a financial institution for the account of the Participant, or in any other commercially reasonable manner as may be determined by the Company.

8. Cash Settlement. Notwithstanding any provision in this Agreement to the contrary, the Company may, in its sole discretion, settle the Participant's SARs in the form of (1) a cash payment to the extent settlement in Shares (i) is prohibited under local law, or (ii) would require the Participant, the Company and/or the Employer to obtain the approval of any governmental and/or regulatory body in the Participant's country of residence (and/or country of employment, if different), or (iii) is administratively burdensome; or (2) Shares, but require the Participant to immediately exercise and sell such Shares (in which case, as a condition to the grant of this award, the Participant hereby expressly and explicitly authorizes the Company to issue sales instructions, on the Participant's behalf) to any brokerage firm and/or third party administrator engaged by the Company to hold your Shares and other amounts acquired under the Plan.

9. Non-Transferability of SARs. The SARs may not be transferred in any manner otherwise than by will or the laws of descent and distribution and, during the Participant's lifetime, may only be exercised by the Participant, and following the Participant's death, only by the Participant's legal representative or legatee, and, if the Committee permits a transfer of the SARs, by the permitted transferee. A permitted transferee will have the rights of the Participant with regard to any transferred SARs, subject to any limitations imposed by the Company as a condition of permitting the transfer or otherwise.

10. Restrictions on Shares. This Agreement shall be subject to all applicable laws, rules, and regulations, and to such approvals by any governmental agencies or stock exchange as may be required. The Participant agrees to take all steps the Committee determines are necessary to comply with all applicable provisions of federal, state and foreign securities law in exercising his or her rights under this Agreement. The Committee may impose such restrictions on any Shares acquired pursuant to the exercise of this SAR as it deems advisable, including, without limitation, minimum holding period requirements, restrictions under applicable federal securities laws, under the requirements of any stock exchange or market upon which such Shares are then listed and/or traded, or under any blue sky state or foreign securities laws as may be applicable to such Shares.

11. Forfeiture; Recovery of Compensation.

(a) The Committee may cancel, rescind, withhold or otherwise limit or restrict the SARs or delivery of Shares upon exercise of the SARs at any time if the Participant is not in compliance with all applicable provisions of this Agreement and the Plan.

(b) By accepting the SARs, the Participant expressly acknowledges and agrees that his or her rights, and those of any permitted transferee of the SARs, under the SARs, including to any Shares acquired under the SARs or proceeds from the disposition thereof, are subject to Section 11.3 and 20.19 of the Plan (including any successor provisions).

(c) To the extend the Participant is covered by the Quintiles IMS Holdings Inc. Change in Control Severance Plan (the "Severance Plan"), adopted on November 5, 2015: Upon a termination of the Participant's employment or service with the Company, the effect of such termination of employment or service on the SARs shall be as set forth in this Agreement, and by accepting this SARs, the Participant expressly acknowledges and agrees that the treatment of equity awards upon a termination of employment or service set forth in Section 5.01 of the Severance Plan, shall not in any respect apply to the SARs granted hereunder.

12. Other Undertakings. To protect the interests of the Company and its direct and indirect affiliates and subsidiaries (individually, a "QuintilesIMS Company" and collectively, the "QuintilesIMS Companies"), including the confidential information of the QuintilesIMS Companies and the confidential information of their respective customers, data suppliers, prospective customers and other companies with which the QuintilesIMS Companies have a business relationship, and in consideration of the covenants and promises and other valuable consideration described in this Agreement, the Company and the Participant agree as follows:

(a) The Participant acknowledges and agrees that he or she is bound by the confidentiality and other covenants contained in one or more restrictive covenant and confidentiality agreements that he or she has executed with a QuintilesIMS Company, which covenants and agreements are incorporated herein by reference and shall survive any exercise, expiration, forfeiture or other termination of this Agreement or the SARs issuable hereunder. The Participant also acknowledges and agrees that the Company shall be an affiliate for purposes of such restrictive covenant and confidentiality agreements.

(b) The Participant acknowledges that the opportunity to participate in the Plan and the financial benefits that may accrue from such participation, is good, valuable and sufficient consideration for the following:

(i) The Participant acknowledges and agrees that he or she is and will remain bound by the non-competition, non-solicitation and other covenants contained in the restrictive covenant and confidentiality agreement(s) that he or she has executed with any of the QuintilesIMS Companies to the fullest extent permitted by law.

(ii) The Participant further acknowledges and agrees that the period during which the non-competition and non-solicitation covenants in such agreement(s) will apply following a termination of Employment shall be extended from twelve (12) months to eighteen (18) months; provided, however, that the remedies available for breach of any non-competition or non-solicitation covenants during such extended six-month period shall be limited to the following: (x) to the extent then outstanding, the forfeiture of the SARs for no consideration, and (y) to the extent the SARs have been exercised on or after the date that is 18 months before Participant's cessation of Employment, with respect to the Shares issued upon such exercise (including Shares withheld for taxes), the Participant shall pay to the Company an amount equal to (A) the aggregate Fair Market Value of such Shares as of the date of exercise, plus (B) the excess, if any, of the aggregate proceeds of all sales of such Shares over the amount described under subsection (A) above. (For this purpose, the Participant's earliest sales of Shares following such exercise will be deemed sales of the Shares acquired upon such exercise.) The Company shall also be entitled to the foregoing remedies in the event of a material breach of any confidentiality, non-disclosure or other similar covenant contained in the restrictive covenant and confidentiality agreement(s) that the Participant has executed with a QuintilesIMS Company.

(iii) The Participant further acknowledges and agrees to the Company's application, implementation and enforcement of (a) such policy set forth in Section 11(b)(ii) of this Agreement and (b) Section 20.19 of the Plan and any provision of applicable law, stock exchange rule or Company policy relating to cancellation, recoupment, rescission or payback of compensation and expressly agrees that the Company may take such actions as are necessary to effectuate such policy (as applicable to the Participant) or applicable law or stock exchange rule without further consent or action being required by the Participant. For purposes of the foregoing, the Participant expressly and explicitly authorizes the Company to issue instructions, on the Participant's behalf, to any brokerage firm and/or third party administrator engaged by the Company to hold Participant's Shares and other amounts acquired under the Plan to re-convey, transfer or otherwise return such Shares and/or other amounts to the Company. To the extent that the terms of this Agreement and such policy conflict, the terms of such policy shall prevail.

(iv) By accepting the SARs, the Participant consents to one or more deductions from any amounts any QuintilesIMS Company owes the Participant from time

to time in an aggregate amount equal to all amounts described in subsection (ii) above, to the extent such deductions are permitted by applicable law. Any such deduction from an amount that constitutes a deferral of compensation under Code Section 409A may only take place at the time the amount would otherwise be payable to the Participant, except to the extent permitted by Code Section 409A.

13. Successors and Assigns. The Company may assign any of its rights under this Agreement to single or multiple assignees, and this Agreement shall inure to the benefit of the successors and assigns of the Company. Subject to the restrictions on transfer herein set forth, the terms and conditions of the Plan and this Agreement shall be binding upon the Participant and his or her heirs, executors, administrators, successors and assigns.

14. Interpretation. Any dispute regarding the interpretation of this Agreement shall be submitted by the Participant or by the Company forthwith to the Committee, which shall review such dispute at its next regular meeting. The resolution of such a dispute by the Committee shall be final and binding on all parties.

15. Tax Consequences. The exercise of this SAR and the subsequent disposition of the Shares may cause the Participant to be subject to federal, state and/or non-U.S. taxation. The Participant should consult a tax advisor before exercising SARs or disposing of the Shares purchased hereunder.

Regardless of any action the Company and/or the Employer takes with respect to any or all income tax (including U.S. federal, state and local taxes and/or non-U.S. taxes), social insurance, payroll tax, payment on account or other tax-related withholding ("Tax-Related Items"), the Participant acknowledges that the ultimate liability for all Tax-Related Items legally due by the Participant is and remains the Participant's responsibility and that the Company and the Employer (a) make no representations or undertakings regarding the treatment of any Tax-Related Items in connection with any aspect of the SARs, including the grant of the SARs, the vesting of the SARs, the exercise of the SARs, the subsequent sale of any Shares acquired pursuant to the SARs and the receipt of any dividends and (b) do not commit to structure the terms of the grant or any aspect of the SARs to reduce or eliminate the liability for Tax-Related Items.

Prior to the delivery of Shares upon exercise of the SARs, if the Participant's country of residence (and/or the Participant's country of employment, if different) requires withholding of Tax-Related Items, unless otherwise determined by the Committee, the Company shall withhold a sufficient number of whole Shares otherwise issuable upon exercise of the SARs that have an aggregate Fair Market Value sufficient to pay the Tax-Related Items required to be withheld with respect to the Shares delivered upon such exercise of the SARs. The cash equivalent of the Shares withheld will be used to settle the obligation to withhold the Tax-Related Items. In the event that withholding in shares is prohibited or problematic under applicable law or otherwise may trigged adverse consequences to the Company or the Employer, the Company and/or the Employer may withhold the minimum Tax-Related Items required to be withheld with respect to the Shares in cash from the Participant's regular salary and/or wages, or other amounts payable to the Participant. In the event the withholding requirements are not satisfied through the

withholding of Shares or through the Participant's regular salary and/or wages or any other amounts payable to the Participant by the Employer, no Shares will be issued to the Participant (or the Participant's estate) upon exercise of the SARs unless and until satisfactory arrangements (as determined by the Committee) have been made by the Participant with respect to the payment of any Tax-Related Items that the Company or the Employer determines, in its sole discretion, must be withheld or collected with respect to such SARs. By accepting the SARs, the Participant expressly consents to the withholding of Shares and/or withholding from the Participant's regular salary and/or wages or other amounts payable to the Participant as provided for hereunder. All other Tax-Related Items related to the SARs and any Shares delivered in payment thereof are the Participant's sole responsibility.

16. Participant Data Privacy. As a condition of the grant of the SARs, the Participant consents to the collection, use and transfer of personal data as described in this paragraph. The Participant understands that the Company and its Affiliates or Subsidiaries hold certain personal information about the Participant, including but not limited to the Participant's name, home address, email address and telephone number, date of birth, social security number, passport or other identification number, salary, nationality, job title, shares of common stock or directorships held in the Company, details of all SARs or other entitlement to shares of common stock awarded, cancelled, exercised, vested, unvested or outstanding in the Participant's favor for the purpose of managing and administering the Plan ("Data"). The Participant further understands that the Company and/or its Affiliates or Subsidiaries will transfer Data amongst themselves as necessary for the purposes of implementation, administration and management of the Participant's participation in the Plan, and that the Company and/or any of its Affiliates or Subsidiaries may each further transfer Data to any third parties assisting the Company in the implementation, administration and management of the Plan. The Participant understands that these recipients may be located in the Participant's country of residence or elsewhere. The Participant authorizes them to receive, possess, use, retain and transfer Data in electronic or other form, for the purposes of implementing, administering and managing the Participant's participation in the Plan, including any requisite transfer of such Data as may be required for the administration of the Plan and/or the subsequent holding shares of common stock on the Participant's behalf to a broker or other third party with whom the shares acquired on exercise may be deposited.

The Participant understands that the Participant may, at any time, view Data, request information about the storage and processing of Data, require any amendments to Data or refuse or withdraw the consent herein, in any case without cost, by contacting in writing the human resources representative. Further, the Participant does not consent, or if the Participant later seeks to revoke his or her consent, the Participant's employment status or service with his or her Employer will be unaffected; the only consequence of refusing or withdrawing the Participant's consent is that the Company would be unable to administer or maintain the awards. Therefore, the Participant understands that refusing or withdrawing his or her consent may affect his or her ability to receive Awards and participate in the Plan. For more information on the consequences of the Participant's refusal to consent or withdrawal of consent, the Participant understands that the Participant may contact his or her local human resources representative.

17. Confidentiality. The Participant agrees not to disclose the terms of this Agreement to anyone other than the members of the Participant's immediately family or the Participant's counsel or financial advisors and agrees to advise such persons of the confidential nature of this offer.

18. Section 409A; No Deferral of Compensation. Neither the Plan nor this Agreement is intended to provide for the deferral of compensation within the meaning of Section 409A of the Internal Revenue Code (the "Code"). The Company reserves the right to unilaterally amend or modify this Agreement, to the extent the Company considers it necessary or advisable, in its sole discretion, to comply with, or to ensure that the SARs granted hereunder are not subject to, Section 409A of the Code.

19. Governing Law. This Agreement and all claims arising out of or based upon this Agreement or relating to the subject matter hereof shall be governed by and construed in accordance with the domestic substantive laws of the State of Delaware without giving effect to any choice or conflict of laws provision or rule that would cause the application of the domestic substantive laws of any other jurisdiction.

Any legal proceeding arising out of this Plan or this Agreement shall be brought exclusively in the Federal or State courts located in the State of Delaware. The Participant agrees to submit to personal jurisdiction and to venue in those courts. The Participant further agrees to waive all legal challenges and defenses to the appropriateness of Delaware as the site of any such legal proceeding and to the application of the laws of the State of Delaware and any applicable Federal laws.

20. Miscellaneous.

(a) Notice hereunder shall be given to the Company at its principal place of business, and shall be given to the Participant at the last address shown in the Company's records, or in either case at such other address as one party may subsequently furnish to the other party in writing.

(b) Notwithstanding any provisions of this Agreement to the contrary, the SARs shall be subject to any special terms and conditions for the Participant's country of residence (and/or country of employment, if different) set forth in the addendum to this Agreement (the "Addendum"). Further, if the Participant transfers residency and/or employment to another country set forth in the Addendum, at the time of transfer, any special terms and conditions for such country will apply to the Participant to the extent the Company determines, in its sole discretion, that the application of such terms and conditions is necessary or advisable in order to comply with local law, rules and regulations or to facilitate the operation and administration of the SARs and the Plan (or the Company may establish alternative terms and conditions as may be necessary or advisable to accommodate the Participant's transfer). In all circumstances, any applicable Addendum shall constitute part of this Agreement.

(c) The Company reserves the right to impose other requirements on the SARs, any Shares acquired pursuant to the SARs and the Participant's participation in the Plan to the extent the Company determines, in its sole discretion, that such other requirements are necessary or advisable in order to comply with local law, rules and regulations or to facilitate the operation and administration of the SARs and the

Plan. Such requirements may include (but are not limited to) requiring the Participant to sign any agreements or undertakings that may be necessary to accomplish the foregoing.

(d) The issuance of Shares upon exercise of the SARs will be contingent upon the Company's receipt of any agreement, statement or other evidence that the Company and/or the Committee may require to satisfy itself that the issuance of Shares pursuant to the exercise of the SARs and any subsequent resale of the Shares will be in compliance with all applicable laws and regulations and with the requirements hereof and of the Plan. The determination of the Committee as to such compliance shall be final and binding on the Participant. The Participant shall not be deemed to be the holder of, or to have any dividend or other rights of a holder with respect to, any Shares subject to the SARs unless and until the SARs shall have been exercised pursuant to the terms hereof and of the Plan, the Company shall have issued and delivered the Shares to the Participant in accordance with this Agreement, and the Participant's name shall have been entered as the shareholder of record on the books of the Company (if an alternative method of delivery is elected by the Company, the Participant will be required to take appropriate steps to cause any nominee to transfer shares into the name of the Participant in order for the Participant to become a record holder of the shares). Thereupon, the Participant shall have full voting, dividend and other ownership rights with respect to such Shares.

(e) This Agreement is subject in its entirety to the provisions of the Plan, which are incorporated herein by reference. A copy of the Plan as in effect on the Grant Date has been furnished to the Participant. By accepting this award of SARs, the Participant agrees to be bound by the terms of the Plan and this Agreement.

(f) This Agreement, the Addendum (if applicable) and the Plan constitute the entire understanding between the Participant and the Company regarding the SARs, and any prior agreements, commitments or negotiations concerning the SARs are superseded.

(g) Any provision of this Agreement or the Addendum that is deemed invalid, illegal or unenforceable in any jurisdiction shall, as to that jurisdiction and subject to this Section, be ineffective to the extent of such invalidity, illegality or unenforceability, without affecting in any way the remaining provisions thereof in such jurisdiction or rendering that or any other provisions of this Agreement and the Addendum invalid, illegal, or unenforceable in any other jurisdiction. If any covenant should be deemed invalid, illegal or unenforceable because its scope is considered excessive, such covenant shall be modified so that the scope of the covenant is reduced only to the minimum extent necessary to render the modified covenant valid, legal and enforceable. No waiver of any provision or violation of this Agreement or the Addendum by the Company shall be implied by the Company's forbearance or failure to take action.

21. Acknowledgement and Acceptance.

(a) In accepting the SARs, the Participant acknowledges and agrees: (i) that the Plan is discretionary in nature and may be amended, cancelled, suspended or terminated by the Company at any time; (ii) that the grant of the SARs does not create any contractual or other right to receive future grants of SARs or any right to continue an employment or other relationship with the Company (for the vesting period or otherwise); (iii) that the Participant remains subject to discharge from such relationship to the same extent as if the SARs had not been granted; (iv) that all determinations with respect to any such future grants, including, but not limited to, when and on what terms they shall be made, will be at the sole discretion of the Committee; (v) that participation in the Plan is voluntary; (vi) that the value of the SARs is an extraordinary item of compensation that is outside the scope of the Participant's employment contract if any; and (vii) that the grant of SARs is not part of normal or expected compensation for purposes of calculating any severance, resignation, redundancy, end of service payments, bonuses, long-service awards, pension or retirement benefits or similar benefits.

(b) If the Participant does not want to accept the SARs on the terms and conditions set out in this Agreement, the Plan and/or any related documents, the Participant may choose the "Decline" button. The SARs will then be cancelled and no other benefit will be due to the Participant in lieu thereof. If Participant does not "Decline" the SARs within thirty (30) days from the Grant Date, the Participant shall be deemed to have accepted the SARs and shall be deemed to have agreed to the terms and conditions set out in this Agreement, the Plan and/or any related documents.

(c) All questions arising under this Agreement, Exhibit A, the Addendum (if applicable) and the Plan shall be decided by the Committee in its sole discretion.

(d) The grant of the SAR is not intended to be a public offering of securities in the Participant's country of residence (and country of employment, if different). The Company has not submitted any registration statement, prospectus or other filings with the local securities authorities (unless otherwise required under local law), and the grant of the SARs is not subject to the supervision of the local securities authorities. No employee of the Company or any of the Company's subsidiaries is permitted to advise the Participant on whether the Participant should acquire Shares by exercising the SAR under the Plan. Investment in Shares involves a degree of risk. Before deciding to acquire Shares by exercising the SARs, the Participant should carefully consider all risk factors relevant to the acquisition of Shares under the Plan and the Participant should carefully review all of the materials related to the SAR and the Plan. In addition, the Participant should consult with the Participant's personal advisor for professional investment advice.

(e) The Participant acknowledges and agrees that it is the Participant's express intent that this Agreement, the Exhibit A, the Addendum (if applicable) and the Plan and all other documents, notices and legal proceedings entered into, given or instituted pursuant to the award, be drawn up in English. If the Participant has received this Agreement, the Exhibit A, the Addendum and the Plan or any other documents related to the award translated into a language other than English, and if the meaning of the translated version is different than the English version, the English version shall control.

(f) As a condition to the grant of the SARs, the Participant agrees to repatriate all payments attributable to the Shares and/or cash acquired under the Plan in accordance with local foreign exchange rules and regulations in the Participant's country of residence (and country of employment, if different). In addition, the Participant also agrees to take any and all actions, and consents to any and all actions taken by the Company and its affiliates and subsidiaries and/or the Employer, as may be required to allow the Company and its affiliates and subsidiaries or the Employer to comply with local laws, rules and regulations in the Participant's country of residence (and country of employment, if different). Finally, the Participant agrees to take any and all actions as may be required to comply with the Participant's personal obligations under local laws, rules and regulations in the Participant's country of residence (and country of employment, if different).

By choosing the "Accept" button, the Participant accepts the SARs as described above and the terms and conditions set out in this Agreement, the Plan and any related documents. Copies of the Plan and such related documents are being provided to Participant as part of this Agreement.

PARTICIPANT

[insert Name of Participant]

QUINTILES IMS HOLDINGS, INC.

James H. Erlinger, III
EVP, General Counsel & Corporate Secretary

STOCK APPRECIATION RIGHTS AGREEMENT
PURSUANT TO QUINTILES IMS HOLDINGS, INC.
2013 STOCK INCENTIVE PLAN

EXHIBIT A

Name of Participant:	[insert Name of Participant]
No. of Shares subject to the Stock Appreciation Rights:	[insert No. of Shares]
Grant Price per Share:	$[insert per share grant price]
Grant Date:	[insert Grant Date]
Expiration Date:	[insert date 10 years from Grant Date]

Vesting Schedule:

Number of SARs Exercisable		Vesting Date
[ ]	(33.00%)	[ ]
[ ]	(33.00%)	[ ]
[ ]	(34.00%)	[ ]

Exhibit 10.45

Name of Participant: _____

QUINTILES IMS HOLDINGS, INC.
2013 STOCK INCENTIVE PLAN

AWARD AGREEMENT
(Awarding Performance Shares)

THIS AWARD AGREEMENT (this "Agreement") is made by and between Quintiles IMS Holdings, Inc., a Delaware corporation (the "Company"), and the participant named above (the "Participant") pursuant to the provisions of the Quintiles IMS Holdings, Inc. 2013 Stock Incentive Plan (the "Plan"), which is incorporated herein by reference. Capitalized terms not defined in this Agreement shall have the meanings given to them in the Plan. In the event of a conflict between the terms and conditions of this Agreement and the Plan, the Plan shall control.

WITNESSETH:

WHEREAS, the Participant is providing, or has agreed to provide, services to the Company, or Affiliate or a Subsidiary of the Company, as an Employee, Director or Third Party Service Provider; and

WHEREAS, the Company considers it desirable and in its best interests that the Participant be given a personal stake in the Company's growth, development and financial success through the grant of performance shares (the "Performance Shares") providing an opportunity to earn shares of the $.01 par value common stock of the Company ("Shares") subject to the vesting and other terms and conditions set forth herein. Each Performance Share represents an unfunded and unsecured right to receive one Share, although the number of Shares issued will be determined in accordance with Exhibit A . Performance Shares are not property or Shares prior to settlement.

NOW, THEREFORE, in consideration of the premises and the mutual agreements set forth herein, the parties agree as follows:

1. Grant of Performance Shares . Effective as of [insert AWARD DATE **|** (the "Date of Grant"), the Company hereby grants to the Participant an award (the "Award") of Performance Shares providing an opportunity to earn [insert TOTAL PERFORMANCE SHARES GRANTED **|** Shares if designated performance goals are achieved at target levels, an opportunity to earn 50% of such target number of Shares if designated performance goals are achieved at threshold levels and an opportunity to earn 200% of the target number of Shares if designated performance goals are achieved at or above the maximum levels, subject in all cases to vesting, forfeiture and other terms and conditions set forth in this Agreement (including Exhibit A). For the avoidance of doubt, the total number of Performance Shares subject to the Award and the performance goals set forth herein are subject to adjustment pursuant to Section 4.4

of the Plan. For purposes of this Agreement, "Employer" shall mean the Affiliate or Subsidiary that employs the Participant (to the extent the Participant is not directly employed by the Company).

No rights as a shareholder shall exist with respect to the Performance Shares as a result of the mere grant of the Performance Shares. Such rights shall exist only after issuance of the Shares in accordance with Section 4 hereof and Exhibit A . The Participant shall not be entitled to receive, currently or on a deferred basis, any dividends or payments (i.e., "dividend equivalents") equivalent to cash, stock or other property paid by the Company as dividends on the Company's Shares prior to the vesting of the Performance Shares.

2. Earning and Vesting . The Performance Shares are subject to forfeiture until they vest. Subject to the terms and conditions set forth in this Agreement and the Plan, and unless earlier terminated or forfeited, the Performance Shares will be earned and vest in accordance with the terms of Exhibit A . Further, notwithstanding any provision of the Plan or this Agreement to the contrary, in no event will any Performance Shares that are not vested immediately prior to the time of a Sale of the Company become vested because of such event.

3. Termination of the Award . If the Participant's employment by, or other service to, the Company or any of its Affiliates or Subsidiaries ("Employment") ceases for any reason prior to the end of the Performance Period, the Performance Shares will be forfeited immediately, unless otherwise determined by the Committee.

Any outstanding Performance Shares that do not vest in accordance with the terms set forth in Exhibit A will terminate on the Determination Date, without any consideration due to the Participant, subject to earlier termination as provided for above.

Other provisions of the Plan and this Agreement, including Sections 8 and 9 of the Agreement, may result in the termination of the Award prior to the end of the Performance Period or the Determination Date, as applicable.

4. Settlement .

(a) Not later than thirty (30) days following the Determination Date (as defined in Exhibit A), but in no event later than March 15 th of the year following the end of the Performance Period, the Company shall deliver to the Participant the number of Shares that become earned and that vest on the Determination Date, determined in accordance with Exhibit A . Payment may be made by issuance of Shares in the name of the Participant and delivery of such Shares to the Participant or, in the discretion of the Company, by issuance and delivery of such Shares to a financial institution for the account of the Participant, or in any other commercially reasonable manner as may be determined by the Company.

(b) The Participant's sales or other dispositions of Shares acquired upon settlement of the Performance Shares will be subject to applicable restrictions under Company policies applicable to the Participant, including those covering insider trading by employees.

(c) Notwithstanding any provision in this Agreement to the contrary, the Company may, in its sole discretion, settle the Participant's Performance Shares in the form of (1) a cash payment to the extent settlement in Shares (i) is prohibited under local law, (ii) would require the Participant, the Company and/or the Employer to obtain the approval of any governmental and/or regulatory body in the Participant's country of residence (and/or country of employment, if different), or (iii) is administratively burdensome; or (2) Shares, but require the Participant to immediately sell such Shares (in which case, as a condition to the grant of this Award, the Participant hereby expressly and explicitly authorizes the Company to issue sales instructions, on the Participant's behalf) to any brokerage firm and/or third party administrator engaged by the Company to hold your Shares and other amounts acquired under the Plan.

5. Restrictive Legends . The Participant understands and agrees that the Company may cause the legends set forth below or legends substantially equivalent thereto, to be placed upon any certificate(s) or book-entry notations evidencing ownership of the Shares together with any other legends that may be required by the Company or by state or federal securities laws:

THE SECURITIES REPRESENTED BY THIS CERTIFICATE ARE SUBJECT TO THE QUINTILES IMS HOLDINGS, INC. 2013 STOCK INCENTIVE PLAN, AS SUCH PLAN MAY BE ALTERED, AMENDED, RESTATED OR MODIFIED FROM TIME TO TIME, AND ANY TRANSFEREE OF THESE SECURITIES SHALL BE SUBJECT TO THE TERMS OF SUCH PLAN. COPIES OF THE FOREGOING PLAN ARE MAINTAINED WITH THE CORPORATE RECORDS OF THE ISSUER AND ARE AVAILABLE FOR INSPECTION AT THE PRINCIPAL OFFICES OF THE ISSUER.

THE SECURITIES REPRESENTED BY THIS CERTIFICATE ARE ALSO SUBJECT TO AN AWARD AGREEMENT BETWEEN THE ISSUER AND THE HOLDER, AS SUCH AGREEMENT MAY BE AMENDED, RESTATED OR MODIFIED FROM TIME TO TIME, AND ANY TRANSFEREE OF THESE SECURITIES SHALL BE SUBJECT TO THE TERMS OF SUCH AGREEMENT. COPIES OF THE FOREGOING AGREEMENT ARE MAINTAINED WITH THE CORPORATE RECORDS OF THE ISSUER AND ARE AVAILABLE FOR INSPECTION AT THE PRINCIPAL OFFICES OF THE ISSUER.

6 **.** Non-Transferability of Performance Shares . Except as may be otherwise determined by the Committee in its sole discretion, the Performance Shares are non-assignable and are not transferable in any manner, by operation of law or otherwise, other than by will or the laws of descent and distribution or as permitted by the Committee. Any attempted transfer, assignment, pledge or other disposition of the Award, the Performance Shares, or of any rights granted under this Agreement that is contrary to the provisions of the Plan or this Section 6 shall be null and void. Except as permitted by the Plan, the Shares to be issued pursuant to this Agreement shall be issued, during the Participant's lifetime, only to the Participant. A permitted transferee will have the rights of the Participant with regard to any transferred Award, subject to any limitations imposed by the Company as a condition of permitting the transfer or otherwise.

7. Restrictions on Shares . This Agreement shall be subject to all applicable laws, rules, and regulations, and to such approvals by any governmental agencies or stock exchange as may be required. The Participant agrees to take all steps the Committee determines are

necessary to comply with all applicable provisions of federal, state and foreign securities law in exercising his or her rights under this Agreement. The Committee may impose such restrictions on any Shares acquired pursuant to the Performance Shares as it deems advisable, including without limitation, minimum holding period requirements, restrictions under applicable federal securities laws, under the requirements of any stock exchange or market upon which such Shares are then listed or traded, or under any blue sky state or foreign securities laws as may be applicable to such Shares.

8. Forfeiture; Recovery of Compensation .

(a)The Committee may cancel, rescind, withhold or otherwise limit or restrict the Performance Shares or delivery of Shares in settlement of the Performance Shares at any time if the Participant is not in compliance with all applicable provisions of this Agreement and the Plan.

(b) By accepting the Performance Shares, the Participant expressly acknowledges and agrees that his or her rights, and those of any permitted transferee of the Performance Shares, with respect to the Performance Shares, including to any Shares acquired upon settlement of the Performance Shares or proceeds from the disposition thereof, are subject to Section 11.3 and 20.9 of the Plan (including any successor provision). Nothing in the preceding sentence shall be construed as limiting the general application of Section 16(e) of this Agreement.

(c) To the extent the Participant is covered by the Quintiles IMS Holdings, Inc. Change in Control Severance Plan (the "Severance Plan"), adopted on November 5, 2015: Upon a termination of the Participant's employment or service with the Company, the effects of such termination of employment or service on the Award shall be as set forth in this Agreement, and by accepting this Award, the Participant expressly acknowledges and agrees that the treatment of equity awards upon a termination of employment or service set forth in Section 5.01 of the Severance Plan, shall not in any respect apply to the Award granted hereunder.

9. Other Undertakings . To protect the interests of the Company and its direct and indirect Affiliates and Subsidiaries (individually, a "QuintilesIMS Company" and collectively, the "QuintilesIMS Companies"), including the confidential information of the QuintilesIMS Companies and the confidential information of their respective customers, data suppliers, prospective customers and other companies with which the QuintilesIMS Companies have a business relationship, and in consideration of the covenants and promises and other valuable consideration described in this Agreement, the Company and the Participant agree as follows:

(a) The Participant acknowledges and agrees that he or she is bound by the confidentiality and other covenants contained in one or more restrictive covenant and confidentiality agreements that he or she has executed with a QuintilesIMS Company, which covenants and agreements are incorporated herein by reference and shall survive any settlement, expiration, forfeiture or other termination of this Agreement or the Performance Shares issuable hereunder. The Participant also acknowledges and agrees that the Company shall be an affiliate for purposes of such restrictive covenant and confidentiality agreements.

(b) The Participant acknowledges that the opportunity to participate in the Plan and the financial benefits that may accrue from such participation is good, valuable and sufficient consideration for the following:

(i) The Participant acknowledges and agrees that he or she is and will remain bound by the non-competition, non-solicitation and other covenants contained in the restrictive covenant and confidentiality agreement(s) that he or she has executed with any of the QuintilesIMS Companies to the fullest extent permitted by law.

(ii) The Participant further acknowledges and agrees that the period during which the non-competition and non-solicitation covenants in any such agreement(s) will apply following a termination of Employment shall be extended from twelve (12) months to eighteen (18) months; provided, however, that the remedies available for breach of any non-competition or non-solicitation covenants during such extended six-month period shall be limited to the following: (x) to the extent then outstanding, the forfeiture of the Performance Shares for no consideration, and (y) to the extent the Performance Shares have been settled on or after the date that is eighteen (18) months before the Participant's cessation of Employment, with respect to the Shares issued upon such settlement (including Shares withheld for taxes), the Participant shall pay to the Company an amount equal to (A) the aggregate Fair Market Value of such Shares as of the date of settlement, plus (B) the excess, if any, of the aggregate proceeds of all sales of such Shares over the amount described under subsection (A) above. (For this purpose, the Participant's earliest sales of Shares following such settlement will be deemed sales of the Shares acquired upon such settlement.) The Company shall also be entitled to the foregoing remedies in the event of a material breach of any confidentiality, non-disclosure or other similar covenant contained in the restrictive covenant and confidentiality agreement(s) that the Participant has executed with a QuintilesIMS Company.

(iii) The Participant further acknowledges and agrees to the Company's application, implementation and enforcement of (a) such policy set forth in Section 9(b)(ii) of this Agreement and (b) Section 20.19 of the Plan and any provision of applicable law, stock exchange rule or Company policy relating to cancellation, recoupment, rescission or payback of compensation and expressly agrees that the Company may take such actions as are necessary to effectuate such policy (as applicable to the Participant) or applicable law or stock exchange rule without further consent or action being required by the Participant. For purposes of the foregoing, the Participant expressly and explicitly authorizes the Company to issue instructions, on the Participant's behalf, to any brokerage firm and/or third party administrator engaged by the Company to hold Participant's Shares and other amounts acquired under the Plan to re-convey, transfer or otherwise return such Shares and/or other amounts to the Company. To the extent that the terms of this Agreement and such policy conflict, the terms of such policy, applicable law or stock exchange rule shall prevail.

(iv) By accepting the Performance Shares, the Participant consents to one or more deductions from any amounts any QuintilesIMS Company owes the Participant from time to time in an aggregate amount equal to all amounts described in subsection (ii) above, to the extent such deductions are permitted by applicable law. Any such deduction from an amount that constitutes a deferral of compensation under Code Section 409A may only take place at the time the amount would otherwise be payable to the Participant, except to the extent permitted by Code Section 409A.

10. Successors and Assigns . The Company may assign any of its rights under this Agreement to single or multiple assignees, and this Agreement shall inure to the benefit of the successors and assigns of the Company. Subject to the restrictions on transfer herein set forth, the terms and conditions of the Plan and this Agreement shall be binding upon the Participant and his or her heirs, executors, administrators, successors and assigns, subject to Section 6 of this Agreement.

11. Interpretation . Any dispute regarding the interpretation of this Agreement shall be submitted by the Participant or by the Company forthwith to the Committee, which shall review such dispute at its next regular meeting. The resolution of such a dispute by the Committee shall be final and binding on all parties.

12. Tax Consequences . The delivery of Shares and the subsequent disposition of those Shares may cause the Participant to be subject to federal, state and/or foreign taxation. The Participant should consult a tax advisor regarding the tax implications of receiving and disposing of Shares.

Regardless of any action the Company and/or the Employer takes with respect to any or all income tax (including U.S. federal, state and local taxes or non-U.S. taxes), social insurance, payroll tax, fringe benefit, payment on account or other tax-related withholding ("Tax-Related Items"), the Participant acknowledges that the ultimate liability for all Tax-Related Items legally due by the Participant is and remains the Participant's responsibility and that the Company and the Employer (a) make no representations or undertakings regarding the treatment of any Tax-Related Items in connection with any aspect of the Award, including the grant of the Performance Shares, the vesting of the Performance Shares, the subsequent issuance or sale of any Shares acquired pursuant to the Performance Shares and the receipt of any dividends, and (b) do not commit to structure the terms of the grant or any aspect of the Performance Shares to reduce or eliminate the Participant's liability for Tax-Related Items.

Prior to the delivery of Shares upon the vesting of the Participant's Performance Shares, if the Participant's country of residence (and/or the country of employment, if different) requires withholding of Tax-Related Items, the Company shall withhold a sufficient number of whole Shares otherwise issuable upon the vesting of the Performance Shares that have an aggregate Fair Market Value sufficient to pay the Tax-Related Items required to be withheld with respect to the Shares delivered upon such vesting of the Performance Shares. The cash equivalent of the Shares withheld will be used to settle the obligation to withhold the Tax-Related Items. In the event that withholding in shares is prohibited or problematic under applicable law or otherwise may trigged adverse consequences to the Company or the

Employer, the Company and/or the Employer may withhold the minimum Tax-Related Items required to be withheld with respect to the Shares in cash from the Participant's regular salary and/or wages or any other amounts payable to the Participant. In the event the withholding requirements are not satisfied through the withholding of Shares by the Company or through the Participant's regular salary and/or wages or other amounts payable to the Participant, no Shares will be issued to the Participant (or the Participant's estate) upon vesting of the Performance Shares unless and until satisfactory arrangements (as determined by the Committee) have been made by the Participant with respect to the payment of any Tax-Related Items that the Company or the Employer determines, in its sole discretion, must be withheld or collected with respect to such Performance Shares. By accepting this grant of Performance Shares, the Participant expressly consents and agrees to the withholding of Shares and/or withholding from the Participant's regular salary and/or wages or other amounts payable to the Participant as provided for hereunder. All other Tax-Related Items related to the Performance Shares and any Shares delivered in payment thereof are the Participant's sole responsibility.

13. Participant Data Privacy . As a condition of the grant of these Performance Shares, the Participant consents to the collection, use and transfer of personal data as described in this paragraph. The Participant understands that the Company and its Affiliates or Subsidiaries hold certain personal information about the Participant, including but not limited to the Participant's name, home address, email address and telephone number, date of birth, social security number, passport or other identification number, salary, nationality, job title, shares of common stock or directorships held in the Company, details of all Performance Shares or other entitlement to shares of common stock awarded, cancelled, exercised, vested, unvested or outstanding in the Participant's favor for the purpose of managing and administering the Plan ("Data"). The Participant further understands that the Company and/or its Affiliates or Subsidiaries will transfer Data amongst themselves as necessary for the purposes of implementation, administration and management of the Participant's participation in the Plan, and that the Company and/or any of its Affiliates or Subsidiaries may each further transfer Data to any third parties assisting the Company in the implementation, administration and management of the Plan. The Participant understands that these recipients may be located in the Participant's country of residence or elsewhere. The Participant authorizes them to receive, possess, use, retain and transfer Data in electronic or other form, for the purposes of implementing, administering and managing the Participant's participation in the Plan, including any requisite transfer of such Data as may be required for the administration of the Plan and/or the subsequent holding shares of common stock on the Participant's behalf to a broker or other third party with whom the Shares acquired on settlement may be deposited.

The Participant understands that the Participant may, at any time, view Data, request information about the storage and processing of Data, require any amendments to Data or refuse or withdraw the consent herein, in any case without cost, by contacting in writing the local human resources representative. Further, the Participant understands that he or she is providing the consent herein on a purely voluntary basis. If the Participant does not consent, or if the Participant later seeks to revoke his or her consent, the Participant's employment status or service with the Employer will be unaffected; the only consequence of refusing or withdrawing the Participant's consent is that the Company would be unable to administer or maintain the Awards. Therefore, the Participant understands that refusing or withdrawing his or her consent

may affect his or her ability to receive Awards and participate in the Plan. For more information on the consequences of the Participant's refusal to consent or withdrawal of consent, the Participant understand that the Participant may contact his or her local human resources representative.

14. Confidentiality . The Participant agrees not to disclose the terms of this Agreement to anyone other than the members of the Participant's immediate family or the Participant's counsel or financial advisors and agrees to advise such persons of the confidential nature of this offer.

15. Governing Law . This Agreement and all claims arising out of or based upon this Agreement or relating to the subject matter hereof shall be governed by and construed in accordance with the domestic substantive laws of the State of Delaware without giving effect to any choice or conflict of laws provision or rule that would cause the application of the domestic substantive laws of any other jurisdiction.

Any legal proceeding arising out of this Plan or this Agreement shall be brought exclusively in the Federal or State courts located in the State of Delaware. The Participant agrees to submit to personal jurisdiction and to venue in those courts. The Participant further agrees to waive all legal challenges and defenses to the appropriateness of Delaware as the site of any such legal proceeding and to the application of the laws of the State of Delaware and any applicable Federal laws.

16. Miscellaneous .

(a) Notice hereunder shall be given to the Company at its principal place of business, and shall be given to the Participant at the last address shown in the Company's records, or in either case at such other address as one party may subsequently furnish to the other party in writing.

(b) Notwithstanding any provisions of this Agreement to the contrary, the Award shall be subject to any special terms and conditions for the Participant's country of residence (and/or country of employment, if different) set forth in the addendum to this Agreement (the "Addendum"). Further, if the Participant transfers residency and/or employment to another country reflected in the Addendum, at the time of transfer, the special terms and conditions for such country will apply to the Participant to the extent the Company determines, in its sole discretion, that the application of such terms and conditions is necessary or advisable in order to comply with local law, rules and regulations or to facilitate the operation and administration of the Award and the Plan (or the Company may establish alternative terms and conditions as may be necessary or advisable to accommodate the Participant's transfer). In all circumstances, any applicable addendum shall constitute part of this Agreement.

(c) The Company reserves the right to impose other requirements on the Award, any Shares acquired pursuant to the Performance Shares and the Participant's participation in the Plan to the extent the Company determines, in its sole discretion, that such other requirements are necessary or advisable in order to comply with local law, rules and regulations or to facilitate the operation and administration of the Award and the Plan. Such requirements may include (but are not limited to) requiring the Participant to sign any agreements or undertakings that may be necessary to accomplish the foregoing.

(d) The issuance of Shares upon settlement of the Performance Shares will be contingent upon the Company's receipt of any agreement, statement or other evidence that the Company and/or the Committee may require to satisfy itself that the issuance of Shares pursuant to the settlement of the Performance Shares and any subsequent resale of the Shares will be in compliance with all applicable laws and regulations and with the requirements hereof and of the Plan. The determination of the Committee as to such compliance shall be final and binding on the Participant. The Participant shall not be deemed to be the holder of, or to have any rights with respect to dividends or other rights of a holder with respect to, any Shares underlying the Performance Shares unless and until the Company shall have issued and delivered the Shares to the Participant in accordance with Section 4 and Exhibit A of this Agreement, and the Participant's name shall have been entered as the shareholder of record on the books of the Company (if an alternative method of delivery is elected by the Company under Section 4, Participant will be required to take appropriate steps to cause any nominee to transfer Shares into the name of the Participant in order for Participant to become a record holder of the Shares). Thereupon, the Participant shall have full voting, dividend and other ownership rights with respect to such Shares.

(e) This Agreement is subject in its entirety to the provisions of the Plan, which are incorporated herein by reference. A copy of the Plan as in effect on the Date of Grant has been furnished to the Participant. Accepting the Award, the Participant agrees to be bound by the terms of the Plan and this Agreement.

(f) The Agreement, Exhibit A , the Addendum (if applicable) and the Plan constitute the entire understanding between the Participant and the Company regarding the Performance Shares, and any prior agreements, commitments or negotiations concerning the Performance Shares are superseded. This Agreement may not be modified adversely to the Participant's interest except by means of a writing signed by the Company and Participant.

(g) Any provision of this Agreement, Exhibit A or the Addendum that is deemed invalid, illegal or unenforceable in any jurisdiction shall, as to that jurisdiction and subject to this Section, be ineffective to the extent of such invalidity, illegality or unenforceability, without affecting in any way the remaining provisions thereof in such jurisdiction or rendering that or any other provisions of this Agreement, Exhibit A and the Addendum invalid, illegal, or unenforceable in any other jurisdiction. If any covenant should be deemed invalid, illegal or unenforceable because its scope is considered excessive, such covenant shall be modified so that the scope of the covenant is reduced only to the minimum extent necessary to render the modified covenant valid, legal and enforceable. No waiver of any provision or violation of the Agreement or the Addendum by the Company shall be implied by the Company's forbearance or failure to take action.

(h) The Performance Shares are intended to be exempt from the requirements of Code Section 409A. The Plan and this Agreement shall be administered and interpreted in a manner consistent with this intent. If the Company determines that this Agreement is subject to Code Section 409A and that it has failed to comply with the requirements of that Section, the Company may, at the Company's sole discretion and without Participant consent, amend the Agreement to cause the terms and conditions of the Agreement to comply with Code Section 409A

or be exempt from Code Section 409A. Notwithstanding the foregoing, in no event shall the Company be liable for all or any portion of any taxes, penalties, interest or other expenses that may be incurred by the Participant on account of non-compliance with Section 409A of the Code.

17. Acknowledgement and Acceptance .

(a) In accepting the Performance Shares, the Participant acknowledges and agrees (i) that the Plan is discretionary in nature and may be amended, cancelled, suspended or terminated by the Company at any time; (ii) that the grant of Performance Shares does not create any contractual or other right to receive future grants of Performance Shares or any right to continue an employment or other relationship with the Company (for the vesting period or otherwise); (iii) that the Participant remains subject to discharge from such relationship to the same extent as if the Performance Shares had not been granted; (iv) that all determinations with respect to any such future grants, including, but not limited to, when and on what terms they shall be made, will be at the sole discretion of the Committee; (v) that participation in the Plan is voluntary; (vi) that the value of the Performance Shares is an extraordinary item of compensation that is outside the scope of the Participant's employment contract if any; and (vii) that the Performance Shares are not part of normal or expected compensation for purposes of calculating any severance, resignation, redundancy, end of service payments, bonuses, long-service awards, pension or retirement benefits or similar benefits.

(b) If the Participant does not want to accept the Performance Shares on the terms and conditions set out in this Agreement, the Plan and/or any related documents, the Participant may choose the "Decline" button found [insert site/location]. The Performance Shares will then be cancelled and no other benefit will be due to the Participant in lieu thereof. If Participant does not "Decline" the Performance Shares within thirty (30) days from the Grant Date, the Participant shall be deemed to have accepted the Performance Shares and shall be deemed to have agreed to the terms and conditions set out in this Agreement, the Plan, Exhibit A , the Addendum (as applicable) and/or any related documents.

(c) All questions arising under the Agreement, Exhibit A , the Addendum (if applicable) and the Plan shall be decided by the Committee in its sole discretion.

(d) Neither the grant of the Performance Shares, nor the issuance of Shares in settlement of the Performance Shares, will give the Participant any right to be retained in the employ or service of the Company or any of its subsidiaries, affect the right of the Company or any of its Subsidiaries, to discharge (as may otherwise be permitted under local law) or discipline the Participant at any time, or affect any right of the Participant to terminate his or her Employment at any time.

(e) The grant of the Performance Shares under the Plan is a one-time benefit and does not create any contractual or other right to receive Performance Shares or benefits in lieu of Performance Shares in the future. The terms of future Performance Shares, if any, will be determined by the Company in its sole discretion, including, but not limited to, the form and timing of such Award, the number of Shares subject to the Performance Shares, and the vesting provisions applicable to the Performance Shares.

(f) The headings preceding the text of the sections hereof are inserted solely for convenience of reference, and shall not constitute a part of this Agreement, nor shall they affect its meaning, construction or effect.

(g) The grant of Performance Shares is not intended to be a public offering of securities in the Participant's country of residence (and country of employment, if different). The Company has not submitted any registration statement, prospectus or other filings with the local securities authorities (unless otherwise required under local law), and the grant of the Performance Shares is not subject to the supervision of the local securities authorities.

(h) It is the Participant's express intent that this Agreement, Exhibit A , the Addendum, the Plan and all other documents, notices and legal proceedings entered into, given or instituted pursuant to the Award, be drawn up in English. If the Participant has received this Agreement, Exhibit A , the Addendum, the Plan or any other documents related to the Award translated into a language other than English, and if the meaning of the translated version is different than the English version, the English version shall control.

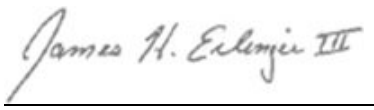
(i) As a condition to the Performance Shares, the Participant agrees to repatriate all payments attributable to the Shares and/or cash acquired under the Plan in accordance with local foreign exchange rules and regulations in the Participant's country of residence (and country of employment, if different). In addition, the Participant also agrees to take any and all actions, and consents to any and all actions taken by the Company and any affiliate or subsidiary, as may be required to allow the Company and any affiliates of subsidiaries to comply with local laws, rules and regulations in the Participant's country of residence (and country of employment, if different). Finally, the Participant agrees to take any and all actions as may be required to comply with the Participant's personal obligations under local laws, rules and regulations in the Participant's country of residence (and country of employment, if different).

By choosing the "Accept" button provided [insert site/location], the Participant accepts the Performance Shares as described above and the terms and conditions set out in this Agreement, Exhibit A , the Addendum (as applicable), the Plan and any related documents. Copies of the Plan and such related documents are being provided to Participant as part of this Agreement.

PARTICIPANT

[insert Name of Participant]

QUINTILES IMS HOLDINGS, INC.



James H. Erlinger, III
EVP, General Counsel & Corporate Secretary

Exhibit A
Performance Shares – Terms and Conditions

1. EPS Shares and TSR Shares . Seventy-five percent (75%) of the Performance Shares are designated as "EPS Shares" and twenty-five percent (25%) of the Performance Shares are designated as "TSR Shares".

2. Definitions . The terms set forth below, as used in this Exhibit A , shall have the following meanings:

(a) "Adjusted Diluted EPS" means, with respect to each fiscal year during the Performance Period, Earnings Per Share, as adjusted to reflect the same adjustments as are made to Adjusted Net Income with respect to such fiscal year (as reported with respect to the relevant fiscal year in the Company's financial statements), divided by the weighted-average Shares outstanding as of the end of the relevant fiscal year, calculated on a diluted basis and reported in the Company's financial statements in accordance with GAAP. The performance goal for Adjusted Diluted EPS shall be subject to adjustment upon the occurrence of certain corporate events in accordance with Section 4.4 of the Plan and may be subject to such other adjustments for material or non-recurring events occurring during the relevant fiscal year as determined by the Committee in its sole discretion.

(b) "Base Year" means the fiscal year immediately preceding the beginning of the Performance Period.

(c) "Comparator Group" shall mean the companies listed in the S&P 500.

A company listed in the S&P 500 that ceases to be publicly traded during the first two years of the Performance Period will not be treated as part of the Comparator Group. A company listed in the S&P 500 that ceases to be publicly traded in the final year of the Performance Period will be included in the Comparator Group and its Total Shareholder Return will be determined by treating the last day of public trading of the company's shares as the valuation date for that company, with no further adjustment to that company's Total Shareholder Return for the remainder of the Performance Period.

(d) "Determination Date" shall mean the date on which the Committee determines the number of Shares that have been earned with respect to the EPS Shares and the TSR Shares, which date shall occur not later than sixty (60) days after the close of the Performance Period.

(e) "Earnings Per Share" shall mean, with respect to each fiscal year during the Performance Period, the Company's earnings per share, fully diluted, as reported in accordance with generally accepted accounting principles in the United States (GAAP).

(f) "EPS Growth" shall mean the compound annual growth rate, expressed as a percentage, of Adjusted Diluted EPS during the Performance Period, which shall be measured by comparing the Adjusted Diluted EPS in the final year of the Performance Period to Adjusted Diluted EPS in the Base Year.

(g) “Performance Period” shall mean the period beginning on January 1, 2017 and ending on December 31, 2019.

(h) “Total Shareholder Return” shall mean the change in the value expressed as a percentage of a given dollar amount invested in a company’s most widely publicly traded stock over the Performance Period, taking into account both stock price appreciation (or depreciation) and the reinvestment of dividends (including the cash value of non-cash dividends) in such stock of the company. The ten (10) trading-day average closing value of the Company’s Shares and the stock of the Comparator Group companies, as applicable (*i.e.* , average closing values over the period of ten (10) trading days ending on the day prior to the beginning of the Performance Period and the final ten (10) trading days ending on the final day of the Performance Period) will be used to value the Company’s Shares and the stock of the Comparator Group companies, as applicable. Dividend reinvestment will be calculated using the closing price of the Shares or the stock of the applicable Comparator Group company, as applicable, on the dividend payment date or, if no trades were reported on such date, the latest preceding date for which a trade was reported.

(i) “TSR Measurement Date” means the last day of the Performance Period, except as otherwise provided in the definition of “Comparator Group” or as determined by the Committee.

(j) “TSR Percentile Rank” shall mean the percentage of Total Shareholder Return values among the Comparator Group companies at the TSR Measurement Date that are equal to or lower than the Company’s Total Shareholder Return at the TSR Measurement Date, provided that if the Company’s Total Shareholder Return falls between the Total Shareholder Return of two companies in the Comparator Group, the TSR Percentile Rank shall be adjusted by interpolating the Company’s Total Shareholder Return on a straight line basis between the Total Shareholder Return of the two Comparator Group companies that are closest to the Company’s. For example, if there were ten Comparator Group companies and the Company’s Total Shareholder Return falls at the point that is equal to 75% of the difference between the 5 th highest Total Shareholder Return and the 6 th highest Total Shareholder Return of the Comparator Group companies at the TSR Measurement Date, the TSR Percentile Rank would be deemed to be 57.5%. For purposes of the TSR Percentile Rank calculation, the Company will be excluded from the group of Comparator Group companies.

3. Earning of EPS Shares . No EPS Shares shall vest unless they have become earned in accordance with this Section 3 of Exhibit A . No portion of the EPS Shares shall become earned unless EPS Growth is equal to or greater than [threshold%]. If the EPS Growth performance condition described in the previous sentence has been met, the number of Shares that may be earned with respect to the EPS Shares shall be equal to the target number of EPS Shares multiplied by the “Applicable Percentage” set forth in the table below. In the event that the EPS Growth falls between the amounts listed in the table below, the Applicable Percentage shall be interpolated on a straight line basis and the percentage of the target number of EPS Shares earned shall be based on such interpolated percentage. If EPS Growth is greater than [Maximum%], the Applicable Percentage shall be 200%.

	EPS Growth	Applicable Percentage
Maximum	[Max%]	200%
Target	[Target%]	100%
Threshold	[Threshold%]	50%

4. Earning of TSR Shares . No TSR Shares shall vest unless they have become earned in accordance with this Section 4 of Exhibit A . No portion of the TSR Shares shall become earned unless the TSR Percentile Rank is at or above the 25 th percentile. If the TSR Percentile Rank performance condition described in the previous sentence has been met, the number of Shares that may be earned with respect to the TSR Shares shall be equal to the target number of TSR Shares multiplied by the "Applicable Percentage" set forth in the table below. In the event that TSR Percentile Rank falls between two of the percentiles listed in the table below, the Applicable Percentage shall be interpolated on a straight line basis and the percentage of the target number of TSR Shares earned shall be based on such interpolated percentage. If TSR Percentile Rank is above the 75 th percentile, the Applicable Percentage shall be 200%.

	TSR Percentile Rank	Applicable Percentage
Maximum	75 th percentile	200%
Target	50 th percentile	100%
Threshold	25 th percentile	50%

5. Vesting of Performance Shares . Subject to Section 12 of the Agreement, the Participant shall become vested in the number of EPS Shares and/or TSR Shares that are earned under Section 3 or Section 4, as applicable, of this Exhibit A on the Determination Date. The number of Shares issuable in respect of the vested EPS Shares and the vested TSR Shares shall be settled in accordance with Section 4 of the Agreement.

Determinations by Committee . All determinations under this Exhibit A shall be made by the Committee and will be final and binding on the Participant.

Exhibit 10.47

Name of Participant: _____

QUINTILES IMS HOLDINGS INC.
2013 STOCK INCENTIVE PLAN

AWARD AGREEMENT
(Awarding Restricted Stock)

THIS AWARD AGREEMENT (this " Agreement ") is made by and between Quintiles IMS Holdings Inc., a Delaware corporation (the " Company "), and the participant named above (the " Participant ") pursuant to the provisions of the Quintiles IMS Holdings Inc. 2013 Stock Incentive Plan (the " Plan "), which is incorporated herein by reference. Capitalized terms not defined in this Agreement shall have the meanings given to them in the Plan. In the event of a conflict between the terms and conditions of this Agreement and the Plan, the Plan shall control.

WITNESSETH:

WHEREAS, the Participant is providing, or has agreed to provide, services to the Company, or Affiliate or a Subsidiary of the Company, as an Employee, Director or Third Party Service Provider;

WHEREAS, the Company considers it desirable and in its best interests that the Participant be given a personal stake in the Company's growth, development and financial success through the grant of an Award of Restricted Stock providing an opportunity to earn shares of the $.01 par value common stock of the Company (" Shares ") on the terms and conditions and subject to the restrictions set forth in this Agreement and the Plan.

NOW, THEREFORE, in consideration of the premises and the mutual agreements set forth herein, the parties agree as follows:

1. Grant of Restricted Stock . Effective as of **[** DATE] (the " Grant Date "), the Company hereby grants to the Participant on the Grant Date an Award of Restricted Stock consisting of, in the aggregate, [Number of shares] Shares (the " Restricted Stock "), subject to the terms and conditions of this Agreement and the Plan. For purposes of this Agreement, the period during which the Restricted Stock remains subject to the transfer restrictions set forth herein shall be called the " Restricted Period ". For the avoidance of doubt, the total number of shares of Restricted Stock subject to the award is subject to adjustment pursuant to Article 4.4 of the Plan.

2. Vesting Schedule . The Restricted Stock will vest as to 25% of the Shares on the second anniversary of the Grant Date, 25% of the Shares on the third anniversary of the Grant Date and as to the remaining 50% of the shares on the fourth anniversary of the Grant Date provided that, on the applicable vesting date, the Participant is and has been at all times since the Grant Date, either employed by the Company or one of its Subsidiaries or in service to the Company as a director; provided however, that the Restricted Stock is subject to accelerated vesting in accordance with Section 3(b) below. Prior to vesting, the Company may retain in its possession the share certificate or other evidence of ownership (but Participant will be and remains the owner of the Shares).

3. Treatment of Restricted Stock upon Termination of Employment .

(a) Forfeiture of Restricted Stock upon Termination . In the event that the Participant's employment by and service as a director of the Company and each of its Subsidiaries (" Employment ") ceases for any reason prior to the lapsing of the Restricted Period, such unvested Restricted Stock shall be forfeited immediately unless otherwise determined by the Committee and subject to 3(b) below. Other provisions of the Plan and this Agreement, including Sections 8 and 9, may result in the termination and forfeiture of the Restricted Stock or portions thereof prior to vesting.

[(b) Notwithstanding Article 15 of the Plan, in the event there occurs a Sale of the Company following the Grant Date in which there is no assumption, continuation, substitution or cash-out of all or a portion of this Award (the " Terminating Restricted Stock "), the Terminating Restricted Stock will vest immediately before the consummation of the Sale of the Company that would cause the Common Stock to cease to be outstanding. In the case of a Sale of the Company following the Grant Date in which the Restricted Stock will be assumed, continued, or substituted (the " Continuing Restricted Stock "), in the event that, at or within 24 months after such Sale of the Company, (i) the Company terminates the Participant's employment without Cause or (ii) the Participant terminates his employment for Good Reason, or (iii) and Expiration Termination occurs, the Continuing Restricted Stock will become fully vested immediately before such termination. For this purpose, the terms "Cause," "Expiration Termination" and "Good Reason" have the meanings as defined in the Employment Agreement between the Participant and the Company, as in effect at the Grant Date.]

4. Dividends and Adjustments . In the event that the Company declares and pays regular cash dividends on Stock, any such dividends on the Restricted Stock payable prior to vesting will be retained by the Company and not paid to Participant (or, if delivered to the Participant, immediately will be returned by Participant to the Company). Dividends other than regular cash dividends will result in an adjustment to the Restricted Stock under Article 4.4 of the Plan (in which case the adjustment will be in lieu of payment of any such dividend). Shares or other property that directly or indirectly result from adjustments to a share of Restricted Stock shall be subject to the same risk of forfeiture, restriction on transferability and other terms and conditions as apply to such granted share of Restricted Stock.

5. Income Tax and Social Insurance Withholding . Regardless of any action the Company takes with respect to any or all income tax (including U.S. federal, state and local taxes or non-U.S. taxes), social insurance, payroll tax, fringe benefit, payment on account or other tax-related withholding (" Tax-Related Items "), the Participant acknowledges that the ultimate liability for all Tax-Related Items legally due by the Participant is and remains the Participant's responsibility and that the Company (a) makes no representations or undertakings regarding the treatment of any Tax-Related Items in connection with any aspect of the Award, including the grant of the Restricted Stock, the vesting of the Restricted Stock, the subsequent sale of any Shares resulting from the Award and the receipt of any dividends or other amounts resulting

from any adjustment to the Award, and (b) does not commit to structure the terms of the Award or any aspect of the Award to reduce or eliminate the Participant's liability for Tax-Related Items. Participant is hereby advised that he is permitted under United States federal income tax law to elect (by filing a "Section 83(b)" election with the Internal Revenue Service) to be taxed on the compensation value of the Restricted Stock at the Grant Date, and agrees that if he makes such an election he will notify the Company immediately. Unless the Participant has, in advance of the vesting of the Restricted Stock, made other arrangements satisfactory to the Company to satisfy withholding obligations, if the Participant's country of residence (and/or the country of employment, if different) requires withholding of Tax-Related Items, the Company will withhold a sufficient number of whole Shares that become vested having an aggregate fair market value sufficient to pay the minimum Tax-Related Items required to be withheld with respect to the vesting of the Restricted Stock. The cash equivalent of the Shares withheld will be used to settle the obligation to withhold the Tax-Related Items. Alternatively, the Company may withhold the minimum Tax-Related Items required to be withheld with respect to the Shares in cash from the Participant's regular salary and/or wages or any other amounts payable to the Participant. In the event the withholding requirements are not satisfied through the withholding of Shares by the Company or through the Participant's regular salary and/or wages or other amounts payable to the Participant, no Shares will be released to the Participant (or the Participant's estate) upon vesting of the Restricted Stock unless and until satisfactory arrangements (as determined by the Committee) have been made by the Participant with respect to the payment of any Tax-Related Items that the Company determines, in its sole discretion, must be withheld or collected with respect to such Restricted Stock. By accepting this grant of Restricted Stock, the Participant expressly consents and agrees to the withholding of Shares and/or withholding from the Participant's regular salary and/or wages or other amounts payable to the Participant as provided for hereunder. All other Tax-Related Items related to the Restricted Stock are the Participant's sole responsibility.

6. Restrictive Legends; Delivery Upon Vesting .

(a) As an award of Restricted Stock, the Shares will be issued to the Participant as of the Grant Date. Any stock certificate or other evidence of ownership of the Restricted Stock will be in the name of the Participant but will be held by the Company until the lapse of the Restricted Period. The Participant understands and agrees that the Company may cause the legends set forth below or legends substantially equivalent thereto, to be placed upon any certificate(s) or book-entry notations evidencing ownership of the Restricted Stock or Shares together with any other legends that may be required by the Company or by the provisions of any applicable laws, including state or federal securities laws:

"The shares of Common Stock evidenced hereby are subject to the terms and conditions of an Award Agreement dated [DATE] between the registered owner and Quintiles IMS Holdings, Inc. and the Quintiles IMS Holdings, Inc. 2013 Stock Incentive Plan, as such plan may be amended from time to time; such shares are subject to forfeiture under the terms of such Agreement and the Plan; and such shares shall not be sold, transferred, assigned, pledged, encumbered or otherwise alienated or hypothecated except pursuant to the provisions of such Agreement and the Plan. Copies of such Agreement and Plan are available from Quintiles IMS Holdings, Inc. upon request."

Participant will have voting rights with regard to the Restricted Stock.

(b) Participant agrees that, upon request of the Company, he will deliver to the Company stock powers or other instruments of transfer or assignment, duly endorsed in blank with signature guaranteed, corresponding to each certificate for Restricted Stock or distributions thereon. If Participant shall fail to provide the Company with any such stock power or other instrument of transfer or assignment, Participant hereby irrevocably appoints the Secretary of the Company as his attorney-in-fact to execute and deliver any such power or other instrument which may be necessary to effectuate the transfer of the Restricted Stock (or assignment of distributions thereon) on the books and records of the Company.

(c) Upon the lapse of the Restricted Period, the risk of forfeiture will lapse and evidence of ownership of the shares immediately will be delivered to the Participant free of the restrictions on transferability otherwise imposed under this Agreement and free of such risk of forfeiture (except for any applicable recoupment or clawback policy of the Company or as required by applicable law or stock exchange regulation). The method of delivery will be in the discretion of the Company, either by delivery of one or more share certificates to the Participant, delivery of the Shares to a financial institution for the account of the Participant or delivery in any other commercially reasonable manner as may be determined by the Company.

(d) The Participant's sales or other dispositions of Shares following the lapse of the Restricted Period will be subject to applicable restrictions under Company policies applicable to the Participant, including those covering insider trading by employees.

7. Restrictions on Shares; Non-transferability during Restricted Period .

(a) This Agreement shall be subject to all applicable laws, rules, and regulations, and to such approvals by any governmental agencies or stock exchange as may be required. The Participant agrees to take all steps the Committee determines are necessary to comply with all applicable provisions of federal and state securities law in exercising his or her rights under this Agreement.

(b) During the Restricted Period, the Restricted Stock is not assignable or transferable, in whole or in part, and it may not, directly or indirectly, be offered, transferred, sold, pledged, assigned, alienated, hypothecated or otherwise disposed of or encumbered (including, but not limited to, by gift, operation of law or otherwise) other than by will or by the laws of descent and distribution to the estate of the Participant upon the Participant's death or with the Company's consent (in which case the Restricted Stock shall remain subject to the vesting and other restrictions as set forth herein). Any purported transfer in violation of this Section 7 shall be void ab initio . Furthermore, notwithstanding any other provision of this Agreement, the Participant may not sell the Shares unless such shares are registered under the Securities Act of 1933, as amended (the " Securities Act "), or, if such Shares are not then so registered, such sale would be exempt from the registration requirements of the Securities Act. The sale, pledge or transfer of the Shares must also comply with other applicable laws and regulations governing the Shares, and the Committee may impose restrictions upon the sale,

pledge, or other transfer of such shares (including the placement of appropriate legends on stock certificates, the imposition of minimum holding period requirements or stop transfer orders or other restrictions under applicable federal securities laws or under the requirements of any stock exchange or market upon which such Shares are then listed or traded, or under any blue sky or state securities laws as may be applicable to such Shares) if, in the judgment of the Committee, such restrictions are necessary or desirable in order to achieve compliance with the provisions of the Act, the securities laws of any state, or any other applicable law.

8. Forfeiture; Recovery of Compensation .

(a) The Committee may determine that the Restricted Stock will be forfeited or that release of the evidence of ownership of the Shares will be delayed if the Participant is not in compliance with all applicable provisions of this Agreement and the Plan (including, but not limited to, Section 11.3 and Section 20.19 of the Plan and Sections 8 and 9 of this Agreement).

(b) By accepting this Award, the Participant expressly acknowledges and agrees that his rights, and those of any permitted transferee, with respect to the Restricted Stock, including to shares following vesting and proceeds from the disposition thereof, are subject to Article 11.3 and Section 20.19 of the Plan (including any successor provisions). Nothing in the preceding sentence shall be construed as limiting the general application of Section 14(a) of this Agreement.

9. Other Undertakings . To protect the interests of the Company and its direct and indirect affiliates and subsidiaries (individually, a " QuintilesIMS Company " and collectively, the " QuintilesIMS Companies "), including the confidential information of the QuintilesIMS Companies and the confidential information of their respective customers, data suppliers, prospective customers and other companies with which the QuintilesIMS Companies have a business relationship, and in consideration of the covenants and promises and other valuable consideration described in this Agreement, the Company and the Participant agree as follows:

(a) The Participant acknowledges and agrees that he is bound by the confidentiality and other covenants contained in one or more restrictive covenant and confidentiality agreements that he has executed with a QuintilesIMS Company, which covenants and agreements are incorporated herein by reference and shall survive any exercise, expiration, forfeiture or other termination of this Agreement or the Restricted Stock issued hereunder. The Participant also acknowledges and agrees that the Company shall be an affiliate for purposes of such restrictive covenant and confidentiality agreements.

(b) The Participant acknowledges that the opportunity to participate in the Plan and the financial benefits that may accrue from such participation is good, valuable and sufficient consideration for the following:

(i) The Participant acknowledges and agrees that he is and will remain bound by the non-competition, non-solicitation and other covenants contained in the restrictive covenant and confidentiality agreement(s) that he has executed with any of the QuintilesIMS Companies to the fullest extent permitted by law.

(ii) The Participant further acknowledges and agrees that the period during which the non-competition and non-solicitation covenants in such agreement(s) will apply following a termination of Employment shall be extended from twelve (12) months to eighteen (18) months; provided, however , that the remedies available for breach of any non-competition or non-solicitation covenants during such extended six-month period shall be limited to the following: (x) to the extent then outstanding, the forfeiture of the Restricted Stock for no consideration, and (y) to the extent the Restricted Stock has vested on or after the date that is eighteen (18) months before the Participant's cessation of Employment, with respect to the shares of Stock that became vested (including Shares withheld for taxes), the Participant shall pay to the Company an amount equal to (A) the aggregate fair market value of such shares of Stock as of the date of vesting, plus (B) the excess, if any, of the aggregate proceeds of all sales of such shares of Stock over the amount described under subsection (A) above. (For this purpose, the Participant's earliest sales of shares following vesting will be deemed sales of the vested shares of Restricted Stock.) The Company shall also be entitled to the foregoing remedies in the event of a material breach of any confidentiality, non-disclosure or other similar covenant contained in the restrictive covenant and confidentiality agreement(s) that the Participant has executed with a QuintilesIMS Company.

(iii) The Participant further acknowledges and agrees to the Company's application, implementation and enforcement of (a) such policy set forth in Section 9(b)(ii) of this Agreement and (b) any provision of applicable law or Company policy relating to cancellation, recoupment, rescission or payback of compensation and expressly agrees that the Company may take such actions as are necessary to effectuate such policy (as applicable to the Participant) or applicable law without further consent or action being required by the Participant. For purposes of the foregoing, the Participant expressly and explicitly authorizes the Company to issue instructions, on the Participant's behalf, to any brokerage firm and/or third party administrator engaged by the Company to hold Participant's shares of Stock and other amounts acquired under the Plan to re-convey, transfer or otherwise return such shares of Stock and/or other amounts to the Company. To the extent that the terms of this Agreement and such policy conflict, the terms of such policy shall prevail.

(iv) By accepting the Restricted Stock, the Participant consents to one or more deductions from any amounts any QuintilesIMS Company owes the Participant from time to time in an aggregate amount equal to all amounts described in subsection (ii) above, to the extent such deductions are permitted by applicable law. Any such deduction from an amount that constitutes a deferral of compensation under Code Section 409A may only take place at the time the amount would otherwise be payable to the Participant, except to the extent permitted by Code Section 409A.

10. Successors and Assigns . The Company may assign any of its rights under this Agreement to single or multiple assignees, and this Agreement shall inure to the benefit of the successors and assigns of the Company. Subject to the restrictions on transfer herein set forth, the terms and conditions of the Plan and this Agreement shall be binding upon the Participant and his or her heirs, executors, administrators, successors and assigns.

11. Interpretation . Any dispute regarding the interpretation of this Agreement shall be submitted by the Participant or by the Company forthwith to the Committee, which shall review such dispute at its next regular meeting. The resolution of such a dispute by the Committee shall be final and binding on all parties.

12. Acknowledgements and Acceptance . In accepting the Award, the Participant acknowledges and agrees that, except as may be provided under the terms of any employment agreement between the Participant and the Company: that the Participant will have no claim or entitlement (i) to compensation or damages in consequence of the termination of Employment for any reason whatsoever and whether or not in breach of contract, insofar as such claim or entitlement arises or may arise from his ceasing to have any rights under the Plan or this Agreement; (ii) to vesting of the Restricted Stock as a result of such termination of Employment, except as expressly provided in this Agreement; or (iii) from the loss or diminution in value of the Restricted Stock or Share following the vesting of the Restricted Stock (including due to any delay in delivery of evidence of ownership following vesting); and, upon the grant of the Award and in partial consideration for his participation in the Plan and this Agreement, the Participant shall be deemed irrevocably to have waived any such claim or entitlement, and (iv) all questions arising under this Agreement and the Plan shall be decided by the Committee in its sole discretion; (v) that the Plan is discretionary in nature and may be suspended or terminated by the Company at any time; (vi) that the grant of the Restricted Stock does not create any contractual or other right to receive future grants of Restricted Stock or other Awards or any right to continue an employment or other relationship with the Company (for the vesting period or otherwise); (vii) that the Participant remains subject to discharge from such relationship to the same extent as if the Restricted Stock had not been granted; (viii) that all determinations with respect to any such future grants, including, but not limited to, when and on what terms they shall be made, will be at the sole discretion of the Committee; (ix) that participation in the Plan is voluntary; (x) that the value of the Restricted Stock is an extraordinary item of compensation; and (xi) that the Restricted Stock is not part of normal or expected compensation for purposes of calculating any severance, resignation, redundancy, end of service payments, bonuses, long-service awards, pension or retirement benefits or similar benefits.

13. Employee Data Privacy . The Company hereby notifies the Participant of the following in relation to the Participant's personal data and the collection, processing and transfer of such data in relation to the Award and the Participant's participation in the Plan pursuant to applicable personal data protection laws. The collection, processing and transfer of the Participant's personal data is necessary for the Company's administration of the Plan and the Participant's participation in the Plan, and the Participant's denial and/or objection to the collection, processing and transfer of personal data may affect the Participant's ability to participate in the Plan. As such, the Participant voluntarily acknowledges, consents and agrees (where required under applicable law) to the collection, use, processing and transfer of personal data as described herein. The Participant understands that the Company and its Affiliates hold certain personal information about the Participant, including but not limited to the Participant's name, home address and telephone number, date of birth, social security number, salary, nationality, job title, shares of common stock or directorships held in the Company, details of all

Restricted Stock or other entitlement to Shares awarded, cancelled, exercised, vested, unvested or outstanding in the Participant's favor for the purpose of managing and administering the Plan (" Data "). The Data may be provided by the Participant or collected, where lawful, from third parties, and the Company will process the Data for the exclusive purpose of implementing, administering and managing the Participant's participation in the Plan. The data processing will take place through electronic and non-electronic means according to logics and procedures strictly correlated to the purposes for which the Data is collected and with confidentiality and security provisions as set forth by applicable laws and regulations in the Participant's country of residence. Data processing operations will be performed in a manner that minimizes the use of personal and identification data when such operations are unnecessary for the processing purposes sought. The Data will be accessible within the Company's organization only by those persons requiring access for purposes of the implementation, administration and operation of the Plan and for the Participant's participation in the Plan. The Participant further understands that the Company and/or its Affiliates will transfer Data amongst themselves as necessary for the purposes of implementation, administration and management of the Participant's participation in the Plan, and that the Company and/or any of its Affiliates may each further transfer Data to any third parties assisting the Company in the implementation, administration and management of the Plans. The Participant understands that these recipients may be located in the European Economic Area, the United States or elsewhere throughout the world. The Participant authorizes (where required under applicable law) them to receive, possess, use, retain and transfer Data in electronic or other form, for the purposes of implementing, administering and managing the Participant's participation in the Plan, including any requisite transfer of such Data as may be required for the administration of the Plan and/or the subsequent holding Shares on the Participant's behalf to a broker or other third party with whom the Shares may be deposited. The Participant may, at any time, exercise the Participant's rights provided under applicable personal data protection laws, which may include the right to (a) obtain confirmation as to the existence of the Data, (b) verify the content, origin and accuracy of the Data, (c) request the integration, update, amendment, deletion, or blockage (for breach of applicable laws) of the Data, and (d) oppose, for legal reasons, the collection, processing or transfer of the Data that is not necessary or required for the implementation, administration and/or operation of the Plan and the Participant's participation in the Plan. The Participant may seek to exercise these rights by contacting the Participant's local human resources representative.

14. Entire Agreement; Governing Law .

(a) The Plan is incorporated herein by reference. 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, agreements, commitment and negotiations 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.

(b) This Agreement and all claims arising out of or based upon this Agreement or relating to the subject matter hereof shall be governed by and construed in accordance with the domestic substantive laws of the State of Delaware without giving effect to any choice or conflict of laws provision or rule that would cause the application of the domestic substantive laws of any other jurisdiction.

(c) Any legal proceeding arising out of this Plan or this Agreement shall be brought exclusively in the Federal or State courts located in the State of Delaware. The Participant agrees to submit to personal jurisdiction and to venue in those courts. The Participant further agrees to waive all legal challenges and defenses to the appropriateness of Delaware as the site of any such legal proceeding and to the application of the laws of the State of Delaware and any applicable Federal laws.

15. Miscellaneous .

(a) Notice hereunder shall be given to the Company at its principal place of business, and shall be given to the Participant at the last address shown in the Company's records, or in either case at such other address as one party may subsequently furnish to the other party in writing.

(b) The Company reserves the right to impose other requirements on the Award, any Shares of Stock issued pursuant to the Restricted Stock and the Participant's participation in the Plan to the extent the Company determines, in its sole discretion, that such other requirements are necessary or advisable in order to comply with local law, rules and regulations or to facilitate the operation and administration of the Award and the Plan. Such requirements may include (but are not limited to) requiring the Participant to sign any agreements or undertakings that may be necessary to accomplish the foregoing.

(c) The delivery of evidence of ownership of shares upon vesting of the Restricted Stock will be contingent upon the Company's receipt of any agreement, statement or other evidence that the Company and/or the Committee may require to satisfy itself that such delivery pursuant to this Agreement and any subsequent resale of the Shares will be in compliance with all applicable laws and regulations and with the requirements hereof and of the Plan. The determination of the Committee as to such compliance shall be final and binding on the Participant. If the Company elects a method of delivery other than delivery of a share certificate to Participant, Participant will be required to take appropriate steps to cause any nominee to transfer Shares into the name of the Participant in order for Participant to become a record holder of the Shares upon such delivery.

(d) This Agreement is subject in its entirety to the provisions of the Plan, which are incorporated herein by reference. A copy of the Plan as in effect on the Grant Date has been furnished to the Participant. Accepting the Award, the Participant agrees to be bound by the terms of the Plan and this Agreement.

(e) Any provision of this Agreement that is deemed invalid, illegal or unenforceable in any jurisdiction shall, as to that jurisdiction and subject to this Section, be ineffective to the extent of such invalidity, illegality or unenforceability, without affecting in any way the remaining provisions thereof in such jurisdiction or rendering that or any other provisions of this Agreement invalid, illegal, or unenforceable in any other jurisdiction. If any covenant should be deemed invalid, illegal or unenforceable because its scope is considered excessive, such covenant shall be modified so that the scope of the covenant is reduced only to the minimum extent necessary to render the modified covenant valid, legal and enforceable. No waiver of any provision or violation of this Agreement or the Addendum by the Company shall be implied by the Company's forbearance or failure to take action.

(f) The Restricted Stock is intended to be subject to Code Section 83 and therefore be exempt from the requirements of Code Section 409A. The Plan and this Agreement shall be administered and interpreted in a manner consistent with this intent. If the Company determines that this Agreement is subject to Code Section 409A and that it has failed to comply with the requirements of that Section, the Company may, at the Company's sole discretion and without Participant consent, amend the Agreement to cause the terms and conditions of the Agreement to comply with Code Section 409A or be exempt from Code Section 409A.

16. Counterparts . This Agreement may be executed in any number of counterparts, each of which shall be deemed to be an original and all of which together shall constitute one and the same instrument. Counterpart signature pages to this Agreement transmitted by facsimile transmission, by electronic mail in portable document format (.pdf), or by any other electronic means (including, without limitation, a clickthrough button or checkbox on a website of the Company or a third-party administrator) intended to preserve the original graphic and pictorial appearance of a document, will have the same effect as physical delivery of the paper document bearing an original signature.

The Company, by its duly authorized officer, and the Participant have executed this Agreement as of the date first set forth above.

QUINTILES IMS HOLDINGS INC.

By: _____

Name: James H. Erlinger III
Title: EVP, General Counsel & Corporate Secretary

Agreed and Accepted:

_____

Participant

Exhibit 10.69

Quintiles IMS Incorporated
Employee Protection Plan and Summary Plan Description
As Amended and Restated Effective January 1, 2017

Introduction

This Quintiles IMS Incorporated Employee Protection Plan ("Plan") provides severance benefits to eligible employees of Quintiles IMS Incorporated and certain of its affiliated companies that have been designated by the Benefits Committee as participating companies in the Plan (all participating companies are collectively referred to in the Plan as "Corporation"). The Plan is a "severance pay arrangement" within the meaning of Section 3(2)(B)(i) of ERISA and is intended to be and shall be administered and maintained as an unfunded welfare benefit plan under Section 3(1) of ERISA. This document serves both as the Plan and summary plan description.

I. Administrative Information

Plan Administration

The Benefits Committee ("Committee"), a committee of Quintiles IMS management employees is named as the Plan Administrator under the Plan. The Committee has the exclusive right, power and authority to interpret the provisions of the Plan and to conclusively decide any questions arising in connection with the administration of, and any claim for severance benefits under, the Plan. All such determinations by the Plan Administrator shall be final and binding on all parties. Without limiting the generality of the foregoing, such authority shall include the discretionary power:

- To make and enforce such rules and regulations as the Plan Administrator deems necessary or proper for the efficient administration of the Plan;
- To decide all questions, including questions of fact, concerning the Plan and the eligibility of any person to participate in, and receive benefits under, the Plan;
- To appoint such agents, counsel, accountants, consultants and other persons as may be required to assist in administering the Plan; and
- To establish procedures, forms and time frames with respect to elections and other matters under the Plan.

Right to Amend and Terminate

The Corporation currently intends to continue the Plan indefinitely, but reserves the right to amend, modify, or terminate any and all provisions of the Plan and any benefits payable under the Plan at any time without further obligation; provided, however, the Corporation may not modify or amend the Plan in a manner that materially adversely affects the rights of a person who has started to receive compensation or benefits under the Plan. Any amendment, modification or termination of the Plan may be made by action of the Corporation's Board of Directors (the "Board"), the Committee or their delegatees.

Not an Employment Contract

Participation in the Plan does not confer any rights to continued employment with the Corporation or any of its subsidiaries or affiliates.

Non-Assignment of Benefit

Benefits under the Plan may not be assigned, pledged or otherwise transferred. If, for example, an employee owes money to someone, he or she may not give that person the right to collect from the Plan any benefit which may be payable.

Prior Plans or Policies; Individual Agreements

Except for any restrictive covenant, confidentiality, work product, and/or arbitration or dispute resolution agreements entered into by an employee and the Corporation (which agreements shall remain in full force and effect in accordance with their respective terms), this Plan supersedes any and all prior severance plans, policies, arrangements, or practices of the Corporation (whether written or unwritten, express or implied) relating to any subject matter covered by the Plan. Notwithstanding the preceding sentence, the Plan does not affect the severance provisions of (a) any written individual employment agreement between an employee and the Corporation which results in such employee not being an Eligible Employee hereunder; (b) any change-in-control severance plan; and (c) any other agreement entered into between an employee and the Corporation which expressly supersedes the provisions of this Plan (i.e., by naming this Plan) and which remains in effect at the date of such employee's termination of employment.

Claims Procedures

Your local Human Resources department reviews and authorizes the payment of benefits under this Plan for those employees who qualify under the provisions of the Plan. No claim forms need be submitted. Questions regarding Plan benefits should be directed to your local Human Resources department. If you feel that you are not receiving benefits that are due, you must notify the Plan Administrator in writing. If the claim for benefits is denied (in whole or in part), you will be notified electronically or in writing within 90 days (180 days if the Plan Administrator notifies you within the 90-day period of a need for an extension) of receiving the claim. The notice of denial will state the reason for the denial, the pertinent Plan provisions upon which the denial is based, any additional information which may be needed and the reason such additional information (if any) is needed. In addition, you will be given an explanation of the Plan's claims review procedures and the time limits applicable to such procedures, including a

statement that you have a right to bring a civil action under Section 502(a) of the Employee Retirement Income Security Act of 1974, as amended ("ERISA") following an adverse benefit determination on review.

If you wish to have a denied claim further reviewed, you must send a written request for review to the Plan Administrator at the address and to the addressee specified in the "Specific Plan Information" section of this Plan within 60 days after your initial claim is denied. You may submit written comments, documents, records and other information relating to the claim to the Plan Administrator. Your claim for review will be given a full and fair review that takes into account all comments, documents, records and other information submitted that relates to the claim, without regard to whether such information was submitted or considered in the initial benefit determination.

The Plan Administrator will render a decision on the claim no later than 60 days after its receipt of your request for review. However, if the Plan Administrator finds it necessary, due to special circumstances, to extend this period and notifies you electronically or in writing, the decision will be rendered as soon as practicable, but in no event later than 120 days after your request for review. The Plan Administrator's decision will be provided electronically or in writing. Such decision will be written in a manner calculated to be understood by you and will include specific reasons for the decision, specific references to the pertinent Plan provisions on which the decision is based, a statement that you have a right to bring a civil action under Section 502(a) of ERISA and that you are entitled to receive, upon request and free of charge, reasonable access to and copies of, all documents, records and other information relevant to your claim for benefits. A document is relevant to your claim for benefits if it was relied upon in making the determination, was submitted, considered or generated in the course of making the determination or demonstrates that benefit determinations are made in accordance with the Plan and that Plan provisions have been applied consistently with respect to similarly situated claimants.

You may not institute any action or proceeding in any state or federal court of law or equity, or before any administrative tribunal or arbitrator, for a claim for benefits under the Plan until you have first exhausted the procedures set forth above. No action or proceeding at all may be brought in state or federal court or before any administrative tribunal or arbitrator for benefits under this Plan after one year from the date of the Plan Administrator's final decision on your claim as described above.

Statement of ERISA Rights

As a participant in the Plan, you are entitled to certain rights and protections under ERISA. ERISA provides that all Plan participants shall be entitled to:

Examine, without charge, at the Plan Administrator's office, all Plan documents, including copies of all documents filed by the Plan with the U.S. Department of Labor, such as detailed annual reports and Plan descriptions.

Obtain copies of all Plan documents and other Plan information upon written request to the Plan Administrator. The Plan Administrator may request a reasonable charge for the copies.

In addition to creating rights for Plan participants, ERISA imposes duties upon the people who are responsible for the operation of employee benefit plans. The people who operate your Plan, called "fiduciaries," have a duty to do so prudently and in the interest of you and other Plan participants and beneficiaries. No one, including your employer or any other person, may discriminate against you in any way for the purpose of preventing you from obtaining a benefit or exercising your rights under ERISA. If your claim for benefits is denied in whole or in part you must receive a written explanation of the reasons for the denial. You have the right to have the Plan Administrator review and reconsider your claim.

Under ERISA, there are steps you can take to enforce your rights. For instance, if you request materials from the Plan and do not receive them within 30 days, you may file suit in a federal court. In such a case, the court may require the Plan Administrator to provide the materials and pay you up to $110 a day until you receive the materials, unless the materials were not sent because of reasons beyond the control of the Plan Administrator. If you have a claim for benefits which is denied or ignored, in whole or in part, you may file suit in a state or federal court but any such suit must be filed within one year from the date of the Plan Administrator's final decision on your claim. If it should happen that you are discriminated against for asserting your rights, you may seek assistance from the U.S. Department of Labor, or you may file suit in a federal court.

The court will decide who should pay court costs and legal fees. If you are successful, the court may order the person you have sued to pay these costs and fees. If you lose, the court may order you to pay these costs and fees, for example, if it finds your claim is frivolous.

If you have any questions about your Plan, you should contact your local Human Resources department. If you have any questions about this statement or about your rights under ERISA, or if you need assistance in obtaining documents from the Plan Administrator, you should contact the nearest office of the Employee Benefits Security Administration, U.S. Department of Labor, 200 Constitution Avenue N.W., Washington, D.C. 20210. You may also obtain certain publications about your rights and responsibilities under ERISA by calling the publications hotline of the Employee Benefits Security Administration.

Right to Withhold Taxes

The Corporation may cause such amounts to be withheld from any payment made under the Plan as it determines necessary to fulfill any federal, state or local wage or compensation withholding requirements.

Unfunded Plan

The Corporation will make all payments under the Plan, and pay all expenses of the Plan, from its general assets. Nothing contained in the Plan will give any employee any interest in any property of the Corporation or any of its subsidiaries or affiliates.

Governing Law

The provisions of the Plan will be construed, administered and enforced according to applicable federal law and the laws of the State of Delaware without regard to its conflict of law rules and with regard to its statutes of limitations.

Compliance with Section 409A

Interpretation Consistent with Section 409A

Anything in this Plan to the contrary notwithstanding, the terms of this Plan shall be interpreted and applied in a manner consistent with the requirements of Section 409A of the Internal Revenue Code of 1986, as amended (the "Code") and the Treasury regulations thereunder (the "Regulations") and the Corporation shall have no right to accelerate or make any payment under this Plan except to the extent permitted under Section 409A of the Code. The Corporation shall have no obligation, however, to reimburse any employee for any tax penalty or interest payable or provide a gross-up payment in connection with any tax liability of such employee under Section 409A of the Code except that this provision shall not apply in the event of the Corporation's negligence or willful disregard in its interpretation of the application of Section 409A of the Code and the Regulations to the Plan, which negligence or willful disregard causes a Plan participant to become subject to a tax penalty or interest payable under Section 409A of the Code, in which case the Corporation will reimburse the participant on an after-tax basis for any such tax penalty or interest not later than the last day of the participant's taxable year next following the participant's taxable year in which the participant remits the applicable taxes and interest.

Exemptions from Section 409A

A Plan participant's right to salary continuation payments under this Plan shall be treated at all times as a right to a series of separate payments under Section 1.409A-2(b)(2)(iii) of the Regulations. To the extent required by Section 409A, any payments to be made to a Plan participant upon his termination of employment shall only be made upon such Plan participant's separation from service within the meaning of Section 409A. It is intended that: (a) all payments made under this Plan on or before the 15th day of the third month following the end of the participant's taxable year in which the participant terminates employment shall be exempt from compliance with Section 409A of the Code pursuant to the exception for short-term deferrals set forth in Section 1.409A-1(b)(4) of the Treasury Regulations (the "Exempt Short-Term Deferral Payments"); and (b) payments under this Plan, in excess of the Exempt Short-Term Deferral Payments, that are made on or before the last day of the second taxable year of the participant following the participant's taxable year in which the participant terminates employment in an aggregate amount not exceeding two times the lesser of: (i) the sum of the participant's annualized compensation based on the participant's annual rate of pay for the participant's taxable year preceding the taxable year in which the participant terminates employment (adjusted for any increase during that year that was expected to continue indefinitely if the participant had not terminated employment); or (ii) the maximum amount that may be taken into account under a qualified plan pursuant to Section 401(a)(17) of the Code for the year in which the participant terminates employment shall be exempt from compliance with Section 409A of the Code pursuant to the exception for payments under a separation pay plan as set forth in Section 1.409A-1(b)(9)(iii) of the Regulations.

Specific Plan Information

Plan Name:	Quintiles IMS Incorporated Employee Protection Plan
Plan Type:	Welfare/Severance Plan
Type of Administration:	Self-administered
Plan Year:	January 1 to December 31
Plan Sponsor:	Quintiles IMS Incorporated 100 IMS Drive Parsippany, NJ 07054
Plan Administrator:	Benefits Committee Attention: Chief Human Resources Officer Quintiles IMS Incorporated 100 IMS Drive Parsippany, NJ 07054
Agent for Service of Legal Process:	Quintiles IMS Incorporated Service of legal process may also be made upon the Plan Administrator (see address above)
Source of Financing of Benefits:	The general assets of the Corporation
Effective Date of this Amendment and Restatement of the Plan:	January 1, 2017
Employer Identification Number:	06-1506026
Plan Number:	506

II. Plan Terms

Plan Coverage

The Plan covers all full-time salaried employees and regular part-time salaried employees who are non-temporary and employed on an indefinite term basis of the Corporation who incur an "Eligible Termination" (as defined below). These employees are referred to in this summary as "Eligible Employees." Notwithstanding the foregoing, (a) an employee who has entered into a written agreement with the Corporation which expressly excludes such employee from participation in this Plan (*e.g.* , by naming this Plan or excluding participation in Corporation-sponsored severance plans generally) and which remains in effect at the date of such employee's termination of employment shall be an Eligible Employee only if so determined by the Plan Administrator; and (b) an employee who otherwise would qualify but who is not on the United States payroll shall be an Eligible Employee only if so determined by the Plan Administrator, and such Eligible Employee, and any employee of an affiliated company who qualifies as an Eligible Employee, shall be subject to such additional terms and limitations as the Plan Administrator may consider necessary or advisable; and (c) a worker who has signed an agreement with the Corporation stating that he or she is not eligible to participate in the Plan and any worker that the Corporation treats as an independent contractor, during the period that the worker is so treated, regardless of whether such worker may be determined to be an employee by administrative, judicial or other decision, shall not be an Eligible Employee. Employees who would otherwise be Eligible Employees but who have executed a written employment agreement with the Corporation or any of its subsidiaries or affiliates that includes a provision for post-termination severance payments and is in effect at the time of an Eligible Termination (hereinafter "Employment Agreement") or are subject to another severance plan with the Corporation or any of its affiliated companies shall receive the greater of the Salary Continuation provided for in this Plan or the post-termination payments to which the Eligible Employee is entitled under any Employment Agreement or such other severance plan as a result of a termination without Cause, but the Eligible Employee shall not be entitled to both Salary Continuation under this Plan and compensation under such Employment Agreement or severance plan. The notice under this Plan shall serve as any required written notice under any such Employment Agreement or severance plan. Payment of severance benefits due under this Plan shall be made in accordance with the terms of this Plan. Each Eligible Employee shall be designated as within one of the groups specified in Section III below.

Eligible Termination

Severance benefits are only payable under this Plan if an Eligible Employee incurs an "Eligible Termination." An Eligible Termination means an involuntary termination of an Eligible Employee's employment by the Corporation for any reason except that an involuntary termination for Cause will not constitute an Eligible Termination and an involuntary termination due to unsatisfactory performance or any act or omission by the employee which could result in disciplinary action by the Corporation against the employee in accordance with the personnel practices, policies and procedures of the Corporation will not constitute an Eligible Termination unless otherwise determined by the Plan Administrator in its sole discretion.

The foregoing notwithstanding, an Eligible Termination shall not include (a) a unilateral resignation; or (b) any termination where an offer of employment is made to the Eligible Employee of a comparable position (i) at the Corporation or at any of its subsidiaries or affiliates, (ii) at an entity in connection with a Business Unit Acquisition, or (iii) at a customer or client of the Corporation in connection with the transfer or outsourcing of the Eligible Employee to such customer or Client. Solely for the purpose of determining whether an Eligible Employee has received an offer of a comparable position in connection with a Business Unit Acquisition, an Eligible Employee shall be considered to have received such an offer if the offer is for employment with the entity that engaged in such Business Unit Acquisition, the compensation payable pursuant to such offer is not less than 100% of such Eligible Employee's base Salary with the Corporation immediately prior to the Business Unit Acquisition and the principal place of employment under such offer is not more than 30 miles away from such Eligible Employee's principal place of employment with the Corporation immediately prior to the Business Unit Acquisition. The determination of whether an Eligible Employee has received an offer of a comparable position under any other circumstances shall be determined by the Plan Administrator, in its sole discretion.

Severance Benefits

If an Eligible Employee incurs an Eligible Termination, he or she will be entitled to the Salary Continuation and Benefits Continuation described in Section III below. Under certain limited circumstances, however, the Plan Administrator (or other officers to whom authority is delegated) may alter the provisions of the Plan (by, for example, increasing or reducing benefits otherwise payable under the Plan), but not the time or form of payment of those benefits, in a manner that complies with Section 409A of the Code. Severance benefits under the Plan may not, in any event, exceed the limitations imposed by ERISA on severance payable under welfare benefit plans.

Unless otherwise determined by the Plan Administrator, the amount of Salary Continuation payable shall be reduced by each of the following amounts applicable to the Eligible Employee (but not reduced to an amount less than zero):

- the amount of any sign-on bonus or any other amount(s) paid by the Corporation to the Eligible Employee (other than the payment of base Salary, performance-related bonuses, or reimbursement of business-related expenses incurred by the Eligible Employee) in connection with the Eligible Employee's commencement of employment, if such payment(s) occurred within twelve months of the date of the Eligible Termination, or
- the amount of any severance payments, termination payments or any other amounts paid or payable to the Eligible Employee arising from or relating to the termination of employment of the Eligible Employee by the Corporation on account of pay-in-lieu-of-notice, severance pay, or similar benefits under other benefit plans, severance programs, employment contracts, the requirements of any works council or labor organization or applicable laws, such as the WARN Act.

If reduced in accordance with this paragraph, the aggregate amount of Salary Continuation payable shall be payable proportionately over the same period during which Salary Continuation is to be paid, as specified in Section III.

The payment of severance benefits in excess of two weeks of Salary and benefits, as provided in Section III, is conditioned upon the signing of a release and agreement and such other documents that the Plan Administrator may require in a form approved by the Plan Administrator. The release and agreement will require an Eligible Employee's waiver of all claims, legal and contractual, against the Corporation, its subsidiaries and affiliates. In addition, it may require, among other things, that (1) the Eligible Employee (a) be reasonably available for a limited period of time to cooperate with the Corporation on various matters, and (b) abide by certain restrictive covenants; and (2) any amounts payable under the Plan are subject to the termination of remaining payments and benefits to be provided to the Eligible Employee, if any, and the clawback or recovery of amounts that were paid to the Eligible Employee and reasonable value of benefits received by the Eligible Employee under the Plan, due to the Eligible Employee's breach of such agreement or a breach of any other agreements, obligations or duties owed to the Corporation or any of its subsidiaries or affiliates. The release and agreement will be provided to the Eligible Employee as soon as administratively practicable following the Eligible Termination. Following return of the required agreement and release signed by the Eligible Employee and expiration of any revocation period, the Corporation will promptly proceed with Salary Continuation and Benefits Continuation in accordance with the terms of the Plan. (In order to satisfy the exemption from Section 409A of the Code described above, the date of commencement of payment of severance and benefits in excess of two weeks of Salary and benefits shall be on or before the earlier of: (i) the 90 th day following the Eligible Termination, determined in the sole discretion of the Plan Administrator; or (ii) March 15 th of the calendar year following the year in which the Eligible Termination occurred.)

IMPORTANT: If an Eligible Employee does not sign the release and agreement, he or she will not be entitled to any benefits under the Plan in excess of two weeks of Salary and benefits and will have NO RIGHT to any other severance benefits under the Plan. If the release and agreement is signed, the payment of severance benefits may be delayed until the end of any period during which an employee is permitted by law to revoke a signed release, subject to the time periods set forth in the above paragraph.

Anything in this Plan to the contrary notwithstanding, payment of Salary Continuation that is not exempt from compliance with Section 409A of the Code to any Specified Employee upon separation from service shall not be made before the date that is six months after the date of separation from service (or, if earlier, the date of death of such Specified Employee). Any Salary Continuation payment which is subject to the six-month delay in payment described in this paragraph will be adjusted to reflect the deferred payment date by multiplying the delayed payment by the product of the six-month CMT Treasury Bill annualized yield rate as published by the U.S. Treasury for the date on which such payment would have been made but for the delay multiplied by a fraction, the numerator of which is the number of days by which such payment was delayed and the denominator of which is 365. The adjusted payment shall be made at the beginning of the seventh month following the Specified Employee's separation from service.

Certain terms are used in the description of Plan benefits contained in this summary. These terms, and their meanings, are as follows:

"Benefits Continuation" means the continuation of medical, dental and vision benefits that are provided over the Severance Continuation Period, as described in Section III.

"Business Unit Acquisition" means the acquisition by an entity unrelated to the Corporation of substantially all of the assets of a subsidiary, business unit or function, portion of a business unit or function, facility or division of the Corporation.

"Cause" means:

(a) willful malfeasance or willful misconduct by the Eligible Employee in connection with his or her employment;

(b) continuing failure to perform such duties as are requested by any employee to whom the Eligible Employee reports, directly or indirectly, or by the Board;

(c) failure by the Eligible Employee to observe material policies of the Corporation; or

(d) the commission by the Eligible Employee of (i) any felony or (ii) any misdemeanor involving, in the sole discretion of the Plan Administrator, moral turpitude.

"Incentive" means a conditional payment, the amount of which is based on performance conditions and eligibility rules of the respective plan, typically calculated based on results obtained over a one-year period.

"Lump Sum" means payment of an Eligible Employee's Salary Continuation benefit in a single payment in lieu of payment over the Severance Continuation Period. The Lump Sum will be paid following the Eligible Termination within the time period set forth in Section II above, subject to the Eligible Employee's execution and return of the release and agreement described above for Salary Continuation in excess of two weeks.

"Salary" means an Eligible Employee's annual base salary in effect at the time of an Eligible Termination except, for purposes of determining the amount payable during the Severance Continuation Period, the Plan Administrator may, in its sole discretion, include an additional cash amount as part of the amount of Salary, in order to reflect any periodic payment being received as compensation by the Eligible Employee in addition to Salary immediately prior to termination and to ensure comparability of benefits among Eligible Employees receiving benefits under the Plan.

"Salary Continuation" means the Salary that is paid over the Severance Continuation Period or the amount paid as a Lump Sum.

" Severance Continuation Period " means the total number of weeks over which Salary Continuation is payable (for circumstances other than Lump Sum payments) or Benefits Continuation is available. The Severance Continuation Period will begin following the Eligible Termination, subject to the Eligible Employee's execution and return of the release and agreement required by the Plan Administrator.

"Specified Employee" means an employee who satisfies the requirements for being designated a "key employee" under Section 416(i)(1)(A)(i), (ii) or (iii) of the Code without regard to Section 416(i)(5) of the Code at any time during a calendar year, in which case such employee shall be considered a Specified Employee for the twelve-month period beginning on the first day of the fourth month immediately following the end of such calendar year.

"Year of Service" means each full and partial year of employment with the Corporation. Service will also include periods of employment prior to the reorganization of Dun & Bradstreet or Cognizant Corporation to the extent they were taken into account under the Dun & Bradstreet and Cognizant Career Transition Plans prior to such reorganization and periods of employment with Quintiles Transnational Corp. or its subsidiaries prior to the merger with IMS Health. All partial years of employment will be aggregated to determine an Eligible Employee's total Years of Service under the Plan. Prior periods of employment with the Corporation or companies that are acquired or become affiliated with the Corporation will not be taken into account unless expressly approved by the Plan Administrator. For purposes of determining Salary Continuation payable and Benefits Continuation available to an Eligible Employee who is re-employed by the Corporation, Years of Service taken into account for purposes of determining any Salary Continuation previously paid to such re-employed Eligible Employee under the Plan or any previous severance plan of the Corporation or its predecessor companies shall be disregarded in determining such Eligible Employee's Salary Continuation and Benefits Continuation upon an Eligible Termination following such re-employment.

III. Salary and Benefits Continuation Information

Salary Continuation For Employees with Level Classifications 1-10

An Eligible Employee whose role in the Corporation's human resources records has an assigned level associated with level classifications 1-10 and who has an Eligible Termination will be assigned to a Designated Group as follows:

Designated Group	Criteria
Tier I	The employee's assigned classification under the global role evaluation system is Level 10
	The employee's assigned classification under the global role evaluation system is Level 9
	The employee's assigned classification under the global role evaluation system is Level 8
Tier II	All other Eligible Employees

An Eligible Employee's Designated Group assignment will determine the period of Salary Continuation upon an Eligible Termination in accordance with the following table:

Tier 1 Level 10	Tier 1 Level 9	Tier 1 Level 8	Tier II Levels 1 – 7
2 weeks of Salary Continuation for each Year of Service, subject to minimum 26 weeks and maximum 52 weeks	2 weeks of Salary Continuation for each Year of Service, subject to minimum 13 weeks and maximum 52 weeks	2 weeks of Salary Continuation for each Year of Service, subject to minimum 8 weeks and maximum 52 weeks	2 weeks of Salary Continuation for each Year of Service, subject to minimum 4 weeks and maximum 26 weeks

Salary Continuation for Employees with Level Classifications 21-41

An Eligible Employee whose role in the Corporation's human resources records has an assigned level associated with level classifications 21-41 and who has an Eligible Termination will be assigned to a Designated Group as follows:

Designated Group	Criteria
Tier I	The employee's assigned classification under the global role evaluation system is Level 38-41
	The employee's assigned classification under the global role evaluation system is Level 36-37
	The employee's assigned classification under the global role evaluation system is Level 34-35
Tier II	All other Eligible Employees

An Eligible Employee's Designated Group assignment will determine the period of Salary Continuation upon an Eligible Termination in accordance with the following table:

Tier 1 Levels 38-41	Tier 1 Levels 36-37	Tier 1 Levels 34-35	Tier II
2 weeks of Salary Continuation for each Year of Service, subject to minimum 26 weeks and maximum 52 weeks	2 weeks of Salary Continuation for each Year of Service, subject to minimum 13 weeks and maximum 52 weeks	2 weeks of Salary Continuation for each Year of Service, subject to minimum 8 weeks and maximum 52 weeks	2 weeks of Salary Continuation for each Year of Service, subject to minimum 4 weeks and maximum 26 weeks

Form of Salary Continuation

A Tier I Eligible Employee's Salary Continuation benefit will be payable in accordance with applicable payroll practices for the Corporation's active employees throughout the Severance Continuation Period and the amount of such payments will be calculated at the Eligible Employee's annualized Salary rate at the time of the Eligible Termination, and will start following the Eligible Termination within the time period set forth in Section II above.

A Tier II Eligible Employees' Salary Continuation benefit will be payable in a Lump Sum following the Eligible Termination within the time period set forth in Section II above.

Notwithstanding anything in the Plan to the contrary, the Plan Administrator in its sole discretion may continue salary and benefits for a period of two weeks following an Eligible Termination whether or not the Eligible Employee has signed and returned the required agreement and release (and the applicable revocation period has expired); provided, however, such two weeks of salary and benefits shall be credited towards the Corporation's obligation to pay any Salary Continuation and provide any Benefits Continuation.

Benefits Continuation

Medical, dental and vision benefits and their eligible enrolled dependents at the time of termination will continue throughout the Severance Continuation Period (even if the Eligible Employee's Salary Continuation benefit was payable in a lump sum) for up to a maximum of six months following the date of the Eligible Employee's Eligible Termination at the levels in effect for the Eligible Employee immediately prior to the Eligible Termination but in no event greater than the levels in effect for active employees generally during the Severance Continuation Period, provided that the Eligible Employee shall pay the employee portion of any required premium or contribution and that continuation of any medical flexible spending accounts will be on an after-tax basis only. Any period during which an Eligible Employee and his or her dependents may be entitled to continued medical coverage following an Eligible Termination pursuant to federal or state laws will commence as of the Termination Date and not the end of the Severance Continuation Period.

Eligible Employees do not accrue or earn vacation or time-off benefits during the Severance Continuation Period.

Termination of Salary and Benefits Continuation

The Severance Continuation Period described herein will end and salary and benefits payable under this Plan will cease upon the earlier of: (a) the end of the Severance Continuation Period; (b) the Eligible Employee's reemployment by or reassignment as a contractor, temporary worker, or consultant to the Corporation or any subsidiary or affiliate of the Corporation; or (c) the Eligible Employee's earning compensation under any employment or compensatory arrangement for services provided to any party other than the Corporation or any subsidiary or affiliate of the Corporation (including as an employee, consultant, sole proprietor, security holder, or otherwise in an arrangement in which anything of value is earned or accrued based on the Eligible Employee's services) if such employment is in breach of agreed restrictions between the Eligible Employee and the Corporation or any subsidiaries or affiliates of the Corporation. The Eligible

Employee must inform the Plan Administrator of any such employment or other arrangement under which such services will be provided, prior to or upon commencement of such employment or arrangement, including the date as of which such employment or services commenced. The Corporation shall be entitled to take any and all reasonable actions to recover from the Eligible Employee (or his or her successor in interest) any payments made and the fair market value of any benefits provided to the Eligible Employee with respect to which the Eligible Employee is not entitled pursuant to this (or any other) section of the Plan. The Eligible Employee (or his or her successor in interest) shall pay: (1) all costs and expenses (including, but not limited to, attorneys' fees, investigation costs, and collection agency fees) incurred by the Corporation in enforcing its rights under this (or any other) section of the Plan; and (2) interest, based on the prime rate (as published in the Wall Street Journal as of the date the payment was made or the benefit provided) plus 2%, on any amounts recovered from the date such amounts were paid or provided to the Eligible Employee (or his or her successor in interest) to the date of recovery by the Corporation.

Incentive Plans

For an Eligible Employee who is an eligible participant of an Incentive plan of the Corporation or any subsidiary or affiliate of the Corporation, any impact that an Eligible Termination has on the right to receive an Incentive payment under such Incentive plan will be based on the terms and conditions of the respective Incentive plan.

Stock Options

Upon termination of employment, any and all exercisable (vested) stock options held by an Eligible Employee either shall forfeit, or will remain exercisable for a limited period of time as set forth in the applicable stock option plan(s) and grant agreement distributed to plan participants. Unvested stock options shall forfeit immediately upon termination of employment.

Outplacement Services

An Eligible Employee whose role in the Corporation's human resources records has an assigned level associated with level classifications 1-10 will be entitled to such outplacement services as determined by the Eligible Employee's assigned Level in accordance with the following table:

Eligible Employee GRE	Outplacement Services
Levels 9 – 10	12 months
Level 8	6 months
Levels 5 – 7	3 months
Levels 1 - 4	1 month

An Eligible Employee whose role in the Corporation's human resources records has an assigned level associated with classification levels 21-41 will be entitled to such outplacement services as determined by the Eligible Employee's assigned Grade in accordance with the following table:

Eligible Employee Level	Outplacement Services
Levels 36-41	12 months
Levels 34-35	6 months
Levels 30-33	3 months
Levels 21-29	1 month

The Corporation will inform all Eligible Employees of the availability of outplacement services. Any such outplacement services provided to an Eligible Employee will not extend beyond the last day of the second calendar year following the calendar year in which the Eligible Employee's Eligible Termination occurred, provided that any reimbursement for outplacement expenses may be paid by the last day of the third calendar year following the calendar year in which the Eligible Employee's Eligible Termination occurred.

Death During Severance Continuation Period

In the event of an Eligible Employee's death during the Severance Continuation Period, the Salary Continuation amounts will continue to be paid to the Eligible Employee's estate at the time or times otherwise provided for in this Plan. The payment of all other benefits under the Plan will cease.

No Further Grants

Following an Eligible Employee's termination of employment and in accordance with the applicable plans and programs, no new grants, awards or contributions will be made to, by or on behalf of him or her under any plan or program of the Corporation including, but not limited to, any stock option, retirement or savings plan. In addition, participation in all Corporation benefit plans (other than the medical, dental and vision coverage which may be continued under this Plan) will cease upon termination of employment.

Exhibit 10.76

QUINTILES IMS INCORPORATED

QUINTILES SAVINGS EQUALIZATION PLAN

Effective December 31, 2016

I. Purpose of the Plan

The purpose of the Quintiles Savings Equalization Plan (the "Plan") is to provide a means of equalizing the benefits of those employees participating in the Quintiles Transnational Corp. 401(k) Plan (the "401(k) Plan") whose matching contributions under the 401(k) Plan are or will be limited by the application of Sections 401(a)(17) or 415 of the Internal Revenue Code of 1986, as amended (the "Code"), or by reason of the exclusion from the definition of compensation under the 401(k) Plan of amounts deferred under any nonqualified deferred compensation plan maintained by Quintiles IMS Incorporated (the "Corporation"). The Plan is intended to be an "excess benefit plan" as that term is defined in section 3(36) of the Employee Retirement Income Security Act of 1974, as amended ("ERISA") with respect to those participants whose benefits under the 401(k) Plan have been limited by Section 415 of the Code, and a plan which is unfunded and is maintained by an employer primarily for the purpose of providing deferred compensation for a select group of management or highly compensated employees for purposes of ERISA.

II. Participation in the Plan

All members of the 401(k) Plan shall be eligible to participate in this Plan whenever their benefits under the 401(k) Plan as from time to time in effect would exceed the limitations on benefits and contributions imposed by Sections 401(a)(17) or 415 of the Code or would be limited by reason of the exclusion from the definition of compensation under the 401(k) Plan of amounts deferred under any nonqualified deferred compensation plan maintained by the Corporation. For purposes of this Plan, benefits of a participant in this Plan shall be determined as though no provisions were contained in the 401(k) Plan incorporating limitations imposed by Sections 401(a)(17) or 415 of the Code or excluding from the definition of compensation under the 401(k) Plan amounts deferred under any nonqualified deferred compensation plan maintained by the Corporation.

III. Equalized Benefits

If member participating contributions or Corporation contributions to the 401(k) Plan for any calendar year are limited by reason of the application of Sections 401(a)(17) or 415 of the Code or the exclusion from the definition of compensation under the 401(k) Plan of amounts deferred under any nonqualified deferred compensation plan maintained by the Corporation, the Corporation shall pay the participant in this Plan, in a single lump sum, on or after January 1 st and on or before March 15th of the immediately following year, provided such participant is actively employed by the Corporation on such payment date, an amount equal to:

(1) the Corporation matching contributions that otherwise would have been credited to such participant's account under the 401(k) Plan if the limitations imposed by Sections 401(a)(17) and 415 of the Code and the exclusion from the definition of compensation under the 401(k) Plan of amounts deferred under any nonqualified deferred compensation plan maintained by the Corporation did not apply, plus

(2) an interest factor equal to one-half of the annual return which would have been received by the participant had such payment been invested eighty percent (80%) in the fixed income fund and twenty percent (20%) in the equity index fund available as investment funds under the 401(k) Plan during the year prior to the year of payment, less

(3) any applicable withholding taxes.

IV. Death

Upon the death of a participant in this Plan, the benefits otherwise payable to such participant pursuant to Article III shall be paid at the time provided in Article III to such participant's designated beneficiary and in the absence of any such designation, to such participant's estate.

V. Administration of the Plan

The Corporation shall administer the Plan, except that any action authorized to be taken by the Corporation hereunder may also be taken by any committee or person(s) duly authorized by the Board of Directors of the Corporation or the duly authorized delegees of such duly authorized committee or person(s). The Corporation shall have full authority to determine all questions arising in connection with the Plan, including interpreting its provisions and construing all of its terms; may adopt procedural rules; and may employ and rely on such legal counsel, such actuaries, such accountants and such agents as it may deem advisable to assist in the administration of the Plan. All of its rules, interpretations and decisions shall be applied in a uniform manner to all participants similarly situated and decisions of the Corporation shall be conclusive and binding on all persons.

VI. Claims

(1) Presentation of Claims . Claims for benefits shall be filed in writing with the Plan Administrator. Written or electronic notice of the disposition of a claim shall be furnished to the claimant within 90 days after the claim is filed (or within 180 days if special circumstances require an extension of time for processing the claim and if notice of such extension and circumstances is provided to the claimant within the initial 90-day period.)

(2) Claims Denial Notification . If a claim is wholly or partially denied, the Plan Administrator shall furnish to the claimant a written notice setting forth in a manner calculated to be understood by the claimant:

- the specific reason(s) for denial;

- specific reference(s) to pertinent Plan provisions on which any denial is based;
- a description of any additional material or information necessary for the claimant to perfect the claim, and an explanation of why such material or information is necessary;
- an explanation of the Plan's claims review procedures and the applicable time limits for such procedures; and
- a statement that the claimant has a right to bring a civil action under Section 502(a) of ERISA following an adverse determination on review.

(3) Claims Review Procedure . Upon a denial, the claimant is entitled (either in person or by his duly authorized representative) to:

- request a subsequent review of the claim by the Plan Administrator upon written application for review made to the Plan Administrator. Any such request for review of the claim must be made within 60 days after receipt by the claimant of such notice. A claimant must submit a written application for review before the claimant is permitted to bring a civil action for benefits;
- review pertinent documents relating to the denial; and
- submit written comments, documents, records and other information relating to the claim.

Timing. The Plan Administrator shall make its decision and notify the claimant with respect to a claim not later than 60 days after receipt of the request. Such 60-day period may be extended for another period of 60 days if the Plan Administrator finds that special circumstances require an extension of time for processing and notice of the extension and special circumstances is provided to the claimant within the initial 60-day period.

Final Decision. The claim for review shall be given a full and fair review that takes into account all comments, documents, records and other information submitted that relates to the claim, without regard to whether such information was submitted or considered in the initial benefit determination. The Plan Administrator shall provide the claimant with written or electronic notice of the decision in a manner calculated to be understood by the claimant. The notice shall include specific reasons for the decision, specific references to the pertinent Plan provisions on which the decision is based, a statement that the claimant has a right to bring a civil action under Section 502(a) of ERISA, and a statement that the claimant is entitled to receive, upon request and free of charge, reasonable access to and copies of all documents, records and other information relevant to the claim. A document is relevant to the claim if it was relied upon in making the determination, was submitted, considered or generated in the course of making the determination or demonstrates that benefit determinations are made in accordance with the Plan and that Plan provisions have been applied consistently with respect to similarly situated claimants.

Delayed Payments . If the Plan Administrator shall approve the payment of a claim for benefits filed in accordance with the claims procedures set forth hereinabove, any payment delayed pending the resolution of such claim will be adjusted to reflect the deferred payment date by multiplying the payment by the product of the six-month CMT Treasury Bill annualized yield rate as published by the U.S. Treasury for the date on which such payment would have been made but for the delay multiplied by a fraction, the numerator of which is the number of days by which such payment was delayed and the denominator of which is 365.

Arbitration . Any dispute or controversy arising under or in connection with the Plan shall be settled exclusively by arbitration in Parsippany, New Jersey in accordance with the rules of the American Arbitration Association in effect at the time of such arbitration. The Corporation shall promptly pay or reimburse on a fully grossed-up and after-tax basis (so that the recipient of such reimbursement is held economically harmless) all reasonable costs and expenses (including fees and disbursements of counsel and pension experts) incurred by a participant or beneficiary to assert rights under this Plan, for so long as such rights may exist, or in any proceeding in connection therewith brought by a participant or beneficiary, whether or not such participant or beneficiary is ultimately successful in enforcing such rights or in such proceeding; provided, however, that no reimbursement shall be owed with respect to expenses relating to any unsuccessful assertion of rights or proceeding if and to the extent that such assertion or proceeding was initiated or maintained in bad faith or was frivolous as determined by the arbitrators or a court having jurisdiction over the matter. The amount of expense eligible for reimbursement in any one taxable year of the participant or beneficiary shall not affect the amount of expense eligible for reimbursement in any other taxable year of the participant or beneficiary. The reimbursement of expenses shall be made each calendar quarter and not later than the last day of the taxable year of the participant or beneficiary in which the expense was incurred. The right to reimbursement of any expense hereunder shall not be subject to liquidation or exchange for another benefit.

VII. Miscellaneous

This Plan may be terminated at any time by the Board of Directors of the Corporation, in which event the rights of participants to their accrued benefits shall become nonforfeitable. This Plan may also be amended at any time by the Board of Directors of the Corporation and the Employee Benefits Committee of the Corporation may amend the Plan without the approval of the Board of Directors of the Corporation with respect to amendments that such Committee determines do not have a significant effect on the cost of the Plan; provided, however, that no such amendment of the Plan may (1) adversely affect a participant's benefit under the Plan to which he or she has become entitled in accordance with the Plan as in effect on the date immediately preceding the date of such amendment, or (2) adversely affect a participant's right or the right of a participant's beneficiary to receive a benefit in accordance with the Plan as in effect on the date immediately preceding the date of such amendment, or (3) cause any payment that a participant or beneficiary is entitled to receive under this Plan to become subject to an income tax penalty or interest payable under Section 409A of the Code.

Benefits payable under this Plan shall not be funded and shall be made out of the general funds of the Corporation; provided, however, that the Corporation reserves the right to establish a trust fund as an alternate source of benefits payable under the Plan and to the extent payments are made from such trust, such payments will satisfy the Corporation's obligations under this Plan.

No right to payment or any other interest under this Plan may be alienated, sold, transferred, pledged, assigned, or made subject to attachment, execution, or levy of any kind.

Nothing in this Plan shall be construed as giving any employee the right to be retained in the employ of the Corporation. The Corporation expressly reserves the right to dismiss any employee at any time without regard to the effect which such dismissal might have upon him under the Plan.

The Corporation may withhold from any benefits under the Plan an amount sufficient to satisfy its tax withholding obligations.

This Plan shall be construed, administered and enforced according to the laws of the State of Connecticut applicable to contracts made and to be performed in such state to the extent not preempted by federal law. Anything in this Plan to the contrary notwithstanding, the terms of this Plan shall be interpreted and applied in a manner consistent with the requirements of Section 409A of the Code and the Treasury Regulations thereunder including the exception for short-term deferrals under Section 1.409A-1(b)(4) of the Treasury Regulations so as not to subject any participant or beneficiary to the payment of any tax penalty or interest which may be imposed by Section 409A of the Code and the Corporation shall have no right to accelerate, defer or make any payment under this Plan except to the extent such action would not subject any participant or beneficiary to the payment of any tax penalty or interest under Section 409A of the Code. If a participant or beneficiary becomes subject to any tax penalty or interest under Section 409A of the Code by reason of his or her participation in this Plan, the Corporation shall reimburse such participant or beneficiary, as the case may be, on a fully grossed-up and after-tax basis for any such tax penalty or interest (so that the recipient of such reimbursement is held economically harmless) ten business days prior to the date such tax penalty or interest is due and payable by such participant or beneficiary to the government.

The Corporation shall require any successor (whether direct or indirect, by purchase, merger, consolidation or otherwise) to all or substantially all of the business and/or assets of the Corporation to expressly assume and agree to perform the obligations of the Corporation under this Plan in the same manner and to the same extent that the Corporation would have been required to perform such obligations if no such succession had taken place and such assumption shall be an express condition to the consummation of any such purchase, merger, consolidation or other transaction.

Date: _____

Quintiles IMS Health Incorporated

By: _____

Its: _____

QUINTILES IMS HOLDINGS, INC.
Non-Employee Director Deferral Plan
Effective January 1, 2017

1. **Purpose of the Plan; Status as Sub-Plan.**

The purpose of this Non-Employee Director Deferral Plan (the "Plan") is to provide a convenient means for non-employee directors to increase their proprietary interest in Quintiles IMS Holdings, Inc., a Delaware corporation (the "Company"), in order to further align their interests with the interests of stockholders of the Company and to help the Company attract and retain qualified directors. The Plan allows non-employee directors to defer the receipt of cash compensation, with the ultimate payout of such deferred compensation to be in the form of Shares of Company common stock.

The Plan shall be deemed to be a subplan implementing the Company's 2013 Stock Incentive Plan (the "2013 Plan") or any other legally permissible successor plan. All references herein to 2013 Plan, shall also include references to the applicable sections of any legally permissible successor plans. Accordingly, Deferred Shares shall be deemed to be Awards governed by the 2013 Plan, and any Shares delivered in connection with such Awards shall be drawn from the 2013 Plan. The provisions of the 2013 Plan, are incorporated herein by reference. The effective date of the Plan is January 1, 2017 (the "Effective Date").

2. **Definitions.**

Capitalized terms used herein have the definitions specified in the 2013 Plan, (including "Award," "Board," "Exchange Act," "Fair Market Value" and "Share"). In addition, certain capitalized terms are defined in Section 1 above and in other Sections below, and the terms set forth in this Section 2 have definitions as follows:

(a) Administrator: The Company's Chief Human Resources Officer, and/or any other officer or committee of employees designated by the Committee to serve individually or by committee as Administrator.

(b) Change in Control: The occurrence of any of the following events after the Effective Date:

(i) Any "person," as such term is used in Section 13(d) and 14(d) of the Exchange Act (other than the Company, any trustee or other

fiduciary holding securities under an employee benefit plan of the Company, or any company owned, directly or indirectly, by the stockholders of the Company in substantially the same proportions as their ownership of stock of the Company), acquires voting securities of the Company and immediately thereafter is the "beneficial owner" (as defined in Rule 13d-3 under the Exchange Act), directly or indirectly, of securities of the Company representing 50% or more of the combined voting power of the Company's then-outstanding voting securities;

(ii) Individuals who on January 1 of any year constitute the Board of Directors, and any new director (other than a director whose initial assumption of office is in connection with an actual or threatened election contest, including but not limited to a consent solicitation, relating to the election of directors of the Company) whose election by the Board or nomination for election by the Company's stockholders was approved by a vote of at least two-thirds (2/3) of the directors then still in office who either were directors on that January 1 or whose election or nomination for election was previously so approved or recommended, cease for any reason to constitute at least a majority thereof;

(iii) There is consummated a merger, consolidation, recapitalization, or reorganization of the Company, or a reverse stock split of any class of voting securities of the Company, if, immediately following consummation of any of the foregoing, either (A) individuals who, immediately prior to such consummation, constitute the Board do not constitute at least a majority of the members of the board of directors of the Company or the surviving or parent entity, as the case may be, or (B) the voting securities of the Company outstanding immediately prior to such event do not represent (either by remaining outstanding or by being converted into voting securities of a surviving or parent entity) at least 50% or more of the combined voting power of the outstanding voting securities of the Company or such surviving or parent entity; or

(iv) The stockholders of the Company have approved a plan of complete liquidation of the Company and there occurs a distribution pursuant to such plan of complete liquidation, and all material contingencies to the completion of the transaction have been satisfied or waived, or there is consummated an agreement for the sale or disposition by the Company of all or substantially all of the Company's assets (or any transaction have a similar effect).

(c) Committee: The Leadership Development and Compensation Committee of the Board.

(d) Deferred Share: A bookkeeping entry, equivalent in value to one Share, credited to a Participant's Plan Account under the Plan. A Deferred Share represents an Other Stock-Based Award under Section 10.2 of the 2013 Plan, (the terms of which are similar to a fully vested Restricted Stock Unit under 2013 Plan Article 8).

(e) Determination Date: As such term is defined in Section 6(b) of the Plan.

(f) Participant: Any director of the Company who is eligible to participate under Section 4 and has validly elected to participate in the Plan, from the earliest service period that is subject to his or her initial deferral election and for so long as such person continues to have Deferred Shares or other amounts credited to his or her Plan Account.

(g) Plan Account: A bookkeeping account to which cash amounts and Deferred Shares may be credited as deferred compensation.

(h) Plan Rights: Fees and other compensation subject to a valid election to defer under the Plan, any Plan Account and Deferred Shares and cash credited thereto, any rights to future distribution and any related rights of a Participant or a Beneficiary.

3. Administration

The Plan will be administered by the Committee. The Committee is authorized to interpret the Plan, to establish, amend and rescind any rules and regulations relating to the Plan, and to make any other determinations that it deems necessary or desirable for the administration of the Plan. The Committee may correct any defect or supply any omission or reconcile any inconsistency in the Plan in the manner and to the extent the Committee deems necessary or desirable. Any decision of the Committee in the interpretation and administration of the Plan, as described herein, shall lie within its sole and absolute discretion and shall be final, conclusive and binding on all parties concerned (including, but not limited to, Participants and their beneficiaries or successors). The foregoing notwithstanding, the Board may exercise any power or perform any function of the Committee, in which case any applicable reference to "Committee" herein shall be deemed to refer to the Board. No Participant shall participate in any determination relating solely or primarily to his or her Plan Rights. The foregoing notwithstanding, the Administrator will perform the functions assigned to it in the Plan together with all other ministerial functions under the Plan.

4. Eligibility

A person serving as a director who, at the date an election to defer compensation may be validly filed, is not an employee of the Company or its subsidiaries, is eligible to become a Participant under this Plan.

5. Voluntary Deferral of Cash Compensation

A person eligible under Section 4 may voluntarily elect to defer his or her cash compensation for services as a Company director, in accordance with the Plan.

(a) *Compensation that May be Deferred* . Compensation that may be deferred includes annual retainer fees for service on the Board or Board committees, including service as a Board or committee chair or in any leadership capacity, meeting fees for service on the Board or committees (if any), and any other cash fees paid for service as a director. The following items may not be deferred hereunder:

- An equity award to a director that is accounted for under Financial Accounting Standards Board Accounting Standards Codification Topic 718 ("FASB ASC 718"), even if such award is settled in cash;
- Any reimbursement for expenses; and
- Any compensation paid for services as an employee or consultant.

(b) *Method Of Election* . To elect to participate in the Plan, the Participant must complete and deliver to the Administrator a written election, not later than the latest of (1) 30 days after the date on which he or she commences service as a director of the Company, (2) 30 days after the Effective Date or (3), for deferrals to occur in the year following the filing of the election to defer, not later than December 31 of the year preceding that following year; provided that the Administrator may specify any other deadline (earlier or later than specified in (1) – (3) above) so long as such deadline ensures effective tax deferral by the Participant and conforms to all applicable requirements of Code Section 409A. The written election:

(i) Shall be on a form specified by the Administrator.

(ii) Shall permit Participant to designate all or a portion of the Participant's cash compensation for the applicable year of service as a director as the amount to be deferred. The Administrator may determine whether this designation shall be as a dollar amount, a percentage or any other manner of designation.

(iii) Shall permit the Participant to elect the time of distribution of Deferred Shares (subject to Section 6), which may be specific to the Deferred Shares resulting from deferral in a specified year (i.e., a different distribution election may apply to deferrals in different years).

(iv) With respect to elections under both (ii) and (iii) above, shall remain effective for all future years of service unless the Participant makes a new valid election in a subsequent year by the applicable deadline for such elections or unless the Administrator has determined, and advised the Participant before such deadline, that the prior election will not remain in effect.

(v) Shall apply only to director compensation that is payable for services performed after the filing of such election. Accordingly, if a new director were to elect to participate within the 30-day period after becoming a director, any fees paid after the date of the election allocable (as provided under Code Section 409A) to services performed during the 30-day period and before the date of the election would not be deferrable. This restriction may also apply to directors electing to participate within 30 days after the Effective Date.

(vi) Shall be irrevocable to the extent provided under Code Section 409A; modifications to distribution elections are not permitted.

(c) *Crediting of Deferred Shares; Dividend Equivalents and Adjustments* . Deferred Shares and related amounts will be credited to a Participant's Plan Account as follows:

(i) The number of Deferred Shares to be credited on a given day will be determined by dividing (i) the amount of cash compensation to be deferred (and other cash then credited to the Plan Account) by (ii) 100% of the Fair Market Value of one Share on that day.

(ii) The Administrator may determine to credit fractional shares (subject to reasonable rounding), or not to credit fractional shares but instead to carry forward in the Plan Account as a cash credit any amount that would have resulted in the crediting of a fractional share.

(iii) The crediting of Deferred Shares to a Participant's Account will occur on one or more days in each calendar quarter. Unless otherwise determined by the Administrator, such crediting will occur on the regular date on which cash retainer fees are paid to non-employee directors (or would be paid but for the director's deferral election). If, on a date other than such regular quarterly payment date, any fees subject to deferral are payable to a director or any cash amounts are credited to the Participant's Plan Account under Section 5(c)(iv) or (v) (dividend equivalents or adjustments), then, unless otherwise determined by the Administrator, those credited amounts will remain as cash credits until the next scheduled date for the crediting of Deferred Shares.

(iv) Dividend equivalents will be credited on each Deferred Share, in a cash amount equal to the regular dividends (if any) or non-regular cash dividends (if any) paid on one Share. Such crediting will take place as of the payment date of the corresponding dividend.

(v) Deferred Shares will be adjusted as provided under Section 4.4 of the 2013 Plan, provided that the Participant will have a legal right to an adjustment in the event of an equity restructuring as that term is used in FASB ASC 718, and provided further that any adjustment will take into account the extent of any crediting of dividend equivalents under Section 5(c)(iv) in connection with the events triggering the adjustment. An adjustment may be effected through the crediting of additional cash to the Participant's Plan Account, if so determined by the Committee.

6. Distributions.

(a) *Generally* . All distributions from a Participant's Plan Account will be made after termination of the Participant's service as a director of the Company as provided in Section 6(b), upon a Change in Control as provided in Section 6(c) or in the event of Participant's death as provided in Section 6(d). A distribution of Deferred Shares shall be in the form of whole Shares equal to the number of Deferred Shares being distributed, provided that any distribution on a final distribution date will include payment of the value of any fractional Share in cash based on the Fair Market Value of a Share as of that distribution date together with payment of any cash balance in the Participant's Plan Account.

(b) *Distributions Elected by the Participant* . With regard to Deferred Shares or other Account balances resulting from deferrals in a given calendar year, a Participant may elect distributions as follows, subject to Section 6(d) (applicable in the event of Participant's death):

- As a lump sum on the first business day of the calendar year immediately following the date on which the Participant has a separation from service with the Company (the "Determination Date");
- As a lump sum on the fifth anniversary of the Determination Date; or
- As annual installments payable commencing on the Determination Date or the fifth anniversary of the Determination Date (and in subsequent years on the first day of the month in which the Determination Date fell), such number of installments (not to exceed ten if commencing on the Distribution Date or five if commencing on the fifth anniversary of the Determination date), to be elected by the Participant in accordance with Section 5(b). The Shares distributable in a given installment will be

determined by dividing the number of Deferred Shares then credited to the Participant's account by the number of remaining scheduled installments (including the given installment), with the resulting number of Deferred Shares rounded down to the nearest whole Share, with no payment in lieu of a fractional share until the final installment is distributed. Any cash distributable in a given installment will be determined in a similar manner, reduced to the nearest whole cent.

The Participant shall elect the distribution date for deferrals at the same time as he or she elects to participate in the Plan under Section 5(b), provided that, if no valid election relating to distribution is on file, the Participant shall be deemed to have elected a lump sum distribution to be made on the Determination Date.

(c) *Change In Control* . In the event of a Change in Control that constitutes (or involves related transactions that constitute) a change in the ownership of the Company, a change in the effective control of the Company, or a change in the ownership of a substantial portion of the Company's assets within the meaning of Treasury Regulation § 1.409A-3(i)(5)(v) – (vii) and any successor thereto (a "409A Change in Control"), Deferred Shares will be distributed in a lump sum not later than five business days after the 409A Change in Control, provided that such distribution shall be simultaneous with the 409A Change in Control if necessary to permit Participants to participate in a transaction that is related to the 409A Change in Control, such as a merger or tender offer.

(d) *Death of the Participant* . In the event of the Participant's death, all remaining Deferred Shares and any other amounts credited to the Participant's Plan Account will be distributed not later than the end of the calendar year following the year of death in accordance with applicable regulations (including proposed regulations) under Code Section 409A.

(e) *Effect of Participant Becoming an Employee or Consultant* . If a Participant ceases to serve as a director but becomes or has become an employee of or consultant to the Company or any of its subsidiaries, whether such Participant will be deemed to have a separation from service for purposes of Section 6(b) will be determined in accordance with Treasury Regulation § 1.409A-1(h).

7. Nontransferability of Plan Rights; Forfeiture.

Plan Rights, including Deferred Shares and any other amounts credited to the Participant's Plan Account, are subject to the restrictions on transferability applicable to an Award as set forth in Section 11.1 of the 2013 Plan, including provisions permitting the designation of a Beneficiary. No provision of the Plan imposes any risk of forfeiture on a Participant's Plan Rights, except that those rights will remain forfeitable to the extent the compensation deferred that resulted in the Deferred Shares or cash credited to the Plan Account would have been forfeitable or subject to recoupment absent deferral.

8. Other Provisions

(a) *Unfunded Plan.* The Plan is subject to Section 20.11 of the 2013 Plan. Accordingly, the interest of each Participant in Plan Rights shall be that of a general creditor of the Company, and Plan Rights shall at all times be maintained by the Company as bookkeeping entries evidencing unfunded and unsecured general obligations of the Company. The Plan shall be unfunded, and therefore no money or other assets of the Company shall be set aside for any Participant.

(b) *Other Applicable 2013 Plan Provisions.* For reference, applicable provisions of the 2013 Plan include (but are not limited to) the provisions relating to legal compliance (2013 Plan Sections 20.4, 20.5 and 20.6), governing law (2013 Plan Section 20.17), limitation on rights as a stockholder or rights to continue in service (2013 Plan Article 16), and severability (2013 Plan Section 20.3).

(c) *Successors and Assigns.* The Plan shall be binding on all successors and assigns of the Company and each Participant, including a Participant's Beneficiaries, estate and any executor, administrator or trustee of such estate, or any receiver or trustee in bankruptcy or representative of the Participant's creditors.

(d) *Amendment and Termination.* The Board or the Committee may amend, modify, suspend or terminate the Plan, but no such action may be taken if it would materially and adversely affect the rights of a Participant under the Plan without such Participant's consent. Unless earlier terminated by action of the Board, the Plan will remain in effect until such time as no Shares remain available for delivery under the Plan and the Company has no further rights or obligations under the Plan.

(e) *Section 409A of the Code; Tax Obligations.* Other provisions of this Plan notwithstanding, if any distribution under the Plan could cause a Participant to incur an accelerated or additional tax or penalty under Code Section 409A, such payment or other benefits will be deferred if deferral will make such payment or other benefits compliant under Section 409A of the Code (for instance, if the Participant is a " *specified employee* " within the meaning of Section 409A of the Code and would receive a distribution hereunder within six months after a separation from service, such distribution shall be delayed until the earlier of the Participant's death or six months and one day following the Participant's separation from service), or otherwise such payment or other benefits will be restructured (but not reduced), to the extent possible, in a manner reasonably determined by the Administrator to not cause such an accelerated or

additional tax or penalty. The Plan, in its terms and operation, is intended to comply with Code Section 409A and will be interpreted accordingly, and will be automatically modified to the extent necessary to so comply. References herein to a Participant's termination of employment or separation from service shall be deemed to refer to the date upon which the Participant has a "separation from service" within the meaning of Code Section 409A. Each distribution hereunder, including each installment if installments are elected, constitutes a "separate payment" for purposes of Code Section 409A. The Participant remains responsible for all taxes payable by the Participant in respect of the compensation deferred under the Plan, Plan Rights and distributions hereunder, including any accelerated or additional tax or penalty under Code Section 409A, and the Company will not indemnify, "gross-up" or otherwise reimburse the Participant for any tax obligation resulting to the Participant from participation in the Plan or otherwise relating to Participant's compensation as a director of the Company.

November 30, 2016

W. Richard Staub III
3210 Merriman Avenue
Raleigh, NC 27607

Dear Richard,

We are very pleased to extend this offer for the role of President, Research & Development Solutions, of Quintiles IMS Incorporated (the " **Company** "), a subsidiary of Quintiles IMS Holdings, Inc. (" **QuintilesIMS** "). Subject to satisfaction of all the conditions described in this letter, your employment in this new role will commence on December 1, 2016 (the " **Start Date** ").

In consideration for your services and the execution of the Non-Competition, Non-Solicitation, Confidentiality and Intellectual Property Agreement set forth in Schedule A attached hereto (the " **Restrictive Covenant Agreement** "), you will be paid a base salary of $540,000 per year, subject to annual review. The base salary shall be payable in periodic installments in accordance with the standard payroll practices of the Company and subject to all withholdings and deductions as required by law. Your principal place of employment shall be at the Company's offices in Raleigh-Durham, North Carolina, subject to business travel as needed to properly fulfill your employment duties and responsibilities.

During your employment, you will be eligible to participate in the Company's Annual Incentive Plan (or such successor or additional plans, the " **AIP** ") on the same terms and conditions as other similarly situated executives. Your annual target bonus opportunity will be 85% of base salary. You will continue to be eligible to participate in the employee benefit plans and programs generally available to the Company's senior executives, subject to the terms and conditions of such plans and programs. The Company reserves the right to amend, modify or terminate any of its benefit plans or programs at any time and for any reason.

You will also be eligible to receive an annual equity award commensurate with amounts, terms and conditions applicable to similarly situated executive officers of the Company, subject to the applicable terms, conditions and eligibility requirements of the equity plans and programs of QuintilesIMS, as they may exist from time to time, and the approval of the Leadership Development and Compensation Committee of the Board of Directors of QuintilesIMS in its discretion.

Effective on the Start Date, your employment will be subject to the terms and conditions set forth in this letter, and any employment agreement between you and QuintilesIMS or any affiliate thereof, including the agreement executed as of August 13, 2013 between you and Novella Clinical, Inc. (" **Employment Agreement** "), shall terminate and have no further force or effect except as expressly described in this offer letter.

This offer of employment is contingent upon: (1) your agreement to the terms and conditions set forth in this offer letter and (2) your agreement to the terms and conditions set forth in the Restrictive Covenant Agreement.

You acknowledge and agree you are receiving good, valuable and adequate consideration for your agreement to the terms of this offer letter, including the promotion and increased responsibility reflected in your new role in the Company as described above.

This offer letter shall not be construed as constituting a contract for employment, or otherwise set forth a length of employment. Rather, your employment will be at-will, meaning that you or the Company may terminate the employment relationship at any time, with or without cause, and for any reason or no particular reason in accordance with the terms of this letter.

If your employment with the Company is terminated by the Company other than for Cause, subject to your execution and non-revocation of a release of claims in a form provided by the Company and your compliance with the Restrictive Covenant Agreement, you will be eligible to receive severance in an aggregate amount equal to the sum of (1) an amount equal to twenty-four (24) months of base salary in effect at the time of your termination, (2) an amount equal to your annual target bonus opportunity in effect for the year of termination, and (3) an amount equal to the projected cost of the continuation of your group health insurance coverage for you and your eligible dependents pursuant to COBRA for the eighteen (18) months following the termination date (together, the " **Severance Payment** "). The Severance Payment shall be payable in equal monthly installments on the Company's regular payroll schedule during the twenty-four month non-competition period pursuant to the Restrictive Covenant Agreement, with the first installment to be paid on the first regular payroll date occurring after the 30 th day following your termination date; provided that if the review and revocation period for the release begins in one taxable year and ends in another taxable year, payments shall not begin until the beginning of the second taxable year; and provided further that the first installment will include all amounts that would otherwise have been paid to you since the period beginning on the termination date if no delay had been imposed. The severance payable pursuant to this paragraph shall be in lieu of any benefits under any other severance plan of the Company.

For purposes of this offer letter, " **Cause** " means the occurrence of any of the following: (i) any willful misconduct or omission or act of dishonesty by you, which as determined by the Company in its reasonable discretion, may cause material harm to the Company or its affiliates, or any other actions that are materially detrimental to the Company or any affiliates' interest; (ii) gross negligence or willful misconduct by you in the performance of your duties; (iii) any material act by you of fraud or intentional misrepresentation or embezzlement, misappropriation or conversion of assets, whether or not related to your employment with the Company; (iv) you being indicted for, convicted of, confessing to, pleading nolo contendere or becoming the subject of proceedings that provide a reasonable basis for the Company to believe that you have engaged in, a felony or in any other crime involving dishonesty or moral turpitude; (v) your material violation of a provision of the Company's code of conduct, ethics policy or other material policy of the Company, which as determined by the Company in its reasonable discretion may be materially detrimental to the Company or any affiliates' interest; (vi) your material breach of fiduciary duty to the Company or its affiliates which as determined by the Company in its reasonable discretion may be materially detrimental to the Company or any affiliates' interest; or (vii) your material breach of this offer letter, the Restrictive Covenant Agreement or any other written agreement between you and the Company which as determined by the Company in its reasonable discretion may be materially detrimental to the Company or any affiliates' interest; provided that , "Cause" shall not be deemed to have occurred pursuant to subsections (v) and (vii) hereof unless you have first received written notice from the Company specifying in reasonable detail the particulars of such grounds and that Company intends to terminate your employment hereunder for such reason, and if such ground is reasonably capable of being cured within fifteen (15) days, you have failed to cure such ground within a period of fifteen (15) days from the date of such notice. The Company may place you on paid leave while it is determining whether there is a basis to terminate your employment for Cause or during the above-referenced cure period.

This offer letter shall be governed by the laws of North Carolina, without regard to conflict of law principles. This offer letter may be signed in any number of counterparts (including via facsimile and electronic transmission), each of which will be deemed to be an original and all of which together will constitute one and the same instrument. No provision of this offer letter may be amended or modified unless agreed to in writing and signed by you and the Company.

Section 409A

This offer letter is intended to comply with Section 409A of the Internal Revenue Code (" **Section 409A** ") or an exemption thereunder and shall be construed and administered in accordance with Section 409A. Notwithstanding any other provision of this offer letter, payments provided under this offer letter may only be made upon an event and in a manner that complies with Section 409A or an applicable exemption. Any payments under this offer letter

that may be excluded from Section 409A either as separation pay due to an involuntary separation from service or as a short-term deferral shall be excluded from Section 409A to the maximum extent possible. For purposes of Section 409A, each installment payment provided under this offer letter shall be treated as a separate payment. Any payments to be made under this offer letter upon a termination of employment shall only be made upon a "separation from service" under Section 409A. Notwithstanding the foregoing, the Company makes no representations that the payments and benefits provided under this offer letter comply with Section 409A and in no event shall the Company be liable for all or any portion of any taxes, penalties, interest or other expenses that may be incurred by you on account of non-compliance with Section 409A.

Notwithstanding any other provision of this offer letter, if any payment or benefit provided to you in connection with termination of employment is determined to constitute "nonqualified deferred compensation" within the meaning of Section 409A and you are determined to be a "specified employee" as defined in Section 409A(a)(2)(b)(i), then such payment or benefit shall not be paid until the first payroll date to occur following the six-month anniversary of your termination date (the " **Specified Employee Payment Date** ") or, if earlier, on the date of your death. The aggregate of any payments that would otherwise have been paid before the Specified Employee Payment Date shall be paid to you in a lump sum on the Specified Employee Payment Date and thereafter, any remaining payments shall be paid without delay in accordance with their original schedule.

We eagerly await your acceptance in writing and look forward to working with you in this role, where we are confident you will find enormous opportunity for growth and development.

Yours sincerely,

/s/ Ari Bousbib
Ari Bousbib
On behalf of Quintiles IMS Incorporated

I have read, understood and accept all the terms of the offer of employment as set forth in the foregoing letter. I have not relied on any agreements or representations, express or implied, that are not set forth expressly in this letter, and this letter supersedes all prior and contemporaneous understandings, agreements, representations and warranties, both written and oral, with respect to the subject matter of this letter, except as expressly set forth herein.

/s/ W. Richard Staub III	November 30, 2016
W. Richard Staub III	Date

Schedule A

NON-COMPETITION, NON-SOLICITATION, CONFIDENTIALITY AND INTELLECTUAL PROPERTY AGREEMENT

This Non-Competition, Non-Solicitation, Confidentiality and Intellectual Property Agreement (the " **Agreement** ") is made by and between W. Richard Staub III (the " **Executive** ") and Quintiles IMS Incorporated (the " **Company** "), a subsidiary of Quintiles IMS Holdings, Inc. (" **QuintilesIMS** "). This Agreement will become effective immediately upon the date Executive executes the letter agreement dated November 30, 2016 to which this Agreement is Exhibit A (the **"Letter Agreement"**).

WHEREAS, Executive has been employed by the Company and his employment is being continued in a senior executive position with the Company as of the Start Date set forth in the Letter Agreement. As an employee, he will have responsibilities that embrace all of the services provided by the Company and will have access to confidential information and trade secrets of the Company and its Affiliates, including but not limited to valuable information about their worldwide business operations and the persons and entities with which they do business in various locations throughout the world and he will develop relationships with their customers and others with which they do business in various locations throughout the world; and

WHEREAS, Executive is already obligated under existing agreements with Affiliates of the Company to comply with restrictive covenants similar to those contained in this Agreement, but Executive agrees that because of the information and relationships to which Executive will be exposed in anticipation of and during the course of Executive's performance of his new role with the Company, it would be harmful to the Company, QuintilesIMS and its Affiliates for Executive to compete with Company, QuintilesIMS or its Affiliates or solicit their clients, customers or employees in the manner prohibited by this Agreement and that the Company, QuintilesIMS and its Affiliates have legitimate business interests in protecting themselves from such competition and solicitation.

NOW, THEREFORE, in consideration of the mutual covenants, promises and obligations set forth herein and in the accompanying Letter Agreement, the parties agree as follows:

1. Nondisclosure .

1.1. Recognition of Company's Rights; Nondisclosure . Executive understands and acknowledges that during the course of his employment by the Company, Executive will have access to and learn about Confidential Information, as defined below, relating to the Company and its Affiliates, and the Company Business. Executive further understands and acknowledges that this Confidential Information, and the Company's ability to reserve it for the exclusive knowledge and use of the Company and its Affiliates, is of great competitive importance and commercial value to the Company, and that improper use or disclosure of the Confidential Information by Executive will cause irreparable harm to the Company and its Affiliates, for which remedies at law will not be adequate. At all times during Executive's employment, and thereafter, Executive will hold in strictest confidence and will not disclose or use any Confidential Information, except as such disclosure or use may be required in connection with Executive's work for the Company, or unless and to the extent the Company expressly authorizes such in writing. Executive will obtain the Company's written approval before publishing or submitting for publication any material (written, verbal, or otherwise, including without limitation presentations, abstracts or posters) that relates to Executive's work at the Company, relates to the Company's Business, and/or incorporates any Confidential Information.

1.2. Assignment . Executive agrees to assign and hereby assigns to the Company any rights Executive may have or acquire in any knowledge, data or information that is made, authored, conceived, developed, or reduced to practice by Executive during the period of Executive's employment with the Company and which (but for Executive's rights therein) would constitute Confidential Information, and Executive recognizes that all Confidential Information shall be the sole property of the Company.

1.3. Subpoena or Court Order . If Executive is required to disclose Confidential Information pursuant to a court order, subpoena or other government process or such disclosure is necessary to comply with applicable law or defend against claims, Executive shall: (i) notify the Company promptly before any such disclosure is made; (ii) at the Company's request and expense take all reasonably necessary steps to defend against such disclosure, including defending against the enforcement of the court order, other government process or claims; and (iii) permit the Company to participate with counsel of its choice in any proceeding relating to any such court order, subpoena, other government process or claims.

1.4. Duration of Confidentiality Obligations . Executive understands and acknowledges that Executive's obligations under this Agreement with regard to any particular Confidential Information or Trade Secret shall commence immediately upon Executive first having access to such Confidential Information or Trade Secret and shall continue during and after Executive's employment by the Company until such time as such Confidential Information or Trade Secret has become public knowledge other than as a result of Executive's breach of this Agreement or breach by those acting in concert with Executive or on Executive's behalf and shall not continue longer than ten (10) years after Executive's separation from service as an employee.

1.5. Confidential Information . The term " **Confidential Information** " includes, but is not limited to: (i) all information not generally known to the public, in spoken, printed, electronic or any other form or medium, relating directly or indirectly to the Company Business, is of value and is treated as confidential, including, but not limited to, future business plans, financial information, business plans, strategic plans, pricing information, licensing strategies, advertising campaigns, information regarding executives and employees, and the terms and conditions of this Agreement; and (ii) information of the Company, or its Affiliates and its and/or their licensors, suppliers, customers, or prospective licensors or customers, including, but not limited to, data, formulas, patterns, compilations, programs, devices, methods, techniques, processes, financial data, financial plans, product plans, or lists of actual or potential customers or suppliers, which: (aa) derives independent actual or potential commercial value, from not being generally known to or readily ascertainable through independent development or reverse engineering by persons or entities who can obtain economic value from its disclosure or use; and (bb) is the subject of efforts that are reasonable under the circumstances to maintain its secrecy (**"Trade Secret"**). Notwithstanding anything otherwise in this Agreement to the contrary, Confidential Information shall not include information that is generally known or available to the public unless such information became so known or available as a consequence of a breach by Executive of Executive's obligations pursuant to this Agreement.

1.6. Third Party Information . Executive understands, in addition, that the Company has received and in the future will receive from third parties confidential or proprietary information (" **Third Party Information** ") subject to a duty on the Company's part to maintain the confidentiality of such information and to use it only for certain limited purposes. During the term of Executive's employment and thereafter, Executive will hold Third Party Information in the strictest confidence and will not disclose to anyone or use the Third Party Information, except as and to the extent permitted under this Agreement with respect to Confidential Information in connection with Executive's work for the Company.

1.7. No Improper Use of Information of Prior Employers and Others . During Executive's employment with the Company, Executive will not improperly use or disclose any Confidential Information of any former employer or any other person to whom Executive has an obligation of confidentiality. Executive will not bring onto the premises of the Company any unpublished documents or any property belonging to any former employer or any other person to whom Executive has an obligation of confidentiality unless consented to in writing by that former employer or person. Executive will use in the performance of Executive's duties only information which is generally known and used by persons with training and experience comparable to Executive's own, which is common knowledge in the industry or otherwise legally in the public domain, or which is otherwise provided or developed by the Company or Executive. Executive represents that Executive's performance of all the terms of this Agreement and as an employee of the Company will be consistent with the obligations set forth in Section 1 of this Agreement.

1.8. Acknowledgement upon Termination of Employment . Executive agrees that upon termination of Executive's employment, without limiting Executive's obligations hereunder, and if requested by the Company, Executive will acknowledge Executive's possession of Confidential Information by signing an appropriate list of all Confidential Information of which Executive has knowledge or about which Executive has acquired information.

2. Competitive Business Activities . Executive acknowledges that by virtue of Executive's employment by and senior position with the Company, (i) Executive will have responsibilities that embrace each of the services provided within the Company Business (as defined in Section 2.7); (ii) the Company operates the Company Business through employees of Company as well as a network of entities subsidiary to or affiliated with the Company, or owned by subsidiaries or Affiliates of the Company located throughout the world; (iii) by virtue of Executive's employment by and senior position with the Company, Executive will have access to Confidential Information (as defined in this Agreement) of the Company and its Affiliates, including but not limited to valuable information about their worldwide business operations and the persons and entities with which they do business in various locations throughout the world and will develop relationships with their customers and others with which they do business in various locations throughout the world; and (iv) the restrictions set forth in this Section 2 are reasonably necessary to protect the Company's legitimate business interests, are reasonable as to time, territory, and scope of prohibited activities, do not interfere with the public policy or public interest, and are described with sufficient accuracy and definiteness to enable Executive to understand the scope of the restrictions imposed.

2.1. Covenant Not to Compete. During Executive's employment and the twenty-four (24) month period following the end of Executive's employment, Executive shall not, within the geographic territory identified in Section 2.4, do any of the following, whether or his own behalf or as an officer, director, stockholder, partner, associate, owner, employee, consultant or independent contractor, nor shall Executive provide material assistance to any other person or entity to do so:

(a) engage in the Company Business in competition with the Company or any Restricted Affiliate;

(b) engage in the Company Business in any role that is the same as or materially similar to the role that he performed for the Company, in competition with the Company or any Restricted Affiliate; or

(c) engage in the Company Business in competition with the Company or any Restricted Affiliate, in any role the performance of which would be reasonably presumed to require or involve the use or disclosure of Confidential Information.

2.2. Covenant Not to Solicit Customers . During Executive's employment and the twenty-four (24) month period following the end of Executive's employment, Executive shall not, within the geographic territory identified in Section 2.4, engage in any of the following activities, whether on his own behalf or as an officer, director, stockholder, partner, associate, owner, employee, consultant or independent contractor, nor shall Executive provide material assistance to any other person or entity to do so:

(a) solicit any customer of the Company or any customer of any Restricted Affiliate, to obtain services that the customer had obtained from the Company or Affiliate from an entity in competition with the Company or Restricted Affiliate;

(b) solicit any person or entity which Executive serviced, contracted with or negotiated with on behalf of the Company or any Restricted Affiliate to obtain services that the person or entity had obtained from the Company or a Restricted Affiliate from an entity in competition with the Company or Restricted Affiliate;

(c) solicit any person or entity which any employee of Company or any Restricted Affiliate for whom Executive was responsible, serviced, contracted with or negotiated with on behalf of the Company or any Restricted Affiliate, to obtain services that the customer had obtained from the Company or Affiliate from an entity in competition with the Company or Restricted Affiliate;

(d) solicit any customer of the Company or any Restricted Affiliate, the effective solicitation of which would reasonably be expected to benefited by the knowledge of Confidential Information, to obtain services that the customer had obtained from the Company or an Restricted Affiliate from an entity in competition with the Company or an Restricted Affiliate;

(e) solicit any vendor or supplier of the Company or a Restricted Affiliate to cease doing business with the Company or Restricted Affiliate, or to provide services to an entity in competition with the Company or any Restricted Affiliate the effect of which would be to eliminate or diminish the provision of services to the Company or an Restricted Affiliate; or

(f) encourage any customer of the Company or any Restricted Affiliate to cancel, terminate or refrain from renewing or continuing any contract or business relationship with the Company or a Restricted Affiliate or to otherwise diminish that Customer's relationship with the Company or any Restricted Affiliate.

2.3. Covenant Not to Solicit or Hire Employees . During Executive's employment and the twenty-four (24) month period following the end of Executive's employment, Executive shall not, engage in any of the following activities, whether or his own behalf or as an officer, director, stockholder, partner, associate, owner, employee, consultant or independent contractor, nor shall Executive provide material assistance to any other person or entity to do so:

(a) offer employment to, solicit for employment or hire any employee of the Company or any Restricted Affiliate or any person who was employed by the Company or any Restricted Affiliate during the one year period prior to the termination of Executive's employment with the Company;

(b) offer employment to, solicit for employment or hire any employee of Company or any Restricted Affiliate with respect to whom Executive had responsibility at the time of the termination of Executive's employment with the Company or during the one year period prior to the termination of Executive's employment with the Company;

(c) offer employment to, solicit for employment or hire any employee of Company or any Restricted Affiliate who was personally known to Executive; or

(d) offer employment to, solicit for employment or hire any employee of Company or any Restricted Affiliate with respect to whom Executive had responsibility at the time of the termination of Executive's employment with the Company or during the one year period prior to the termination of Executive's employment with Company.

2.4. Geographic Territory . In recognition of the worldwide presence of the Company, the worldwide extent of Executive's responsibilities, the breadth of Executive's knowledge of Confidential Information relevant to the operations of the Company and its Affiliates worldwide, and the relationships with customers, potential customers and contacts important to the Company Business that Executive will develop and that will be available to him as a consequence of the goodwill of the Company worldwide, Executive agrees that the restrictions set forth in Sections 2.1 and 2.2 above will apply to the broadest geographic territory possible, including the following geographical regions: (a) the world; (b) the United States; (c) any country in which Executive worked, had responsibility or provided services on behalf of the Company or a Restricted Affiliate; (d) any country in which any employee of the Company or any Restricted Affiliate who was supervised by Executive, either directly or through other supervisors, had responsibility, provided services or worked; (e) any State of the United States, or similar political subdivision in a foreign country, in which Executive worked, had responsibility, or provided services on behalf of the Company or any Restricted Affiliate; (f) any State of the United States, or similar political subdivision of any foreign country in which any employee of the Company or any Restricted Affiliate who was supervised by Executive had responsibility, provided services or worked; (g) any city, or any county or similar political subdivision in any foreign country, in which Executive had responsibility, worked or provided services on behalf of the Company or any Restricted Affiliate; (h) any city, or any county or similar political subdivision in any foreign country in which any employee of Company or any Restricted Affiliate who was supervised by Executive had responsibility, worked or provided services on behalf of Company or any Restricted Affiliate; (i) any State, city, metropolitan area or country (or similar political subdivisions in any foreign country) in which Company or any Restricted Affiliate is located or does business.

2.5. Exclusion . Notwithstanding the foregoing, Executive's ownership of not more than one (1) percent of the issued and outstanding stock of a corporation the shares of which are regularly traded on a national securities exchange or in the over-the-counter markets shall not violate this Section 2.

2.6. Tolling . The period during which Executive must refrain from the activities set forth in Sections 2.1, 2.2 and 2.3 shall be tolled during any period in which he fails to abide by those provisions.

2.7. Definitions . As used in this Agreement:

(a) " **Affiliate(s)** " shall mean: (i) any Company parent, subsidiary or related entity; and/or (ii) any entity directly or indirectly controlled or beneficially owned in whole or part by Company's parent, subsidiary or related entity.

(b) " **Company Business** " shall mean the business engaged in by the Company, and its Restricted Affiliates, that includes but is not limited to the provision of contract research, sales and marketing services, market research services, technology services, information services and consulting services to pharmaceutical, biotechnology, medical device and healthcare entities.

(c) " **Restricted Affiliates** " shall mean any Affiliate of the Company with which Executive worked, had responsibility or supervisory authority, or which uses Confidential Information of the Company about which Executive has knowledge.

3. Assignment of Inventions .

3.1. Proprietary Rights; Inventions . The term " **Proprietary Rights** " shall mean all trade secret, patent, copyright, mask work, trademark and other intellectual property rights throughout the world. The term "Inventions" shall mean any and all inventions, improvements, know-how, trade secrets, confidential and proprietary information, trademarks, service marks and other indicia of origin, websites, URLs, domain names, software programs, discoveries, conceptions, preparations and developments, in all stages of development, whether or not eligible for or covered by patent, copyright or trade secret protection.

3.2. Prior Inventions . Inventions, if any, patented or unpatented, which Executive made prior to the beginning of Executive's employment with the Company are excluded from the scope of this Agreement. To preclude any possible uncertainty, Executive has provided to Company a complete list of all Inventions that Executive has, alone or jointly with others, made, authored, conceived, developed, or reduced to practice or caused to be made, authored, conceived, developed, or reduced to practice prior to the beginning of Executive's employment with the Company, that Executive considers to be Executive's property or the property of third parties and that Executive wish to have excluded from the scope of this Agreement (collectively, " **Prior Inventions** "). If disclosure of any such Prior Invention would cause Executive to violate any prior confidentiality agreement, Executive understands that Executive is not to list such Prior Inventions in his disclosure to the Company but is only to disclose a cursory name for each such Invention, a listing of the party to whom it belongs and the fact that full disclosure as to such Inventions has not been made for that reason. If no such disclosure is attached, Executive represents that there are no Prior Inventions. Notwithstanding anything to the contrary in this Agreement, Executive agrees that Executive will not incorporate, or permit to be incorporated, any Inventions in which Executive or any third parties own any rights in any Company product, process, service, machine, or other Company Inventions (as defined below) without the Company's prior written consent. Without limiting any other remedy to which the Company may be entitled, if in the course of Executive's employment with the Company, (a) Executive incorporates an Invention that Executive owns or controls into a Company product, process, service, machine, or other Company Invention, Executive agrees to grant and hereby grants to the Company a nonexclusive, royalty-free, paid-up irrevocable, perpetual, transferable, worldwide license (with rights to sublicense through multiple tiers of sublicensees) under such Inventions and all Proprietary Rights therein to make, have made, modify, use, sell, have sold, import, export and otherwise exploit any and all products, processes, services, machines or other Company Inventions, and (b) Executive incorporates an

Invention that Executive does not own or control into a Company product, process, service, machine, or other Company Invention, Executive shall take all reasonable action necessary to cause the third party who owns or controls such Invention to grant to the Company the rights described in the foregoing sentence.

3.3. Assignment of Inventions . Executive agrees to assign and hereby assigns all Executive's right, title and interest in and to any and all Inventions and all Proprietary Rights with respect thereto (except to the extent that such Inventions constitute works for hire or otherwise belong to the Company by operation of law), which (a) are related to the Company's Business or actual or demonstrably anticipated research or development or (b) are developed during Company time or using Company resources, and that in each case are made, authored, conceived, developed, or reduced to practice by Executive, either alone or jointly with others, during the period of Executive's employment with the Company. Inventions assigned to the Company, or to a third party as directed by the Company pursuant to this Section 3.3, are hereinafter referred to as " **Company Inventions** ". Executive further agrees to waive and hereby waives and agrees never to assert any and all moral rights in any Company Inventions, such as the right to be named as author, the right to modify, the right to prevent mutilation and the right to prevent commercial exploitation, whether arising under the Berne Convention or otherwise, and all other similar rights regardless of whether such right is denominated or generally referred to as a "moral right."

3.4. Obligation to Keep Company Informed . Executive will promptly disclose to the Company fully and in writing all Inventions that are made, authored, conceived, developed or reduced to practice by Executive, either alone or jointly with others, during the period of Executive's employment with the Company and for a two (2) year period thereafter. At the time of each such disclosure, Executive will advise the Company in writing of any Inventions that Executive believes are non-assignable Inventions under the provisions of applicable law (i.e., inventions that Executive developed entirely on Executive's own time without using the Company's equipment, supplies, facility or trade secret information, unless such Invention (a) relates to the Company's Business or actual or demonstrably anticipated research or development, or (b) results from any work performed by Executive for the Company) and Executive will at that time provide to the Company in writing all evidence necessary to substantiate that conclusion.

3.5. Works for Hire . Executive acknowledges and agrees that all original works of authorship which are made by Executive (solely or jointly with others) within the scope of Executive's employment and which are protectable by copyright are "works made for hire," pursuant to the United States Copyright Act (17 U.S.C., Section 101).

3.6. Enforcement of Proprietary Rights . Executive agrees that Executive will assist the Company in every proper way to obtain, and from time to time enforce, United States and foreign Proprietary Rights relating to Company Inventions in any and all countries. To that end Executive will execute, verify and deliver such documents and perform such other acts (including appearances as a witness) as the Company may reasonably request for use in applying for, obtaining, perfecting, evidencing, sustaining and enforcing such Proprietary Rights and the assignment thereof. In addition, Executive agrees that Executive will execute, verify and deliver assignments of such Proprietary Rights to the Company or its designee. Any such assistance provided during the term of Executive's employment will be provided without additional compensation. Executive's obligation to assist the Company with respect to Proprietary Rights relating to such Company Inventions in any and all countries shall continue beyond the termination of Executive's employment, but the Company shall compensate Executive at a reasonable rate after Executive's termination for the time actually spent by Executive and for any reasonable expenses actually incurred by Executive thereafter at the Company's request on such assistance. In the event the Company is unable for any reason, after reasonable effort, to secure Executive's signature on any document needed in connection with the actions specified in the preceding paragraph, Executive hereby irrevocably designates and appoints the Company and each of its duly authorized officers and agents as Executive's agent and attorney in fact, which appointment is coupled with an interest, to act for and on Executive's behalf to execute, verify and file any such documents and to do all other lawfully permitted acts to further the purposes of the preceding paragraph with the same legal force and effect as if executed by Executive. Executive hereby waives and quitclaims to the Company any and all claims, of any nature whatsoever, which Executive now or may hereafter have for infringement of any Proprietary Rights assigned hereunder to the Company.

3.7. Irrevocable Assignment . The Company's ownership of all Company Inventions that are made, authored, conceived, developed or reduced to practice by Executive, either alone or jointly with others, during the period of

Executive's employment with the Company, as assigned to the Company pursuant to this Agreement or by operation of law, shall not be subject to revocation or rescission in the event of a dispute between the Company and Executive concerning payment of compensation or benefits to Executive, unless Executive proves that the Company acquired ownership thereof fraudulently.

4. Non-Disparagement . Executive agrees not to make any disclosures, issue any statements or otherwise cause to be disclosed any information which is designed, intended or might reasonably be anticipated to disparage the Company, its officers or directors, its business, services, products, technologies and/or personnel. Nothing in this Section is intended, nor shall be construed, to (a) prohibit Executive from any communications to, or participation in any investigation or proceeding conducted by, any governmental agency with jurisdiction concerning the terms, conditions and privileges of employment or jurisdiction over the Company's business, or (b) prevent Executive from otherwise engaging in any legally protected activity.

5. Records . Executive agrees to keep and maintain adequate and current records of all Confidential Information learned or received by Executive and all Inventions made, authored, conceived, developed or reduced to practice by Executive during the period of Executive's employment with the Company, which records shall be available to, and to the extent constituting Confidential Information or Company Inventions shall remain the sole property of, the Company at all times.

6. No Conflicting Obligation . Executive represents that Executive's performance of all the terms of this Agreement and as an employee of the Company do not and will not breach any (a) agreement to keep in confidence information acquired by Executive in confidence or in trust prior to Executive's employment by the Company, or (b) agreement with or obligation to any third party to which he is otherwise bound, or faculty or staff appointment with a university, government or other research institution). Executive has not entered into, and Executive agrees that Executive will not enter into, any agreement, either written or oral, in conflict herewith.

7. Return of Company Materials . When Executive leaves the employ of the Company, Executive agrees that: (a) Executive will return all the Company property (including, but not limited to, credit cards; keys; company car; cell phone; air card; access cards; thumb drive(s), laptop(s), personal digital devices and all other computer hardware and software; records, files, documents, manuals, and other documents in whatever form they exist, whether electronic, hard copy or otherwise and all copies, notes or summaries thereof which Executive created, received or otherwise obtained in connection with Executive's employment); (b) Executive will not delete any emails, files or other information from any Company computer or device prior to Executive's return of the property except in strict accordance with Company policy; and (c) Executive will permanently delete any Company information that may reside on Executive's personal computer(s), other devices or accounts and submit all personal computers, phones and other devices which Executive used for Company business, and will identify all personal accounts on which Company information has been placed and related passwords, to a third party vendor, as may be designated by the Company, for inspection and removal of any Company-related information. Executive further agrees that any property situated on the Company's premises and owned by the Company, including disks and other storage media, filing cabinets or other work areas, is subject to inspection by Company personnel at any time with or without notice.

8. Publicity . Executive hereby irrevocably consents to any and all uses and displays, by the Company and its agents, representatives and licensees, of Executive's name, voice, likeness, image, appearance and biographical information in, on or in connection with any pictures, photographs, audio and video recordings, digital images, websites, television programs and advertising, other advertising and publicity, sales and marketing brochures, books, magazines, other publications, CDs, DVDs, tapes and all other printed and electronic forms and media throughout the world, at any time during or after the period of his employment by the Company, for all legitimate commercial and business purposes of the Company without further consent from or royalty, payment or other compensation to Executive.

9. Legal and Equitable Remedies for Breach of Certain Provisions . Executive acknowledges that his failure to abide by Sections 1 (Nondisclosure), 2 (Competitive Business Activities), or 3 (Inventions) of this Agreement would cause irreparable harm to the Company and/or its Affiliates for which legal remedies would be inadequate. Therefore, in addition to any legal or other relief to which the Company and/or its Affiliates may be entitled by virtue of Executive's failure to abide by these provisions: (a) the Company and its Affiliates may seek legal and equitable

relief, including but not limited to preliminary and permanent injunctive relief, for Executive's actual or threatened failure to abide by these provisions; (b) Executive will return all post-termination payments received, including but not limited to those received pursuant to any employment contract or agreement or severance plan in which Executive participates; and (c) if, as a result of Executive's failure to abide by the Competitive Business Activities provisions, any commission or fee becomes payable to Executive or to any person, corporation or other entity with which Executive has become employed or otherwise associated, Executive shall pay the Company or cause the person, corporation or other entity with whom he has become employed or otherwise associated to pay the Company an amount equal to such commission or fee. In the event that the Company or its Affiliates exercises its right to require Executive to return all post-termination payments received pursuant to any employment contract or agreement or severance plan in which Executive participates hereof, Executive shall remain obligated to abide by the terms of this Agreement, including but not limited to Sections 1 (Nondisclosure), 2 (Competitive Business Activities), and 3 (Inventions) set forth in this Agreement.

10. Notification of New Employer . In the event that Executive leaves the employ or retention of the Company, Executive hereby consents to the notification of Executive's new employer of Executive's rights and obligations under this Agreement.

11. Governing Law; Consent to Personal Jurisdiction and Forum . This Agreement shall be construed, interpreted, and governed in accordance with and by North Carolina law, without regard to the conflicts of laws principles thereof. The parties agree that the state and federal courts in North Carolina shall have jurisdiction (non-exclusive) for the adjudication of all disputes arising out of this Agreement, and Executive consents to the exercise of personal jurisdiction over Executive in any such adjudication and hereby waives any and all objections and defenses to the exercise of such personal jurisdiction and such venue.

12. Severability . Executive agrees that the restrictions contained in this Agreement are reasonable and necessary, are valid and enforceable, and do not impose a greater restraint than necessary to protect the Company's legitimate business interests. If any one or more of the provisions contained in this Agreement shall for any reason be held by a court to be excessively broad as to duration, geographical scope, activity or subject, the parties intend that such court would reduce, or "blue pencil" such provision by limiting and reducing it, so as to be enforceable to the extent compatible with the applicable law as it shall then appear. In case any one or more of the provisions contained in this Agreement shall, for any reason (including the failure of a court to "blue pencil" a provision pursuant to the foregoing sentence), be held to be invalid, illegal or unenforceable in any respect, such invalidity, illegality or unenforceability shall not affect the other provisions of this Agreement, and this Agreement shall be construed as if such invalid, illegal or unenforceable provision had never been contained herein; provided, however, that if the absence of such provision causes a material adverse change in either the risks or benefits of this Agreement to either the Company or Executive, the Company and Executive shall negotiate in good faith a commercially reasonable substitute or replacement for the invalid or unenforceable provision.

13. Successors and Assigns . This Agreement will be binding upon Executive's heirs, executors, administrators and other legal representatives and will be for the benefit of the Company, its Affiliates, its successors, and its assigns.

14. Waiver . No waiver by the Company of any breach of this Agreement shall be a waiver of any preceding or succeeding breach. No waiver by the Company of any right under this Agreement shall be construed as a waiver of any other right. The Company shall not be required to give notice to enforce strict adherence to all terms of this Agreement.

15. Entire Agreement . This Agreement and the Letter Agreement contain the entire agreement of Executive and the Company and its Affiliates with respect to the matters set forth herein and supersede all previous negotiations and discussions, agreements and understandings regarding such matters. In the event of any conflict between this Agreement and any other agreement with the Company or its Affiliates, the terms of the agreement which are most restrictive shall control. It is understood that this Agreement does not constitute an express or implied employment contract for any definite period of time and that Executive's employment with the Company is "at will" meaning that either the Company or Executive can end the employment relationship at any time, with or without cause.

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

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the date written below.

QUINTILES IMS INCORPORATED

By: _____
Name:
Title:

W. RICHARD STAUB III

_____
Name:

_____
Date

Exhibit 21.1

QUINTILES IMS HOLDINGS, INC.

SUBSIDIARIES OF THE REGISTRANT

Subsidiary	Jurisdiction or State of Organization
Albatross Financial Solutions Limited	United Kingdom
ALIMED Egeszsegugyi Szolgaltato Kft.	Hungary
AMIX S.a.r.l.	France
APPATURE, INC.	Washington
Asesorias IMS Health Chile Limitada	Chile
Asserta Centroamerica Medicion de Mercados, S.A.	Guatemala
Battaerd Mansley Pty. Ltd.	Australia
Benefit Canada, Inc.	Quebec
Benefit Holding, Inc.	North Carolina
Biodesign Gmbh	Germany
BRI International Limited	United Kingdom
BUZZEOPDMA LLC	Delaware
Cambridge Pharma Consultancy Limited	United Kingdom
Cambridge Pharma Consultancy, Inc.	Delaware
CDS – Centre de Service SAS	France
Cegedim Venezuela C.A.	Venezuela
Cenduit (India) Services Private Company Limited	India
Cenduit LLC	Delaware
Cenduit Mauritius Holdings Company	Mauritius
Clinical Lab Minority Shareholder Limited	United Kingdom
Coordinated Management Holdings L.L.C.	Delaware
COORDINATED MANAGEMENT SYSTEMS, INC.	Delaware
CORE Center for Outcomes Research GmbH	Switzerland
CORE Holding GmbH	Switzerland
CRM Health Korea Ltd.	Korea
CSD Health Korea Ltd.	Korea
DATA NICHE ASSOCIATES, INC.	Illinois
Dataline Software Limited	United Kingdom
Datandina Ecuador S.A.	Ecuador
Datec Industria e Comercio, Distribuidora Grafica e Mala Direta Ltda.	Brazil
Dimensions Healthcare LLC	Abu Dhabi
EA Institute, LLC	Delaware
Encore Health Resources, LLC	Texas
ENTERPRISE ASSOCIATES, LLC	Delaware
Forcea NV	Belgium
Global Crown Investment Limited	Hong Kong
Hospital Marketing Services Ltd.	United Kingdom
Hotel Lot C-8B, LLC	North Carolina
Iasist Holdco Limited	United Kingdom
Iasist Portugal, Consultadoria na Área de Saúde, Unipessoal, LDA	Portugal
Iasist SAU Agencia en Chile	Chile
Iasist Sociedad Anonima Unipersonal	Spain
ICOMED Belgium, SA	Belgium
ICOMED S.a.r.l.	France
iGuard, Inc.	North Carolina
Impact RX, LLC	South Africa
IMS (GIBRALTAR) HOLDING LIMITED	Gibraltar
IMS (UK) Pension Plan Trustee Company Limited	United Kingdom
IMS AB	Sweden
IMS Adriatic d.o.o. za konzalting	Croatia
IMS AG	Switzerland
IMS BERMUDA HOLDINGS LTD.	Bermuda

Subsidiary	Jurisdiction or State of Organization
IMS BERMUDA INVESTMENTS LTD.	Bermuda
IMS Bulgaria E.o.o.D.	Bulgaria
IMS CHINAMETRIK INCORPORATED	Delaware
IMS CHINAMETRIK LIMITED	Hong Kong
IMS Consulting Myanmar Company, Ltd.	Myanmar
IMS CONTRACTING & COMPLIANCE, INC.	Delaware
IMS GOVERNMENT SOLUTIONS, INC.	Delaware
IMS Health (Australia) Partnership	Australia
IMS Health (N.Z.) Limited	New Zealand
IMS Health (Pty.) Ltd.	South Africa
IMS Health a.s.	Czech Republic
IMS Health Analytics Services Private Limited	India
IMS Health Argentina S.A.	Argentina
IMS HEALTH ASIA PTE. LTD.	Singapore
IMS Health Australia Holding Pty. Ltd.	Australia
IMS Health Australia Pty. Ltd.	Australia
IMS Health B.V.	Netherlands
IMS Health Bangladesh Limited	Bangladesh
IMS Health Beteiligungs-gesellschaft mbH	Germany
IMS Health Bolivia S.R.L.	Bolivia
IMS HEALTH CANADA INC.	Canada
IMS HEALTH CAPITAL, INC.	Nevada
IMS Health Colombia S.A	Colombia
IMS Health Consulting bvba	Belgium
IMS Health Consulting Sp.z.o.o.	Poland
IMS Health Cyprus LTD	Cyprus
IMS Health de Venezuela C.A.	Venezuela
IMS Health Del Peru S.A.	Peru
IMS Health Deutschland GmbH	Germany
IMS Health Do Brasil Ltda.	Brazil
IMS Health Egypt Limited	Egypt
IMS Health Finance B.V.	Netherlands
IMS Health Finance UK I Limited	United Kingdom
IMS Health Finance UK II Ltd.	United Kingdom
IMS Health Finance UK III Ltd.	United Kingdom
IMS Health Finance UK V Ltd.	United Kingdom
IMS HEALTH FINANCE, INC.	Delaware
IMS Health Global Holdings UK Limited	United Kingdom
IMS Health GmbH	Switzerland
IMS Health GmbH & Co. OHG	Germany
IMS HEALTH GROUP LIMITED	United Kingdom
IMS Health Hellas Technology Solutions SA	Greece
IMS Health Holdings (Pty.) Ltd.	South Africa
IMS Health HQ Limited	United Kingdom
IMS Health II – Technology Solutions Lda.	Portugal
IMS HEALTH INDIA HOLDING CORPORATION	Delaware
IMS Health India Private Limited	India
IMS Health Information Solutions India Private Ltd.	India
IMS Health Information and Consulting Services India Private Limited	India
IMS Health Information Solutions (China) Co. Ltd.	China
IMS Health Information Solutions Argentina S.A.	Argentina
IMS Health Information Solutions Australia Pty. Ltd.	Australia
IMS Health Information Solutions France SAS	France
IMS Health Information Solutions GmbH	Austria
IMS Health Information Solutions Italy SRL	Italy
IMS Health Information Solutions Japan K.K.	Japan
IMS HEALTH KOREA LTD.	Korea
IMS Health Lanka (Private) Limited	Sri Lanka

Subsidiary	Jurisdiction or State of Organization
IMS Health Licensing Associates, L.L.C.	Delaware
IMS Health Limited	Ireland
IMS Health Limited	United Kingdom
IMS Health LLC	Russia
IMS Health Malaysia Sdn. Bhd.	Malaysia
IMS Health Norway A/S	Norway
IMS HEALTH OPERATIONS CENTER PHILIPPINES, INC.	Philippines
IMS Health Oy	Finland
IMS Health Pakistan (Private) Limited	Pakistan
IMS Health Paraguay SRL	Paraguay
IMS HEALTH PHILIPPINES, INC.	Philippines
IMS HEALTH PUERTO RICO INC.	Puerto Rico
IMS Health Regional Pte Ltd.	Singapore
IMS Health S.A.	Spain
IMS Health S.A.S.	France
IMS Health S.P.R.L.	Belgium
IMS Health S.r.l.	Italy
IMS Health Scottish L.P.	United Kingdom
IMS Health Services Ltd.	Hungary
IMS Health Soluçoes de Tecnologia do Brazil Ltda.	Brazil
IMS Health Sp.z.o.o.	Poland
IMS Health Support Montargis S.a.r.l.	France
IMS Health Surveys Limited	United Kingdom
IMS Health Sweden AB	Sweden
IMS HEALTH TAIWAN LTD.	Taiwan
IMS Health Technology Services Limited	United Kingdom
IMS Health Technology Solutions (China) Co. Ltd	China
IMS Health Technology Solutions Australia Pty. Ltd.	Australia
IMS Health Technology Solutions Colombia Ltda.	Colombia
IMS Health Technology Solutions Czech Republic SRO	Czech Republic
IMS Health Technology Solutions Denmark AS	Denmark
IMS Health Technology Solutions Egypt L.L.C.	Egypt
IMS Health Technology Solutions Finland OY	Finland
IMS Health Technology Solutions France SAS	France
IMS Health Technology Solutions Holdings AB	Sweden
IMS Health Technology Solutions Hungary Ltd.	Hungary
IMS Health Technology Solutions India Private Ltd.	India
IMS Health Technology Solutions Italy SRL	Italy
IMS Health Technology Solutions Japan K.K.	Japan
IMS Health Technology Solutions Kazakhstan, LLC	Kazakhstan
IMS Health Technology Solutions Norway AS	Norway
IMS Health Technology Solutions Poland SP. z.o.o.	Poland
IMS Health Technology Solutions Romania Srl	Romania
IMS Health Technology Solutions Russia LLC	Russia
IMS Health Technology Solutions Slovakia SRO	Slovak Republic
IMS Health Technology Solutions Sweden AB	Sweden
IMS Health Technology Solutions Ukraine LLC	Ukraine
IMS Health Technology TUNISIA	Tunisia
IMS Health Tibbi Istatistik Ticaret ve Musavirlik Ltd Sirketi	Turkey
IMS HEALTH TRADING CORPORATION	Delaware
IMS HEALTH TRANSPORTATION SERVICES CORPORATION	Delaware
IMS Health Tunisia sarl	Tunisia
IMS Health UK Investments Limited	United Kingdom
IMS Health Uruguay S.A.	Uruguay
IMS Health, LDA.	Portugal
IMS Holdings (U.K.) Limited	United Kingdom
IMS Hospital Group Limited	United Kingdom
IMS Informatics AG	Switzerland

Subsidiary	Jurisdiction or State of Organization
IMS Informatics Holding AG	Switzerland
IMS INFORMATION MEDICAL STATISTICS (ISRAEL) LTD.	Israel
IMS Information Medical Statistics Spol.s.r.o.	Slovak Republic
IMS Information Solutions Belgium SA	Belgium
IMS Information Solutions Medical Research Limited	United Kingdom
IMS Information Solutions UK Ltd.	United Kingdom
IMS JAPAN K.K.	Japan and Delaware
IMS Market Research Consulting (Shanghai) Co., Ltd.	China
IMS Medical Radar AB	Sweden
IMS Meridian Limited	Hong Kong
IMS Meridian Research Limited	British Virgin Islands
IMS Pharmaceutical Services Srl.	Romania
IMS Republica Dominicana, S.A.	Dominican Republic
IMS SERVICES, LLC	Delaware
IMS Services, pharmaceutical marketing services Ltd.	Slovenia
IMS Software GmbH	Germany
IMS SOFTWARE SERVICES LTD.	Delaware
IMS Technology Solutions UK Limited	United Kingdom
IMS Trading Management, Inc.	Delaware
IMSWorld Publications Limited	United Kingdom
Infopharm Ltd.	United Kingdom
Informations Medicales & Statistiques S.A.R.L.	Morocco
Innovex Merger Corp.	North Carolina
Innovex Saglik Hizmetleri Arastirma ve Danismanlik Ticaret Limited Sirketi	Turkey
Innovex Saglik Urunleri Pazarlame ve Hizmet Danismanlik Anonim Sirketi	Turkey
Institute of Medical Communications NCO	Russia
INTERCONTINENTAL MEDICAL STATISTICS INTERNATIONAL, LTD. (DE)Delaware	Delaware
Intercontinental Medical Statistics Kenya Limited	Kenya
Interstatistik AG	Switzerland
IPP Informacion Promocional y Publicitaria S.A. de C.V.	Mexico
IPP Technology Solutions Mexico S.A. de CV	Mexodi
Kun Tuo Medical Research & Development (Beijing) Co. Ltd.	China
Laboratorie Novex Pharma Sarl	France
Laboratorio Commuq Pharma SLU	Spain
M&H Informatics (BD) LTD.	Bangladesh
MED-VANTAGE, INC.	Delaware
Mercados Y Analisis, S.A.	Spain
Mercurial Insights Holding Pty. Ltd.	Australia
Mercurial Insights Pty. Ltd.	Australia
Meridian Research Vietnam Ltd.	Vietnam
MG Recherche SARL	France
Nordisk Medicin Information AB	Sweden
Novella Clinical LLC	Delaware
Novella Clinical Resourcing, Ltd.	United Kingdom
Novella Clinical, Ltd.	United Kingdom
Novex Pharma GmbH	Germany
Novex Pharma Laboratio S.L.	Spain
Novex Pharma Limited	United Kingdom
Operaciones Centralizadas Latinoamericana Limitada	Chile
Outcome Sciences, LLC	Delaware
Penderwood Limited	United Kingdom
Pharma Deals Limited	United Kingdom
Pharmadata s.r.o.	Slovak Republic
Pharmaforce, S.A. de C.V.	Mexico
PharmARC Consulting Services GmbH	Switzerland
PharmARC Inc.	New Jersey
Pharm-Consult Limited Liability Partnership	Kazakhstan
PR Editions S.A.S.	France

Subsidiary	Jurisdiction or State of Organization
PR International S.A.S.	France
Primeum IMS SAS	France
Privacy Analytics Inc.	Canada
Professional Pharmaceutical Marketing Services (Pty.) Ltd.	South Africa
PT IMS Health Indonesia	Indonesia
PT Quintiles Indonesia	Indonesia
Pygargus AB	Sweden
Q Squared Solutions (Beijing) Co., Ltd.	China
Q Squared Solutions (India) Private Limited	India
Q Squared Solutions (Quest) Limited	United Kingdom
Q Squared Solutions (Quest) LLC	Delaware
Q Squared Solutions (Shanghai) Co., Ltd.	China
Q Squared Solutions B.V.	Amsterdam
Q Squared Solutions BioSciences LLC	Delaware
Q Squared Solutions China (Quest) Limited	United Kingdom
Q Squared Solutions China Limited	United Kingdom
Q Squared Solutions Expression Analysis LLC	Delaware
Q Squared Solutions Holdings B.V.	Amsterdam
Q Squared Solutions Holdings Limited	United Kingdom
Q Squared Solutions Holdings LLC	Delaware
Q Squared Solutions KK	Japan
Q Squared Solutions Limited	United Kingdom
Q Squared Solutions LLC	North Carolina
Q Squared Solutions Proprietary Limited	South Africa
Q Squared Solutions Pte. Ltd.	Singapore
Q Squared Solutions S.A.	Argentina
Quintiles (Thailand) Co., Ltd.	Thailand
Quintiles AB	Sweden
Quintiles AG	Switzerland
Quintiles Argentina S.A.	Argentina
Quintiles Asia Pacific Commercial Holdings, LLC	North Carolina
Quintiles Asia, Inc.	North Carolina
Quintiles Austria GmbH	Austria
Quintiles Belgium NV/SA	Belgium
Quintiles Belgrade d.o.o.	Serbia
Quintiles Benefit France SNC	France
Quintiles Benin Ltd.	Benin
Quintiles BioSciences Holdings, LLC	Delaware
Quintiles Brasil Ltda.	Brazil
Quintiles BT, Inc.	North Carolina
Quintiles Bulgaria EOOD	Bulgaria
Quintiles Canada, Inc.	Quebec
Quintiles Chile	Chile
Quintiles Clindata (Pty) Limited	South Africa
Quintiles Clindepharm (Pty.) Limited	South Africa
Quintiles Clinical and Commercial Nigeria Limited	Nigeria
Quintiles Colombia Ltda.	Colombia
Quintiles Comercial Brasil Ltda.	Brazil
Quintiles Commercial AB	Sweden
Quintiles Commercial APS	Denmark
Quintiles Commercial Europe Limited	United Kingdom
Quintiles Commercial Germany GmbH	Germany
Quintiles Commercial Italia S.r.l.	Italy
Quintiles Commercial Laboratorio S.L.	Spain
Quintiles Commercial Overseas Holdings Limited	United Kingdom
Quintiles Commercial Oy	Finland
Quintiles Commercial Portugal Unipessoal, Lda.	Portugal
Quintiles Commercial Rus	Russia

Subsidiary	Jurisdiction or State of Organization
Quintiles Commercial South Africa (Pty.) Limited	South Africa
Quintiles Commercial UK Limited	United Kingdom
Quintiles Commercial US, Inc.	Delaware
Quintiles Consulting, Inc.	North Carolina
Quintiles Costa Rica, S.A.	Costa Rica
Quintiles Czech Republic, s.r.o.	Czech Republic
Quintiles D.O.O. Beograd	Serbia
Quintiles Denmark	Denmark
Quintiles East Africa Limited	Kenya
Quintiles East Asia Pte. Ltd.	Singapore
Quintiles Eastern Holdings GmbH	Austria
Quintiles Egypt LLC	Egypt
Quintiles Enterprise Management (Shanghai) Co. Ltd.	China
Quintiles Estonia OU	Estonia
Quintiles European Holdings	United Kingdom
Quintiles Federated Services, Inc.	North Carolina
Quintiles Finance Sarl	Luxembourg
Quintiles Finance Uruguay S.r.L.	Uruguay
Quintiles Funding LLC	North Carolina
Quintiles Gesmbh	Austria
Quintiles GmbH	Germany
Quintiles Greece	Greece
Quintiles Guatemala, S.A.	Guatemala
Quintiles Holdings	United Kingdom
Quintiles Holdings S.a.r.l.	Luxembourg
Quintiles Holdings SNC	France
Quintiles Hong Kong Limited	Hong Kong
Quintiles Hungary Ltd.	Hungary
Quintiles IMS Holdings, Inc.	Delaware
QUINTILES IMS INCORPORATED	Delaware
Quintiles IMS Incorporated	Delaware
Quintiles Ireland Limited	Ireland
Quintiles Israel Ltd.	Israel
Quintiles Istanbul Saglik Hizmetleri Arastirma ve Danismanlik Limited Sirketi	Turkey
Quintiles Lanka (Private) Limited	Republic of Sri Lanka
Quintiles Latin America Inc.	Argentina
Quintiles Latin America, LLC	North Carolina
Quintiles Latvia SIA	Latvia
Quintiles Limited	United Kingdom
Quintiles Luxembourg—US	North Carolina
Quintiles Luxembourg European Holding S.a.r.l.	Luxembourg
Quintiles Luxembourg European Holding S.a.r.l.—US	North Carolina
Quintiles Luxembourg France Holdings Sarl	France
Quintiles Malaysia Sdn. Bhd.	Malaysia
Quintiles Market Intelligence LLC	North Carolina
Quintiles Mauritius Holdings, Inc.	Mauritius
Quintiles Medical Communications & Consulting, Inc.	New Jersey
Quintiles Medical Development (Dalian) Co. Ltd.	China
Quintiles Medical Development (Shanghai) Co., Ltd.	China
Quintiles Medical Education, Inc.	New York
Quintiles Mexico, S. de R.L. de C.V.	Mexico
Quintiles Netherlands	Netherlands
Quintiles New Zealand	New Zealand
Quintiles Norway	Norway
Quintiles Novosibirsk	Russia
Quintiles OY	Finland
Quintiles Panama, Inc.	Panama
Quintiles Peru S.r.l.	Peru

Subsidiary	Jurisdiction or State of Organization
Quintiles Pharma Services Corp.	North Carolina
Quintiles Pharma, Inc.	North Carolina
Quintiles Phase One Clinical Trials India Private Limited	India
Quintiles Phase One Services, LLC	Kansas
Quintiles Philippines, Inc.	Philippines
Quintiles Poland Sp. Zoo	Poland
Quintiles Portugal	Portugal
Quintiles Pty Limited	Australia
Quintiles Puerto Rico, Inc.	Puerto Rico
Quintiles Research (India) Private Limited	India
Quintiles Romania S.R.L.	Romania
Quintiles Russia	Russia
Quintiles S.a.r.l.	Luxembourg
Quintiles S.a.r.L.—US	North Carolina
Quintiles S.L.	Spain
Quintiles Site Services, S.A.	Costa Rica
Quintiles Slovakia Services s.r.o.	Slovakia
Quintiles Slovakia, s. r. o.	Slovakia
Quintiles South Africa (Pty.) Limited	South Africa
Quintiles Srl	Italy
Quintiles St. Petersburg	Russia
Quintiles Staff Services Sp.A.	Italy
Quintiles Support Sarl	France
Quintiles Switzerland	Switzerland
Quintiles Switzerland Sarl	Switzerland
Quintiles Taiwan Limited	Taiwan
Quintiles Transfer, LLC	Delaware
Quintiles Transnational Japan K.K.	Japan
Quintiles Transnational Korea Co., Ltd	Korea
Quintiles Trustees Ltd.	United Kingdom
Quintiles UAB	Lithuania
Quintiles UK Holdings Limited	United Kingdom
Quintiles Ukraine	Ukraine
Quintiles Vietnam LLC	Viet Nam
Quintiles West Africa Limited	Ghana
Quintiles Zagreb d.o.o.	Croatia
Quintiles, Inc.	North Carolina
Rehfeld Solutions A/S	Denmark
Reportive SA	France
RMBC Pharma Ltd.	Russia
Rowfarma de Mexico S. de R.L. de C.V.	Mexico
RX India LLC	Delaware
Schwarzeck Verlag GmbH	Germany
Servicios Clinicos, S.A. de C.V.	Mexico
Shanghai IMS Market Research Co. Ltd.	China
Source Belgium sprl	Belgium
Spartan Leasing Corporation	Delaware
Suomen Lääkedata Oy	Finland
Targeted Molecular Diagnostics, LLC	Illinois
Temas Srl—Società Unipersonale	Italy
THE AMUNDSEN GROUP, INC.	Massachusetts
Transforce S.A. de C.V.	Mexico
UAB IMS Health	Lithuania
VALUEMEDICS RESEARCH, LLC	Delaware
VCG&A, Inc.	Massachusetts
VCG-Bio, Inc.	Delaware

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statement on Form S-8 (Nos. 333-213927, 333-193212, 333-188431) and Form S-3 (No. 333-199843) of Quintiles IMS Holdings, Inc. of our report dated February 16, 2017 relating to the financial statements, financial statement schedules and the effectiveness of internal control over financial reporting, which appears in this Form 10-K.

/s/ PricewaterhouseCoopers LLP

Raleigh, North Carolina
February 16, 2017

Exhibit 31.1

CERTIFICATION OF PERIODIC REPORT UNDER SECTION 302 OF

THE SARBANES-OXLEY ACT OF 2002

I, Ari Bousbib, certify that:

1. I have reviewed this annual report on Form 10-K of Quintiles IMS Holdings, Inc. (the "registrant");

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 16, 2017

/s/ Ari Bousbib

Ari Bousbib
Chairman, Chief Executive Officer and President
(Principal Executive Officer *)*

Exhibit 31.2

CERTIFICATION OF PERIODIC REPORT UNDER SECTION 302 OF

THE SARBANES-OXLEY ACT OF 2002

I, Michael R. McDonnell, certify that:

1. I have reviewed this annual report on Form 10-K of Quintiles IMS Holdings, Inc. (the "registrant");

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 16, 2017

/s/ Michael R. McDonnell

Michael R. McDonnell
Executive Vice President and Chief Financial Officer
(Principal Financial Officer)

Exhibit 32.1

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

I, Ari Bousbib, Chairman, Chief Executive Officer and President of Quintiles IMS Holdings, Inc. (the "Company"), do hereby certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to the best of my knowledge:

(1) the Annual Report on Form 10-K of the Company for the year ended December 31, 2016 (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 for the periods presented therein.

Date: February 16, 2017

/s/ Ari Bousbib
Ari Bousbib
Chairman, Chief Executive Officer and President
(Principal Executive Officer)

This certification is being furnished solely to accompany the Report pursuant to 18 U.S.C. § 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, and shall not be deemed "filed" by the Company for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, and shall not 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 or after the date of this Report, irrespective of any general incorporation language contained in such filing.

A signed original of this written statement required by Section 906 of the Sarbanes-Oxley Act of 2002 has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.

Exhibit 32.2

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

I, Michael R. McDonnell, Executive Vice President and Chief Financial Officer of Quintiles IMS Holdings, Inc. (the "Company"), do hereby certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to the best of my knowledge:

(1) the Annual Report on Form 10-K of the Company for the year ended December 31, 2016 (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 for the periods presented therein.

Date: February 16, 2017

/s/ Michael R. McDonnell
Michael R. McDonnell
Executive Vice President and Chief Financial Officer
(Principal Financial Officer)

This certification is being furnished solely to accompany the Report pursuant to 18 U.S.C. § 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, and shall not be deemed "filed" by the Company for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, and shall not 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 or after the date of this Report, irrespective of any general incorporation language contained in such filing.

A signed original of this written statement required by Section 906 of the Sarbanes-Oxley Act of 2002 has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.