CERNER CORP /MO/
Form 10-K
February 08, 2019
Table of Contents

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

FORM 10-K

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

For the fiscal year ended: December 29, 2018

or

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

For the transition period from _____ to _____

Commission file number: 0-15386

CERNER CORPORATION
(Exact name of registrant as specified in its charter)

Delaware (State or other jurisdiction of incorporation or organization)	43-1196944 (I.R.S. Employer Identification No.)
2800 Rockcreek Parkway North Kansas City, MO (Address of principal executive offices)	64117 (Zip Code)

(816) 221-1024
(Registrant's telephone number, including area code)

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

Title of each class	Name of each exchange on which registered
Common Stock, $0.01 par value per share	The Nasdaq Stock Market LLC (Nasdaq Global Select Market)

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

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.
Yes [X] No [ ]
Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act.

Yes [ ] No [X]

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes [X] No [ ]

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files).

Yes [X] No [ ]

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. [X]

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

Large accelerated filer [X] Accelerated filer [ ] Non-accelerated filer [ ]

Smaller reporting company [ ] Emerging growth company [ ]

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

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).

Yes [ ] No [X]

As of June 29, 2018, the aggregate market value of the registrant's common stock held by non-affiliates of the registrant was $18.8 billion based on the closing sale price as reported on the Nasdaq Global Select Market. Shares of common stock held by each executive officer, director and holder of 10% or more of the outstanding common stock have been excluded in that such persons may be deemed to be affiliates. This determination of affiliate status for purposes of this calculation is not intended as a conclusive determination of affiliate status for other purposes.

Indicate the number of shares outstanding of each of the registrant's classes of common stock, as of the latest practicable date.

Class	Outstanding at January 28, 2019
Common Stock, $0.01 par value per share	324,360,908 shares

DOCUMENTS INCORPORATED BY REFERENCE

Document	Parts into Which Incorporated
Portions of the registrant's Proxy Statement for the Annual Shareholders' Meeting to be held May 30, 2019	Part III

Table of Contents

CERNER CORPORATION

TABLE OF CONTENTS

Table of Contents

PART I.

Item 1. Business.

Overview

Cerner Corporation started doing business as a Missouri corporation in 1980 and was merged into a Delaware corporation in 1986. Unless the context otherwise requires, references in this report to "Cerner," the "Company," "we," "us" or "our" mean Cerner Corporation and its subsidiaries.

Our corporate world headquarters is located in a Company-owned office park in North Kansas City, Missouri, with our principal place of business located at 2800 Rockcreek Parkway, North Kansas City, Missouri 64117. Our telephone number is 816.221.1024. Our Web site, which we use to communicate important business information, can be accessed at: www.cerner.com. We make our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and all amendments to those reports available free of charge on or through this Web site as soon as reasonably practicable after such material is electronically filed with or furnished to the Securities and Exchange Commission ("SEC"). We do not intend for information contained in our website to be part of this annual report on Form 10-K.

Cerner is a leading supplier of health care information technology ("HCIT") solutions and tech-enabled services. Our mission is to relentlessly seek breakthrough innovation that will shape health care of tomorrow. We offer a wide range of intelligent solutions and tech-enabled services that support the clinical, financial and operational needs of organizations of all sizes. We have systems in more than 27,500 facilities worldwide, including hospitals, physician practices, laboratories, ambulatory centers, behavioral health centers, cardiac facilities, radiology clinics, surgery centers, extended care facilities, retail pharmacies, and employer sites.

Cerner® solutions are offered on the unified Cerner Millennium® architecture and on the HealtheIntent® cloud-based platform. Cerner Millennium is a person-centric computing framework, which includes integrated clinical, financial and management information systems. This architecture allows providers to securely access an individual's electronic health record ("EHR") at the point of care, and it organizes and proactively delivers information to meet the specific needs of physicians, nurses, laboratory technicians, pharmacists, front- and back-office professionals and consumers. Our HealtheIntent platform is a cloud-based platform designed to scale at a population level while facilitating health and care at a person and provider level. On the HealtheIntent platform, we offer solutions that aggregate, transform and reconcile data across the continuum of care, enabling key stakeholders to manage the health of populations, improve outcomes and lower costs. Cerner also has an EHR agnostic platform, CareAware®, that facilitates connectivity of health care devices to EHRs, allowing for more efficient and effective care.

On February 2, 2015, Cerner acquired the Health Services business from Siemens AG, which offered a portfolio of enterprise-level clinical and financial health care information technology solutions, as well as departmental, connectivity, population health, and care coordination solutions globally.

We offer a broad range of tech-enabled services, including implementation and training, remote hosting, operational management services, revenue cycle services, support and maintenance, health care data analysis, clinical process optimization, transaction processing, employer health centers, employee wellness programs and third-party administrator services for employer-based health plans.

In addition to software and services, we offer a wide range of complementary hardware and devices, both directly from Cerner and as a reseller for third parties.

Table of Contents

The following table presents consolidated revenues by our business models and by segment, as a percentage of total revenues:

	For the Years Ended		
	2018	2017	2016
Revenues by Business Models			
Licensed software	11%	12%	11%
Technology resale	5%	5%	6%
Subscriptions	6%	9%	9%
Professional services	34%	31%	30%
Managed services	21%	21%	21%
Support and maintenance	21%	20%	21%
Reimbursed travel	2%	2%	2%
	100%	100%	100%
Revenues by Segment			
Domestic	88%	89%	89%
Global	12%	11%	11%
	100%	100%	100%

Health Care and Health Care IT Industry

Health care expenditures continue to consume an increasing portion of most economies. In the U.S., health care spending increased 3.9 percent to $3.5 trillion in 2017, and now represents 17.9 percent of the U.S.' Gross Domestic Product ("GDP"). An aging population and high levels of chronic conditions are contributing to expectations that health care expenditures will continue growing faster than the economy. The Centers for Medicare and Medicaid Services ("CMS") estimates annual U.S. health care spending will grow at an average rate of 5.5 percent through 2026 and reach $5.7 trillion, or 19.7 percent of GDP by 2026. We believe this trajectory is unsustainable and that health care IT can play an important role in facilitating a shift from a high-cost health care system that incents volume to a proactive system that incents health, quality and efficiency.

For this change to occur, we believe traditional fee-for-service ("FFS") reimbursement models must continue to shift to value-based approaches that are more aligned with quality, outcomes, and efficiency. The shift away from traditional FFS is evident in growth of lives covered under Accountable Care Organizations ("ACOs"). ACOs are groups of hospitals and providers that focus on providing coordinated, high quality care to Medicare, Medicaid, or commercially insured populations and then share in savings created by lowering the cost of care. According to Leavitt Partners, lives covered under ACOs grew from approximately 5 million in 2011 to more than 32 million in 2018.

In addition to the increasing number of lives covered under ACOs, the structure of ACOs is evolving to where providers are expected to assume more risk. Currently, most ACO contracts are upside only, which means providers can receive bonuses for good performance, but they assume no downside for underperformance. In 2018, CMS released a rule called "Pathways to Success" that accelerates the timeframe during which providers need to move to ACOs that include both upside bonuses and downside penalties. We believe this shift is important as assumption of risk by providers creates a strong incentive for them to improve care coordination and deliver high quality care at a lower cost.

Another step towards a value-based model occurred with the passage of The Medicare Access and CHIP Reauthorization Act ("MACRA"), which enacts significant reforms to the payment programs under the Medicare Physician Fee Schedule and consolidated three current value-based programs into one.

While each of the different approaches to aligning reimbursement with value will continue to evolve, we believe the trend away from traditional FFS will continue. We believe this growth in government and private models aligning payment with value, quality and outcomes will drive major changes in the way health care is provided in the next decade, and we expect a much greater focus on patient engagement, wellness and prevention. As health care providers become accountable for proactively managing the health of the populations they serve, we expect them to need ongoing investment in sophisticated information technology solutions that will enable them to predict when intervention is needed so they can improve outcomes and lower the cost of providing care.

Table of Contents

The increasingly complex and more clinical outcomes-based reimbursement environment is also contributing to a heightened demand for revenue cycle solutions and services and a desire for these solutions and services to be closely aligned with clinical solutions. We believe this trend is positive for Cerner because our Cerner Millennium revenue cycle solutions and services are integrated with our clinical solutions, creating a clinically driven revenue cycle solution that has had significant adoption in recent years.

Over the past several years, we have also seen a shift in the U.S. marketplace towards a preference for a single platform across inpatient and ambulatory settings. The number of physicians employed by hospitals has increased as hospitals have acquired physician groups, and health systems are recognizing the benefit of having a single patient record at the hospital and the physician office. We are benefiting from this trend due to our unified Cerner Millennium platform, which spans multiple venues, and ongoing enhancements we have made to our physician solutions.

While health care providers are showing a preference for a single platform across multiple venues, there is also an increased push for interoperability across disparate systems to address the reality that no patient's record will only have information from a single health care IT system. We believe health information should be shareable and accessible among primary care physicians, specialists, and hospital physicians.

As a result, Cerner has led or been a key participant in nearly every major industry effort to advance interoperability and system openness. One example is Cerner's role as a founding member of the CommonWell Health Alliance, an open, not-for-profit industry consortium that brought health care IT firms together for the purpose of enabling safe nationwide interoperability. The vision of CommonWell is for a patient to be able to visit a new doctor, give their consent, and, within moments, have his or her lifetime record available from all the prior places he or she has visited.

In 2018, CommonWell announced general availability of its connection to CareQuality, another national interoperability framework. This connection allows CommonWell and CareQuality enabled health care providers to connect and bilaterally exchange health data to improve care coordination and delivery. This is a significant milestone on the path to achieving true nationwide interoperability and making health data available to individuals and providers regardless of where care occurs.

Outside the United States, we believe Cerner's growth opportunities are good, as most countries are also dealing with health care expenditures growing faster than their economies, which is leading to a focus on controlling costs while also improving quality of care.

Cerner Vision and Growth Strategy

For nearly four decades, Cerner has focused on creating innovation at the intersection of health care and information technology. Together with our clients, we are creating a future where the health care system works to improve the well-being of individuals and communities. Our vision has always guided our large investments in research and development ("R&D"), which have created strong levels of organic growth throughout our history. Our proven ability to innovate has led to what we believe to be industry-leading architectures and an unmatched breadth and depth of solutions and services. The strength of our solutions and services has contributed to our growth. We believe we are positioned to continue growing in coming years as regulatory requirements and industry shifts continue to pressure health care providers to improve quality while lowering costs, which we believe will require having more sophisticated information technology than many of our competitors provide.

A key area of growth for Cerner in recent years has been in the U.S. Federal government sector. As part of the Leidos Partnership for Defense Health, Cerner has played a key role in the U.S. Department of Defense's ("DoD") EHR rollout, which achieved completion of its fourth pilot site in 2018. Broader deployment has kicked off with implementations beginning at four additional sites in the second half of 2018. Also, Cerner was selected in 2018 by the U.S. Department of Veterans Affairs ("VA") to replace their existing EHR system with one based on the EHR

being deployed across the DoD health system. With the VA managing one of the largest health systems in the world, this opportunity is expected to contribute to Cerner's growth for several years. In addition, we believe there is potential for this project to have broad industry impact. At the core of this project, Cerner aims to enable seamless care through a single system that links both veteran and military populations, totaling more than 18 million people, while also delivering national interoperability to the commercial market. This will allow patient data to be shared between VA, DoD, and community providers through a secure system.

In addition to growing our client base, we believe we have an opportunity to grow revenues by expanding our solution footprint with existing clients. For example, less than half of our Cerner Millennium EHR clients have implemented Cerner revenue cycle solutions. This penetration has been growing in recent years and we expect it to continue because of the preference for having EHR and revenue cycle systems provided on the same platform. There is also opportunity to expand penetration

Table of Contents

of other solutions, such as women's health, anesthesiology, imaging, clinical process optimization, critical care, health care devices, device connectivity, emergency department and surgery.

We also have an opportunity to grow by expanding our services that are targeted at capturing a larger percentage of our clients' existing IT spending. These services leverage our proven operational capabilities and the success of our CernerWorks[SM] managed services business, where we have demonstrated the ability to improve our clients' service levels at a cost that is at or below amounts they were previously spending. One of these services is Cerner ITWorks[SM], a suite of solutions and services that improves the ability of hospital IT departments to meet their organization's needs while also creating a closer alignment between Cerner and our clients. A second example is Cerner RevWorks[SM], which includes solutions and services to help health care organizations improve their revenue cycle functions.

Another area in which we continue to have success is our CommunityWorks[SM] offering, which leverages a shared instance of the Cerner Millennium platform across multiple clients, allowing us to offer low-cost, high-value solutions and services to smaller community hospitals and critical access hospitals. We believe there continues to be a good opportunity to grow in the small hospital market given many of the existing suppliers in this market have struggled to keep up with ongoing regulatory requirements and marketplace expectations.

We also expect to drive growth over the course of the next decade through initiatives outside the core HCIT market. For example, we offer clinic, pharmacy, wellness and third-party administration services directly to employers. In 2019, we're expanding our onsite services to include a multi-employer tenant clinic model, serving employers who would not normally be able to support their own onsite clinic. These offerings have been shaped by what we have learned from changes we have implemented at Cerner. We have removed our third-party administrator and become self-administered, launched an on-site clinic and pharmacy, incorporated biometric measurements for our associate population, realigned the economic incentives for associates in our health plan, and implemented a data-driven wellness management program. These changes have had a positive impact on the health of our associates while also keeping our health care costs below industry averages.

As discussed below, another significant opportunity for future growth, and a large area of investment for Cerner, is leveraging the vast amounts of data being created as the health care industry is digitized and using this data to help providers and employers manage the health of populations.

Population Health

Population Health Management involves a shift from solely automating health systems to managing a person's health. Getting there requires complete and accurate patient data and meaningfully using that data to engage individuals, exchange information between providers and ultimately drive better outcomes at a lower cost. We believe this shift will shape the future of health care and enable a system driven by accountability, transparency and value.

Cerner's approach to population health is to enable organizations to:

- KNOW what is happening and predict what will happen within their population through solutions for data exchange, longitudinal record, enterprise data warehouse, analytics and quality and regulatory reporting;
- ENGAGE providers and patients in health and care delivery through personal health portals and solutions for care management, home care, long-term care, and retail pharmacy; and
- MANAGE health and improve care with capacity and workforce management, clinical research, predictive modeling, health registries, and contract and network management.

These solutions are enabled by Cerner's HealtheIntent platform, which is a multi-purpose, programmable platform designed to scale at a population level while facilitating health and care at a person and provider level. This cloud-based platform enables organizations to aggregate, transform and reconcile data across the continuum of care,

and helps improve outcomes and lower costs.

HealtheIntent is scalable, secure and can be accessed anywhere, anytime. It is able to receive data from any clinical or revenue cycle system and also incorporate other data, such as pharmacy, claims, patient satisfaction, socioeconomic, genomic and dozens of open data sources. HealtheIntent collects the data from these disparate sources in near real-time, providing clarity to millions of data points in an actionable and programmable workflow. It enables organizations to identify, score and predict the risks of individual patients, allowing them to match the right care programs to the right individuals. The EHR-agnostic nature of our HealtheIntent platform allows us to offer our solutions to the entire marketplace, not just existing Cerner clients.

Table of Contents

We have created a series of solutions on the HealtheIntent platform, including the following solutions:

- Longitudinal Record - provides clinicians and the patient a view of their consolidated clinical record, gathered and normalized from multiple sources.
- Registries and Scorecards - identifies and automatically segments patients by disease, guides interventions according to clinical best practice, provides visibility to quality measures for provider's population, produces client-defined performance scorecards, and tracks their health and their interventions according to clinical best practice.
- Enterprise and Population Health Analytics - allows the integrated data to be analyzed for the purpose of population health management and research.
- Provider Performance Management - creates visibility for providers on their performance against key clinical and operation metrics and can be aligned with payment models that incentivize high quality and efficient care.
- Patient/Member Engagement - an enhanced patient portal complemented by engagement services to help health care organizations create more meaningful interactions and engagement with the members they serve, and provides the ability to target individuals at risk of becoming chronically ill.
- Community Care Management - provides a person-centric approach of proactive surveillance, coordination and facilitation of health services across the care continuum to achieve optimal health status, quality and costs.
- Population Health Programs - leverages evidence-based guidelines and the contextual information within HealtheIntent to provide identification, prediction and management of a condition at the population, provider and person level and facilitates a personalized plan of care for each member.
- Contract and Network Management - for managing provider networks, modeling to inform payer negotiations, determining appropriate business models, and managing contract performance in near real-time.

In less than five years since the first HealtheIntent solution went live at our alpha client, more than 155 clients have purchased HealtheIntent solutions. The broad addressable market for population health solutions is reflected in the diversity of these clients, which include health systems, physician groups, employers, health plans, state governments, and accountable care organizations. The initial adoption by a large number of clients is encouraging and positions us for larger contributions to revenue from HealtheIntent solutions as these initial clients and others transition away from FFS models to value-based and at-risk models that require population health solutions and services. The data variety and scalability of the HealtheIntent platform has also grown quickly, as reflected in its over 1,025 data connections, including over 60 EHR systems and 140 claims and payer systems, and records for more than 218 million people.

In 2018, we announced a collaboration with Lumeris Healthcare Outcomes, LLC ("Lumeris") that we believe will strengthen our ability to help health systems succeed in a value-based care market. Lumeris is a company with a consistently highly rated Medicare Advantage plan, a proven methodology to help leading health systems advance value-based care strategies, and the subject matter expertise required to support those efforts. Cerner and Lumeris are launching an EHR-agnostic offering called Maestro Advantage™ that is designed to help health systems set up and manage Medicare Advantage Plans and provider-sponsored health plans. As part of the collaboration, Lumeris is adopting HealtheIntent as the platform for its clinical methodology and advanced analytics. With this relationship, we gain a partner with a 4.5-Star Medicare Advantage plan to build out the end-to-end capabilities required to run a provider-sponsored health plan within HealtheIntent. We also gain an opportunity to be a larger participant in the economics of the provider-sponsored health plan market by being able to offer additional services as part of the Maestro Advantage offering, such as care management and provider engagement, along with the solutions on the HealtheIntent platform.

In summary, we believe our comprehensive approach to population health is differentiated in the marketplace. We expect population health to be a large contributor to our long-term growth as health care continues to evolve towards a model that incents keeping people healthy.

Software Development

We commit significant resources to developing new health information system solutions and services. As of the end of 2018, approximately 7,300 associates were engaged in research and development activities. Total expenditures for the development and enhancement of our software solutions were $747 million, $706 million and $705 million during the 2018, 2017 and 2016 fiscal years, respectively. These figures include both capitalized and non-capitalized portions and exclude amounts amortized for financial reporting purposes.

As discussed above, continued investment in R&D remains a core element of our strategy. This will include ongoing enhancement of our core solutions and development of new solutions and services.

Table of Contents

Intellectual Property

We have a broad portfolio of intellectual property rights to protect the proprietary interests in our solutions, services, devices and brands. Our solutions constitute works of authorship protected by copyrights in the U.S. and globally. We own valuable trade secrets embodied in, or related to, our solutions, services and devices and protect these rights through a number of technical and legal measures. We have registered or applied to register certain trademarks and service marks in a number of countries with particular emphasis on the Cerner branding elements. We continue to develop our patent portfolio and own more than 440 issued patents with hundreds of patent applications pending. We do not consider any of our businesses to be dependent upon any one patent, copyright, trademark, or trade secret, or any family or families of the same.

Our solutions, devices and services incorporate or rely on intellectual property rights licensed from third parties, including software subject to open source software licenses. Certain technologies licensed to Cerner are also important for internal use in running our business and supporting our clients. Although replacing any existing licenses could be inconvenient, based on our experiences, existing contractual relationships, and the incentives of our technology suppliers, we believe that Cerner will continue to obtain these technologies or suitable alternatives for commercially reasonable prices on commercially reasonable terms or under open source software licenses acceptable to Cerner.

Managing Cybersecurity Risks

Our business operations, including the provision of the solutions and services described above, involve the compilation, hosting and transmission of confidential information, including patient health information. We have included security features in our solutions and services that are intended to protect the privacy and integrity of this information, but our solutions and services may be vulnerable to security breaches, viruses, programming errors and other similar disruptive problems. Cerner maintains documented information privacy, security and risk management programs with clearly defined roles, responsibilities, policies, and procedures which are designed to secure the information maintained on Cerner's platforms.

In addition, all of our associates are required to complete annual cybersecurity education and training, which includes identifying suspicious emails, Internet threats, telecommunication threats and ransomware. Cerner regularly reviews and modifies its security program to reflect changing technology, regulatory environment, laws, risk, industry and security practices and other business needs. We believe our policies and procedures are adequate to ensure that relevant information about cybersecurity risks and incidents is appropriately reported and disclosed.

Sales and Marketing

The markets for Cerner HCIT solutions, health care devices and services include integrated delivery networks, physician groups and networks, managed care organizations, hospitals, medical centers, free-standing reference laboratories, home health agencies, blood banks, imaging centers, pharmacies, pharmaceutical manufacturers, employers, governments and public health organizations. The majority of our sales are clinical and revenue cycle solutions and services to hospitals and health systems, but our solutions and services are highly scalable and sold to organizations ranging from physician practices, to community hospitals, to complex integrated delivery networks, to local, regional and national government agencies. Sales to large health systems typically take approximately nine to 18 months, while the sales cycle is often shorter when selling to smaller hospitals and physician practices.

Our executive marketing management is located at our world headquarters in Kansas City, Missouri, while our client representatives are deployed across the United States and globally. In addition to the United States, through our subsidiaries, we have sales associates and/or offices giving us a presence in more than 35 countries.

We support our sales force with technical personnel who perform demonstrations of Cerner solutions and services and assist clients in determining the proper hardware and software configurations. Our primary direct marketing strategy is

to generate sales contacts from our existing client base and through presentations at industry seminars and tradeshows. We market our ambulatory solutions, offered on a subscription basis, directly to the physician practice market using lead generation activities and through existing acute care clients that are looking to extend Cerner solutions to affiliated physicians. We attend a number of major tradeshows each year and sponsor executive user conferences, which feature industry experts who address the HCIT needs of large health care organizations.

Client Services

Substantially all of Cerner's clients that buy software solutions also enter into software support agreements with us for maintenance and support of their Cerner systems. In addition to immediate software support in the event of problems, these agreements allow clients to access new releases of the Cerner solutions covered by support agreements. Each client has 24-hour access to the applicable client support teams, including those located at our world headquarters in North Kansas

Table of Contents

City, Missouri, our Continuous Campus in Kansas City, Kansas, our campus in Malvern, Pennsylvania, and our global support organizations in Germany, England and Ireland.

Most clients who buy hardware through Cerner also enter into hardware maintenance agreements with us. These arrangements normally provide for a fixed monthly fee for specified services. In the majority of cases, we utilize subcontractors to meet our hardware maintenance obligations. We also offer a set of managed services that include remote hosting, operational management services and disaster recovery.

Backlog

Backlog, which reflects contracted revenue that has not yet been recognized as revenue, was $15.25 billion as of December 29, 2018, of which we expect to recognize approximately 29% as revenue over the next 12 months. In the first quarter of 2018, we adopted new revenue recognition guidance as further discussed in Note (2) of the notes to consolidated financial statements. In connection with the adoption of such guidance, we modified our calculation of backlog as previously determined under Regulation S-K to represent the aggregate amount of transaction price allocated to performance obligations that are unsatisfied (or partially satisfied) to conform to the new revenue recognition guidance. Backlog amounts disclosed prior to the adoption of the new revenue recognition guidance have not been adjusted, and are not comparable to, the current period presentation.

We believe that backlog may not necessarily be a comprehensive indicator of future revenue as certain of our arrangements may be canceled (or conversely renewed) at our clients' option, thus contract consideration related to such cancellable periods has been excluded from our calculation of backlog. However, historically our experience has been that such cancellation provisions are rarely exercised. We expect to recognize approximately $525 million of revenue over the next 12 months under currently executed contracts related to such cancellable periods, which is not included in our calculation of backlog.

Competition

The market for HCIT solutions, devices and services is intensely competitive, rapidly evolving and subject to rapid technological change. We offer a suite of intelligent solutions and services that support the clinical, financial and operational needs of organizations of all sizes. The principle markets in which we compete include, without limitation, health care software solutions, HCIT services, ambulatory, health care device and technology resale, health care revenue cycle and transaction services, value-based care technologies, analytics systems, care management solutions, population health management, and post-acute care. Our principal existing competitors, including their affiliates, in these markets include, but are not limited to:

Allscripts Healthcare Solutions, Inc.	InterSystems Corporation
athenahealth, Inc.	MEDHOST, Inc.
Computer Programs and Systems, Inc.	Medical Information Technology, Inc. (MEDITECH)
eClinicalWorks, LLC	Optum, Inc.
Epic Systems Corporation	

In addition, we expect that major software information systems companies, large information technology consulting service providers and system integrators, start-up companies, managed care companies, healthcare insurance companies, accountable care organizations and others specializing in the health care industry may offer competitive software solutions, devices or services. The pace of change in the HCIT market is rapid and there are frequent new software solutions, devices or services introductions, enhancements and evolving industry standards and requirements. We believe that the principal competitive factors in our markets include the breadth and quality of solution and service offerings, the stability of the solution provider, the features and capabilities of the information systems and devices, the ongoing support for the systems and devices and the potential for enhancements and future compatible software solutions and devices. We believe that we compete favorably with our competitors on the basis of these factors and that we are the leader- or among the leaders- in each of our main offerings. Our brand recognition and reputation for

innovative technology and service delivery, combined with our breadth of solution and services offerings, global distribution channels and client relationships position us as a strong competitor going forward.

Number of Employees (Associates)
At the end of 2018, we employed approximately 29,200 associates worldwide.

Table of Contents

Executive Officers of the Registrant

The following table sets forth the names, ages, positions and certain other information regarding the Company's executive officers as of January 28, 2019. Officers are elected annually and serve at the discretion of the Board of Directors.

Name	Age	Positions
Brent Shafer	61	Chairman of the Board of Directors and Chief Executive Officer
Marc G. Naughton	63	Executive Vice President and Chief Financial Officer
Michael R. Nill	54	Executive Vice President and Chief Operating Officer
John Peterzalek	58	Executive Vice President and Chief Client Officer
Randy D. Sims	58	Executive Vice President, Chief Legal Officer and Secretary
Jeffrey A. Townsend	55	Executive Vice President and Chief of Innovation
Donald Trigg	47	Executive Vice President, Strategic Growth
Julia M. Wilson	56	Executive Vice President and Chief People Officer

Brent Shafer was appointed Chief Executive Officer and Chairman of the Board of Directors effective February 1, 2018. Prior to joining the Company, Mr. Shafer served as Chief Executive Officer of Philips North America, a health technology company and the North American division of Koninklijke Philips N.V. ("Philips") since February 2014. In that position, Mr. Shafer led an organization of 17,000 employees and oversaw a health technology portfolio that included a broad range of solutions and services covering patient monitoring, imaging, clinical informatics, sleep and respiratory care as well as a group of market-leading consumer-oriented brands. For 12 years, Mr. Shafer played a key role in helping Philips develop and strengthen its health care focus, increase its profitability and grow its market share. Prior to his most recent position, Mr. Shafer served as Chief Executive Officer of the global Philips' Home Healthcare Solutions business, a home healthcare services provider with 6,000 employees, from May 2010 until May 2014, as Chief Executive Officer of the North America region for Royal Philips Electronics from January 2009 until May 2010, and as president and Chief Executive Officer of the Healthcare Sales and Service business for Philips North America from May 2005 until May 2010. Prior to joining Philips, Mr. Shafer served in various senior leadership positions with other companies, including Hill-Rom Company Inc., GE Medical Systems, and Hewlett-Packard.

Marc G. Naughton joined the Company in November 1992 as Manager of Taxes. In November 1995 he was named Chief Financial Officer and in February 1996 he was promoted to Vice President. He was promoted to Senior Vice President in March 2002 and promoted to Executive Vice President in March 2010.

Michael R. Nill joined the Company in November 1996. Since that time he has held several positions in the Technology, Intellectual Property and CernerWorks Client Hosting Organizations. He was promoted to Vice President in January 2000, promoted to Senior Vice President in April 2006 and promoted to Executive Vice President and named Chief Engineering Officer in February 2009. Mr. Nill was appointed Chief Operating Officer in May 2011.

John Peterzalek joined the Company in 2003 as President, Cerner South East and has held a variety of business and client leadership roles since that time, including Senior Vice President, East Region, a title which he held from 2007 to 2014 when he was named Senior Vice President, Client Relationships. He was promoted to Executive Vice President, Client Relationships in April 2017 and Executive Vice President, Worldwide Client Relationships in

October 2017. He held the title of Executive Vice President, Worldwide Client Relationships until September 2018 when he was named Executive Vice President and Chief Client Officer. As Chief Client Officer, Mr. Peterzalek focuses on driving value, innovation and results to Cerner's clients globally and leads the corporate direction for revenue generation, solution strategy, business development, and marketing.

Randy D. Sims joined the Company in March 1997 as Vice President and Chief Legal Officer, was promoted to Senior Vice President in March 2011, and Executive Vice President in April 2018. Prior to joining the Company, Mr. Sims worked at Farmland Industries, Inc. for three years where he last served as Associate General Counsel. Prior to Farmland, Mr. Sims was in-house legal counsel at The Marley Company for seven years, holding the position of Assistant General Counsel when he left to join Farmland.

Jeffrey A. Townsend joined the Company in June 1985. Since that time he has held several positions in the Intellectual Property Organization and was promoted to Vice President in February 1997. He was appointed Chief Engineering Officer

Table of Contents

in March 1998, promoted to Senior Vice President in March 2001, named Chief of Staff in July 2003 and promoted to Executive Vice President in March 2005.

Donald Trigg serves as Executive Vice President, Strategic Growth. He originally joined the Company in 2002 as Vice President, Corporate Positioning. He has held multiple roles during his time at the Company, including Chief Marketing Officer from 2003 to 2007, General Manager for the Kansas City region from 2006-2007, Managing Director for the United Kingdom and Ireland from 2008-2010 and Senior Vice President and President, Cerner Health Ventures from 2012-2018. From 2010-2012, Mr. Trigg served as Chief Revenue Officer at CodeRyte, Inc prior to its acquisition by 3M's healthcare division. Mr. Trigg also spent more than a decade serving in the public policy space as a senior advisor for the 2000 Bush for President campaign in Austin, TX, the Director of Policy at the U.S. Department of Commerce and in a series of senior policy roles in the U.S. House and U.S. Senate.

Julia M. Wilson first joined the Company in July 1990. Since that time, she has held several positions in the Functional Group Organization. She was promoted to Vice President and Chief People Officer in August 2003, to Senior Vice President in March 2007 and to Executive Vice President in March 2013.

Item 1A. Risk Factors.

Risks Related to our Business

We may incur substantial costs related to product-related liabilities. Many of our software solutions, health care devices, technology-enabled services or other services (collectively referred to as "Solutions and Services") are intended for use in collecting, storing and displaying clinical and health care-related information used in the diagnosis and treatment of patients and in related health care settings such as registration, scheduling and billing. We attempt to limit by contract our liability; however, the limitations of liability set forth in the contracts may not be enforceable or may not otherwise protect us from liability for damages. We may also be subject to claims that are not covered by contract. Although we maintain liability insurance coverage, there can be no assurance that such coverage will cover any particular claim that has been brought or that may be brought in the future, that such coverage will prove to be adequate or that such coverage will continue to remain available on acceptable terms, if at all. A successful material claim or series of claims brought against us, if uninsured or under-insured, could materially harm our business, results of operations and financial condition. Product-related claims, even if not successful, could damage our reputation, cause us to lose existing clients, limit our ability to obtain new clients, divert management's attention from operations, result in significant revenue loss, create potential liabilities for our clients and us and increase insurance and other operational costs.

We may be subject to claims for system errors and warranties. Our Solutions and Services are very complex and may contain design, coding or other errors, especially when first introduced. It is not uncommon for HCIT providers to discover errors in Solutions and Services after their introduction to the market. Similarly, the installation of our Solutions and Services is very complex and errors in the implementation and configuration of our systems can occur. Our Solutions and Services are intended for use in collecting, storing, and displaying clinical and health care-related information used in the diagnosis and treatment of patients and in related health care settings such as registration, scheduling and billing. Therefore, users of our Solutions and Services are less tolerant of errors than the market for other types of technologies generally. Our client agreements typically provide warranties concerning material errors and other matters. If a client's Solutions and Services fail to meet these warranties or leads to faulty clinical decisions or injury to patients, it could 1) constitute a material breach under the client agreement, allowing the client to terminate the agreement and possibly obtain a refund or damages or both, or require us to incur additional expense in order to make the Solution or Service meet these criteria; or 2) subject us to claims or litigation by our clients or clinicians or directly by the patient. Additionally, such failures could damage our reputation and could negatively affect future sales. Our client agreements generally limit our liability arising from such claims but such limits may not

be enforceable in certain jurisdictions or circumstances. Although we maintain liability insurance coverage, there can be no assurance that such coverage will cover any particular claim that has been brought or that may be brought in the future, that such coverage will prove to be adequate or that such coverage will continue to remain available on acceptable terms, if at all. A successful material claim or series of claims brought against us, if uninsured or under-insured, could materially harm our business, results of operations and financial condition.

We may experience interruptions at our data centers or client support facilities, which could interrupt clients' access to their data, exposing us to significant costs and reputational harm. We perform data center and/or hosting services for certain clients, including the collection and storage of critical patient and administrative data and the provision of support services through various client support facilities. Our business relies on the secure electronic transmission, data center storage and hosting of sensitive information, including protected health information; personally identifiable information;

Table of Contents

financial information; and other sensitive information relating to our clients and their patients, providers and certain billing information, our company, our workforce and our third party suppliers. Complete failure of all local public power and backup generators; impairment of all telecommunications lines; a successful concerted denial of service attack; a significant system, network or data breach; damage, injury or impairment (environmental, accidental or intentional) to the buildings, the equipment inside the buildings housing our data centers, the personnel operating such facilities or the client data contained therein; or errors by the personnel trained to operate such facilities could cause a disruption in operations and negatively impact clients who depend on us for data center and system support services. We offer our clients disaster recovery services for additional fees to protect clients from isolated data center failures, leveraging our multiple data center facilities; however only a small percentage of our hosted clients choose to contract for these services. Additionally, Cerner's core systems are disaster tolerant as we have implemented redundancy across physically diverse data centers. If any of these systems are interrupted, damaged or breached by an unforeseen event or actions of a Cerner associate or contractor or a third party or fail for any extended period of time, it could damage our reputation, cause us to lose existing clients, hurt our ability to obtain new clients, result in significant revenue loss, create potential liabilities for our clients and us, increase insurance and other operating costs and have a material adverse impact on our results of operations. We use third party public cloud providers in connection with certain cloud-based offerings and third parties to host our own data, in which case we have to rely on such third parties to prevent service interruption and such reliance is subject to similar risks described above with respect to our own data center and hosting services.

If our IT security is breached, or if the IT security of third parties on which we rely is breached, we could be subject to increased expenses, exposure to legal claims and regulatory actions, and clients and prospective clients could be deterred from using our Solutions and Services. We are in the information technology business, and in providing our Solutions and Services, we store, retrieve, process and manage our clients' information and data (and that of their patients), as well as our own data. We believe we have a reputation for secure and reliable Solution and Service offerings, and we have invested a great deal of time and resources in protecting the security, confidentiality, integrity and availability of our Solutions and Services and the internal and external data that we manage. Third parties attempt to identify and exploit Solution and Service vulnerabilities, penetrate or bypass our security measures, and gain unauthorized access to our or our clients' and suppliers' software, hardware and cloud offerings, networks and systems, any of which could lead to disruptions in mission-critical systems or the unauthorized release or corruption of personal information or the confidential information or data of Cerner, our clients or their patients.

High-profile security breaches at other companies have increased in recent years, and security industry experts and government officials have warned about the risks of hackers and cyber-attacks targeting information technology products and businesses. Although this is an industry-wide problem that affects other software and hardware companies, we may be targeted by computer hackers because we are a prominent health care IT company and have high profile clients, including government clients. These risks will increase as we continue to grow our cloud offerings, collect, store and process increasingly large amounts of our clients' confidential data, including personal health information, and host or manage parts of our clients' businesses in cloud-based/multi-tenant IT environments. We use third party public cloud providers in connection with certain cloud-based offerings and third party providers to host our own data, in which case we have to rely on the processes, control and security such third parties have in place to protect the infrastructure, which are subject to similar risks described above with respect to our IT security.

We continue to invest in and improve our threat protection, detection and mitigation policies, procedures and controls. In addition, we work with other companies in the industry on increased awareness and enhanced protections against cybersecurity threats. Because of the evolving nature and sophistication of these security threats, which can be difficult to detect, there can be no assurance that our policies, procedures and controls or those of third parties on which we rely will detect or prevent any of these threats and we cannot predict the full impact of any such past or future incident.

The costs we would incur to address and remediate these security incidents would increase our expenses, and our efforts to address these problems may not be successful and could result in interruptions, delays, cessation of service and loss of existing or potential clients that may impede our sales, development of solutions, provision of services or other critical functions. If a cyber-attack or other security incident described above were to allow unauthorized access to or modification of our clients' or suppliers' data, our own data or our IT systems, or if our Solutions or Services are perceived as having security vulnerabilities, we could suffer significant damage to our brand and reputation. This in turn could lead to fewer clients using our Solutions and Services and result in reduced revenue and earnings. These types of security incidents could also lead to lawsuits, regulatory investigations and claims and increased legal liability, including regulatory actions by state and federal government authorities and non-US authorities and, in some cases, contractual costs related to notification and fraud monitoring of impacted persons. We maintain cyber risk insurance, but this insurance may not be sufficient to cover all of our losses from any future breaches of our IT systems or those of third parties on which we rely.

Table of Contents

Our proprietary technology may be subject to claims for infringement or misappropriation of intellectual property rights of others, or our intellectual property rights may be infringed or misappropriated by others. We rely upon a combination of confidentiality practices and policies, license agreements, confidentiality provisions in employment agreements, confidentiality agreements with third parties and technical security measures to maintain the confidentiality, exclusivity and trade secrecy of our proprietary information. We also rely on trademark and copyright laws to protect our intellectual property rights in the U.S. and abroad. We continue to develop our patent portfolio of U.S. and global patents, but these patents do not provide comprehensive protection for the wide range of Solutions and Services we offer. Despite our protective measures and intellectual property rights, we may not be able to adequately protect against theft, copying, reverse engineering, misappropriation, infringement or unauthorized use or disclosure of our intellectual property, which could have an adverse effect on our competitive position.

In addition, we are routinely involved in intellectual property infringement or misappropriation claims, and we expect this activity to continue or even increase as the number of competitors, patents and patent enforcement organizations in the HCIT and broader IT market increases, the functionality of our Solutions and Services expands, the use of open-source software increases and we enter new geographies and new market segments. These claims, even if unmeritorious, are expensive to defend and are often incapable of prompt resolution. If we become liable to third parties for infringing or misappropriating their intellectual property rights, we could be required to pay a substantial damage award, develop alternative technology, obtain a license or cease using, selling, offering for sale, licensing, implementing or supporting the applicable Solutions and Services.

Many of our software solutions and technology-enabled services contain open source software that may pose particular risks to our proprietary software solutions and technology-enabled services in a manner that could have a negative effect on our business. We rely upon open source software in our software solutions and technology-enabled services. The licensing terms applicable for certain open source software have not been interpreted by U.S. or foreign courts and could be construed in a manner that imposes unanticipated conditions or restrictions on our ability to provide and support our Solutions or Services.

Additionally, we may encounter claims from third parties claiming ownership and unauthorized use of the software purported to be licensed under the open source terms, demanding release of derivative works of open source software that could include our proprietary source code, or otherwise seeking to enforce the terms of the applicable open source licenses. These claims could result in litigation and, even if unmeritorious, could be expensive to defend and incapable of prompt resolution. If we become liable to third parties for such claims, we could be required to make our software source code available under the applicable open source license, utilize or develop alternative technology, or cease using, selling, offering for sale, licensing, implementing or supporting the applicable solutions or technology-enabled services. In addition, use of certain open source software may pose greater risks than use of third party commercial software, as most open source licensors and distributors do not provide commercial warranties or indemnities or controls on the origin of the software.

We may become involved in legal proceedings that could have a material adverse impact on our business, results of operations and financial condition. From time to time and in the ordinary course of our business, we and certain of our subsidiaries may become involved in various legal proceedings and claims, including for example, employment disputes and litigation; client disputes and litigation alleging solution and implementation defects, personal injury, intellectual property infringement, violations of law and breaches of contract and warranties; and other third party disputes and litigation alleging personal injury, intellectual property infringement, violations of law, and breaches of contracts and warranties. All such legal proceedings are inherently unpredictable and, regardless of the merits of the claims, litigation may be expensive, time-consuming and disruptive to our operations and distracting to management. If resolved against us, such legal proceedings could result in excessive verdicts, injunctive relief or other equitable relief that may affect how we operate our business. Similarly, if we settle such legal proceedings, it may affect how

we operate our business. Future court decisions, alternative dispute resolution awards, business expansion or legislative activity may increase our exposure to litigation and regulatory investigations. In some cases, substantial non-economic remedies or punitive damages may be sought. Although we maintain liability insurance coverage, there can be no assurance that such coverage will cover any particular verdict, judgment or settlement that may be entered against us, that such coverage will prove to be adequate or that such coverage will continue to remain available on acceptable terms, if at all. If we incur liability that exceeds our insurance coverage or that is not within the scope of the coverage in legal proceedings brought against us, it could have a material adverse effect on our business, results of operations and financial condition.

We are subject to risks associated with our global operations. We market, sell and support our Solutions and Services globally. We have established offices around the world, including in the Americas, Europe, the Middle East and the Asia

Table of Contents

Pacific region. We plan to continue to expand our non-U.S. operations and enter new global markets. This expansion will require significant management attention and financial resources to develop successful direct and indirect non-U.S. sales and support channels. Our business is generally transacted in the local functional currency. In some countries, our success will depend in part on our ability to form relationships with local partners. There is a risk that we may sometimes choose the wrong partner. For these and other reasons, we may not be able to maintain or increase non-U.S. market demand for our Solutions and Services.

Non-U.S. operations are subject to inherent risks, and our business, results of operations and financial condition, including our revenue growth and profitability, could be adversely affected by a variety of uncontrollable and changing factors. These include, but are not limited to:

- Greater difficulty in collecting accounts receivable and longer collection periods;
- Difficulties and costs of staffing and managing non-U.S. operations;
- The impact of global economic and political market conditions;
- Effects of sovereign debt conditions, including budgetary constraints;
- Unfavorable or volatile foreign currency exchange rates;
- Legal compliance costs or business risks associated with our global operations where: i) local laws and customs differ from, or are more stringent than those in the U.S., such as those relating to data protection and data security, or ii) risk is heightened with respect to laws prohibiting improper payments and bribery, including without limitation the U.S. Foreign Corrupt Practices Act, the U.K. Anti-Bribery Act and similar laws and regulations in foreign jurisdictions;
- Certification, licensing or regulatory requirements and unexpected changes to those requirements;
- Changes to or reduced protection of intellectual property rights in some countries;
- Potentially adverse tax consequences as a result of changes in tax laws or otherwise, and difficulties associated with repatriating cash generated or held abroad in a tax-efficient manner;
- Different or additional functionality requirements or preferences;
- Trade protection measures;
- Export control regulations;
- Health service provider or government spending patterns or government-imposed austerity measures;
- Natural disasters, war or terrorist acts;
- Labor disruptions that may occur in a country; and
- Political unrest which may impact sales or threaten the safety of associates or our continued presence in these countries and the related potential impact on global stability.

Fluctuations in foreign currency exchange rates could materially affect our financial results. Our consolidated financial statements are presented in U.S. dollars. In general, the functional currency of our subsidiaries is the local currency where the subsidiary operates. For each subsidiary, assets and liabilities denominated in foreign currencies are translated into U.S. dollars at the exchange rates in effect at the balance sheet dates and revenues and expenses are translated at the average exchange rates prevailing during the month of the transaction. Therefore, increases or decreases in the value of the U.S. dollar against other major currencies affect our revenues, net earnings and the value of balance sheet items denominated in foreign currencies. Future fluctuations in foreign currency exchange rates, particularly the strengthening of the U.S. dollar against major currencies, could materially affect our financial results.

We are subject to tax legislation in numerous countries; changes in tax laws or challenges to our tax positions could adversely affect our business, results of operations and financial condition. We are a global corporation with a presence in more than 35 countries. As such, we are subject to tax laws, regulations and policies of the U.S. federal, state and local governments and of comparable taxing authorities in other country jurisdictions. Changes in tax laws, including for example the U.S. federal tax legislation commonly referred to as the Tax Cuts and Jobs Act of 2017 ("Tax Act"), as well as other factors, could cause us to experience fluctuations in our tax obligations and effective tax rates in 2018 and thereafter and otherwise adversely affect our tax positions and/or our tax liabilities. Although our

accounting for the effects of the enactment of the Tax Act is now complete, there could be additional regulations we may become subject to. The full impact of the Tax Act on us may change significantly as regulations, interpretations and rulings relating to the Tax Act are issued and additional changes in U.S. federal and state tax laws may be made in the future. There can be no assurance that our effective tax rates, tax payments, tax credits or incentives will not be adversely affected by these or other initiatives.

In addition, U.S. federal, state and local, as well as other countries' tax laws and regulations, are extremely complex and subject to varying interpretations and requires significant judgment in determining our worldwide provision for income taxes and other tax liabilities. Longstanding international tax norms that determine each country's jurisdiction to tax cross-border

Table of Contents

international trade are evolving as a result of the Base Erosion and Profit Shifting reporting requirements ("BEPS") recommended by the G8, G20 and Organization for Economic Cooperation and Development ("OECD"). Further, during 2018, the European Commission issued proposals and the OECD issued an interim report related to the taxation of the digital economy. As these and other tax laws and related regulations change, our financial results could be materially impacted. Given the unpredictability of these possible changes and their potential interdependency, it is very difficult to assess the overall effect of such potential tax changes, but such changes could adversely impact our financial results.

In the ordinary course of a global business, there are many intercompany transactions and calculations which could be subject to challenge by tax authorities. We are regularly under audit by tax authorities and those authorities often do not agree with positions taken by us on our tax returns. Our intercompany transfer pricing has been reviewed by the U.S. Internal Revenue Service ("IRS") and by foreign tax jurisdictions and will likely be subject to additional audits in the future. There can be no assurance that our tax positions will not be challenged by relevant tax authorities or that we would be successful in any such challenge, which could result in additional taxation, penalties and interest payments.

The vote by the United Kingdom (UK) to leave the European Union (EU) could adversely affect our financial results. In June 2016, UK voters approved a referendum to withdraw the UK's membership from the EU, which is commonly referred to as "Brexit". In March 2017, the UK government initiated the exit process under Article 50 of the Treaty of the European Union, commencing a period of up to two years for the UK and the other EU member states to negotiate the terms of the withdrawal, such period ending on March 29, 2019 unless extended. There has been limited progress so far in the negotiations and continued uncertainty in the UK government and Parliament, which increases the possibility of the UK exiting the EU on March 29, 2019 without a formal withdrawal agreement in place and of significant market and economic disruption. We have operations in the UK and the EU, and as a result, we face risks associated with the potential uncertainty and disruptions that may lead up to and follow Brexit, including with respect to volatility in exchange rates and interest rates and potential material changes to the regulatory regime applicable to our operations in the UK. Brexit could adversely affect European or worldwide political, regulatory, economic or market conditions and could contribute to instability in global political institutions, regulatory agencies and financial markets. For example, depending on the terms of Brexit, the UK could also lose access to the single EU market and to the global trade deals negotiated by the EU on behalf of its members. Disruptions and uncertainty caused by Brexit may also cause our clients to closely monitor their costs and reduce their spending budget on our Solutions and Services. Any of these effects of Brexit, and others we cannot anticipate or that may evolve over time, could adversely affect our business, results of operations and financial condition.

Our success depends upon the recruitment and retention of key personnel. To remain competitive in our industries, we must attract, motivate and retain highly skilled managerial, sales, marketing, consulting and technical personnel, including executives, consultants, programmers and systems architects skilled in the HCIT, health care devices, health care transactions, population health management and revenue cycle industries and the technical environments in which our Solutions and Services are offered. Competition for such personnel in our industries is intense in both the U.S. and abroad. We may also experience increased compensation costs that are not offset by either improved productivity or higher sales. Our failure to attract additional qualified personnel and to retain and motivate existing personnel to meet our needs could have a material adverse effect on our prospects for long-term growth. In addition, we invest significant time and expense in training our associates, which increases their value to clients and competitors who may seek to recruit them and increases the cost of replacing them. Our success is dependent to a significant degree on the continued contributions of key management, sales, marketing, consulting and technical personnel. Members of our senior management team have left over the years for a variety of reasons, and we cannot guarantee that there will not be additional departures. The unexpected loss of key personnel, or the failure to successfully develop and execute effective succession planning to assure smooth transitions of those key associates and their knowledge, relationships and expertise, could disrupt our business and have a material adverse impact on our

results of operations and financial condition, and could potentially inhibit development and delivery of our Solutions and Services and market share advances.

We may be subject to harassment or discrimination claims and legal proceedings, and our inability or failure to respond to and effectively manage publicity related to such claims could adversely impact our business. Although our Global Code of Conduct and other employment policies prohibit harassment and discrimination in the workplace, in sexual or in any other form, we have ongoing programs for workplace training and compliance, and we investigate and take disciplinary action with respect to alleged violations, actions by our associates could violate those policies. And, with the increased use of social media platforms, including blogs, chat platforms, social media websites, and other forms of Internet-based communications that allow individuals access to a broad audience, there has been an increase in the speed and accessibility of information dissemination. The dissemination of information via social media, including information about alleged harassment, discrimination or other claims, could harm our business, brand, reputation, financial condition, and results of operations, regardless of the information's accuracy.

Table of Contents

We depend on strategic relationships and third party suppliers and our revenue and operating earnings could suffer if we fail to manage these relationships properly. To be successful, we must continue to maintain our existing strategic relationships and establish additional strategic relationships as necessary with leaders in the markets in which we operate. We believe that these relationships contribute to our ability to further build our brand, extend the reach of our Solutions and Services and generate additional revenues and cash flows. If we were to lose critical strategic relationships, this could have a material adverse impact on our business, results of operations and financial condition.

We license or purchase certain intellectual property and technology (such as software, services, hardware and content) from third parties, including some competitors, and depend on such third party intellectual property and software, services, hardware and content in the operation and delivery of our Solutions and Services. Additionally, we sell or license third party intellectual property, services and software, hardware or content in conjunction with our Solutions and Services. For instance, we currently depend on Amazon Web Services, Microsoft, Cloudera, Oracle, VMWare and IBM technologies for portions of the operational capabilities of, among others, our Millennium and HealtheIntent solutions. Our remote hosting and cloud services businesses also rely on a limited number of software and services suppliers for certain functions of these businesses, such as Oracle, NetApp, Microsoft, Veritas, CITRIX, GTT and Equinix. Additionally, we rely on Dell/EMC, Hewlett-Packard Enterprise, Cisco, NetApp, IBM and others for our hardware technology platforms.

Most of our third party software license support contracts expire within one to five years, can be renewed only by mutual consent and may be terminated if we breach the terms of the license and fail to cure the breach within a specified period of time. Most of these third party software licenses are non-exclusive; therefore, our competitors may obtain the right to use any of the technology covered by these licenses and use the technology to compete directly with us.

If any of our third party suppliers were to change product offerings, cease actively supporting the technologies, fail to update and enhance the technologies to keep pace with changing industry standards, encounter technical difficulties in the continuing development of these technologies, significantly increase prices, change delivery models, terminate our licenses or supply contracts, suffer significant capacity or supply chain constraints or suffer significant disruptions, we may need to seek alternative suppliers and incur additional internal or external development costs to ensure continued performance of our Solutions and Services. Such alternatives may not be available on attractive terms, or may not be as widely accepted or as effective as the intellectual property or technology provided by our existing suppliers. If the cost of licensing, purchasing or maintaining our third party intellectual property or technology significantly increases, our operating earnings could significantly decrease. In addition, interruption in functionality of our Solutions and Services as a result of changes in third party suppliers could adversely affect our commitments to clients, future sales of Solutions and Services, and negatively affect our revenue and operating earnings.

We intend to continue strategic business acquisitions and other combinations, which are subject to inherent risks. In order to expand our Solutions and Services offerings and grow our market and client base, we may continue to seek and complete strategic business acquisitions and other combinations that we believe are complementary to our business. Acquisitions have inherent risks which may have a material adverse effect on our business, results of operations, financial condition or prospects, including, but not limited to: 1) failure to successfully integrate the business, culture and financial operations, services, intellectual property, solutions or personnel of an acquired business and to maintain uniform standard controls, policies, procedures and information systems; 2) diversion of our management's attention from other business concerns; 3) management of a larger company and entry into markets in which we have little or no direct prior experience; 4) failure to achieve projected synergies and performance targets; 5) failure to commercialize "go forward" Solutions and Services under development and increase revenues from existing marketed Solutions and Services; 6) loss of clients, key personnel, supplier, research and development, distribution, marketing, promotion and other important relationships; 7) incurrence of debt or assumption of known and unknown

liabilities; 8) write-off of software development costs, goodwill, client lists and amortization of expenses related to intangible assets; 9) dilutive issuances of equity securities; 10) accounting deficiencies that could arise in connection with, or as a result of, the acquisition of an acquired company, including issues related to internal control over financial reporting and the time and cost associated with remedying such deficiencies; and 11) litigation arising from claims or liabilities assumed from an acquired company or that are otherwise related to acquisition activity, such as claims from former employees, former stockholders or other third parties, all of which could require us to incur significant expenses and cause management distraction. If we fail to successfully integrate acquired businesses or fail to implement our business strategies with respect to these acquisitions, we may not be able to achieve projected results or support the amount of consideration paid for such acquired businesses.

Table of Contents

Volatility and disruption resulting from global economic or market conditions could negatively affect our business, results of operations and financial condition. Our business, results of operations, financial condition and outlook may be impacted by the health of the global economy. Volatility and disruption in global capital and credit markets may lead to slowdowns or declines in client spending which could adversely affect our business and financial performance. Our business and financial performance, including new business bookings and collection of our accounts receivable, may be adversely affected by current and future economic conditions (including a reduction in the availability of credit, higher energy costs, rising interest rates, financial market volatility and lower than expected economic growth) that cause a slowdown or decline in client spending. Reduced purchases by our clients or changes in payment terms could adversely affect our revenue growth and cause a decrease in our cash flow from operations. Bankruptcies or similar events affecting clients may cause us to incur bad debt expense at levels higher than historically experienced. Further, volatility and disruption in global financial markets may also limit our ability to access the capital markets at a time when we would like, or need, to raise capital, which could have an impact on our ability to react to changing economic and business conditions. Accordingly, if global financial and economic volatility continues or worsens, our business, results of operations and financial condition could be materially and adversely affected.

We operate in intensely competitive and dynamic industries, and our ability to successfully compete and continue to grow our business depends on our ability to respond quickly to market changes, changing technologies and evolving pricing and deployment methods and to bring competitive new Solutions and Services and features to market in a timely fashion. The market for health care information systems, Solutions and Services to the health care industry is intensely competitive, dynamically evolving and subject to rapid technological advances and innovative enhancements, changing delivery and pricing models, evolving standards in computer hardware and software development and communications infrastructure, and changing and increasingly sophisticated client needs. Development of new proprietary Solutions or Services is complex, entails significant time and expense, may not be successful and often involves a long return on investment cycle. We cannot guarantee that the market for our Solutions and Services will develop as quickly as expected or at all or that we will be able to introduce new Solutions or Services on schedule or at all. Moreover, we cannot guarantee that errors will not be found in our new Solution releases before or after commercial release, which could result in Solution delivery redevelopment costs, harm to our reputation, lost sales, license terminations or renegotiations, product liability claims, diversion of resources to remedy errors and loss of, or delay in, market acceptance. We believe that we must continue to dedicate a significant amount of resources to our research and development efforts to maintain our competitive position; and oftentimes, successful investments require several years before generating significant revenue.

In addition, we expect that major software information systems companies, highly capitalized consumer technology companies, large information technology consulting service providers and system integrators, start-up companies and others operating in the health care industry may offer competitive Solutions and Services. As we continue to develop new Solutions and Services to address areas such as analytics, transaction services, device integration, revenue cycle and population health management, we expect to face new competitors, and these competitors may have more experience in these markets, better brand recognition and/or more established relationships with prospective clients. We face strong competition and often face downward price pressure, which could adversely affect our results of operations or liquidity. For example, some of our competitors may bundle products for promotional purposes or as a long-term pricing strategy, commit to large deployments at prices that are unprofitable, or provide guarantees of prices and product implementations. These practices could, over time, significantly constrain the prices that we can charge for certain of our Solutions and Services. If we do not adapt our pricing models to reflect changes in use of our Solutions and Services or changes in client demand, our revenues could decrease.

Additionally, the pace of change in the health care information systems market is rapid and there are frequent new software solution introductions, new deployment models (such as via the cloud), software solution enhancements, device introductions, device enhancements and evolving industry standards and requirements. We provide our cloud and other offerings to clients globally via deployment models that best suit their needs, including via our cloud-based

software as a services (SaaS) offering. As our business models continue to evolve, we may not be able to compete effectively, generate significant revenues or maintain the profitability of our cloud offerings. If we do not successfully execute our strategy or anticipate the needs of our clients, our reputation as a SaaS provider could be harmed and our revenues and profitability could decline. There are a limited number of hospitals and other health care providers in the U.S. market and in recent years, the health care industry has been subject to increasing consolidation. If we are unable to recognize the impact of industry consolidation, falling costs and technological advancements in a timely manner, or we are too inflexible to rapidly adjust our business models, our prospects and financial results could be negatively affected materially.

Our success also depends on our ability to maintain and expand our business with our existing clients and effectively transition existing clients to current Solutions and Services, as well as attracting additional clients. Certain clients originally purchased

Table of Contents

one or a limited number of our Solutions and Services. These clients may choose not to expand their use of or purchase new Solutions and Services. Failure to generate additional business from our current clients could materially and adversely impact our business, financial condition and operating results.

If we are unable to manage our growth in the new markets in which we offer Solutions and Services, our business, results of operations and financial condition could suffer. Our future financial results will depend on our ability to profitably manage our business in the new markets that we enter. Over the past several years, we have pursued growth and expansion opportunities in the areas of analytics, revenue cycle and population health. To achieve success in those areas, we will need to, among other things, recruit, train, retain and effectively manage associates, manage changing business conditions and implement and improve our technical, administrative, financial control and reporting systems for offerings in those areas. Difficulties in managing future growth in new markets could have a material adverse impact on our business, results of operations and financial condition.

Long sales cycles for our Solutions and Services could have a material adverse impact on our future results of operations. Some of our Solutions and Services have long sales cycles, ranging from several months to eighteen months or more beginning at initial contact with the client through execution of a contract. How and when to implement, replace, or expand an information system, or modify, add or outsource business processes, are major decisions for health care organizations. Many of the Solutions and Services we provide require a substantial capital investment and time commitments by the client or prospective client. Any decision by our clients or prospective clients to delay a purchasing decision could have a material adverse impact on our results of operations.

Our work with government clients exposes us to additional risks inherent in the government contracting environment. Our clients include national, provincial, state, local and foreign governmental entities and their agencies. Our government work carries various risks inherent in contracting with such government entities and agencies. These risks include, but are not limited to, the following:

- Government entities, particularly in the U.S., often reserve the right to audit our contracts and conduct inquiries and investigations of our business practices with respect to government contracts. U.S. government agencies conduct reviews and investigations and make inquiries regarding our systems in connection with our performance and business practices with respect to our government contracts. Negative findings from audits, investigations or inquiries could affect our future sales and profitability by preventing us, by operation of law or in practice, from receiving new government contracts for some period of time.

- If a government client discovers improper or illegal activities during its audits or investigations, we may become subject to various civil and criminal penalties, including those under the civil U.S. False Claims Act, and administrative sanctions, which may include termination of contracts, suspension of payments, fines and suspensions or debarment from doing business with other agencies of that government. The inherent limitations of internal controls may not prevent or detect all improper or illegal activities.

- U.S. government contracting regulations impose strict compliance and disclosure obligations. Disclosure is required if certain company personnel have knowledge of "credible evidence" of a violation of federal criminal laws involving fraud, conflict of interest, bribery or improper gratuity, a violation of the civil U.S. False Claims Act or receipt of a significant overpayment from the government. Failure to make required disclosures could be a basis for suspension and/or debarment from federal government contracting in addition to breach of the specific contract and could also impact contracting beyond the U.S. federal level. Reported matters also could lead to audits or investigations and other civil, criminal or administrative sanctions.

- Government contracts are subject to heightened reputational and contractual risks compared to contracts with commercial clients. For example, government contracts and the proceedings surrounding them are often subject to

more extensive scrutiny and publicity. Negative publicity, including allegations of improper or illegal activity, poor contract performance, deficiencies in services or other deliverables, or information security breaches, regardless of accuracy, may adversely affect our reputation.

Terms and conditions of government contracts also tend to be more onerous and are often more difficult to negotiate. Because government contracts are subject to specific procurement regulations and a variety of other socio-economic requirements, we must comply with such requirements. We must also comply with various statutes, regulations and requirements related to employment practices, recordkeeping and accounting. These regulations and requirements

Table of Contents

affect how we transact business with our clients and suppliers, and in some instances, impose additional costs on our business operations.

- Government entities typically fund projects through appropriated monies. While these projects are often planned and executed as multi-year projects, government entities usually reserve the right to change the scope of projects or terminate these projects at their convenience either for lack of approved funding or any other reason. Changes in government or political developments, including budget deficits, shortfalls or uncertainties, government spending reductions (e.g., U.S. Congressional sequestration of funds under the Budget Control Act of 2011) or other debt constraints could result in our projects being reduced in price or scope or terminated altogether, which also could limit our recovery of reimbursable expenses. Furthermore, if insufficient funding is appropriated to the government entity to cover termination costs, we may not be able to fully recover our investments.

- Our failure to comply with a variety of complex procurement rules and regulations could result in our being liable for penalties, including termination of our government contracts, disqualification from bidding on future government contracts and suspension or debarment from government contracting. We must comply with laws and regulations relating to the formation, administration and performance of government contracts, which affect how we do business with our customers and may impose added costs on our business. Significant statutes and regulations in the U.S. that we must comply with include the Federal Acquisition Regulation and supplements, the Truth in Negotiations Act, the Procurement Integrity Act, and the Civil False Claims Act.

- Government contracts may be protested by unsuccessful bidders. These protests could result in administrative procedures and litigation, could be expensive to defend and incapable of prompt resolution. Loss of a bid protest may result in loss of the award, contract modification, expense or delay.

The occurrences or conditions described above could affect not only our business with the particular government entities involved, but also our business with other entities of the same or other governmental bodies or with certain commercial clients and could have a material adverse effect on our business, results of operations and financial condition.

There are risks associated with our outstanding and future indebtedness. We have customary restrictive covenants in our current debt agreements, which may limit our flexibility to operate our business. These covenants include limitations on priority debt, liens, mergers, asset dispositions, and transactions with affiliates, and require us to maintain certain leverage and interest coverage ratios. Failure to comply with these covenants could result in an event of default that, if not cured or waived, could result in reduced liquidity for the Company and could have a material adverse effect on our business, results of operations and financial condition. Additionally, our ability to pay interest and repay the principal for our indebtedness is dependent upon our ability to manage our business operations, generate sufficient cash flows to service such debt and the other factors discussed in this section. There can be no assurance that we will be able to manage any of these risks successfully.

Changes in accounting standards issued by the Financial Accounting Standards Board ("FASB") or other standard-setting bodies may adversely affect our financial statements. Our financial statements are subject to the application of U.S. GAAP, which is periodically revised and/or expanded. From time to time, we are required to adopt new or revised accounting standards issued by recognized authoritative bodies, including the FASB and the SEC. It is possible that future accounting standards we are required to adopt, such as amended guidance for lease accounting, may require changes to the current accounting treatment that we apply to our consolidated financial statements and may require us to make significant changes to our processes and systems. Refer to Note (1) of the notes to consolidated financial statements relating to summary of significant accounting policies and recently issued accounting pronouncements for more information. Such changes could result in a material adverse impact on our business, results of operations and financial condition.

Goodwill and other intangible assets represent approximately 19% of our total assets and we could suffer losses due to asset impairment charges. We assess our goodwill and other intangible assets for impairment periodically in accordance with applicable authoritative accounting guidance. Declines in business performance or other factors could result in a non-cash impairment charge. This could materially and negatively affect our results of operations and financial condition.

Risks Related to our Industries

The health care industry is subject to changing political, economic and regulatory influences, which could impact the purchasing practices and operations of our clients and increase our costs to deliver compliant Solutions and Services. The last four years have been quite active legislatively with major statutes such as the Protecting Access to Medicare Act (PAMA) of 2014 establishing requirements for "Appropriate Use Criteria" in ordering high dollar diagnostic

Table of Contents

imaging services, the Medicare and CHIP Reauthorization Act (MACRA) of 2015 which reformed how physicians are paid under Medicare and which established the Merit-based Incentive Payment System (MIPS), the 21st Century Cures Act of 2016 (Cures Act) which laid the groundwork for nationwide trusted health information exchange, established interoperability requirements for providers, payers and consumers and which set the framework for information blocking regulations, and most recently the Substance Use Disorder Prevention that Promotes Opioid Recovery and Treatment for Patients and Communities (SUPPORT) Act of 2018 that includes significant policies for addressing the opioid crisis. These statutes are heavily laden with provisions that directly call for or describe roles for the use of health information technology to help providers comply with new federal requirements under Medicare and for state Medicaid programs.

Many health care providers are consolidating to create integrated health care delivery systems with greater market power. These providers may try to use their market power to negotiate price reductions for our Solutions and Services. As the health care industry consolidates, our client base could be consolidated with fewer buyers, competition for clients could become more intense and the importance of landing new client relationships becomes greater.

Reform of payment policies for Medicare and Medicaid continues to evolve. The Patient Protection and Affordable Care Act (the "ACA") became law in 2010; this comprehensive health care reform legislation introduced value-based principles into federal health insurance payments systems, sought to improve health care quality, and expanded access to affordable health insurance. MACRA built upon the value based policies introduced by the ACA. These legislative initiatives accelerated the adoption of "Alternative Payment Models" as bundled payment models based on episodes of care or per capita payment for defined populations emerged as alternatives to traditional fee for service payments to providers. Subsequent legislative, regulatory and judicial developments have created uncertainty for the continued implementation of the ACA and other health care-related legislation and, to the extent that implementation continues, the way in which they are implemented. Examples include the Medicare Shared Savings Program for Accountable Care Organizations and the Bundled Payment for Care Improvement - Advanced model program under the Innovation Center of the Center for Medicare and Medicaid Services (CMS) which focuses on episode-based payment for hospital and ambulatory services. Together with ongoing statutory and budgetary policy developments at a federal level, the collective impact of this health care reform legislation could include changes in Medicare and Medicaid payment policies and other health care delivery administrative reforms that could potentially negatively impact our business and the business of our clients. Because of that uncertainty and because of ongoing federal fiscal budgetary pressures yet to be resolved for federal health programs, we cannot predict the full effect of health care legislation on our business at this time. The direction and pace of health care reform initiatives may adversely impact either our operational results or the way we operate our business. Federal health insurance programs still routinely require adoption of certified HCIT as a program requirement or prerequisite, and we anticipate future adoption of new certification requirements. But we also anticipate possible significant impacts from information blocking provisions of the Cures Act and expanded surveillance by federal agencies of both certified HCIT and its use by our clients. CMS has also mandated updates to the electronic prescribing standards and adoption of controlled substance electronic prescribing by hospitals in response to the opioid crisis which may drive upgrades of existing HCIT investments by hospitals and physicians rather than seeking replacement. In response to this uncertainty, purchasers of HCIT may postpone investment decisions, including investments in our Solutions and Services. Future legislation and regulation may ultimately impact the fiscal stability and sustainability of HCIT purchasers. Differences in demand related to new regulatory requirements and/or near-term compliance deadlines that contribute to demand for our Solutions and Services could impact our financial results. There can be no certainty that any legislation that may be adopted will be favorable to our business. We cannot predict whether or when future health care reform initiatives at the federal or state level or other initiatives affecting our business will be proposed, enacted or implemented or what impact those initiatives may have on our business, results of operations and financial condition.

The health care industry is highly regulated, and thus, we are subject to several laws, regulations and industry initiatives, non-compliance with certain of which could materially adversely affect our operations or otherwise

adversely affect our business, results of operations and financial condition. As a participant in the health care industry, our operations and relationships, and those of our clients, are regulated by several U.S. federal, state, local and foreign governmental entities. The impact of these regulations on us is both direct, to the extent that we are ourselves subject to these laws and regulations, and also indirect, in terms of government program requirements applicable to our clients for the use of HCIT and because, in a number of situations, even though we may not be directly regulated by specific health care laws and regulations, our Solutions and Services must be capable of being used by our clients in a way that complies with those laws and regulations. There is a significant and wide-ranging number of regulations both within the U.S. and abroad, such as regulations in the areas of health care fraud, information blocking, e-prescribing, claims processing and transmission, health care devices, the security and privacy of patient data and interoperability standards, that may be directly or indirectly applicable to our operations and relationships or the business practices of our clients. Specific risks include, but are not limited to, the following:

Table of Contents

Health Care Fraud. U.S. federal and state governments continue to enhance regulation of and increase their scrutiny over practices involving health care fraud, waste and abuse perpetuated by health care providers and professionals whose services are reimbursed by Medicare, Medicaid and other government health care programs. Our health care provider clients, as well as our provision of Solutions and Services to government entities, subject our business to laws and regulations on fraud and abuse which, among other things, prohibit the direct or indirect payment or receipt of any remuneration for patient referrals, or arranging for or recommending referrals or other business paid for in whole or in part by these federal or state health care programs. U.S. federal enforcement personnel have substantial funding, powers and remedies to pursue suspected or perceived fraud and abuse. The effect of this government regulation on our clients is difficult to predict. Many of the regulations applicable to our clients and that may be applicable to us, including those relating to marketing incentives offered in connection with health care device sales and information blocking, are vague or indefinite and have not been interpreted by the courts. They may be interpreted or applied by a prosecutorial, regulatory or judicial authority in a manner that could broaden their applicability to us or require our clients to make changes in their operations or the way in which they deal with us. If such laws and regulations are determined to be applicable to us and if we fail to comply with any applicable laws and regulations, we could be subject to civil and criminal penalties, sanctions or other liability, including exclusion from government health programs, which could have a material adverse effect on our business, results of operations and financial condition. Even an unsuccessful challenge by a regulatory or prosecutorial authority of our activities could result in adverse publicity, require a costly response from us and adversely affect our business, results of operations and financial condition.

Preparation, Transmission, Submission and Collection of Medical Claims for Reimbursement. Our Solutions and Services are capable of electronically transmitting claims for services and items rendered by a physician to many patients' payers for approval and reimbursement. We also provide revenue cycle management services to our clients that include the coding, preparation, submission and collection of claims for medical service to payers for reimbursement. Such claims are governed by U.S. federal and state laws. U.S. federal law provides civil liability to any persons that knowingly submit, or cause to be submitted, a claim to a payer, including Medicare, Medicaid and private health plans, seeking payment for any services or items that overbills or bills for services or items that have not been provided to the patient. U.S. federal law may also impose criminal penalties for intentionally submitting such false claims. In addition, federal and state law regulates the collection of debt and may impose monetary penalties for violating those regulations. We have policies and procedures in place that we believe result in the accurate and complete preparation, transmission, submission and collection of claims, provided that the information given to us by our clients is also accurate and complete. The HIPAA security, privacy and transaction standards, as discussed below, also have a potentially significant effect on our claims preparation, transmission and submission services, since those services must be structured and provided in a way that supports our clients' HIPAA compliance obligations. In connection with these laws, we may be subjected to U.S. federal or state government investigations and possible penalties may be imposed upon us; false claims actions may have to be defended; private payers may file claims against us; and we may be excluded from Medicare, Medicaid or other government-funded health care programs. Any investigation or proceeding related to these laws, even if unwarranted or without merit, may have a material adverse effect on our business, results of operations and financial condition.

Regulation of Health Care Devices. The U.S. Food and Drug Administration ("FDA") has determined that certain of our Solutions and Services are medical devices that are actively regulated under the Federal Food, Drug and Cosmetic Act ("Act") and amendments to the Act. Other countries have similar regulations in place related to medical devices, that now or may in the future apply to certain of our Solutions and Services. If other of our Solutions and Services are deemed to be actively regulated medical devices by the FDA or similar regulatory agencies in countries where we do business, we could be subject to extensive requirements governing pre- and post-marketing activities including pre-market notification clearance. Complying with these medical device regulations globally is time consuming and expensive and could be subject to unanticipated and significant delays. Further, it is possible that these regulatory agencies may become more active in regulating software and devices that are used in health care. If we are unable to

obtain the required regulatory approvals for any such Solutions and Services, our short- and long-term business plans for these Solutions and Services could be delayed or canceled.

There have been nine FDA inspections at various Cerner sites since 2003. Inspections conducted at our Headquarters Campus, Realization Campus and Innovations Campus in 2010 and 2017 resulted in the issuance of an FDA Form 483 observation to which we responded promptly. The FDA has taken no further action with respect to the Form 483 observations that were issued in 2010 and 2017. The remaining FDA inspections, including inspections at our campuses in 2006, 2007 and 2014, resulted in no issuance of a Form 483. We remain subject to periodic FDA inspections and we could be required to undertake additional actions to comply with the Act and any other applicable regulatory requirements. Our failure to comply with the Act and any other applicable regulatory requirements could have a material adverse effect on our ability to continue to manufacture, distribute and deliver our Solutions and Services. The FDA has many enforcement tools including recalls, device corrections, seizures, injunctions, refusal to grant pre-market clearance of products, civil fines and criminal

Table of Contents

prosecutions. Any of the foregoing could have a material adverse effect on our business, results of operations and financial condition.

Security and Privacy. U.S. federal, state and local and foreign laws regulate the confidentiality of personal information, how that information may be used, and the circumstances under which such information may be released. These regulations govern both the disclosure and use of confidential personal and patient medical record information and require the users of such information to implement specified security and privacy measures. U.S. regulations currently in place governing electronic health data transmissions continue to evolve and are often unclear and difficult to apply. Laws in non-U.S. jurisdictions are also evolving and may have similar or even stricter requirements related to the treatment of personal or patient information.

In the U.S., HIPAA regulations apply national standards for some types of electronic health information transactions and the data elements used in those transactions to ensure the integrity, security and confidentiality of health information and standards to protect the privacy of individually identifiable health information. Covered entities under HIPAA, which include health care organizations such as our clients, our employer clinic business and our claims processing, transmission and submission services, are required to comply with HIPAA privacy standards, transaction regulations and security regulations. Moreover, the HITECH provisions of the American Recovery and Reinvestment Act of 2009 ("ARRA"), and associated regulatory requirements, extend many of the HIPAA obligations, formerly imposed only upon covered entities, to business associates as well. As a business associate of our clients who are covered entities, we were in most instances already contractually required to comply with the HIPAA regulations as they pertain to handling of covered client data. However, the extension of these HIPAA obligations to business associates by law has created additional liability risks related to the privacy and security of individually identifiable health information.

Evolving HIPAA and HITECH-related laws and regulations in the U.S. and data privacy and security laws and regulations in non-U.S. jurisdictions could restrict the ability of our clients to obtain, use or disseminate patient information. This could adversely affect demand for our Solutions and Services if they are not re-designed in a timely manner to meet the requirements of any new interpretations or regulations that seek to protect the privacy and security of patient data or enable our clients to execute new or modified health care transactions. We may need to expend additional capital, software development and other resources to modify our Solutions and Services to address these evolving data security and privacy issues. Furthermore, our failure to maintain confidentiality of sensitive personal information in accordance with the applicable regulatory requirements could damage our reputation and expose us to claims, fines and penalties.

In Europe, we are subject to EU and national data protection legislation, including the 2016 General Data Protection Regulation ("GDPR") which imposes restrictions on the processing of personal data (including health data) that, in some respects, are more stringent, and impose more significant burdens on subject businesses, than current privacy standards in the U.S. The EU regulation establishes several obligations that organizations must follow with respect to use of personal data, including a prohibition on the transfer of personal information from the EU to other countries whose laws do not adequately protect the privacy and security of personal data to European standards. In addition to this EU-wide legislation, certain member states have adopted more stringent data protection standards, particularly for health data. We have addressed these requirements, relative to data transfers, by self-certifying our compliance with the EU-U.S. Privacy Shield Framework to the U.S. Department of Commerce International Trade Administration ("ITA"). The ITA has approved our self-certification. However, continued criticism of the Privacy Shield by officials in Europe casts uncertainty as to the long-term effectiveness of the Privacy Shield to support EU-U.S. transfers of personal data. For that reason, we are also pursuing alternative methods of compliance (e.g. Standard Contractual Clauses), but those methods also may be subject to scrutiny by data protection authorities in European member states.

The GDPR impacts how businesses, including both us and our clients, can collect and process the personal data of EU individuals. We have incurred development costs in delivering Solutions and Services as we update our Solutions and Services to enable our European clients to comply with these varying and evolving standards. The costs of compliance with, and other burdens imposed by, such laws, regulations and policies, or modifications thereto, that are applicable to us may limit the use and adoption of our Solutions and Services and could have a material adverse impact on our business, results of operations and financial condition.

The GDPR grants broad enforcement powers to regulatory agencies to investigate and enforce our compliance with their data privacy and security requirements. Governmental enforcement personnel, particularly in the EU, have substantial powers and remedies to pursue suspected or perceived violations. If we fail to comply with any applicable laws or regulations or fail to deliver compliant Solutions and Services, we could be subject to civil penalties, sanctions or contract liability. Enforcement investigations, even if meritless, could have a negative impact on our reputation, cause us to lose existing clients or limit our ability to attract new clients.

Table of Contents

Interoperability Standards. Our clients continue to be concerned and often require that our Solutions and Services be interoperable with other third party HCIT suppliers. Market forces and governmental/regulatory authorities create software interoperability standards that may apply to our Solutions and Services. If our Solutions and Services are not consistent with those standards, we could be forced to incur substantial additional development costs to conform. The Office of the National Coordinator for Health Information Technology (ONC) is charged under the Cures Act with developing a Trusted Exchange Framework that establishes governance requirements for trusted health information exchange in the U.S. ONC has developed the U.S. Common Data Set for Interoperability which may lay the groundwork for future data exchange requirements for trusted exchange. ONC continues to modify and refine these standards. We may incur increased software development and administrative expense and delays in delivering Solutions and Services if we need to update our Solutions and Services to conform to these varying and evolving requirements. In addition, delays in interpreting these standards may result in postponement or cancellation of our clients' decisions to purchase our Solutions and Services. If our Solutions and Services are not compliant with these evolving standards, our market position and sales could be impaired, and we may have to invest significantly in changes to our Solutions and Services.

Federal Requirements for Certified Health Information Technology. Various U.S. federal, state and non-government agencies continue to generate requirements for the use of information technology. In many cases, these requirements have become conditions for receiving payment for health care services to beneficiaries of federal health insurance programs. These requirements are expansions of the statutory ARRA HITECH program that began providing incentive payments in 2011 to hospitals and eligible providers for the "meaningful use of certified electronic health record technology ("CEHRT")." Although those incentive programs have expired, CEHRT continues to be a condition of participation in federal health care programs. In 2015, MACRA required the use of CEHRT as part of its Quality Payment Program for eligible providers under Medicare. CEHRT is also one of the areas measured under the Merit based Incentive Payment System (known as MIPS) by which the Medicare Physician Fee Schedule was restructured. In the last several years, participation in Medicare's "alternative payment models" to replace traditional "fee for service" payments with quality and risk-sharing payment models has been conditioned on CEHRT and this continues with the Trump Administration. The Cures Act has tied CEHRT to its policy goals of reducing barriers to the exchange of health information data blocking, encouraging nationwide interoperability, consumer access to health information and improving health information availability between consumers and their care teams. The regulations establishing the certification standards for CEHRT will continue to be updated to support these policy goals with greater emphasis on interoperability, consumer engagement, patient safety and health information privacy and security. The ONC is due to develop additional regulations under the Cures Act to enforce the act’s policy directives relating to data blocking and interoperability. In addition, the ONC has increased its surveillance activities concerning vendor compliance relative to CEHRT.

We have completed certification efforts to meet current CEHRT requirements that became mandatory for certain Federal programs on January 1, 2019, and for many others that become mandatory during 2019. We will continue to address additional regulatory requirements as they evolve. However, these standards and specifications are subject to interpretation by the entities designated to certify our electronic health care technology as CEHRT compliant. Additionally, if our business practices, Solutions and Services are not compliant with these evolving regulatory requirements, our market position and sales could be impaired, and we may have to invest significantly in changes to our Solutions and Services. Further, we bear potential financial risks where we are alleged to have not appropriately complied with these regulations. We also bear financial risk where we have entered into agreements with clients to warrant their ability to meet future federal program requirements that require use of CEHRT. While a client's ability to meet future federal health program related attestation requirements may be dependent on the client's ability to adopt, rollout and attain sufficient use of our certified Solutions and Services on a timely basis, we may face risks that come from issues in full adoption of our certified Solutions and Services, which in turn could lead to a client missing its attestation targets. These risks are enhanced when we are under agreements to provide application management

services to our clients that place responsibilities on us for application configuration and implementation as a prerequisite to meaningful use attainment ordinarily borne by the client.

Risks Related to Our Common Stock

Our quarterly operating results may vary, which could adversely affect our stock price. Our quarterly operating results have varied in the past and may continue to vary in future periods, including variations from guidance, expectations or historical results or trends. Quarterly operating results may vary for a number of reasons including demand for our Solutions and Services, the financial condition of our current and potential clients, our long sales cycle, potentially long installation and implementation cycles for larger, more complex systems, accounting policy changes and other factors described in this section and elsewhere in this report. As a result of health care industry trends and the market for our Solutions and Services, a large percentage of our revenues are generated by the sale and installation of larger, more complex and higher-priced

Table of Contents

systems. The sales process for these systems is lengthy and involves a significant technical evaluation and commitment of capital and other resources by the client. Sales may be subject to delays due to changes in clients' internal budgets, procedures for approving large capital expenditures, competing needs for other capital expenditures, additions or amendments to U.S. federal, state or local regulations, availability of personnel resources or by actions taken by competitors. Delays in the expected sale, installation or implementation of these large systems may have a significant negative impact on our anticipated quarterly revenues and consequently our earnings, since a significant percentage of our expenses are relatively fixed. Because of the complexity and value of our contracts, the loss of even a small number of clients could have a significant negative effect on our financial results.

Revenue recognized in any quarter may depend upon our or our clients' abilities to meet project milestones. Delays in meeting these milestone conditions or modification of the project plan could result in a shift of revenue recognition from one quarter to another and could have a material adverse effect on results of operations for a particular quarter.

We may also experience seasonality in revenues. For example, our revenues historically have been lower in the first quarter of the year and greater in the fourth quarter of the year, primarily as a result of clients' year-end efforts to make final capital expenditures for the then-current year. These seasonal variations may lead to fluctuations in our annual and quarterly revenues and operating results.

Our sales forecasts may vary from actual sales in a particular quarter. We use a "pipeline" system, a common industry practice, to forecast sales and trends in our business. Our sales associates monitor the status of all sales opportunities, such as the date when they estimate that a client will make a purchase decision and the potential dollar amount of the sale. These estimates are aggregated periodically to generate a sales pipeline. We compare this pipeline at various points in time to evaluate trends in our business. This analysis provides guidance in business planning and forecasting, but these pipeline estimates are by their nature speculative. Our pipeline estimates are not necessarily reliable predictors of revenues in a particular quarter or over a longer period of time, partially because of changes in the pipeline and in conversion rates of the pipeline into contracts that can be very difficult to estimate. A negative variation in the expected conversion rate or timing of the pipeline into contracts, or in the pipeline itself, could cause our plan or forecast to be inaccurate and thereby adversely affect business results. For example, a slowdown in information technology spending, adverse economic conditions, new or changed U.S. federal, state or local regulations related to our industry or a variety of other factors can cause purchasing decisions to be delayed, reduced in amount or cancelled, which would reduce the overall pipeline conversion rate in a particular period of time. Because a substantial portion of our contracts are completed in the latter part of a quarter, we may not be able to adjust our cost structure quickly enough in response to a revenue shortfall resulting from a decrease in our pipeline conversion rate in any given fiscal quarter.

The trading price of our common stock may be volatile. The market for our common stock may experience significant price and volume fluctuations in response to a number of factors including actual or anticipated variations in operating results, articles or rumors about our performance or Solutions and Services, announcements of technological innovations or new services or products by our competitors or us, changes in expectations of future financial performance or estimates of securities analysts, governmental regulatory action, health care reform measures, client relationship developments, economic conditions and changes occurring in the securities markets in general and other factors, many of which are beyond our control. For instance, our quarterly operating results have varied in the past and may continue to vary in future periods, due to a number of reasons including, but not limited to, demand for our Solutions and Services, the financial condition of our current and potential clients, our long sales cycle, potentially long installation and implementation cycles for larger, more complex and higher-priced systems, key management changes, accounting policy changes and other factors described herein. As a matter of policy, we do not generally comment on our stock price or rumors.

Furthermore, the stock market in general, and the markets for software, health care devices, other health care solutions and services and information technology companies in particular have experienced extreme volatility that often has been unrelated to the operating performance of particular companies. These broad market and industry fluctuations may adversely affect the trading price of our common stock, regardless of actual operating performance.

We cannot guarantee that our stock repurchase program or our quarterly dividend program will be fully implemented or that either will enhance long-term stockholder value. Our Board of Directors has approved a stock repurchase program totaling $1.0 billion, of which $283 million remains available for purchase at the end of 2018. The repurchase program does not have an expiration date and we are not obligated to repurchase a specified number or dollar value of shares. Additionally, our Board has approved the initiation of a quarterly cash dividend program and while we expect to pay a cash dividend on a quarterly basis, future declarations of such quarterly cash dividends are subject to approval by the Board of Directors and the Board of Directors' determination that the declaration of dividends are in the best interests of Cerner and its shareholders.

Table of Contents

Either or both of our repurchase or dividend programs may be suspended or terminated at any time and, even if fully implemented, may not enhance long-term stockholder value.

Our Directors have authority to issue preferred stock and our corporate governance documents contain anti-takeover provisions. Our Board of Directors has the authority to issue up to 1,000,000 shares of preferred stock and to determine the preferences, rights and privileges of those shares without any further vote or action by the shareholders. The rights of the holders of common stock may be harmed by rights granted to the holders of any preferred stock that may be issued in the future and issuances of preferred stock could be used to delay or hinder a change of control of the Company.

In addition, some provisions of our Certificate of Incorporation and Bylaws could make it more difficult for a potential acquirer to acquire a majority of our outstanding voting stock or otherwise effect a change of control of the Company. These include provisions that provide for a classified board of directors, require advance notice of stockholder proposals at stockholder meetings, prohibit shareholders from taking action by written consent and restrict the ability of shareholders to call special meetings. We are also subject to provisions of Delaware law that prohibit us from engaging in any business combination with any interested shareholder for a period of three years from the date the person became an interested shareholder, unless certain conditions are met, which could have the effect of delaying or preventing a change of control.

Risks Relating to Forward-looking Statements

Statements made in this report, the Annual Report to Shareholders of which this report is made a part, other reports and proxy statements filed with the SEC, communications to shareholders, press releases and oral statements made by representatives of the Company that are not historical in nature, or that state the Company's or management’s intentions, hopes, beliefs, expectations, plans, goals or predictions of future events or performance, may constitute "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). Forward-looking statements can often be identified by the use of forward-looking terminology, such as "could," "should," "will," "intended," "continue," "believe," "may," "expect," "hope," "anticipate," "goal," "forecast," "plan," "guidance," "opportunity," "prospects" or "estimate" or the negative of these words, variations thereof or similar expressions. Forward-looking statements are not guarantees of future performance or results. They involve risks, uncertainties and assumptions. It is important to note that any such performance and actual results, financial condition or business, could differ materially from those expressed in such forward-looking statements. Factors that could cause or contribute to such differences include, but are not limited to, those discussed in this Item 1A. Risk Factors and elsewhere herein or in other reports filed with the SEC. Other unforeseen factors not identified herein could also have such an effect. Any forward-looking statements made in this report speak only as of the date of this report. Except as required by law, we undertake no obligation to update or revise forward-looking statements to reflect changed assumptions, the occurrence of unanticipated events or changes in our business, results of operations, financial condition or business over time.

Market and Industry Data

This Annual Report on Form 10-K may contain market, industry and government data and forecasts that have been obtained from publicly available information, various industry publications and other published industry sources. We have not independently verified the information and cannot make any representation as to the accuracy or completeness of such information. None of the reports and other materials of third party sources referred to in this Annual Report on Form 10-K were prepared for use in, or in connection with, this Annual Report.

Item 1B. Unresolved Staff Comments.

None

23

Table of Contents

Item 2. Properties.

As of the end of 2018, we owned approximately six million gross square feet of real estate located in the greater Kansas City metro area and Malvern, Pennsylvania. Such property primarily consists of office space, data center, and warehouse facilities used primarily by our Domestic Segment.

As of the end of 2018, we leased additional space used primarily by our Domestic Segment in the following locations:

Arlington, Virginia	Franklin, Tennessee	New York, New York
Brooklyn, New York	Jefferson City, Missouri	North Kansas City, Missouri
Carlsbad, California	Kansas City, Missouri	Rochester, Minnesota
Colchester, Vermont	Lakeland, Florida	Salt Lake City, Utah
Columbia, Missouri	Mason, Ohio	Tempe, Arizona
Costa Mesa, California	Minneapolis, Minnesota	Waltham, Massachusetts
Denver, Colorado	Nevada, Missouri	
Durham, North Carolina	New Concord, Ohio	

We also leased space primarily used by our Global Segment in the following locations:

Abu Dhabi, United Arab Emirates	Gothenburg, Sweden	Oslo, Norway
Bangalore, India	Hamburg, Germany	Palma de Mallorca, Spain
Berlin, Germany	Idstein, Germany	Paris, France
Brasov, Romania	Kolkata, India	Riyadh, Saudi Arabia
Brisbane, Australia	Kuala Lumpur, Malaysia	Sao Paulo, Brazil
Cairo, Egypt	Las Palmas, Gran Canaria, Spain	Singapore
Doha, Qatar	Lisbon, Portugal	St. Wolfgang, Germany
Dubai, United Arab Emirates	London, England	Stockholm, Sweden
Dublin, Ireland	Lund, Sweden	Sydney, Australia
Erlangen, Germany	Madrid, Spain	The Hague, Netherlands
Essen, Germany	Markham, Ontario, Canada	Vienna, Austria
Gmund, Austria	Melbourne, Australia	

In general, we believe our facilities are suitable to meet our current and reasonably anticipated future needs.

Item 3. Legal Proceedings.

From time to time, we are involved in litigation which is incidental to our business. In our opinion, no litigation to which we are currently a party is likely to have a material adverse effect on our consolidated financial condition, results of operations, or cash flows.

Item 4. Mine Safety Disclosures.

Not applicable

Table of Contents

Part II.

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

Our common stock trades on the Nasdaq Global Select Market[SM] under the symbol CERN. The following table sets forth the high, low and last sales prices for the fiscal quarters of 2018 and 2017 as reported by the Nasdaq Global Select Market.

	2018			2017		
	High	Low	Last	High	Low	Last
First Quarter	$73.43	$56.49	$58.00	$59.83	$47.09	$58.85
Second Quarter	63.22	52.05	59.79	69.28	58.09	66.47
Third Quarter	67.57	59.49	64.41	72.27	61.53	71.32
Fourth Quarter	65.44	48.78	52.01	73.86	62.86	67.39

At January 28, 2019, there were approximately 940 owners of record. To date, we have paid no cash dividends. Subject to declaration by the Board of Directors, the Company plans to initiate a quarterly cash dividend of $0.15 per share, with the first payment expected in the third quarter of 2019. Future dividends will be subject to the determination, declaration and discretion of the Board of Directors and compliance with our covenants under our credit facility.

The table below provides information with respect to Common Stock purchases by the Company during the fourth fiscal quarter of 2018:

Period	Total Number of Shares Purchased (a)	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs (b)	Approximate Dollar Value of Shares That May Yet Be Purchased Under the Plans or Programs (b)
September 30, 2018 - October 27, 2018	—	$—	—	$581,522,399
October 28, 2018 - November 24, 2018	1,722,734	58.05	1,722,124	481,556,844
November 25, 2018 - December 29, 2018	3,745,917	52.96	3,745,917	283,172,767
Total	5,468,651	$ 54.56	5,468,041	

(a) Of the 5,468,651 shares of common stock, par value $0.01 per share, presented in the table above, 610 shares were originally granted to employees as restricted stock pursuant to our 2011 Omnibus Equity Incentive Plan (the "Omnibus Plan"). The Omnibus Plan allows for the withholding of shares to satisfy the minimum tax obligations due upon the vesting of restricted stock. Pursuant to the Omnibus Plan, the 610 shares reflected above were relinquished by employees in exchange for our agreement to pay U.S. federal and state withholding obligations resulting from the vesting of the Company's restricted stock.

(b) As announced on May 25, 2017, our Board of Directors authorized a share repurchase program that allows the Company to repurchase up to $500 million of shares of our common stock, excluding transaction costs. As announced on May 21, 2018, our Board of Directors approved an amendment to the repurchase program that was

authorized in May 2017. Under the amendment, the Company was authorized to repurchase up to an additional $500 million of shares of our common stock, for an aggregate of $1 billion, excluding transaction costs. The repurchases are to be effectuated in the open market, by block purchase, in privately negotiated transactions, or through other transactions managed by broker-dealers. No time limit was set for the completion of the program. During 2018, we repurchased 11.2 million shares for total consideration of $644 million under the program pursuant to Rule 10b5-1 plans. At December 29, 2018, $283 million remains available for repurchase under the outstanding program. Refer to Note (14) of the notes to consolidated financial statements for further information regarding our share repurchase program.

See Part III, Item 12 for information relating to securities authorized for issuance under our equity compensation plans.

Table of Contents

Item 6. Selected Financial Data.

(In thousands, except per share data)	2018[1]	2017[2]	2016	2015[3]	2014
Statement of Operations Data:					
Revenues	$5,366,325	$5,142,272	$4,796,473	$4,425,267	$3,402,703
Operating earnings	774,785	960,471	911,013	781,136	763,084
Earnings before income taxes	800,851	967,129	918,434	781,380	774,174
Net earnings	630,059	866,978	636,484	539,362	525,433
Earnings per share:					
Basic	1.91	2.62	1.88	1.57	1.54
Diluted	1.89	2.57	1.85	1.54	1.50
Weighted average shares outstanding:					
Basic	330,084	331,373	337,740	343,178	342,150
Diluted	333,572	337,999	343,653	350,908	350,386
Balance Sheet Data:					
Working capital	$1,356,114	$1,590,632	$773,960	$1,049,967	$1,714,471
Total assets	6,708,636	6,469,311	5,629,963	5,561,984	4,530,565
Long-term debt and capital lease obligations, excl. current installments	438,802	515,130	537,552	563,353	62,868
Shareholders' equity	4,928,389	4,785,348	3,927,947	3,870,384	3,565,968

(1) In 2018, we adopted new revenue recognition guidance as further discussed in Note (2) of the notes to consolidated financial statements.

(2) Includes the impact of certain U.S. income tax reform, as further described in Note (12) of the notes to consolidated financial statements.

(3) In 2015, we acquired our Health Services business from Siemens AG.

Table of Contents

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

The following Management Discussion and Analysis ("MD&A") is intended to help the reader understand our results of operations and financial condition. This MD&A is provided as a supplement to, and should be read in conjunction with, our financial statements and the accompanying notes to the financial statements.

Our fiscal year ends on the Saturday closest to December 31. Fiscal years 2018, 2017 and 2016 each consisted of 52 weeks and ended on December 29, 2018, December 30, 2017, and December 31, 2016, respectively. All references to years in this MD&A represent fiscal years unless otherwise noted.

Management Overview

Our revenues are primarily derived by selling, implementing and supporting software solutions, clinical content, hardware, devices and services that give health care providers and other stakeholders secure access to clinical, administrative and financial data in real or near-real time, helping them to improve quality, safety and efficiency in the delivery of health care.

Our core strategy is to create organic growth by investing in research and development ("R&D") to create solutions and tech enabled services for the health care industry. This strategy has driven strong growth over the long-term, as reflected in five- and ten-year compound annual revenue growth rates of 13% and 12%, respectively. This growth has also created an important strategic footprint in health care, with Cerner® solutions in more than 27,500 contracted provider facilities worldwide, including hospitals, physician practices, laboratories, ambulatory centers, behavioral health centers, cardiac facilities, radiology clinics, surgery centers, extended care facilities, retail pharmacies, and employer sites. Selling additional solutions and services back into this client base is an important element of our future revenue growth. We are also focused on driving growth by strategically aligning with health care providers that have not yet selected a supplier and by displacing competitors in health care settings that are looking to replace their current suppliers. We may also supplement organic growth with acquisitions or strategic investments.

We expect to drive growth through solutions and tech-enabled services that reflect our ongoing ability to innovate and expand our reach into health care. Examples of these include our CareAware® health care device architecture and devices, Cerner ITWorks℠ services, revenue cycle solutions and services, and HealtheIntent® population health solutions and services. Finally, we continue to believe there is significant opportunity for growth outside of the United States, with many non-U.S. markets focused on health care information technology as part of their strategy to improve the quality and lower the cost of health care.

Beyond our strategy for driving revenue growth, we are also focused on earnings growth. Similar to our history of growing revenue, our net earnings have increased at compound annual rates of 10% and 13% over the most recent five- and ten-year periods, respectively. We expect to drive earnings growth as we continue to grow our revenue. We also have opportunities to expand our operating margins over time. In the near term, we expect growth in non-cash expenses, such as amortization and depreciation, and a mix of lower margin revenue associated with some of our rapidly growing services businesses will limit our margin expansion. Longer-term, we expect to generate margin expansion as the growth rate of non-cash expenses slows, we achieve economies of scale and efficiencies in our services businesses, control general and administrative expenses, and get more contributions to our growth from solutions on our HealtheIntent platform, which we expect to be accretive to our overall margins.

We are also focused on continuing to deliver strong levels of cash flow, which we expect to accomplish by continuing to grow earnings and prudently managing capital expenditures.

Results Overview

Bookings, which reflects the value of executed contracts for software, hardware, professional services and managed services, was $6.72 billion in 2018, which is an increase of 6% compared to $6.32 billion in 2017.

Revenues for 2018 increased 4% to $5.37 billion, compared to $5.14 billion in 2017. The increase in revenue reflects ongoing demand from new and existing clients for Cerner's solutions and services driven by their needs to keep up with regulatory requirements, adapt to changing reimbursement models, and deliver safer and more efficient care.

Net earnings for 2018 decreased 27% to $630 million, compared to $867 million in 2017. Diluted earnings per share decreased 26% to $1.89 in 2018, compared to $2.57 in 2017. The overall decrease in net earnings and diluted earnings per share was

Table of Contents

primarily a result of increased operating expenses, which includes the hiring of personnel to support revenue growth and a $45 million pre-tax charge to provide an allowance against certain disputed client receivables. Additionally, we had a lower effective tax rate in 2017, stemming from certain U.S. income tax reform enacted in December 2017.

We had cash collections of receivables of $5.49 billion in 2018 compared to $5.44 billion in 2017. Days sales outstanding was 79 days for the 2018 fourth quarter compared to 82 days for the 2018 third quarter and 72 days for the 2017 fourth quarter. Operating cash flows for 2018 were $1.45 billion compared to $1.31 billion in 2017.

Revenue Recognition

In the first quarter of 2018, we adopted new revenue recognition guidance as further discussed in Note (2) of the notes to consolidated financial statements. The impact of applying this new guidance (versus prior U.S. GAAP) increased 2018 revenues and earnings before income taxes by $207 million and $101 million, respectively. This impact is primarily driven by certain new contracts in 2018 where we made commitments for specified upgrades. Under the new revenue guidance, we are required to estimate stand-alone selling price when allocating transaction consideration to performance obligations, such as specified upgrades. Under prior U.S. GAAP, we could not establish vendor specific objective evidence of fair value for specified upgrades, which would have delayed the revenue recognition on the entire contract until the upgrades were delivered.

Health Care Information Technology Market Outlook

We have provided an assessment of the health care information technology market under "Health Care and Health Care IT Industry" in Part I, Item 1 "Business," which is incorporated herein by reference.

Results of Operations
Fiscal Year 2018 Compared to Fiscal Year 2017

(In thousands)	2018	% of Revenue	2017	% of Revenue	% Change
Revenues	$5,366,325	100 %	$5,142,272	100 %	4 %
Costs of revenue	937,348	17 %	854,091	17 %	10 %
Margin	4,428,977	83 %	4,288,181	83 %	3 %
Operating expenses					
Sales and client service	2,493,696	46 %	2,276,821	44 %	10 %
Software development	683,663	13 %	605,046	12 %	13 %
General and administrative	389,469	7 %	355,267	7 %	10 %
Amortization of acquisition-related intangibles	87,364	2 %	90,576	2 %	(4)%
Total operating expenses	3,654,192	68 %	3,327,710	65 %	10 %
Total costs and expenses	4,591,540	86 %	4,181,801	81 %	10 %
Operating earnings	774,785	14 %	960,471	19 %	(19)%
Other income, net	26,066		6,658		
Income taxes	(170,792)		(100,151)		

Net earnings	$630,059	$866,978	(27)%

Revenues & Backlog

Revenues increased 4% to $5.37 billion in 2018, as compared to $5.14 billion in 2017. The growth in revenues includes a $220 million increase in professional services revenue, driven by increased contributions from Cerner ITWorks and revenue cycle services. Refer to Note (2) of the notes to consolidated financial statements for further information regarding revenues disaggregated by our business models.

Table of Contents

Backlog, which reflects contracted revenue that has not yet been recognized as revenue, was $15.25 billion as of December 29, 2018, of which we expect to recognize approximately 29% as revenue over the next 12 months. In the first quarter of 2018, we adopted new revenue recognition guidance as further discussed in Note (2) of the notes to consolidated financial statements. In connection with the adoption of such guidance, we modified our calculation of backlog as previously determined under Regulation S-K to represent the aggregate amount of transaction price allocated to performance obligations that are unsatisfied (or partially satisfied) to conform to the new revenue recognition guidance. Backlog amounts disclosed prior to the adoption of the new revenue recognition guidance have not been adjusted, and are not comparable to, the current period presentation.

We believe that backlog may not necessarily be a comprehensive indicator of future revenue as certain of our arrangements may be canceled (or conversely renewed) at our clients' option, thus contract consideration related to such cancellable periods has been excluded from our calculation of backlog. However, historically our experience has been that such cancellation provisions are rarely exercised. We expect to recognize approximately $525 million of revenue over the next 12 months under currently executed contracts related to such cancellable periods, which is not included in our calculation of backlog.

Costs of Revenue

Costs of revenue as a percent of revenues were 17% in both 2018 and 2017.

Costs of revenue include the cost of reimbursed travel expense, sales commissions, third party consulting services and subscription content and computer hardware, devices and sublicensed software purchased from manufacturers for delivery to clients. It also includes the cost of hardware maintenance and sublicensed software support subcontracted to the manufacturers. Such costs, as a percent of revenues, typically have varied as the mix of revenue (software, hardware, devices, maintenance, support, and services) carrying different margin rates changes from period to period. Costs of revenue does not include the costs of our client service personnel who are responsible for delivering our service offerings. Such costs are included in sales and client service expense.

Operating Expenses

Total operating expenses increased 10% to $3.65 billion in 2018, as compared to $3.33 billion in 2017.

- Sales and client service expenses as a percent of revenues were 46% in 2018, compared to 44% in 2017. These expenses increased 10% to $2.49 billion in 2018, from $2.28 billion in 2017. Sales and client service expenses include salaries and benefits of sales, marketing, support, and services personnel, depreciation and other expenses associated with our managed services business, communications expenses, unreimbursed travel expenses, expense for share-based payments, and trade show and advertising costs. The 2018 amount includes a pre-tax charge of $45 million to provide an allowance against certain client receivables with Fujitsu Services Limited ("Fujitsu"), as further discussed in Note (3) of the notes to consolidated financial statements. The remaining growth in sales and client service expenses is primarily due to the hiring of services personnel to support growth in services revenue.
- Software development expenses as a percent of revenues were 13% in 2018, compared to 12% in 2017. Expenditures for software development include ongoing development and enhancement of the Cerner Millennium® and HealtheIntent platforms, with a focus on supporting key initiatives to enhance physician experience, revenue cycle and population health solutions. A summary of our total software development expense in 2018 and 2017 is as follows:

	For the Years Ended	
(In thousands)	2018	2017
Software development costs	$747,128	$705,944
Capitalized software costs	(271,787)	(271,411)
Capitalized costs related to share-based payments	(1,906)	(2,737)
Amortization of capitalized software costs	210,228	173,250
Total software development expense	$683,663	$605,046

- General and administrative expenses as a percent of revenues were 7% in both 2018 and 2017. These expenses increased 10% to $389 million in 2018, from $355 million in 2017. General and administrative expenses include

Table of Contents

salaries and benefits for corporate, financial and administrative staffs, utilities, communications expenses, professional fees, depreciation and amortization, transaction gains or losses on foreign currency, expense for share-based payments, acquisition costs and related adjustments. The increase in general and administrative expenses is primarily due to increased expense associated with share-based payment awards.

- Amortization of acquisition-related intangibles as a percent of revenues was 2% in both 2018 and 2017. These expenses decreased 4% to $87 million in 2018, from $91 million in 2017. Amortization of acquisition-related intangibles includes the amortization of customer relationships, acquired technology, trade names, and non-compete agreements recorded in connection with our business acquisitions. The decrease in amortization of acquisition-related intangibles includes the impact of certain intangible assets becoming fully amortized.

Non-Operating Items

- Other income, net was $26 million in 2018, compared to $7 million in 2017. The increase is primarily attributable to increased interest on our cash and investment balances, due to rising interest rates.

- Our effective tax rate was 21% in 2018, compared to 10% in 2017. The increase in the effective tax rate in 2018 is primarily a result of impacts from certain U.S. income tax reform enacted in December 2017. Refer to Note (12) of the notes to consolidated financial statements for further information regarding our effective tax rate. We do not expect significant changes to our overall effective tax rate in 2019, from what is reported for 2018.

Operations by Segment

We have two operating segments: Domestic and Global. The Domestic segment includes revenue contributions and expenditures associated with business activity in the United States. The Global segment primarily includes revenue contributions and expenditures linked to business activity in Aruba, Australia, Austria, the Bahamas, Belgium, Bermuda, Brazil, Canada, Cayman Islands, Chile, Denmark, Egypt, England, Finland, France, Germany, India, Ireland, Kuwait, Luxembourg, Malaysia, Mexico, Netherlands, Norway, Portugal, Qatar, Romania, Saudi Arabia, Singapore, Slovakia, Spain, Sweden, Switzerland and the United Arab Emirates. Refer to Note (17) of the notes to consolidated financial statements for further information regarding our reportable segments.

The following table presents a summary of our operating segment information for the years ended 2018 and 2017:

(In thousands)	2018	% of Segment Revenue	2017	% of Segment Revenue	% Change
Domestic Segment					
Revenues	$4,730,266	100%	$4,575,171	100%	3%
Costs of revenue	827,904	18%	755,729	17%	10%
Operating expenses	2,164,465	46%	1,998,544	44%	8%
Total costs and expenses	2,992,369	63%	2,754,273	60%	9%
Domestic operating earnings	1,737,897	37%	1,820,898	40%	(5)%
Global Segment					
Revenues	636,059	100%	567,101	100%	12%
Costs of revenue	109,444	17%	98,362	17%	11%
Operating expenses	321,116	50%	264,196	47%	22%
Total costs and expenses	430,560	68%	362,558	64%	19%
Global operating earnings	205,499	32%	204,543	36%	—%

Other, net	(1,168,611)	(1,064,970)	10%
Consolidated operating earnings	$774,785	$960,471	(19)%

Domestic Segment

- Revenues increased 3% to $4.73 billion in 2018, from $4.58 billion in 2017. The growth in revenues includes a $181 million increase in professional services revenue, driven by increased contributions from Cerner ITWorks

Table of Contents

and revenue cycle services. Refer to Note (2) of the notes to consolidated financial statements for further information regarding revenues disaggregated by our business models.

- Costs of revenue as a percent of revenues were 18% in 2018, compared to 17% in 2017. The higher costs of revenue as a percent of revenues was primarily driven by higher third-party costs associated with services revenue.
- Operating expenses as a percent of revenues were 46% in 2018, compared to 44% in 2017. The higher operating expenses as a percent of revenues reflects the hiring of personnel to support revenue growth.

Global Segment

- Revenues increased 12% to $636 million in 2018, from $567 million in 2017. This increase was driven by growth across most of our business. Refer to Note (2) of the notes to consolidated financial statements for further information regarding revenues disaggregated by our business models.
- Costs of revenue as a percent of revenues were 17% in both 2018 and 2017.
- Operating expenses as a percent of revenues were 50% in 2018, compared to 47% in 2017. The increase as a percent of revenues is primarily due to a pre-tax charge of $45 million in 2018 to provide an allowance against certain client receivables with Fujitsu, as further discussed in Note (3) of the notes to consolidated financial statements.

Other, net

Operating results not attributed to an operating segment include expenses such as software development, general and administrative expenses, acquisition costs and related adjustments, share-based compensation expense, and certain amortization and depreciation. These expenses increased 10% from 2017 to 2018. The increase is primarily due to increased software development expenses, including increased amortization of capitalized software costs resulting from releases of new and enhanced solutions over the last four quarters.

Fiscal Year 2017 Compared to Fiscal Year 2016

(In thousands)	2017	% of Revenue	2016	% of Revenue	% Change
Revenues	$5,142,272	100 %	$4,796,473	100 %	7 %
Costs of revenue	854,091	17 %	779,116	16 %	10 %
Margin	4,288,181	83 %	4,017,357	84 %	7 %
Operating expenses					
Sales and client service	2,276,821	44 %	2,071,926	43 %	10 %
Software development	605,046	12 %	551,418	11 %	10 %
General and administrative	355,267	7 %	392,454	8 %	(9)%
Amortization of acquisition-related intangibles	90,576	2 %	90,546	2 %	— %
Total operating expenses	3,327,710	65 %	3,106,344	65 %	7 %
Total costs and expenses	4,181,801	81 %	3,885,460	81 %	8 %
Operating earnings	960,471	19 %	911,013	19 %	5 %
Other income, net	6,658		7,421		
Income taxes	(100,151)		(281,950)		
Net earnings	$866,978		$636,484		36 %

31

Table of Contents

Revenues

Revenues increased 7% to $5.14 billion in 2017, as compared to $4.80 billion in 2016. The growth in revenues includes a $147 million increase in professional services revenue, driven by growth in implementation and consulting activities. Refer to Note (2) of the notes to consolidated financial statements for further information regarding revenues disaggregated by our business models.

Costs of Revenue

Costs of revenue as a percent of revenues were 17% in 2017, compared to 16% in 2016. The marginally higher costs of revenue as a percent of revenues was primarily due to higher third-party costs associated with technology resale.

Operating Expenses

Total operating expenses increased 7% to $3.33 billion in 2017, as compared to $3.11 billion in 2016.

- Sales and client service expenses as a percent of revenues were 44% in 2017, compared to 43% in 2016. These expenses increased 10% to $2.28 billion in 2017, from $2.07 billion in 2016. The growth in sales and client service expenses reflects hiring of services personnel to support the growth in services revenue.

- Software development expenses as a percent of revenues were 12% in 2017, compared to 11% in 2016. Expenditures for software development include ongoing development and enhancement of the Cerner Millennium® and HealtheIntent platforms, with a focus on supporting key initiatives to enhance physician experience, revenue cycle and population health solutions. A summary of our total software development expense in 2017 and 2016 is as follows:

	For the Years Ended	
(In thousands)	2017	2016
Software development costs	$705,944	$704,882
Capitalized software costs	(271,411)	(290,911)
Capitalized costs related to share-based payments	(2,737)	(2,785)
Amortization of capitalized software costs	173,250	140,232
Total software development expense	$605,046	$551,418

- General and administrative expenses as a percent of revenues were 7% in 2017, compared to 8% in 2016. These expenses decreased 9% to $355 million in 2017, from $392 million in 2016. The decrease in general and administrative expenses was primarily due to 2016 containing $36 million of expenses associated with a voluntary separation plan. Refer to Note (1) of the notes to consolidated financial statements for further detail regarding our 2016 voluntary separation plan.

- Amortization of acquisition-related intangibles as a percent of revenues was 2% in both 2017 and 2016. These expenses remained flat at $91 million in both 2017 and 2016.

Non-Operating Items

- Other income, net remained flat at $7 million in both 2017 and 2016.

- Our effective tax rate was 10% in 2017, compared to 31% in 2016. The decrease in the effective tax rate in 2017 is primarily a result of impacts from certain U.S. income tax reform enacted in December 2017, and the inclusion of net excess tax benefits as discrete items within the tax provision, upon our adoption of ASU 2016-09 in the first quarter of 2017. Refer to Note (12) of the notes to consolidated financial statements for further information regarding our effective tax rate.

32

Table of Contents

Operations by Segment

The following table presents a summary of our operating segment information for the years ended 2017 and 2016:

(In thousands)	2017	% of Segment Revenue	2016	% of Segment Revenue	% Change
Domestic Segment					
Revenues	$4,575,171	100%	$4,245,097	100%	8%
Costs of revenue	755,729	17%	676,437	16%	12%
Operating expenses	1,998,544	44%	1,774,146	42%	13%
Total costs and expenses	2,754,273	60%	2,450,583	58%	12%
Domestic operating earnings	1,820,898	40%	1,794,514	42%	1%
Global Segment					
Revenues	567,101	100%	551,376	100%	3%
Costs of revenue	98,362	17%	102,679	19%	(4)%
Operating expenses	264,196	47%	246,243	45%	7%
Total costs and expenses	362,558	64%	348,922	63%	4%
Global operating earnings	204,543	36%	202,454	37%	1%
Other, net	(1,064,970)		(1,085,955)		(2)%
Consolidated operating earnings	$960,471		$911,013		5%

Domestic Segment

- Revenues increased 8% to $4.58 billion in 2017, from $4.25 billion in 2016. The growth in revenues includes a $141 million increase in professional services revenue, driven by growth in implementation and consulting activities. Refer to Note (2) of the notes to consolidated financial statements for further information regarding revenues disaggregated by our business models.
- Costs of revenue as a percent of revenues were 17% in 2017, compared to 16% in 2016. The marginally higher costs of revenue as a percent of revenues was primarily due to higher third-party costs associated with technology resale.
- Operating expenses as a percent of revenues were 44% in 2017, compared to 42% in 2016. The increase as a percent of revenues reflects hiring of services personnel to support the growth in services revenue.

Global Segment

- Revenues increased 3% to $567 million in 2017, from $551 million in 2016. The growth in revenues includes a $13 million increase in support and maintenance revenue. Refer to Note (2) of the notes to consolidated financial statements for further information regarding revenues disaggregated by our business models.
- Costs of revenue as a percent of revenues were 17% in 2017, compared to 19% in 2016. The lower costs of revenue as a percent of revenues was primarily driven by a lower mix of technology resale, which carries a higher cost of revenue.
- Operating expenses as a percent of revenues were 47% in 2017, compared to 45% in 2016. The increase as a percent of revenues is primarily due to an increase in non-personnel expenses.

Other, net

These expenses decreased 2% from 2016 to 2017. The decrease was primarily due to 2016 containing $36 million of expenses associated with a voluntary separation plan. Refer to Note (1) of the notes to consolidated financial statements for further detail regarding our 2016 voluntary separation plan.

33

Table of Contents

Liquidity and Capital Resources

Our liquidity is influenced by many factors, including the amount and timing of our revenues, our cash collections from our clients and the amount we invest in software development, acquisitions, capital expenditures, and in recent years, our share repurchase programs.

Our principal sources of liquidity are our cash, cash equivalents, which primarily consist of money market funds, commercial paper and time deposits with original maturities of less than 90 days, and short-term investments. At the end of 2018, we had cash and cash equivalents of $374 million and short-term investments of $401 million, as compared to cash and cash equivalents of $371 million and short-term investments of $435 million at the end of 2017.

We maintain a $100 million multi-year revolving credit facility, which expires in October 2020. The facility provides an unsecured revolving line of credit for working capital purposes, along with a letter of credit facility. We have the ability to increase the maximum capacity to $200 million at any time during the facility's term, subject to lender participation. As of the end of 2018, we had no outstanding borrowings under this facility; however, we had $30 million of outstanding letters of credit, which reduced our available borrowing capacity to $70 million. Refer to Note (9) of the notes to consolidated financial statements for additional information regarding our credit facility.

We believe that our present cash position, together with cash generated from operations, short-term investments and, if necessary, our available line of credit, will be sufficient to meet anticipated cash requirements during 2019.

The following table summarizes our cash flows in 2018, 2017 and 2016:

	For the Years Ended		
(In thousands)	2018	2017	2016
Cash flows from operating activities	$1,454,009	$1,307,675	$1,245,637
Cash flows from investing activities	(828,937)	(1,005,851)	(789,774)
Cash flows from financing activities	(609,787)	(110,984)	(676,677)
Effect of exchange rate changes on cash	(12,082)	9,222	(10,447)
Total change in cash and cash equivalents	3,203	200,062	(231,261)
Cash and cash equivalents at beginning of period	370,923	170,861	402,122
Cash and cash equivalents at end of period	$374,126	$370,923	$170,861
Free cash flow (non-GAAP)	$733,388	$671,444	$492,514

Cash from Operating Activities

	For the Years Ended		
(In thousands)	2018	2017	2016
Cash collections from clients	$5,486,654	$5,444,531	$5,184,252
Cash paid to employees and suppliers and other	(4,032,498)	(3,932,398)	(3,665,592)
Cash paid for interest	(15,707)	(17,914)	(18,484)
Cash paid for taxes, net of refunds	15,560	(186,544)	(254,539)
Total cash from operations	$1,454,009	$1,307,675	$1,245,637

Cash flow from operations increased $146 million in 2018 compared to 2017, due primarily to net refunds of taxes. Cash flow from operations increased $62 million in 2017 compared to 2016, due primarily to an increase in cash impacting earnings, partially offset by an increase in cash used to fund working capital requirements. During 2018, 2017 and 2016, we received total client cash collections of $5.49 billion, $5.44 billion and $5.18 billion, respectively. Days sales outstanding was 79 days in the fourth quarter of 2018, compared to 82 days for the 2018 third quarter and 72 days for the 2017 fourth quarter. Revenues provided under support and maintenance agreements represent

recurring cash flows. We expect these revenues to continue to grow as the base of installed systems grows.

Table of Contents

Cash from Investing Activities

(In thousands)	For the Years Ended 2018	2017	2016
Capital purchases	$(446,928)	$(362,083)	$(459,427)
Capitalized software development costs	(273,693)	(274,148)	(293,696)
Purchases of investments, net of sales and maturities	(71,497)	(339,974)	(18,179)
Purchase of other intangibles	(36,819)	(29,646)	(18,472)
Total cash flows from investing activities	$(828,937)	$(1,005,851)	$(789,774)

Cash flows from investing activities consist primarily of capital spending and short-term investment activities. Our capital spending in 2018 was driven by capitalized equipment purchases primarily to support growth in our managed services business, investments in a cloud infrastructure to support cloud-based solutions, building and improvement purchases to support our facilities requirements and capitalized spending to support our ongoing software development initiatives. Capital purchases in 2018 were higher than 2017 levels, primarily driven by an increase in spending to support our facilities requirements, including commencement of construction on the next two phases of our Innovations Campus (office space development located in Kansas City, Missouri); along with increased capital purchases to support the growth in our managed services business. Total capital spending is expected to increase more than $75 million in 2019, primarily driven by spending to support our facilities requirements, including the continued construction of our Innovations Campus.

Short-term investment activity historically consists of the investment of cash generated by our business in excess of what is necessary to fund operations. Our 2016 and 2018 activity is impacted by higher levels of excess cash being used to repurchase shares of our common stock, as discussed further below. Additionally, on July 27, 2018 we acquired a minority interest in Essence Group Holdings Corporation for cash consideration of $266 million. Refer to Note (4) of the notes to consolidated financial statements for further information regarding this investment. We expect to continue seeking and completing strategic acquisitions or investments that are complementary to our business.

Cash from Financing Activities

(In thousands)	For the Years Ended 2018	2017	2016
Repayment of long-term debt	$(75,000)	$—	$—
Cash from option exercises (net of taxes paid in connection with shares surrendered by associates)	81,476	65,121	25,672
Treasury stock purchases	(623,127)	(173,434)	(700,275)
Contingent consideration payments for acquisition of businesses	(1,691)	(2,671)	(2,074)
Other	8,555	—	—
Total cash flows from financing activities	$(609,787)	$(110,984)	$(676,677)

In March 2018, we repaid our $75 million floating rate Series 2015-C Notes due February 15, 2022. Refer to Note (9) of the notes to consolidated financial statements for further information regarding our outstanding indebtedness.

Cash inflows from stock option exercises are dependent on a number of factors, including the price of our common stock, grant activity under our stock option and equity plans, and overall market volatility. We expect net cash inflows from stock option exercises to continue in 2019 based on the number of exercisable options at the end of 2018 and our current stock price. Refer to Note (14) of the notes to consolidated financial statements for additional information regarding our stock option and equity plans.

During 2018, 2017 and 2016, we repurchased 11.2 million shares of our common stock for total consideration of $644 million, 2.7 million shares of our common stock for total consideration of $173 million, and 13.7 million shares of our common stock for total consideration of $700 million, respectively. At the end of 2018, $283 million remains available for repurchase under our current repurchase program. We may continue to repurchase shares under this

program in 2019, which will be dependent on a number of factors, including the price of our common stock. Although we may continue to repurchase shares, there is no assurance that we will repurchase up to the full amount remaining under the program. Refer to Note (14) of the notes to consolidated financial statements for further information regarding our share repurchase program.

Table of Contents

Subject to declaration by the Board of Directors, the Company plans to initiate a quarterly cash dividend of $0.15 per share, with the first payment expected in the third quarter of 2019. Future dividends will be subject to the determination, declaration and discretion of the Board of Directors and compliance with our covenants under our credit facility. The Company anticipates that the cash used for future dividends and share repurchases will come primarily from cash from operations.

Free Cash Flow (Non-GAAP)

	For the Years Ended		
(In thousands)	2018	2017	2016
Cash flows from operating activities (GAAP)	$1,454,009	$1,307,675	$1,245,637
Capital purchases	(446,928)	(362,083)	(459,427)
Capitalized software development costs	(273,693)	(274,148)	(293,696)
Free cash flow (non-GAAP)	$733,388	$671,444	$492,514

Free cash flow increased $62 million in 2018, compared to 2017. This increase was primarily due to an increase in cash from operations, partially offset by increased capital purchases. Free cash flow increased $179 million in 2017, compared to 2016. This increase was primarily due to an increase in cash from operations, along with reduced capital purchases.

Free cash flow is a non-GAAP financial measure used by management along with GAAP results to analyze our earnings quality and overall cash generation of the business. We define free cash flow as cash flows from operating activities reduced by capital purchases and capitalized software development costs. The table above sets forth a reconciliation of free cash flow to cash flows from operating activities, which we believe is the GAAP financial measure most directly comparable to free cash flow. The presentation of free cash flow is not meant to be considered in isolation, nor as a substitute for, or superior to, GAAP results, and investors should be aware that non-GAAP measures have inherent limitations and should be read only in conjunction with our consolidated financial statements prepared in accordance with GAAP. Free cash flow may also be different from similar non-GAAP financial measures used by other companies and may not be comparable to similarly titled captions of other companies due to potential inconsistencies in the method of calculation. We believe free cash flow is important to enable investors to better understand and evaluate our ongoing operating results and allows for greater transparency in the review and understanding of our overall financial, operational and economic performance, because free cash flow takes into account certain capital expenditures necessary to operate our business.

Table of Contents

Contractual Obligations, Commitments and Off Balance Sheet Arrangements

The following table represents a summary of our contractual obligations and commercial commitments at the end of 2018, except short-term purchase order commitments arising in the ordinary course of business.

	Payments Due by Period						
(In thousands)	2019	2020	2021	2022	2023	2024 and thereafter	Total
Balance sheet obligations[(a)]:							
Long-term debt obligations	$—	$2,500	$—	$226,100	$1,700	$208,862	$439,162
Interest on long-term debt obligations	14,315	14,315	14,315	10,738	7,160	10,740	71,583
Capital lease obligations	4,914	—	—	—	—	—	4,914
Interest on capital lease obligations	143	—	—	—	—	—	143
Other obligations:							
Operating lease obligations	29,739	27,669	22,904	17,240	10,166	17,743	125,461
Purchase obligations	138,851	102,773	24,746	15,517	15,486	26,924	324,297
Total	$187,962	$147,257	$61,965	$269,595	$34,512	$264,269	$965,560

(a) At the end of 2018, liabilities for unrecognized tax benefits were $19 million.

We have no off balance sheet arrangements as defined in Regulation S-K. The effects of inflation on our business during 2018, 2017 and 2016 were not significant.

Recent Accounting Pronouncements

Refer to Note (1) of the notes to consolidated financial statements for information regarding recently issued accounting pronouncements.

Critical Accounting Policies

We believe that there are several accounting policies that are critical to understanding our historical and future performance, as these policies affect the reported amount of revenue and other significant areas involving our judgments and estimates. These significant accounting policies relate to revenue recognition, software development, and income taxes. These accounting policies and our procedures related to these accounting policies are described in detail below and under specific areas within this MD&A. In addition, Note (1), Note (2), and Note (12) of the notes to consolidated financial statements expands upon discussion of our accounting policies for these areas.

Revenue Recognition

In the first quarter of 2018, we adopted Accounting Standards Update ("ASU") 2014-09, Revenue from Contracts with Customers (Topic 606). ASU 2014-09, as amended, replaced most existing revenue recognition guidance in U.S. GAAP. This new guidance requires a significant amount of judgments and estimates in implementing its five-step process to be followed in determining the amount and timing of revenue recognition and related disclosures. Refer to Note (2) of the notes to consolidated financial statements for further discussion regarding significant judgments involved in our application of ASU 2014-09.

Software Development Costs

Costs incurred internally in creating computer software solutions and enhancements to those solutions are expensed until completion of a detailed program design, which is when we determine that technological feasibility has been

established. Thereafter, all software development costs are capitalized until such time as the software solutions and enhancements are available for general release, and the capitalized costs subsequently are reported at the lower of amortized cost or net realizable value.

Net realizable value is computed as the estimated gross future revenues from each software solution less the amount of estimated future costs of completing and disposing of that product. Because the development of projected net future revenues related to our software solutions used in our net realizable value computation is based on estimates, a significant reduction

Table of Contents

in our future revenues could impact the recovery of our capitalized software development costs. If we missed our estimates of net future revenues by 10%, the amount of our capitalized software development costs would not be impaired.

Capitalized costs are amortized based on current and expected net future revenue for each software solution with minimum annual amortization equal to the straight-line amortization over the estimated economic life of the software solution. We are amortizing capitalized costs over five years. The five-year period over which capitalized software development costs are amortized is an estimate based upon our forecast of a reasonable useful life for the capitalized costs. Historically, use of our software programs by our clients has exceeded five years and is capable of being used a decade or more.

We expect that major software information systems companies, large information technology consulting service providers and systems integrators and others specializing in the health care industry may offer competitive products or services. The pace of change in the HCIT market is rapid and there are frequent new product introductions, product enhancements and evolving industry standards and requirements. As a result, the capitalized software solutions may become less valuable or obsolete and could be subject to impairment.

Income Taxes

We make a number of assumptions and estimates in determining the appropriate amount of expense to record for income taxes. These assumptions and estimates consider the taxing jurisdictions in which we operate as well as current tax regulations. Accruals are established for estimates of tax effects for certain transactions, business structures and future projected profitability of our businesses based on our interpretation of existing facts and circumstances. If these assumptions and estimates were to change as a result of new evidence or changes in circumstances, the change in estimate could result in a material adjustment to the consolidated financial statements.

We have discussed the development and selection of these critical accounting estimates with the Audit Committee of our Board of Directors and the Audit Committee has reviewed our disclosure contained herein.

Item 7A. Quantitative and Qualitative Disclosures about Market Risk.

We have global operations, and as a result, we are exposed to market risk related to foreign currency exchange rate fluctuations. Foreign currency fluctuations through December 29, 2018 have not had a material impact on our financial position or operating results. We currently do not use currency hedging instruments, though we actively monitor our exposure to foreign currency fluctuations and may use hedging transactions in the future if management deems it appropriate. We believe most of our global operations are naturally hedged for foreign currency risk as our foreign subsidiaries invoice their clients and satisfy their obligations primarily in their local currencies. There can be no guarantee that the impact of foreign currency fluctuations in the future will not have a material impact on our financial position or operating results.

Item 8. Financial Statements and Supplementary Data.

The Financial Statements and notes to consolidated financial statements required by this Item are submitted as a separate part of this report. See Note (18) to the consolidated financial statements for supplementary financial information.

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

N/A

Item 9A. Controls and Procedures.

a) Evaluation of Disclosure Controls and Procedures.

Our management is responsible for maintaining disclosure controls and procedures (as defined in the Exchange Act Rules 13a-15(e) and 15d-15(e)). We carried out an evaluation, under the supervision and with the participation of our management, including our Chief Executive Officer ("CEO") and Chief Financial Officer ("CFO"), of the effectiveness of our disclosure controls and procedures as of the end of the period covered by this Annual Report (the "Evaluation Date"). Based upon that evaluation, our CEO and CFO have concluded that, as of the Evaluation Date, our disclosure controls and procedures were designed and were effective to provide reasonable assurance that the information required to be disclosed by us in our reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time period specified in SEC rules and forms and is

Table of Contents

accumulated and communicated to our management, including our CEO and CFO, to allow timely decisions regarding required disclosure.

b) Management's Report on Internal Control over Financial Reporting.

Our management is responsible for establishing and maintaining adequate internal control over financial reporting (as defined in Rule 13a-15(f) under the Exchange Act). Our management assessed the effectiveness of our internal control over financial reporting as of December 29, 2018. In making this assessment, our management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO") in its Internal Control-Integrated Framework (2013). Based on this assessment, our management has concluded that, as of December 29, 2018, our internal control over financial reporting was effective based on these criteria. Our independent registered public accounting firm that audited the consolidated financial statements included in this annual report has issued an audit report on the effectiveness of our internal control over financial reporting, which is included herein under "Report of Independent Registered Public Accounting Firm".

c) Changes in Internal Control over Financial Reporting.

During the fourth fiscal quarter ended December 29, 2018, progress continued on a plan that calls for modifications and enhancements to our internal controls over financial reporting in relation to our upcoming adoption of the new lease standard effective in the first quarter of 2019. Such plan resulted in changes to certain processes and procedures during the quarter. Specifically, we implemented/modified internal controls to address:

- Monitoring of the adoption process; and
- The gathering of information and evaluation of analysis used in the development of disclosures required prior to the new standard's adoption.

As we continue the implementation process, we expect that there will be additional changes in internal controls over financial reporting.

Except as disclosed above, there were no other changes in our internal controls over financial reporting during the fiscal quarter ended December 29, 2018, that have materially affected, or are reasonably likely to materially affect, our internal controls over financial reporting.

d) Limitations on Controls.

Our management, including our CEO and CFO, have concluded that our disclosure controls and procedures and internal control over financial reporting are designed to provide reasonable assurance of achieving their objectives and are effective at that reasonable assurance level. However, our management can provide no assurance that our disclosure controls and procedures or our internal control over financial reporting can prevent all errors and all fraud under all circumstances. A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Further, the design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, within the Company have been or will be detected. The design of any system of controls also is based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions; over time, controls may become inadequate because of changes in conditions, or the degree of compliance with policies or procedures may deteriorate. Because of the inherent limitations in a cost-effective control system, misstatements due to error or fraud may occur and not be detected.

Item 9B. Other Information.

N/A

Table of Contents

PART III.

Item 10. Directors, Executive Officers and Corporate Governance.

The information under "Information Concerning Directors," "Meetings of the Board and Committees," "Section 16(a) Beneficial Ownership Reporting Compliance," "Corporate Governance: Code of Business Conduct and Ethics," "Consideration of Director Nominees," "Committees of the Board: Audit Committee" and "Certain Transactions" as it relates to family relationships as set forth in the Company's definitive proxy statement related to its 2019 annual meeting of stockholders (the "Proxy Statement"), which will be filed with the SEC not later than 120 days after the end of the Company's fiscal year pursuant to Regulation 14A, is incorporated herein by reference.

There have been no material changes to the procedures by which security holders may recommend nominees to our Board of Directors since our last disclosure thereof in our 2018 proxy statement.

The information required by this Item 10 regarding our Executive Officers is set forth under the caption "Executive Officers of the Registrant" in Part I above.

Item 11. Executive Compensation.

The information under "Committees of the Board: Compensation Committee," "Director Compensation," "2018 Director Compensation Table," "Compensation Committee Report," "Compensation Discussion and Analysis," "Summary Compensation Table," "2018 Grants of Plan-Based Awards," "Outstanding Equity Awards at 2018 Fiscal Year-End," "2018 Option Exercises and Stock Vested," "Potential Payments Under Termination or Change in Control," "Pay Ratio" and "Compensation Committee Interlocks and Insider Participation" set forth in the Proxy Statement, which will be filed with the SEC not later than 120 days after the end of the Company's fiscal year pursuant to Regulation 14A, is incorporated herein by reference.

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

The following table provides information about our common stock that may be issued under our equity compensation plans as of December 29, 2018:

(In thousands, except per share data) Plan category	Securities to be issued upon exercise of outstanding options and rights [1]	Weighted average exercise price per share [2]	Securities available for future issuance[3]
Equity compensation plans approved by security holders [4]	22,674	$ 52.31	7,400
Equity compensation plans not approved by security holders	—	—	—
Total	22,674		7,400

(1) Includes grants of stock options, time-based and performance-based restricted stock and restricted stock units.

(2) Includes weighted-average exercise price of outstanding stock options only.

(3) Excludes securities to be issued upon exercise of outstanding options and rights.

(4) Includes the Stock Option Plan D, Stock Option Plan E, 2001 Long-Term Incentive Plan F, 2004 Long-Term Incentive Plan G and 2011 Omnibus Equity Incentive Plan. All new grants are made under the 2011 Omnibus Equity Incentive Plan, as the previous plans are no longer active.

The information under "Security Ownership of Certain Beneficial Owners and Management" set forth in the Proxy Statement, which will be filed with the SEC not later than 120 days after the end of the Company's fiscal year pursuant to Regulation 14A, is incorporated herein by reference.

Table of Contents

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

The information under "Certain Transactions" and "Meetings of the Board and Committees" set forth in the Proxy Statement, which will be filed with the SEC not later than 120 days after the end of the Company's fiscal year pursuant to Regulation 14A, is incorporated herein by reference.

Item 14. Principal Accountant Fees and Services.

The information under "Relationship with Independent Registered Public Accounting Firm" set forth in the Proxy Statement, which will be filed with the SEC not later than 120 days after the end of the Company's fiscal year pursuant to Regulation 14A, is incorporated herein by reference.

PART IV.

Item 15. Exhibits, Financial Statement Schedules.

a) Financial Statements and Exhibits

(1) Consolidated Financial Statements:

Reports of Independent Registered Public Accounting Firm

Consolidated Balance Sheets - As of December 29, 2018 and December 30, 2017

Consolidated Statements of Operations -Years Ended December 29, 2018, December 30, 2017 and December 31, 2016

Consolidated Statements of Comprehensive Income - Years Ended December 29, 2018, December 30, 2017 and December 31, 2016

Consolidated Statements of Cash Flows - Years Ended December 29, 2018, December 30, 2017 and December 31, 2016

Consolidated Statements of Changes in Shareholders' Equity - Years Ended December 29, 2018, December 30, 2017 and December 31, 2016

Notes to Consolidated Financial Statements

(2) Financial Statement Schedules

All schedules are omitted because they are not required or the required information is shown in the financial statements or notes thereto.

b) Exhibits

Table of Contents

Exhibit Number	Exhibit Description	Incorporated by Reference			Filed Herewith
		Form	Exhibit(s)	Filing Date SEC File No./Film No.	
3.1	Third Restated Certificate of Incorporation of Cerner Corporation	10-K	3(a)	2/11/2015	
3.2	Amended & Restated Bylaws of Cerner Corporation (effective March 2, 2018)	8-K	3.1	3/6/2018	
4	Specimen stock certificate	10-K	4(a)	2/28/2007 000-15386/07658265	
10.1*	2006 Form of Indemnification Agreement for use between the Registrant and its Directors	10-K	10(a)	2/28/2007 000-15386/07658265	
10.2*	2010 Form of Indemnification Agreement for use between the Registrant and its Directors and Section 16 Officers	8-K	99.1	6/3/2010 000-15386/10875957	
10.3*	Executive Employment Agreement between Cerner Corporation and Brent Shafer	10-K	10.3	2/12/2018	
10.4*	Relocation Agreement between Cerner Corporation and Brent Shafer	10-Q	10.2	5/3/2018	
10.5*	Amended & Restated Aircraft Time Sharing Agreement between Cerner Corporation and Brent Shafer	10-Q	10.1	10/26/2018	
10.6*	Amended & Restated Executive Employment Agreement between Cerner Corporation and Clifford W. Illig	8-K/A	10.1	8/17/2017	
10.7*	Amended Employment Agreement between Cerner Corporation and Zane M. Burke	8-K	10.1	9/11/2017	
10.8*	Separation Agreement between Cerner Corporation and Zane M. Burke	10-Q	10.2	10/26/2018	
10.9*	Amended Employment Agreement between Cerner Corporation and Michael R. Nill	8-K	10.2	9/11/2017	
10.10*	Amended Employment Agreement between Cerner Corporation and Jeffrey A. Townsend	8-K	10.3	9/11/2017	
10.11*		10-Q	10.10	10/27/2017	

	Relocation Agreement between Cerner Corporation and Jeffrey A. Townsend				
10.12*	Amended Employment Agreement between Cerner Corporation and Marc G. Naughton	8-K	10.4	9/11/2017	
10.13*	Amended Employment Agreement between Cerner Corporation and John Peterzalek				X
10.14*	Amended Stock Option Plan D of Registrant dated December 8, 2000	10-K	10(f)	3/30/2001 000-15386/1586224	
10.15*	Amended Stock Option Plan E of Registrant dated December 8, 2000	10-K	10(g)	3/30/2001 000-15386/1586224	
10.16*	Cerner Corporation Associate Equity Participation Program Non-Qualified Stock Option Agreement				X
10.17*	Cerner Corporation 2001 Long-Term Incentive Plan F	DEF 14A	Annex I	4/16/2001 000-15386/1603080	

Table of Contents

10.18*	Cerner Corporation 2001 Long-Term Incentive Plan F Nonqualified Stock Option Agreement	10-K	10(v)	3/17/2005 000-15386/05688830
10.19*	Cerner Corporation 2001 Long-Term Incentive Plan F Nonqualified Stock Option Grant Certificate	10-Q	10(a)	11/10/2005 000-15386/051193974
10.20*	Cerner Corporation 2004 Long-Term Incentive Plan G (as amended on December 3, 2007)	10-K	10(g)	2/27/2008 000-15386/08646565
10.21*	Cerner Corporation 2004 Long-Term Incentive Plan G Nonqualified Stock Option Grant Certificate	10-K	10(q)	2/27/2008 000-15386/08646565
10.22*	Cerner Corporation 2011 Omnibus Equity Incentive Plan (As Amended and Restated May 22, 2015)	8-K	10.2	5/27/2015
10.23*	Cerner Corporation 2011 Omnibus Equity Incentive Plan - Director Restricted Stock Agreement	10-Q	10.2	5/6/2016
10.24*	Cerner Corporation 2011 Omnibus Equity Incentive Plan - Performance Based Restricted Stock Agreement	10-K	10(u)	2/8/2013 000-15386/13586825
10.25*	Cerner Corporation 2011 Omnibus Equity Incentive Plan - Performance Based Restricted Stock Agreement	10-Q	10.3	5/6/2016
10.26*	Cerner Corporation 2011 Omnibus Equity Incentive Plan - Performance Based Restricted Stock Agreement	10-Q	10.4	10/27/2017
10.27*	Cerner Corporation 2011 Omnibus Equity Incentive Plan - Time Based Restricted Stock Agreement	10-Q	10.4	5/6/2016
10.28*	Cerner Corporation 2011 Omnibus Equity Incentive Plan - Time Based Restricted Stock Agreement	10-Q	10.3	10/27/2017
10.29*	Cerner Corporation 2011 Omnibus Equity Incentive Plan-Non-Qualified Stock Option Grant Certificate	10-K	10(v)	2/8/2013 000-15386/13586825
10.30*	Cerner Corporation 2011 Omnibus Equity Incentive Plan-Non-qualified Stock Option Grant Certificate	10-Q	10.5	5/6/2016
10.31*	Cerner Corporation 2011 Omnibus Equity Incentive Plan - Non-Qualified Stock Option Grant Certificate	10-Q	10.2	8/3/2016
10.32*	Cerner Corporation 2011 Omnibus Equity Incentive Plan - Non-Qualified Stock Option Grant Certificate	10-Q	10.2	10/27/2017
10.33*	Cerner Corporation 2011 Omnibus Equity Incentive Plan - Time-Based Restricted Stock Unit Agreement	10-Q	10.2	4/28/2017
10.34*		10-Q	10.5	10/27/2017

	Cerner Corporation 2011 Omnibus Equity Incentive Plan - Time-Based Restricted Stock Unit Agreement				
10.35*	Cerner Corporation 2011 Omnibus Equity Incentive Plan - Performance-Based Restricted Stock Unit Agreement	10-Q	10.3	4/28/2017	
10.36*	Cerner Corporation 2011 Omnibus Equity Incentive Plan - Performance-Based Restricted Stock Unit Agreement	10-Q	10.6	10/27/2017	
10.37*	Cerner Corporation 2001 Associate Stock Purchase Plan as Amended and Restated January 1, 2019				X
10.38*	Cerner Corporation 2018 Performance Compensation Plan (effective January 1, 2018)	8-K	10.1	3/6/2018	
10.39*	2018 Executive Performance Agreement - Section 16 Officer	8-K	10.2	3/6/2018	
10.40	Interparty Agreement, dated January 19, 2010, among Kansas Unified Development, LLC, OnGoal, LLC and Cerner Corporation	8-K	99.1	1/25/2010 000-15386/10543089	

Table of Contents

10.41	Master Sale and Purchase Agreement between Siemens AG and Cerner Corporation dated August 5, 2014	10-Q	2.1	10/24/2014 000-15386/141172425	
10.42	Amendment Agreement to the Master Sale and Purchase Agreement between Siemens AG and Cerner Corporation dated February 2, 2015	8-K	10.1	2/2/2015	
10.43	Master Note Purchase Agreement between Cerner Corporation and the Purchasers listed in Schedule A thereto dated December 4, 2014	8-K	10.1	12/5/2014 000-15386/141269611	
10.44	Third Amended and Restated Credit Agreement, dated October 30, 2015, among Cerner Corporation and U.S. Bank National Association, Bank of America, N.A. and Commerce Bank, N.A.	8-K	10.1	11/3/2015	
21	Subsidiaries of Registrant				X
23	Consent of Independent Registered Public Accounting Firm				X
31.1	Certification of D. Brent Shafer pursuant to Section 302 of Sarbanes-Oxley Act of 2002				X
31.2	Certification of Marc G. Naughton pursuant to Section 302 of Sarbanes-Oxley Act of 2002				X
32.1	Certification of D. Brent Shafer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of Sarbanes-Oxley Act of 2002				X
32.2	Certification of Marc G. Naughton pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of Sarbanes-Oxley Act of 2002				X
101.INS	XBRL Instance Document				X
101.SCH	XBRL Taxonomy Extension Schema Document				X
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document				X
101.LAB	XBRL Taxonomy Extension Labels Linkbase Document				X
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document				X
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document				X

* Indicates a management contract or compensatory plan or arrangement required to be identified by Part IV, Item 15(a)(3).

PLEASE NOTE: Pursuant to the rules and regulations of the Securities and Exchange Commission, we have filed or incorporated by reference the agreements referenced above as exhibits to this annual report on Form 10-K. The agreements have been filed to provide investors with information regarding their respective terms. The agreements are not intended to provide any other factual information about the Company or its business or operations. In particular,

the assertions embodied in any representations, warranties and covenants contained in the agreements may be subject to qualifications with respect to knowledge and materiality different from those applicable to investors and may be qualified by information in confidential disclosure schedules not included with the exhibits. These disclosure schedules may contain information that modifies, qualifies and creates exceptions to the representations, warranties and covenants set forth in the agreements. Moreover, certain representations, warranties and covenants in the agreements may have been used for the purpose of allocating risk between the parties, rather than establishing matters as facts. In addition, information concerning the subject matter of the representations, warranties and covenants may have changed after the date of the respective agreement, which subsequent information may or may not be fully reflected in the Company's public disclosures. Accordingly, investors

Table of Contents

should not rely on the representations, warranties and covenants in the agreements as characterizations of the actual state of facts about the Company or its business or operations on the date hereof.

Item 16. Form 10-K Summary.

None.

Table of Contents

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.

CERNER CORPORATION

Date: February 8, 2019 By: /s/ Brent Shafer
D. Brent Shafer
Chairman of the Board and
Chief Executive Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated:

Signature and Title	Date
/s/ Brent Shafer Brent Shafer, Chairman of the Board and Chief Executive Officer (Principal Executive Officer)	February 8, 2019
/s/ Marc G. Naughton Marc G. Naughton, Executive Vice President and Chief Financial Officer (Principal Financial Officer)	February 8, 2019
/s/ Michael R. Battaglioli Michael R. Battaglioli, Vice President and Chief Accounting Officer (Principal Accounting Officer)	February 8, 2019
/s/ Gerald E. Bisbee, Jr. Gerald E. Bisbee, Jr., Ph.D., Director	February 8, 2019
/s/ Denis A. Cortese Denis A. Cortese, M.D., Director	February 8, 2019
/s/ Mitchell E. Daniels Mitchell E. Daniels, Director	February 8, 2019
/s/ Linda M. Dillman Linda M. Dillman, Director	February 8, 2019
/s/ Julie L. Gerberding Julie L. Gerberding, M.D., Director	February 8, 2019
/s/ William D. Zollars William D. Zollars, Director	February 8, 2019

Table of Contents

Report of Independent Registered Public Accounting Firm

To the Shareholders and Board of Directors
Cerner Corporation:

Opinion on Internal Control Over Financial Reporting
We have audited Cerner Corporation and subsidiaries' (the "Company") internal control over financial reporting as of December 29, 2018, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 29, 2018, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission.
We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) ("PCAOB"), the consolidated balance sheets of the Company as of December 29, 2018 and December 30, 2017, the related consolidated statements of operations, comprehensive income, cash flows, and changes in shareholders' equity for each of the years in the three year period ended December 29, 2018, and the related notes (collectively, the consolidated financial statements), and our report dated February 8, 2019 expressed an unqualified opinion on those consolidated financial statements.
Basis for Opinion
The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.
We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit 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 audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.
Definition and Limitations of Internal Control Over Financial Reporting
A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company’s assets that could have a material effect on the financial statements.
Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/KPMG LLP
Kansas City, Missouri
February 8, 2019

47

Table of Contents

Report of Independent Registered Public Accounting Firm

To the Shareholders and Board of Directors
Cerner Corporation:

Opinion on the Consolidated Financial Statements
We have audited the accompanying consolidated balance sheets of Cerner Corporation and subsidiaries (the "Company") as of December 29, 2018 and December 30, 2017, the related consolidated statements of operations, comprehensive income, cash flows, and changes in shareholders' equity for each of the years in the three year period ended December 29, 2018, and the related notes (collectively, the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 29, 2018 and December 30, 2017, and the results of its operations and its cash flows for each of the years in the three year period ended December 29, 2018, in conformity with U.S. generally accepted accounting principles.
We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) ("PCAOB"), the Company's internal control over financial reporting as of December 29, 2018, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission, and our report dated February 8, 2019 expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting.
Changes in Accounting Principle
As discussed in note 2 to the consolidated financial statements, the Company changed its method of accounting for revenue transactions with customers in 2018 due to the adoption of Accounting Standards Update 2014-09, "Revenue from Contracts with Customers (Topic 606)". The Company also changed its method of accounting for certain share-based payment award transactions in 2017 due to the adoption of Accounting Standards Update 2016-09 "Compensation - Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting".
Basis for Opinion
These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.
We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/KPMG LLP

We have served as the Company's auditor since 1983.

Kansas City, Missouri
February 8, 2019

Table of Contents

CERNER CORPORATION AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
As of December 29, 2018 and December 30, 2017

(In thousands, except share data)	2018	2017
Assets		
Current assets:		
Cash and cash equivalents	$374,126	$370,923
Short-term investments	401,285	434,844
Receivables, net	1,183,494	1,042,781
Inventory	25,029	15,749
Prepaid expenses and other	334,870	515,930
Total current assets	2,318,804	2,380,227
Property and equipment, net	1,743,575	1,603,319
Software development costs, net	894,512	