



2020

ANNUAL REPORT





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Board of Directors



Brent Shafer

Chairman of the Board and Chief Executive Officer,
Cerner Corporation



Gerald E. Bisbee Jr., Ph.D., M.B.A.

Co-founder and Chief Executive Officer,
Think Medium



Mitchell E. Daniels Jr., J.D.

President,
Purdue University



Julie L. Gerberding, M.D., M.P.H.

Executive Vice President and Chief Patient Officer, Strategic
Communications, Global Public Policy and Population Health,
Merck & Co., Inc.



**Major General Elder Granger, M.D.,
USA Army (Retired)**

President and Chief Executive Officer,
The 5Ps, LLC



John J. Greisch, M.B.A.

Former President and Chief Executive Officer,
Hill-Rom Holdings, Inc.



Melinda J. Mount, M.B.A.

Former President,
AliphCom, Inc. (d/b/a Jawbone)



George A. Riedel, M.B.A.

Former Chairman and Chief Executive Officer,
Cloudmark, Inc. and
Sr. Lecturer at Harvard Business School



R. Halsey Wise, M.B.A.

Founder and Chief Executive,
Lime Barrell Advisors, LLC



William D. Zollars

Lead Independent Director,
Cerner Corporation and
Former Chairman, Chief Executive Officer and President,
YRC Worldwide, Inc.

Leadership



Brent Shafer
Chairman of the Board and
Chief Executive Officer



Donald D. Trigg
President



Travis S. Dalton
Executive Vice President,
Chief Client & Services Officer and
President, Cerner Government Services



Daniel P. Devers
Executive Vice President,
Chief Legal Officer and
Secretary



Mark J. Erceg
Executive Vice President and
Chief Financial Officer



Jerome Labat
Executive Vice President and
Chief Technology Officer



Tracy L. Platt
Executive Vice President and
Chief Human Resources Officer



Kimberly H. Gerard
Senior Vice President and
Chief Transformation Officer



William E. Graff
Senior Vice President and
Chief Information Officer



Maria M. Houchins
Senior Vice President,
Business Processes and
Corporate Planning



Darrell E. Johnson
Senior Vice President and
Chief Marketing Officer



Eva L. Karp, D.H.A.
Senior Vice President,
Chief Clinical and Patient
Safety Officer



William B. Mintz
Senior Vice President and
Chief Strategy Officer



Rama V. Nadimpalli
Senior Vice President and GM,
Cerner India



Brenna M. Quinn
Senior Vice President,
Revenue Cycle

Cerner's long-term performance

This table provides a view of our growth over the last decade and since we first became a publicly traded company in 1986.

		Compound Annual Growth Rates				
		1986	2010	2020	Previous Decade 2010 - 2020	Since Going Public 1986 - 2020
Top Line	Bookings	\$18	\$1,995	\$5,585	11%	18%
	Revenue	\$17	\$1,850	\$5,506	12%	19%
	Domestic Revenue	\$17	\$1,562	\$4,880	12%	18%
	International Revenue	\$0.2	\$288	\$626	8%	27%
	Revenue Backlog	\$11	\$4,940	\$13,036	10%	23%
Bottom Line	Operating Earnings (GAAP)	\$3	\$359	\$915	10%	18%
	Operating Margin (GAAP)	14.8%	19.4%	16.6%		
	Net Earnings (GAAP)	\$2	\$237	\$780	13%	19%
	Diluted Earnings Per Share (GAAP)	\$0.01	\$0.69	\$2.52	14%	18%
	Adjusted Operating Earnings ¹	\$3	\$384	\$1,098	11%	19%
	Adjusted Operating Margin ¹	14.8%	20.8%	19.9%		
	Adjusted Net Earnings ¹	\$2	\$253	\$879	13%	20%
	Adjusted Diluted Earnings Per Share ¹	\$0.01	\$0.74	\$2.84	14%	18%
Balance Sheet	Total Assets	\$26	\$2,423	\$7,521	12%	18%
	Cash and Investments	\$8	\$836	\$1,568	6%	17%
	Days Sales Outstanding	161	87	76	-1%	-2%
	Total Debt	\$1	\$93	\$1,336	31%	24%
	Equity	\$16	\$1,905	\$4,483	9%	18%
Cash Flow	Operating Cash Flow	\$1	\$456	\$1,437	12%	24%
	Free Cash Flow ¹	(\$1)	\$273	\$857	12%	NM
Investment Growth	Capital Expenditures	\$1	\$102	\$284	11%	18%
	Research and Development	\$2	\$285	\$797	11%	19%
	Associate Headcount	149	8,242	26,379	12%	16%
Market Performance	Cerner Stock Price	\$0.24	\$23.68	\$78.48	13%	19%
	Market Capitalization	\$45	\$7,886	\$24,003	12%	20%
	NASDAQ Composite Index	\$349	\$2,653	\$12,888	17%	11%
	S&P 500 Index	\$242	\$1,258	\$3,756	12%	8%

Notes: Amounts are in millions except operating margin, adjusted operating margin, diluted earnings per share, adjusted diluted earnings per share, days sales outstanding, associate headcount, stock prices and index information.

NM = Not Meaningful

¹Adjusted operating earnings, adjusted operating margin, adjusted net earnings, adjusted diluted earnings per share, and free cash flow reflect adjustments compared to results reported on a Generally Accepted Accounting Principles (GAAP) basis. Non-GAAP results should not be substituted as a measure of our performance but instead should be used along with GAAP results as a supplemental measure of financial performance. These non-GAAP financial measures are used by management along with GAAP results to analyze our business, to make strategic decisions, to assess long-term trends on a comparable basis, and for management compensation purposes. Please see the appendix following "A letter to our shareholders, clients and associates" for a reconciliation of these items to GAAP results.

A letter to our shareholders, clients and associates

Honored to support healthcare systems and their important work

Rarely does a company's vision and mission come into focus as powerfully as Cerner's did in 2020. The overwhelming impact of the COVID-19 pandemic underscored the importance of a *seamless and connected world where everyone thrives*.

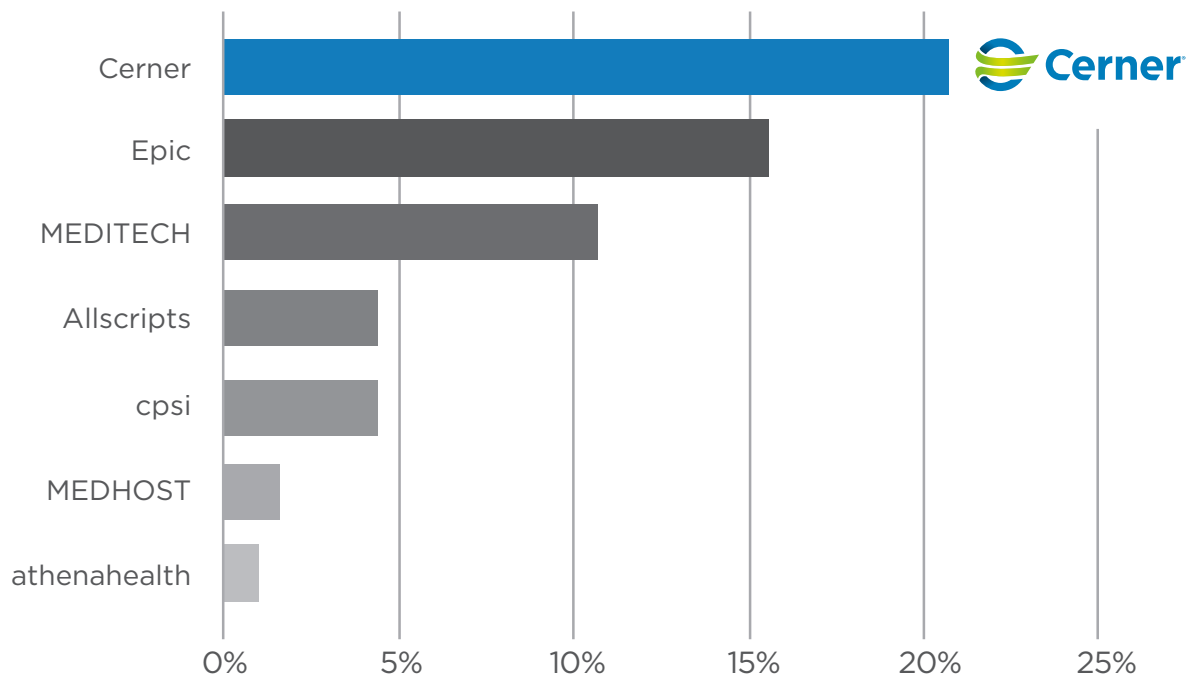
As the worldwide market share leader in acute electronic health record solutions, the past year was a reminder of the enormous responsibility Cerner and our associates have to improve access to and affordability of high-quality healthcare — for everyone.



Brent Shafer

Chairman of the Board and
Chief Executive Officer

Leading worldwide acute EHR market share



Market share data validated as of Dec. 31, 2019, by KLAS Research. Data sourced from the following reports: "Global (non-US) EMR Market Share 2020 | Regional Vendor Energy Rising" May 2020 (pgs. 100-101) and "US Hospital EMR Market Share 2020 | Shifting Perspectives Among Large and Small Hospitals" April 2020. (pg. 24)
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Market share reflects recent divestitures of Cerner assets to CompuGroup Medical SE in 2020.

We welcome this opportunity with a dual focus on delivering technology that makes providers more effective today, while pressing forward with urgency to build the tools and partnerships that will transform healthcare well into the future; thus, creating value for our shareholders.

Before sharing the financial highlights from this past year, let me express my extreme gratitude for the frontline caregivers and workers who sacrificed their health and safety to keep communities around the world safe. We are also proud of the way Cerner associates stepped up to put our clients first while adapting to a new remote work environment and caring for their loved ones.

Financial highlights

Despite several important business wins, which I will comment on shortly, revenue was down 3% in 2020 due to our efforts to rationalize our business portfolio. Specifically, as part of ongoing portfolio management, Cerner divested its commercial RevWorks business to R1 RCM Inc. and certain global businesses to CompuGroup Medical SE. These divestitures reflect Cerner's purposeful focus of resources on improving our core platforms.

In addition, we furthered our progress with transformation initiatives and reached approximately \$300 million of cumulative cost reductions over the past two years. The company's portfolio management and business simplification efforts are also reflected by product offerings being reduced from 25,000 individual features to about 400 products. Cerner's transformation allows us to increase efficiency and have a more rapid impact on healthcare technology. These actions, coupled with tight cost control, contributed to Cerner's full year adjusted operating marginⁱ expanding to 19.9%, a 140 basis point improvement over last year.

Full year free cash flowⁱ was a record-high \$857 million, driven by solid operating cash flow and cost and capital reductions since beginning transformation initiatives two years ago. Cerner plans to continue driving operating efficiencies and business simplification to meet operational improvement goals and deliver value to shareholders.

Cerner's adjusted net earningsⁱ increased to \$879 million while adjusted diluted EPSⁱ grew six percentage points to \$2.84. Through dividend and share buyback programs, the company returned nearly \$1 billion of capital to shareholders, and Cerner remains in a position to deploy capital in the coming year with a strong cash balance and ample debt capacity. Cerner expects solid top- and bottom-line growth in 2021 due to continued success with its multi-year transformation effort, provided pandemic response continues to show positive progress.

Additionally, in 2020, Cerner joined *Fortune* magazine's Fortune 500 list for the first time. The company has been on the cusp of this ranking for years, and I am confident the strategies we have in place will fuel positive revenue growth for years to come. Cerner's resilient business model and its success executing growth strategies and transformation efforts over the past 18 months helped to mitigate the unexpected impact of COVID-19. Paired with over 600 patents — 167 granted in the past year and a half — Cerner is positioned more than ever to define innovation in the industry and lead the transformation of healthcare.

Cerner's commitment to our clients

Cerner's commitment to our clients' success is evident in our relentless pursuit of innovation. Despite the havoc, the pandemic reinforced the importance of technology, its role in supporting healthcare's infrastructure and how we should re-imagine care delivery. COVID-19 showcased the importance of simplifying access, improving the interoperable exchange of critical health data and more quickly advancing clinical research.

Cerner has played a leading role in the digitization and automation of healthcare. Our unique and differentiated ability to ingest heterogeneous data, normalize and curate it, then return the data with analytical insights to providers is improving care delivery and the economics of healthcare. In the past year, Cerner has made strong investments and has established collaborations and partnerships that lay an even stronger foundation in data science for the next frontier of healthcare.

Cerner is a strategic partner for the future

As a testament to Cerner's technology, innovation and incredible commitment of our associates, many health systems, hospitals and clinics extended or expanded their relationships with Cerner. These clients clearly view Cerner as a long-term strategic partner to help them navigate healthcare.

To better coordinate single registration across its 28 hospitals and clinics in six states, Banner Health built upon its multi-year, long-standing strategic alignment by adding Cerner's revenue cycle management solution last year.

Intermountain Healthcare, one of Cerner's most closely aligned clients, also signed a multi-year expansion. Intermountain remains a model of care delivery and our collaboration with this widely recognized large, not-for-profit can be a template for health systems worldwide.

Also in 2020, Cerner's data rich *HealthIntent*[®] platform and health networks became a vital part of the health ecosystem. Through the company's health information exchange (HIE) capabilities, England's National Health Service's caregivers more than doubled the number of shared records accessed. Today, approximately 20 million people in England have the benefit of interoperable health data.

Overall, Cerner added 23 organizations (nearly a third of which are entirely new to Cerner) to its Health Network business to help organizations better understand and predict what will happen within a population, engage consumers and better manage healthcare outcomes.

COVID-19 brought considerable focus to the unique challenges rural populations face. Cerner's *CommunityWorks*SM business proved to be an affordable, cost-effective cloud-based model for many communities. In 2020, 25 new community, critical access and specialty hospitals added Cerner technology agreements.

For financial and clinical improvements to their health systems, I have repeatedly challenged our provider clients to "get current" on *Cerner*[®] software. I am pleased to report more than two-thirds of these hospitals, health systems and clinics have the most recent code installed, more than doubling over the past year. In addition to benefiting from Cerner's latest innovations, organizations on current code collectively save four million hours per year in the EHR.

Re-imagining the future of healthcare

In the earliest stages of the COVID-19 outbreak, Cerner transitioned all associates whose work permitted to a virtual environment. These actions have allowed for continued flexibility in supporting providers as they have adapted and responded to the virus.

For example, London's 4,000-bed Nightingale Hospital — created in a 100-acre convention center — required expanded use of the *Cerner* EHR to improve care coordination and increase efficiency. The Nightingale Hospital was quickly connected via Cerner's HIE to other London acute Trusts and local primary and community providers.

In Philadelphia, Einstein Healthcare used Cerner's AWS-powered data science tools, including *HealthDataLab*™, to contact more than 4,000 patients with underlying conditions at higher risk of contracting COVID-19. Over 3,000 booked telehealth appointments, filled prescriptions, or received specialist referrals as a result.

Using Cerner's *Command Center* dashboard, a vital tool during the pandemic, clients are able to access near real-time data on resource availability and critical patient needs across their health systems to support faster decision-making.

Cerner Learning Health Network™



33 states +
Washington, D.C.



56 health system
member organizations



991 settings
of care



22,000+
hospital beds



26,000+
affiliated physicians

The pre-pandemic launch of the *Cerner Learning Health Network*™, a pilot with Duke Clinical Research, provided a chance to evaluate the impact of real-world data to increase the safety, efficacy and efficiency of drug development. A nationwide network of diverse health systems, brought together by the *Cerner Learning Health Network*, uses de-identified patient data to advance clinical research and improve outcomes. While it showed early success with proven therapies for chronic cardiovascular disease, potentially the biggest healthcare crisis of our lifetime provided an ideal use case.

Researchers needed quick access to data — number of positive COVID-19 cases, mortality rates, treatment options, treatment effectiveness — from a diverse population to understand the disease and better inform clinical care. Leveraging Cerner's clinical scale and AWS's data science capabilities, the *Learning Health Network* helped fuel a dataset of COVID-19-positive patients comprised of nearly half a million records. In collaboration with AWS, Cerner offered this crucial resource free-of-charge. Approximately 40 academic organizations have used the data to support studies, clinical trials and medical treatments related to the pandemic.

With traditional research processes today, new drugs and therapies take an average of nearly \$1 billion to move from lab to market, according to analysis in the *Journal of the American Medical Association*. In total, the *Learning Health Network* is a national database of nearly 92 million patient records that has the potential to drastically transform clinical care through research beyond COVID-19. It provides health systems more cost-effective research methods and access to usable data to advance healthcare innovation and improve care quality.

Investing in the future - Improving care through data-driven insights and interoperability

Data has the potential to be a billion-dollar business for Cerner, driving significant growth and providing value to multiple industries beyond healthcare. Cerner expects to play a meaningful role in the clinical trials value chain by helping hospitals make studies more accessible to patients and decreasing the cost of treatment discovery.

Cerner's acquisition of Kantar Health, expected to close in the second quarter of 2021, will enhance our access to pharmaceutical and life sciences and help improve the safety, efficiency and efficacy of clinical research. Kantar Health brings a wealth of consulting competency and epidemiological, oncology and rare disease expertise, along with robust real-world information about a patient's health status and care delivery. This, combined with Cerner's technology strength and patient insights, is expected to enable researchers to more rapidly address the most complex clinical questions.

Cerner's investment in and collaboration with Elligo Health Research brings clinical trial resources to populations that may otherwise not have access while providing more data insights to the *Cerner Learning Health Network*. Through this collaboration, we expect rural hospitals, minority populations and underserved communities, as well as physician practices to have more access to trial therapies and care.

For decades, Cerner has worked to connect patient care. The company has long supported the clearing of unnecessary hurdles that prevented meaningful information sharing and interoperability. As such, Cerner was among the first major EHR suppliers last year to unequivocally support the final rules of the 21st Century Cures Act to improve consumer access to personal health data.

The industry must now shift the interoperability conversation from connectivity to usability. At Cerner Health Conference, we introduced *Cerner Unite™*, a portfolio of interoperability products, and *Cerner Discover™*, a portfolio of intelligence-integrated products, that will take data connectivity to the next level.

Amazon Halo and the value of data-sharing

- Wearable technology can help customers improve their health and wellness by integrating into a patient's EHR
- Allows individuals to opt-in to share activity, sleep, body fat percentage and other wellness data with care providers



Federal business progress



Department of Defense

- 14 sites deployed in 2020
- 20 total DoD commands now live

Veterans Affairs

- First go-live at VA Medical Center in Washington
- Plus four outpatient clinics in Montana, Idaho and Washington

U.S. Coast Guard

- Four sites deployed

Five years ago, Cerner began a journey to create a longitudinal health record for the U.S. Departments of Defense and Veterans Affairs. In April, along with the U.S. Coast Guard, these departments — for the first time in history — launched a joint HIE to securely connect and share health information, establishing a seamless care experience for 18 million Service members, Veterans and their families. Throughout 2020, Cerner implemented several “go-live” events across the agencies. In the third quarter, the VA announced a historic and successful milestone — the deployment of the new EHR at Mann-Grandstaff VA Medical Center and its four community-based outpatient clinics across Montana, Idaho and Washington.

The joint HIE also expanded to include CommonWell Health Alliance, an industry-wide data-sharing association Cerner co-founded in 2013, to advance interoperability. More than 15,000 hospitals and clinics in this nationwide network joined the approximately 46,000 community partners who are already part of the

joint HIE. Through these exchanges, clinicians can have a more complete view of their patients’ medical histories and current conditions, allowing for better-informed decision-making.

Eliminating inequities in healthcare

Minority groups, particularly African-Americans, have been disproportionately affected by COVID-19 due to lack of healthcare access, educational and income gaps and work environments. In fact, it’s estimated that 80% of issues related to a person’s health are non-clinical factors.

Consistent with our mission, Cerner partnered with Testing for America, the United Negro College Fund and the Thurgood Marshall College Fund to offer affordable, rapid COVID-19 testing for students, faculty and staff at Historically Black Colleges and Universities.

Cerner is proudly providing interoperability services and online tools to connect laboratory partners, university medical centers and public health entities. This collaboration has enabled universities to allow students to return to campus and make adjustments as needed for a safe learning environment.

COVID-19 has also disproportionately affected underserved and geographically remote communities, emphasizing how social determinants of health (SDOH) impact care delivery outcomes.

Cerner is developing new tools to aid clinicians in understanding how SDOH affect patient health, thereby beginning the work to eliminate inequities in healthcare. One example includes a series of dashboards built from the CDC's Social Vulnerability Index that locates social disparities and pinpoints where resources are needed. Providers can use data and insights from *HealthIntent* to stratify risk within communities and strategically engage underserved populations.

Cerner's Social Determinants Innovation Collaborative (SDIC), introduced in 2019, has grown to more than 50 health systems with over 150 representatives who share best practices for addressing SDOH in their communities. Through regular meetings, SDIC leaders discuss how to address barriers to care, like food insecurity, homelessness, access to transportation and substance abuse.

Conclusion

On behalf of Cerner associates around the world, thank you for your investment in Cerner and belief in the company's vision. We accomplished a great deal in an extraordinary, unforgettable year.

Thank you, once again, to all healthcare professionals for their tireless, heroic work and to Cerner's associates for their passion and commitment. We will remain focused on innovation that will transform the future — because healthcare is too important to stay the same.



Brent Shafer

Chairman of the Board and Chief Executive Officer

¹Adjusted operating margin, free cash flow, adjusted net earnings and adjusted diluted EPS reflect adjustments compared to results reported on a Generally Accepted Accounting Principles (GAAP) basis. Non-GAAP results should not be substituted as a measure of our performance but instead should be used along with GAAP results as a supplemental measure of financial performance. These non-GAAP financial measures are used by management along with GAAP results to analyze our business, to make strategic decisions, to assess long-term trends on a comparable basis, and for management compensation purposes. Please see the appendix following "A letter to our shareholders, clients and associates" for a reconciliation of these items to GAAP results.

Appendix: Reconciliation of GAAP results to Non-GAAP results*

Adjusted Operating Earnings and Adjusted Operating Margin	1986		2010		2020	
	Operating Earnings	Operating Margin %	Operating Earnings	Operating Margin %	Operating Earnings	Operating Margin %
<i>(\$ in millions)</i>						
Operating earnings (GAAP)	\$3	14.8%	\$359	19.4%	\$915	16.6%
Share-based compensation expense			25		154	
Acquisition-related amortization					55	
Organizational restructuring and other expense					168	
Allowance on non-current asset					21	
COVID-19 related expense					6	
Gain on sale of businesses					(221)	
Adjusted Operating Earnings (non-GAAP)/ Adjusted Operating Margin (non-GAAP)	\$3	14.8%	\$384	20.8%	\$1,098	19.9%

Adjusted Net Earnings and Adjusted Diluted Earnings Per Share	1986		2010		2020	
	Net Earnings	Diluted Earnings Per Share	Net Earnings	Diluted Earnings Per Share	Net Earnings	Diluted Earnings Per Share
<i>(\$ in millions, except per share data)</i>						
Net earnings (GAAP)	\$2	\$0.01	\$237	\$0.69	\$780	\$2.52
Pre-tax adjustments for Adjusted Net Earnings:						
Share-based compensation expense			25		154	
Acquisition-related amortization					55	
Organizational restructuring and other expense					168	
Allowance on non-current asset					21	
COVID-19 related expense					6	
Investment gains					(76)	
Gain on sale of businesses					(221)	
After-tax adjustments for Adjusted Net Earnings:						
Income tax effect of pre-tax adjustments			(9)		(10)	
Share-based compensation permanent tax items					(1)	
Valuation allowance on net operating loss carryforwards					3	
Adjusted Net Earnings (non-GAAP)/ Adjusted Diluted Earnings Per Share (non-GAAP)	\$2	\$0.01	\$253	\$0.74	\$879	\$2.84

Free Cash Flow	1986	2010	2020
<i>(\$ in millions)</i>			
Cash flows from operating activities (GAAP)	\$1	\$456	\$1,437
Capital purchases	(1)	(102)	(284)
Capitalized software development costs	(1)	(81)	(296)
Free Cash Flow (non-GAAP)	(\$1)	\$273	\$857
Cash flows from investing activities (GAAP)	(\$2)	(\$521)	(\$801)
Cash flows from financing activities (GAAP)	(\$1)	\$35	(\$461)

*More detail on these adjustments and management's use of Non-GAAP results is in our 2020 annual report on Form 10-K and our current reports on Form 8-K.

Corporate responsibility at Cerner

The events of the past year brought Cerner's vision of a seamless and connected world where everyone thrives into sharp focus. At a deeper level, the company's purpose is to advance humanity, enabling access to health and care for all communities regardless of socio-economic divides.

In this year's Corporate Responsibility Report, I am pleased to share with you the progress Cerner has made in advancing its diversity and inclusion efforts along with its thoughtful COVID-19 response and impactful community involvement. Cerner remains committed to promoting a clean environment and reducing the company's overall environmental impact.

In 2020, Cerner's Associate Business Resource Groups continued the important work of advancing equality and equity across the company while building a supportive professional environment where associates can safely engage. The executive leaders and I used this network to guide our actions when the nation was gripped by civil and social unrest.

Cerner is proud of the diversity and equality recognition we received from Forbes and the Human Rights Campaign Foundation. We are especially honored to have a perfect score on the Corporate Equality Index for the fourth consecutive year. Through all our corporate diversity and inclusion efforts, associates are encouraged to voice and respect different viewpoints and ideas as this is vital for Cerner's innovative spirit to thrive.

The pandemic highlighted this spirit, resulting in a burst of innovation to support hospitals and health systems as they responded to COVID-19. Much of this work was completed remotely as Cerner transitioned associates whose work allowed to a virtual environment within weeks of the initial outbreak. Given the size of our workforce and the organizations we support, Cerner plays an important role in keeping our communities as safe as possible.

During such times of uncertainty, I am always grateful to hear the inspiring stories of how Cerner associates give back. Associate contributions in 2020 provided meals for frontline caregivers and workers, personal protective equipment for students completing annual exams and food for families in need. Through Cerner's corporate foundation, associate donations enabled children to receive life-changing care and wellness exams. Additionally, Cerner offered time off to volunteer, and associates logged nearly 35,000 hours to causes they believe in.

Though the year was challenging, 2020 showed how collaboration, innovation and dedication to making a difference can lead to positive change. I am optimistic about the future of healthcare and our global community.



Brent Shafer

Chairman of the Board and Chief Executive Officer

Corporate responsibility

Cerner believes we have a responsibility to our clients, associates, shareholders and the communities in which we operate to conduct business in a manner that promotes strong corporate, social and environmental governance. We believe this commitment to corporate responsibility inherently drives value for all Cerner stakeholders.

With the oversight of Cerner's Board of Directors, we routinely assess, modify and improve our approach to managing the business. Through thoughtful execution of our COVID-19 response, continued advancement of diversity and inclusion initiatives, impactful community involvement and the expansion, diversification and initiation of the declassification of the company's Board of Directors, Cerner further enhanced its focus on corporate responsibility in 2020.

It's our mission to relentlessly seek breakthrough innovation that will shape healthcare of tomorrow. To do so responsibly, we respect and encourage the perspectives of every person, value our diversity, act with integrity and diligently deliver on our commitments. We believe that what we do doesn't just impact healthcare — it impacts the world.

Visit www.cerner.com/about/corporate-responsibility for more information on Cerner's corporate responsibility.

Corporate recognition



Most Innovative Companies

Best Employers for
New Graduates

Best Employers for Diversity



Helen Darling Award for
Excellence in Health Care
Value and Innovation

Best Employers for
Healthy Lifestyles



Best Places to Work

Corporate Equality Index
Perfect Score



Second consecutive year



Third consecutive year

COVID-19 response

The COVID-19 pandemic has united the entire healthcare ecosystem to work tirelessly to solve challenging issues that our industry has never encountered at such speed and scale. It has been our privilege to navigate this complex journey together with our clients as we shift from surge to recovery efforts.

Protecting the health and well-being of our associates and clients was Cerner's chief objective amidst the outbreak of the pandemic. With guidance from our COVID-19 Task Force, Cerner was able to seamlessly implement our business continuity plans by transitioning a large majority of our workforce to a virtual environment, while continuing to deliver world-class solutions and services to our clients. Throughout the pandemic, the Task Force has maintained close communication with the World Health Organization and the U.S. Centers for Disease Control to provide continual guidance and support of our remote workforce, rolling out enhanced health, wellness and family resources to assist our associates and their loved ones with navigating the challenging new environment.

With our workforce safe, connected and well-supported, we were able to effectively address the unique challenges that COVID-19 presented to healthcare providers, highlighting what Cerner does best as a company — working closely with our clients to develop innovative solutions to complex problems and re-imagining the delivery of healthcare.

Throughout the pandemic, Cerner has supported our clients with data and intelligence solutions designed to aid the fast and effective decision making of care providers. We expanded access to our platforms, enhanced our telehealth offerings, provided critical technology infrastructure to stand up temporary hospitals and surge facilities and developed dashboards that use artificial intelligence to help clients efficiently monitor and manage complex resource and patient needs in new and dynamic care settings.

Further, early in the pandemic, as COVID-19 cases increased worldwide, Cerner began preparing for COVID-19 vaccines by reaching out to our clients to ensure they had the technology necessary for large-scale vaccination efforts. Cerner provided hospitals with our Mass Vaccination solution to supplement rapid vaccination of frontline staff and patients without sacrificing their safety. In addition, Cerner is providing the physical location, technology, financial support, logistics management and volunteers for mass vaccination events in the Kansas City area. We are proud of the initiatives we've been able to deliver in response to COVID-19 and look forward to rolling out additional innovation to support our clients and communities through the pandemic.

Visit www.cerner.com/covid-19 for more information on Cerner's COVID-19 response.

Operation Safe



As part of Operation Safe, Cerner is honored to share our facilities, technology, expertise and associate volunteers with our coalition partners to provide COVID-19 vaccinations to thousands of eligible Missouri residents every week at Cerner's headquarters in North Kansas City.

Cerner today

40+ years
of HIT experience



26,400
Cerner associates

600+

PATENTS
WORLDWIDE



More than
650,000 **PHYSICIAN**
USERS
and 2,200,000 non-physician users



3,300+
U.S. home healthcare
and long-term care
facilities



\$800 million
APPROXIMATE ANNUAL R&D INVESTMENT

4,000+
U.S.
hospitals



6,000+
U.S. physician
practices

262 million+
longitudinal records managed
within the *HealthIntent* platform
Includes historical records



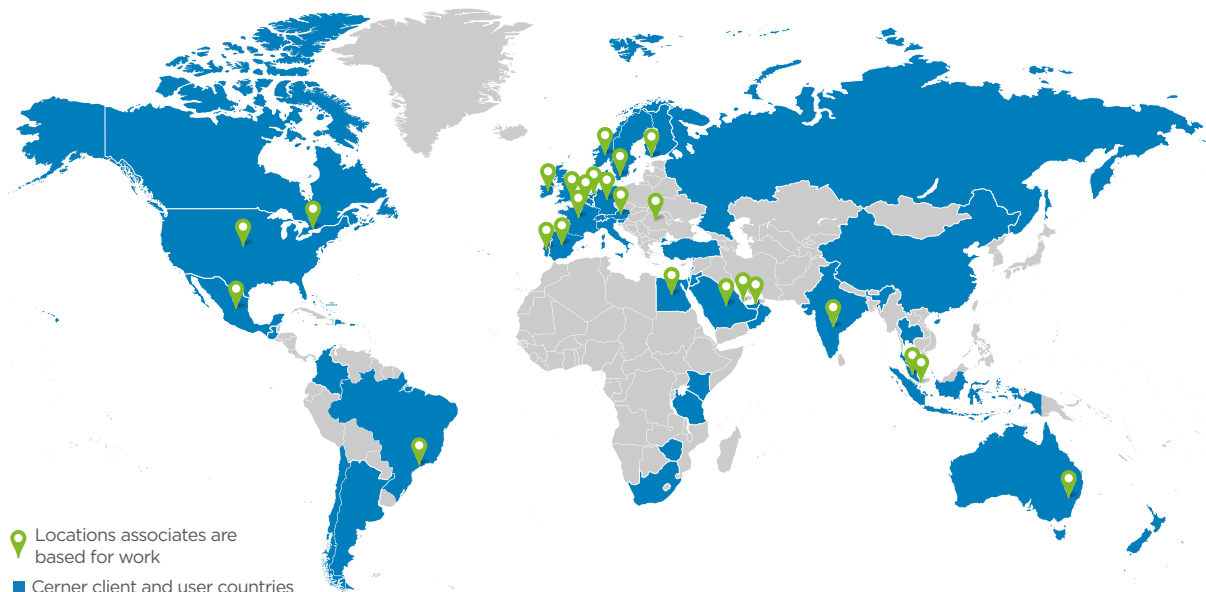
89 languages
spoken for business
Includes dialects

Cerner Millennium®
translated into **7 languages**

NOTE: All data points are global except as noted. Updated Q1 2021.

Global footprint

Cerner is truly a global company with our life-changing solutions and services being utilized by healthcare providers and patients around the world. With a presence in over 35 different countries, our associates speak 89 different native languages and dialects, and come from a variety of cultures, races and backgrounds. The unique experiences of our diverse workforce offer an invaluable platform from which we can explore enhanced solutions for our clients and the patients they serve.



Governance

We believe strong corporate governance practices and policies are critical to fostering a culture of integrity, managing a better-performing and sustainable business and achieving long-term shareholder value. Through our framework of policies and processes, we focus on better managing our business and on aligning the interests of management with our stakeholders.

Over the past year, Cerner has further-strengthened its corporate governance by expanding, diversifying and initiating the process to declassify the Board of Directors, as well as taking steps to more closely align executive compensation with shareholder interests through enhanced claw back agreements, double trigger equity vesting upon a change-in-control and inclusion of additional performance metrics in equity grants.

The company's environmental, social and governance policies and practices are overseen by the Nominating, Governance & Public Policy Committee of Cerner's Board of Directors.

Visit the Governance section of www.cerner.com/about/corporate-responsibility for more information on Cerner's corporate governance.

Board of Directors

Cerner's complex and evolving business requires a Board of Directors with diverse backgrounds, experience, ethnicity, gender, race and skills. Cerner's Board members possess a vital diversity of skills and attributes essential to overseeing the direction of the company to protect and promote the long-term value of Cerner for its shareholders.

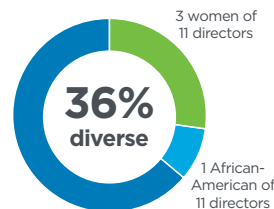


Following the addition of four highly experienced directors to the Board of Directors in 2019, Cerner further expanded the breadth of knowledge and experience of its Board in 2020 with the addition of **Major General Elder Granger, M.D., U.S. Army (retired)**. As a proven clinical, military and business leader who has successfully navigated complex policy, regulatory and competitive environments, Dr. Granger brings invaluable insights to Cerner particularly in the commercial and federal health sectors. The opportunity to bring Dr. Granger on board is not only another step in Cerner's improved corporate governance, it also adds another dimension of experience that complements the skills of the rest of our Board of Directors.

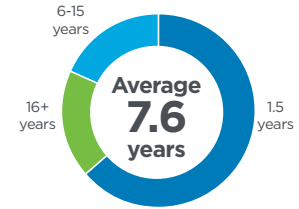
Board skills and attributes



Gender and ethnic diversity*



Board tenure*



Average age: 66 years*

*As of December, 31, 2020, which is inclusive of Linda M. Dillman, who unexpectedly passed away in March of 2021

Visit www.cerner.com/about/leadership to learn more about Cerner's Board of Directors.

Human capital



Tracy L. Platt

Executive Vice President and
Chief Human Resources Officer

“At Cerner, we aspire for all associates to have flexibility to manage their life; create work that is meaningful and makes a difference; and feel appreciated, valued, recognized and rewarded. We want to attract, engage and retain the best available talent for our clients and ultimately the patients and consumers of healthcare we serve.”

Our associates are at the core of everything we do. We understand that it is through listening, acknowledging and welcoming different viewpoints that innovation thrives. The Associate Experience is how Cerner ensures we are an employer of choice. Investment from all levels of leadership support programming and initiatives that make Cerner a great place to work.

Through organizational health and engagement feedback, learning and leadership development programs, competitive compensation practices, health and well-being benefits, global recognition initiatives and community and philanthropy events and services, Cerner is dedicated to building a culture and community designed to foster an exceptional and diverse global workforce.

Diversity, Equity and Inclusion

Diversity, Equity and Inclusion (DEI) are core to our mission.

- Diversity means understanding that each associate is unique. It’s about recognizing, valuing and respecting their individual dimensions, such as race, ethnicity, gender, sexual orientation, disabilities, generation or veteran status.
- Equity is a choice. We choose to create fair and impartial actions and opportunities for all.
- Inclusion is a focus on all associates having the opportunity to be fully engaged in the workplace. Associates have a seat at the table where their unique perspectives and ideas are leveraged for the greater good.



Dr. Andrea Hendricks

Senior Executive Director and
Chief DEI Officer

This is how we work together. Cerner’s strategy focuses on all three. Our approach to Diversity, Equity and Inclusion centers around four main areas:

Workplace

Cerner strives to create an engaging, innovative atmosphere that promotes safety and a sense of belonging for all associates.

Workforce

Cerner aims to attract, retain and develop skilled associates from diverse backgrounds.

Community

Cerner supports regional and global economies through diverse partnerships that develop healthy and educated individuals.

Marketplace

Cerner’s corporate mission is to relentlessly seek breakthrough innovation that will shape healthcare of tomorrow.

Please view Cerner’s Diversity, Equity and Inclusion Annual Report on our DEI website at www.cerner.com/about/diversity-inclusion for more details.

Wellness

At Cerner, we are committed to providing our associates and their families with the tools, resources and support needed to improve their health and wellness.



Health at Cerner is Cerner's internal wellness brand, offering a vast catalog of easily accessible and personalized physical, mental, legal and financial health resources.

From on-site health clinics, pharmacies and fitness centers to on-demand wellness and strength training classes; maternity and new parent resources to virtual counseling and therapy solutions; financial advisory services to expert legal assistance; the mission of *Health at Cerner* is to empower our associates and their families to obtain their optimal level of health.

Visit healthatcerner.com to learn more about *Health at Cerner*.

Cerner Charitable Foundation

Building upon its rich history, First Hand Foundation expanded as Cerner Charitable Foundation in 2020. As Cerner's corporate philanthropy, the foundation is building healthier tomorrows and stronger communities.

Over the last 25 years, the Cerner Charitable Foundation has improved the lives of nearly 600,000 people around the world. To celebrate this anniversary, the foundation published a digital book, which can be viewed online.

The foundation's work to provide equitable access to healthcare for children began with its individual medical grant program. In 2020, the Cerner Charitable Foundation awarded \$2.4 million in funding to children in need while passing the milestone of 15,000 grants awarded since the program's inception.

Celebrating 25 years

View Cerner Charitable Foundation's digital 25th anniversary book at cernercharitablefoundation.org/anniversarybook



Through initiatives sponsored by the foundation and work with causes close to their hearts, Cerner associates volunteered more than 39,000 hours to make a difference in the communities they call home around the world.

As COVID-19 gripped the country, the foundation established a new initiative to deliver 23,981 meals to front-line workers from 80 restaurant partners funded by associate and community member contribution.

Cerner Charitable Foundation's work is guided by the social determinants of health and driven toward a vision of an equitable world where individuals and communities thrive.

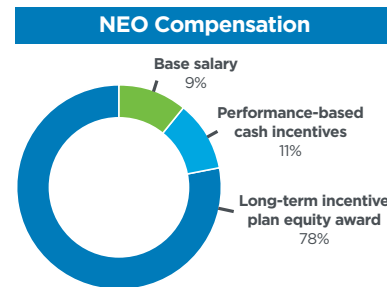
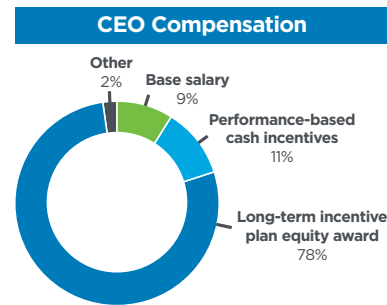
Visit cernercharitablefoundation.org to learn more about the Cerner Charitable Foundation.

Executive compensation

Our compensation strategy is linked to our performance management philosophy, which is designed to identify and reward associate performance through compensation. We believe in pay for performance and linking executive compensation with shareholder value, as represented by our Chief Executive Officer (CEO) and Named Executive Officer (NEO) pay mix.

We strengthened our governance framework by making modifications to our compensation programs, including expanding our ability to clawback incentive compensation to more broadly cover conduct deemed detrimental to the company, as well as amending our change-in-control vesting provisions to require that all future equity grants require a “double trigger” prior to any change-in-control vesting acceleration.

Further, to continue increasing management alignment with our stakeholders and delivery of both short and long-term value, we have approved several enhancements to our 2021 compensation programs. Our cash incentive program will now be based on annual metrics as opposed to quarterly results. Additionally, two new performance metrics will be added to NEO awards to complement our existing financial-related performance metrics – a client success metric will be added to help reinforce our relentless client focus, and an organizational health metric will be added to directly link NEO compensation with associate engagement and workplace diversity and inclusion. Finally, our 2021 performance-based equity awards will include three performance metrics – Adjusted EPS, revenue growth and relative total shareholder return (TSR) – to drive long-term value creation for our associates and shareholders.



Data security and privacy

The security and privacy of user and patient data is paramount to every aspect of how Cerner delivers its solutions and services. Our Computer Security Incident Response Center (CSIRC) is responsible for 24x7x365 continuous threat monitoring of all Cerner platforms. The CSIRC evaluates and coordinates responses across multiple threat vectors in order to safeguard Cerner environments. As part of the company’s vulnerability and threat management program, Cerner’s security professionals analyze and quantify the risk potential of identified vulnerabilities and threats to both Cerner and its clients.



Cerner utilizes a defense-in-depth strategy, employing multiple security solutions and countermeasures through various layers of the ecosystem to protect Cerner platforms. We regularly conduct security architecture reviews, internal assessments and external audits to examine the controls present within our platforms and Cerner’s operations, and to validate that Cerner is operating effectively in accordance with its Security Program.

Visit www.cerner.com/security and www.cerner.com/privacy for more on Cerner’s security and privacy programs.

Environment

At Cerner, we have policies and practices in place to encourage that we operate our business and provide solutions and services to our clients in a manner that promotes clean business practices and reduces our corporate footprint on the environment.

In addition to our high-level corporate programs, our associates have organized grassroots eco-awareness groups pursuing more sustainable practices on our campuses and in our daily



lives, working to safeguard the future health of our associates, families and communities. Through coordinated focus groups, recycling initiatives, ride share programs, community events, philanthropy and sustainability awareness campaigns, our associates are dedicated to making and promoting eco-friendly choices and considering the environmental impact of everything we do.

At the time of publishing this report, we are working through an assessment of our carbon

footprint for the past three years. Upon completion of the carbon assessment, we intend to publish our scope emissions data to the Corporate Responsibility section of our website.

Visit the Environmental section of www.cerner.com/about/corporate-responsibility to learn more about Cerner's commitment to the environment.



Appendix: Key Performance Indicator index

Reference index	Key Performance Indicator	2020	2019	2018
Governance				
	Classification of Board of Directors	Declassification initiated	Classified	Classified
	Members of Board of Directors*	11	10	9
	Independent Board Members (%)*	91%	90%	89%
	Board Gender & Ethnic Diversity (%)*	36%	30%	22%
	Formal Board oversight of company environmental, social and governance initiatives	Yes	No	No
	* As of December 31, 2020			
Environmental				
SASB TC-SI-130a.1	Total energy consumed (GJ)**	962,841	1,033,704	1,003,629
SASB TC-SI-130a.2	Total water consumed (m ³)**	295,438	336,709	340,685
	Scope 1 GHG Emissions (Tonnes CO ₂ e)**	Cerner is currently undergoing a third-party carbon assessment for the years 2018-2020. When the results are available, we intend to update this table and the Key Performance Indicator Index on Cerner's Corporate Responsibility website		
	Scope 2 GHG Emissions (Tonnes CO ₂ e)**			
	Scope 3 GHG Emissions (Tonnes CO ₂ e)**			
SASB TC-SI-130a.3	Discussion of the integration of environmental considerations into strategic planning for data center needs	See Data Centers section of Cerner's Environmental Policy		
	**Environmental metrics are specific to our properties in the Kansas City area, Malvern, PA and Bangalore, India.			
Social				
SASB TC-SI-330a.1	Global workforce (# of associates)	26,400	27,400	29,200
	Americas (%)	74%	72%	76%
	Asia-Pacific (%)	20%	20%	17%
	Europe and Middle East (%)	6%	8%	7%
	Discussion of systems for managing workforce and risk prevention:			
	<p>With a presence in over 35 countries, we are able to serve clients around the globe. Leveraging technology, collaboration and anchored in a common global set of associate behaviors, our associates work effectively across borders in pursuit of Cerner's mission. We recognize and value the diversity in our global workforce and take a global lens to equity and inclusion in all countries in which we operate, as described earlier in this report. Our human resources programs and processes, including associate recognition, performance management, associate surveys, town halls and job framework allow us to create a consistent global associate experience at scale, while allowing for customization at the country or regional level where appropriate. We supplement our global approach with locally relevant programs and policies that enable us to recruit and retain top talent in all our locations. We behave with integrity in everything we do, and that includes complying with all local laws and regulations, maintaining strict policies around data protection and enforcing a program of mandatory compliance training for all associates.</p>			

Reference Index	Key Performance Indicator	2020	2019	2018
Social (continued)				
SASB TC-SI-330a.2	Employee engagement (%)	68%	See discussion	
	Discussion of employee engagement:			
	Prior to 2020, our annual employee surveys were developed and administered internally. In 2019, we engaged with Korn Ferry to enhance our employee engagement survey methodology. The result of this collaboration was our 2020 organizational health and engagement survey, developed in partnership with Korn Ferry and delivered via the Qualtrics survey platform. Our 2020 engagement index was calculated as the percentage of associates who responded Agree or Strongly Agree to the statements “Cerner motivates me to do more than is required”, “I feel motivated to do more than is required of me”, “I feel proud to work for Cerner”, “I would recommend Cerner as a good place to work”, and “Given your choice, how long would you plan to continue working for Cerner” (with 5+ years viewed as favorable). Due to the change in survey methodology, our prior year engagement metrics are not directly comparable to those from 2020.			
	Inclusion index (%)	73%	N/A	N/A
	Discussion of inclusion index:			
	For the first time, in 2020, our organizational health and engagement survey included a validated index for inclusion against which Cerner is measuring the health of our workforce and driving improvements in leadership behavior. Our 2020 inclusion index was calculated as the percentage of associates who responded Agree or Strongly Agree to the statements “I feel a sense of connection and belonging at work”, “Opportunities for advancement are available to associates regardless of personal background”, “The people I work with discuss and debate issues respectfully to get better results”, “I can freely express my voice without fear of negative consequences”. In 2021, a quantitative Organizational Health metric will be added to performance-based cash compensation for our Named Executive Officers (NEOs) to directly link their compensation with key organizational objectives including attracting, engaging and retaining top talent and continuing to cultivate a highly diverse and inclusive workplace.			
SASB TC-SI-330a.3	Gender			
	Global Workforce			
	Total workforce male (%)	62%	61%	58%
	Total workforce female (%)	38%	39%	42%
	Management ¹			
	Management male (%)	65%	65%	63%
	Management female (%)	35%	35%	37%
	Technical Staff ²			
	Technical Staff male (%)	75%	75%	75%
	Technical Staff female (%)	25%	25%	25%
	All Other Associates ³			
	All other male (%)	46%	46%	41%
	All other female (%)	54%	54%	59%

¹ All leadership levels plus team lead and manager level associates

² Associates with Job Family Groups of Development, Information Technology and Support

³ Associates not included in Management or Technical Staff groups

Reference Index	Key Performance Indicator	2020	2019	2018
Social (continued)				
SASB TC-SI-330a.3 (continued)	Ethnicity (U.S. Only)			
	White (%)	74%	75%	74%
	Asian (%)	12%	12%	11%
	Hispanic (%)	4%	3%	5%
	African American (%)	8%	8%	8%
	Other (%)	3%	2%	3%

Discussion of gender and ethnicity disclosures:

[See the Diversity, Equity and Inclusion section of Cerner's 2020 Corporate Responsibility Report](#)

[Cerner Diversity, Equity and Inclusion website](#)

Data Security

SASB TC-SI-230a.2 Description of approach to data security risks, including use of third-party cybersecurity standards:

[See the Data Security and Privacy section of Cerner's 2020 Corporate Responsibility Report](#)

[Cerner Security Program](#)

Data Privacy

SASB TC-SI-220a.1 Description of policies and practices relating to behavioral advertising and user privacy:

[See the Data Security and Privacy section of Cerner's 2020 Corporate Responsibility Report](#)

[Cerner Privacy Policies](#)

Managing Systemic Risks from Technology Disruptions

SASB TC-SI-550a.2 Description of business continuity risks related to disruptions of operations:

[See Cybersecurity and Information Technology Risks in the Risk Factors section of Cerner's 2020 Form 10-K](#)

Cerner Corporation
2020 Annual Report
Form 10-K

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

FORM 10-K

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

For the fiscal year ended: December 31, 2020

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)

2800 Rockcreek Parkway

North Kansas City, MO

(Address of principal executive offices)



43-1196944

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

64117

(Zip Code)

(816) 221-1024

(Registrant's telephone number, including area code)

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

<u>Title of each class</u>	<u>Trading Symbol(s)</u>	<u>Name of each exchange on which registered</u>
Common Stock, \$0.01 par value per share	CERN	The Nasdaq Stock Market LLC

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

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.

Yes No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act.

Yes No

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

Yes No

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

Yes No

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

Large accelerated filer Accelerated filer

Non-accelerated filer 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 has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C.7262(b)) by the registered public accounting firm that prepared or issued its audit report.

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

Yes No

As of June 30, 2020, the aggregate market value of the registrant's common stock held by non-affiliates of the registrant was \$18.6 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.

<u>Class</u>	<u>Outstanding at February 1, 2021</u>
Common Stock, \$0.01 par value per share	306,294,309 shares

DOCUMENTS INCORPORATED BY REFERENCE

Document

Portions of the registrant's Proxy Statement for the 2021 Annual Shareholders' Meeting

Parts into Which Incorporated

Part III

PART I.

This annual report on Form 10-K and the documents incorporated herein by reference contain forward-looking statements based on expectations, estimates, and projections as of the date of this filing. Actual results may differ materially from those expressed in forward-looking statements. See Item 1A of Part I — "Risk Factors."

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 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. *Cerner*[®] solutions and services help clinicians make care decisions and assist organizations in managing the health of their populations. We also offer integrated clinical and financial systems to help manage day-to-day revenue functions, as well as a wide range of services to support clinical, financial and operational needs. We are also expanding our presence in the life sciences industry by working with health care stakeholders to harness data to improve the safety, efficiency, and efficacy of clinical research.

Cerner solutions are offered on the unified *Cerner Millennium*[®] architecture and on the *HealthIntent*[®] 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 *HealthIntent* 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 *HealthIntent* 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, enhance clinical research and lower costs. Cerner also has an EHR agnostic platform, *CareAware*[®], that facilitates connectivity of health care devices to EHRs and helps improve hospital operations, 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 and care coordination solutions globally. Refer to Notes (8) and (9) of the notes to consolidated financial statements ("Notes") for information on our acquisitions and dispositions.

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, real-world evidence, 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, primarily as a reseller for third parties.

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

	For the Years Ended		
	2020	2019	2018
<i>Revenues by Business Models</i>			
Licensed software	12 %	12 %	11 %
Technology resale	3 %	4 %	5 %
Subscriptions	7 %	6 %	6 %
Professional services	35 %	35 %	34 %
Managed services	23 %	21 %	21 %
Support and maintenance	19 %	20 %	21 %
Reimbursed travel	1 %	2 %	2 %
	<u>100 %</u>	<u>100 %</u>	<u>100 %</u>
<i>Revenues by Segment</i>			
Domestic	89 %	89 %	88 %
International	11 %	11 %	12 %
	<u>100 %</u>	<u>100 %</u>	<u>100 %</u>

A description of our business models is as follows:

- Licensed software - We develop and license intellectual property ("IP") (our architectures, application software, executable and referential knowledge, data and algorithms) to our clients. Our licensed software business model includes revenues from IP delivered via perpetual license and software as a service, where functionality is delivered via "the cloud".
- Technology resale - We bundle licensed software with other companies' IP in the form of sublicenses to create complete technology solutions for our clients. We also resell bundled computer equipment (hardware) from technology companies to create a completely functional system. Additionally, we resell medical devices for a growing list of medical device companies.
- Subscriptions - Another method by which we provide IP is on a time-based subscription model that has a periodic usage charge. This is the primary way we package and provide medical knowledge, which changes frequently based on research and can be updated independently from the software in which it is embedded. Also included in this category of revenue is our Electronic Data Interchange ("EDI") transaction revenue. EDI is the electronic transfer of data between health care providers and payers.
- Professional services - We provide a wide range of professional services to assist our clients in the implementation of our information systems in their organizations. These services are in the form of project management, technical and application expertise, clinical process optimization, regulatory consulting and education and training of our clients' workforce to assist in the design and implementation of our systems. This business model also includes certain outsourcing services utilized by health care organizations.
- Managed services - Our managed services business model includes revenues from remote hosting, application management services, operational management services, and disaster recovery. Remote hosting is the largest of these offerings, and it involves Cerner buying the necessary equipment, installing it in one of our data centers, and operating the entire system on the client's behalf.
- Support and maintenance - This business model is comprised of the ongoing support and maintenance services we provide our clients. Almost all of our clients contract for these services. Clients with support contracts get 24x7 access to our immediate response center, which serves as our "emergency room," as well as access to our SolutionWorks organization for less urgent issues. In addition, our clients' support payments give them ongoing access to the latest releases of our IP. We also provide support for sublicensed software and maintenance for third party hardware.

- Reimbursed travel - Includes reimbursable out-of-pocket expenses (primarily travel) incurred in connection with our client service activities.

Health Care and Health Care IT Industry

There are several major forces shaping health care worldwide.

- **Rising Health Care Costs** - Health care costs continue to rise above the rate of inflation, with total health care expenditures increasing 4.5% to \$3.8 trillion in 2019, representing 18% of the U.S. Gross Domestic Product ("GDP"). Health expenditures are expected to grow over 5% annually over the next decade, which would bring them to approximately 20% of GDP. Similar growth trends exist in most major non-U.S. markets as well. 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.
- **Industry Consolidation** - The number of health care providers turning to mergers, acquisitions and partnerships has surged. On a 15-year basis the percentage of hospitals functioning under a health system rather than operating independently increased from approximately 50% to approximately 65%. Today, over 70% of hospitals are operating as part of a health system rather than independently. This consolidation trend has also included the outpatient setting as health systems are seeking to build out health networks within defined Metropolitan Statistical Areas ("MSAs").
- **Evolving Reimbursement** - With the full enactment of The Patient Protection and Affordable Care Act ("ACA"), Medicaid expansion in more than three-quarters of all states, and the aging population driving Medicare growth, the government is playing an increasingly material role in U.S. health care economics. The implications for providers include increased regulatory requirements for payment at less favorable terms than commercial payers. This reality has exacerbated an already tough margin profile and is expected to be the new normal for the years to come. Provider organizations are also dealing with an ongoing shift to value-based reimbursement models through programs like the Medicare Access and CHIP Reauthorization Act ("MACRA") and Bundled Payment Care Initiative, which change the way that Medicare rewards clinicians for value over volume. These reforms, over time, could materially change provider economics.
- **Consumer Expectations** - Increased out-of-pocket expense and technology utilization outside health care have contributed to rising consumer expectations on cost, convenience and service. This growing consumerism has increased the political focus on rising drug prices, surprise medical bills, and escalating premiums, highlighting the importance of having comprehensive strategies for engaging consumers.
- **Cognitive Computing** - Today, health care is principally digitized across the core clinical, operational and financial settings. However, while workflows have been digitized, business processes remain largely unautomated and the industry has yet to realize the benefits of digitization achieved in other industries. Cognitive computing represents a meaningful opportunity to leverage the digitization that now exists in health care to improve efficiency and quality, and we believe Cerner is well positioned to play a key role in helping the health care industry achieve this potential.
- **Coronavirus ("COVID-19") Pandemic** – The health care and life sciences industries are at the forefront of the pandemic with heroic efforts by health care providers on the frontlines and advances in technology and science enabling vaccines to get to market in an unprecedented timeframe. Looking beyond 2020, we believe the pandemic could lead to an acceleration of macro trends already playing out. Examples of this include the likelihood the pandemic accelerates the role of the Federal government as the top regulator and payor for health care; ongoing health system consolidation; and increased consumer expectations, particularly around the convenience of telehealth.

For the core provider market, many of these forces are contributing to an overall challenging macro environment. Providers are simultaneously seeking to grow key service lines, drive operational efficiencies to make money at Medicare rates, and build out the competencies required to take and effectively manage risk and participate in value-based reimbursement models. Information technology is seen as an enabler of these efforts, which represents an opportunity for

Cerner. At the same time, the low-margin nature of provider businesses can make it difficult to fund required investment, making it important for solutions and services to have a clear return on investment.

Cerner Vision and Growth Strategy

Throughout our history, Cerner has focused on creating innovation at the intersection of health care and information technology. Our vision has long been to create a Health Network Architecture ("HNA") for providers of care in every community. HNA has four core pillars: automate the care process; connect the person; structure, store and study the data; and then 'close the loop' by pushing analytic insights back into the care process. The base digitization that now exists in health care is foundational to achieving this vision, and we believe it can be achieved in the decade to come.

Our framework for growth as we work towards achieving our long-term vision includes three core areas.

First, we are focused on delivering in our core market, including executing effectively on our large U.S. federal contracts, continuing to enhance key solution areas, such as revenue cycle, that are important to existing clients and represent revenue growth opportunities, and aligning with our provider clients to help them increase revenue in key service lines, tackle margin compression and optimize their reimbursement dollars. In addition, we are investing in platform modernization, with a focus on delivering a software as a service platform that we expect to lower total cost of ownership, improve clinician experience and patient outcomes, enable clients to accelerate adoption of new functionality, and better leverage third-party innovations. These efforts, in collaboration with Amazon Web Services, can differentiate Cerner and position our installed client base to better manage the forces of change playing out in health care.

Second, we are continuing work towards advancing the HNA vision that has driven Cerner almost since its inception. We believe that through the creation of a cohesive architecture for health care, the walls between care centers will become transparent as information travels seamlessly among care settings. Data collected at one setting will be available to others across the country, ensuring every individual in every part of the care process is connected to the right knowledge, resources and persons at the appropriate time and place. We believe the coming decade is the window when the confluence of technology, data liquidity and business model shifts can make this vision a reality. Health systems are increasingly building network strategies within specific regions to enhance contracting power, increase patient stickiness and move closer to the premium dollar. Cerner has an opportunity to become a strategic partner and assist with network design, provide services in areas such as cybersecurity and operational reporting, and improve performance under value-based contracting. Cerner's *HealthIntent* platform was purpose-built as a cloud-based, EHR-agnostic platform that enables these efforts. *HealthIntent* is also foundational to our offerings in other areas that represent growth opportunities for Cerner. These include provider market offerings, such as long-term care, home care and hospice, rehabilitation, behavioral health, community care, care team communications, and health systems operations, as well as consumer and employer offerings.

Third, Cerner has an opportunity to harness data to drive growth in new areas, including using real-world evidence to improve clinical research and providing release of information services to drive efficiencies for the legal, life insurance and other industries. Cerner has natural points of differentiation, including our proximity to the data given that our technology assets are in place in approximately a quarter of U.S. health care facilities, and our proven ability to aggregate and normalize multiple sources of data through our *HealthIntent* platform, which contains data from over 250 million longitudinal records.

The early returns have been positive. We have made progress in the pharma and life sciences space with our *HealthDataLab*SM offering and the *Cerner Learning Health Network*TM, a strategy originating from our collaboration with the Duke Clinical Research Institute.

We have made good progress at building the *Cerner Learning Health Network*. With a mission of revolutionizing clinical research, the *Cerner Learning Health Network* offers health systems complimentary access to a network of bi-directional, de-identified data resources. This access helps advance research efforts and provides opportunities to generate revenue with funded research studies from life science companies.

In late 2020, Cerner took two actions to enhance the *Learning Health Network*SM and further position Cerner to play a meaningful role in advancing clinical research. First, Cerner invested in Elligo Health Research, a leading integrated research organization that enables clinical trials with nationwide community-based health care practices. Cerner plans to work with Elligo to expand the data and tools available in the *Cerner Learning Health Network* to offer additional clinical trial resources to community and rural hospitals and physician practices. This collaboration is expected to shorten clinical

research timeframes, make clinical trials more broadly and easily accessible and reduce the costs associated with bringing therapies to market.

Second, Cerner announced an agreement to acquire Kantar Health, a division of Kantar Group. Kantar Health is a leading data, analytics and real-world evidence and commercial research consultancy serving the life science industry. With this acquisition, which we expect to close in the second quarter of 2021, subject to certain conditions, Cerner plans to harness data to improve the safety, efficiency and efficacy of clinical research across life sciences, pharmaceuticals and health care at large. This acquisition is expected to allow the *Cerner Learning Health Network* client consortium to more directly engage with life sciences for funded research studies. This acquisition is expected to be a strong complement to our existing Data-as-a-Service efforts as it would bring a meaningful entry into the pharmaceutical market through Kantar Health's existing clients and their strong leadership team with important industry experience and relationships.

Cerner expects to build on this early success and continue creating information-based solutions that reinvent traditional health care businesses, allow our customers to better serve their markets and ultimately change lives. We believe the data space not only represents a material addressable market beyond Cerner's traditional provider base, but that it is also consistent with, and a compelling advancement of, the vision of personalized medicine that animated the original thinking around HNA.

Importantly, Cerner's health data strategy is based on curating data from a willing and engaged network of providers with an emphasis on clear boundaries around the usage of patient data and based on clearly defined use cases with clarity and transparency around data rights.

In summary, we believe Cerner's core value proposition remains strong and there is ample opportunity to grow both organically and inorganically through the areas discussed above. As Cerner drives these areas of growth, we expect a strong and dynamic competitive landscape, ranging from startups to mega-cap companies that are attracted to the substantial addressable markets across health care. Success will require entrepreneurial scale. We will have to move faster and be nimbler than the mega-caps, while also leveraging our advantages of size and experience that venture-backed startups lack.

Contracting with the Government

As we grow our federal business, revenue attributable to prime contracts or to subcontracts with other contractors engaged in work for the U.S. government is becoming a bigger contributor to our overall revenue. Within the U.S. government, our revenues are diversified across various agencies, including the Department of Defense and the U.S. Department of Veterans Affairs. During 2020 and 2019, approximately 18% and 13%, respectively, of our total revenues were attributable to our relationships (as the prime contractor or a subcontractor) with U.S. government agencies. Contracting with the U.S. government subjects us to substantial regulation and unique risks, including the U.S. government's ability to cancel any contract at any time through a termination for the convenience of the U.S. government. Government cancellation terms typically permit the recovery of all or a portion of our incurred costs and fees for work performed prior to termination when the U.S. government issues a termination for convenience. These regulations and risks are described in more detail below under "Risk Factors" in this annual report on Form 10-K.

Software Development

We commit significant resources to developing new health information system solutions and services. As of the end of 2020, approximately 7,200 associates were engaged in research and development activities. Total expenditures for the development and enhancement of our software solutions were \$797 million, \$784 million and \$747 million during 2020, 2019 and 2018, respectively. These figures include both capitalized and non-capitalized portions and exclude amounts amortized for financial reporting purposes.

As discussed above, continued investment in research and development ("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.

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 United States 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 600 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 North 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, in years when COVID-19 was not a concern, 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. Normally, 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.

Backlog

Backlog, which reflects contracted revenue that has not yet been recognized as revenue, was \$13.04 billion as of December 31, 2020, of which we expect to recognize approximately 30% as revenue over the next 12 months.

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 \$1.08 billion 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. 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.
- Arcadia Solutions, LLC
- athenahealth, Inc.
- Capsule Technologies, Inc.
- Computer Programs and Systems, Inc.
- eClinicalWorks, LLC
- Epic Systems Corporation
- Health Catalyst, Inc.
- InterSystems Corporation
- Innovaccer, Inc.
- Medical Information Technology, Inc. (MEDITECH)
- Optum, Inc.

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, health care 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.

Human Capital Management

Cerner believes that attracting, engaging and retaining employees is vital to the Company's continued success. Our Chief Human Resources Officer, reporting directly to our Chief Executive Officer, oversees our human capital management strategies. In addition, our Board of Directors is actively involved in our human capital management in its oversight of our long-term strategy and through its committees and engagement with management.

At Cerner, we're collectively working to create a culture and a community where our employees, who we refer to as our associates, feel their voice is heard in our ongoing efforts to make a difference in the future of health care. Our efforts have earned Cerner recognition over the years as one of Forbes' Best Employers, Best Employers for Diversity, Best Employers for LGBTQ Equality and a perfect score on the Human Right Campaign Equality Index.

The Company employed approximately 26,400 associates worldwide as of December 31, 2020. Of that total population, approximately 74% of our associates were employed in the United States and the remaining associates were employed outside the United States. Approximately 35% of our associates work in professional services (implementation, training, consulting and other services), 27% of our associates work in development (coding and engineering), 10% of our associates work in managed services (hosting), and the remaining associates work in other areas with no such area making up 10% or more of our associate base.

Our human capital management operating model focuses on the following strategic areas:

Talent Acquisition: We continue to actively hire talent and are primarily focused on recruiting talent in support of our strategic growth initiatives. We strive for the attraction, retention and development of skilled, engaged teams of diverse associates.

Learning and Leadership Development: Associate training is also an important component of our human capital management. We have programs designed specifically to support early career talent, as well as management development. The Company continues to explore solutions that provide training material and support to all levels in the organization.

Compensation: Cerner offers competitive compensation to attract, reward and motivate associates. We have a pay for performance compensation philosophy and reward associates through a combination of base pay, cash incentives and equity awards for the results they achieve, as well as how they achieve those results. Our Cerner Foundations Retirement Plan (401k) and Associate Stock Purchase Plan provide associates an opportunity for an ownership stake in Cerner.

Health, Wellbeing and Benefits: Consistent with our strong commitment to associate wellbeing, we offer a full suite of programs, many of which are also offered virtually, including: fitness classes, wellness coaching, a data-driven wellness management program, comprehensive bariatric care, musculoskeletal health coaching, as well as on-site child care, fitness centers, health clinics and pharmacies. We also offer associates a comprehensive and competitive set of benefit plans.

Associate Experience and Engagement: We strive to create an environment in which associates are fully engaged, feel safe, have a sense of belonging and are empowered to make a difference. We focus on an inclusive culture to retain talent. These ongoing efforts are shaped by the action planning from our annual employee engagement census survey.

Talent Management: Cerner has a yearly performance management process to encourage development and feedback conversations. Manager and employee conversations are an important part of the growth and career development of our associates.

Organization Design and Effectiveness: This area focuses on organizational design consulting, the integration of new associates from our business acquisitions, and coaching.

Associate Relations and Employment Practices: This area focuses on compliance with applicable employment laws, associate relations and resolving associate employment-related disputes, as well as on managing the process for departing associates, including the provision of outplacement services. In addition, this area provides proactive performance coaching for our associates. Associates are encouraged to report ethics, safety, or grievances through multiple channels including a company provided confidential hotline.

Diversity and Inclusion ("D&I"): This area focuses on education, diversity management, associate community building, market outreach, fostering a culture of inclusion and diversity strategies. We have an enterprise-wide D&I strategy to achieve holistic transformation in collaboration with executives, leaders and associates. We focus on inclusive solutions and supporting diversity for clients.

Global Community and Philanthropy, Events and Services: This area focuses on community building, philanthropy, social responsibility and sustainability. Our associates give back to the communities where they work and live, contributing millions of dollars last year to First Hand Foundation, a project of Cerner Charitable Foundation.

Information about our Executive Officers

The following table sets forth the names, ages, positions and certain other information regarding the Company's executive officers as of February 1, 2021. Officers are elected annually and serve at the discretion of the Board of Directors.

Name	Age	Positions
Brent Shafer	63	Chairman of the Board of Directors and Chief Executive Officer
Marc G. Naughton	65	Executive Vice President and Chief Financial Officer
Travis S. Dalton	50	Executive Vice President, Chief Client & Services Officer and President, Cerner Government Services
Daniel P. Devers	48	Executive Vice President and Chief Legal Officer
Jerome Labat	55	Executive Vice President and Chief Technology Officer
Tracy L. Platt	47	Executive Vice President and Chief Human Resources Officer
Donald D. Trigg	49	President

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 that, Mr. Shafer served as Chief Executive Officer of the global Philips' Home Healthcare Solutions business, a home health care 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.

Travis S. Dalton joined the Company in August 2001 as Practice Operations Manager and has held a variety of business and client senior leadership roles since that time, including Client Results Executive from February 2009 until he was promoted to Vice President and Client Results Executive, a title which he held from March 2011 to December 2012. Mr. Dalton's role was expanded in December 2012, and he served as the Vice President, Investor Owned and General Manager Federal from December 2012 until he was promoted to Senior Vice President, Investor Owned and General Manager Federal in March 2016 (which title was changed to Senior Vice President and General Manager, Federal Government in October 2017). His role was changed to Senior Vice President and President, Cerner Government Services in August 2018. He was promoted to Executive Vice President, Chief Client and Services Officer and President, Cerner Government Services in January 2021. In this role, Mr. Dalton oversees worldwide client relationship management, sales, services, consulting, support, hosting and client success. He also leads Cerner's work in implementing a new, interoperable electronic health record for the U.S. Departments of Defense (DOD) and Veterans Affairs (VA).

Daniel P. Devers was appointed as Executive Vice President and Chief Legal Officer in January 2021 and has served as Senior Vice President and Chief Intellectual Property Officer since May 2013. As Cerner's Chief Legal Officer, Mr. Devers is responsible for overseeing Cerner's worldwide legal affairs including litigation, intellectual property and corporate matters. Prior to serving as Chief Legal Officer, Mr. Devers served as Senior Vice President – Cloud Strategy from February 2020 to January 2021, Senior Vice President and General Counsel from April 2018 to February 2020, Senior Corporate Counsel – Intellectual Property from 2003 to 2007 and Corporate Counsel – Intellectual Property from February 2002 to December 2003. He has been a member of the Cerner Executive Committee since March 2020. Mr. Devers was

an equity partner at Shook, Hardy & Bacon LLP prior to joining Cerner. He taught patent law at the University of Missouri and served a three-year gubernatorial appointment to the Missouri Technology Corporation's Board of Directors.

Jerome Labat joined the Company in June 2020 as Executive Vice President and Chief Technology Officer (CTO). As CTO, Mr. Labat has executive responsibility for client-facing software products and technology development, including platform and product development, modernization and security. Prior to joining the company, Mr. Labat served as Senior Vice President and Chief Technology Officer at Micro Focus International plc, a British multinational, pure-play enterprise software and information technology company, from September 2017 until June 2020. In this role, Mr. Labat led an organization of about 500 people globally and, among other things was responsible for the company's product portfolio technology and strategy vision as to how Micro Focus' solutions would support its clients through their digital transformation, and developed and implemented technology and solution strategies to support Micro Focus' digital transformation. Prior to joining Micro Focus, Mr. Labat spent five years with Hewlett Packard Enterprise Corporation (HPE), his most recent title being CTO HPE- Software Division, which he held from December 2013 to August 2017. In this role, Mr. Labat led HPE's cloud automation business. Prior to serving as CTO HPW-Software Division, Mr. Labat served as Vice President and General Manager, Cloud Automation and Management for HPE and in various senior leadership positions with other companies, including Intuit Corporation and Oracle Corporation.

Tracy L. Platt joined the Company in July 2019 as Executive Vice President and Chief Human Resources Officer. Prior to joining the Company, Ms. Platt spent nearly 10 years in executive HR roles at Medtronic Plc, a global health care company that develops and distributes medical devices. More specifically, Ms. Platt was Vice President, Human Resources, Medtronic from September 2009 to July 2019. Ms. Platt brings health care experience from Medtronic and other key organizations, including Cardinal Health and GE Healthcare. Her most recent role at Medtronic included HR leadership for its global operations organization and driving an operating model transformation throughout the enterprise.

Donald D. Trigg 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, Senior Vice President and President, Cerner Health Ventures from 2012-2018, and Executive Vice President, Strategic Growth from 2019 to February 2020. From 2010-2012, Mr. Trigg served as Chief Revenue Officer at CodeRyte, Inc. prior to its acquisition by 3M's health care 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.

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 1A. Risk Factors.

COVID-19 Risks

The extent to which the COVID-19 pandemic and measures taken in response could materially adversely affect our financial condition, future bookings and results of operations will depend on future developments, which are highly uncertain and are difficult to predict. The COVID-19 pandemic and efforts to control its spread have significantly curtailed the movement of people, goods and services worldwide, including in most or all of the regions in which we sell our software, health care devices, technology-enabled services or other services (collectively referred to as "Products and Services") and conduct our business operations. It has caused us to modify our business practices, and we may take further actions as required by government authorities, our clients or as determined to be in the best interests of our associates, clients and business partners. These measures and our clients' focus on the pandemic have also resulted in delays in marketing, selling and implementing our Products and Services. There is no certainty that these measures will be sufficient to mitigate the risks posed by the virus and our ability to perform critical functions could be harmed. The magnitude and duration of the disruption and resulting decline in business activity is uncertain. In particular, we have experienced and may continue to experience a negative financial impact due to a number of factors, including without limitation:

- Cerner's efforts and investments in assisting its clients in their response to the pandemic;
- Near-term declines in new business bookings as our clients focus on helping their patients during the crisis, rather than making new or expanded purchasing decisions, and longer-term declines in bookings for new Products and Services to the extent that the pandemic results in a sustained global or U.S. economic downturn;
- Delays in implementing our Products and Services, including delays in the pace of completion of existing projects, while client resources are reallocated or dedicated to fighting the COVID-19 pandemic, and supply chain interruptions;
- Financial pressures being put on our clients, which may in turn result in a delay in collections or non-payment from our clients; and
- Financial pressures being put on our strategic investments for which we hold an equity interest increases the risk of asset impairment.

Although we experienced some challenges in connection with the COVID-19 pandemic during 2020, including declines in revenue related to project delays, at this time, we have not experienced a negative impact on our liquidity, access to capital or overall operations. While we generally expect the level of demand for our Products and Services negatively impacted by the COVID-19 pandemic to recover as we progress through fiscal 2021, we are unable to predict the ultimate impact of the COVID-19 outbreak, including the nature and timing of when demand recovery may occur. Even after the COVID-19 pandemic has subsided, we may experience material adverse impacts to our business as a result of the global or U.S. economic impact and any recession that has occurred or may occur in the future. There are no comparable recent events that provide guidance as to the effect the COVID-19 pandemic may have, and, as a result, the ultimate impact of the pandemic on our operations and financial results is highly uncertain and subject to change. To the extent the COVID-19 pandemic adversely affects our business and financial results, it may also have the effect of heightening many of the other risks described below.

Cybersecurity and Information Technology Risks

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 hosting services for certain clients, including the collection and storage of critical patient and administrative data and the provision of support services. We rely on the secure electronic transmission, processing and storage of sensitive information, including protected health information; personally identifiable information; financial information; and other sensitive information relating to our clients and their patients, our company and our third-party suppliers. We also use public cloud providers and other third parties in connection with hosting our own data. A catastrophic failure of our backup generators during a prolonged public utility power outage; an impairment of telecommunications lines; a successful concerted denial of service attack; a significant system, network or data breach; damage, injury or impairment to the buildings, equipment, personnel operating such facilities or the client data contained therein; or errors by the personnel operating such facilities could cause a disruption in operations and negatively impact our clients. System redundancy, disaster recovery and other continuity measures may be inadequate. Any interruption, damage or breach of our systems or those of third parties on which we rely 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, increase our operating costs and have a material adverse impact on our results of operations.

A security breach could subject us to increased expenses, legal exposure and regulatory actions, and clients and prospective clients could be deterred from using our Products and Services. Our Products and Services require us to store, retrieve, process and manage our clients' information and data (and that of their patients), as well as our own data. Persons with authorized access, both associates and third parties, may use such access to harm the Company. Or persons outside of our organization may attempt to identify and exploit Product and Service vulnerabilities, penetrate or bypass our security measures, and gain unauthorized access to our software, hardware and cloud offerings, networks and systems, or those of our clients and suppliers, any of which could lead to disruptions in mission-critical systems or the unauthorized release or corruption of protected health information, personally identifiable information, financial information or other sensitive information, or the confidential information or data of Cerner, our clients or their patients, or our suppliers. We may be targeted by computer hackers because we are a prominent health care IT company and have high profile clients, including government clients. Additionally, our clients and their employees may be targeted by hackers who compromise their credentials and lead to unauthorized access of our systems. These risks may increase as we continue to grow our cloud offerings, collect, store and process increasingly large amounts of our clients' confidential data, including protected health information and sensitive personal data, and host or manage parts of our clients' businesses in cloud-based/multi-tenant IT environments. We also use third party public cloud providers in connection with certain client facing

cloud-based offerings and to host our own data. There can be no assurance that our policies, procedures and controls or those of third parties on which we rely will detect or prevent all 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. 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 were to allow unauthorized access to or modification of data or our IT systems, or if our Products 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 Products and Services and result in reduced revenue and earnings. These types of security incidents could also lead to lawsuits, regulatory investigations and claims and, in some cases, contractual costs related to notification and fraud monitoring. There can be no assurance that our cyber risk insurance will adequately cover all of our losses from any future security breaches or remain available on acceptable terms, if at all.

Operating and Product Risks

We may be subject to claims for system errors and warranties or incur substantial costs related to product and service-related liabilities. Many of our Products 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. Our Products and Services, or the third-party software products or services incorporated therein, may contain design, coding or other errors, especially when first introduced. Similarly, errors in the implementation and configuration can occur and have occurred in the past. These errors could affect the ability of our Products and Services to properly function, integrate or operate with other offerings, scale to meet the needs of our clients, create vulnerabilities and adversely affect market acceptance. Our client agreements typically provide warranties concerning material errors and other matters. Our failure to meet these warranties could allow the client to terminate the agreement and possibly obtain a refund or damages or both, require us to incur additional expense to correct such failure, subject us to claims, damage our reputation and negatively affect future sales. We attempt to contractually limit our liability; however, these contractual limitations may not be enforceable or otherwise protect us from liability. We may also be subject to claims that are not covered by contract. There is no assurance that our liability insurance will adequately cover any claim or remain available on acceptable terms, if at all. If we are uninsured or under-insured for any such claim, our business, results of operations and financial condition could be materially harmed. Product and service-related claims, even if not successful, could damage our reputation, result in the loss of existing or potential clients, divert management's attention, result in significant revenue loss, create potential liabilities for our clients and us and increase our operational costs.

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 or our software may be subject to claims related to open source software licenses. We rely upon a combination of confidentiality practices and policies, contractual arrangements and technical security measures to maintain the confidentiality and trade secrecy of our proprietary information. We also rely on trademark, copyright and patent laws to protect our intellectual property rights. Despite these efforts, 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 occasionally involved in intellectual property infringement or misappropriation claims. These claims, even if unmeritorious, are expensive to defend and are often incapable of prompt resolution. If we are unsuccessful in defending these claims, 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 Products and Services. We rely upon open source software in our Products and Services. We may encounter claims alleging unauthorized use of the software purported to be licensed under 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. We could also be required to make our software source code available under the applicable open source license, utilize or develop alternative technology, or cease using, selling or supporting the applicable Products and Services if we are unsuccessful in defending such claims.

We may become involved in legal proceedings that could have a material adverse impact on our business, results of operations and financial condition, and our inability or failure to effectively manage publicity related to such claims or legal proceedings could adversely impact our business. From time to time and in the ordinary course of our business, we may become involved in various legal proceedings and claims, including for example, those relating to employment practices, solution and implementation defects, personal injury, torts, intellectual property infringement, violations of law and breaches of contract and warranties. All disputes and legal proceedings are inherently unpredictable. And, regardless of the merits of the claims, litigation may lead to negative publicity and may be expensive, time-consuming and disruptive to our operations and distracting to management. If resolved against us, legal proceedings could result in excessive judgments, injunctive relief or other equitable relief that may affect how we operate our business. Any settlements of disputes or legal proceedings may also affect how we operate our business. There can be no assurance that our liability insurance will adequately cover any judgment or settlement or 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, it could have a material adverse effect on our business, results of operations and financial condition. Additionally, 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.

We are subject to risks associated with our global operations. We market, sell and support our Products and Services globally. We periodically evaluate entering into new markets and adjusting our focus in certain existing markets. Significant management attention and financial resources could be required to address the risks noted below associated with new market entry into non-U.S. markets and potential disruptions if we chose to adjust our focus in a given market. 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 and labor disruptions;
- Effects of sovereign debt conditions, including budgetary constraints, or health service provider or government spending patterns or government-imposed austerity measures;
- Legal compliance costs or business risks associated with our global operations, such as: i) local laws and customs differing from, or more stringent than those in the United States, such as those relating to data protection and data security, trade protection measures and intellectual property rights, ii) heightened risk 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, iii) export control regulations, iv) different or additional functionality requirements or preferences, or v) certification (e.g. CE marking for medical device software), licensing or regulatory requirements and unexpected changes to those requirements;
- The United Kingdom's withdrawal of its membership from the European Union ("EU"), which is commonly referred to as "Brexit" and associated uncertainty and disruptions relating thereto;
- Natural disasters, war, terrorist acts or 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; and
- Our ability to form relationships with local partners, which help us to offer our Products and Services at scale, and our reliance on these partners whose reputation may not be regarded as highly outside the United States.

We operate in intensely competitive and dynamic industries, and our ability to successfully compete depends on our ability to anticipate or respond quickly to market changes and to bring competitive new Products and Services and features to market in a timely fashion. The market for our Products and Services 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 Products 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 Products and Services will continue to grow or that we will be able to successfully introduce new Products or Services. We provide solutions to clients via various deployment models, including client-server-based solutions and cloud-based offerings. As we move more of our offerings to the cloud, we may incur disruption as we transition existing clients and be less competitive during the transition, which could impact revenue and profitability. We believe 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 Products and Services. As we continue to develop new Products and Services to address areas such as analytics, machine learning ("ML"), artificial intelligence ("AI"), value-based care, consumer solutions, population health management and other health network solutions, we expect to face new competitors, and these competitors may have more experience in these markets, better brand recognition 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. If we do not adapt our pricing models to reflect changes in use of our Products and Services or changes in client demand, our revenues could decrease.

Our success also depends on our ability to maintain and expand our business with our existing clients and effectively transition existing clients to current Products and Services, as well as attracting additional clients. Certain clients originally purchased one or a limited number of our Products and Services. These clients may choose not to expand their use of or purchase new Products and Services. Failure to retain and generate additional business from our current clients could materially and adversely impact our business, financial condition and operating results. In addition, there are a limited number of hospitals and other health care providers in the U.S. market, and the health care industry has been subject to increasing consolidation, which can cause fewer new footprint opportunities or lead to the replacement of our Products and Services in existing clients if the acquiror (or the group being acquired) has a relationship with a different Health Information Technology (HIT) provider. If we are unable to adapt to the impact of industry consolidation, falling costs and technological advancements in a timely manner, our prospects and financial results could be negatively affected.

We intend to continue strategic business acquisitions and to make strategic investments, which are subject to inherent risks. In order to expand our Products and Services offerings and grow our market and client base, we may continue to seek and complete strategic business acquisitions and investments that we believe are complementary to our business. Acquisitions and strategic investments 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) diversion of our management's attention; 2) investment in or entry into markets in which we have little or no direct prior experience; 3) failure to achieve projected synergies; 4) failure to commercialize "go forward" Products and Services; 4) failure to successfully integrate the business; 5) loss of clients, key personnel, suppliers and other important relationships; 6) incurrence of debt or assumption of known and unknown liabilities; 7) write-off of software development costs, goodwill, client lists and amortization of expenses related to intangible assets; 8) dilutive issuances of equity securities; 9) accounting deficiencies relating to 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 10) litigation related to acquisition activity. Further, when we make a strategic investment, we have to rely on third party management teams to drive the portfolio company's success and at times infuse additional capital or provide bridge loans to protect our investment. If we fail to successfully integrate acquired businesses or fail to implement our business strategies with respect to our acquisitions or investments, we may not be able to achieve projected results or support the amount of consideration paid for such acquired businesses or invested into a portfolio company.

If we are unable to manage our growth in the new markets in which we offer Products 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. We expect to pursue growth and expansion opportunities in the areas of analytics, ML, AI, value-based care, consumer solutions, population health and other health network solutions. 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 Products and Services could have a material adverse impact on our future results of operations. Some of our Products 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. Implementing, replacing, or expanding an information system, or modifying, adding or outsourcing business processes, are major decisions for health care organizations. Many of the Products 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.

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. As we decide to partner rather than directly provide certain Products and Services, we will become more dependent on these strategic relationships to meet our clients' needs. We believe that these relationships contribute to our ability to further build our brand, extend the reach of our Products and Services, develop and deploy new products and services, and generate additional revenues and cash flows. The loss of a critical strategic relationship or failure to establish additional relationships, or the failure to realize anticipated synergies and benefits of these strategic relationships, 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 intellectual property and technology in the operation and delivery of our Products and Services. Additionally, we sell or license third party intellectual property and technology in conjunction with our Products and Services. Our remote hosting and cloud services businesses also rely on a limited number of software and services suppliers for certain functions of these businesses. 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 the technology covered by these licenses to compete directly with us. If our third party suppliers were to change product offerings, cease actively supporting the technologies, fail to update and enhance the technologies, encounter technical difficulties in developing these technologies, significantly increase prices, change delivery models, terminate our licenses or supply contracts or suffer significant capacity or supply chain constraints or disruptions, we may need to seek alternative suppliers and incur additional internal or external development costs to ensure continued performance of our Products 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. In addition, interruption in functionality of our Products and Services as a result of changes in third party suppliers could adversely affect our commitments to clients, future sales of Products and Services, and negatively affect our revenue and operating earnings.

Our success depends upon the recruitment and retention of key personnel. Members of our senior management team and other key personnel have departed the Company during the past few years for a variety of reasons, and we cannot guarantee that there will not be additional departures. To remain competitive, we must attract, motivate and retain highly skilled managerial, sales, marketing, consulting and technical personnel, including key personnel skilled in the industries and technical environments in which our Products and Services are offered. As we modernize our core platforms to the cloud, it is important that we retain and attract experienced technical talent with cloud expertise to lead this transformation. Competition for such personnel in our industries is intense in both the United States and abroad. 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. We may also experience increased compensation costs that are not offset by either improved productivity or higher sales. 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 Products and Services and market share advances.

We might not be successful in achieving expected operating efficiencies and sustaining or improving operating expense reductions and might experience business disruptions and adverse tax consequences associated with restructuring, realignment and cost reduction activities. Cerner has implemented and plans to continue to implement several restructuring and realignment initiatives to reduce costs and increase operating efficiencies. There can be no assurance that we will realize, in full or in part, the anticipated benefits of these initiatives. If we are unable to deliver on these initiatives, while continuing to invest in business growth, or if the volume and nature of change overwhelms available resources, our business operations and financial results could be materially and adversely impacted. Our ability to successfully manage and execute these initiatives and realize expected savings and benefits in the amounts and at the times anticipated is important to our business success. Any failure to do so could have a material adverse effect on our businesses, financial condition and results of operations. Moreover, our ability to achieve our other strategic goals and business plans might be adversely affected and we could experience business disruptions with clients and elsewhere if our restructuring and realignment efforts and our cost reduction activities prove ineffective.

Regulatory Risks

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 Products and Services that enable our clients to meet their compliance requirements. 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 Products 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 maintaining and acquiring new client relationships becomes greater.

The last five 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 imaging services, the Medicare and CHIP Reauthorization Act 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 a nationwide trusted health information exchange, established interoperability requirements for providers, payers and consumers, and 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 state Medicaid programs.

Reform of payment policies for Medicare and Medicaid continues to evolve. The Patient Protection and Affordable Care Act 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" (APMs) as bundled payment models based on episodes of care or per capita payment for defined populations as alternatives to traditional fee for service payments to providers. New APMs continue to be developed under the authorities of the Centers for Medicare and Medicaid Innovations, and value-based efforts such as the Medicare Shared Savings Program Accountable Care Organization (MSSP ACO) program or Bundled Payment for Care Improvement (BPCI) advanced episode-based payment model program have seen their second iteration. APMs have evolved to usually require two-sided risk (shared saving and shared losses) and use of Certified EHR Technology (CEHRT) as a precondition for program participation. However, even after failed attempts to repeal the ACA, continuing challenges in the courts create uncertainty for the continued implementation of the ACA. Given a fractious and polarized legislative environment at the federal level, the near-term prospects for health care related legislation face uncertainty. 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. We also anticipate significant impacts from information blocking provisions of the Cures Act and its enabling regulations, which includes mandated adoption of new certified capabilities and updates to support new interoperability requirements as a part of required use of certified HIT. We expect expanded surveillance by federal agencies of certified HIT and its use by our clients. We also anticipate newly expanded regulations under the federal Self-Referral and Anti-Kickback Laws that will contain expanded safe harbors for value based care, and that may promote expanded donation of certified HIT and of cybersecurity technologies in support of trusted health information exchange to support coordinated patient care within value based APMs. In response to this uncertainty, purchasers of HIT may elect to update HIT already in use and postpone investment decisions in new or replacement HIT, including investments in our Products and Services. Future legislation and regulation together with future judicial decisions may ultimately impact the fiscal stability and sustainability of HIT purchasers. Differences in demand related to new regulatory requirements and near-term compliance deadlines that contribute to demand for our Products and Services could impact our financial results. There can be no certainty that any legislation that may be adopted or judicial decisions 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 HIT. Even though we may not be directly regulated by specific health care laws and regulations, our Products and Services must be capable of being used by our clients in a way that complies with those laws and regulations. There are a significant and wide-ranging number of regulations both within the United States 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:

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 Products 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 prosecutorial, regulatory or judicial authorities 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 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 or from providing certain Products and Services to our clients who participate in such 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 Products and Services are capable of electronically transmitting claims for services and items rendered by a physician to many patients' payers for approval and 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 Health Insurance Portability and Accountability Act of 1996 ("HIPAA") security, privacy and transaction standards, as discussed below, also have a potentially significant effect on our claims preparation, transmission and submission services, because 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 Products and Services are covered 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 Products and Services. If other of our Products 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 Products and Services, our short- and long-term business plans for these Products and Services could be delayed or canceled. Our sites have been previously subject to FDA inspections, and we remain subject to periodic FDA inspections. 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 Products and Services.

Security and Privacy. U.S. federal, state and local laws and foreign legislation govern 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.

Data protection regulations impact how businesses, including both us and our clients, can collect and process the personal data of individuals. 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 Products and Services and could have a material adverse impact on our business, results of operations and financial condition. Furthermore, we incur development, resource, and capital costs in delivering, updating, and supporting Products and Services to enable our U.S. and non-U.S. clients to comply with these varying and evolving standards. U.S. federal, state, and non-U.S. governmental enforcement personnel have substantial powers and remedies, particularly in the EU, to pursue suspected or perceived violations. If we fail to comply with any applicable laws or regulations or fail to deliver compliant Products and Services, we could be subject to civil penalties, sanctions and 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. 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 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 and their business associates 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. We and our U.S. clients are also subject to evolving state laws regarding the privacy and security of health care information and personal information generally.

In non-U.S. jurisdictions, we also are subject to transnational, national and local data protection legislation, including, but not limited to, the EU General Data Protection Regulation ("GDPR"), Canadian Personal Information Protection and Electronic Documents Act and Canadian Provincial legislation. In addition to EU and Canadian federal legislation, certain European member states and Canadian provinces have adopted more stringent data protection standards, particularly for health data. These regulations may impose 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 United States.

In non-U.S. jurisdictions, we are subject to potential restrictions on cross-border transfers of personal data to the United States as well as other countries where Cerner has business operations. A recent EU court decision regarding the adequacy of U.S. law to protect EU personal data created additional uncertainty regarding the lawfulness of transfers of EU personal data to the United States and India. Cerner has addressed these requirements through the execution of Standard Contractual Clause Agreements and by designing our support services to minimize, to the extent feasible, transfers of our EU client's patient data to the United States. However, the adoption of data privacy laws and court decisions that restrict cross border transfers or otherwise require data localization could have a material impact on our business. Furthermore, the perception by non-U.S. clients that we cannot provide adequate assurance for transfers of personal information may limit the use and adoption of our Products and Services and could have a material adverse impact on our business, results of operations and financial condition.

Development and adoption of ML and AI technologies offer the potential to significantly improve the delivery of health care. The application of ML and AI technologies to personal and patient information may be regulated under some privacy laws (e.g. GDPR). Furthermore, the lack of standards for measuring the accuracy and effectiveness of ML and AI can raise new or exacerbate existing technological, legal or other challenges that could impact our reputation and have a material adverse impact on our results of operations.

Interoperability Standards. Our commercial and government clients continue to be subject to requirements to adopt interoperable HIT which requires that our Products and Services be interoperable with other third party HIT suppliers. Market forces and governmental/regulatory authorities create software interoperability standards that may apply to our Products and Services. In the case of certain of our Products, these interoperability standards are the basis of certification requirements that our Products must meet, and, in turn, many of our clients must meet prerequisite or participation requirements for many federal health insurance programs, including Medicare and Medicaid Fee for Service programs, for alternative payment models under the Innovation Center of CMS and for other federal or state health insurance or reimbursement programs. These expectations for interoperability are supported by the information blocking prohibitions of the Cures Act. If our Products and Services are not consistent with those requirements, we could be forced to incur substantial additional development costs to conform. The Office of the National Coordinator for Health Information Technology (ONC) is also charged under the Cures Act with developing a Trusted Exchange Framework that establishes governance requirements for trusted health information exchange in the United States. ONC has developed the U.S. Common Data Set for Interoperability which may lay the groundwork for iterative expansion of 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 Products and Services if we need to update our Products 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 Products and Services. If our Products 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 Products 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 certified health 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 requirement of participation in federal health care programs in order to receive reimbursement for health items and services provided by our clients to Medicare and Medicaid beneficiaries. 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 the adoption of CEHRT. 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 has finalized additional regulations under the Cures Act to enforce the act's policy directives relating to data blocking and interoperability. Along with recent CMS actions taken for Medicare and Medicaid, these regulations will also mandate adoption of updated and expanded certified capabilities of CEHRT that our clients must adopt to remain able to participate in the federal programs mentioned earlier. 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. We will continue to address additional regulatory requirements to update our basis for CEHRT as they evolve to support the mandatory updates imposed by new regulations under the Cures Act. Given recent CMS regulations, these updates must become certified and adopted by our clients by January 1, 2023. However, these standards and specifications are subject to interpretation by the entities designated to certify our electronic health care technology as CEHRT compliant. Additionally, the Cures Act requires us to comply with conditions of certification such that if our business practices or our Products 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 Products 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 Products and Services on a timely basis, we may face risks that come from issues in full adoption of our certified Products 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.

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 government entities. These risks include, but are not limited to, the following:

- Government entities, particularly in the United States, often reserve the right to audit our contracts and conduct reviews, inquiries and investigations of our business practices and performance with respect to government contracts. If a government client discovers improper conduct 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 civil money penalties, and suspensions or debarment from doing business with other government agencies.
- U.S. government contracting regulations impose strict compliance and disclosure obligations and our failure to comply with these obligations could be a basis for suspension or debarment, or both, from federal government contracting in addition to breach of the specific contract.
- Government contracts are subject to heightened reputational and contractual risks compared to contracts with commercial clients and often involve more extensive scrutiny and publicity. Negative publicity, including allegations of improper or illegal activity, poor contract performance, or information security breaches, regardless of accuracy, may adversely affect our reputation.
- Terms and conditions of government contracts also tend to be more onerous, are often more difficult to negotiate and involve additional costs. We must comply with specific procurement regulations and a variety of other socio-economic requirements, as well as various statutes, regulations and requirements related to employment practices, recordkeeping and accounting. Our failure to comply with a variety of complex procurement rules and regulations could result in our liability for penalties, including termination of our government contracts, disqualification from bidding on future government contracts and suspension or debarment from government contracting.
- Government entities typically fund projects through appropriated monies. Our VA Electronic Health Record Modernization and DOD MHS Genesis agreements are indefinite delivery, indefinite quantity contracts. The change in presidential administration may affect VA and DOD budget priorities for this ongoing work.
- Government entities reserve the right to change the scope of or terminate these projects at their convenience for lack of approved funding or other reasons, which could limit our recovery of reimbursable expenses or investments. In addition, government contracts may be protested, which could result in administrative procedures and litigation, result in delays in performance and payment, be expensive to defend and be incapable of prompt resolution.
- It is common in contracting with governments for there to be a prime contractor with privity of contract to the government client and one or more subcontractors. We serve in both capacities for different government clients. There are inherent risks in being a subcontractor, including without limitation, reliance on the performance of the prime contractor for the execution of the contract to the satisfaction of the client. Additionally, when we serve as the prime contractor, we rely on our subcontractors to fulfill certain contractual obligations under our agreements with government clients. A failure by the prime contractor to perform under an agreement under which we serve as a subcontractor, or a failure by a subcontractor to perform under an agreement under which we serve as a prime contractor, could have a material adverse impact on our business, results of operations and financial condition.

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.

Capital and Credit Risks

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. 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 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, particularly in light of the ongoing COVID-19 pandemic, our business, results of operations and financial condition could be materially and adversely affected.

There are risks associated with our outstanding and future indebtedness. As of December 31, 2020, we had \$1.34 billion of long-term debt outstanding, and we may incur additional indebtedness in the future. 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 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. In addition, the London Interbank Offered Rate ("LIBOR") is scheduled to be phased out, and when it does, we will need to agree upon a replacement index with the lenders under our outstanding indebtedness at the time. Such new rates may not be as favorable to us as those in effect prior to any LIBOR phase-out. With respect to our Third Amended and Restated Credit Agreement (as amended, the "Credit Agreement") and the related interest rate swap, if the swap and the Credit Agreement replacement rates are not identical, our hedge could be less effective. Our failure to manage these risks effectively could adversely affect our financial condition and results of operations.

We cannot guarantee that our capital allocation strategy, which may include share repurchases and dividend payments, will be fully implemented or that it will enhance long-term shareholder value. As of December 31, 2020, the total available for repurchase under our stock repurchase program was \$927 million. 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, 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. 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 shareholder value.

Tax, Finance and Accounting Related Risks

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 comparable taxing authorities in other country jurisdictions. Changes in tax laws could cause us to experience fluctuations in our tax obligations and effective tax rates in future periods and otherwise adversely affect our tax positions and our tax liabilities. Our effective tax rates, tax payments, tax credits or incentives could be adversely affected by changes in tax laws. 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 require significant judgment in determining our worldwide provision for income taxes and other tax liabilities. As these and other tax laws and related regulations change, our financial results could be materially impacted. 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.

Goodwill and other intangible assets represent approximately 17% 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.

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.

Lower than expected revenue growth or shifts in our revenue mix could adversely affect our results of operations. Our revenue growth and mix could vary over time due to a number of factors, including timing of contracts signing, changes in the health of our end markets, unexpected client attrition, and the mix of software, hardware, devices, maintenance, support and services revenues, which carry different margin rates which can vary from period to period. Our operating results could be harmed by changes in revenue mix and costs, together with numerous other factors, including rapid growth in lower margin services business, declines in software, and growth in non-cash expenses, such as amortization and depreciation.

General Risk Factors

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 Products 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, our clients' abilities to meet project milestones, seasonality of revenue collection 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 Products and Services, a large percentage of our revenues are generated by the sale and installation of larger, more complex and higher-priced 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 applicable laws, availability of personnel resources or by actions taken by competitors. Revenue recognized in any quarter may also depend upon our clients' abilities to meet project milestones. Delays in the expected sale, installation or implementation of these large systems or in meeting project milestones 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. We may also experience seasonality in revenues.

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 Products 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 other factors, many of which are beyond our control. Furthermore, broad market and industry fluctuations may also adversely affect the trading price of our common stock, regardless of actual operating performance. As a matter of policy, we do not generally comment on our stock price or rumors.

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, future fluctuations in foreign currency exchange rates, particularly the strengthening of the U.S. dollar against major currencies, could materially affect our financial results.

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, such as advance notice of stockholder proposals at meetings, no ability to take action by written consent and restricting shareholders from calling special meetings. We are also subject to the business combination provisions that could delay or prevent a change of control.

Item 1B. Unresolved Staff Comments.

None

Item 2. Properties.

As of the end of 2020, we owned approximately 6.7 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 2020, we also leased approximately 357 thousand gross square feet of office space in the United States used by our Domestic segment, and approximately 1.4 million gross square feet of office and data center space outside the United States, primarily in Australia, Canada, Europe, India, and the Middle East, which is used by our International segment.

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.

The disclosure relating to our dispute and settlement with Fujitsu Services Limited contained in Note (19) is incorporated herein by reference.

Item 4. Mine Safety Disclosures.

Not applicable.

Part II.

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

Our common stock trades on the Nasdaq Global Select MarketSM under the symbol CERN.

At February 1, 2021, there were approximately 925 owners of record.

Our Board of Directors declared cash dividends on our issued and outstanding common stock in 2020 and 2019. Subject to declaration by our Board of Directors, we expect to continue paying quarterly cash dividends as a part of our current capital allocation strategy. Future dividends will be subject to the determination, declaration and discretion of our Board of Directors and compliance with covenants under our outstanding debt agreements. Refer to Note (16) of the Notes for further information regarding our dividend program.

The table below provides information with respect to Common Stock purchases by the Company during the fourth fiscal quarter of 2020:

Period	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs (a)	Approximate Dollar Value of Shares That May Yet Be Purchased Under the Plans or Programs (a)
October 1, 2020 - October 31, 2020	113,426	\$ 69.76	113,426	\$ 1,025,820,997
November 1, 2020 - November 30, 2020	528,050	73.67	528,050	\$ 986,919,553
December 1, 2020 - December 31, 2020	811,066	74.11	811,066	\$ 926,812,469
Total	<u>1,452,542</u>	\$ 73.61	<u>1,452,542</u>	

- (a) Under our current share repurchase program, which was initially approved by our Board of Directors on May 23, 2017 (and announced May 25, 2017) and most recently amended on December 12, 2019 (as announced on December 13, 2019), the Company is authorized to repurchase up to \$3.70 billion of shares of our common stock, 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 2020, we repurchased 10.6 million shares for total consideration of \$757 million under the program pursuant to Rule 10b5-1 plans. As of December 31, 2020, \$927 million remains available for repurchase under the program. Refer to Note (16) of the Notes 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.

Item 6. Selected Financial Data.*(In thousands, except per share data)*

	2020 ⁽¹⁾	2019 ⁽²⁾	2018 ⁽³⁾	2017 ⁽⁴⁾	2016
Statement of Operations Data:					
Revenues	\$ 5,505,788	\$ 5,692,598	\$ 5,366,325	\$ 5,142,272	\$ 4,796,473
Operating earnings	914,567	600,669	774,785	960,471	911,013
Earnings before income taxes	991,473	654,512	800,851	967,129	918,434
Net earnings	780,088	529,454	630,059	866,978	636,484
Earnings per share:					
Basic	2.54	1.66	1.91	2.62	1.88
Diluted	2.52	1.65	1.89	2.57	1.85
Weighted average shares outstanding:					
Basic	306,669	318,229	330,084	331,373	337,740
Diluted	309,136	321,235	333,572	337,999	343,653
Balance Sheet Data:					
Working capital	\$ 1,482,361	\$ 1,069,176	\$ 1,356,114	\$ 1,590,632	\$ 773,960
Total assets	7,521,096	6,894,622	6,708,636	6,469,311	5,629,963
Long-term debt, excluding current installments	1,336,069	1,038,382	438,802	515,130	537,552
Shareholders' equity	4,482,567	4,317,328	4,928,389	4,785,348	3,927,947

(1) In 2020, we recognized gains upon the disposition of certain business operations as further discussed in Note (9) of the Notes.

(2) In 2019, we adopted new lease accounting guidance as further discussed in Note (6) of the Notes.

(3) In 2018, we adopted new revenue recognition guidance as further discussed in Note (2) of the Notes.

(4) Includes the impact of certain U.S. income tax reform.

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.

All references to years in this MD&A represent fiscal years unless otherwise noted. Refer to Note (1) of the Notes for information regarding our fiscal year end.

Information regarding our 2018 results of operations, including a year-to-year comparison against 2019, may be found in Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations in our annual report on Form 10-K for the period ended December 28, 2019, which was filed with the Securities and Exchange Commission on February 10, 2020.

Management Overview

Our revenues are primarily derived by selling, implementing, operating 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 R&D to create solutions and tech-enabled services for the health care industry. We may also supplement organic growth with acquisitions or strategic investments and collaborations.

Cerner's long history of growth has created an important strategic footprint in health care, with Cerner holding more than 25 percent market share in the U.S. acute care EHR market and a leading market share in several non-U.S. regions. Foundational to our growth going forward is delivering value to this core client base, including executing effectively on our large U.S. federal contracts and cross-selling key solutions and services in areas such as revenue cycle. We are also investing in platform modernization, with a focus on delivering a software as a service platform that we expect to lower total cost of ownership, improve clinician experience and patient outcomes, and enable clients to accelerate adoption of new functionality and better leverage third-party innovations.

We also expect to continue driving growth by leveraging our *HealthIntent* platform, which is the foundation for established and new offerings for both provider and non-provider markets. The EHR-agnostic *HealthIntent* platform enables Cerner to become a strategic partner with health care stakeholders and help them improve performance under value-based contracting. The platform, along with our *CareAware* platform, also supports offerings in areas such as long-term care, home care and hospice, rehabilitation, behavioral health, community care, care team communications, health systems operations, consumer and employer, and data-as-a-service.

Beyond our strategy for driving revenue growth, we are also focused on earnings growth. After several years of margin compression related to slowing revenue growth, increased mix of low-margin services, and lower software demand due to the end of direct government incentives for EHR adoption, Cerner implemented a new operating structure and introduced other initiatives focused on cost optimization and process improvement in 2019. To assist in these efforts, we engaged an outside consulting firm to conduct a review of our operations and cost structure. We have made good progress since we kicked off our transformation in 2019 and expect this progress to be reflected in improved profitability going forward. We are focused on ongoing identification of opportunities to operate more efficiently and on achieving the efficiencies without impacting the quality of our solutions and services and commitments to our clients.

We are also focused on delivering strong levels of cash flow which we expect to accomplish by continuing to grow earnings and prudently managing capital expenditures. We expect to use future cash flow and debt, as appropriate, to meet our capital allocation objectives, which include investing in our business, potential acquisitions or other strategic investments to drive profitable growth, and returning capital to shareholders through share repurchases and dividends.

COVID-19

Our business and results of operations in 2020 were impacted by the ongoing COVID-19 pandemic. It has caused us to modify certain of our business practices, including requiring most of our associates to work remotely; restricting associate

travel; developing social distancing plans for our associates; and canceling or postponing in person participation in certain meetings, events and conferences. It is not possible to quantify the full financial impact that the COVID-19 pandemic has had on our results of operations, cash flows, or financial condition, due to the uncertainty surrounding the pandemic, the difficulty inherent in identifying and measuring the various impacts that have or may stem from such an event and the fact that there are no comparable recent events that provide guidance as to how to measure or predict the effect the COVID-19 pandemic may have on our business. However, we believe COVID-19 has impacted, and could continue in the near-term to impact, our business results, primarily, but not limited to, in the following areas:

- Bookings, backlog and revenues – A decline in new business bookings as certain client purchasing decisions and projects are delayed to focus on treating patients, procuring necessary medical supplies, and managing their own organizations through this crisis. This decline in bookings flows through to reduced backlog and lower subsequent revenues.
- Associate productivity – A decline in associate productivity, primarily for our services personnel, as a large amount of work is typically done at client sites, which is being impacted by travel restrictions and our clients' focus on the pandemic. Our clients' focus on the pandemic has also led to pauses on existing projects and postponed start dates for others, which translates into lower professional services revenues and a lower operating margin percentage. We are mitigating this by doing more work remotely than we have in the past, but we cannot fully offset the negative impact.
- Travel – Associate travel restrictions reduce client-related travel, which reduces reimbursed travel revenues and lowers our costs of revenue as a percent of revenues. Such restrictions also reduce non-reimbursable travel, which lowers operating expenses.
- Cash collections – A delay in client cash collections due to COVID-19's impact on national reimbursement processes, and client focus on managing their own organizations' liquidity during this time. This translates to lower cash flows from operating activities, and a higher days sales outstanding metric. Lower cash flows from operating activities may impact how we execute under our capital allocation strategy.
- Capital expenditures – A decline in capital spending as certain capital projects are delayed.

We believe the impact of COVID-19 on our results of operations for the first quarter of 2020 was limited, with the largest impact in the areas of reduced bookings and lower technology resale revenue, due to the mid-March 2020 timing of when we implemented changes to our business practices in response to COVID-19, and the nature of the industry in which we operate. We believe the impact of COVID-19 on our results of operations for the second through fourth quarters of 2020 was much greater than in the first quarter of 2020 as the pandemic and practices we implemented in mid-March 2020 were ongoing for the full period, with the largest impact in the areas of reduced bookings and lower licensed software, technology resale, professional services, and reimbursed travel revenues.

We expect a negative financial impact to continue into 2021. However, the impact will be difficult to quantify as there are many factors outside of our control, so any forward looking statements that we make regarding our projections of future financial performance; new solutions and services; capital allocation plans; cost optimization and operational improvement initiatives; and the expected benefits of our acquisitions, divestitures or other collaborations will all be subject to increased risks, as discussed further below and in Part I, Item 1A of this annual report on Form 10-K. Additionally, we may make further modifications to our operations or business plans that have a negative financial impact as required by government authorities, our clients or as we determine are in the best interests of our associates, clients and business partners. While we expect COVID-19 to have an impact on our results of operations, cash flows, and financial position in the near-term, we believe the nature of our products and services offerings will continue to be in demand, regardless of this pandemic. However, the COVID-19 pandemic and related restrictive measures have created significant economic uncertainty and the duration and magnitude of the impact of the pandemic is unknown at this time; therefore, there can be no assurance that the ultimate impact of the pandemic will not adversely affect our future operational and financial performance.

Operational Improvement Initiatives

Throughout 2020, the Company has continued to focus on leveraging the impact of our new operating structure, which was rolled out in the first quarter of 2019, and identifying additional efficiencies in our business. We continue to be focused on reducing operating expenses and generating other efficiencies that are expected to provide longer-term operating margin expansion. We are continuing our portfolio management, which includes ongoing evaluation of our offerings,

exiting certain low-margin businesses, and being more selective as we consider new business opportunities. To assist in these efforts, we engaged an outside consulting firm to conduct a review of our operations and cost structure. As part of our portfolio management, we closed on the sale of certain of our business operations, primarily conducted in Germany and Spain, in July 2020, and the sale of certain of our revenue cycle outsourcing business operations in August 2020. We expect to continue to evaluate and complete divestiture transactions that are strategic to our operational improvement initiatives. We continue to be focused on ongoing identification of opportunities to operate more efficiently and on achieving the efficiencies without impacting the quality of our solutions and services and commitments to our clients.

In the near term, we expect to incur expenses in connection with these efforts. Such expenses may include, but are not limited to, consultant and other professional services fees, employee separation costs, contract termination costs, and other such related expenses. We recognized \$168 million and \$221 million of expenses related to these efforts in 2020 and 2019, respectively, which are included in operating expenses in our consolidated statements of operations. We expect to incur additional expenses in connection with these initiatives in 2021, which may be material.

Results Overview

Bookings, which reflect the value of executed contracts for software, hardware, professional services and managed services, was \$5.58 billion in 2020, which is a decrease of 7% compared to \$5.99 billion in 2019.

Revenues for 2020 decreased 3% to \$5.51 billion, compared to \$5.69 billion in 2019.

Net earnings for 2020 increased 47% to \$780 million, compared to \$529 million in 2019. Diluted earnings per share increased 53% to \$2.52 in 2020, compared to \$1.65 in 2019.

We had cash collections of receivables of \$5.70 billion in 2020, compared to \$5.79 billion in 2019. Days sales outstanding was 76 days for the 2020 fourth quarter, compared to 81 days for the 2020 third quarter and 72 days for the 2019 fourth quarter. Operating cash flows for 2020 were \$1.44 billion, compared to \$1.31 billion in 2019.

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 2020 Compared to Fiscal Year 2019

<i>(In thousands)</i>	2020	% of Revenue	2019	% of Revenue	% Change
Revenues	\$ 5,505,788	100 %	\$ 5,692,598	100 %	(3)%
Costs of revenue	932,941	17 %	1,071,041	19 %	(13)%
Margin	4,572,847	83 %	4,621,557	81 %	(1)%
Operating expenses					
Sales and client service	2,582,615	47 %	2,675,337	47 %	(3)%
Software development	749,007	14 %	737,136	13 %	2 %
General and administrative	491,586	9 %	520,598	9 %	(6)%
Amortization of acquisition-related intangibles	55,595	1 %	87,817	2 %	(37)%
Total operating expenses	3,878,803	70 %	4,020,888	71 %	(4)%
Total costs and expenses	4,811,744	87 %	5,091,929	89 %	(6)%
Gain on sale of businesses	220,523	4 %	—	— %	
Operating earnings	914,567	17 %	600,669	11 %	52 %
Other income, net	76,906		53,843		
Income taxes	(211,385)		(125,058)		
Net earnings	\$ 780,088		\$ 529,454		47 %

Revenues & Backlog

Revenues decreased 3% to \$5.51 billion in 2020, as compared to \$5.69 billion in 2019. The decline in revenues is primarily attributable to the following:

- The impact of the ongoing COVID-19 pandemic on our 2020 operations, with the largest impact in the areas of licensed software, technology resale, professional services, and reimbursed travel revenues, as further discussed above.
- The 2020 period includes a \$142 million reduction in revenues due to the termination of certain revenue cycle outsourcing contracts effective in the fourth quarter of 2019.
- The 2020 period includes a \$43 million reduction in revenues due to the sale of certain of our business operations primarily conducted in Germany and Spain, as further discussed in Note (9) of the Notes. We expect the disposition of such operations to reduce future International Segment revenues by approximately \$83 million on an annualized basis.
- The 2020 period includes a \$39 million reduction in revenues due to the sale of certain of our revenue cycle outsourcing business operations, as further discussed in Note (9) of the Notes. We expect the disposition of such operations to reduce future Domestic Segment revenues by approximately \$77 million on an annualized basis.

These declines are partially offset by increased implementation activity within our federal business, inclusive of ongoing projects with the U.S. Department of Defense and the U.S. Department of Veterans Affairs. In 2020, 18% of our total revenues were attributable to our relationships (as the prime contractor or a subcontractor) with U.S. government agencies, compared to 13% in 2019. Refer to Note (2) of the Notes for further information regarding revenues disaggregated by our business models.

Backlog, which reflects contracted revenue that has not yet been recognized as revenue, was \$13.04 billion at the end of 2020, compared to \$13.71 billion at the end of 2019. This decline in backlog is primarily attributable to the divestiture

transactions discussed above, along with the impact of the ongoing COVID-19 pandemic on our bookings during 2020, as further discussed above. We expect to recognize 30% of our backlog as revenue over the next 12 months.

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 \$1.08 billion 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 2020, compared to 19% in 2019. The lower costs of revenue as a percent of revenues was primarily driven by lower reimbursed travel revenue, which carries a 100% cost of revenue; a lower mix of technology resale revenue, which carries a high cost of revenue; and reduced utilization of third-party resources associated with professional services and support and maintenance revenue.

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 decreased 4% to \$3.88 billion in 2020, compared to \$4.02 billion in 2019.

- Sales and client service expenses as a percent of revenues were 47% in both 2020 and 2019. These expenses decreased 3% to \$2.58 billion in 2020, from \$2.68 billion in 2019. 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 decrease in sales and client service expenses was primarily driven by a \$41 million reduction in associate travel costs; a \$30 million reduction in charges incurred in connection with the termination of certain revenue cycle outsourcing contracts, discussed above; and the impact of 2019 including a \$30 million charge in connection with a client dispute. The divestiture transactions, as further discussed in Note (9) of the Notes, also contributed to the reduction in expenses. These reductions were partially offset by a \$21 million pre-tax charge recorded in 2020 to provide an allowance against certain non-current receivables from a former client.

- Software development expenses as a percent of revenues were 14% in 2020, compared to 13% in 2019. Expenditures for software development include ongoing development and enhancement of the *Cerner Millennium* and *HealthIntent* platforms, with a focus on supporting key initiatives to enhance physician experience, revenue cycle, population health management, and health network solutions. In addition, 2020 includes an increase in costs incurred in connection with our efforts to modernize our platforms, with a focus on development of a software as a service platform. A summary of our total software development expense in 2020 and 2019 is as follows:

(In thousands)	For the Years Ended	
	2020	2019
Software development costs	\$ 796,971	\$ 783,593
Capitalized software costs	(287,869)	(270,948)
Capitalized costs related to share-based payments	(7,408)	(2,923)
Amortization of capitalized software costs	247,313	227,414
Total software development expense	\$ 749,007	\$ 737,136

- General and administrative expenses as a percent of revenues were 9% in both 2020 and 2019. These expenses decreased 6% to \$492 million in 2020, from \$521 million in 2019. General and administrative expenses include 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, certain organizational restructuring and other expense. The decrease in general and administrative expenses includes the impact of 2019 including a \$7 million charge to settle disputes with a former vendor. The divestiture transactions, as further discussed in Note (9) of the Notes, also contributed to the reduction in expenses. In 2020, general and administrative expenses include \$137 million of expenses incurred in connection with our operational improvement initiatives, discussed above, compared to \$149 million in the same period of 2019. We expect to incur additional expenses in connection with these efforts in future periods, which may be material.
- Amortization of acquisition-related intangibles as a percent of revenues was 1% in 2020, compared to 2% in 2019. These expenses decreased 37% to \$56 million in 2020, from \$88 million in 2019. 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 is primarily due to the impact of certain intangible assets from the Health Services acquisition in February 2015 becoming fully amortized in the first quarter of 2020. The divestiture transactions, as further discussed in Note (9) of the Notes, also contributed to the reduction in expenses.

Gain on Sale of Businesses

In 2020, we recognized a \$221 million gain on sale of businesses. Refer to Note (9) of the Notes for further information regarding divestiture transactions that closed during the third quarter of 2020. We expect to continue to evaluate and complete divestiture transactions that are strategic to our operational improvement initiatives discussed above.

Non-Operating Items

- Other income, net was \$77 million in 2020, compared to \$54 million in 2019. The 2020 period includes a \$76 million gain recognized on the disposition of one of our equity investments. The 2019 period includes a \$14 million unrealized gain recognized on that same equity investment; and a \$16 million gain recognized on the disposition of another one of our equity investments. The remaining difference is primarily attributable to increased interest expense in 2020, from the \$600 million of revolving credit loans we borrowed under our Credit Agreement in May 2019, and the \$300 million of Series 2020-A Notes we issued in March 2020. Refer to Note (13) of the Notes for further information regarding the components of other income, net.
- Our effective tax rate was 21% in 2020, compared to 19% in 2019. The increase in the effective tax rate in 2020 is primarily due to a decrease in net excess tax benefits recognized as a component of income tax expense in connection with the exercise of stock options and the vesting of restricted share and share unit awards. Also contributing to the increase, are taxes associated with the divestiture transactions that closed in the third quarter

of 2020, as further discussed in Note (9) of the Notes. Refer to Note (14) of the Notes for further discussion regarding our effective tax rate. We do not expect significant changes to our overall effective tax rate in 2021, from what is reported for 2020.

Operations by Segment

We have two operating segments: Domestic and International. The Domestic segment includes revenue contributions and expenditures associated with business activity in the United States. The International segment includes revenue contributions and expenditures linked to business activity outside the United States, primarily from Australia, Canada, Europe, and the Middle East. Refer to Note (20) of the Notes for further information regarding our reportable segments.

The following table presents a summary of our operating segment information for 2020 and 2019:

<i>(In thousands)</i>	2020	% of Segment Revenue	2019	% of Segment Revenue	% Change
Domestic Segment					
Revenues	\$ 4,879,769	100%	\$ 5,038,127	100%	(3)%
Costs of revenue	854,574	18%	967,035	19%	(12)%
Operating expenses	2,339,624	48%	2,398,422	48%	(2)%
Total costs and expenses	3,194,198	65%	3,365,457	67%	(5)%
Domestic operating earnings	1,685,571	35%	1,672,670	33%	1%
International Segment					
Revenues	626,019	100%	654,471	100%	(4)%
Costs of revenue	78,367	13%	104,006	16%	(25)%
Operating expenses	242,991	39%	276,914	42%	(12)%
Total costs and expenses	321,358	51%	380,920	58%	(16)%
International operating earnings	304,661	49%	273,551	42%	11%
Other costs and expenses, net	(1,296,188)		(1,345,552)		(4)%
Gain on sale of businesses	220,523		—		
Consolidated operating earnings	\$ 914,567		\$ 600,669		52%

Domestic Segment

- Revenues decreased 3% to \$4.88 billion in 2020, from \$5.04 billion in 2019. The decline in revenues is primarily driven by:
 - The impact of the ongoing COVID-19 pandemic on our 2020 operations, with the largest impact in the areas of licensed software, technology resale, professional services, and reimbursed travel revenues, as further discussed above.
 - The 2020 period includes a \$142 million reduction in revenues due to the termination of certain revenue cycle outsourcing contracts effective in the fourth quarter of 2019.
 - The 2020 period includes a \$39 million reduction in revenues due to the sale of certain of our revenue cycle outsourcing business operations, as further discussed in Note (9) of the Notes.

These declines are partially offset by increased implementation activity within our federal business; inclusive of ongoing projects with the U.S. Department of Defense and the U.S. Department of Veterans Affairs. Refer to Note (2) of the Notes for further information regarding revenues disaggregated by our business models.

- Costs of revenue as a percent of revenues were 18% in 2020, compared to 19% in 2019. The lower costs of revenue as a percent of revenues was primarily driven by lower reimbursed travel revenue, which carries a 100% cost of revenue; a lower mix of technology resale revenue, which carries a high cost of revenue; and reduced utilization of third-party resources associated with professional services and support and maintenance revenue.
- Operating expenses as a percent of revenues were 48% in both 2020 and 2019. These expenses decreased 2% to \$2.34 billion in 2020, from \$2.40 billion in 2019. The decrease in operating expenses was primarily driven by a \$32 million reduction in associate travel costs; a \$30 million reduction in charges incurred in connection with the termination of certain revenue cycle outsourcing contracts, discussed above; and the impact of 2019 including a \$30 million charge in connection with a client dispute. These reductions were partially offset by a \$21 million pre-tax charge recorded in 2020 to provide an allowance against certain non-current receivables from a former client.

International Segment

- Revenues decreased 4% to \$626 million in 2020, from \$654 million in 2019. The decline in revenues is primarily due to a \$43 million reduction from the sale of certain of our business operations primarily conducted in Germany and Spain, as further discussed in Note (9) of the Notes. Additionally, we believe the ongoing COVID-19 pandemic has negatively impacted our operations for 2020, as further discussed above. These declines are partially offset by 2020 revenue growth from increased implementation activity in Sweden and the United Kingdom. Refer to Note (2) of the Notes for further information regarding revenues disaggregated by our business models.
- Costs of revenue as a percent of revenues were 13% in 2020, compared to 16% in 2019. The lower costs of revenue as a percent of revenues was primarily driven by lower reimbursed travel revenue, which carries a 100% cost of revenue; and reduced utilization of third-party resources associated with professional services and support and maintenance revenue.
- Operating expenses as a percent of revenues were 39% in 2020, compared to 42% in 2019. These expenses decreased 12% to \$243 million in 2020, from \$277 million in 2019. The decrease in operating expenses is primarily due to the sale of certain of our business operations in Germany and Spain, as further discussed in Note (9) of the Notes.

Other, net

Operating costs and expenses not attributed to an operating segment include expenses such as software development, general and administrative expenses, share-based compensation expense, certain amortization and depreciation, certain organizational restructuring and other expense. These expenses decreased 4% to \$1.30 billion in 2020, from \$1.35 billion in 2019. The decrease is primarily due to lower personnel expenses in 2020 as a result of our operational improvement initiatives, as discussed above.

The effects of inflation on our business during 2020 and 2019 were not significant.

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 our share repurchase and dividend programs.

Our principal sources of liquidity are our cash, cash equivalents, which primarily consist of money market funds, time deposits and commercial paper with original maturities of less than 90 days, short-term investments, borrowings under our Credit Agreement and other sources of debt financing. At the end of 2020, we had cash and cash equivalents of \$616 million and short-term investments of \$442 million, as compared to cash and cash equivalents of \$442 million and short-term investments of \$100 million at the end of 2019.

We have entered into a Credit Agreement with a syndicate of lenders that provides for an unsecured \$1.00 billion revolving credit loan facility, along with a letter of credit facility up to \$100 million (which is a sub-facility of the \$1.00 billion revolving credit loan facility). We have the ability to increase the maximum capacity to \$1.20 billion at any time during the Credit Agreement's term, subject to lender participation and the satisfaction of specified conditions. The Credit Agreement

expires in May 2024. At the end of 2020, we had outstanding revolving credit loans and letters of credit of \$600 million and \$34 million, respectively; which reduced our available borrowing capacity to \$366 million under the Credit Agreement.

We have also entered into note purchase agreements pursuant to which we may issue and sell unsecured senior promissory notes to those purchasers electing to purchase. Refer to Notes (1) and (11) of the Notes for additional information regarding our sources of debt financing.

We believe that our present cash position, together with cash generated from operations, short-term investments and, as appropriate, remaining availability under our Credit Agreement and other sources of debt financing, will be sufficient to meet anticipated cash requirements for the next 12 months.

The following table summarizes our cash flows in 2020 and 2019:

	For the Years Ended	
	2020	2019
<i>(In thousands)</i>		
Cash flows from operating activities	\$ 1,436,705	\$ 1,313,099
Cash flows from investing activities	(801,237)	(640,408)
Cash flows from financing activities	(461,497)	(601,380)
Effect of exchange rate changes on cash	(199)	(3,594)
Total change in cash and cash equivalents	173,772	67,717
Cash and cash equivalents at beginning of period	441,843	374,126
Cash and cash equivalents at end of period	\$ 615,615	\$ 441,843
Free cash flow (non-GAAP)	<u>\$ 857,447</u>	<u>\$ 567,710</u>

Cash from Operating Activities

	For the Years Ended	
	2020	2019
<i>(In thousands)</i>		
Cash collections from clients	\$ 5,704,730	\$ 5,787,180
Cash paid to employees and suppliers and other	(4,082,664)	(4,348,438)
Cash paid for interest	(36,302)	(25,639)
Cash paid for taxes, net of refunds	(149,059)	(100,004)
Total cash from operations	\$ 1,436,705	\$ 1,313,099

Cash flows from operations increased \$124 million in 2020 compared to 2019, due primarily to a reduction in cash used to fund working capital requirements. This includes the impact of \$76 million of certain federal payroll taxes related to pay cycles in the second through fourth quarters of 2020, for which we have deferred remittance to the taxing authority as permitted under the Coronavirus Aid, Relief, and Economic Security Act (the "CARES Act"). Such remittances are expected to be paid to the taxing authority in equal amounts at the end of 2021 and 2022, respectively, as permitted by the CARES Act. Days sales outstanding was 76 days in the fourth quarter of 2020, compared to 81 days for the third quarter of 2020 and 72 days for the fourth quarter of 2019.

Cash from Investing Activities

<i>(In thousands)</i>	For the Years Ended	
	2020	2019
Capital purchases	\$ (283,981)	\$ (471,518)
Capitalized software development costs	(295,277)	(273,871)
Purchases of investments, net of sales and maturities	(363,387)	215,107
Purchases of other intangibles	(38,243)	(35,587)
Sale of businesses	229,471	—
Acquisition of businesses, net of cash acquired	(49,820)	(74,539)
Total cash flows from investing activities	<u>\$ (801,237)</u>	<u>\$ (640,408)</u>

Cash flows from investing activities consist primarily of capital spending, investment, acquisition, and divestiture activities.

Our capital spending in 2020 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 2020 were below 2019 levels, primarily driven by reduced purchases to support our facilities requirements, reflective of the completion of construction on the current phases of our Innovations Campus in the third quarter of 2020. Capital purchases are expected to further decrease in 2021, with these construction phases now complete.

Short-term investment activity historically consists of the investment of cash generated by our business in excess of what is necessary to fund operations. The 2020 activity includes the investment of proceeds from the sale of certain business operations in the third quarter of 2020, as discussed below. The 2019 activity was impacted by changes made to our investment mix, such that our excess funds were more heavily held in cash and cash equivalents versus short-term and long-term investments.

Investment activity also includes the sale of one of our equity investments in August 2020 for cash proceeds of \$90 million. Refer to Note (4) of the Notes for further information regarding this investment.

On July 1, 2020, we sold certain of our business operations, primarily conducted in Germany and Spain, for cash proceeds of \$224 million. We also sold certain of our revenue cycle outsourcing business operations on August 3, 2020. Refer to Note (9) of the Notes for further information regarding these sales. We expect to continue to evaluate and complete divestiture transactions that are strategic to our operational improvement initiatives discussed above.

In 2020 and 2019, we completed certain business acquisitions of entities providing solutions to clients in the health care industry. Refer to Note (8) of the Notes for further information regarding our business acquisitions. In December 2020, we entered into an agreement to acquire Kantar Health, a division of Kantar Group, for \$375 million in cash, subject to adjustment. Kantar Health provides data, analytics, commercial research, and consulting services to the life sciences industry. The acquisition is anticipated to close in the second quarter of 2021, subject to certain conditions. We expect to continue seeking and completing strategic business acquisitions, investments, and relationships that are complementary to our business.

Cash from Financing Activities

<i>(In thousands)</i>	For the Years Ended	
	2020	2019
Long-term debt issuance	\$ 300,000	\$ 600,000
Repayment of long-term debt	(2,500)	—
Cash from option exercises (net of taxes paid in connection with shares surrendered by associates)	229,933	241,435
Treasury stock purchases	(756,950)	(1,320,542)
Dividends paid	(221,461)	(113,823)
Other	(10,519)	(8,450)
Total cash flows from financing activities	<u>\$ (461,497)</u>	<u>\$ (601,380)</u>

In March 2020, we issued \$300 million aggregate principal amount of 2.50% senior unsecured Series 2020-A notes. In May 2019, we borrowed \$600 million of revolving credit loans under our Credit Agreement. Refer to Note (11) of the Notes for further information regarding these obligations.

We may incur additional indebtedness in the next 12 months, which will primarily be dependent on cash flows from operations as well as the timing of business acquisition and capital allocation activity. The proceeds from such indebtedness would be deployed in accordance with our capital allocation strategy, which may include share repurchases and dividend payments (as discussed further below), as well as for general corporate purposes, including acquisitions and investments. The terms and availability of any such debt financing may be impacted by economic and financial market conditions, as well as our financial condition and results of operations at the time we seek such financing, and there can be no assurances that we would be able to obtain such financing on terms that will be acceptable or advantageous to us.

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 2021 based on the number of exercisable options at the end of 2020 and our current stock price. Refer to Note (16) of the Notes for additional information regarding our stock option and equity plans.

During 2020 and 2019, we repurchased 10.6 million and 18.8 million shares of our common stock for total consideration of \$757 million and \$1.30 billion, respectively. As of December 31, 2020, \$927 million remains available for repurchase under our share repurchase program. We may continue to repurchase shares under this program, but such repurchases will be dependent on a number of factors, including the price of our common stock and other cash flow needs. There is no assurance that we will repurchase up to the full amount remaining under the program. Refer to Note (16) of the Notes for further information regarding our share repurchase program.

Refer to Note (16) of the Notes for a summary of cash dividend activity in 2020 and 2019. Subject to declaration by our Board of Directors, we expect to continue paying quarterly cash dividends as a part of our current capital allocation strategy. Future dividends will be subject to the determination, declaration and discretion of our Board of Directors and compliance with covenants under our outstanding debt agreements.

The source of funds for such repurchases and dividends may include cash generated from operations, liquidation of investment holdings and other dispositions of assets, and the incurrence of indebtedness.

Free Cash Flow (Non-GAAP)

<i>(In thousands)</i>	For the Years Ended	
	2020	2019
Cash flows from operating activities (GAAP)	\$ 1,436,705	\$ 1,313,099
Capital purchases	(283,981)	(471,518)
Capitalized software development costs	(295,277)	(273,871)
Free cash flow (non-GAAP)	<u>\$ 857,447</u>	<u>\$ 567,710</u>

Free cash flow increased \$290 million in 2020, compared to 2019, primarily due to reduced capital expenditures. 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, and for management compensation purposes. 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.

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 2020, except short-term purchase order commitments arising in the ordinary course of business.

(In thousands)	Payments Due by Period						
	2021	2022	2023	2024	2025	2026 and thereafter	Total
Balance sheet obligations ^(a) :							
Long-term debt obligations	\$ —	\$ 225,000	\$ —	\$ 600,000	\$ 211,662	\$ 300,000	\$ 1,336,662
Interest on long-term debt obligations	27,368	23,989	20,885	17,610	11,080	33,750	134,682
Other obligations:							
Operating lease obligations	33,611	27,131	20,347	12,199	7,438	37,224	137,950
Purchase obligations	67,126	40,026	37,921	31,630	41,213	521,297	739,213
Total	\$ 128,105	\$ 316,146	\$ 79,153	\$ 661,439	\$ 271,393	\$ 892,271	\$ 2,348,507

(a) At the end of 2020, liabilities for unrecognized tax benefits were \$22 million.

Off-Balance Sheet Arrangements

Refer to Note (11) of the Notes for information regarding our interest rate swap agreement, which is accounted for as a cash flow hedge in accordance with ASC Topic 815, *Derivatives and Hedging*. LIBOR is scheduled to be phased out by the end of 2021. When LIBOR ceases to exist, we will need to agree upon a replacement index with the lenders under our Credit Agreement at the time, and such new rates may not be as favorable to us as those in effect prior to any LIBOR phase-out. If the swap and the Credit Agreement replacement rates are not identical, our hedge could be less effective.

Recent Accounting Pronouncements

Refer to Note (1) of the Notes 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 (14) of the Notes 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 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 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 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.

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 Private Securities Litigation Reform Act of 1995. Forward-looking statements can often be identified by the use of forward-looking terminology, such as "could," "can," "should," "will," "intended," "continue," "believe," "may," "expect," "hope," "anticipate," "goal," "positioned", "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. Significant 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.

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

We are exposed to interest rate risk, primarily changes in LIBOR, related to outstanding revolving credit loans under our Credit Agreement. As of December 31, 2020, the interest rate on revolving credit loans outstanding was 0.95% based on LIBOR plus the applicable spread. In order to manage this exposure, we have entered into an interest rate swap agreement, to hedge the variability of cash flows associated with such interest obligations through May 2024. The interest rate swap effectively fixes the interest rate on the hedged indebtedness under our Credit Agreement at 3.06%. Refer to Note (11) of the Notes for further information regarding outstanding indebtedness and our interest rate swap agreement.

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 31, 2020 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 (21) of the Notes 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.

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 defined in the Exchange Act Rules 13a-15(e) and 15d-15(e)) 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 reports 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 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.

We are responsible for establishing and maintaining adequate internal control over financial reporting (as defined in Rule 13a-15(f) under the Exchange Act). We assessed the effectiveness of our internal control over financial reporting as of December 31, 2020. In making this assessment, we 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, we have concluded that, as of December 31, 2020, 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.

There were no changes in our internal controls over financial reporting during the fiscal quarter ended December 31, 2020, that have materially affected, or are reasonably likely to materially affect, our internal controls over financial reporting.

d) Limitations on Controls.

We 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.

Effective February 19, 2021, we entered into a letter agreement with each of our Named Executive Officers (except John Peterzalek, former EVP and Chief Client and Services Officer, and Marc Naughton, EVP and Chief Financial Officer, whose pending departures were announced in January 2021 and October 2020, respectively), pursuant to which the terms of their Executive Severance Agreements ("ESAs") were amended to modify the provision providing for partial acceleration of equity awards upon a Change in Control (as such term is defined in the ESAs). The ESAs previously provided that 50% of the outstanding and unvested equity incentive awards held by the Named Executive Officers would vest on the date that the Change in Control becomes effective with the remaining 50% to continue vesting according to their vesting schedules, subject to earlier vesting upon the events specified in the ESAs. The letter agreement amended this provision to provide that the 50/50 vesting of equity upon a Change in Control does not apply with respect to any awards granted after January 1, 2021. These amendments were done in connection with the Compensation Committee's direction to implement only double-trigger vesting upon a change in control for all equity awards granted to all Cerner associates after January 1, 2021. The foregoing description of the letter agreement does not purport to be complete and is qualified in its entirety by reference to the full text of the form of letter agreement, which is attached hereto as Exhibit 10.38 and incorporated herein by reference.

PART III.

Item 10. Directors, Executive Officers and Corporate Governance.

The information under "Information Concerning Directors and Nominees," "Meetings of the Board and Committees," "Corporate Governance: Code of Business Conduct and Ethics and Other Governance Documents," "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 2021 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 2020 proxy statement.

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

Item 11. Executive Compensation.

The information under "Committees of the Board: Compensation Committee," "Director Compensation," "2020 Director Compensation Table," "Compensation Committee Report," "Compensation Discussion and Analysis," "Summary Compensation Table," "2020 Grants of Plan-Based Awards," "Outstanding Equity Awards at 2020 Fiscal Year-End," "2020 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 31, 2020:

(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⁾	14,335	\$ 58.59	17,989
Equity compensation plans not approved by security holders	—	—	—
Total	<u>14,335</u>		<u>17,989</u>

(1) Includes grants of stock options, 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 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.

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

(i) Consolidated Financial Statements:

[Reports of Independent Registered Public Accounting Firm](#)

[Consolidated Balance Sheets](#) - As of December 31, 2020 and December 28, 2019

[Consolidated Statements of Operations](#) - Years Ended December 31, 2020, December 28, 2019 and December 29, 2018

[Consolidated Statements of Comprehensive Income](#) - Years Ended December 31, 2020, December 28, 2019 and December 29, 2018

[Consolidated Statements of Cash Flows](#) - Years Ended December 31, 2020, December 28, 2019 and December 29, 2018

[Consolidated Statements of Changes in Shareholders' Equity](#) - Years Ended December 31, 2020, December 28, 2019 and December 29, 2018

[Notes to Consolidated Financial Statements](#)

(ii) 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

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	Certificate of Amendment to the Third Restated Certificate of Incorporation of Cerner Corporation	8-K	3.1	5/28/2020	
3.3	Amended & Restated Bylaws of Cerner Corporation (effective May 27, 2020)	8-K	3.2	5/28/2020	
4.1	Specimen stock certificate	10-K	4(a)	2/28/2007	
4.2	Description of Company Securities				X
10.1*	2006 Form of Indemnification Agreement for use between the Registrant and its Directors	10-K	10(a)	2/28/2007	
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	
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*	Offer Letter - Jerome Labat				X
10.7*	Amended Employment Agreement between Cerner Corporation and Jerome Labat				X
10.8*	Letter Agreement between Cerner Corporation and Marc G. Naughton Regarding Departure				X
10.9*	Amended Employment Agreement between Cerner Corporation and Marc G. Naughton	8-K	10.4	9/11/2017	
10.10*	Amended Employment Agreement between Cerner Corporation and John Peterzalek	10-K	10.13	2/8/2019	
10.11*	Letter Agreement between Cerner and John Peterzalek Regarding Departure				X
10.12*	Amended Employment Agreement between Cerner Corporation and Donald D. Trigg	10-K	10.13	2/10/2020	
10.13*	Cerner Corporation 2011 Omnibus Equity Incentive Plan (As Amended and Restated May 22, 2015)	8-K	10.2	5/27/2015	
10.14*	Cerner Corporation 2011 Omnibus Equity Incentive Plan (As amended and Restated May 30, 2019)	8-K	10.1	6/3/2019	
10.15*	Cerner Corporation 2011 Omnibus Equity Incentive Plan - Director Restricted Stock Agreement	10-Q	10.2	5/6/2016	
10.16*	2011 Omnibus Equity Incentive Plan - Form of Director Restricted Stock Agreement	10-Q	10.5	4/26/2019	
10.17*	Cerner Corporation 2011 Omnibus Equity Incentive Plan - Performance Based Restricted Stock Agreement	10-K	10(u)	2/8/2013	

10.18*	Cerner Corporation 2011 Omnibus Equity Incentive Plan - Performance Based Restricted Stock Agreement	10-Q	10.3	5/6/2016	
10.19*	Cerner Corporation 2011 Omnibus Equity Incentive Plan - Performance Based Restricted Stock Agreement	10-Q	10.4	10/27/2017	
10.20*	2011 Omnibus Equity Incentive Plan - Form of Performance Based Restricted Stock Agreement	10-Q	10.4	4/26/2019	
10.21*	Cerner Corporation 2011 Omnibus Equity Incentive Plan - Time Based Restricted Stock Agreement	10-Q	10.4	5/6/2016	
10.22*	Cerner Corporation 2011 Omnibus Equity Incentive Plan - Time Based Restricted Stock Agreement	10-Q	10.3	10/27/2017	
10.23*	2011 Omnibus Equity Incentive Plan - Form of Time Based Restricted Stock Agreement	10-Q	10.3	4/26/2019	
10.24*	Cerner Corporation 2011 Omnibus Equity Incentive Plan- Non-Qualified Stock Option Grant Certificate	10-K	10(v)	2/8/2013	
10.25*	Cerner Corporation 2011 Omnibus Equity Incentive Plan- Non-qualified Stock Option Grant Certificate	10-Q	10.5	5/6/2016	
10.26*	Cerner Corporation 2011 Omnibus Equity Incentive Plan - Non-Qualified Stock Option Grant Certificate	10-Q	10.2	8/3/2016	
10.27*	Cerner Corporation 2011 Omnibus Equity Incentive Plan - Non-Qualified Stock Option Grant Certificate	10-Q	10.2	10/27/2017	
10.28*	Cerner Corporation 2011 Omnibus Equity Incentive Plan - Time-Based Restricted Stock Unit Agreement	10-Q	10.2	4/28/2017	
10.29*	Cerner Corporation 2011 Omnibus Equity Incentive Plan - Time-Based Restricted Stock Unit Agreement	10-Q	10.5	10/27/2017	
10.30*	Cerner Corporation 2011 Omnibus Equity Incentive Plan - Performance-Based Restricted Stock Unit Agreement	10-Q	10.3	4/28/2017	
10.31*	Cerner Corporation 2011 Omnibus Equity Incentive Plan - Performance-Based Restricted Stock Unit Agreement	10-Q	10.6	10/27/2017	
10.32*	Cerner Corporation 2011 Omnibus Equity Incentive Plan - Time Based Restricted Stock Unit Agreement				X
10.33*	Cerner Corporation 2011 Omnibus Equity Incentive Plan - Performance Based Restricted Stock Unit Agreement				X
10.34*	Cerner Corporation 2001 Associate Stock Purchase Plan as Amended and Restated January 1, 2019	10-K	10.37	2/8/2019	
10.35*	Cerner Corporation 2018 Performance Compensation Plan (effective January 1, 2018)	8-K	10.1	3/6/2018	
10.36*	Form 2020 Executive Performance Agreement - Section 16 Officer	8-K	10.1	4/29/2020	
10.37*	Form 2019 Executive Performance Agreement - Section 16 Officer	10-Q	10.2	4/26/2019	
10.38*	Form Amendment to Executive Severance Agreement				X
10.39	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	

10.40	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	
10.41	First Amendment to Third Amended and Restated Credit Agreement dated May 6, 2019 among Cerner Corporation, U.S. Bank National Association, Commerce Bank N.A., and Bank of America, N.A.	8-K	10.1	5/7/2019	
10.42	Second Amendment to Third Amended and Restated Credit Agreement dated November 5, 2019 among Cerner Corporation, U.S. Bank National Association, Commerce Bank N.A., Bank of America, N.A. and PNC Bank, National Association.	8-K	10.1	11/5/2019	
10.43	Master Note Agreement dated November 11, 2019, between Cerner Corporation and the Purchasers listed therein	8-K	10.4	11/5/2019	
10.44	First Amendment to Master Note Agreement dated October 8, 2020, between Cerner Corporation and the Purchasers listed therein	8-K	10.1	10/9/2020	
21	Subsidiaries of Registrant				X
23	Consent of Independent Registered Public Accounting Firm				X
31.1	Certification of 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 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 - the instance document does not appear in the interactive data file because its XBRL tags are embedded within the inline XBRL document.				X
101.SCH	Inline XBRL Taxonomy Extension Schema Document				X
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document				X
101.LAB	Inline XBRL Taxonomy Extension Labels Linkbase Document				X
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document				X
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document				X
104	Cover Page Interactive Data File - formatted in Inline XBRL and contained in Exhibit 101.				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 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.

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 19, 2021

By: /s/ Brent Shafer
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:

<u>Signature and Title</u>	<u>Date</u>
<u>/s/ Brent Shafer</u> Brent Shafer, Chairman of the Board and Chief Executive Officer (Principal Executive Officer)	February 19, 2021
<u>/s/ Marc G. Naughton</u> Marc G. Naughton, Executive Vice President and Chief Financial Officer (Principal Financial Officer)	February 19, 2021
<u>/s/ Michael R. Battaglioli</u> Michael R. Battaglioli, Vice President and Chief Accounting Officer (Principal Accounting Officer)	February 19, 2021
<u>/s/ Gerald E. Bisbee, Jr.</u> Gerald E. Bisbee, Jr., Ph.D., Director	February 19, 2021
<u>/s/ Mitchell E. Daniels</u> Mitchell E. Daniels, Director	February 19, 2021
<u>/s/ Linda M. Dillman</u> Linda M. Dillman, Director	February 19, 2021
<u>/s/ Julie L. Gerberding</u> Julie L. Gerberding, M.D., Director	February 19, 2021
<u>/s/ Elder Granger</u> Elder Granger, M.D., Director	February 19, 2021
<u>/s/ John J. Greisch</u> John J. Greisch, Director	February 19, 2021
<u>/s/ Melinda J. Mount</u> Melinda J. Mount, Director	February 19, 2021
<u>/s/ George A. Riedel</u> George A. Riedel, Director	February 19, 2021
<u>/s/ R. Halsey Wise</u> R. Halsey Wise, Director	February 19, 2021
<u>/s/ William D. Zollars</u> William D. Zollars, Director	February 19, 2021

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 31, 2020, 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 31, 2020, 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 31, 2020 and December 28, 2019, 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 31, 2020, and the related notes (collectively, the consolidated financial statements), and our report dated February 19, 2021 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 19, 2021

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 31, 2020 and December 28, 2019, 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 31, 2020, 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 31, 2020 and December 28, 2019, and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2020, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) ("PCAOB"), the Company's internal control over financial reporting as of December 31, 2020, 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 19, 2021 expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting.

Changes in Accounting Principle

As discussed in Note 6 to the consolidated financial statements, the Company has changed its method of accounting for leases as of December 30, 2018 due to the adoption of Accounting Standards Update 2016-02, *Leases (Topic 842)*.

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.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that: (1) relates to accounts or disclosures that are material to the consolidated financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of a critical audit matter does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing separate opinions on the critical audit matter or on the accounts or disclosures to which it relates.

Evaluation of contract modifications

As discussed in Note 2 to the consolidated financial statements, the Company executes modifications to existing arrangements with a significant customer, which may involve significant customization or development of software licenses. When a modification occurs, the Company evaluates the modification in order to determine if it should be accounted for (i) as a separate contract, (ii) as the termination of the original contract and creation of a new contract, (iii) through a cumulative catch up adjustment to the original contract, or a combination thereof. During 2020, the Company recognized \$5.5 billion in total revenue, of which 18% related to this customer.

We identified the evaluation of contract modifications as a critical audit matter. Specifically, for certain contract modifications with the significant customer, determining whether the modification should be accounted for as a separate contract or part of the existing contract and whether promises in the contract modification represented separate or combined performance obligations required challenging auditor judgment. Certain of the existing arrangements and contract modifications involve customization and significant integration services. This evaluation required challenging auditor judgment due to the varying nature of the underlying promises and the number of contract modifications requiring assessment during the period.

The following are the primary procedures we performed to address this critical audit matter. We evaluated the design and tested the operating effectiveness of management's internal control related to the determination of whether contract modifications should be accounted for as a separate contract or part of the existing contract, and whether promises in these arrangements are distinct or combined performance obligations. For a selection of contract modifications involving the significant customer, we:

- obtained and read the agreements and evaluated the terms and conditions therein
- assessed whether the modification should be accounted for as a separate contract or part of the existing contract
- evaluated the identification of performance obligations in each arrangement by considering the nature of the promises within the contract and the interrelationship of the promised goods and services.

/s/KPMG LLP

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

Kansas City, Missouri
February 19, 2021

CERNER CORPORATION AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
As of December 31, 2020 and December 28, 2019

(In thousands, except share data)

	2020	2019
Assets		
Current assets:		
Cash and cash equivalents	\$ 615,615	\$ 441,843
Short-term investments	442,473	99,931
Receivables, net	1,168,712	1,139,595
Inventory	23,027	23,182
Prepaid expenses and other	401,160	392,073
Total current assets	2,650,987	2,096,624
Property and equipment, net	1,804,083	1,858,772
Right-of-use assets	104,536	123,155
Software development costs, net	1,009,349	939,859
Goodwill	914,520	883,158
Intangible assets, net	329,249	364,439
Long-term investments	510,220	419,419
Other assets	198,152	209,196
Total assets	<u>\$ 7,521,096</u>	<u>\$ 6,894,622</u>
Liabilities and Shareholders' Equity		
Current liabilities:		
Accounts payable	\$ 235,755	\$ 273,440
Deferred revenue	393,293	360,025
Accrued payroll and tax withholdings	309,814	245,843
Other current liabilities	229,764	148,140
Total current liabilities	1,168,626	1,027,448
Long-term debt	1,336,069	1,038,382
Deferred income taxes	376,035	377,657
Other liabilities	157,799	133,807
Total liabilities	<u>3,038,529</u>	<u>2,577,294</u>
Shareholders' Equity:		
Common stock, \$0.01 par value, 500,000,000 shares authorized, 373,224,832 shares issued at December 31, 2020 and 367,634,796 shares issued at December 28, 2019	3,732	3,676
Additional paid-in capital	2,288,806	1,905,171
Retained earnings	6,475,551	5,934,909
Treasury stock, 67,371,686 shares at December 31, 2020 and 56,723,546 shares at December 28, 2019	(4,164,718)	(3,407,768)
Accumulated other comprehensive loss, net	(120,804)	(118,660)
Total shareholders' equity	<u>4,482,567</u>	<u>4,317,328</u>
Total liabilities and shareholders' equity	<u>\$ 7,521,096</u>	<u>\$ 6,894,622</u>

See notes to consolidated financial statements.

CERNER CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF OPERATIONS

For the years ended December 31, 2020, December 28, 2019 and December 29, 2018

	For the Years Ended		
	2020	2019	2018
<i>(In thousands, except per share data)</i>			
Revenues	\$ 5,505,788	\$ 5,692,598	\$ 5,366,325
Costs and expenses:			
Costs of revenue	932,941	1,071,041	937,348
Sales and client service	2,582,615	2,675,337	2,493,696
Software development (Includes amortization of \$247,313, \$227,414 and \$210,228, respectively)	749,007	737,136	683,663
General and administrative	491,586	520,598	389,469
Amortization of acquisition-related intangibles	55,595	87,817	87,364
Total costs and expenses	4,811,744	5,091,929	4,591,540
Gain on sale of businesses	220,523	—	—
Operating earnings	914,567	600,669	774,785
Other income, net	76,906	53,843	26,066
Earnings before income taxes	991,473	654,512	800,851
Income taxes	(211,385)	(125,058)	(170,792)
Net earnings	<u>\$ 780,088</u>	<u>\$ 529,454</u>	<u>\$ 630,059</u>
Basic earnings per share	\$ 2.54	\$ 1.66	\$ 1.91
Diluted earnings per share	\$ 2.52	\$ 1.65	\$ 1.89
Basic weighted average shares outstanding	306,669	318,229	330,084
Diluted weighted average shares outstanding	309,136	321,235	333,572

See notes to consolidated financial statements.

CERNER CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

For the years ended December 31, 2020, December 28, 2019 and December 29, 2018

	For the Years Ended		
	2020	2019	2018
<i>(In thousands)</i>			
Net earnings	\$ 780,088	\$ 529,454	\$ 630,059
Foreign currency translation adjustment and other (net of taxes (benefit) of \$3,250, \$(1,288) and \$(645), respectively)	12,897	(3,408)	(30,575)
Unrealized loss on cash flow hedge (net of tax benefit of \$5,003 and \$4,137 in 2020 and 2019, respectively)	(15,210)	(12,578)	—
Unrealized holding gain on available-for-sale investments (net of taxes of \$56, \$290 and \$132, respectively)	169	878	405
Comprehensive income	<u>\$ 777,944</u>	<u>\$ 514,346</u>	<u>\$ 599,889</u>

See notes to consolidated financial statements.

CERNER CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS

For the years ended December 31, 2020, December 28, 2019 and December 29, 2018

	For the Years Ended		
	2020	2019	2018
<i>(In thousands)</i>			
CASH FLOWS FROM OPERATING ACTIVITIES:			
Net earnings	\$ 780,088	\$ 529,454	\$ 630,059
Adjustments to reconcile net earnings to net cash provided by operating activities:			
Depreciation and amortization	697,423	687,966	642,591
Share-based compensation expense	153,449	103,641	95,423
Provision for deferred income taxes	1,502	51,125	34,428
Gain on sale of businesses	(220,523)	—	—
Investment gains	(75,834)	(29,621)	—
Changes in assets and liabilities (net of business acquired):			
Receivables, net	3,686	58,113	(207,785)
Inventory	960	1,855	(9,307)
Prepaid expenses and other	(51,442)	(76,748)	156,216
Accounts payable	(62,663)	(8,734)	65,202
Accrued income taxes	19,995	(4,599)	(27,849)
Deferred revenue	34,500	(39,245)	81,538
Other accrued liabilities	155,564	39,892	(6,507)
Net cash provided by operating activities	1,436,705	1,313,099	1,454,009
CASH FLOWS FROM INVESTING ACTIVITIES:			
Capital purchases	(283,981)	(471,518)	(446,928)
Capitalized software development costs	(295,277)	(273,871)	(273,693)
Purchases of investments	(696,548)	(364,648)	(623,293)
Sales and maturities of investments	333,161	579,755	551,796
Purchase of other intangibles	(38,243)	(35,587)	(36,819)
Sale of businesses	229,471	—	—
Acquisition of businesses, net of cash acquired	(49,820)	(74,539)	—
Net cash used in investing activities	(801,237)	(640,408)	(828,937)
CASH FLOWS FROM FINANCING ACTIVITIES:			
Long-term debt issuance	300,000	600,000	—
Repayment of long-term debt	(2,500)	—	(75,000)
Proceeds from exercise of stock options	253,605	258,036	91,349
Payments to taxing authorities in connection with shares directly withheld from associates	(23,672)	(16,601)	(9,873)
Treasury stock purchases	(756,950)	(1,320,542)	(623,127)
Dividends paid	(221,461)	(113,823)	—
Other	(10,519)	(8,450)	6,864
Net cash used in financing activities	(461,497)	(601,380)	(609,787)
Effect of exchange rate changes on cash and cash equivalents	(199)	(3,594)	(12,082)
Net increase in cash and cash equivalents	173,772	67,717	3,203
Cash and cash equivalents at beginning of period	441,843	374,126	370,923
Cash and cash equivalents at end of period	\$ 615,615	\$ 441,843	\$ 374,126

See notes to consolidated financial statements.

CERNER CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY
For the years ended December 31, 2020, December 28, 2019 and December 29, 2018

(In thousands)	Common Stock		Additional Paid-in Capital	Retained Earnings	Treasury Stock	Accumulated Other Comprehensive Loss, Net
	Shares	Amount				
Balance at December 30, 2017	359,205	\$ 3,592	\$ 1,380,371	\$ 4,938,866	\$ (1,464,099)	\$ (73,382)
Exercise of stock options and vests of restricted shares and share units	3,008	30	83,768	—	—	—
Employee share-based compensation expense	—	—	95,423	—	—	—
Cumulative effect of accounting change (ASU 2014-09)	—	—	—	7,600	—	—
Other comprehensive income (loss)	—	—	—	—	—	(30,170)
Treasury stock purchases	—	—	—	—	(643,669)	—
Net earnings	—	—	—	630,059	—	—
Balance at December 29, 2018	362,213	3,622	1,559,562	5,576,525	(2,107,768)	(103,552)
Exercise of stock options and vests of restricted shares and share units	5,422	54	241,968	—	—	—
Employee share-based compensation expense	—	—	103,641	—	—	—
Other comprehensive income (loss)	—	—	—	—	—	(15,108)
Treasury stock purchases	—	—	—	—	(1,300,000)	—
Cash dividends declared	—	—	—	(171,070)	—	—
Net earnings	—	—	—	529,454	—	—
Balance at December 28, 2019	367,635	3,676	1,905,171	5,934,909	(3,407,768)	(118,660)
Exercise of stock options and vests of restricted shares and share units	5,590	56	230,186	—	—	—
Employee share-based compensation expense	—	—	153,449	—	—	—
Cumulative effect of accounting change (ASU 2016-13)	—	—	—	(4,606)	—	—
Other comprehensive income (loss)	—	—	—	—	—	(2,144)
Treasury stock purchases	—	—	—	—	(756,950)	—
Cash dividends declared	—	—	—	(234,840)	—	—
Net earnings	—	—	—	780,088	—	—
Balance at December 31, 2020	373,225	\$ 3,732	\$ 2,288,806	\$ 6,475,551	\$ (4,164,718)	\$ (120,804)

See notes to consolidated financial statements.

CERNER CORPORATION AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(1) Basis of Presentation, Nature of Operations and Summary of Significant Accounting Policies

Basis of Presentation

The consolidated financial statements include all the accounts of Cerner Corporation ("Cerner," the "Company," "we," "us" or "our") and its subsidiaries. All significant intercompany transactions have been eliminated in consolidation.

The consolidated financial statements were prepared using accounting principles generally accepted in the United States of America ("GAAP"). These principles require us to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities and the reported amounts of revenues and expenses. Actual results could differ from those estimates.

Fiscal Period End

Prior to fiscal year 2020, our fiscal year ended on the Saturday closest to December 31. Fiscal years 2019 and 2018 each consisted of 364 days and ended on December 28, 2019 and December 29, 2018, respectively.

In December 2019, our Board of Directors approved the change of our fiscal year to a calendar year, commencing with fiscal year 2020. Accordingly, our 2020 fiscal year presented herein consisted of 369 days and ended on December 31, 2020. Subsequent fiscal years will begin on January 1 and end on December 31 of each year.

All references to years in these notes to consolidated financial statements ("Notes") represent the respective periods described above, unless otherwise noted.

Nature of Operations

We design, develop, market, install, host and support health care information technology, health care devices, hardware and content solutions for health care organizations and consumers. We also provide a wide range of value-added 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.

Supplemental Disclosures of Cash Flow Information

<i>(In thousands)</i>	For the Years Ended		
	2020	2019	2018
Cash paid during the year for:			
Interest (including amounts capitalized of \$14,855, \$17,190, and \$12,710, respectively)	\$ 36,302	\$ 25,639	\$ 15,707
Income taxes, net of refunds	149,059	100,004	(15,560)
Non-cash items:			
Lease liabilities recorded upon the commencement of operating leases	26,352	29,542	—
Capital purchases	22,218	12,673	11,989

CARES Act

Cash flows from operating activities for the year ended December 31, 2020 include the impact of \$76 million of certain federal payroll taxes related to pay cycles in the second through fourth quarters of 2020, for which we have deferred remittance to the taxing authority as permitted under the CARES Act. Such remittances are expected to be paid to the taxing authority in equal amounts at the end of 2021 and 2022, respectively, as permitted by the CARES Act. At December 31, 2020, \$38 million of these deferred remittances are included in both "Accrued payroll and tax withholdings" and "Other liabilities" in our consolidated balance sheets.

Summary of Significant Accounting Policies

(a) Cash Equivalents - Cash equivalents consist of short-term debt securities with original maturities of less than 90 days.

(b) Investments in Debt Securities – We account for our investments in debt securities as available-for-sale investments in accordance with Accounting Standards Codification Topic ("ASC") 320, *Investments-Debt Securities*. Short-term available-for-sale investments are primarily invested in time deposits, commercial paper, government and corporate bonds, with maturities of less than one year. Long-term available-for-sale investments are primarily invested in government and corporate bonds with maturities of less than two years.

Available-for-sale investments are recorded at fair value with the unrealized gains and losses reflected in accumulated other comprehensive loss until realized. Realized gains and losses from the sale of available-for-sale investments, if any, are determined on a specific identification basis.

Generally, premiums are amortized and discounts are accreted over the life of the security as adjustments to interest income for our investments. For investments in callable debt securities, any premiums are amortized to the earliest call date. Interest income is recognized when earned.

Refer to Note (4) and Note (12) for further description of these assets and their fair value.

(c) Investments in Equity Securities - We account for our investments in equity securities that give us the ability to exercise significant influence over the operating and financial policies of an investee under the equity method in accordance with ASC 323, *Investments-Equity Method and Joint Ventures*. Under the equity method, we recognize our share of the earnings or losses of an investee, generally on a three-month lag. Such share of the investee's earnings or losses are presented in "Other income, net" in our consolidated statements of operations.

We account for our investments in equity securities that do not qualify for equity method accounting in accordance with ASC 321, *Investments-Equity Securities* ("ASC 321"). We measure these investments at fair value with changes in fair value recognized in "Other income, net" in our consolidated statements of operations for such investments with readily determinable fair values. For these investments that do not have readily determinable fair values, we measure such investments at cost minus impairment, if any, plus or minus changes resulting from observable price changes in orderly transactions for the identical or similar investment of the same issuer.

(d) Concentrations - The majority of our cash and cash equivalents are held at three major financial institutions. Deposits held with banks may exceed the amount of insurance provided on such deposits. Generally these deposits may be redeemed upon demand.

(e) Inventory - Inventory consists primarily of computer hardware and sublicensed software, held for resale. Inventory is recorded at the lower of cost (first-in, first-out) or net realizable value.

(f) Property and Equipment - We account for property and equipment in accordance with ASC 360, *Property, Plant, and Equipment*. Property, equipment and leasehold improvements are stated at cost. Depreciation of property and equipment is computed using the straight-line method over periods of one to 50 years. Amortization of leasehold improvements is computed using a straight-line method over the shorter of the lease terms or the useful lives, which range from periods of one to 15 years.

(g) Software Development Costs - Our software solutions are offered to our clients both through traditional licenses as well as software as a service delivery models. Development costs associated with the certain solutions offered exclusively through a software as a service model are accounted for in accordance with ASC 350-40, *Internal-Use Software*. All other client solution development costs, which represent a significant majority of development costs, are accounted for in accordance with ASC 985-20, *Costs of Software to be Sold, Leased or Marketed*.

Under ASC 985-20, software development costs incurred in creating computer software solutions are expensed until technological feasibility has been established upon completion of a detailed program design. Thereafter, all software development costs incurred through the software's general release date are capitalized and subsequently recorded at the lower of amortized cost or net realizable value. Capitalized costs are amortized based on current and expected future

revenue for each software solution with minimum annual amortization equal to the straight-line amortization over the estimated economic life of the solution. We amortize capitalized costs over five years.

Under ASC 350-40, software development costs related to preliminary project activities and post-implementation and maintenance activities are expensed as incurred. We capitalize direct costs related to application development activities that are probable to result in additional functionality. Capitalized costs are amortized on a straight-line basis over five years. We test for impairment whenever events or changes in circumstances that could impact recoverability occur.

See Note (7) for further information relating to our software development costs.

(h) Goodwill - We account for goodwill under the provisions of ASC 350, *Intangibles – Goodwill and Other*. Goodwill is not amortized but is evaluated for impairment annually or whenever there is an impairment indicator. All goodwill is assigned to a reporting unit, where it is subject to an annual impairment assessment. Based on these evaluations, there was no impairment of goodwill in 2020, 2019 or 2018. Refer to Note (10) for more information on goodwill and other intangible assets.

(i) Intangible Assets - We account for intangible assets in accordance with ASC 350, *Intangibles – Goodwill and Other*. Amortization of finite-lived intangible assets is computed using the straight-line method over periods of three to 30 years.

(j) Income Taxes - Income taxes are accounted for in accordance with ASC 740, *Income Taxes*. Deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. Refer to Note (14) for additional information regarding income taxes.

(k) Earnings per Common Share - Basic earnings per share ("EPS") excludes dilution and is computed, in accordance with ASC 260, *Earnings Per Share*, by dividing income available to common shareholders by the weighted-average number of common shares outstanding for the period. Diluted EPS reflects the potential dilution that could occur if securities or other contracts to issue stock were exercised or converted into common stock or resulted in the issuance of common stock that then shared in our earnings. Refer to Note (15) for additional details of our earnings per share computations.

(l) Accounting for Share-based Payments - We recognize all share-based payments to associates, directors and consultants, including grants of stock options, restricted stock, restricted stock units and performance shares, in the financial statements as compensation cost based on their fair value on the date of grant, in accordance with ASC 718, *Compensation-Stock Compensation*. This compensation cost is recognized over the vesting period on a straight-line basis for the fair value of awards that actually vest. Refer to Note (16) for a detailed discussion of share-based payments.

(m) Voluntary Separation Benefits - We account for voluntary separation benefits in accordance with the provisions of ASC 712, *Compensation-Nonretirement Postemployment Benefits*. Voluntary separation benefits are recorded to expense when an associate irrevocably accepts the offer and the amount of the termination liability is reasonably estimable.

In 2020 and 2019, we recognized \$20 million and \$52 million, respectively, of expenses in connection with voluntary separation benefits, which are included in "General and administrative" expense in our consolidated statements of operations.

(n) Exit or Disposal Cost Obligations - We account for involuntary employee separation benefits pursuant to one-time benefit arrangements and contract termination costs in accordance with ASC 420, *Exit or Disposal Cost Obligations*.

In 2020 and 2019, we recognized \$22 million and \$34 million, respectively, of expenses in connection with involuntary associate termination events, which are included in "General and administrative" expense in our consolidated statements of operations.

In 2020 and 2019, we recognized \$29 million and \$66 million, respectively, of pre-tax charges in connection with the termination of certain contracts prior to the end of their stated terms. Such charges are included in "Sales and client service" expense in our consolidated statements of operations.

(o) Foreign Currency - In accordance with ASC 830, *Foreign Currency Matters*, assets and liabilities of non-U.S. subsidiaries whose functional currency is the local currency are translated into U.S. dollars at exchange rates prevailing at

the balance sheet date. Revenues and expenses are translated at average exchange rates during the year. The net exchange differences resulting from these translations are reported in accumulated other comprehensive loss. Gains and losses resulting from foreign currency transactions are included in the consolidated statements of operations.

(p) Accounting Pronouncements Adopted in 2020

Credit Losses on Financial Instruments. In the first quarter of 2020, we adopted new guidance regarding impairment assessment for certain financial assets. Refer to Notes (3) and (4) for further details.

Collaborative Arrangements. In November 2018, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") 2018-18, *Collaborative Arrangements (Topic 808): Clarifying the Interaction between Topic 808 and Topic 606*, which clarifies when transactions between participants in a collaborative arrangement are within the scope of the FASB's recent revenue standard (Topic 606). Such guidance clarifies revenue recognition and financial statement presentation for transactions between collaboration participants. We adopted ASU 2018-18 in the first quarter of 2020. Such guidance did not have an impact on our consolidated financial statements and related disclosures.

(q) Recently Issued Accounting Pronouncements

Reference Rate Reform. The FASB issued ASU 2020-04, *Reference Rate Reform (Topic 848): Facilitation of the Effects of Reference Rate Reform on Financial Reporting* in March 2020 and ASU 2021-01, *Reference Rate Reform (Topic 848): Scope* in January 2021. Such guidance provides optional financial reporting alternatives to reduce the cost and complexity associated with the accounting for contracts and hedging relationships affected by reference rate reform, such as the upcoming discontinuance of LIBOR. The accommodations within this guidance may be applied prospectively from the beginning of our 2020 first quarter through December 31, 2022. We are currently evaluating the effect that this guidance may have on our contracts that reference LIBOR, specifically, our Third Amended and Restated Credit Agreement (as amended, the "Credit Agreement") and related interest rate swap. As of the date of this filing, we have not elected to apply any of the provisions of this guidance.

(2) Revenue Recognition

In May 2014, the FASB issued ASU 2014-09, *Revenue from Contracts with Customers (Topic 606)*, which requires an entity to recognize the amount of revenue to which it expects to be entitled for the transfer of promised goods or services to customers. ASU 2014-09 replaced most existing revenue recognition guidance in U.S. GAAP. The standard contains a five-step process to be followed in determining the amount and timing of revenue recognition. It also provides guidance on accounting for costs incurred to obtain or fulfill contracts with customers, and establishes disclosure requirements which are more extensive than those required under prior U.S. GAAP.

ASU 2014-09, as amended ("Topic 606"), was effective for the Company in the first quarter of 2018. We selected the Modified Retrospective (cumulative effect) transition method of adoption. Such method provided that the cumulative effect from prior periods upon applying the new guidance to contracts which were not complete as of the adoption date be recognized in our consolidated balance sheets as of December 31, 2017, including an \$8 million increase to retained earnings.

Revenue Recognition Policy

We enter into contracts with customers that may include various combinations of our software solutions and related services, which are generally capable of being distinct and accounted for as separate performance obligations. Performance obligations that are not distinct at contract inception are combined. Contracts that include software customization may result in the combination of the customization services with the software license as one distinct performance obligation.

The predominant model of customer procurement involves multiple deliverables and includes a software license agreement, project-related implementation and consulting services, software support, hosting services, and computer hardware. We allocate revenues to each performance obligation within an arrangement based on estimated relative stand-alone selling price. Revenue is then recognized for each performance obligation upon transfer of control of the software solution or services to the customer in an amount that reflects the consideration we expect to receive.

Generally, we recognize revenue under Topic 606 for each of our performance obligations as follows:

- Perpetual software licenses - We recognize perpetual software license revenues when control of such licenses are transferred to the client ("point in time"). We determine the amount of consideration allocated to this performance obligation using the residual approach.
- Software as a service - We recognize software as a service ratably over the related hosting period ("over time").
- Time-based software and content license fees - We recognize a license component of time-based software and content license fees upon delivery to the client ("point in time") and a non-license component (i.e. support) ratably over the respective contract term ("over time").
- Hosting - Remote hosting recurring services are recognized ratably over the hosting service period ("over time"). Certain of our hosting arrangements contain fees deemed to be a "material right" under Topic 606. We recognize such fees over the term that will likely affect the client's decision about whether to renew the related hosting service ("over time").
- Services - We recognize revenue for fixed fee services arrangements over time, utilizing a labor hours input method. For fee-for-service arrangements, we recognize revenue over time as hours are worked at the rates clients are invoiced, utilizing the "as invoiced" practical expedient available in Topic 606. For stand-ready services arrangements, we recognize revenue ratably over the related service period.
- Support and maintenance - We recognize support and maintenance fees ratably over the related contract period ("over time").
- Hardware - We recognize hardware revenues when control of such hardware/devices is transferred to the client ("point in time").
- Transaction processing - We recognize transaction processing revenues ratably as we provide such services ("over time").

Certain customer contracts require significant customization of the software to meet the particular requirements specified by each customer. The contract pricing is stated as a fixed amount and generally results in the transfer of control of the applicable performance obligation over time. We recognize revenue for such contracts based on the proportion of labor hours expended to the total hours expected to complete the performance obligation. The impact to revenues for changes in estimates of total hours expected to complete performance obligations are recognized in the period in which they occur, and were not material for the periods presented herein.

Revenues are recognized net of any taxes collected from customers and subsequently remitted to governmental authorities.

Disaggregation of Revenue

The following table presents revenues disaggregated by our business models:

	For the Years Ended								
	2020			2019			2018		
	Domestic Segment	International Segment	Total	Domestic Segment	International Segment	Total	Domestic Segment	International Segment	Total
<i>(In thousands)</i>									
Licensed software	\$ 604,707	\$ 51,512	\$ 656,219	\$ 628,958	\$ 51,627	\$ 680,585	\$ 573,034	\$ 40,544	\$ 613,578
Technology resale	173,264	23,327	196,591	225,076	21,809	246,885	208,722	36,354	245,076
Subscriptions	354,023	24,185	378,208	333,298	25,417	358,715	300,555	25,154	325,709
Professional services	1,717,873	212,572	1,930,445	1,760,532	231,946	1,992,478	1,574,407	237,056	1,811,463
Managed services	1,120,939	124,488	1,245,427	1,098,695	115,205	1,213,900	1,060,081	94,860	1,154,941
Support and maintenance	881,778	189,001	1,070,779	904,204	200,434	1,104,638	921,336	196,780	1,118,116
Reimbursed travel	27,185	934	28,119	87,364	8,033	95,397	92,131	5,311	97,442
Total revenues	\$ 4,879,769	\$ 626,019	\$ 5,505,788	\$ 5,038,127	\$ 654,471	\$ 5,692,598	\$ 4,730,266	\$ 636,059	\$ 5,366,325

The following table presents our revenues disaggregated by timing of revenue recognition:

	For the Years Ended								
	2020			2019			2018		
	Domestic Segment	International Segment	Total	Domestic Segment	International Segment	Total	Domestic Segment	International Segment	Total
<i>(In thousands)</i>									
Revenue recognized over time	\$ 4,557,358	\$ 585,316	\$ 5,142,674	\$ 4,565,172	\$ 600,953	\$ 5,166,125	\$ 4,271,934	\$ 569,780	\$ 4,841,714
Revenue recognized at a point in time	322,411	40,703	363,114	472,955	53,518	526,473	458,332	66,279	524,611
Total revenues	\$ 4,879,769	\$ 626,019	\$ 5,505,788	\$ 5,038,127	\$ 654,471	\$ 5,692,598	\$ 4,730,266	\$ 636,059	\$ 5,366,325

Significant Customers

Revenues attributable to our relationships (as the prime contractor or a subcontractor) with U.S. government agencies, within our Domestic segment, comprised 18% and 13% of our consolidated revenues for 2020 and 2019, respectively. Amounts due in connection with these relationships comprised 13% of client receivables as of December 31, 2020.

Transaction Price Allocated to Remaining Performance Obligations

As of December 31, 2020, the aggregate amount of transaction price allocated to performance obligations that are unsatisfied (or partially unsatisfied) for executed contracts approximates \$13.04 billion, of which we expect to recognize approximately 30% of the revenue over the next 12 months and the remainder thereafter. As of December 28, 2019, the aggregate amount of transaction price allocated to performance obligations that were unsatisfied (or partially unsatisfied) for executed contracts approximated \$13.71 billion.

Contract Liabilities

Our payment arrangements with clients typically include an initial payment due upon contract signing and date-based licensed software payment terms and payments based upon delivery for services, hardware and sublicensed software. Customer payments received in advance of satisfaction of the related performance obligations are deferred as contract liabilities. Such amounts are classified in our consolidated balance sheets as "Deferred revenue". During 2020 and 2019, substantially all of our contract liability balance at the beginning of each respective year was recognized in revenues during that year.

Costs to Obtain or Fulfill a Contract

We have determined the only significant incremental costs incurred to obtain contracts with clients within the scope of Topic 606 are sales commissions paid to our associates. We record sales commissions as an asset, and amortize to expense ratably over the remaining performance periods of the related contracts with remaining performance obligations. As of December 31, 2020 and December 28, 2019, our consolidated balance sheets included assets of \$88 million and \$89 million, respectively, related to sales commissions to be expensed in future periods, which are included in "Other assets".

We recognized \$38 million, \$41 million and \$41 million of amortization related to these sales commissions assets in 2020, 2019 and 2018, respectively, which is included in "Costs of revenue" in our consolidated statements of operations.

Significant Judgments when Applying Topic 606

Our contracts with clients typically include various combinations of our software solutions and related services. Determining whether such software solutions and services are considered distinct performance obligations that should be accounted for separately versus together may require significant judgment.

Contract transaction price is allocated to distinct performance obligations using estimated stand-alone selling price. We determine stand-alone selling price maximizing observable inputs such as stand-alone sales when they exist or substantive renewal prices charged to clients. In instances where stand-alone selling price is not observable, we utilize an estimate of stand-alone selling price. Such estimates are derived from various methods that include: cost plus margin, historical pricing practices, and the residual approach. Judgment may be required to determine standalone selling prices for each performance obligation and whether it depicts the amount we expect to receive in exchange for the related good or service.

Contract modifications occur when we and our customers agree to modify existing customer contracts to change the scope or price (or both) of the contract or when a customer terminates some, or all, of the existing services provided by us. When a contract modification occurs, it requires us to exercise judgment to determine if the modification should be accounted for as (i) a separate contract, (ii) the termination of the original contract and creation of a new contract, (iii) a cumulative catch up adjustment to the original contract, or a combination thereof.

The labor hours input method used for our fixed fee services performance obligation is dependent on our ability to reliably estimate the direct labor hours to complete a project, which may span several years. We utilize our historical project experience and detailed planning process as a basis for our future estimates to complete current projects.

Certain of our arrangements contain variable consideration. We do not believe our estimates of variable consideration to be significant to our determination of revenue recognition.

(3) Receivables

Client receivables represent recorded revenues that have either been billed, or for which we have an unconditional right to invoice and receive payment in the future. We periodically provide long-term financing options to creditworthy clients through extended payment terms. Generally, these extended payment terms provide for date-based payments over a fixed period, not to exceed the term of the overall arrangement. Thus, our portfolio of client contracts contains a financing component, which is recognized over time as a component of "Other income, net" in our consolidated statements of operations. We perform ongoing credit evaluations of our clients and generally do not require collateral from our clients.

A summary of net receivables is as follows:

<i>(In thousands)</i>	2020	2019
Client receivables	\$ 1,322,278	\$ 1,245,670
Less: Provision for expected credit losses	153,566	106,075
Total receivables, net	<u>\$ 1,168,712</u>	<u>\$ 1,139,595</u>

In addition to the client receivables presented above, at December 31, 2020 and December 28, 2019, we had \$17 million and \$47 million, respectively, of non-current net client receivables, which are presented in "Other assets" in our consolidated balance sheets.

A reconciliation of the beginning and ending amount of our provision for expected credit losses is as follows:

<i>(In thousands)</i>	Current	Non-current	Total
Provision for expected credit losses - balance at December 30, 2017	\$ 52,786	\$ 18,747	\$ 71,533
Additions charged to costs and expenses	25,529	45,320	70,849
Deductions, foreign currency and other	(13,754)	(218)	(13,972)
Provision for expected credit losses - balance at December 29, 2018	64,561	63,849	128,410
Additions charged to costs and expenses	57,167	—	57,167
Deductions, foreign currency and other	(15,653)	1,490	(14,163)
Provision for expected credit losses - balance at December 28, 2019	106,075	65,339	171,414
Cumulative effect of accounting change (ASU 2016-13)	4,606	—	4,606
Additions charged to costs and expenses	65,099	20,703	85,802
Deductions, foreign currency and other	(22,214)	(47,478)	(69,692)
Provision for expected credit losses - balance at December 31, 2020	<u>\$ 153,566</u>	<u>\$ 38,564</u>	<u>\$ 192,130</u>

During 2020 and 2019, we received total client cash collections of \$5.70 billion and \$5.79 billion, respectively.

Expected Credit Losses

In June 2016, the FASB issued ASU 2016-13, *Financial Instruments - Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments*, which provides a new impairment model for certain financial assets that is based on expected losses rather than incurred losses. Such guidance impacts how we determine our allowance for estimated uncollectible client receivables. The standard requires use of the modified retrospective (cumulative effect) transition approach as of the beginning of the first reporting period in which the guidance was effective, which for the Company was the first quarter of 2020. Under this transition method, the cumulative effect from prior periods upon applying this new guidance was recognized in our consolidated balance sheets as of December 29, 2019. We did not recast comparative periods.

A summary of such cumulative effect adjustment is as follows:

<i>(In thousands)</i>	Increase/ (Decrease)
Receivables, net	\$ (4,606)
Retained earnings	(4,606)

The cumulative effect adjustment is the result of providing an allowance on unbilled client receivables, for which we have an unconditional right to invoice and receive payment in the future.

Our estimates of expected credit losses for client receivables at both December 29, 2019 and December 31, 2020, were primarily based on historical credit loss experience and adjustments for certain asset-specific risk characteristics (i.e.

known client financial hardship or bankruptcy). Exposure to credit losses may increase if our clients are adversely affected by changes in health care laws; reimbursement or payor models; economic pressures or uncertainty associated with local or global economic recessions; disruption associated with the COVID-19 pandemic; or other client-specific factors. Although we have historically not experienced significant credit losses, it is possible that there could be an adverse impact from potential adjustments to the carrying amount of client receivables as clients' cash flows are impacted by the COVID-19 pandemic and related economic uncertainty, which may be material.

(4) Investments

Available-for-sale investments at the end of 2020 were as follows:

<i>(In thousands)</i>	Adjusted Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
Cash equivalents:				
Money market funds	\$ 40,027	\$ —	\$ —	\$ 40,027
Time deposits	36,756	—	—	36,756
Commercial paper	61,000	—	—	61,000
Total cash equivalents	137,783	—	—	137,783
Short-term investments:				
Time deposits	28,302	—	—	28,302
Commercial paper	264,000	12	(19)	263,993
Government and corporate bonds	149,975	247	(44)	150,178
Total short-term investments	442,277	259	(63)	442,473
Long-term investments:				
Government and corporate bonds	136,983	152	(57)	137,078
Total available-for-sale investments	\$ 717,043	\$ 411	\$ (120)	\$ 717,334

Available-for-sale investments at the end of 2019 were as follows:

<i>(In thousands)</i>	Adjusted Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
Cash equivalents:				
Money market funds	\$ 185,666	\$ —	\$ —	\$ 185,666
Time deposits	64,286	—	—	64,286
Total cash equivalents	249,952	—	—	249,952
Short-term investments:				
Time deposits	2,506	—	—	2,506
Government and corporate bonds	83,272	52	(11)	83,313
Total short-term investments	85,778	52	(11)	85,819
Long-term investments:				
Government and corporate bonds	96,186	91	(67)	96,210
Total available-for-sale investments	\$ 431,916	\$ 143	\$ (78)	\$ 431,981

We sold available-for-sale investments for proceeds of \$71 million, \$233 million and \$45 million in 2020, 2019 and 2018, respectively, resulting in insignificant gains/losses in each period.

Other Investments

At December 31, 2020 and December 28, 2019, we had investments in equity securities that do not have readily determinable fair values of \$361 million and \$314 million, respectively, accounted for in accordance with ASC 321, *Investments-Equity Securities*. Such investments are included in "Long-term investments" in our consolidated balance sheets. We did not record any changes in the measurement of such investments in 2020 or 2019, respectively.

At December 28, 2019, we had investments in equity securities with readily determinable fair values of \$14 million, accounted for in accordance with ASC 321. Such investments were included in "Short-term investments" in our consolidated balance sheets. Changes in the measurement of such investments favorably impacted "Other income, net" by \$76 million and \$14 million in 2020 and 2019, respectively. In August 2020, we sold these investments for cash proceeds of \$90 million.

At December 31, 2020 and December 28, 2019, we had investments in equity securities reported under the equity method of accounting of \$12 million and \$9 million, respectively. Such investments are included in "Long-term investments" in our consolidated balance sheets.

Impairment Assessment

We adopted ASU 2016-13 in the first quarter of 2020, which made certain amendments to the model used to assess available-for-sale debt securities for impairment. Such guidance provides that an available-for-sale debt security is impaired if the fair value of the security is less than its amortized cost basis. A determination is made whether the decline in fair value below the amortized cost basis has resulted from a credit loss or other factors, such as market liquidity or changes in interest rates. Impairment related to credit losses is recognized in net earnings, whereas impairment related to other factors is recognized as a component of accumulated other comprehensive loss, net. We did not recognize any impairment on our available-for-sale debt securities through net earnings in 2020.

(5) Property and Equipment

A summary of property, equipment and leasehold improvements stated at cost, less accumulated depreciation and amortization, is as follows:

<i>(In thousands)</i>	Depreciable Lives (Yrs)	2020	2019
Computer and communications equipment	1 — 5	\$ 1,939,517	\$ 1,855,550
Land, buildings and improvements	12 — 50	1,403,835	1,374,541
Leasehold improvements	1 — 15	208,496	214,608
Furniture and fixtures	5 — 12	146,351	132,540
Other equipment	3 — 20	1,025	1,078
		3,699,224	3,578,317
Less accumulated depreciation and leasehold amortization		1,895,141	1,719,545
Total property and equipment, net		<u>\$ 1,804,083</u>	<u>\$ 1,858,772</u>

Depreciation and leasehold amortization expense for 2020, 2019 and 2018 was \$365 million, \$347 million and \$323 million, respectively.

(6) Leases

In February 2016, the FASB issued ASU 2016-02, *Leases (Topic 842)*, which introduced a new accounting model that requires most leases to be reported on the balance sheet. It also established disclosure requirements, which are more extensive than those required under prior U.S. GAAP. The standard required use of the modified retrospective (cumulative effect) transition approach and was effective for the Company in the first quarter of 2019. We selected the effective date of ASU 2016-02 as the date of initial application on transition, as permitted by ASU 2016-02, as amended ("Topic 842"). Under this transition method, the cumulative effect from prior periods upon applying the new guidance to arrangements

containing leases was recognized in our consolidated balance sheets as of December 30, 2018. We did not recast comparative periods.

A summary of such cumulative effect adjustment is as follows:

<i>(In thousands)</i>	Increase / (Decrease)
Right-of-use asset	\$ 129,652
Prepaid expenses and other	3,968
Other current liabilities	22,767
Other liabilities	110,853

Arrangements Containing Leases

The cumulative effect adjustment above, is primarily comprised of arrangements where we are the lessee under operating leases for real estate (office, data center, and warehouse space) and certain dedicated fiber optic lines within our infrastructure. The duration of these agreements ranges from several months to in excess of 20 years. Generally, variable lease payments under these operating lease agreements relate to amounts based on changes to an index or rate (i.e. percentage change in the consumer price index). We do not have any arrangements where we are the lessee, classified as finance leases in our consolidated financial statements.

In addition to the items described above, we also procure hotel stays and rental cars in connection with associate business travel, and the use of certain equipment for trade shows, client presentations, conferences, and internal meetings. We have made the policy election to classify such arrangements as short-term leases, as defined in Topic 842. As such, we have not recognized lease liabilities and right-of-use assets for such arrangements in our consolidated financial statements. The duration of these arrangements is less than one month. Therefore, we do not disclose any short-term lease expense, as permitted by Topic 842. Expense for such items is recognized on a straight-line basis over the term of such arrangements.

Arrangements in which we are the lessor are not significant to our consolidated financial statements.

Amounts Included in the Consolidated Financial Statements

The following table presents a summary of lease liability and right-of-use asset amounts included in our consolidated balance sheets at the end of 2020 and 2019, under operating lease arrangements where we are the lessee:

<i>(In thousands)</i>			
Description	Balance Sheet Classification	2020	2019
Right-of-use asset	Right-of-use assets	\$ 104,536	\$ 123,155
Lease liability - current	Other current liabilities	29,913	29,541
Lease liability - non-current	Other liabilities	90,106	104,614

Operating lease cost was \$37 million and variable lease cost was less than \$1 million in both 2020 and 2019.

Maturity Analysis

Aggregate future payments under operating lease arrangements where we are the lessee (by fiscal year) are as follows:

<i>(In thousands)</i>	Operating Lease Obligations
2021	\$ 33,611
2022	27,131
2023	20,347
2024	12,199
2025	7,438
2026 and thereafter	37,224
Aggregate future payments	137,950
Impact of discounting	(17,931)
Aggregate lease liability at December 31, 2020	<u>\$ 120,019</u>

At December 31, 2020, the weighted-average remaining lease term and weighted-average discount rate for our operating lease arrangements where we are the lessee were 6.81 years and 3.5%, respectively.

(7) Software Development

A summary of software development costs, net is as follows:

<i>(In thousands)</i>	2020		2019	
	Gross Carrying Amount	Accumulated Amortization	Gross Carrying Amount	Accumulated Amortization
Software to be sold, leased or marketed	\$ 2,610,476	\$ 1,788,019	\$ 2,379,028	\$ 1,586,134
Software delivered exclusively as a service	385,168	198,276	305,233	158,268
Total	<u>\$ 2,995,644</u>	<u>\$ 1,986,295</u>	<u>\$ 2,684,261</u>	<u>\$ 1,744,402</u>
Software development costs, net		<u>\$ 1,009,349</u>		<u>\$ 939,859</u>

Estimated aggregate amortization expense for each of the next five years is as follows:

<i>(In thousands)</i>	
2021	\$ 276,532
2022	245,911
2023	194,007
2024	147,349
2025	95,431

Information regarding our software development costs is included in the following table:

<i>(In thousands)</i>	For the Years Ended		
	2020	2019	2018
Software development costs	\$ 796,971	\$ 783,593	\$ 747,128
Capitalized software development costs	(295,277)	(273,871)	(273,693)
Amortization of capitalized software development costs	247,313	227,414	210,228
Total software development expense	<u>\$ 749,007</u>	<u>\$ 737,136</u>	<u>\$ 683,663</u>

(8) Business Acquisition

2020 Acquisitions

On April 1, 2020, we acquired a consulting company specializing in providing cybersecurity solutions to clients in the health care industry, for cash consideration of \$34 million. We believe this acquisition enhanced our resource capabilities and growth opportunities for our cybersecurity solution offerings. These factors, combined with the synergies and economies of scale expected, are the basis for the acquisition and comprise the resulting goodwill recorded.

On October 19, 2020, we acquired a software company that offered a patient referral management solution to clients within the health care industry, for cash consideration of \$15 million. We believe this acquisition enhanced our portfolio of offerings on our *HealtheIntent* platform. This factor, combined with the synergies and economies of scale expected, are the basis for the acquisition and comprise the resulting goodwill recorded.

These acquisitions were treated as purchases in accordance with ASC 805, *Business Combinations* ("ASC 805"), which requires allocation of the purchase price to the estimated fair values of assets and liabilities acquired in the transactions.

The aggregate final allocation of purchase price for our 2020 acquisitions was as follows:

<i>(In thousands)</i>	Allocation Amount
Receivables, net	\$ 2,313
Inventory	863
Prepaid expenses and other	331
Property and equipment, net	114
Right-of-use assets	683
Goodwill	33,709
Intangible assets, net	16,510
Other assets	179
Accounts payable	(880)
Deferred revenue	(3,158)
Accrued payroll and tax withholdings	(501)
Other current liabilities	(713)
Deferred income taxes	(374)
Total purchase price	<u>\$ 49,076</u>

The goodwill was allocated to our Domestic operating segment, with \$4 million of such goodwill expected to be deductible for tax purposes. Identifiable intangible assets primarily consist of acquired technology intangible assets and are being amortized over a weighted-average period of 8 years. The operating results from of our 2020 acquisitions were combined with our operating results subsequent to the respective purchase dates. Pro-forma results of operations, assuming these acquisitions were made at the beginning of the earliest period presented, have not been presented because the effect of these acquisitions, both individually and in the aggregate, were not material to our results.

2019 Acquisition

On October 25, 2019, we acquired all of the issued and outstanding membership interests of AbleVets, LLC, a Virginia limited liability company ("AbleVets"), for cash consideration of \$76 million. AbleVets is a health IT engineering and consulting company specializing in cybersecurity, cloud and system development solutions for federal organizations. We believe this acquisition enhanced our resource capabilities and growth opportunities within our federal business. These factors, combined with the synergies and economies of scale expected from combining the operations of AbleVets with Cerner, are the basis for the acquisition and comprise the resulting goodwill recorded.

The acquisition of AbleVets was treated as a purchase in accordance with ASC 805, which requires allocation of the purchase price to the estimated fair values of assets and liabilities acquired in the transaction.

The final allocation of purchase price was as follows:

<i>(In thousands)</i>	Allocation Amount
Cash and cash equivalents	\$ 471
Receivables, net	11,690
Prepaid expenses and other	911
Property and equipment, net	1,240
Right-of-use assets	8,448
Goodwill	37,815
Intangible assets, net	37,402
Accounts payable	(5,244)
Deferred revenue	(157)
Accrued payroll and tax withholdings	(5,812)
Other current liabilities	(2,994)
Other liabilities	(8,016)
Total purchase price	<u>\$ 75,754</u>

The fair values of the acquired intangible assets were estimated by applying the income approach. Such estimations required the use of inputs that were unobservable in the marketplace (Level 3), including a discount rate that we estimated would be used by a market participant in valuing these assets, projections of revenues and cash flows, and client attrition rates, among others. Refer to Note (12) for further information about the fair value level hierarchy.

The goodwill was allocated to our Domestic operating segment and is expected to be deductible for tax purposes. Identifiable intangible assets primarily consist of customer relationship intangible assets and are being amortized over a weighted-average period of 8 years. The operating results of AbleVets were combined with our operating results subsequent to the purchase date of October 25, 2019. Pro-forma results of operations, assuming this acquisition was made at the beginning of the earliest period presented, have not been presented because the effect of this acquisition was not material to our results.

(9) Gain on Sale of Businesses

Germany and Spain

On July 1, 2020, we sold certain of our business operations, primarily conducted in Germany and Spain, to affiliates of CompuGroup Medical SE & Co. KGaA ("CGM"), as a part of our portfolio management strategy. Such operations included the associates, intellectual property, client contracts, other assets, and liabilities related to our medico[®], Selene[®], Soarian Health Archive[®], and Soarian[®] Integrated Care solution offerings. We received a sale price of \$230 million, which is subject to post-closing adjustments for working capital and certain other adjustments.

The following table presents a reconciliation of the sale price to the net gain recognized on the disposed business operations which is included in "Gain on sale of businesses" in our consolidated statements of operations:

<i>(In thousands)</i>	
Sale price	\$ 230,316
Net assets/liabilities removed	(7,934)
Transaction expenses	(5,583)
Foreign currency	1,550
Gain on sale of businesses	<u>\$ 218,349</u>

The following table presents a reconciliation of the sale price to the cash proceeds received from CGM which are included in "Sale of businesses" in our consolidated statements of cash flows:

<i>(In thousands)</i>	
Sale price	\$ 230,316
Receivable due from CGM	(4,049)
VAT and other transaction taxes, net	(2,142)
Foreign currency	356
Cash received from sale of businesses	<u>\$ 224,481</u>

Amounts included in our consolidated balance sheets related to the disposed business operations immediately prior to the sale on July 1, 2020 were as follows:

<i>(In thousands)</i>	Asset/ (Liability)
Receivables, net	\$ 8,646
Inventory	65
Prepaid expenses and other	5,993
Property and equipment, net	340
Right-of-use assets	554
Software development costs, net	5,532
Goodwill	7,692
Intangible assets, net	3,687
Accounts payable	(2,763)
Deferred revenue	(16,756)
Accrued payroll and tax withholdings	(4,545)
Other current liabilities	(511)
Net assets/(liabilities)	<u>\$ 7,934</u>

Revenue Cycle Outsourcing

On August 3, 2020, we sold certain of our revenue cycle outsourcing business operations to affiliates of R1 RCM Inc., as a part of our portfolio management strategy. Such operations included the associates, client contracts, certain other assets, and certain liabilities related to our commercial revenue cycle outsourcing services business. A net gain of \$2 million was recognized on the disposed business operations and is included in "Gain on sale of businesses" in our consolidated statements of operations. Amounts included in our consolidated balance sheets related to the disposed business operations immediately prior to the sale on August 3, 2020 were not material to our consolidated financial statements.

(10) Goodwill and Other Intangible Assets

The changes in the carrying amounts of goodwill by segment were as follows:

<i>(In thousands)</i>	Domestic	International	Total
Balance at the end of 2018	\$ 782,664	\$ 64,880	\$ 847,544
Goodwill recorded in connection with the AbleVets acquisition	37,071	—	37,071
Foreign currency translation adjustment and other	—	(1,457)	(1,457)
Balance at the end of 2019	819,735	63,423	883,158
Purchase price allocation adjustments for the AbleVets acquisition	744	—	744
Goodwill recorded in connection with 2020 business acquisitions	33,709	—	33,709
Goodwill reduction in connection with divestiture transactions	—	(7,692)	(7,692)
Foreign currency translation adjustment and other	—	4,601	4,601
Balance at the end of 2020	<u>\$ 854,188</u>	<u>\$ 60,332</u>	<u>\$ 914,520</u>

A summary of net intangible assets is as follows:

<i>(In thousands)</i>	2020		2019	
	Gross Carrying Amount	Accumulated Amortization	Gross Carrying Amount	Accumulated Amortization
Customer lists	\$ 494,615	\$ 312,044	\$ 500,914	\$ 271,211
Purchased software	354,228	337,811	364,144	353,722
Internal use software	207,696	123,280	174,572	99,272
Trade names	42,951	28,961	41,731	26,574
Other	50,535	18,680	49,389	15,532
Total	<u>\$ 1,150,025</u>	<u>\$ 820,776</u>	<u>\$ 1,130,750</u>	<u>\$ 766,311</u>
Intangible assets, net		<u>\$ 329,249</u>		<u>\$ 364,439</u>

Amortization expense for 2020, 2019 and 2018 was \$85 million, \$114 million and \$109 million, respectively.

Estimated aggregate amortization expense for each of the next five years is as follows:

<i>(In thousands)</i>	
2021	\$ 77,634
2022	72,328
2023	62,773
2024	55,886
2025	14,836

(11) Long-term Debt

The following is a summary of indebtedness outstanding:

<i>(In thousands)</i>	2020	2019
Credit agreement loans due May 5, 2024	\$ 600,000	\$ 600,000
Senior notes:		
Series 2020-A due March 11, 2030	300,000	—
Series 2015-A due February 15, 2022	225,000	225,000
Series 2015-B due February 14, 2025	200,000	200,000
Other	11,662	14,162
Total indebtedness	1,336,662	1,039,162
Less: debt issuance costs	(593)	(780)
Long-term debt	<u>\$ 1,336,069</u>	<u>\$ 1,038,382</u>

Credit Agreement

In May 2019 and November 2019, we entered into amendments to our Third Amended and Restated Credit Agreement (as amended, the "Credit Agreement") with a syndicate of lenders. The Credit Agreement provides for an unsecured revolving credit facility expiring in May 2024, and includes: (a) a revolving credit loan facility of up to \$1.00 billion at any time outstanding, and (b) a letter of credit facility of up to \$100 million at any time outstanding (which is a sub-facility of the \$1.00 billion revolving credit loan facility). The Credit Agreement also includes an accordion feature allowing an increase of the credit facility of up to an additional \$200 million (\$1.20 billion in the aggregate) at any time outstanding, subject to lender participation and the satisfaction of specified conditions. Borrowings outstanding under the Credit Agreement are due in May 2024, with prepayment permitted at any time. Proceeds may be used for working capital and general corporate purposes, including but not limited to certain business acquisitions and purchases under our share repurchase programs. The Credit Agreement provides certain restrictions on our ability to borrow, incur liens, sell assets and pay dividends, and contains certain leverage and interest coverage covenants.

Generally, interest on revolving credit loans is payable at a variable rate based on LIBOR, prime, or the U.S. federal funds rate, plus a spread that varies depending on leverage ratios maintained. Unused commitment, letter of credit, and other fees are also payable under the Credit Agreement. At December 31, 2020 and December 28, 2019, the interest rate on revolving credit loans outstanding was 0.95% and 2.54%, respectively, based on LIBOR plus the applicable spread.

As of December 31, 2020, we had outstanding revolving credit loans and letters of credit of \$600 million and \$34 million, respectively; which reduced our available borrowing capacity to \$366 million under the Credit Agreement.

Interest Rate Swap

We are exposed to market risk from fluctuations in the variable interest rates on outstanding indebtedness under our Credit Agreement. In order to manage this exposure, we have entered into an interest rate swap agreement, with an initial notional amount of \$600 million, to hedge the variability of cash flows associated with such interest obligations through May 2024. The interest rate swap has an effective start date of May 13, 2019, and is designated as a cash flow hedge, which effectively fixes the interest rate on the hedged indebtedness under our Credit Agreement at 3.06%. At December 31, 2020 and December 28, 2019, this swap was in a net liability position with an aggregate fair value of \$37 million and \$17 million, respectively; which is presented in our consolidated balance sheets in "Other current liabilities". We classify fair value measurements of our interest rate swap as Level 2, as further described in Note (12).

Our interest rate swap agreement is accounted for in accordance with ASC Topic 815, *Derivatives and Hedging*. Such agreement is designated as a cash flow hedge and considered to be highly effective under hedge accounting principles. Therefore, the swap agreement is recognized in our consolidated balance sheets as either an asset or liability, measured at fair value. Changes in the fair value of the swap agreement are initially recorded in accumulated other comprehensive loss, net and then subsequently recognized in our consolidated statements of operations in the periods in which earnings are affected by the hedged item. All cash flows associated with the swap agreement are classified as operating activities in our consolidated statements of cash flows.

2020 Senior Notes

In March 2020, we issued \$300 million aggregate principal amount of 2.50% senior unsecured Series 2020-A notes (the "Series 2020-A Notes") due March 11, 2030, pursuant to a Master Note Agreement we entered into in November 2019, and subsequently amended on October 8, 2020 (collectively and as amended, the "2019 Shelf Agreement"). Interest on the Series 2020-A Notes is payable semiannually on each March 11 and September 11, commencing September 11, 2020, and the principal balance is due at maturity. The Company may prepay at any time all, or any part of, the outstanding principal amount of the Series 2020-A Notes, subject to the payment of a make-whole amount. The Series 2020-A Notes are subject to the terms of the 2019 Shelf Agreement, which contains customary events of default and covenants related to limitations on indebtedness and transactions with affiliates and the maintenance of certain financial ratios. As of the date of this filing, \$1.50 billion remains available for sale under the 2019 Shelf Agreement, which is uncommitted and subject to participation by the purchasers.

2015 Senior Notes

On December 4, 2014, we entered into a Master Note Purchase Agreement (the "Master Note Purchase Agreement") with the Purchasers listed therein, pursuant to which we may issue and sell up to an aggregate principal amount of \$1.50 billion of unsecured senior promissory notes to those Purchasers electing to purchase. In January 2015, we issued \$500 million aggregate principal amount of unsecured Senior Notes ("Senior Notes"), pursuant to the Master Note Purchase Agreement. The issuance consisted of \$225 million of 3.18% Series 2015-A Notes due February 15, 2022, \$200 million of 3.58% Series 2015-B Notes due February 14, 2025, and \$75 million in floating rate Series 2015-C Notes due February 15, 2022. Interest is payable semiannually on February 15th and August 15th in each year, commencing on August 15, 2015 for the Series 2015-A Notes and Series 2015-B Notes. The Master Note Purchase Agreement contains certain leverage and interest coverage ratio covenants and provides certain restrictions on our ability to borrow, incur liens, sell assets, and other customary terms. Proceeds from the Senior Notes are available for general corporate purposes. As of the date of this filing, the remaining \$1.00 billion available for sale is uncommitted and subject to participation by the Purchasers under the Master Note Purchase Agreement.

In March 2018, we repaid our \$75 million floating rate Series 2015-C Notes due February 15, 2022.

Other

Other indebtedness includes estimated amounts payable through September 1, 2025, under an agreement entered into in September 2015.

Covenant Compliance

As of December 31, 2020, we were in compliance with all debt covenants.

Maturities

Maturities of indebtedness outstanding at the end of 2020 are as follows:

<i>(In thousands)</i>	Credit Agreement Loans	Senior Notes	Other	Total
2021	\$ —	\$ —	\$ —	\$ —
2022	—	225,000	—	225,000
2023	—	—	—	—
2024	600,000	—	—	600,000
2025	—	200,000	11,662	211,662
2026 and thereafter	—	300,000	—	300,000
Total	\$ 600,000	\$ 725,000	\$ 11,662	\$ 1,336,662

(12) Fair Value Measurements

We determine fair value measurements used in our consolidated financial statements based upon the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value hierarchy distinguishes between (1) market participant assumptions developed based on market data obtained from independent sources (observable inputs) and (2) an entity's own assumptions about market participant assumptions developed based on the best information available in the circumstances (unobservable inputs). The fair value hierarchy consists of three broad levels, which gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1) and the lowest priority to unobservable inputs (Level 3). The three levels of the fair value hierarchy are described below:

- Level 1 – Valuations based on quoted prices in active markets for identical assets or liabilities that the entity has the ability to access.
- Level 2 – Valuations based on quoted prices for similar assets or liabilities, quoted prices in markets that are not active, or other inputs that are observable or can be corroborated by observable data for substantially the full term of the assets or liabilities.
- Level 3 – Valuations based on inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

The following table details our financial assets measured and recorded at fair value on a recurring basis at the end of 2020:

(In thousands)

Description	Balance Sheet Classification	Fair Value Measurements Using		
		Level 1	Level 2	Level 3
Money market funds	Cash equivalents	\$ 40,027	\$ —	\$ —
Time deposits	Cash equivalents	—	36,756	—
Commercial paper	Cash equivalents	—	61,000	—
Time deposits	Short-term investments	—	28,302	—
Commercial paper	Short-term investments	—	263,993	—
Government and corporate bonds	Short-term investments	—	150,178	—
Government and corporate bonds	Long-term investments	—	137,078	—

The following table details our financial assets measured and recorded at fair value on a recurring basis at the end of 2019:

(In thousands)

Description	Balance Sheet Classification	Fair Value Measurements Using		
		Level 1	Level 2	Level 3
Money market funds	Cash equivalents	\$ 185,666	\$ —	\$ —
Time deposits	Cash equivalents	—	64,286	—
Time deposits	Short-term investments	—	2,506	—
Government and corporate bonds	Short-term investments	—	83,313	—
Government and corporate bonds	Long-term investments	—	96,210	—

Our investments in equity securities with readily determinable fair values accounted for in accordance with ASC 321 were measured and recorded at fair value on a recurring basis using a Level 2 valuation. The fair value of such arrangements was based on quoted prices in active markets, reduced by a percentage reflecting a discount for lack of marketability.

Our interest rate swap agreement is measured and recorded at fair value on a recurring basis using a Level 2 valuation. The fair value of such agreement is based on the market standard methodology of netting the discounted expected future variable cash receipts and the discounted future fixed cash payments. The variable cash receipts are based on an

expectation of future interest rates derived from observed market interest rate forward curves. Since these inputs are observable in active markets over the terms that the instrument is held, the derivative is classified as Level 2 in the hierarchy.

We estimate the fair value of our long-term, fixed rate debt using a Level 3 discounted cash flow analysis based on current borrowing rates for debt with similar maturities. We estimate the fair value of our long-term, variable rate debt using a Level 3 discounted cash flow analysis based on LIBOR rate forward curves. The fair value of our long-term debt, including current maturities, at the end of 2020 and 2019 was approximately \$1.36 billion and \$1.07 billion, respectively. The carrying amount of such debt at the end of 2020 and 2019 was \$1.33 billion and \$1.03 billion, respectively.

(13) Other Income

A summary of non-operating income and expense is as follows:

<i>(In thousands)</i>	For the Years Ended		
	2020	2019	2018
Interest income	\$ 28,901	\$ 38,227	\$ 34,211
Interest expense	(29,080)	(14,469)	(7,987)
Gain on sale of equity investment	75,834	15,509	—
Unrealized gain on equity investment	—	14,112	—
Other	1,251	464	(158)
Other income, net	\$ 76,906	\$ 53,843	\$ 26,066

(14) Income Taxes

Income tax expense (benefit) for 2020, 2019 and 2018 consists of the following:

<i>(In thousands)</i>	For the Years Ended		
	2020	2019	2018
Current:			
Federal	\$ 131,741	\$ 45,575	\$ 89,551
State	30,565	13,429	24,804
Foreign	47,577	14,929	22,009
Total current expense	209,883	73,933	136,364
Deferred:			
Federal	(4,469)	30,353	31,129
State	(96)	11,747	8,144
Foreign	6,067	9,025	(4,845)
Total deferred expense	1,502	51,125	34,428
Total income tax expense	\$ 211,385	\$ 125,058	\$ 170,792

Temporary differences between the financial statement carrying amounts and tax basis of assets and liabilities that give rise to significant portions of deferred income taxes at the end of 2020 and 2019 relate to the following:

<i>(In thousands)</i>	2020	2019
Deferred tax assets:		
Accrued expenses	\$ 63,080	\$ 31,995
Tax credits and separate return net operating losses	17,976	19,186
Contract and service revenues and costs	9,383	—
Share-based compensation	49,650	52,643
Lease liability	23,928	29,939
Other	17,554	12,701
Gross deferred tax assets	181,571	146,464
Less: Valuation Allowance	(3,384)	—
Total deferred tax assets	178,187	146,464
Deferred tax liabilities:		
Software development costs	(270,041)	(247,217)
Property and equipment	(204,568)	(171,267)
Prepaid expenses	(37,547)	(39,311)
Contract and service revenues and costs	—	(12,112)
Lease right-of-use assets	(20,639)	(28,100)
Other	(9,260)	(10,549)
Total deferred tax liabilities	(542,055)	(508,556)
Net deferred tax liability	\$ (363,868)	\$ (362,092)

At the end of 2020, we had net operating loss carry-forwards from foreign jurisdictions of \$19 million that are available to offset future taxable income with no expiration. In addition, we had a state income tax credit carry-forward of \$9 million available to offset income tax liabilities through December 31, 2030. During 2020, we recorded a valuation allowance of \$3 million against the net operating loss carry-forward in a foreign jurisdiction due to a change in circumstances.

At the end of 2020, we had not provided tax on the cumulative undistributed earnings of certain foreign subsidiaries of approximately \$96 million, because it is our intention to reinvest these earnings indefinitely. The unrecognized deferred tax liability relating to these earnings is approximately \$5 million.

The effective income tax rates for 2020, 2019, and 2018 were 21%, 19%, and 21%, respectively. A reconciliation of the effective income tax rates to the U.S. federal statutory rate of 21% is follows:

<i>(In thousands)</i>	For the Years Ended		
	2020	2019	2018
Tax expense at statutory rates	\$ 208,209	\$ 137,447	\$ 168,179
State income tax, net of federal benefit	24,234	18,561	25,321
Tax credits	(21,254)	(22,750)	(19,737)
Foreign rate differential	1,973	(6,328)	(4,851)
Share-based compensation	(1,303)	(8,090)	(1,696)
Permanent differences	(6,534)	3,278	6,224
Other, net	6,060	2,940	(2,648)
Total income tax expense	\$ 211,385	\$ 125,058	\$ 170,792

A reconciliation of the beginning and ending amount of unrecognized tax benefit is presented below:

<i>(In thousands)</i>	2020	2019	2018
Unrecognized tax benefit - beginning balance	\$ 19,125	\$ 18,688	\$ 15,287
Gross decreases - tax positions in prior periods	(3,964)	(2,383)	—
Gross increases - tax positions in prior periods	312	1,220	1,591
Gross increases - tax positions in current year	6,595	1,607	2,370
Settlements	—	—	(541)
Currency translation	136	(7)	(19)
Unrecognized tax benefit - ending balance	<u>\$ 22,204</u>	<u>\$ 19,125</u>	<u>\$ 18,688</u>

If recognized, \$15 million of the unrecognized tax benefit will favorably impact our effective tax rate. It is reasonably possible that our unrecognized tax benefits may decrease by up to \$11 million within the next twelve months. Our federal returns have been examined by the Internal Revenue Service through 2016. Our federal returns are open for examination for 2017 and thereafter. We have various state and foreign returns under examination.

The ending amounts of accrued interest and penalties related to unrecognized tax benefits were \$5 million in 2020 and \$4 million in 2019. We classify interest and penalties as income tax expense in our consolidated statement of operations, and our income tax expense for 2020, 2019 and 2018 each included \$1 million of interest and penalties.

The foreign portion of our earnings before income taxes was \$208 million, \$109 million, and \$89 million in 2020, 2019, and 2018 respectively, and the remaining portion was domestic.

(15) Earnings Per Share

A reconciliation of the numerators and the denominators of the basic and diluted per share computations are as follows:

<i>(In thousands, except per share data)</i>	2020			2019			2018		
	Earnings (Numerator)	Shares (Denominator)	Per-Share Amount	Earnings (Numerator)	Shares (Denominator)	Per-Share Amount	Earnings (Numerator)	Shares (Denominator)	Per-Share Amount
Basic earnings per share:									
Income available to common shareholders	\$ 780,088	306,669	\$ 2.54	\$ 529,454	318,229	\$ 1.66	\$ 630,059	330,084	\$ 1.91
Effect of dilutive securities:									
Stock options, non-vested shares and share units	—	2,467		—	3,006		—	3,488	
Diluted earnings per share:									
Income available to common shareholders including assumed conversions	<u>\$ 780,088</u>	<u>309,136</u>	\$ 2.52	<u>\$ 529,454</u>	<u>321,235</u>	\$ 1.65	<u>\$ 630,059</u>	<u>333,572</u>	\$ 1.89

Options to purchase 4.1 million, 9.6 million and 12.9 million shares of common stock at per share prices ranging from \$52.32 to \$76.49, \$52.32 to \$75.83 and \$50.04 to \$73.40, were outstanding at the end of 2020, 2019 and 2018, respectively, but were not included in the computation of diluted earnings per share because they were anti-dilutive.

(16) Share-Based Compensation and Equity

Stock Option and Equity Plans

At the end of 2020, we had four fixed stock option and equity plans in effect for associates and directors. This includes one plan from which we could issue grants, the Cerner Corporation 2011 Omnibus Equity Incentive Plan (the "Omnibus Plan"); and three plans from which no new grants are permitted, but some awards remain outstanding (Plans E, F, and G).

Awards under the Omnibus Plan may consist of stock options, stock appreciation rights, restricted stock, restricted stock units, performance shares, performance units, performance grants and bonus shares. At the end of 2020, 18.0 million shares remain available for awards. Stock options granted under the Omnibus Plan are exercisable at a price not less than fair market value on the date of grant. Stock options under the Omnibus Plan typically vest over a period of 4 or 5 years and are exercisable for periods of up to 10 years.

Stock Options

The fair market value of each stock option award granted in 2020 is estimated on the date of grant using the Black-Scholes-Merton ("BSM") pricing model. The pricing model requires the use of the following estimates and assumptions:

- Expected volatilities under the BSM model are based on an equal weighting of implied volatilities from traded options on our common shares and historical volatility.
- The expected term of stock options granted is the period of time for which an option is expected to be outstanding beginning on the grant date. Our calculation of expected term takes into account the contractual term of the option, as well as the effects of employees' historical exercise patterns; groups of associates (executives and non-executives) that have similar historical behavior are considered separately for valuation purposes.
- The risk-free rate is based on the zero-coupon U.S. Treasury bond with a term consistent with the expected term of the awards.

The weighted-average assumptions used to estimate the fair market value of stock options were as follows:

	For the Years Ended		
	2020	2019	2018
Expected volatility (%)	24.5 %	25.0 %	27.0 %
Expected dividend rate (%)	1 %	1 %	—
Expected term (yrs)	6	7	7
Risk-free rate (%)	1.1 %	2.4 %	2.8 %

Stock option activity for 2020 was as follows:

(In thousands, except per share and term data)	Number of Shares	Weighted-Average Exercise Price (Per Share)	Aggregate Intrinsic Value	Weighted-Average Remaining Contractual Term (Yrs)
Outstanding at beginning of year	15,416	\$ 56.36		
Granted	3	72.36		
Exercised	(4,931)	51.49		
Forfeited and expired	(284)	60.98		
Outstanding at end of year	<u>10,204</u>	58.59	\$ 202,938	5.56
Exercisable at end of year	6,437	\$ 57.23	\$ 136,811	4.72

	For the Years Ended		
	2020	2019	2018
(In thousands, except for grant date fair values)			
Weighted-average grant date fair values	\$ 16.64	\$ 17.51	\$ 20.13
Total intrinsic value of options exercised	\$ 115,607	\$ 155,202	\$ 74,530
Cash received from exercise of stock options	253,605	258,036	91,349
Tax benefit realized upon exercise of stock options	27,103	36,629	17,233

At the end of 2020, there was \$49 million of total unrecognized compensation cost related to stock options granted under all plans. That cost is expected to be recognized over a weighted-average period of 1.93 years.

Non-vested Shares and Share Units

Non-vested shares and share units are valued at fair market value on the date of grant and will vest provided the recipient, if a member of the Board of Directors, has continuously served on the Board of Directors through such vesting date or, in the case of an associate, provided that service and/or performance measures are attained. The expense associated with these grants is recognized over the period from the date of grant to the vesting date.

Non-vested share and share unit activity for 2020 was as follows:

	Number of Shares	Weighted-Average Grant Date Fair Value Per Share
(In thousands, except per share data)		
Outstanding at beginning of year	2,634	\$ 65.30
Granted	2,620	70.12
Vested	(990)	66.29
Forfeited	(133)	67.63
Outstanding at end of year	<u>4,131</u>	<u>\$ 68.05</u>

	For the Years Ended		
	2020	2019	2018
(In thousands, except for grant date fair values)			
Weighted average grant date fair values for shares granted during the year	\$ 70.12	\$ 66.49	\$ 59.34
Total fair value of shares vested during the year	\$ 70,355	\$ 30,558	\$ 26,264

At the end of 2020, there was \$193 million of total unrecognized compensation cost related to non-vested share and share unit awards granted under all plans. That cost is expected to be recognized over a weighted-average period of 1.79 years.

Associate Stock Purchase Plan

We maintain an associate stock purchase plan ("ASPP"), which qualifies under Section 423 of the Internal Revenue Code. Generally, the ASPP provides our U.S. based associates the opportunity to purchase shares of our common stock at a 15% discount. Purchases of shares are made on the open market and subsequently reissued to participants of the ASPP. The difference between the open market purchase price and the cost to the participants is recognized as compensation expense, as such difference is paid by Cerner, in cash.

Share-Based Compensation Cost

Our stock option and non-vested share and share unit awards qualify for equity classification. The costs of our ASPP, along with participant contributions, are recorded as a liability until open market purchases are completed. The amounts recognized in the consolidated statements of operations with respect to stock options, non-vested shares and share units and ASPP are as follows:

(In thousands)	For the Years Ended		
	2020	2019	2018
Stock option and non-vested share and share unit compensation expense	\$ 153,449	\$ 103,641	\$ 95,423
Associate stock purchase plan expense	5,478	6,053	6,082
Amounts capitalized in software development costs, net of amortization	(4,867)	(410)	914
Amounts charged against earnings, before income tax benefit	\$ 154,060	\$ 109,284	\$ 102,419
Amount of related income tax benefit recognized in earnings	\$ 30,775	\$ 20,967	\$ 21,371

Preferred Stock

At the end of 2020 and 2019, we had 1.0 million shares of authorized but unissued preferred stock, \$0.01 par value.

Treasury Stock

Under our current share repurchase program, which was initially approved by our Board of Directors in May 2017 and most recently amended in December 2019, the Company is authorized to repurchase up to \$3.70 billion of shares of our common stock, 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 2020, 2019, and 2018, we repurchased 10.6 million, 18.8 million, and 11.2 million shares for total consideration of \$757 million, \$1.30 billion, and \$644 million, respectively, under the program. The shares were recorded as treasury stock and accounted for under the cost method. No repurchased shares have been retired. As of December 31, 2020, \$927 million remains available for repurchase under the program.

Dividends

Cash dividend activity in 2020 and 2019 was as follows:

Date Declared	Date of Record	Payment Date	Amount per Share
May 29, 2019	June 18, 2019	July 26, 2019	\$0.18
September 10, 2019	September 25, 2019	October 9, 2019	\$0.18
December 12, 2019	December 27, 2019	January 9, 2020	\$0.18
March 19, 2020	April 3, 2020	April 17, 2020	\$0.18
May 21, 2020	June 5, 2020	July 17, 2020	\$0.18
September 10, 2020	September 25, 2020	October 13, 2020	\$0.18
December 10, 2020	December 28, 2020	January 12, 2021	\$0.22

In connection with the declaration of such dividends, our non-vested shares and share units are entitled to dividend equivalents, which will be payable to the holder subject to, and upon vesting of, the underlying awards. Our outstanding stock options are not entitled to dividend or dividend equivalents. At December 31, 2020 and December 28, 2019, our consolidated balance sheets included liabilities for dividends payable of \$69 million and \$56 million, respectively, which are included in "Other current liabilities".

Accumulated Other Comprehensive Loss, Net (AOCI)

The components of AOCI, net of tax, were as follows:

<i>(In thousands)</i>	Foreign currency translation adjustment and other	Unrealized loss on cash flow hedge	Unrealized holding gain (loss) on available- for-sale investments	Total
Balance at December 30, 2017	\$ (72,364)	\$ —	\$ (1,018)	\$ (73,382)
Other comprehensive income (loss) before reclassifications	(30,575)	—	402	(30,173)
Amounts reclassified from AOCI	—	—	3	3
Balance at December 29, 2018	(102,939)	—	(613)	(103,552)
Other comprehensive income (loss) before reclassifications	(3,408)	(13,078)	901	(15,585)
Amounts reclassified from AOCI	—	500	(23)	477
Balance at December 28, 2019	(106,347)	(12,578)	265	(118,660)
Other comprehensive income (loss) before reclassifications	12,897	(23,687)	194	(10,596)
Amounts reclassified from AOCI	—	8,477	(25)	8,452
Balance at December 31, 2020	<u>\$ (93,450)</u>	<u>\$ (27,788)</u>	<u>\$ 434</u>	<u>\$ (120,804)</u>

The effects on net earnings of amounts reclassified from AOCI were as follows:

<i>(In thousands)</i>	AOCI Component	Location	Years Ended		
			2020	2019	2018
	Unrealized loss on cash flow hedge	Other income, net	\$ (10,622)	\$ (624)	\$ —
		Income taxes	2,145	124	—
		Net of tax	(8,477)	(500)	—
	Unrealized holding gain (loss) on available-for-sale investments	Other income, net	31	29	(4)
		Income taxes	(6)	(6)	1
		Net of tax	25	23	(3)
	Total amount reclassified, net of tax		<u>\$ (8,452)</u>	<u>\$ (477)</u>	<u>\$ (3)</u>

(17) Defined Contribution Retirement Plans

We maintain certain defined contribution retirement plans (the "Plans"), which qualify under Section 401(k) of the Internal Revenue Code. Generally, the Plans allow our U.S. associates to make salary contributions to the Plans, subject to annual limitations determined by the Internal Revenue Service. The Plans provide for certain discretionary matches on behalf of the participants for which we recognized expenses of \$61 million, \$59 million and \$41 million in 2020, 2019 and 2018, respectively.

(18) Purchase Obligations

We have purchase commitments with various vendors, under agreements through 2030. Aggregate future payments under these commitments are as follows:

<i>(In thousands)</i>	Purchase Obligations
2021	\$ 67,126
2022	40,026
2023	37,921
2024	31,630
2025	41,213
2026 and thereafter	521,297
	<u>\$ 739,213</u>

(19) Contingencies

We accrue estimates for resolution of any legal and other contingencies when losses are probable and reasonably estimable in accordance with ASC 450, *Contingencies* ("ASC 450"). No less than quarterly, and as facts and circumstances change, we review the status of each significant matter underlying a legal proceeding or claim and assess our potential financial exposure. We accrue a liability for an estimated loss if the potential loss from any legal proceeding or claim is considered probable and the amount can be reasonably estimated. Significant judgment is required in both the determination of probability and the determination as to whether the amount of an exposure is reasonably estimable, and accruals are based only on the information available to our management at the time the judgment is made, which may prove to be incomplete or inaccurate or unanticipated events and circumstances may occur that might cause us to change those estimates and assumptions. Furthermore, the outcome of legal proceedings is inherently uncertain, and we may incur substantial defense costs and expenses defending any of these matters. Should any one or a combination of more than one of these proceedings be successful, or should we determine to settle any one or a combination of these matters, we may be required to pay substantial sums, become subject to the entry of an injunction or be forced to change the manner in which we operate our business, which could have a material adverse impact on our business, results of operations, cash flows or financial condition.

As previously disclosed, we were in dispute with Fujitsu Services Limited ("Fujitsu") regarding Fujitsu's obligation to pay amounts to us due upon the termination of a subcontract, including client receivables, in connection with Fujitsu's contract as the prime contractor in the National Health Service ("NHS") initiative to automate clinical processes and digitize medical records in the Southern region of England. The NHS terminated its contract with Fujitsu, which gave rise to the termination of our subcontract with Fujitsu. We filed a request for arbitration with the London Court of International Arbitration on April 22, 2019 seeking damages. On December 30, 2019, Fujitsu filed its Defense and Counterclaim (the "Counterclaim") in response. In its Counterclaim, Fujitsu defended against our claim in full and argued that we are liable to Fujitsu for: (i) £306 million in damages based on our alleged fraudulent misrepresentations inducing Fujitsu to enter into the subcontract; or (ii) alternatively, £173.8 million in damages based on our alleged breaches of the subcontract. The parties entered into a settlement on November 2, 2020, agreeing to dismiss all claims against each other with prejudice.

Cerner Health Services, Inc. ("Cerner HS"), a wholly owned subsidiary of Cerner Corporation, filed a lawsuit in the Chester County, Pennsylvania, Court of Common Pleas against NextGen Healthcare Information Systems, LLC ("NextGen") relating to a dispute arising out of a supplier relationship initially established between Siemens Health Services, Inc. and NextGen prior to the acquisition of the assets of Siemens Health Services, Inc. by Cerner HS in 2015. In September 2017, the court issued a preliminary injunction to prevent NextGen from refusing to honor certain contractual obligations to support Cerner HS's clients who use NextGen ambulatory EHR solutions. In September 2018, NextGen filed a counterclaim alleging breach of contract and tortious interference but did not specify its damages. NextGen has provided an expert report alleging profit disgorgement damages of \$122 million or, alternatively, \$26 million in lost profit damages. In December 2019, we deposed NextGen's expert, gaining additional clarity on categories of alleged damages but not on the alleged theories of liability. A trial commenced on January 25, 2021. We believe NextGen's claims are without merit and are vigorously defending against them; however, there can be no assurances as to the outcome of the dispute. We have not concluded that a loss related to the claims raised by NextGen in its counterclaim is probable, nor have we accrued a liability related to these claims. Although a loss may be reasonably

possible (as defined in ASC 450), we do not have sufficient information to determine the amount or range of reasonably possible loss in light of the inherent difficulty of predicting the outcome of litigation generally, the wide range of damages presented by NextGen's expert, and the continued lack of clarity on the causal connection between Cerner Corporation's and Cerner HS's actions and any alleged damages.

The terms of our agreements with our clients generally provide for limited indemnification of such clients against losses, expenses and liabilities arising from third party or other claims based on, among other things, alleged infringement by our solutions of an intellectual property right of third parties or damages caused by data privacy breaches or system interruptions. The terms of such indemnification often limit the scope of and remedies for such indemnification obligations and generally include, as applicable, a right to replace or modify an infringing solution. For several reasons, including the lack of a sufficient number of prior indemnification claims relating to IP infringement, data privacy breaches or system interruptions, the inherent uncertainty stemming from such claims, and the lack of a monetary liability limit for such claims under the terms of the corresponding agreements with our clients, we cannot determine the maximum amount of potential future payments, if any, related to such indemnification provisions.

In addition to commitments and obligations in the ordinary course of business, we are involved in various other legal proceedings and claims that arise in the ordinary course of business, including for example, employment and client disputes and litigation alleging solution and implementation defects, personal injury, intellectual property infringement, violations of law, breaches of contract and warranties, and compliance audits by various government agencies. Many of these proceedings are at preliminary stages and many seek an indeterminate amount of damages. At this time, we do not believe the range of potential losses under any claims to be material to our consolidated financial statements.

(20) Segment Reporting

We have two operating segments, Domestic and International. Revenues are derived primarily from the sale of clinical, financial and administrative information solutions and services. The cost of revenues includes the cost of third-party consulting services, 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. Operating expenses incurred by the geographic business segments consist of sales and client service expenses including salaries of sales and client service personnel, expenses associated with our managed services business, marketing expenses, communications expenses and unreimbursed travel expenses. "Other" includes expenses that have not been allocated to the operating segments, such as software development, general and administrative expenses, certain organizational restructuring and other expense, share-based compensation expense, and certain amortization and depreciation. "Other" also includes gains or losses recognized on the divestiture of businesses. Performance of the segments is assessed at the operating earnings level by our chief operating decision maker, who is our Chief Executive Officer. Items such as interest, income taxes, capital expenditures and total assets are managed at the consolidated level and thus are not included in our operating segment disclosures. Accounting policies for each of the reportable segments are the same as those used on a consolidated basis.

The following table presents a summary of our operating segments and other expense for 2020, 2019 and 2018:

<i>(In thousands)</i>	Domestic	International	Other	Total
2020				
Revenues	\$ 4,879,769	\$ 626,019	\$ —	\$ 5,505,788
Costs of revenue	854,574	78,367	—	932,941
Operating expenses	2,339,624	242,991	1,296,188	3,878,803
Total costs and expenses	<u>3,194,198</u>	<u>321,358</u>	<u>1,296,188</u>	<u>4,811,744</u>
Gain on sale of businesses	—	—	220,523	220,523
Operating earnings (loss)	<u>\$ 1,685,571</u>	<u>\$ 304,661</u>	<u>\$(1,075,665)</u>	<u>\$ 914,567</u>
<i>(In thousands)</i>	Domestic	International	Other	Total
2019				
Revenues	\$ 5,038,127	\$ 654,471	\$ —	\$ 5,692,598
Costs of revenue	967,035	104,006	—	1,071,041
Operating expenses	2,398,422	276,914	1,345,552	4,020,888
Total costs and expenses	<u>3,365,457</u>	<u>380,920</u>	<u>1,345,552</u>	<u>5,091,929</u>
Operating earnings (loss)	<u>\$ 1,672,670</u>	<u>\$ 273,551</u>	<u>\$(1,345,552)</u>	<u>\$ 600,669</u>
<i>(In thousands)</i>	Domestic	International	Other	Total
2018				
Revenues	\$ 4,730,266	\$ 636,059	\$ —	\$ 5,366,325
Costs of revenue	827,904	109,444	—	937,348
Operating expenses	2,164,465	321,116	1,168,611	3,654,192
Total costs and expenses	<u>2,992,369</u>	<u>430,560</u>	<u>1,168,611</u>	<u>4,591,540</u>
Operating earnings (loss)	<u>\$ 1,737,897</u>	<u>\$ 205,499</u>	<u>\$(1,168,611)</u>	<u>\$ 774,785</u>

(21) Quarterly Results (unaudited)

Selected quarterly financial data for 2020 and 2019 is set forth below:

<i>(In thousands, except per share data)</i>	Revenues	Earnings Before Income Taxes	Net Earnings	Basic Earnings Per Share	Diluted Earnings Per Share
2020					
First Quarter	\$ 1,411,741	\$ 183,971	\$ 147,159	\$ 0.48	\$ 0.47
Second Quarter	1,330,349	171,530	134,748	0.44	0.44
Third Quarter ^(a)	1,368,673	459,840	356,676	1.17	1.16
Fourth Quarter ^(a)	1,395,025	176,132	141,505	0.46	0.46
Total	<u>\$ 5,505,788</u>	<u>\$ 991,473</u>	<u>\$ 780,088</u>		

(a) Third and Fourth quarter results include gains on sale of businesses of \$217 million and \$4 million, respectively, as further described in Note (9).

<i>(In thousands, except per share data)</i>	Revenues	Earnings Before Income Taxes	Net Earnings	Basic Earnings Per Share	Diluted Earnings Per Share
2019					
First Quarter	\$ 1,389,877	\$ 206,376	\$ 166,219	\$ 0.51	\$ 0.51
Second Quarter ^(b)	1,431,061	154,123	126,969	0.40	0.39
Third Quarter ^{(b)(c)}	1,429,428	102,312	81,935	0.26	0.26
Fourth Quarter ^{(b)(c)}	1,442,232	191,701	154,331	0.49	0.49
Total	<u>\$ 5,692,598</u>	<u>\$ 654,512</u>	<u>\$ 529,454</u>		

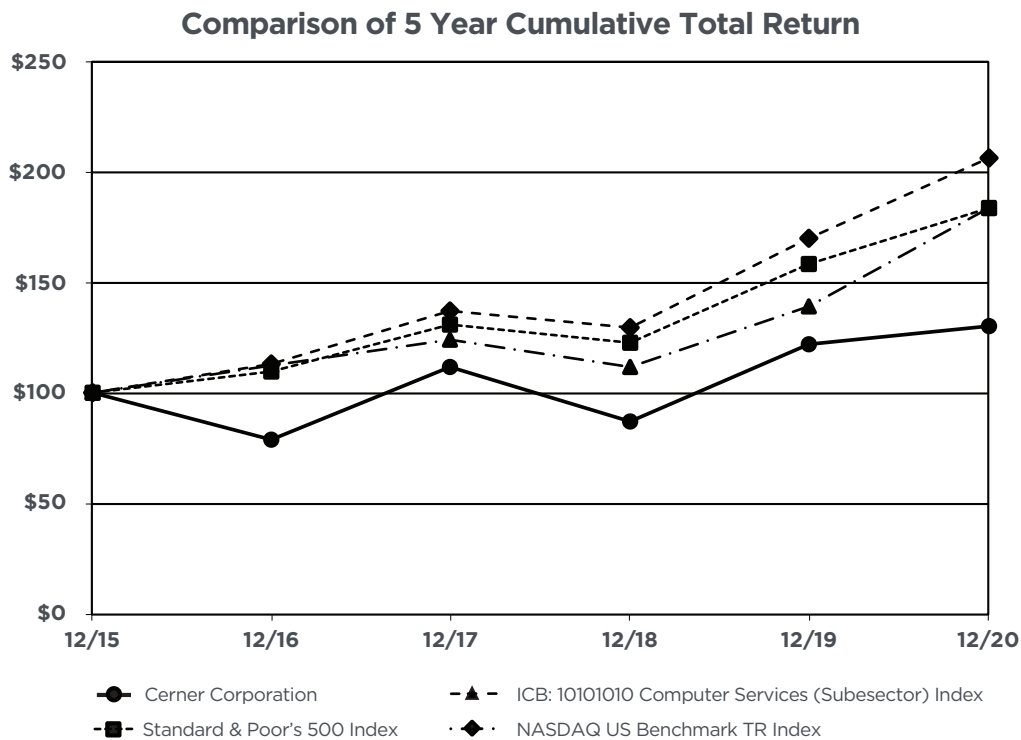
(b) Second through Fourth quarter results include pre-tax charges for employee separation costs of \$41 million, \$32 million and \$13 million, respectively, as further described in Note (1).

(c) Third and Fourth quarter results include pre-tax charges for contract termination costs of \$60 million and \$6 million, respectively, as further described in Note (1).

Stock price performance graph

In September 2020, FTSE Russell completed a migration to enhance its Industry Classification Benchmark (ICB) framework. As a result, the ICB: 9533 Computer Services (Subsector) Index that we included in our stock price performance graph in prior years was eliminated. We have now included the equivalent ICB: 10101010 Computer Services (Subsector) Index from the newly enhanced ICB structure.

The following graph presents a comparison of the cumulative total shareholder return on our Common Stock with the cumulative total return of the ICB: 10101010 Computer Services (Subsector) Index, the Standard & Poor's 500 Index and the NASDAQ US Benchmark TR Index. The graph assumes that \$100 was invested on December 31, 2015 in our Common Stock and in each of the foregoing indices, and that all dividends were reinvested. The total cumulative dollar returns shown on the graph represent the value that such investments would have had on December 31, 2020.



The information contained in this stock price performance graph section shall not be deemed to be “soliciting material” or “filed” or incorporated by reference in future filings with the Securities and Exchange Commission, or subject to the liabilities of Section 18 of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), except to the extent we specifically incorporate it by reference into a document filed under the Securities Act of 1933, as amended, or the Exchange Act.

Corporate information

ANNUAL REPORT/FORM 10-K

Publications of interest to current and potential Cerner investors (including our quarterly reports on Form 10-Q and annual reports on Form 10-K, which are filed with the Securities and Exchange Commission) are available at no charge to shareholders. To obtain copies of these materials, you can access them at investors.cerner.com or send a written request to:

**Cerner Corporation
Investor Relations
2800 Rock Creek Parkway
North Kansas City, MO 64117-2551**

Inquiries of an administrative nature relating to shareholder accounting records, stock transfer, change of address and miscellaneous shareholder requests should be directed to our transfer agent and registrar, Computershare Trust Company, N.A. at 1-800-884-4225.

TRANSFER AGENT AND REGISTRAR

Computershare Trust Company, N.A.
P.O. Box 505000
Louisville, KY 40233-5000
1-800-884-4225

STOCK LISTINGS

Cerner Corporation's common stock trades on the Nasdaq Global Select MarketSM under the symbol CERN.

INDEPENDENT ACCOUNTANTS

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Worldwide

with associates in

Australia	Netherlands
Austria	Norway
Belgium	Portugal
Brazil	Qatar
Canada	Romania
Egypt	Saudi Arabia
Finland	Singapore
France	Spain
Germany	Sweden
India	United Arab Emirates
Ireland	United Kingdom
Malaysia	United States of America
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