CFRA

Industry Surveys

Health Care Technology

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CHARTS & FIGURES

NEW THEMES

What's Changed: During the height of the pandemic, there was a jump in demand for telehealth. However, over the past year, telehealth utilization has since declined as more patients return to in-person medical services. Read more on page 12.

What's Changed: The pandemic has highlighted gaps in health care standards and outdated practices, which has led to evolving medical technology regulation. Check out page 15.

EXECUTIVE SUMMARY

For fall 2022, CFRA is happy to introduce our first survey on the Health Care Technology sub-industry. With this report, our health care industry survey coverage now spans Biotechnology, Health Care Equipment & Supplies, Health Care Facilities (including Health Care Services), Life Sciences Tools & Services, Managed Health Care, and Pharmaceuticals. We decided to replace our former Health Care Providers and Services survey, which included Managed Health Care. We now provide separate surveys for both Managed Health Care and Health Care Facilities. This survey includes companies involved in health care software, electronic health records (EHRs), telemedicine, and more.

A Neutral Outlook: Near-Term Industry Growth Slowed by Several Operating Headwinds

CFRA initiates a neutral 12-month fundamental outlook on the Health Care Technology sub-industry. Challenges posed by Covid-19, along with recent inflationary, supply chain, and labor pressures, introduced budget pressures at health care facilities (primarily hospitals) that continue to threaten near-term investment in health care technology. Furthermore, the higher interest rate environment and indications of a possible near-term recession could slow industry growth. Despite these headwinds, however, we see reasons for optimism. Many EHR vendors have more resilient business models than in the past, with more of their revenues considered recurring today. Several health care technology companies also maintain low or even negative net debt (cash exceeds debt), mitigating the impact of rising interest rates and boosting financial flexibility in a slowing economic environment, in our view.

M&A Activity Vibrant: The Entry of Big Tech

Propelled by improving data capabilities, secular trends towards digitization, and potentially even the global pandemic, which offered an opportunity for health care technology firms to demonstrate the utility of digital solutions when in-person health care activity was limited, M&A activity in the Health Care Technology sub-industry has been strong in the past few years. While current year fundraising and IPO activity remains weaker in the rising interest rate environment, the industry saw several high-profile IPOs in recent years. In addition, recent large deals indicate a healthy appetite for consolidation, in our view, as firms aim to add complementary products, expand into new markets, and tap into more robust data and analytical capabilities. Another recent trend is the introduction of several Big Tech firms into the health care tech space, including Oracle and Amazon. Not to mention, firms like Apple, Google, and Microsoft continue to develop capabilities for health care data, analytics, and connectivity.

Telehealth Growth Moderating, Regulations Uncertain Post-Pandemic

The global pandemic drove telehealth visit demand to unprecedented levels in 2020, though volumes have moderated over the past two years. Recent FAIR Health data indicates that telehealth visits, while still well above pre-pandemic levels, have stabilized as a percentage of medical claims, indicating a potential foothold or floor for telehealth within the wider industry, in our view. While telehealth has benefitted from relaxed HIPAA restrictions and several states adopting interstate telehealth care waivers, the regulatory outlook for telehealth once the public health emergency officially ends remains unclear. Recent data suggests telehealth may have an outsized benefit in the mental health space, though the industry continues to grapple with fundamental issues related to privacy, fraud, and potential added costs to the overall health care system from increased patient volumes. Longer-term, however, we have a positive outlook for the telehealth market, where we anticipate strong growth as consumers favor lower-cost, more convenient options than the current in-person health care market.

HEALTH CARE TECHNOLOGY

Outlook: Neutral

MARKET CAP BREAKDOWN*

(as of August 31, 2022)

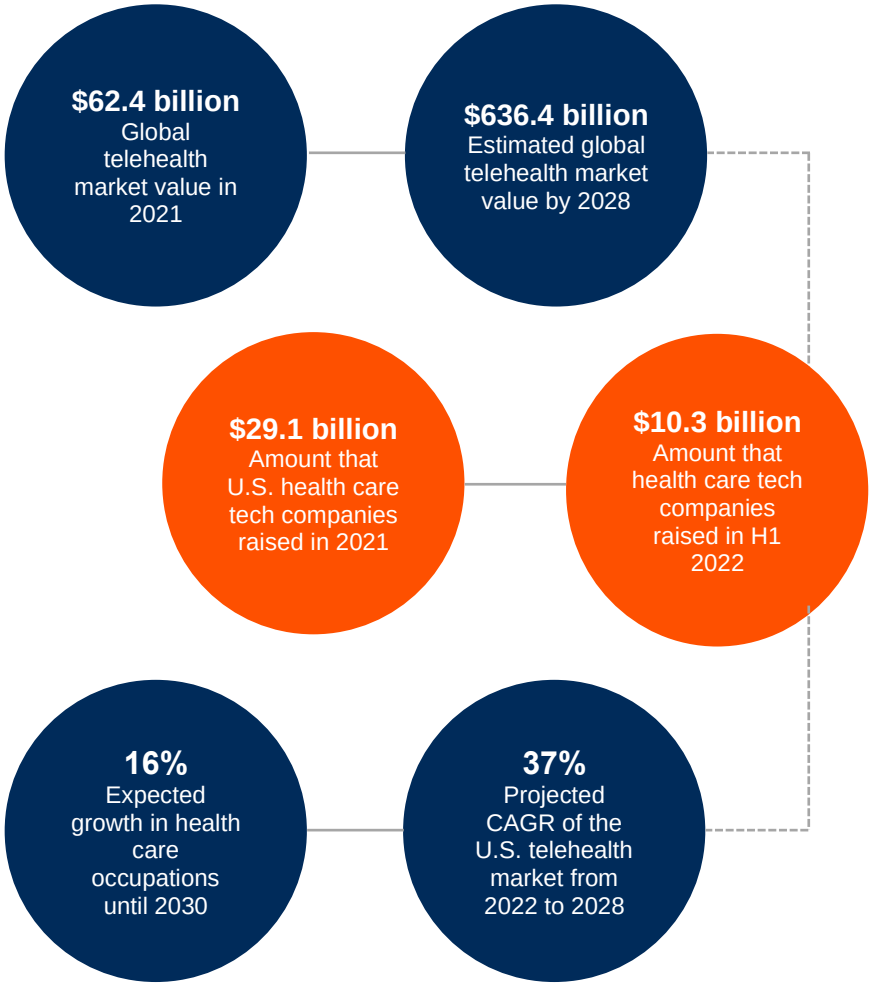
RANK NO.	COMPANY NAME	MARKET CAP ($ billion)
1	Veeva Systems	30.9
2	Inspire Medical Systems	5.5
3	Teladoc Health	5.0
4	Omnicell Corp	4.5
5	GoodRx Holdings	2.4
	Others†	6.7

Source: CFRA, S&P Global Market Intelligence.
†Refer to the "Comparative Company Analysis" section of this survey for the list of companies.

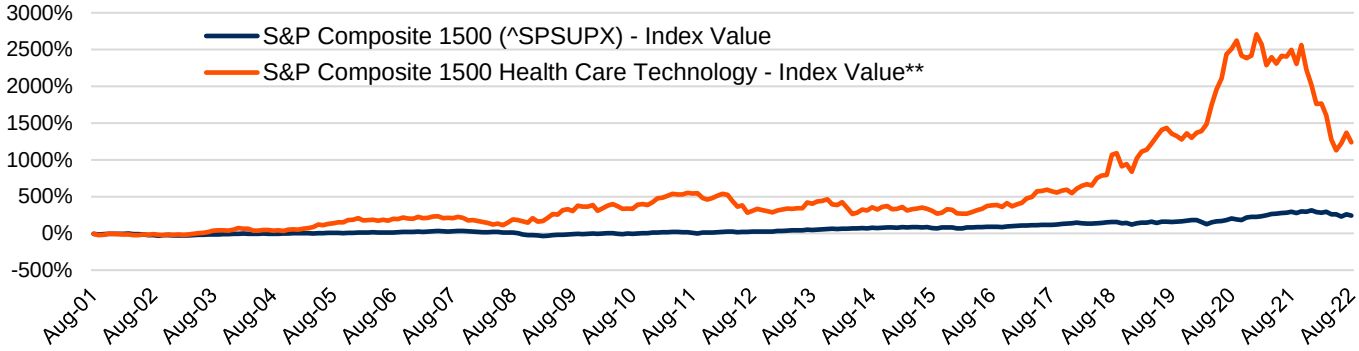
ETF FOCUS

XLV Health Care Select Sector SPDR Fund	AUM ($M) 39,936.6	Expense Ratio 0.12
VHT Vanguard Health Care	AUM ($M) 16,686.2	Expense Ratio 0.10
EDOC Global X Telemedicine & Digital Health	AUM ($M) 176.8	Expense Ratio 0.68

BY THE NUMBERS



20-YEAR INDEX PERFORMANCE*

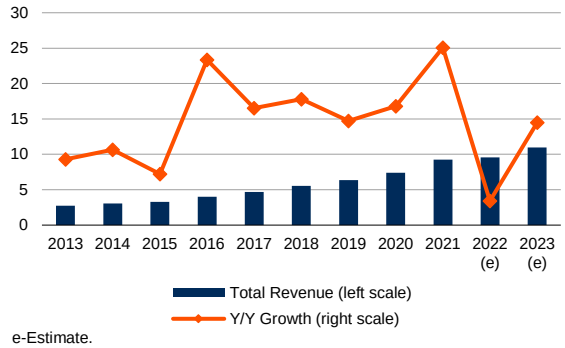


*Data as of August 31, 2022.
**Custom Index based on list of companies in Comparative Company Analysis.
Source: S&P Global Market Intelligence.

FINANCIAL METRICS

Revenue Growth

(percent change, Y/Y)

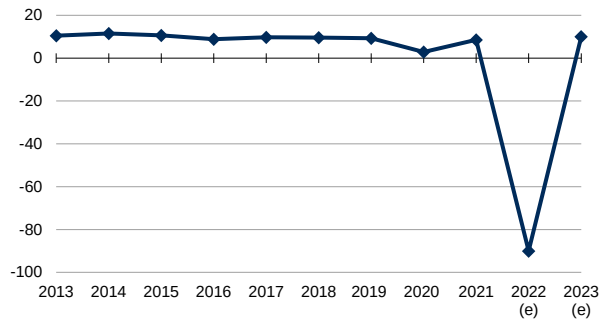


e-Estimate.
Source: CFRA, S&P Global Market Intelligence.

- For constituents in the S&P Composite 1500 Health Care Technology custom index, revenue grew 25.1% in 2021. We expect revenue growth to slow to 3.1% in 2022, driven in part by company-specific trends from some of the higher-revenue index constituents (i.e., Veeva Systems slowing sales growth; Allscripts Healthcare Solutions with lower revenue base following the sale of the Hospital & Large Physician segment). We also see some impact of slower growth in telehealth versus earlier in the pandemic.
- In 2023, we expect revenue growth of 14.0%, largely impacted by expected sales and customer growth in the telehealth market, though also reflecting the impact of higher sales by firms with larger relative weightings in the custom index.

EBITDA Margin

(percent)

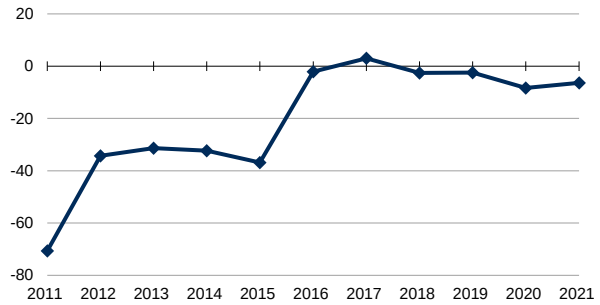


e-Estimate.
Source: CFRA, S&P Global Market Intelligence.

- After industry EBITDA margin contracted to 2.9% in 2020, we saw positive recovery to 8.5% industry EBITDA margin in 2021.
- We anticipate EBITDA margin to severely decline in 2022 (90%-95%), reflecting lower margins among telehealth firms. We see a significant decline in Teladoc's margins with slower visit growth compared to 2020-2021 and challenges in converting ad spending to customer growth, as well as expectations of increasing losses at American Well with higher R&D spending and lower revenue per visit.
- We expect health care technology firms to regain momentum with forecasted 9.7% margin growth in 2023.

Net Debt/Capitalization

(percent)

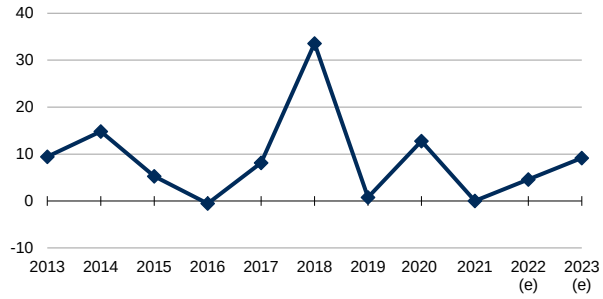


Source: CFRA, S&P Global Market Intelligence.

- The industry's net debt to capital ratio has been low in the past several years compared to other industries. In 2021, our custom index had a negative net-debt/capital ratio (cash exceeds debt), while several companies currently maintain negative net debt as of Q2 2022, which we think indicates healthy balance sheets.
- In our view, this provides more downside protection against weakening economic conditions or recession, as well as upside in the form of increased financial flexibility for potential acquisitions or other strategic initiatives.

Adjusted EPS Growth

(percent change, Y/Y)

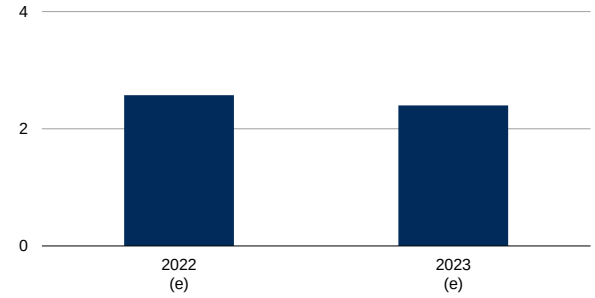


e-Estimate.
Source: CFRA, S&P Global Market Intelligence.

- In 2021, adjusted EPS for health care technology companies was flat with 2020 levels. In 2022, we expect 7.2% adjusted EPS growth, offset by losses of the currently unprofitable companies in the custom index (American Well, Inspire Medical Systems, Tabula Rasa, and Teladoc).
- We currently expect 10.6% adjusted EPS growth in 2023 as these companies move closer to profitability.

Enterprise Value-to-Forward Revenue Ratio

(multiple)



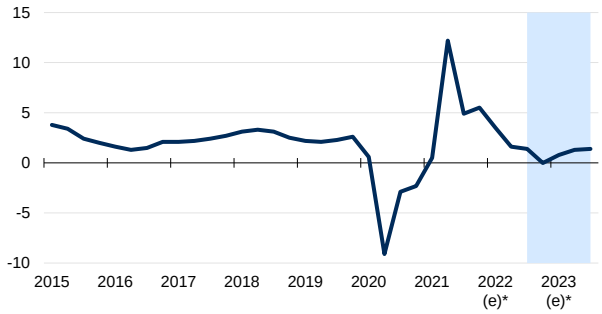
e-Estimate.
Source: CFRA, S&P Global Market Intelligence.

- For the companies in the health care technology custom index, we forecast enterprise value-to-forward revenue of 2.5x in 2022, followed by 2.3x in 2023. By this measure, several companies are trading below recent multiples from 2020-2021, a period of lower interest rates and better equity market returns compared to the current environment. We think this could be favorable for potential industry M&A activity, as lower valuations may make companies more attractive as takeover targets.

KEY INDUSTRY DRIVERS

U.S Real GDP Growth

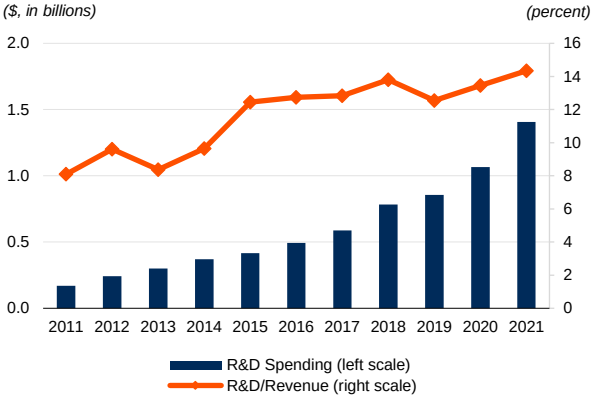
(percent change, Y/Y)



*Actual data as of Q2 2022. Forecast by Action Economics in shaded area.
Source: Bureau of Economic Analysis, Action Economics.

- Action Economics projects U.S. real GDP growth to flatten to 0.4% in 2022 from 5.5% in 2021, propelled by higher inflation and sluggish economic growth, which are indicators of a possible near-term economic recession.
- U.S. real GDP growth is estimated to reach 1.7% in 2023, an improvement from 2022 but below the 2.1% average growth from 2015-2021.

R&D Spending



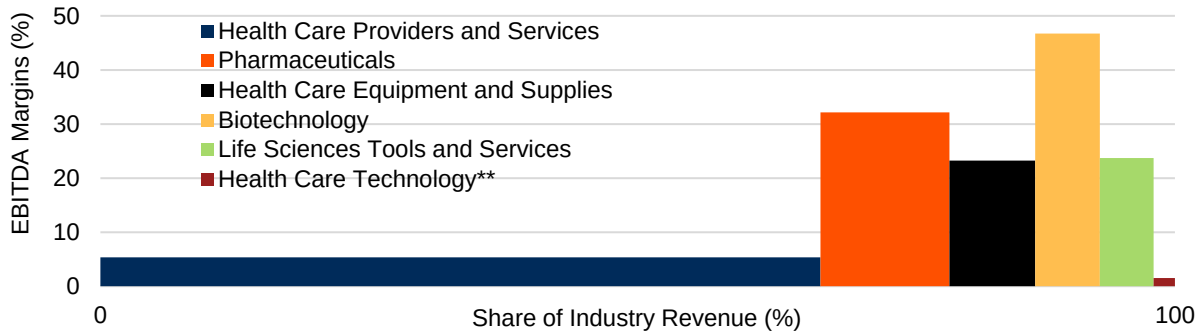
Source: CFRA, S&P Global Market Intelligence.

- Average industry research & development (R&D) spending as a percentage of revenue has increased over the last few years as companies spend more to research and develop innovative new products.

INDUSTRY TRENDS

Profit Pools

PROFIT SHARE MAP OF HEALTH CARE SECTOR*

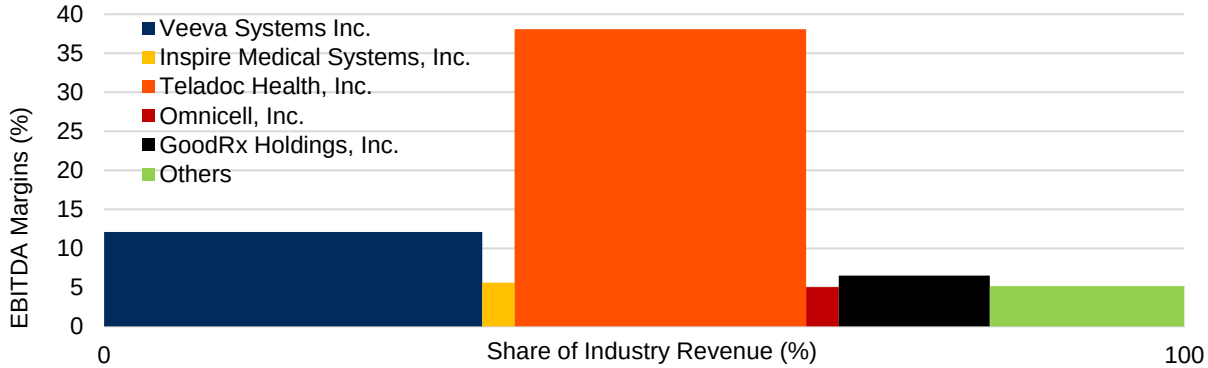


*Companies within the S&P Composite 1500 Index as of Q2 2022.
**Custom Index based on list of companies in Comparative Company Analysis.
Source: CFRA, S&P Global Market Intelligence.

The Health Care Providers and Services industry is the largest in terms of total revenue in the health care sector. Pharmaceuticals is the second largest industry, comprising 12.2% of the entire Health Care sector's revenue. Companies in the Health Care Technology custom index have a 1.9% share of overall sector revenues. Within the Health Care Technology custom index, Teladoc contributed a higher percentage of total revenue with 22% in 2021. Veeva Systems contributed 20%, while Allscripts and Omnicell contributed 16% and 12%, respectively.

In recent years, Health Care Technology's average profit margins have lagged other industries in the sector, apart from Health Care Providers and Services, which tends to make up the largest share of industry revenue but the lowest profit margins. One reason for this, in our view, is the emergence of newer, growth-oriented companies in the Health Care Technology sub-industry, several of which continue to sustain operating losses as they work towards eventual profitability by growing sales and expanding market share. American Well Corporation, Inspire Medical Systems, Tabula Rasa, and Teladoc are expected to post operating losses in the near term.

PROFIT SHARE MAP OF HEALTH CARE TECHNOLOGY CUSTOM INDEX*



*Companies within the S&P Composite 1500 custom index as of Q2 2022.
Source: CFRA, S&P Market Intelligence.

Porter's Five Forces

Threat of new entrants: High

The Health Care Technology sub-industry has low barriers to entry, as the health care system is rapidly shifting towards digitalization when digital health care reached a peak during the Covid-19 outbreak. Artificial intelligence (AI) and machine learning have been in practice in the health care industry for years with ongoing research and tests on the models. On top of that, AI became crucial over the last few years in developing predictive models for Covid-19 cases and to track and estimate the risk of Covid-19 patients developing severe symptoms. The health digital transformation since the pandemic has led to companies becoming more adaptable to evolving technology, which creates more opportunities for new companies to penetrate the market.

Threat of substitutes: Low

The threat of substitution is low in the Health Care Technology sub-industry because switching costs can be very high for buyers. The technology used in the industry typically comprises a combination of automation solutions including a vast amount of data coupled with AI and machine learning. For instance, many health care facilities have started adopting EHR systems to increase efficiency in day-to-day operations. The data migration process to a new system can be cumbersome and expensive for customers to switch to another product.

Bargaining power of buyers: Low

The bargaining power of buyers in the Health Care Technology sub-industry is expected to be relatively low. Lack of awareness about technologies such as big data and high costs associated with these technologies are some of the factors responsible for lowering the bargaining power of buyers. Furthermore, switching cost for buyers is expected to be high, which negatively impacts the bargaining power of buyers.

Bargaining power of suppliers: Unique

The Health Care Technology sub-industry has numerous suppliers nationwide that offer technology solutions software for EHR, which weakens the power of suppliers for this product. However, there may be critical suppliers that provide complex or unique components that are less substitutable such as Simulations Plus, Inc. The company specializes on AI and machine learning for drug discovery and development for mechanistic modeling and simulation, which gives it a competitive advantage and higher bargaining power in the market.

Degree of rivalry: High

Intense rivalry often exists among competitors in the Health Care Technology sub-industry because companies that make the most efficient product stand to capture the most market share. The digital transformation in health care was elevated to a new level as the industry had to rapidly roll out digital technologies such as telehealth to cope with the pandemic restrictions. Since then, the health care system relies heavily on technology, which supports high demand in the industry. As the health care system continues to adopt virtual care, companies are aggressively competing to capture market share and meet customer demands through new and improved products.

Competitive Environment

As the industry seeks to replace outdated platforms, improve capabilities, and reduce costs, competition within the Health Care Technology sub-industry continues to increase, which we think ultimately benefits customers and advances the state of the health care market. The market capitalization for the S&P 1500 Health Care Technology custom index stands at $60.1 billion with aggregate industry revenue of $15.6 billion as of August 26, 2022.

As a percentage of industry revenues, research and development spending dramatically increased over the past decade, indicative of intense competition and quickly evolving technology within the industry, in our view. In recent years, several large retail and big tech companies, which have established infrastructure and brand loyalty, have also entered the health care scene.

Alphabet is focusing to drive the industrywide push for predictive analytics, precision medicine, and interoperability by taking advantage on its expertise in AI and data storage. The company also has the ambition to improve consumer health and to taper health care costs. Several top health care solutions and platforms that Google offers include Google Fit, DeepMind, Verily, Calico, and FitBit. On top of that, it is also utilizing its cloud platform and search capabilities to improve the safety and functionality of electronic health records (EHRs). Amazon Care offers virtual and video health care options to Amazon employees, partnering with insurance companies access networks of providers and process claims. However, the Washington Post recently reported that Amazon will shut down the program by year-end 2022. Oracle recently moved into the health care technology space with its acquisition of EHR-provider Cerner. Through its “Health” app and Watch device, Apple is competing to integrate its technology into existing health care platforms and promote the storage and sharing of key health data. Some of the top health care solutions and platforms offered are Apple Watch, Health Records, and Genetic Testing.

Another rival in the health care market, Microsoft is adopting a different strategy by concentrating on its data analytics expertise through its cloud platform, Azure, instead of entering the consumer-facing realm. Azure is a useful tool to assist in optimizing data storage as well as providing the facility for providers and payers to target specific pockets of populations for greater health outcomes. On May 24, 2022, the company unveiled its partnership with AI data security company BeeKeeperAI to enhance Azure and to streamline the complex AI research process in the health care industry.

While regulation is a barrier to entry in several parts of the health care technology market, many regulations have been lifted or reduced during the Covid-19 pandemic, giving more exposure to smaller players and moving the industry towards a more inclusive and competitive environment.

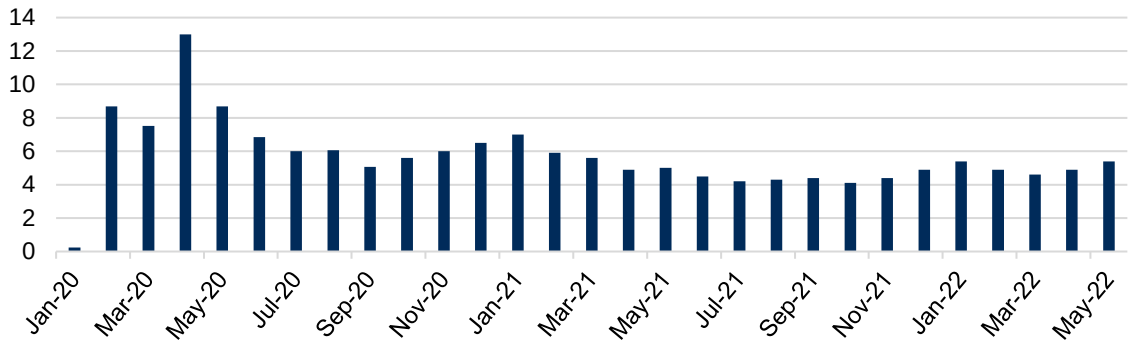
Operating Environment

Under the Medicare Access and CHIP Reauthorization Act of 2015 (MACRA), health care providers are not reimbursed on a fee-for-service basis; rather, companies are paid based on the quality and effectiveness of care, i.e., value-based care. The ongoing shift from fee-for-service to value-based compensation will likely provide opportunities for innovative health care technology firms, in our view. Medicare insurance reimbursement already incorporates quality-based guidance for electronic health record systems that rewards interoperability, a term for the ease of accessing and sharing health care data between doctors, hospitals, and other health care entities. As health care technology and EHR companies make medical data accessible across a variety medical devices and systems, as well as enable real-time health information from multiple sources like test results and drug prescriptions, we think health care providers could ultimately make faster, more informed, and higher quality decisions. Over time, these developments can also lower the overall cost of providing care. We believe that the U.S. health system is still in the early stages of shifting to value-based care, which will likely be a theme of growing importance in health care over time.

The Department of Health and Human Services (HHS) has provided flexibility to HIPAA-covered (Health Insurance Portability and Accountability Act) health care during the pandemic. HIPAA-covered health care providers may seek to communicate with patients and provide telehealth services through remote communications technologies. The Centers for Medicare & Medicaid Services (CMS) has also issued temporary measures to make it easier for people enrolled in Medicare, Medicaid, and the Children's Health Insurance Program (CHIP) to receive medical care through telehealth services during the Covid-19 public health emergency.

With widespread closures of doctor's offices and a secular shift towards working from home, the pandemic dramatically increased the demand for certain segments of the Health Care Technology sub-industry, particularly telehealth. However, as the pandemic's severity declined, the industry observed weaker demand for telehealth from its peak over the past two years. According to a February 2022 report from the Peterson-Kaiser Family Foundation Health System Tracker (latest available), which incorporates data from March 2019 through August 2021, the percentage of outpatient visits conducted through telehealth rose from 0% prior to the pandemic to a high of 13% between March and August 2020. As the pandemic continued, telehealth began to constitute a smaller percentage of outpatient visits, falling to 11% between September 2020 and February 2021 and 8% between March 2021 and August 2021, though still significantly higher than pre-pandemic levels. Recent data from FAIR Health, a nonprofit health care information provider, indicates that telehealth comprised 5.4% of medical claim lines in May 2022 (latest available). Between May 2021 and May 2022, the data suggests that telehealth, as a percentage of medical claims, has remained stable within a range of 4% to 6% of medical claims. The decline in telehealth utilization was likely due to the continued reduction of the reported number and severity of Covid-19 infections, which may have led more patients to return to in-person health care services.

TELEHEALTH MEDICAL CLAIM LINES*
(in percent)

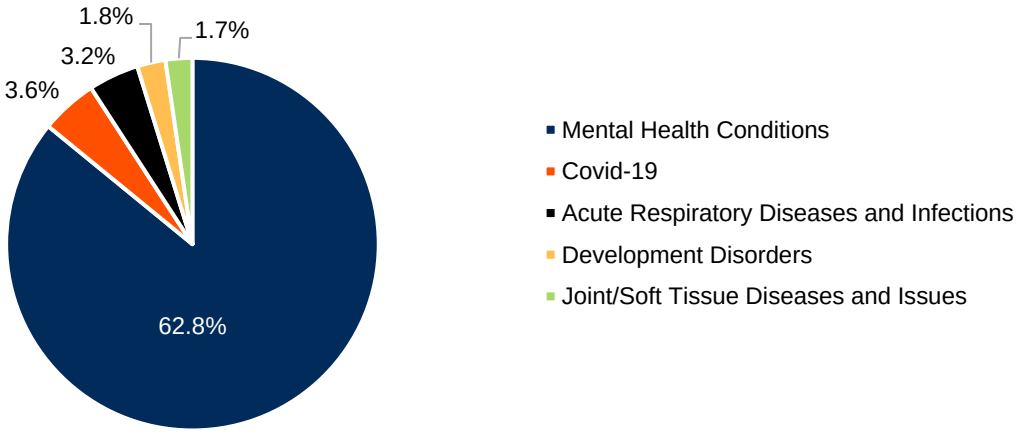


*Latest available data.
Source: FAIR Health.

Looking ahead, we think telehealth offers several positives for the health care industry. For example, telehealth helps to promote health care cost efficiency, as an in-person appointment with a doctor is typically more expensive compared to an online appointment. In addition, telehealth also increases patients' flexibility by offering virtual appointment options. Telehealth technologies can also promote the sharing of data across the health care system and expedite the response to medical emergencies and urgent care needs. Furthermore, the CDC has emphasized the use of telehealth in helping to boost the health of rural residents. Convenience helps to reduce barriers for people who live far from health care services and specialists, as well as those with time or access restrictions and those who experience transportation or mobility issues. The CDC is also supporting telehealth projects to provide better access to rural residents for chronic disease prevention and management and specialist care. This includes services for stroke care and cardiac rehabilitation, diabetes management and Type 2 diabetes prevention, vision care for people with diabetes, tobacco cessation, and epilepsy management.

In addition, telehealth has also provided a substantial contribution in addressing multiple diagnoses among patients since the pandemic. According to FAIR Health, mental health conditions account for more than 62% of total telehealth utilization as of May 2022 (latest available). One could argue that telehealth, with its convenience, privacy, and ability to take place across multiple platforms (i.e., phone, video, chat) caters well to mental health treatment and may benefit from broader mental health initiatives in society.

PERCENTAGE OF TOTAL TELEHEALTH SERVICES BY DIAGNOSIS*
(in percent)



*Data as of May 2022.
Source: FAIR Health.

Economically, questions remain as to whether telehealth has managed to provide savings to the health care industry. A 2017 study conducted by HealthAffairs revealed that telehealth visits cost patients an average of $79 as opposed to $146 for an office visit, with much of the savings attributed to cutting out costs of time and travel. However, the study also found evidence of increased costs due to higher utilization of health care. In other words, more patients using telehealth induced higher overall costs of care. For example, increased patient volumes imply occasionally higher acuity (more sick) cases, new testing and/or imaging, and higher usage of time by physicians and nurses.

Another potential source of savings is for chronic care management (CCM) for the Medicare beneficiary population, where telehealth would be convenient for patients who need quick but frequent check-ins with their doctors. The many forms of virtual care such as phone calls, video appointments, or remote patient monitoring could act as a replacement for more costly office visits. This convenience can help to tremendously lessen health care costs for this patient population.

On the other hand, there is also evidence that shows the convenience of telehealth could lead to higher costs rather than savings. Research discloses that telehealth services could encounter challenges including telehealth fraud, waste, and abuse, which might lead to higher costs. An example of direct telehealth fraud is upcoding phone call check-ins to full telehealth appointments as well as the risk of billing of services not rendered. The largest source of wasted costs related to telehealth could be the time and effort spent on assuring payment integrity, whether the payments are made correctly and by the right party.

Regulatory Environment

HIPAA

Originally passed in 1996, the Health Insurance Portability and Accountability Act (HIPAA) sets federal standards for safeguarding patient information and ensuring a level of privacy across the health care industry. HIPPA evolves over time as technological development and the rise cybercrime puts patient data privacy at risk.

HITECH

In response to the global financial crisis, Congress passed an economic stimulus package in 2009, called the American Recovery and Reinvestment Act (ARRA). Within ARRA was the HITECH (Health Information Technology for Economic and Clinical Health) Act, which provided financial incentives between 2011 and 2015 to spur the adoption of health care information technology (HCIT), including the implementation of electronic health records (EHRs). These incentives appear to have spurred significant adoption of EHR within the industry. According to The Office of the National Coordinator for Health Information Technology (ONC), the percent of non-federal acute care hospitals that had adopted at least the basic EHR with notes system grew from 12.2% in 2009 to 83.8% in 2015. Today, the CMS continues to direct government insurance reimbursement among health care providers for the use of “certified electronic health record technology” (CEHRT), with payments potentially lowered if providers do not meet minimum criteria. HITECH also spurred greater enforcement of HIPAA by raising the financial penalties for HIPAA violations.

MACRA

In 2015, the U.S. government introduced new legislation known as the Medicare Access and CHIP Reauthorization Act of 2015 (MACRA). According to the American Academy of Family Physicians (AAFP), MACRA changed the Medicare reimbursement methodology for physicians and introduced two different quality-based payment systems, the Merit-Based Incentive Payment System (MIPS) and the Advanced Alternative Payment Model (AAPM). MIPS guidelines specifically incorporate the advancement of “interoperability,” which draws on the previous CEHRT guidance from MACRA.

CURES Act

2016 saw the passage of the 21st Century Cures Act (CURES). Among other initiatives, the legislation built on HITECH and MACRA by promoting interoperability and working against the inappropriate blocking of electronic health care data and records. Over the past few years, the ONC expanded on the CURES Act by publishing guidance known as Final Rules, such as provisions for health information to be easily accessible in apps with open APIs (application programming interfaces). In addition, companies like Epic and NextGen Healthcare have recently signaled their intent to become qualified health information networks (QHIN), which promote clinical data sharing across the industry.

Evolving Regulation in Response to Covid-19

State legislators and federal agencies have increasingly evaluated medical technology regulation and introduced new laws in response to Covid-19. The pandemic has highlighted gaps in health care standards and outdated practices, while also accelerating the trend towards making health care technology more available in a regulatory fashion. This is especially evident in the telemedicine industry, where it has long been difficult for doctors to apply for the ability to provide services out of state medical services. According to the HHS, traditional HIPAA restrictions have been relaxed during the public health emergency (PHE), allowing health care providers to utilize technologies like Zoom, Skype, WhatsApp, FaceTime, and Facebook Messenger. In addition, CMS agreed to allow Medicare and Medicaid reimbursement for telehealth doctors' visits in place of in-person contacts, while also expanding the number of medical services allowed through telehealth and permitting these appointments to cross state lines, subject to state-by-state rules.

As of August 15, 2022, 20 U.S. states have adopted long-term or permanent provisions allowing the practice of telemedicine across state lines, while 10 states had waivers in place that allow interstate telemedicine, according to the Federation of State Medical Boards.

Due to legislation passed in 2021, the relaxed telehealth provisions are set to remain in effect for at least five months after the declared end of the PHE, which is currently in-force until at least October 13, 2022, when it can be extended for another 90 days at a time. The government has also played a vital role in addressing the Covid-19 pandemic when it announced the declaration of the PHE on January 27, 2020. According to Healthcare Finance, on August 18, 2022, CMS has issued a roadmap to the end of PHE and has encouraged health care providers to take the necessary actions to prepare for the end of the flexibilities. Some adjustments to the reporting requirements include a change to section 1332 waivers on telehealth and hospital care at home, where the waivers will resume for 151 days after the end of PHE. As of mid-August 2022, health officials are anticipating that the Biden administration would extend the PHE for another 90 days after mid-October 2022. Thus, we expect these provisions to remain in place until at least March 2023.

M&A Environment

Digital health raised $10.3 billion in funding across 329 deals in the first half of 2022, down from $14.7 billion raised in the same period in 2020. According to Fierce Healthcare, the industry is forecasted to achieve total overall funding of about $21.0 billion in 2022, lower than $29.1 billion raised in 2021.

We think the pandemic gave health care tech companies an opportunity to showcase the utility of digital solutions in a challenging health care environment. IPO activity in the industry had been strong before recent equity market volatility and rising interest rates slowed IPO volumes across the market during 2022. In 2020, we saw the IPOs of American Well, a competitor in the telehealth space, as well as GoodRx, which offers technology geared towards the prescription drug market, and One Medical, a membership-based health care company offering in-person and virtual care options. One Medical recently gained notoriety with Amazon's planned $3.9 billion acquisition of the company.

The Health Care Technology sub-industry also continues to experience consolidation, with several transactions aiming to add complementary products, expand into new markets, or tap into more robust data and analytical capabilities. In October 2019, Veeva Systems acquired Crossix, a health care data and analytics company. In October 2020, Teladoc completed an $18.5 billion merger with Livongo, which provides services for the management of diabetes and other chronic conditions. In February 2022, EHR-provider athenahealth was acquired by private equity firms Bain Capital and Hellman & Friedman for $17.0 billion.

Several large technology players have also made recent entries into the health care technology scene. In May 2022, Allscripts Healthcare Solutions closed the sale of its Hospitals & Large Physician Practices segment to Harris Health, a subsidiary of Canada-based Constellation Software. In June 2022, software giant Oracle completed an acquisition of EHR-provider Cerner for approximately $28 billion. In addition to its recently announced acquisition of One Medical, Amazon also made recent headlines with reported interest in acquiring Signify Health, a company providing technologies for the in-home health care market.

HOW THE INDUSTRY OPERATES

Electronic Medical Records (EMRs)

Electronic medical records or EMRs are digital versions that are equivalent to the old-fashioned paper medical records. The system was developed to adapt to the rapid shift towards digitalization in the landscape of health services. As the amount of paper records continued to grow, many organizations had to occupy rooms and storage facilities for the sake of storing files. The process of performing physical documentations can also be time consuming and can heighten the probability of inaccuracies in record keeping.

The EMR system was developed in an effort to lessen the setbacks of paper medical records. The system helps to minimize the risk of misplacement, theft, damage, or tampering of sensitive data. In addition, the system's efficiency can also reduce physicians' time for record keeping and allow them to focus on patient interactions. It also helps to maintain current and accurate data of patients' information and eradicate errors caused by handwriting and legibility issues. EMRs also promote effective data tracking by allowing doctors and physicians to track data of individual patients associated with their practice. For instance, the system provides the tool for doctors to identify which patients are due for preventive screenings, vaccinations, or checkups. This ultimately eases doctors and physicians' day-to-day operations of improving their patients' care with effective data tracking as well as reminders for patient screenings and checkups.

EMR is a convenient tool for tracking patients' quality of care. However, it does not easily allow transfer of information to other health care organizations.

Electronic Health Records (EHRs)

Electronic health records systems or EHRs were developed not long after the development of EMRs with the objective to create improvements from the existing system. EHRs serve many of the similar purposes of EMRs of collecting and storing patient health data in digital form but with stronger focus on individual patients. The EHR system is also designed to boost interoperability for patient information transfer between health care facilities. This allows hospitals to effectively update records and pull information in an accessible manner. Roughly 96% of hospitals have adopted EHRs as of 2019 (latest available). Doctors are also able to save time using the EHR system, which helps to simplify their logistical day-to-day tasks such as billing, scheduling, and patient test results.

The Michigan Center for Effective IT Adoption estimates that in-office EHR systems cost $33,000 for initial implementation, followed by $4,000 per year for maintenance, for a total five-year cost of $48,000. For web-based software-as-as-service (SaaS) EHR systems, they estimate a lower upfront cost ($26,000), followed by higher annual network and subscription fees ($8,000), for a total five-year cost of $58,000. Despite these costs, hospitals can rapidly increase their efficiency and receive incentives for using these systems. In response to the global financial crisis, Congress passed an economic stimulus package in 2009, called the American Recovery and Reinvestment Act (ARRA). Within ARRA was the HITECH (Health Information Technology for Economic and Clinical Health) Act, which provided financial incentives between 2011 and 2015 to spur the adoption of health care information technology (HCIT), including the implementation of EHRs. Today, the CMS continues to direct government insurance reimbursement among health care providers for the use of "certified electronic health record technology" (CEHRT), with payments potentially lowered if providers do not meet minimum criteria.

North America has been dominant in the EHR market, accounting for 39.2% of global revenues in 2021, according to Vantage Market Research. The largest vendors by U.S. market share of the EHR market in 2021 include Epic (32.9%), Cerner (24.4%), Meditech (16.7%), CPSI (8.7%), according to Becker's

Hospital Review. These companies compete to provide the best all-around platform to hospitals and organizations while also protecting sensitive data.

Interoperability

By far one of the greatest advantages to digitizing health records is the ability for patient information to be transferred in the case of switching providers. The EHR offers the convenience for different hospitals to add on to data already collected, as opposed to reconstructing patient profiles, proving a significant improvement from EMRs. Doctors can quickly receive a complete history of previous tests and analyze a patient's profile to better judge diagnosis and treatments. Care center administrative costs can additionally be reduced by a considerable amount, avoiding the physical exchange of data through laborious tasks. Physicians and staff can therefore improve their quality of care as well as increase patient engagements.

The Office of the National Coordinator for Health IT (ONC) is responsible for interoperability oversight. From 2014 to 2015, the ONC revised its interoperability roadmap, with the result being a 10-year plan that sets standards, as well as goals for specific years within the timeframe.

Data Analytics

Data analytics in the health care industry involves gathering and analyzing aggregate data to draw insights and thematic conclusions. While this information can be analyzed among large patient groups or populations, it can also be used to analyze individual patients' conditions as well as practitioners' performance. According to IBM, the pandemic has accelerated many health care institutions to transition from a fee-for-service (rewards health care providers for volume of care) to value-based care. In doing so, providers are adopting analytic technology to improve their ability to deliver health risk assessments. One of the largest segments of data analytics by market share is descriptive analytics. Descriptive analytics propels market growth of organizations through summarizing past events and occurrences relating to the business model. For example, descriptive analytics can provide data on how many new patients are using telehealth, or how many patients are hospitalized in a given time period. Furthermore, machine learning techniques are integrated into programs to develop the most accurate results. It is used by hospitals to provide health insights such as risk scoring or early signs of deterioration. It can also be used to ensure financial stability in the case of supply chain management, fraud, and efficiency. Two other areas of data analytics are diagnostic and prescriptive analytics. Diagnostic analytics helps doctors to further understand the reasons that patients experience certain conditions. In comparison, prescriptive analytics allows doctors to further understand what decisions and actions are needed to be taken to make specific recommendations in care intervention.

In 2021, the global health care analytics industry was valued at $29.1 billion and is forecasted to grow at a CAGR of 21.5% from 2022 to 2030, according to Grand View Research. Big data in health care has the ability to yield key insights, although the volume of sensitive information at hand is a challenge.

The Role of the Government

Because the U.S. federal government is responsible for financing health care services for elderly and poor citizens through Medicare and Medicaid, the federal government is a major force in shaping a health care system.

U.S. health care spending is projected to grow at an average rate of 9.9% from 2019 to 2030, according to CMS. National health spending was estimated to have grown 2.7% in 2020, down slightly from 4.5% growth in 2019. Further, the national health care expenditure of GDP accounted for 19.7% of GDP in 2020 (latest available). The largest shares of total health spending in 2020 were sponsored by the federal government (36.3%) and households (26.1%).

PERSONAL HEALTH CARE EXPENDITURES

(in $, billions)

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Hospital care	1,123	1,194	1,270	1,342	1,435	1,516	1,601	1,696	1,792	1,890	2,002	2,114	2,210
Professional services	979	1,022	1,069	1,144	1,201	1,272	1,347	1,424	1,503	1,582	1,664	1,751	1,827
Physician and clinical services	737	768	810	850	903	959	1,016	1,077	1,140	1,202	1,268	1,337	1,398
Other professional services	105	111	117	128	132	140	149	157	165	174	183	192	200
Dental services	138	143	142	166	166	173	182	191	199	206	214	222	230
Home health care	191	196	209	220	232	244	257	271	285	300	316	334	352
Nursing and continuing care facilities	106	113	124	122	129	139	149	160	172	184	198	213	226
Retail outlet sales	168	174	197	182	188	198	208	218	228	239	250	262	273
Prescription drugs	456	476	489	510	535	560	589	619	650	683	718	754	792
Medical products	324	338	348	365	380	398	419	440	462	486	511	539	567
Durable medical equipment	132	138	141	146	155	162	170	179	188	197	206	216	225
Non-durable medical products	54	57	55	57	60	63	66	70	73	77	81	84	88
Other personal health care	78	81	86	89	95	100	104	110	115	120	126	131	137
Total Expenditures	46	47	48	53	56	59	61	65	68	72	76	81	85

Source: Centers for Medicare and Medicaid Services.

HOW TO ANALYZE A COMPANY IN THIS INDUSTRY

When evaluating a company in the Health Care Technology sub-industry, it is important to consider the company's fundamental strengths and weaknesses, its business strategy, its competitive advantages, and the broad industry-level forces at play. Key variables influencing a company's financial health and future prospects vary significantly from sub-industry to sub-industry.

Researching the Business

A thorough examination of the company's products and markets is the first step in the analysis. Below are a few important questions to consider regarding a health care technology company's product portfolio and strategy:

What are the company's principal products? Most companies in the Health Care Technology sub-industry offer electronic health record (EHR) systems while some companies specialize in niche products such as drug discovery and development software, neurostimulation technology, telemedicine equipment, cloud-based software, platform for drug prices comparison, and virtual health care services. Proprietary items, especially in high-tech devices and software, have high margins when they are introduced, considering that competition is relatively thin or, in some instances, nonexistent. Analysts and investors often focus heavily on key growth driving products for companies.

Margins are typically lower on commodity-like products that have been in the market for a long time – although cash flow from these products often supports R&D efforts. Investors and analysts generally do not assign as much value to this important revenue stream as they should because cash flow from these product lines, while important to the aims of the organization, is not seen as a growth area. However, these revenue streams tend to have a high level of consistency and help to fund working capital requirements.

What are the growth dynamics of core business lines? For companies participating in the Health Care Technology sub-industry, revenue growth is influenced by several factors, including rapid digitalization of the Health Care industry largely factored by the Covid-19 pandemic and rising adoption of advanced health care IT solutions and services.

What are the company's primary competitive advantages? For most companies in the Health Care Technology sub-industry, size has become one of the key factors driving both revenue growth and operating margin expansion. The demand for EHR systems is rapidly increasing in parallel with rising number of hospitals worldwide. Therefore, competition in the EHR business is intense, which threatens those who fail to innovate and incentivizes those who are successful to create competitive advantages or tap into less saturated markets.

Financial Analysis

A number of items on the income statement and balance sheet are important in the analysis of a company in the Health Care Technology sub-industry. Given the diversity in terms of geography, sources of revenue, scope of operations, and methods of growth, these items must be evaluated on a company-by-company basis.

Revenues. Examine the company's recent and historical revenue growths. Has revenue growth trend been consistent or volatile? It is important to identify the factors driving revenue expansion. Are revenues rising on sales volume growth from operations, or from one-time boosts related to acquisitions? If revenue growth is being driven by acquisitions, will the acquisitions enable cost reductions, and if so, will they justify the purchase price of the acquired company? Is the company gaining market share or just hiking prices? If so, how sustainable are these price increases?

EBITDA Margin. A profitability ratio that measures how much in earnings a company is generating before interest, taxes, depreciation, and amortization, as a percentage of revenue. This metric is useful to gauge a company's financial health and operational profitability before accounting for extraneous costs of depreciation and amortization, taxation, and interest on debts.

Adjusted Earnings per Share (EPS). Among the most important financial metrics for investors in the Health Care Technology sub-industry, EPS performance is widely monitored because it combines several important factors including a company's ability to increase revenues; control operating expenses; and manage capitalization, as interest expense on debt and equity share count also factor into EPS. "Adjusted" refers to management's discretionary removal of certain non-operating items from the earnings calculation. These often include one-time legal expenses or non-cash amortization expenses resulting from acquisitions.

Watch Out! *Costs for bad debts, sales returns, warranties, obsolete inventory, and other provisions are estimated by management and recorded as either expenses or offsets to revenue (depending upon the provision). Management has discretion in calculating these estimates, and therefore has the ability to manipulate earnings, and sometimes revenues. Specifically, by under-provisioning or reversing previous provisions, management can generate artificial, and therefore unsustainable earnings.*

R&D Spending. R&D is one of the critical aspects of operations in the Health Care Technology sub-industry. These costs fund developer and researcher salaries and lab equipment needed to fuel technological innovation. Without maintaining a steady or growing R&D margin, a company in this industry can see its products become obsolete in only a few years. When comparing companies, investors may look at ratios such as R&D as a percentage of sales or R&D expenditures per employee.

The Impact of Acquisitions

It is important to know whether sales and earnings growth is acquisition-driven or internally (organically) driven. Internal growth shows that a company can effectively manage and innovate within its existing geographic territory and facilities. If growth is acquisition-driven, it is important to examine relevant statistics on a "same-store" basis. Growth generated via acquisitions often masks underlying performance trends in revenue growth and margins.

Watch Out! *A company can manipulate earnings by using the adjustment to fair market value of a target company's assets and liabilities in an acquisition to understate assets and overstate liabilities, thereby allocating a greater portion of the purchase price to goodwill.*

Behind the Balance Sheet

Balance Sheet Integrity

While the income statement shows financials over periods of time, the balance sheet is a snapshot of a company's financial position at a specific moment. This picture can be useful in determining the stability and soundness of a firm.

◆ **Net debt-to-capitalization ratio.** This is the ratio of a company's total net debt to its total capitalization. Net debt can typically be calculated by deducting total debt (short-term debt plus long-term debt) with cash and cash equivalents. Many analysts tend to use the ratio of long-term debt-to-total capital. Companies with a lower net debt-to-capitalization ratio typically have more financial flexibility as they can usually borrow at lower rates and they are usually less burdened by existing interest and principal payments.

Watch Out! *Some companies engage in supplier financing arrangements (aka reverse factoring). There are several variations of these programs, but basically, a company arranges for a financial institution to pay its suppliers and the company repays the financial institution later. This effectively lengthens the supplier payment terms and thus improves working capital, which can result in overstated cash flows and understated leverage ratios.*

Enterprise Value-to-Forward Revenue Ratio. This is the ratio of a company's enterprise value to its estimated revenue of its next period's earnings. Enterprise value is calculated by adding market value of equity (market capitalization) with net debt (total debt less cash). This ratio is useful to determine a company's valuation within the context of a possible acquisition.

GLOSSARY

21st Century Cures Act—Signed into law on December 13, 2016 and is designed to help accelerate medical product development and bring new innovations and advances to patients who need them faster and more efficiently.

California Consumer Privacy Act—A state statute intended to enhance privacy rights and consumer protection for residents of California, United States.

Electronic Health Records (EHR)—A systematized collection of patient and population electronically stored health information in a digital format and can be shared across different health care settings.

Electronic Medical Records (EMR)—A digital system that is equivalent to the old-fashioned paper medical records.

Health care information technology (HCIT)—HCIT solutions target every element of the health care value chain with many applications ranging from workflow optimization and revenue management to care delivery and patient engagement.

Health Information Technology for Economic and Clinical Health Act—Enacted as part of the American Recovery and Reinvestment Act of 2009, this was signed into law on February 17, 2009, to promote the adoption and meaningful use of health information technology.

Health Insurance Portability and Accountability Act (HIPAA)—A federal law that required the creation of national standards to protect sensitive patient health information from being disclosed without the patient's consent or knowledge.

Medicare Access and CHIP Reauthorization Act of 2015 (MACRA)—A bipartisan legislation signed into law on April 16, 2015, which provides a new framework for reimbursing clinicians who successfully demonstrate value over volume in patient care.

Public health emergency (PHE) —An emergency need for health care (medical) services to respond to a disaster, significant outbreak of an infectious disease, bioterrorist attack, or other significant or catastrophic events.

Telehealth—Providing health care remotely by means of telecommunications technology.

INDUSTRY REFERENCES

PERIODICALS

American Academy of Family Physicians (AAFP)
aafp.org
A professional association that promotes and maintains high-quality standards for family medicine, an offshoot of the classical general practitioner.

Becker's Hospital Review
beckershospitalreview.com
A leading hospital magazine for hospital business news and analysis for hospital and health care system executives.

Fierce Healthcare
fiercehealthcare.com
Provides critical business news to executives across the industry, including providers, payers, and technology innovators.

Health Affairs
healthaffairs.org
A monthly peer-review health care journal.

Healthcare Finance News
healthcarefinancenews.com
Industry's business newspaper, offering health care financial managers comprehensive news coverage of the health care finance industry.

HIPAA Journal
hipaajournal.com
Provides the most comprehensive coverage of HIPAA news anywhere online, in addition to independent advice about HIPAA compliance.

Journal of Medical Economics
medicaleconomics.com
A monthly peer-reviewed academic journal that covers econometric assessments of novel therapeutic and medical device interventions.

RESEARCH AND CONSULTING FIRMS

Action Economics
actioneconomics.com
Research firm that provides in-depth analysis of economic data and projections.

eMarketer
insiderintelligence.com
A subscription-based market research company that provides insights and trends related to digital marketing, media, and commerce.

Grand View Research
grandviewresearch.com
Business consulting firm that offers action-ready market research reports, custom market analysis, and consulting services.

IBM
ibm.com
Global consulting firm that offers application management, integrated communications, artificial intelligence, Internet of things, and security software solutions

IQVIA
iqvia.com
Consulting firm that specializes in health care analysis, services, and solutions.

McKinsey & Company
mckinsey.com
Global management consulting firm and trusted advisor to many of the world's most influential business and institutions.

Peterson-KFF Health System Tracker
healthsystemtracker.org
A partnership between The Peterson Center on Healthcare and Kaiser Family Foundation that provides up-to-date information on trends of the U.S. health care system.

Vantage Market Research
vantagemarketresearch.com
Research firm that provides quantified B2B research on more than 20,000 emerging markets.

TRADE ASSOCIATIONS

FAIR Health
fairhealthconsumer.org
A non-profit organization with a mission to help understand health care costs and health coverage and to bring transparency to health care costs and insurance.

Federation of State Medical Boards
fsmb.org
A national non-profit organization that supports America's state medical boards in licensing, disciplining, and regulating physicians and other health care professionals.

GOVERNMENT AGENCIES

Centers for Diseases Control and Prevention (CDC)
cdc.gov
One of the major operating components of the U.S. Department of Health & Human Services that conducts critical science and provides health information.

Centers for Medicare & Medicaid Services (CMS)
cms.gov
A division of the U.S. Department of Health & Human Services that oversees the administration of the Medicare and Medicaid programs.

U.S. Department of Health and Human Services
hhs.gov
Federal agency charged with enhancing and protecting the health and well-being of all Americans.

COMPARATIVE COMPANY ANALYSIS

Operating Revenues

Ticker		Company		Yr. End	Million $ 2021	2020	2019	2018	2017	2016	2015	CAGR (%) 10-Yr.	5-Yr.	1-Yr.	Index Basis (2012=100) 2021	2020	2019	2018	2017	2016
HEALTH CARE TECHNOLOGY																				
MDRX	§	ALLSCRIPTS HEALTHCARE SOLUTIONS, INC.		DEC	1,503.0	1,502.7	1,632.6	1,617.8	1,497.7	1,386.1	1,386.4	0.4	1.6	0.0	108	108	118	117	108	100
CPSI	§	COMPUTER PROGRAMS AND SYSTEMS, INC.		DEC	280.6	264.5	274.6	280.4	276.9	267.3	182.2	4.9	1.0	6.1	154	145	151	154	152	147
HSTM	§	HEALTHSTREAM, INC.		DEC	256.7	244.8	254.1	231.6	214.9	192.1	209.0	12.1	6.0	4.9	123	117	122	111	103	92
NXGN	§	NEXTGEN HEALTHCARE, INC.	#	MAR	596.4	556.8	540.2	529.2	531.0	509.6	492.5	4.7	2.5	3.1	121	113	110	107	108	103
OMCL	§	OMNICELL, INC.		DEC	1,132.0	892.2	897.0	787.3	712.7	695.9	484.6	16.5	10.2	26.9	234	184	185	162	147	144
SLP	§	SIMULATIONS PLUS, INC.		AUG	46.5	41.6	34.0	29.7	24.1	20.0	18.3	18.2	18.4	11.7	254	227	185	162	132	109
TRHC	§	TABULA RASA HEALTHCARE, INC.		DEC	331.3	297.2	284.7	204.3	133.5	94.8	70.0	NA	28.4	11.5	473	424	406	292	191	135
AMWL		AMERICAN WELL CORPORATION		DEC	252.8	245.3	148.9	114.0	114.0	0.0	24.4	NA	NA	3.1	1037	1006	610	467	467	0
GDRX		GOODRX HOLDINGS, INC.		DEC	745.4	550.7	388.2	249.5	249.5	0.0	0.0	NA	NA	35.4	NA	NA	NA	NA	NA	NA
INSP		INSPIRE MEDICAL SYSTEMS, INC.		DEC	233.4	115.4	82.1	50.6	28.6	16.4	8.0	NA	70.0	102.3	2913	1440	1024	631	357	205
TDOC		TELADOC HEALTH, INC.		DEC	2,032.7	1,094.0	553.3	417.9	233.3	123.2	77.4	NA	75.2	85.8	2627	1414	715	540	301	159
VEEV		VEEVA SYSTEMS INC.	#	JAN	1,850.8	1,465.1	1,104.1	862.2	690.6	550.5	409.2	48.0	29.1	32.7	452	358	270	211	169	135

Note: Data as originally reported. CAGR-Compound annual growth rate.
[]Company included in the S&P 500. †Company included in the S&P MidCap 400. §Company included in the S&P SmallCap 600. #Of the following calendar year.
Souce: S&P Capital IQ.

Net Income

Ticker		Company		Yr. End	Million $ 2021	2020	2019	2018	2017	2016	2015	CAGR (%) 10-Yr.	5-Yr.	1-Yr.	Index Basis (2012=100) 2021	2020	2019	2018	2017	2016
HEALTH CARE TECHNOLOGY																				
MDRX	§	ALLSCRIPTS HEALTHCARE SOLUTIONS, INC.		DEC	134.4	700.4	-182.2	363.7	-196.5	-25.7	-2.2	6.2	NM	-80.8	NM	NM	8184	NM	8826	1152
CPSI	§	COMPUTER PROGRAMS AND SYSTEMS, INC.		DEC	18.4	14.2	20.5	17.6	-17.4	3.9	18.3	-3.3	36.2	29.4	100	78	112	96	-95	21
HSTM	§	HEALTHSTREAM, INC.		DEC	5.8	14.1	15.8	32.2	10.0	3.8	8.6	-1.7	9.3	-58.5	68	163	183	374	116	44
NXGN	§	NEXTGEN HEALTHCARE, INC.		MAR	1.6	9.5	7.5	24.5	2.4	18.2	5.7	-17.0	11.0	26.9	29	168	133	433	43	322
OMCL	§	OMNICELL, INC.		DEC	77.8	32.2	61.3	37.7	30.5	9.8	30.8	22.3	51.5	141.8	253	105	199	123	99	32
SLP	§	SIMULATIONS PLUS, INC.		AUG	9.8	9.3	8.6	8.9	5.8	5.0	3.8	13.7	14.6	4.8	255	243	223	232	151	129
TRHC	§	TABULA RASA HEALTHCARE, INC.		DEC	-79.1	-81.0	-32.4	-47.3	12.8	-5.5	-2.9	NA	70.3	-2.4	2760	2827	1133	1650	-447	193
AMWL		AMERICAN WELL CORPORATION		DEC	-176.3	-224.4	-87.2	-52.7	-52.7	0.0	-28.7	NA	NA	-21.4	615	783	304	184	184	0
GDRX		GOODRX HOLDINGS, INC.		DEC	-25.3	-293.6	66.0	43.8	43.8	0.0	0.0	NA	NA	-91.4	NA	NA	NA	NA	NA	NA
INSP		INSPIRE MEDICAL SYSTEMS, INC.		DEC	-42.0	-57.2	-33.2	-21.8	-17.5	-18.5	-21.3	NA	17.8	-26.5	197	268	156	102	82	87
TDOC		TELADOC HEALTH, INC.		DEC	-428.8	-485.1	-98.9	-97.1	-106.8	-74.2	-58.0	NA	42.0	-11.6	739	836	170	167	184	128
VEEV		VEEVA SYSTEMS INC.	#	JAN	427.4	380.0	301.1	229.8	151.2	77.6	54.5	58.0	47.5	26.2	785	698	553	422	278	142

Note: Data as originally reported. CAGR-Compound annual growth rate.
[]Company included in the S&P 500. †Company included in the S&P MidCap 400. §Company included in the S&P SmallCap 600. #Of the following calendar year.
Souce: S&P Capital IQ.

Ticker	Company		Yr. End	Return on Revenues (%) 2021	2020	2019	2018	2017	2016	Return on Assets (%) 2021	2020	2019	2018	2017	2016	Return on Equity (%) 2021	2020	2019	2018	2017	2016
HEALTH CARE TECHNOLOGY																					
MDRX	§ ALLSCRIPTS HEALTHCARE SOLUTIONS, INC.		DEC	8.9	46.6	NM	22.5	NM	NM	NA	24.0	NM	11.4	NM	NM	NA	24.0	NM	NM	NM	2.0
CPSI	§ COMPUTER PROGRAMS AND SYSTEMS, INC.		DEC	6.6	5.4	7.5	6.3	NM	1.5	4.8	4.4	6.0	5.4	NM	1.2	4.8	4.4	11.9	11.9	NM	3.4
HSTM	§ HEALTHSTREAM, INC.		DEC	2.3	5.8	6.2	13.9	4.7	2.0	1.2	2.8	3.2	7.3	2.4	0.9	1.2	2.8	4.3	4.3	3.0	1.7
NXGN	§ NEXTGEN HEALTHCARE, INC.		MAR	0.3	1.7	1.4	4.6	0.5	3.6	0.3	1.5	1.0	4.6	0.5	3.9	0.3	1.5	1.9	7.0	0.8	6.4
OMCL	§ OMNICELL, INC.		DEC	6.9	3.6	6.8	4.8	4.3	1.4	3.6	1.8	4.9	3.5	3.0	1.0	3.6	1.8	8.0	6.1	6.2	2.3
SLP	§ SIMULATIONS PLUS, INC.		AUG	21.1	22.4	25.3	30.1	24.0	24.8	5.4	5.5	19.0	20.6	15.0	17.8	5.4	5.5	24.7	31.0	23.8	23.4
TRHC	§ TABULA RASA HEALTHCARE, INC.		DEC	NM	NM	NM	NM	9.6	NM	NM	NM	NM	NM	6.8	NM	NM	NM	NM	NM	14.2	NM
AMWL	AMERICAN WELL CORPORATION		DEC	NM	NM	NM	NM	0.0	0.0	NM	NM	NM	NM	NA	NA	NM	NM	NM	0.0	0.0	0.0
GDRX	GOODRX HOLDINGS, INC.		DEC	NM	NM	17.0	17.6	0.0	0.0	NM	NM	17.1	13.9	NA	NA	NM	NM	NM	0.0	0.0	0.0
INSP	INSPIRE MEDICAL SYSTEMS, INC.		DEC	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	0.0
TDOC	TELADOC HEALTH, INC.		DEC	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
VEEV	VEEVA SYSTEMS INC.	#	JAN	23.1	25.9	27.3	26.7	21.9	14.1	11.2	12.5	13.3	13.9	12.3	8.5	11.2	12.5	20.7	21.4	19.4	13.4

Note: Data as originally reported. CAGR-Compound annual growth rate.
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Souce: S&P Capital IQ.

Ticker	Company		Yr. End	Current Ratio 2021	2020	2019	2018	2017	2016	Debt/Capital Ratio (%) 2021	2020	2019	2018	2017	2016	Debt as a % of Net Working Capital 2021	2020	2019	2018	2017	2016
HEALTH CARE TECHNOLOGY																					
MDRX	§ ALLSCRIPTS HEALTHCARE SOLUTIONS, INC.		DEC	1.4	1.2	0.7	1.1	1.0	0.9	NA	9.1	30.0	29.1	36.3	43.8	NA	76.7	NM	1,057.5	NM	NM
CPSI	§ COMPUTER PROGRAMS AND SYSTEMS, INC.		DEC	1.5	1.8	1.6	1.8	1.4	1.4	29.9	26.8	35.0	43.8	50.1	48.2	420.7	247.0	399.3	396.3	802.3	1,080.5
HSTM	§ HEALTHSTREAM, INC.		DEC	1.1	1.0	2.1	2.3	2.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NXGN	§ NEXTGEN HEALTHCARE, INC.		MAR	1.2	1.1	1.8	1.2	1.1	1.1	0.0	0.0	24.4	2.8	10.3	4.7	0.0	0.0	110.4	34.8	523.3	82.8
OMCL	§ OMNICELL, INC.		DEC	0.9	3.0	2.0	1.9	1.7	1.7	0.0	32.6	5.6	16.6	26.0	36.3	0.0	84.5	20.3	70.3	132.5	182.7
SLP	§ SIMULATIONS PLUS, INC.		AUG	12.0	23.4	4.4	3.7	6.2	6.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TRHC	§ TABULA RASA HEALTHCARE, INC.		DEC	1.2	1.3	2.4	0.8	1.3	1.4	86.2	63.7	54.9	24.5	0.0	0.0	2,183.4	1,266.9	414.9	NM	0.0	0.0
AMWL	AMERICAN WELL CORPORATION		DEC	5.8	9.2	2.1	3.4	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA	0.0	0.0	0.0	0.0	NA	NA
GDRX	GOODRX HOLDINGS, INC.		DEC	13.4	18.2	2.6	4.4	0.0	0.0	44.1	48.1	211.9	246.0	NA	NA	65.1	64.3	1,247.7	1,269.8	NA	NA
INSP	INSPIRE MEDICAL SYSTEMS, INC.		DEC	6.5	13.0	10.1	17.9	3.4	1.7	6.5	9.7	14.9	13.2	91.7	212.5	7.0	9.9	15.9	13.2	97.1	249.7
TDOC	TELADOC HEALTH, INC.		DEC	3.7	3.2	6.5	8.5	3.9	3.9	7.1	8.0	30.3	29.0	27.1	15.5	138.1	191.1	88.5	88.2	178.9	68.8
VEEV	VEEVA SYSTEMS INC.	#	JAN	3.7	3.2	2.8	3.6	3.3	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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Souce: S&P Capital IQ.

Ticker	Company		Yr. End	Price/Earnings Ratio (High-Low) 2021	2020	2019	2018	2017	2016	Dividend Payout Ratio (%) 2021	2020	2019	2018	2017	2016	Dividend Yield (High-Low, %) 2021	2020	2019	2018	2017	2016
HEALTH CARE TECHNOLOGY																					
MDRX	§	ALLSCRIPTS HEALTHCARE SOLUTIONS, INC.		DEC	18 - 13	3 - 1	NM - NM	8 - 4	NM - NM	NM - NM	0.0	0.0	0.0	0.0	0.0	0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0
CPSI	§	COMPUTER PROGRAMS AND SYSTEMS, INC.		DEC	30 - 21	32 - 18	23 - 15	27 - 19	NM - NM	197 - 77	0.0	30.4	28.0	31.9	NM	638.0	0.0 - 0.0	0.0 - 0.0	2.3 - 0.0	1.9 - 1.2	1.6 - 1.2	6.3 - 1.3
HSTM	§	HEALTHSTREAM, INC.		DEC	165 - 117	63 - 41	60 - 49	32 - 22	98 - 68	240 - 154	0.3	0.3	0.4	0.0	0.0	0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0
NXGN	§	NEXTGEN HEALTHCARE, INC.		MAR	164 - 60	179 - 50	60 - 35	463 - 323	53 - 36	184 - 131	0.0	0.0	0.0	0.0	0.0	0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0	5.0 - 0.0
OMCL	§	OMNICELL, INC.		DEC	103 - 65	157 - 73	62 - 40	80 - 42	67 - 39	150 - 94	0.0	0.0	0.0	0.0	0.0	0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0
SLP	§	SIMULATIONS PLUS, INC.		AUG	183 - 86	138 - 51	85 - 36	46 - 28	47 - 25	39 - 22	49.2	45.5	48.9	46.6	59.6	69.0	0.7 - 0.4	0.6 - 0.3	0.9 - 0.3	1.4 - 0.6	1.7 - 1.0	2.5 - 1.3
TRHC	§	TABULA RASA HEALTHCARE, INC.		DEC	NM - NM	NM - NM	NM - NM	NM - NM	48 - 15	NM - NM	0.0	0.0	0.0	0.0	0.0	0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0
AMWL		AMERICAN WELL CORPORATION		DEC	NM - NM	NM - NM	NA - NA	NA - NA			0.0	0.0	0.0	0.0	0.0	0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0
GDRX		GOODRX HOLDINGS, INC.		DEC	NM - NM	NM - NM	NA - NA	NA - NA			0.0	0.0	0.0	3074.4	0.0	0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0
INSP		INSPIRE MEDICAL SYSTEMS, INC.		DEC	NM - NM	NM - NM	NM - NM	NM - NM	NA - NA	NA - NA	0.0	0.0	0.0	0.0	0.0	0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0
TDOC		TELADOC HEALTH, INC.		DEC	NM - NM	NM - NM	NM - NM	NM - NM	NM - NM	NM - NM	0.0	0.0	0.0	0.0	0.0	0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0
VEEV		VEEVA SYSTEMS INC.	#	JAN	122 - 48	86 - 52	69 - 34	62 - 39	83 - 36	79 - 55	0.0	0.0	0.0	0.0	0.0	0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0

Note: Data as originally reported. CAGR-Compound annual growth rate.
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Souce: S&P Capital IQ.

Ticker	Company		Yr. End	Earnings per Share ($) 2021	2020	2019	2018	2017	2016	Tangible Book Value per Share ($) 2021	2020	2019	2018	2017	2016	Share Price (High-Low, $) 2021	2020	2019	2018	2017	2016
HEALTH CARE TECHNOLOGY																					
MDRX	§	ALLSCRIPTS HEALTHCARE SOLUTIONS, INC.		DEC	1.0	4.4	-1.1	2.1	-1.1	-0.1	0.2	1.5	-1.7	-2.7	-4.4	-8.8	19.0 - 13.0	14.9 - 4.6	12.4 - 8.8	16.1 - 8.5	15.2 - 10.2	15.2 - 9.8
CPSI	§	COMPUTER PROGRAMS AND SYSTEMS, INC.		DEC	1.3	1.0	1.4	1.3	-1.3	0.3	-4.3	-1.8	-3.5	-4.9	-7.5	-8.8	37.6 - 26.2	35.8 - 16.9	34.0 - 20.7	34.7 - 23.8	36.2 - 21.6	59.2 - 18.3
HSTM	§	HEALTHSTREAM, INC.		DEC	0.2	0.4	0.5	1.0	0.3	0.1	1.1	0.9	4.8	4.8	4.1	2.6	31.1 - 21.5	28.0 - 18.0	30.0 - 23.6	31.9 - 21.2	31.5 - 20.6	28.8 - 17.8
NXGN	§	NEXTGEN HEALTHCARE, INC.		MAR	0.0	0.1	0.1	0.4	0.0	0.3	1.3	1.3	0.6	1.0	0.1	0.6	23.8 - 13.6	19.4 - 5.1	21.1 - 13.6	23.7 - 12.2	17.7 - 12.6	17.5 - 10.6
OMCL	§	OMNICELL, INC.		DEC	1.6	0.7	1.4	0.9	0.8	0.3	0.8	4.8	7.1	3.6	0.3	-3.3	187.3 - 115.8	125.0 - 54.2	92.6 - 57.8	79.5 - 39.8	55.4 - 31.9	40.5 - 25.1
SLP	§	SIMULATIONS PLUS, INC.		AUG	0.5	0.5	0.5	0.5	0.3	0.3	6.4	5.9	0.8	0.4	0.0	0.5	90.9 - 36.9	77.9 - 26.0	42.0 - 18.2	24.0 - 14.3	17.5 - 8.8	11.9 - 6.7
TRHC	§	TABULA RASA HEALTHCARE, INC.		DEC	-3.4	-3.7	-1.6	-2.5	0.7	-0.5	-13.4	-9.4	-8.2	-2.7	-1.0	0.3	69.3 - 10.1	69.7 - 30.1	69.0 - 37.4	91.2 - 28.1	36.8 - 11.6	16.2 - 10.4
AMWL		AMERICAN WELL CORPORATION		DEC	-0.7	-2.3	-2.1	-1.3	0.0	0.0	2.5	4.1	-13.3	-10.2	0.0	0.0	43.8 - 5.7	41.8 - 21.3	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0
GDRX		GOODRX HOLDINGS, INC.		DEC	-0.1	-1.1	0.2	0.1	0.0	0.0	0.9	1.0	-5.9	-12.5	0.0	0.0	59.7 - 26.7	64.2 - 33.5	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0
INSP		INSPIRE MEDICAL SYSTEMS, INC.		DEC	-1.5	-2.2	-1.4	-1.5	-14.9	-16.9	8.4	8.5	5.8	7.0	-92.6	-88.0	286.3 - 159.2	204.7 - 40.5	75.9 - 38.7	57.9 - 22.5	0.0 - 0.0	0.0 - 0.0
TDOC		TELADOC HEALTH, INC.		DEC	-2.7	-5.4	-1.4	-1.5	-1.9	-1.8	-2.3	-4.8	0.6	0.4	-1.6	0.4	308.0 - 87.3	253.0 - 81.3	86.3 - 46.0	89.0 - 30.9	37.9 - 15.7	20.8 - 9.1
VEEV		VEEVA SYSTEMS INC.	#	JAN	2.6	2.4	1.9	1.5	1.0	0.5	15.4	11.3	7.3	7.6	5.5	3.8	344.0 - 235.7	314.0 - 118.1	176.9 - 82.4	109.1 - 52.2	68.1 - 40.7	48.0 - 20.0

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