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GROWTH
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HGP Health IT Annual Market Review

Health IT & Health Information Services *January 2023*

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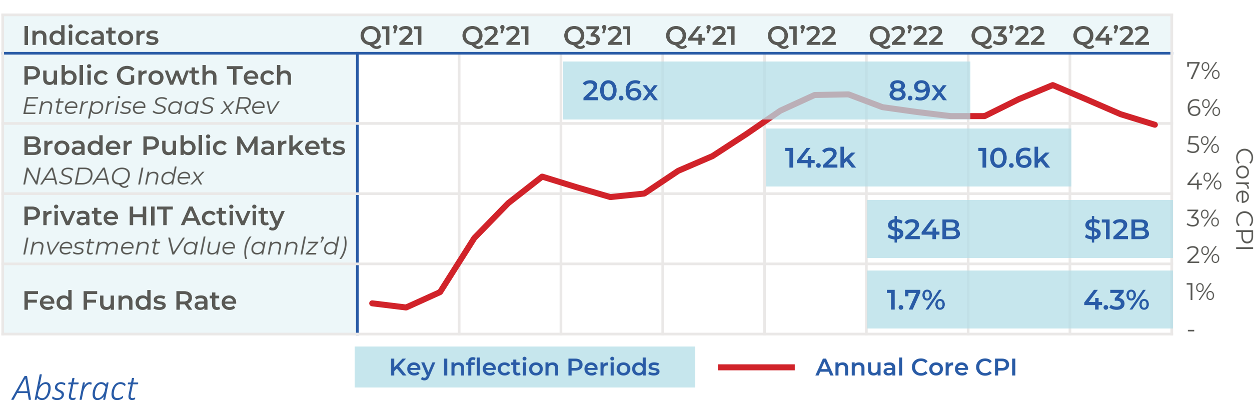
Executive Summary 1

Building the Health IT Market Mosaic

From armchair epidemiologists to armchair economists, never has society paid more attention to subject matter previously overlooked. Of course, the economy has always been a discussion topic, but the COVID economic response and the ensuing inflation and rising interest rate environment put economic data and Federal Reserve Federal Open Market Committee (FOMC) meetings at the forefront of the news cycle and social conversation.

Towards the end of 2022, overall market sentiment was pessimistic, reflecting a lack of confidence in the FOMC to manage inflation without shocking the economy into recession. In early 2023, market sentiment is flashing glimmers of hope based on encouraging economic data that signals the Fed may be able navigate inflation and lead the economy into a soft landing. A full quarter of Q4 CPI prints is signaling momentum that inflation can be contained in a resilient labor market. The market is showing more signs of confidence, and while it remains early to extrapolate that into a true upswing, sentiment appears to be moving in the right direction.

In an effort to make sense of the economic outlook and better understand how the market is behaving, HGP will take our readers through the facts, relaying data and anecdotal observations to help piece together the mosaic that shapes the current and future state of capital markets. As shown in the table below, public growth tech, broader public markets, private HIT markets, and the FOMC all experienced varying inflection points in response to the inflationary environment – notably growth tech led the market downturn, will it lead it out?



Abstract

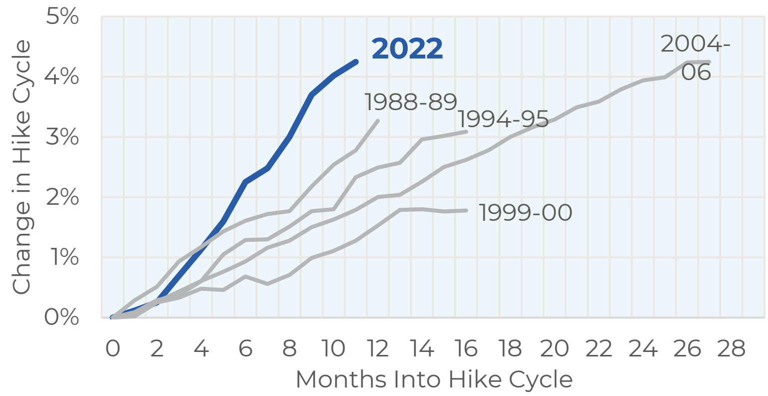
1) Inflation Metrics: Inflation started flashing as early as Q2 2021, but few paid attention at the early onset, seeing inflation as transitory.
2) Public Growth Tech: Growth tech, both frothy and highly sensitive to interest rates, began its decline in Q4'21 ahead of the broader markets and well ahead of FOMC action.
3) Broader Public Markets: Broader public markets began to sell off in Q1'22, but it wasn't felt as acutely until Q2'22, 2 quarters after the growth tech downturn.
4) HIT Private M&A & Investment Activity: Private HIT markets, which are typically slower to react, only began to register sharp declines in M&A and investment activity in Q2'22.
5) Fed Funds Rate: The Fed was the last to respond, beginning its hike cycle in Q2'22, much later than when growth tech began responding to the threat of rate increases.

Macro Indicators

The analysis begins with synthesizing the key elements that are driving the macroeconomic and interest rate environment and outlook, since these trends underly the valuations and cost of capital that dictate investment and capital market activity, particularly in growth sectors such as Health IT.

It's common knowledge the FOMC has raised the Fed Funds rate from near 0% to 4.25-4.5%, and the FOMC is now projecting a terminal rate between 5-5.5% with no rate decreases through 2023. The increase represents the fastest and most aggressive hike cycle since the 1979-80 cycle, which saw the fastest rate increase in history equaling 10% over 7-months.

MOST AGGRESSIVE FED FUNDS RATE HIKE CYCLES, *POST 1980*

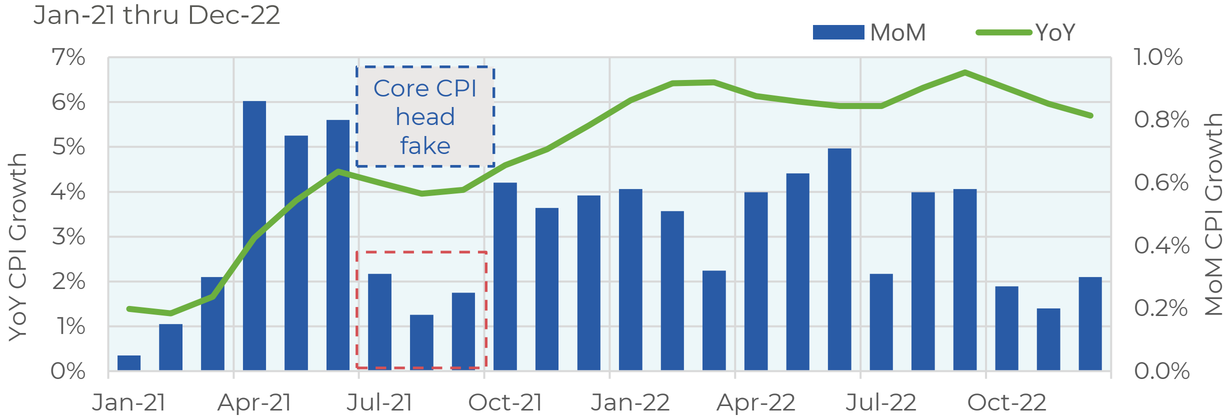


The FOMC meets seven times per year, and the next meeting is held February 1, 2023. In the interim, the market generally tracks inflationary and labor/ productivity readouts that inform each of those meetings. Many, if not a consensus, feel the Fed will overshoot, leading to the current yield curve inversion. A yield curve inversion implies that longer-term interest rates are lower than shorter-term rates and is historically a near certain indicator of a recession, generally measured by the spread between the 2-year and 10-year treasury rates. However, in this case, the yield curve inversion may also imply the expectation that inflation will be contained. A full schedule of 2023 key economic data reporting dates can be found on page 27.

Core CPI has been running much hotter than the FOMC target 2% with the annual rate of Core CPI persisting near 6-6.5% throughout 2022. However, while monthly CPI is more volatile, it is a more current indicator and trended favorably to an annualized 3.1% rate based on the Q4 2022 data. However, as the data indicates, a few months of improved Core CPI may not solidify a long-term trend, such as July – September '21 which may have misled the FOMC into not acting sooner.

MONTHLY CORE CPI

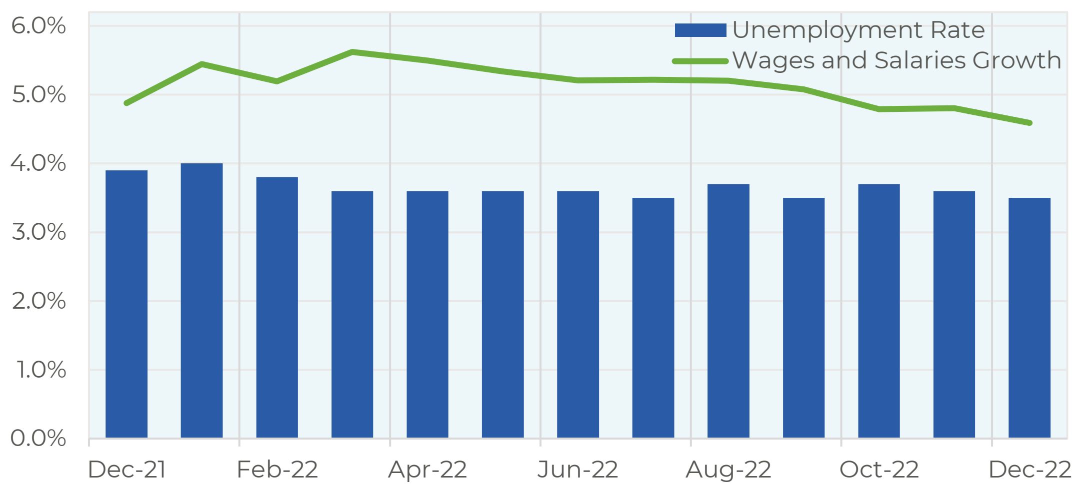
Jan-21 thru Dec-22



The strength of the labor markets is viewed by the FOMC as a strong corollary and leading indicator of prices and price inflation. The reason being is that prices are often set as a derivative of wages, one of the largest expenses to produce goods and services. Unemployment statistics are closely linked to wage growth, since the supply and demand of the labor force is a determinant of wages. Wage growth is viewed as stubbornly high by the FOMC and is a key metric to monitor over the coming months to solidify the falling CPI trend.

Unemployment and Annual Wage Growth

Dec-21 – Dec-22



Given the importance and stubborn nature of wages, especially in the eyes of the FOMC, it is worth noting that annual wage growth was increasing above a historical rate of 2%, hovering around 3-4%, even before the pandemic, which likely indicates that this component of inflation may prove to be the most entrenched, but throughout this hike cycle the FOMC has telegraphed a more modest wage growth target of ~3.5%. As of December 2022, wage growth decreased to 4.6%.

Long-Term Wage Growth Rate

Jan-15 thru Dec-22

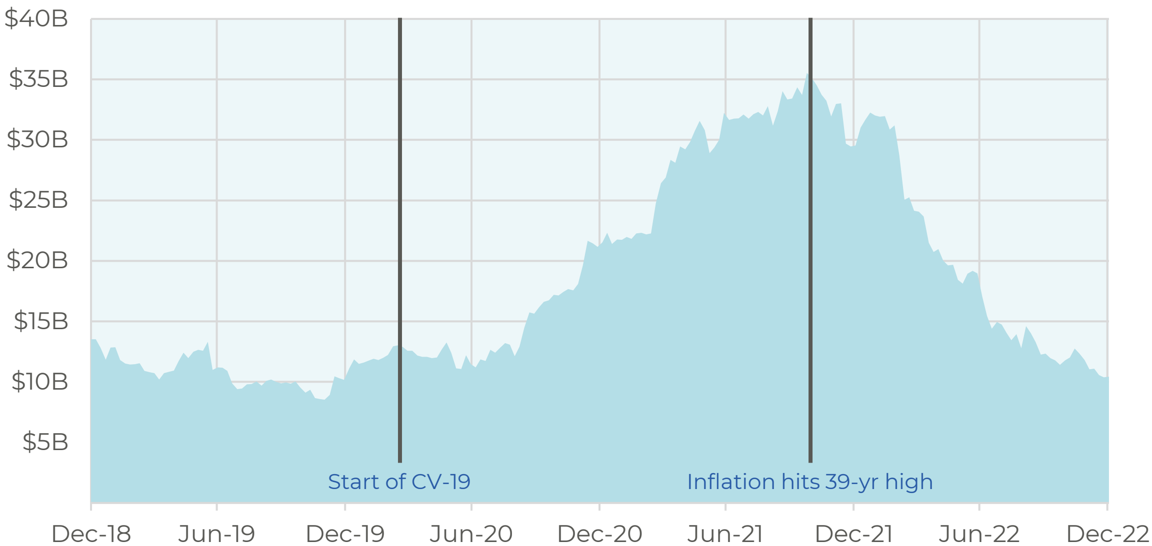
HGP Health IT M&A & Investment Activity Data

With this important macroeconomic backdrop, the following analysis pivots to the data and HGP's observations that highlight the trends in Health IT.

Undoubtedly, the capital market slowdown due to the interest rate and macroeconomic environment has left a mark on Health IT. It's important to note that while investment activity has been undeniably falling, it remains at a healthy level when put into a historical context – 2H 2022 investment value is about the same as that seen in 2H 2019. It remains unclear as to whether investment hit the bottom or will continue on a downward trajectory, though many market participants remain optimistic 2023 will bring economic clarity and restore investor confidence.

HEALTH IT ANNUALIZED US PRIVATE EQUITY INVESTMENT VALUE

6-mo Moving Average



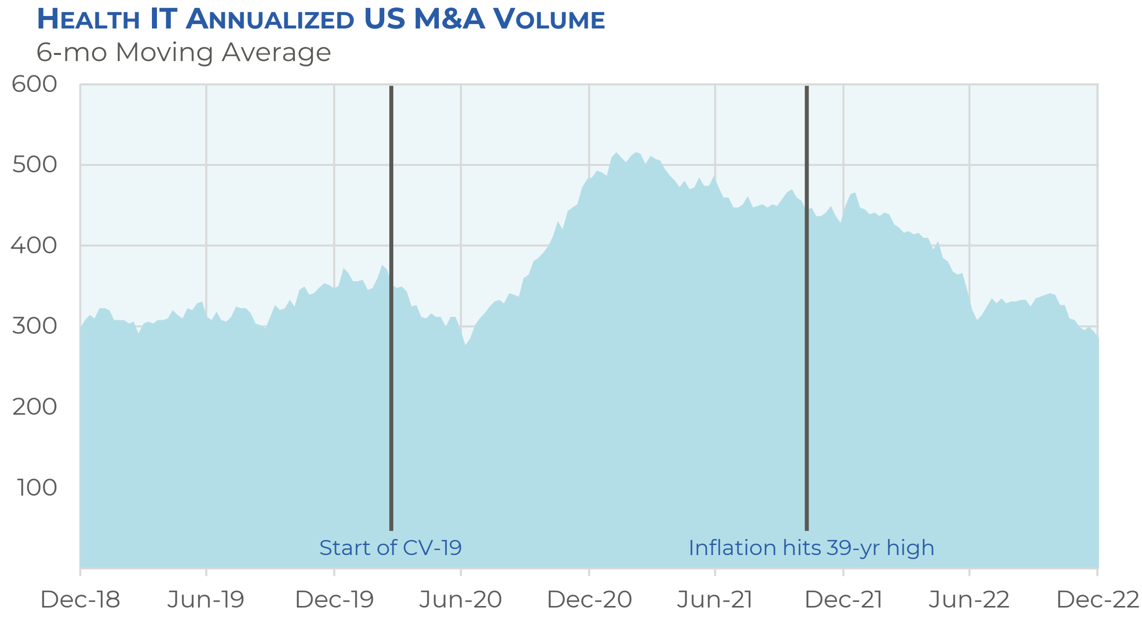
HIT US-Based Investments	2019		2020		2021		2022	
	1H	2H	1H	2H	1H	2H	1H	2H
Value	$6.4B	$5.0B	$5.9B	$10.5B	$15.7B	$13.8B	$9.5B	$5.0B

In 2022, M&A volume (see chart on pg. 7) also dropped to pre-COVID levels. After an extended period of "risk-on" mentality, which peaked during the post-COVID hype cycle, investors, including strategic acquirors, dramatically shifted down their risk tolerance. This is driven by two key factors:

1) **Rising Cost of Capital:** Rising rates means a higher cost of capital, which makes financing business operations and acquisitions more expensive. Additionally, many leveraged enterprises have floating rate debt. The credit (debt) markets also tightened, with lenders more selective with loans and terms, particularly lenders with a floating cost of capital (those who pay interest on deposits).

2) **Concerns over a Recession:** The inverted yield curve points toward a potential recession, and companies are less inclined to increase risk (and spend) in the face of potential adversity. Companies are tightening budgets to prepare for the possibility of a more severe recession, whether this materializes or not.

While buyer appetite has waned, anecdotally, HGP has seen seller interest remain strong. As a result, the number of sellers waiting on the sidelines is steadily building, and HGP believes there is the potential for significant deal flow if economic indicators continue to restore confidence to markets rattled by the fear of a deeper recession. Many expect buyers will continue to operate with a cautious mindset as they try to better gauge the pulse of the economic environment. The market is ideal for both buyers willing to capitalize on the market reset and for high-quality sellers that demonstrate superior performance despite challenging market conditions.



HIT US-Based M&A	2019		2020		2021		2022	
	1H	2H	1H	2H	1H	2H	1H	2H
Volume	165	174	157	236	241	214	182	139

It is worth noting that the pullback is largely *not* driven by company or sector fundamentals within Health IT, which is why so much attention has been put into macro considerations in this review. Healthcare and Health IT is a growth and durable industry.

However, some industry-specific factors created headwinds for pockets of Health IT in 2022. Hospital margins came under significant pressure due to a downturn in inpatient volume and a huge increase in labor costs. That pressure is easing, and hospital margins are much improved and should continue to do so in 2023. The impact on Health IT vendors was significant – elongating sales cycles and reducing bookings because of delayed purchasing decisions. While some of these headwinds will persist, hospitals will continue to invest in technology that delivers strong ROI and helps navigate both the cost and innovation curves.

Most importantly, the fundamentals that underly the Health IT market – a $4 trillion spend, an aging population, chronic conditions and comorbidities, clinical burnout and resource constraints, and advancements in technology – set the table for the ongoing tectonic shift in this industry.

Valuation Trends – Public Health IT, Enterprise SaaS, and Private Health IT

Per the chart below, corporate valuations fell significantly from the post-COVID peak to levels lower than pre-COVID averages. HGP's observations of this trend:

1) Private HIT valuations have been the most resilient, although admittedly there are fewer multiples to draw from in recent quarters, making the current data less statistically significant. Overall, Private HIT valuations have not fallen as much as their public Health IT and Enterprise SaaS counterparts, nor did they rise as much during the upswing.

2) Public HIT has always traded at a discount to Enterprise SaaS. This is partially due to the fact that the composition of these indices are not exactly apples to apples, as the Public HIT index includes companies that are not pure SaaS and several smaller companies. However, many growth stage, privately held Health IT companies have a similar profile as Enterprise SaaS which makes it an important metric to monitor.

HEALTH IT REVENUE MULTIPLES

As compared to Public HIT and Enterprise SaaS indexes

Both HGP's recent experience and the data support a flight to quality. From a data standpoint, 2022 showed a stark difference in performance of companies trading on revenue multiples versus EBITDA multiples. Based on HGP's segmentation of xRevenue-valued and xEBITDA-valued public Health IT companies, in 2022 the xRevenue cohort declined 55% while the xEBITDA cohort declined only 5%. The results largely mirror our experience in the private markets – valuations for many unprofitable SaaS companies fell 50% or greater over the course of the year, not unlike the Enterprise SaaS category. However, the falling tide does not necessarily beach all boats just as the rising tide does not lift them. While the tide went out for those not achieving the higher standard sought out by investors, high quality growth companies are continuing to fetch premium valuations.

Company Type	Avg. Valuation Multiple		2022 % Δ in Valuation	2022 Stock Return
	Beg. of Year	End of Year		
xRevenue HIT	10.8x	3.6x	-66%	-55%
xEBITDA Health IT	15.8x	13.5x	-15%	-4%

Piecing Together the Mosaic

Inflation Metrics: Inflation started flashing in Q2 2021, but few paid attention at the early onset, seeing inflation as transitory.

	Q1'21	Q2'21	Q3'21	Q4'21	Q1'22	Q2'22	Q3'22	Q4'22
Annual Core CPI	1.7%	4.5%	4.0%	5.5%	6.4%	5.9%	6.7%	5.7%
T3M Core CPI (Annlz'd)	2.0%	10.1%	3.0%	6.9%	5.8%	7.9%	6.0%	3.1%

Public Growth Tech: Growth tech, both frothy and highly sensitive to interest rates, began its decline in Q3'21 ahead of the broader markets and well ahead of FOMC action.

	Q1'21	Q2'21	Q3'21	Q4'21	Q1'22	Q2'22	Q3'22	Q4'22
Enterprise SaaS xRev	21.3x	22.9x	20.6x	15.8x	12.4x	8.9x	7.4x	6.9x
Health IT xRev	13.4x	12.5x	9.6x	6.9x	5.9x	4.4x	3.8x	3.6x

Broader Public Markets: Broader public markets began to sell off in Q1'22, but it wasn't felt as acutely until Q2'22, 2 quarters after the growth tech downturn.

	Q1'21	Q2'21	Q3'21	Q4'21	Q1'22	Q2'22	Q3'22	Q4'22
S&P 500	3,973	4,298	4,308	4,779	4,530	3,785	3,586	3,840
NASDAQ	13,247	14,504	14,449	15,645	14,221	11,029	10,576	10,466

HIT Private M&A & Investment Activity: Private HIT markets, which are typically slower to react, only began to register sharp declines in M&A and investment activity in Q2'22.

	Q1'21	Q2'21	Q3'21	Q4'21	Q1'22	Q2'22	Q3'22	Q4'22
Health IT M&A Volume	501	487	449	428	416	345	324	293
Health IT Inv. Value	$25B	$32B	$33B	$29B	$24B	$19B	$12B	$10B

Fed Funds Rate: The Fed was the last to react, beginning its hike cycle in Q2'22, much later than when growth tech began responding to the threat of rate increases.

	Q1'21	Q2'21	Q3'21	Q4'21	Q1'22	Q2'22	Q3'22	Q4'22
Fed Funds Rate	0.1%	0.1%	0.1%	0.1%	0.3%	1.7%	3.1%	4.3%

Note: *Data presented as of end of quarter. HIT Private M&A & Investment Activity is the annualized T6M average as of the end of the respective quarter.*

Interpreting the Mosaic

Economic indicators are key to watch. In Q4 2022, market sentiment was extremely negative and behaving as though a recession was near certain, with 50% of economic forecasts projecting a recession, a historically high watermark. One could make the case that this bearish sentiment provides upside for any positive surprises. The ideal economic indicators are: 1) decreasing core CPI and PCE readouts toward the 2% target and 2) some softening of labor markets. Some negative economic news is good news: the goldilocks scenario is this soft landing – breaking CPI without breaking the economy. With overall sentiment so negative in part driven by the FOMCs conservative posture on CPI coupled with a lack of confidence in the FOMC from their delayed reaction, a string of positive macroeconomic/CPI indicators will have a meaningfully positive market impact.

Growth tech led us into the recession and very well may lead us out. The FOMC is given a hard time for not acting sooner, and rightfully so. In fact, growth tech reacted to the macroeconomic indicators faster than any other sector. Admittedly, growth tech rose the most and had the most to fall, but the correction has taken growth tech prices to levels 30-50% lower than pre-COVID, arguably an overcorrection. PE buyout activity, such as Thoma Bravo's acquisition of Coupa and Vista's acquisition of Duck Creek, may point to a floor of ~8x ARR for high quality enterprise SaaS. Further go-private activity would signal a bottoming out of public equities.

Private market activity trails public market activity by a quarter or two. While growth equity turned down in Q3 '21, the broader markets in Q1 '22, Health IT private market activity did not register weakness until Q2 '22. This is in part due to the time required to close a private transaction which typically takes months once deal terms are agreed.

The Fed Funds Rate is extremely important but is a lagging indicator of markets. The Fed Funds rate was the last domino to fall in the mosaic. Macro indicators lead to FOMC action versus vice versa.

It would be dishonest not to admit that the market needs to adjust to a new normal. A 2.5% Fed Funds rate is considered neutral, which, other than briefly touching this level in 2019, is a rate not seen since 2008. Once the investors adjust to the reality that the capital markets can function in a normal rate environment, activity should return more normalized level.

This market is ideal for buyers and high-quality sellers. For buyers, perhaps the investment runway has been extended, and now is a good time to acquire sound companies that have come into hard times. For quality sellers, these stand above the rest and are highly sought out in this environment. Sellers experiencing strong bookings in this market are also standouts. Profitable businesses are also in favor. Post-COVID, the market, and monetary policy, was fast and loose. Now is a time to be thoughtful, and with an intentional approach, and we think this is a very exciting and opportunistic market for all stakeholders.

Health IT Market Trends 2

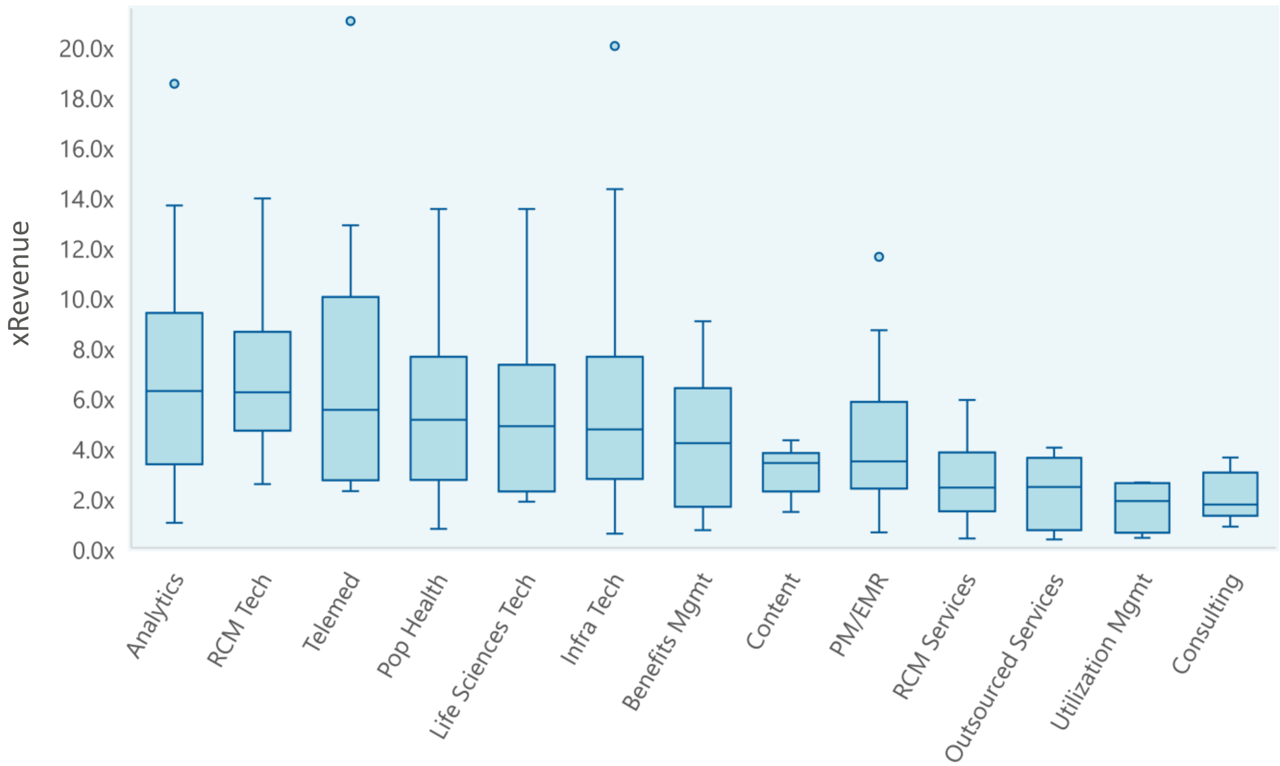
HGP keeps close tabs on M&A valuations to see how the market evolves over time. While HGP can only draw data from deals with disclosed multiples and therefore must be careful to consider bias in any conclusions drawn from this data, one can still get a good sense for how the market values companies within the different subsectors of health IT. The following table and accompanying box-and-whisker plot show the distributions of revenue multiples in 13 subsectors of health IT. The sectors were sorted according to median revenue multiple from largest to smallest.

Reported 2017 –2022	Deals with Disclosed Revenue Multiples	Deals with Disclosed EBITDA Multiples	Revenue Multiple					EBITDA Multiple
			25th %-tile	Median	75th %-tile	Mean	Std. Dev.	Median
Analytics	16	7	3.7x	6.3x	8.7x	7.2x	4.7x	18.5x
RCM Tech	34	21	4.8x	6.2x	8.6x	6.9x	3.0x	16.7x
Telemed	19	5	2.7x	5.5x	10.0x	6.8x	4.9x	20.0x
Population Health	63	14	2.9x	5.2x	7.5x	6.2x	4.7x	14.2x
Life Sciences Tech	21	8	2.3x	4.9x	7.1x	5.0x	3.0x	19.5x
Infra Tech	29	19	2.8x	4.7x	7.6x	6.0x	4.5x	15.5x
Benefits Mgmt.	17	5	2.0x	4.2x	4.6x	4.2x	2.8x	14.0x
Content	8	4	2.4x	3.4x	3.7x	3.1x	1.0x	15.9x
PM/EMR	43	23	2.3x	3.4x	5.4x	4.0x	2.4x	15.3x
RCM Services	13	17	1.6x	2.4x	3.6x	2.7x	1.5x	11.0x
Outsourced Services	11	4	0.9x	2.4x	3.3x	2.2x	1.4x	9.3x
Utilization Mgmt.	4	2	1.0x	1.9x	2.5x	1.7x	1.1x	11.9x
Consulting	15	8	1.4x	1.7x	2.7x	2.0x	0.9x	12.1x

It's important to keep dispersion in mind when assessing valuation data, which is why HGP includes the 25th percentile, 75th percentile, and standard deviation in our summary statistics. While measures of central tendency like the median and mean are certainly indicative of how buyers are valuing assets, the dispersion shows that with higher multiples, Investor's also see higher risk. This becomes especially apparent when charting the data using a box-and-whisker plot. Generally speaking, the sectors with highest median revenue multiple also experience large standard deviations and positive skew. For instance, while 25% of the observed telemedicine companies received 10.0x revenue or more in sale transactions during the period, another 25% received less than 2.7x revenue at exit. Companies in these hot spaces cannot forget that they still need to show strong operating metrics in order to realize premium valuation multiples.

In 2022, a few sectors saw their median multiples tick up relative to the period between January 2017 – December 2021, namely Analytics (by 1.3x) and Infrastructure Technology (by 1.0x). This is seen as a possible indication of the resilient nature of the sectors, when juxtaposed with sectors that had benefited from COVID tailwinds, such as Telemed, where the US-based M&A volume was cut more than half between 2021 and 2022.

The box-and-whisker plot graphically displays the Median, 25th Percentile, 75th Percentile, Minimum, and Maximum; where points beyond 1.75 times the Inter-Quartile Range are shown as outliers. The inter-quartile range is represented by the “box” and shows the range between the 75th Percentile and the 25th Percentile. Visually, the inter-quartile range serves to describe the variability of the data. Note that point estimates such as the mean or median can often be misleading on their own, as they do not convey the level of variability which can be very high such as in the Telemedicine and Population Health sectors.



The sectors were sorted according to decreasing median revenue multiple and show a trend of decreasing IQR as median revenue multiple decreases. Thus, while companies that fall within sectors further to the right on the graph can expect a lower revenue multiple in a transaction, the transaction outcome is also more predictable. A company that falls within a sector on the left, however, cannot have as strong of confidence in their expected outcome. These observations follow a common theme in investment theory: that with greater potential upside, there is also greater risk and volatility.

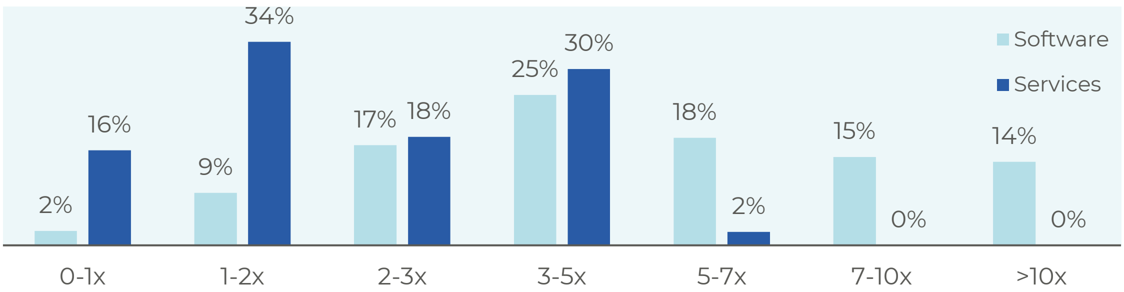
While the metrics presented here may be used as a guidepost for expected outcomes, the end result of any transaction often depends on buyer circumstances as much as on seller or market fundamentals, and buyer circumstances tend to be extremely unpredictable. It is not uncommon for the clearing price of a transaction to be significantly higher than the cover bids. This usually occurs when a buyer has unique circumstances that justify a higher price than the rest of the buyer universe. Identifying those buyers and appropriately positioning in relation to them is part of the art of running a successful transaction process.

The following table provides additional context on the valuation trends within each sector as well as a sample of recent transactions within each.

Sector	Description	Representative Deals
Analytics (16 deals) Median: 6.3x Std. Dev.: 4.7x	Primarily represents a mix of life sciences and provider analytics, and to a lesser extent, payer analytics.	Inovalon (Nordic Capital), Lumere (GHX), Central Logic (Rubicon), LeanTaaS (Bain), Signify Health (CVS)
RCM Tech (34 deals) Median: 6.2x Std. Dev.: 3.0x	Includes tech-oriented RCM vendors serving hospitals and physicians, and to a lesser extent, payers.	Change Healthcare (Optum), VisitPay (R1 RCM), ABILITY (Inovalon), TransUnion Healthcare (nThrive)
Telemed (19 deals) Median: 5.5x Std. Dev.: 4.9x	Contains a mix of pure telehealth tech, telehealth services, and virtual care models.	2nd.MD (Accolade), PillPack (Amazon), Silvercloud (Amwell), SOC Telemed (Patient Square Capital)
Population Health (63 deals) Median: 5.2x Std. Dev.: 4.7x	Comprised of patient engagement, provider connectivity, and care management technologies.	Fitbit (Google), Iora Health (One Medical), Preventice (Boston Scientific), VRI (ModivCare), Castlight (Vera)
Life Sciences IT (21 deals) Median: 4.9x Std. Dev.: 3.0x	Includes traditional CTMS vendors as well as other vendors that deliver value in the drug/device process.	Medidata (Dassault Systemes), Bracket Global (Genstar Capital), Cytel (Nordic Capital), Pinnacle 21 (Certara)
Infrastructure Tech (29 deals) Median: 4.7x Std. Dev.: 4.5x	Compliance and resource management software generally serving provider organizations.	symplr (Clearlake), Haemonetics (GPI), Intelligent Medical Objects (Thomas H. Lee Partners), IPG (Evolent)
Benefits Management (17 deals) Median: 4.2x Std. Dev.: 2.8x	Includes benefits management and admin software companies serving payers and employers.	Connecture (Francisco Partners), PinnacleCare (Sun Life), WageWorks (HealthEquity), LifeWorks (Telus)
PM/EMR (43 deals) Median: 3.4x Std. Dev.: 2.4x	Includes ambulatory, acute, post-acute, alternate site, and departmental EMR/PM systems.	Cerner (Oracle), Intelerad (HGCapital), athenahealth (Veritas), Therapy Brands (KKR), AllScripts (Harris)
Content (8 deals) Median: 3.4x Std. Dev.: 1.0x	Transactions are a mix of online consumer content and provider-oriented clinical content.	WebMD (Internet Brands), Care.com (IAC), Medlife (PharmEasy), MedCerts (Stride), mdBriefCase (Think Research)
RCM Services (13 deals) Median: 2.4x Std. Dev.: 1.5x	Outsourced revenue cycle management services generally serving hospitals and physicians.	Intermedix (R1), AGS Health (Baring), MedData (Frazier), mNet (SSM), Ensemble (Berkshire), CloudMed (R1)
Outsourced Services (11 deals) Median: 2.4x Std. Dev.: 1.4x	Includes non-RCM outsourced services primarily serving payers as well as providers.	Sedgwick & MedRisk (Carlyle Group), Sound Physicians (Summit), ReCept Pharmacy (OmniCell)
Consulting (15 deals) Median: 1.7x Std. Dev.: 0.9x	Project-based IT consulting and staff augmentation companies generally serving provider organizations.	The Advisory Board Company (UnitedHealth), Navigant (Guidehouse), CynergisTek (Clearwater Compliance)
Utilization Mgmt (4 deals) Median: 1.9x Std. Dev.: 1.1x	Payer-oriented software and services vendors focused on traditional utilization management.	Senior Whole Health (Magellan), New Century (Evolent), HealthHelp (WNS Holdings)

HEALTH IT M&A (INCLUDING BUYOUT) 3

HEALTH IT REVENUE MULTIPLES DISTRIBUTION 2017 — 2022

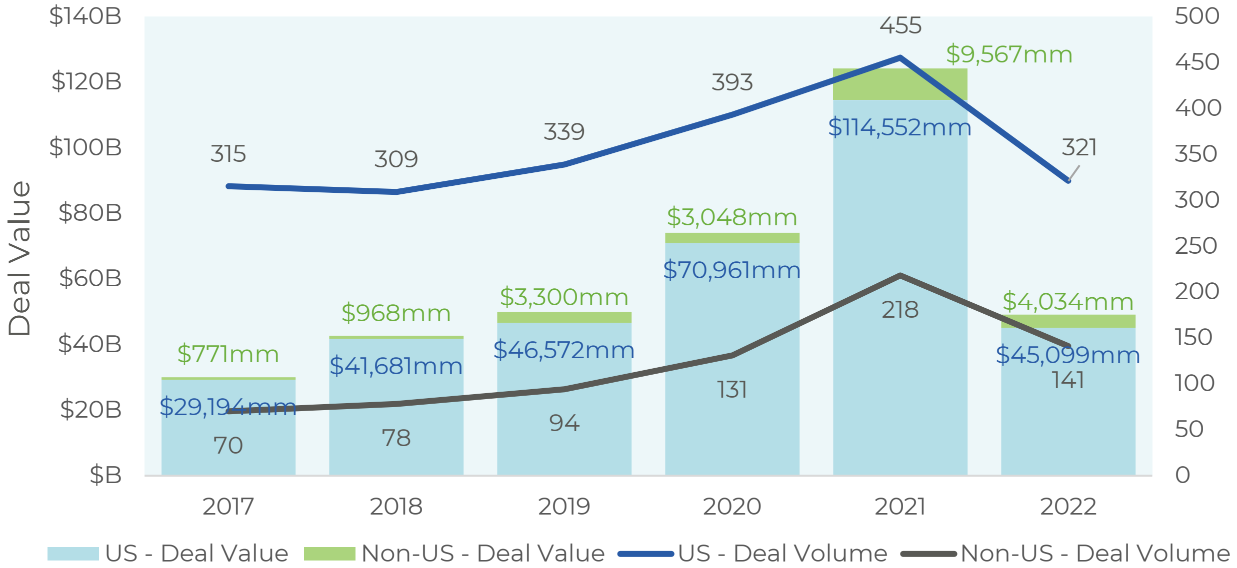


HGP has observed a number of tangible and intangible company and transaction characteristics that typically define where a deal falls on the valuation distribution. Growth, profitability, and recurring revenue are the most commonly identified factors used to justify valuation multiples. Not all health IT companies capture premium valuations just because they operate in health IT. However, those companies that offer a combination of growth, address an unmet need, and fit into the vision of healthcare reform are seeing valuations significantly higher than historical patterns of activity. Premium value is also created when a seller fulfills the specific needs of a buyer at a specific point in time. Timing and serendipity are external factors that play a large and sometimes unpredictable role in the creation of value.

HGP'S TARGET METRICS FOR EMERGING GROWTH HEALTH IT COMPANIES

	Best	Good	Passable	Avoid
Recurring Revenue	Monthly Subscription or Monthly Transaction	Annual Subscription or Prepaid Transactional	1-Year+ Prepaid Subscription	Perpetual License + Maintenance
Revenue Metric	Contracted Annual Recurring Revenue	Annual Recurring Revenue	Trailing Twelve Month	Sum of Parts Revenue Multiples
Revenue Growth	35%+	20-35%	10-20%	<10%
Gross Margin	80%+	70-80%	60-70%	GM <70% for SaaS Lower for Services
Gross Revenue Retention	95%+	90-95%	Depends on Customer Type	<90%
Customer Concentration	<10%	10-20%	20-30%	1 customer > 30% or a handful of >50%
Profitability	20%+	0-20%	Small Losses	Large Losses

HEALTH IT M&A ACTIVITY 2017 – 2022



The M&A frenzy of 2020 – 2021 is no longer, and M&A volume has dropped back to pre-COVID levels. In 2022, deal volume and value declined by 31% and 60%, respectively, and in Q4, deal volume hit its lowest watermark in the last 5 years. With the rising cost of capital and concerns over a potential recession, buyer appetite has declined considerably; however, seller interest has remained strong, and a significant pipeline of deals could come to market as macro conditions stabilize. The market is ideal for both buyers willing to capitalize on the market reset and for high-quality sellers that demonstrate superior performance despite challenging market conditions.

The most notable pocket of the Health IT M&A market was in take-private transactions. PE firms and well capitalized strategic buyers seized on the opportunity and acquired multiple companies whose valuations were adversely affected by the broader market downturn. Seven take-private deals closed in 2022 (Cerner, Change Healthcare, Vocera Communications, Tivity Health, Convey Health Solutions, Castlight, and SOC Telemed), and two more are in the hopper (Signify Health, One Medical) to close in early 2023.

GLOBAL HEALTH IT M&A DEALS BY QUARTER

Getting more granular into valuation multiples, it is useful to note that multiples are often somewhat correlated to a target's enterprise value. Software company valuations steadily climb as enterprise value increases until approximately the $1B valuation mark. Services company multiples experience a similarly steady climb in EBITDA multiples, and in larger increments at the $500mm and $1B valuation marks. The inflection points are in part due to a private equity universe that has expanded leverage capacity for larger transactions, which in turn drives up valuation multiples as the enterprise value increases.

		Software Companies			Services Companies		
		Revenue Multiple	EBITDA Multiple	Transaction Value	Revenue Multiple	EBITDA Multiple	Transaction Value
All Transactions	# of Transactions	250	111	261	44	33	52
	Median	4.6x	16.0x	$ 175	2.0x	11.6x	$ 219
	Mean	5.7x	17.4x	$ 834	2.2x	12.5x	$ 766
<$30mm Transactions	# of Transactions	59	18	60	9	7	10
	Median	3.3x	10.6x	$ 14	1.7x	9.8x	$ 12
	Mean	4.4x	15.5x	$ 16	1.9x	9.7x	$ 15
$30-100mm Transactions	# of Transactions	44	15	44	12	6	12
	Median	4.0x	13.2x	$ 59	2.4x	9.2x	$ 48
	Mean	4.6x	15.4x	$ 57	2.2x	9.3x	$ 52
$100-500mm Transactions	# of Transactions	78	26	79	12	7	14
	Median	4.8x	15.0x	$ 215	1.7x	10.9x	$ 250
	Mean	6.0x	16.4x	$ 240	2.1x	11.4x	$ 269
$500mm-$1B Transactions	# of Transactions	20	11	24	5	5	6
	Median	6.4x	18.7x	$ 650	2.6x	13.0x	$ 670
	Mean	6.7x	18.0x	$ 703	2.8x	14.8x	$ 670
>$1B Transactions	# of Transactions	49	41	54	6	8	10
	Median	6.5x	17.7x	$ 1,770	2.4x	16.1x	$ 2,775
	Mean	7.2x	19.4x	$ 3,264	2.4x	17.2x	$ 3,128

Generally, companies have three valuation inflection points: proof-of-concept, growth scalability, and mature scalability.

1. **Proof-of-concept** is value created when a company shows that its product can be successfully sold and deployed in a commercial setting.
2. **Growth scalability** occurs when an earlier stage company begins to show profitability or at least scale at high levels of growth, although the organization is still small and lean.
3. **Mature scalability** takes place after a company has matured to a level where it takes on real corporate and organizational infrastructure and the company begins to show strong profitability.

2017 – 2022 Software Revenue Multiple Distribution by Target Enterprise Value					
Percentile	<$30mm	$30-100mm	$100-500mm	$500mm-$1B	>$1B
90^{th} Percentile	6.9x	8.1x	12.0x	12.0x	13.0x
75^{th} Percentile	5.4x	6.7x	7.7x	8.0x	8.8x
50^{th} Percentile	3.3x	4.0x	4.8x	6.4x	6.5x
25^{th} Percentile	2.1x	2.7x	3.0x	4.4x	4.6x

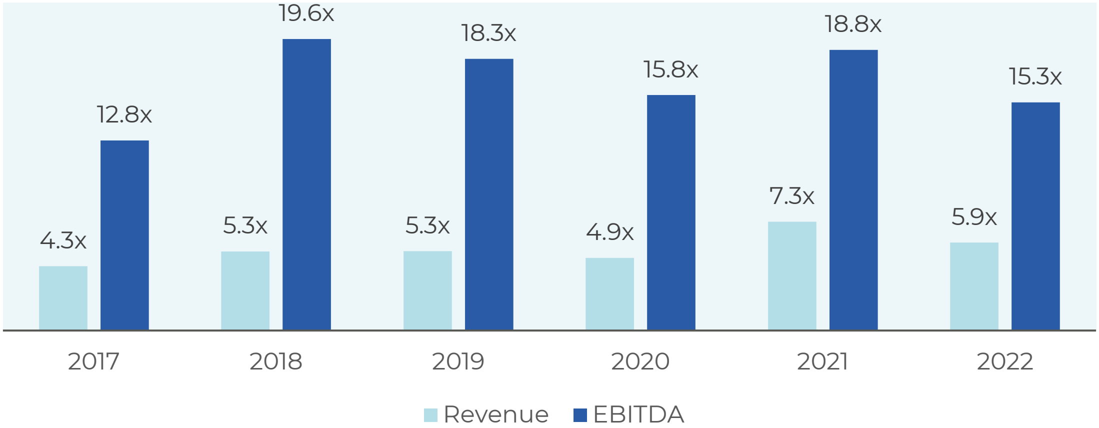
2017 – 2022 Services Revenue Multiple Distribution by Target Enterprise Value					
Percentile	<$30mm	$30-100mm	$100-500mm	$500mm-$1B	>$1B
90^{th} Percentile	3.2x	3.5x	3.9x	5.0x	3.3x
75^{th} Percentile	1.9x	3.0x	3.2x	3.6x	2.9x
50^{th} Percentile	1.7x	2.4x	1.7x	2.6x	2.4x
25^{th} Percentile	1.1x	1.1x	1.3x	1.3x	1.7x

The above tables demonstrate the positive relationship between valuation and scale. As software businesses grow in scale, so do their multiples. Revenue multiples steadily increase from 3.3x to 4.8x as companies begin to reach the $100mm mark. As software businesses grow further to over $500mm and reach mature scalability, they experience a material step up in value, with revenue multiples further increasing to a median of around 6.4x.

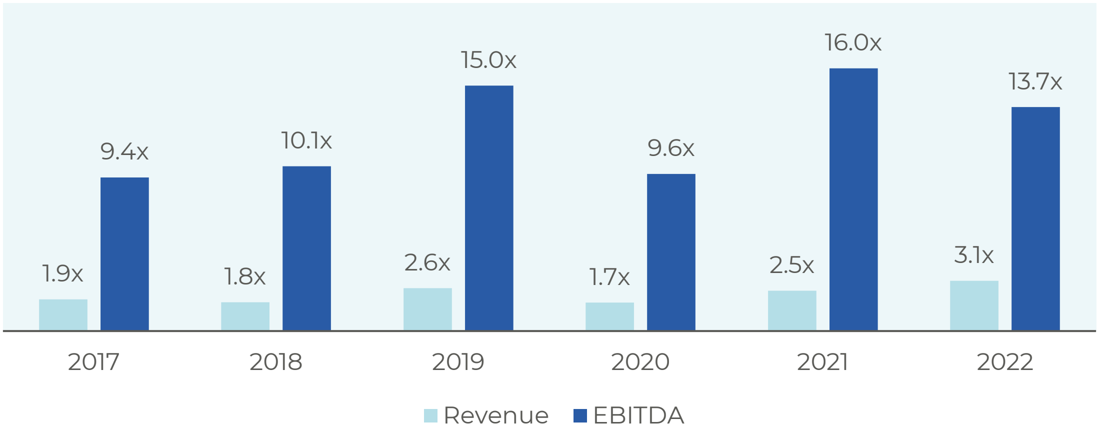
Services businesses do not seem to benefit as drastically from increased scale as do software companies. While median revenue multiples do not rise substantially as services companies mature, a few scalable, high-quality Services businesses that traded on EBITDA multiples had implied revenue multiples that were outliers, as can be seen in the 90^{th} percentile for companies in the $500mm-$1B range in EV.

Detailed multiples trends can be found in the following bar charts. It should be noted that valuation multiple trends can be very volatile given the limited availability of data.

Software Average M&A Multiples 2017 — 2022



Services Average M&A Multiples 2017 — 2022



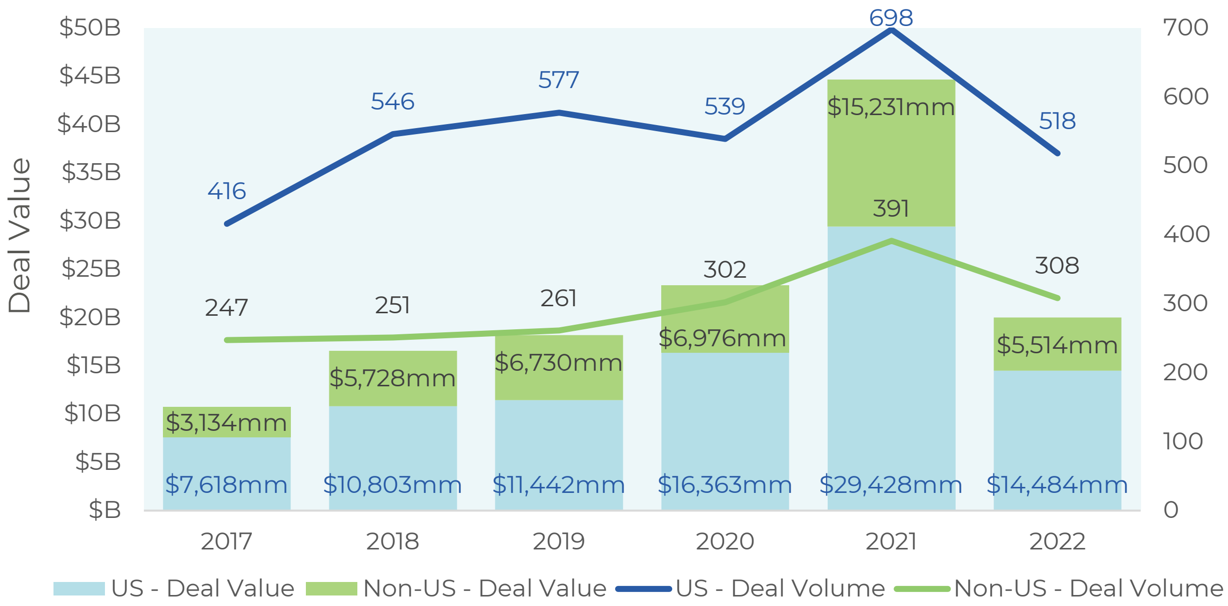
While valuations have fallen since the post-COVID peak, the step-down in valuations is less severe in private health IT as compared to the public benchmark. For software companies, revenue multiples declined by 20% (7.3x to 5.9x), a modest depression compared to their actively traded public HIT peers, who experienced a 66% loss in value in 2022 (10.8x to 3.6x). Note that the declined level of activity in 2022 inserts a sampling bias into the dataset of disclosed multiples.

It is worth noting that the 2022 xEBITDA for services companies is atypically close to that of software companies. Delving into the dataset, there is a small sample size of 9 services transactions mostly comprising high-quality mega deals. These include Aspirion, CloudMed, Ensemble Health Partners, and Revecore. Due to the large size and high quality of these transactions coupled with the limited number of transactions in the dataset, the 2022 EBITDA multiple for services may not be a reasonable valuation indicator for services transactions on the whole.

Health IT Capital Raises (Non-Buyout) 4

Capital raise activity echoed the M&A market with an undeniable decline as compared to 2021, though still at a healthy level when assessed in the context of pre-COVID periods. At its peak in Q1 2021, global deal value reached almost $14B and gradually tapered off each passing quarter, eventually to land at $2.5B – a low watermark for the last 4 years. Looking to 2023, the cumulative overhang of private equity capital, which peaked in 2020 and remains at historically high levels, bodes well for the resilience of health IT investment activity as investors look to deploy that capital for years to come.

Health IT Investment Activity 2017 — 2022



Global Health IT Investment Deals By Quarter

Healthcare Capital Markets 5

HGP tracks a custom index within the health IT space. What classifies a company in the universe of health IT, and ideally creates a valuation premium, is a strong information technology and data component that creates scalability and competitive strength. This is particularly relevant to services organizations that use technology and data analytics to streamline their operations. With this in mind, HGP evaluated the performance of publicly traded health IT companies against the S&P 500 and the Nasdaq indices, in order to assess the health IT companies within the wider market.

The HIT index was not immune to the brutal sell-off in the overall technology markets in 2022, continuing the downward trend that began in November 2021. While the HIT index had closed 2021 down 16%, a significant underperformance to the overall market, it tracked S&P 500 and NASDAQ indices more closely in 2022, though still underperforming and closing the year down 47%.

The cratering valuations in the public markets made some of the larger index constituents attractive acquisition targets, and a handful of take-private transactions occurred as a result. This is noteworthy given that these acquisitions that were closed in 2022 have removed close to 20% of the aggregate market cap of publicly traded health IT companies (10% in count); as a result, the public HIT index became even more growth-oriented. This shift is expected to deepen with Signify Health – CVS and One Medical – Amazon acquisitions closing in early 2023, as well as other companies being taken private.

Target Company	Buyer/ Investor	EV
Cerner	Oracle	$28B
Change Healthcare	Optum	$13B
Vocera Communications	Stryker	$3.1B
Tivity Health	Stone Point Capital	$3B
Convey Health Solutions	TPG	$1B
Castlight	Vera Whole Health (GTCR)	$370mm
SOC Telemed	Patient Square Capital	$300mm

Health IT Index Performance 2022

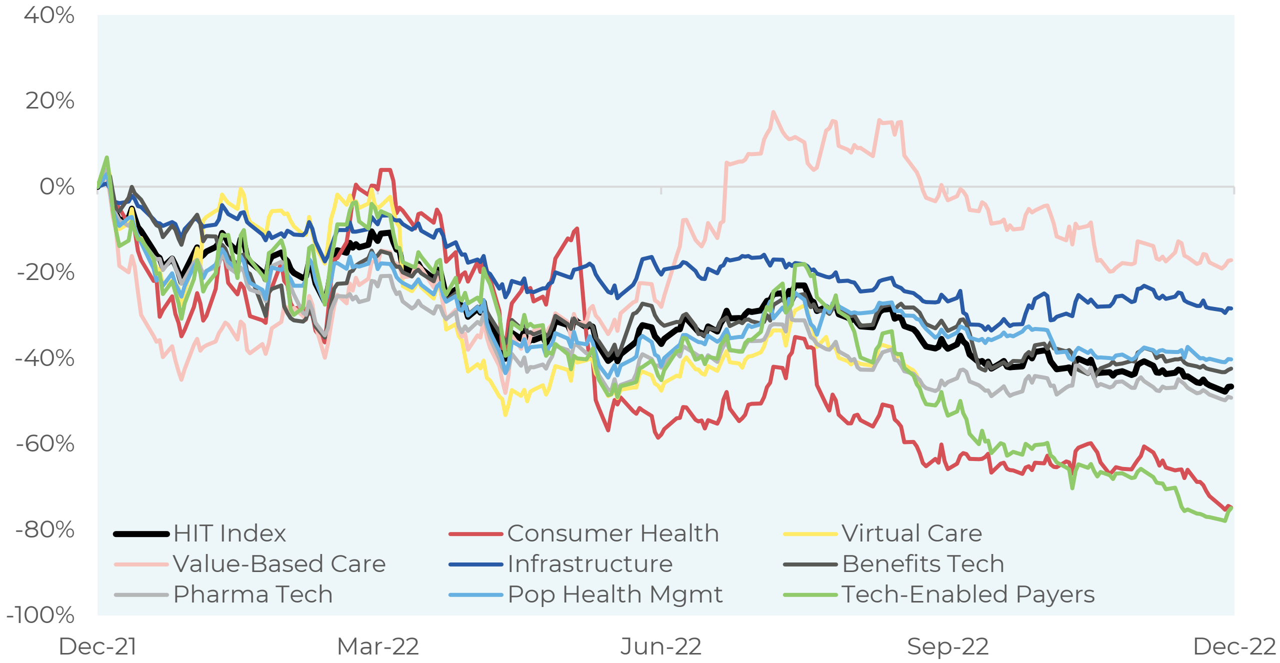
HIT & SUBSECTORS INDEX PERFORMANCE 2022

To drill-down into the drivers behind the variability within the Health IT index, HGP classified the 70 constituents into their respective sectors – Benefits Tech, Consumer Health, Infrastructure, Pharma Tech, Population Health Management, Tech-Enabled Payers, Value-Based Care, and Virtual Care.

Though every index has lost value in the double digits, the Value-Based Care basket is seen as a bright spot that outperformed against the major market indices. While this index has only four constituents, it's worthy to note that One Medical, whose $3.9B acquisition by Amazon was announced in July 2022, is one of the four. Despite closing the first half of 2022 down 55%, ONEM stock price flourished after the announcement, and closed the year down only 4%.

Consumer Health and Tech-Enabled Payers separated from the flock and underperformed their peers significantly, disadvantaged by the relatively low number and recency of their constituents, who entered the public markets riding on growth and are now being caught flat-footed with their lack of profitability, which has been the favored metric of 2022.

The consolidation activity in the public HIT markets shows that there is strong investor interest in the industry, and the market thesis remains indisputable. HGP will be closely tracking the shifting dynamics of the bear market, which tends to create opportunities that are challenging to seize, but more rewarding for those who can seize them.



2022 Index Performance					
Health IT	-46.6%	Infrastructure	-28.4%	Tech-Enabled Payers	-74.9%
Benefits Tech	-42.4%	Pharma Tech	-49.2%	Value-Based Care	-17.1%
Consumer Health	-74.8%	Pop Health Mgmt	-40.3%	Virtual Care	-63.7%

HIT and Subsector Index Performance Detail As Of December 31, 2022

Detail on the sectors and companies HGP tracks as part of the health IT index can be found below. Multiples shown are based off 2023E revenue and EBITDA.

Company	Share Price % Change	EV/ Rev	EV/ EBITDA	Company	Share Price % Change	EV/ Rev	EV/ EBITDA
Benefits Tech							
Benefitfocus	0%	2.3X	13.6X	GoodRx	-86%	2.3X	9.4X
Castlight Health (acq.)	NA	NA	NA	HealthEquity	41%	7.0X	22.5X
Convey Health (delist.)	29%	NA	NA	Progyny	-39%	2.7X	16.2X
Ehealth	-81%	0.8X	NMF	SelectQuote	-93%	0.9X	NMF
Evolent Health	1%	1.9X	22.0X	Thorne Research*	-41%	0.7X	4.8X
GoHealth	-82%	1.0X	10.5X				
Consumer Health							
23andMe*	-69%	2.4X	NMF	Peloton	-79%	1.6X	NMF
Owlet Baby Care*	-78%	0.7X	NMF				
Infrastructure							
Allscripts	-4%	2.5X	8.7X	NRC Health	-9%	NA	NA
Cerner (acq.)	NA	NA	NMF	Omnicell	-72%	2.2X	18.0X
Change HC (acq.)	NA	NA	NMF	OptimizeRx	-73%	2.7X	20.8X
CPSI	-8%	1.5X	8.5X	Phreesia	-24%	5.4X	NMF
Doximity*	-34%	13.4X	NMF	Roper Technologies	-11%	8.5X	20.9X
HealthStream	-6%	2.6X	13.0X	Streamline Health	11%	3.7X	NMF
Inovalon (acq.)	-73%	5.2X	7.6X	Tabula Rasa	-66%	1.2X	22.5X
MultiPlan	5%	1.9X	11.1X	Vocera (acq.)	NA	NA	NMF
NextGen Healthcare	-4%	2.5X	8.7X				
Pharma Tech							
Certara*	-44%	7.1X	19.9X	Science 37*	-97%	NMF	NMF
Invitae	-88%	3.1X	NMF	Schrödinger	-46%	3.6X	NA
IQVIA	-28%	3.2X	13.4X	Simulations Plus	-25%	10.1X	26.7X
Model N	33%	6.1X	NMF	SOPHiA GENETICS*	-84%	NMF	NMF
Pear Therapeutics*	-77%	3.6X	NMF	Veeva Systems	-38%	10.3X	26.4X

*: Companies that went public in 2021.

Company	Share Price % Change	EV/ Rev	EV/ EBITDA	Company	Share Price % Change	EV/ Rev	EV/ EBITDA
Population Health Management							
Definitive Healthcare*	-61%	6.4X	22.6X	Sema4*	-94%	NMF	NMF
Health Catalyst	-74%	1.5X	NMF	Sharecare*	-67%	0.8X	11.0X
NantHealth	-75%	3.5X	NMF	Signify Health*	97%	6.7X	24.3X
Premier	-13%	3.2X	8.8X				
Tech-Enabled Payers							
Bright Health*	-81%	NMF	NMF	Oscar*	-69%	NMF	NMF
Clover Health*	-76%	NMF	NMF				
Value-Based Care							
Alignment HC*	-16%	1.1X	NMF	One Medical	-4%	2.9X	NMF
Oak Street Health	-39%	2.0X	NMF	Privia Health*	-14%	1.5X	NMF
Virtual Care							
Accolade	-70%	1.5X	NMF	iRhythm Technologies	-20%	5.6X	NMF
Akili Interactive*	NA	NMF	NMF	LifeStance Health*	-49%	2.0X	27.6X
DocGo*	-22%	1.2X	10.6X	SmileDirectClub	-86%	0.6X	NMF
Amwell	-54%	0.7X	NMF	SOC Telemed (acq.)	NA	NA	NMF
Babylon Health*	-96%	0.2X	NMF	Talkspace*	-69%	NMF	NMF
Cue Health*	-84%	0.2X	NMF	Teladoc Health	-75%	1.7X	15.4X
EUDA Health*	NA	3.1X	NA	UpHealth*	-93%	0.8X	9.3X
Hims & Hers Health*	0%	1.6X	NMF				

*: Companies that went public in 2021 or 2022.

HIT and Subsectors Index Valuation Multiples

Median Values	Revenue Multiples 2023E	Revenue Multiples 2024E	EBITDA Multiples 2023E	EBITDA Multiples 2024E
Enterprise SaaS	5.6X	4.9X	19.6X	19.7X
Health IT (all)	2.3X	1.9X	14.5X	13.1X
Pharma Tech	4.8X	4.1X	23.1X	20.5X
Pop Health Mgmt	3.4X	2.8X	16.8X	13.3X
Infrastructure	2.6X	2.4X	13.0X	12.1X
Benefits Tech	1.9X	1.6X	13.6X	10.9X
Value-Based Care	1.7X	1.3X	NMF	NMF
Consumer Health	1.6X	1.4X	NMF	NMF
Virtual Care	1.3X	1.0X	14.2X	13.1X
Tech-Enabled Payers	NMF	NMF	NMF	NMF

While all subsectors trade at a deep discount to Enterprise SaaS, mature subsectors within HIT trade at healthier valuations. The Health IT Index is trading at a ~60% discount to Enterprise SaaS on a 2023E xRev basis and a ~25% discount based on 2023E xEBITDA basis.

HEALTH IT IPOS AND SPACS

In no category was the difference between 2021 and 2022 more stark than the IPO market. The IPO market has virtually shut its doors – according to the EY Global IPO Trends report, Americas IPO activity fell to a 13-year low by volume and a 20-year low by value after a record-breaking 2021. Americas IPO volume fell 76% from 532 to 130 over the year. Value took an even harder fall, dropping 95% from $174.5 billion to a mere $9 billion. The underlying cause, largely a result of macroeconomic and inflationary pressure, is market volatility and the reset in corporate valuations, which taken together rattled investor confidence and risk tolerance.

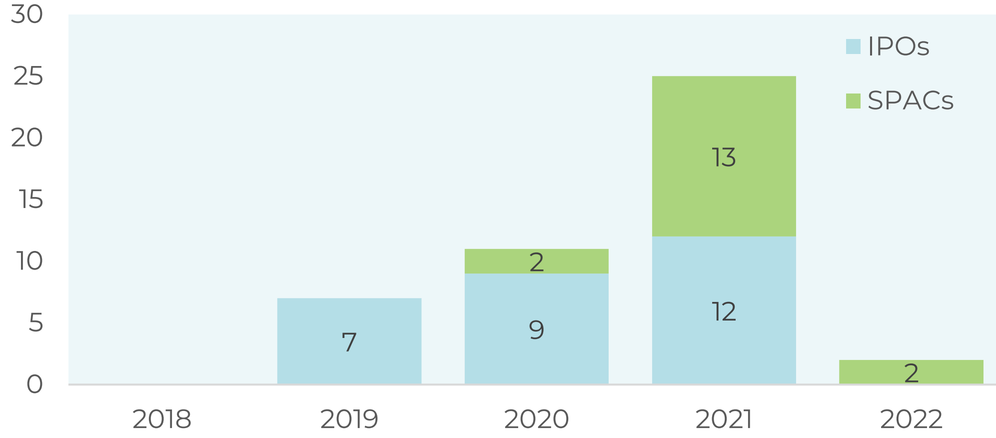
SPACS, which had a burst of popularity in 2021, saw a dramatic crash in 2022, both in terms of successfully completed reverse mergers and the rampant redemption rates hindering the ability to get deals done. In 2022, SPAC IPOs in the Americas fell 86% and 92% in transaction volume and value, respectively. There is a glut of SPACs that face a liquidation in the next 6-months due to their expiration without completing a de-SPAC. According to EY, more than 80% of the 480 SPACs currently seeking targets face expiration by mid-2023 following 60 SPAC liquidations in 2022.

According to EY, the IPO market typically rebounds quickly and robustly after a retrenchment. In order to fire up the market, valuations will need to stabilize, and successful IPOs will foster the additional flow of transactions. More favorable conditions seem likely for 2023, particularly in the latter half of the year. With the IPO markets all but closed in 2022, a strong pipeline has formed, and the market expects a wave of IPOs at the first opportunity.

In the Health IT market, only two companies went public in 2022 through SPACs, marking the tail-end of the SPAC frenzy of 2020-21. Both companies faced headwinds in the markets, similar to their predecessors, losing more than 70% of their opening price.

- **Akili Interactive**, maker of video game-like digital therapeutics intended to improve attention function in children with ADHD, merged with Chamath Palihapitiya's SPAC Social Capital and raised more than $163mm through its IPO.
- **EUDA Health**, a Singapore-based telehealth company, raised $86mm through a reverse merger with SPAC 8i Acquisition 2 Corp.

US HEALTH IT IPO AND SPAC VOLUME



Macroeconomics 6

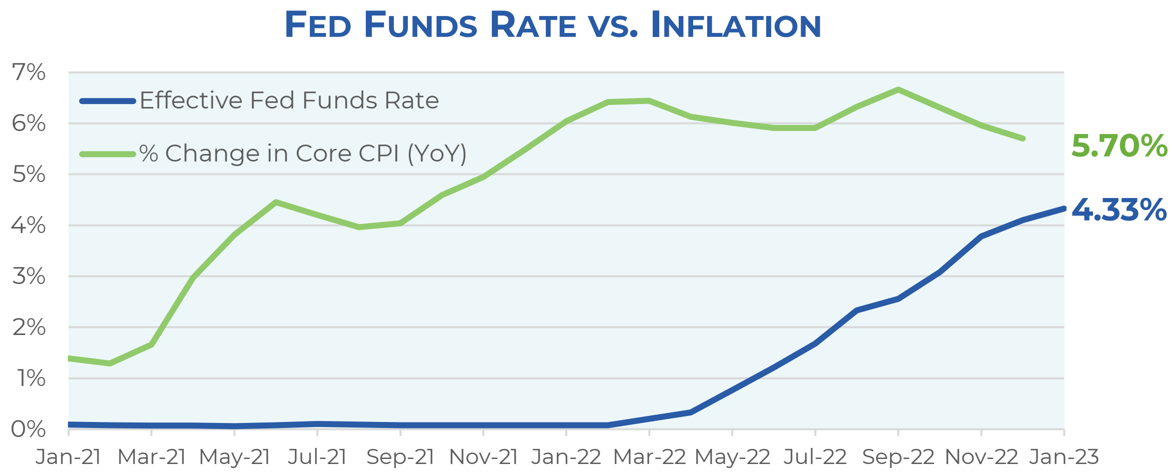
2022 was a strange, rollercoaster of a year — while the pandemic's impact is still at play, other forces have come into the macroeconomic picture and become realities that we deal with every day, whether at the gas pump or the supermarkets: inflation was this year's main story and its Goliath to be dealt with, in which case Jerome Powell and the Fed policymakers formed the proverbial David. CPI and unemployment readouts and FOMC meetings became highly anticipated dates in any given month, and everybody seemed to have an opinion on what constitutes a recession.

To avoid a hard landing, the FOMC increased the Fed funds rate cautiously yet steadily (from 0.08% to 4.33% to end the year) and largely stabilized the annual inflation at roughly 6%, spooking the markets of a recession and bringing down asset prices in the meantime. While S&P 500 ended the year down 19%, NASDAQ and DJIA diverged and ended the year down 33% and 9% respectively, highlighting the disparate trends in technology and industrial sectors. As tech companies found out they were bloated with cheap capital and excess hiring, they resorted to massive layoffs in order to pivot from growth to profitability. On the other hand, 2022 largely favored energy and industrials as oil and commodity prices increased as a result of Russia's invasion of Ukraine.

To revisit the supply and demand factors that had been impeding growth and inflating prices, and how they evolved since our last report:

Supply-Side Issues:

- China is abandoning its Covid Zero policy and reopening the economy. This is expected to further relieve supply chain issues, which had been on the mend to revert to pre-COVID levels.
- While unemployment remains low, wage growth has slowed down from its 11% peak to 6%. Given wage growth is the main component of inflation, this is a healthy sign.
- Even though the war in Ukraine pushed the global energy supply into crisis in the first half of 2022, oil prices are now off their peak at $120/bbl levels in 1H 2022, ending the year at $80/bbl levels. For the time being, energy prices seem to be contained, which will prevent inflation from spiraling.



Demand-Side Issues:

- While consumer spending hasn't decreased, it is showing signs of a cool-down, as the month-over-month Personal Consumption Expenditures increase approaches zero.
- Slowdown in wage growth is a positive (as a deflationary factor) on the demand side as well, as a leading indicator to decreasing disposable income and consumer spending.
- The stimulus programs have come to a halt. As the Congress was split in the midterm elections of 2022, it is likely that the government will not be undertaking a major stimulus effort in the next two years.
- Households are less levered and seem to have stable financial health to shoulder a recession and pull of a soft landing: the household debt-to-GDP ratio is hovering around its low watermark in two decades of 75%, significantly lower than the 100% ratio ahead of the '08 crisis.

A difficult year is now in the rearview mirror, and every new year deserves a hopeful beginning. Though many do not expect the markets to come back roaring, there is hope that the economy can adjust to a "new normal" with a healthy level of inflation, modest growth, and accessible capital (that is not necessarily cheap).

2022 US Stock Market Performance

Feb 24 – Russia begins invasion operations in Ukraine

Mar 8 – US and UK ban Russian oil, EU reduces demand on Russian gas

May 2 – SCOTUS draft opinion overturning Roe v Wade is leaked

May 4 – Fed raises rates by 50 bps

Jun 15 – Fed raises rates by 75 bps

Jun 24 – SCOTUS overturns Roe v Wade

Jul 13 – Inflation peaks at 9.1%

Jul 27 – Fed raises rates by 75 bps

Aug 2 – House Speaker Pelosi visits Taiwan

Aug 16 – Biden signs the Inflation Reduction Act of 2022 into law

Aug 24 – Biden announces plans to cancel student debt

Sep 21 — Fed raises rates by 75 bps

Oct 27 – Musk completes $44B acquisition of Twitter

Nov 2 – Fed raises rates by 75 bps

Dec 14 – Fed raises rates by 50 bps

According to Pitchbook, the rising cost of debt and declining valuations had an immediate impact on PE dealmaking activity in 2022, leading to a 20% drop in deal value compared to 2021. Large take-privates constituted a bright spot for PE firms to buy up public companies at discounts ($224B in deal value, second highest in history after 2007), meanwhile total deal value for platform deals shrank by 27% as firms pivoted to add-ons and growth equity deals, constituting more than 80% of PE dealmaking activity. On the front-end, dry powder is estimated to have ticked down for the first time since 2008 by 10%, but is expected to be replenished by the near-record fundraising activity this year with $343B raised across 405 funds.

After a historic boom, global M&A activity also fell and increasingly contracted each quarter in the face of market volatility and uncertainty: according to Dealogic data, total M&A value fell by 37%. Despite the unfavorable environment, mega-deals like Activision – Microsoft ($75B), VMWare – Broadcom ($61B), Twitter – Elon Musk et al ($44B), IHS Markit – S&P Global ($43B), Warner Bros – Discovery ($42B), and Cerner – Oracle ($28B) underscored the ability of M&A activity to weather tough headwinds. Anecdotally, HGP sees high quality assets continuing to trade at meaningful valuation multiples, as the proactive buyers who are willing to take a bit of risk engage with sellers who are motivated to get deals done, and that sentiment seems to echo across the broader M&A market.

VC funding activity is on a steep slide, as the exuberance of 2021 is long gone and Q4 ‘22 was the bottom since COVID began, both in value and count terms. However, the “crunch” seems to be felt differently across different stages. According to data from Cooley, a leading law firm in venture deals, later stage rounds are being hit harder than earlier rounds: the median Series D (or higher) valuation has declined from its peak of $3.5B in May ‘22 to $527mm in Sep ‘22, whereas Series A deals have seen a 43% decline from their all-time high, and seed stage deals continue to call for steadily increasing valuations, showing resilience. On the front-end, VC fundraising activity has set a new high in 2022: $163B was raised across 769 funds. The deployment of this capital over the next few years will be an interesting trend to watch, affecting both the future of startups and return expectations of LPs.

Given these circumstances, investors and entrepreneurs are compelled to act with a heightened level of focus, diligence, and patience in the face of headwinds such as geopolitical risks, rising cost of debt and inflation. When the storms pass and macro conditions normalize, prospects of growth and deal activity will be waiting those who have adapted and survived. The following table outlines key dates for economic indicators to watch in 2023.

2023 FOMC Meeting Dates	Reference Month	2023 Monthly CPI Report Dates	2023 PPI Report Dates	2023 Employment
February 1	Jan-23	February 14	February 16	February 3
March 22	Feb-23	March 14	March 15	March 10
May 3	Mar-23	April 12	April 13	April 7
June 14	Apr-23	May 10	May 11	May 5
July 26	May-23	June 13	June 14	June 2
September 20	Jun-23	July 12	July 13	July 7
November 1	Jul-23	August 10	August 11	August 4
December 13	Aug-23	September 13	September 14	September 1
	Sep-23	October 12	October 11	October 6
	Oct-23	November 14	November 15	November 3
	Nov-23	December 12	December 13	December 8

Health IT Headlines 7

Notable headlines from 2022 are outlined in the following pages on a quarterly basis. The headlines in 2022 illustrate the significant influence that policy and regulatory intervention has on the incentives that dictate health IT investment and innovation trends, the increasing vertical integration across healthcare, and the expanding presence of non-traditional companies in the health IT market.

Q1 Headlines

Elizabeth Holmes is found guilty of defrauding Theranos' investors

January 3: A jury found Elizabeth Holmes guilty of defrauding investors out of hundreds of millions of dollars. The verdict capped the downfall of one of Silicon Valley's most dynamic and scandal-plagued young executives who promised to revolutionize blood testing with an innovative technology that required just a small sample of blood pricked from a patient's finger.

Microsoft, Cleveland Clinic and Providence join coalition to innovate AI in healthcare

January 18: With healthcare increasingly placing bets on artificial intelligence, Microsoft has formed a coalition with some of the nation's top health and life sciences organizations to build and track new AI innovations. The Artificial Intelligence Industry Innovation Coalition (AI3C) unites 9 other big names alongside Microsoft: Brookings Institution, Cleveland Clinic, Duke Health, Intermountain Healthcare, Novant Health, Plug and Play, Providence, the University of California, San Diego and UVA.

ONC completes critical 21st Century Cures Act requirement, publishes the Trusted Exchange Framework and the Common Agreement for Health Information Networks

January 18: The U.S. Department of Health and Human Services' (HHS) Office of the National Coordinator for Health Information Technology (ONC) and its Recognized Coordinating Entity (RCE), The Sequoia Project, Inc., announced the publication of the Trusted Exchange Framework and the Common Agreement (TEFCA). Entities will soon be able to apply and be designated as Qualified Health Information Networks (QHINs). QHINs will connect to one another and enable their participants to engage in health information exchange across the country.

IBM sells Watson Health assets to investment firm Francisco Partners

January 21: The assets acquired by Francisco Partners include extensive and diverse data sets and products, including Health Insights, MarketScan, Clinical Development, Social Program Management, Micromedex and imaging software offerings, the company said in a press release.

DOJ sues to block UnitedHealth-Change Healthcare deal

February 24: The Department of Justice filed suit to intervene in UnitedHealth Group's acquisition of Change Healthcare, just days shy of the company's planned consummation date of Feb. 27. In an announcement, the DOJ said that the deal would harm competition in commercial health markets as well as the market for technology that insurers use to process claims and reduce healthcare costs.

Teladoc to partner with Amazon on Alexa-enabled virtual visits

February 28: Teladoc Health announced that it was partnering with Amazon to launch voice-activated virtual care on Alexa-supported Echo devices. According to the companies, U.S. customers around the country can connect with a Teladoc provider via audio at any time for general medical needs.

Amazon Pharmacy teams up with Blue Plans in 5 states to roll out prescription discount savings card

March 8: Amazon Pharmacy is partnering with Blue Plans in five states and Prime Therapeutics to tackle the affordability of prescription medications. The online retail giant's pharmacy arm is rolling out a prescription discount savings card that's available to some Blue Plans members.

Bipartisan legislation would broaden telehealth benefits for employees

March 31: The House of Representatives has drafted a bill that would provide new virtual care options for American employees. The Telehealth Benefit Expansion for Workers Act would amend HIPAA and the Affordable Care Act to allow employers to offer standalone telehealth service programs – not unlike dental and vision plans – in addition to existing health insurance plans.

Q2 HEADLINES

3M is said to consider sale of its healthcare IT division

April 26: 3M Co. is said to consider a possible divestiture of its healthcare information technology unit. The move comes after 3M (MMM) originally evaluated a sale of the unit in 2015, though it shelved the plan in 2016. The healthcare IT unit is located within 3M's larger health group, which contributed about $9B of 3M's 2021 revenue.

Walmart Health rolls out virtual diabetes program as retail giant moves deeper into treating chronic conditions

April 28: Walmart's telehealth provider, MeMD, is rolling out the virtual diabetes program as a standalone service or as part of a comprehensive medical and behavioral telehealth program for enterprise customers and health plans. The retail giant collaborated with the American Diabetes Association on the virtual program, which was developed to help employees and members close gaps in diabetes management through early intervention, Walmart Health executives said.

DOJ launches investigation into Cerebral's prescribing practices

May 7: Mental health startup Cerebral said it is under investigation by the Department of Justice (DOJ) for "possible violations" of the Controlled Substances Act. Cerebral Medical Group received a grand jury subpoena from the U.S. Attorney's Office for the Eastern District of New York. The Controlled Substances Act regulates the distribution of potentially addictive medicines like Adderall and Xanax.

NowRx, Hyundai partner on last-mile medication delivery

May 13: Silicon Valley startup NowRx is teaming up with Hyundai Motor Group for a pilot project testing last-mile medication delivery, with an eye toward testing autonomous vehicles down the road. NowRx, a digital pharmacy that offers same-day and same-hour prescription medication delivery as well as telehealth services, plans to roll out the pilot project later this year, serving two micro-fulfillment centers in the Los Angeles area.

Pharmacy retail giant Walgreens looks to disrupt the clinical trials business

June 16: Walgreens' healthcare ambitions continue to grow as the pharmacy retail giant expands its reach into clinical trials by leveraging its vast trove of patient data, its technology assets and its retail locations. Walgreens aims to revolutionize the antiquated clinical trials model with an eye toward using its community reach to increase patient enrollment as well as racial and ethnic diversity in sponsor-led drug development research, executives said.

New class action lawsuit claims Meta's discreet patient data tracker was active across 664 provider websites

June 21: Facebook parent company Meta was hit with a class action lawsuit alleging the tech company has been collecting sensitive patient-status data through hospital websites in violation of the Health Insurance Portability and Accountability Act (HIPAA). The case was filed in the Northern District of California by an anonymous patient of Baltimore's Medstar Health System on the behalf of "millions of other Americans whose medical privacy has been violated by Facebook's Pixel tracking tool."

Supreme Court overturns Roe v. Wade

June 24: The Supreme Court has overturned 49 years of a women's right to an abortion in siding today with Mississippi Department of Health Officer Thomas E. Dobbs in Dobbs v. Jackson Women's Health Organization. In the 6-3 decision, Justice Samuel Alito wrote the opinion for the majority, including Chief Justice John Roberts and Justices Neil Gorsuch, Brett Kavanaugh, Amy Coney Barrett and Clarence Thomas. Justices Stephen Breyer, Sonia Sotomayor and Elena Kagan dissented.

Q3 HEADLINES

Merative, a new data company, formed from IBM's healthcare analytics assets

July 5: Six months after scooping up the health analytics assets of IBM Watson Health, private equity firm Francisco Partners announced this past week that it is using them to launch a new healthcare data company, called Merative.

Patient payments startup Cedar, valued at $3 billion, lays off 24% of its workforce "in order to adapt to current market realities."

July 8: Cedar joins other digital health startups in cutting its workforce with an eye on its bottom line. "It is still our mission to empower individuals to easily and affordably pursue the care they need." "Everyone at Cedar, including those leaving us, has made valuable contributions to this mission, and we sincerely thank our colleagues for all of their hard work", a company spokesperson said in a statement.

Former Theranos COO is guilty of federal fraud

July 8: Ramesh "Sunny" Balwani, the former COO of failed blood testing startup Theranos and ex-boyfriend of founder Elizabeth Holmes, was found guilty of defrauding investors and patients. Jury deliberations stretched for four full days following a lengthy trial that got underway in March with opening statements. A jury of five men and seven women determined that Balwani had defrauded both patients and investors, finding him guilty on all 12 charges he faced, which included ten counts of federal wire fraud and two counts of conspiracy to commit wire fraud.

Healthcare Tech Company Olive lays off 450 employees

July 19: The Columbus-based health technology company Olive announced Tuesday that it is cutting 450 jobs. Olive said the cuts are "based on the realities of today's economy." Workers were told their work will stop immediately. They will be paid and will receive benefits for 60 days and will be eligible for two weeks severance pay for each year of service, according to a company notice.

Amazon makes further healthcare inroads with $3.9B One Medical deal

July 21: The merger agreement with the IT-driven primary care company aims to make healthcare more "accessible, affordable and even enjoyable" with in-person and virtual care services.

Biden signs executive order on emergency abortion access

August 4: The day after the federal government filed a lawsuit against Idaho for its almost absolute ban on abortion that would make it a criminal offense for physicians to perform emergency care, President Joe Biden issued an executive order protecting access.

Digital health unicorn Truepill conducts third round of layoffs in 2022

August 14: Truepill, a platform that helps other companies offer diagnostics, telehealth services and prescriptions, has conducted its third mass layoff in a string of workforce reductions, sources tell TechCrunch. The layoff impacted about third of the company, or 175 people.

CVS Health to purchase Signify Health for $8B

September 5: CVS Health announced that it will acquire Dallas-based Signify Health, a network of 10,000 clinicians across 50 states with more than 50 health plan clients, including CVS' Aetna division, for $8 billion.

FTC to look into Amazon, One Medical deal

September 6: The Federal Trade Commission is scrutinizing Amazon's Prime business model and has also reviewed the tech giant's other potential deals, such as the acquisition of Metro-Goldwyn-Mayer Studios and a new deal with autonomous vacuum maker iRobot, for antitrust violations.

Walmart teams with UnitedHealth Group, Optum on patient experience

September 8: Walmart and UnitedHealth Group, along with UHG subsidiary Optum, are beginning a 10-year collaboration the companies describe as "wide-ranging," and intend to leverage their combined expertise to improve health outcomes and the patient experience.

Q4 HEADLINES

Optum and Change Healthcare Complete Combination

October 3: Optum, a diversified health services company, announced it has completed its combination with Change Healthcare. The combined businesses share a vision for achieving a simpler, more intelligent and adaptive health system for patients, payers and care providers. The combination will connect and simplify the core clinical, administrative and payment processes health care providers and payers depend on to serve patients. Increasing efficiency and reducing friction will benefit the entire health system, resulting in lower costs and a better experience for all stakeholders.

Telehealth unicorn Cerebral lays off 20% of staff for 'operational efficiencies'

October 24: Cerebral is laying off 20% of its staff, citing an ongoing push for efficiency at the digital health unicorn. According to the WSJ, which first reported the news, and Insider, some 400 people will lose their jobs, primarily clinical staff and care counselors.

VA Awards Oracle Cerner $956M in EHR Modernization Task Orders

October 26: Oracle's Cerner subsidiary has secured a pair of task orders worth $956 million combined to continue to the deployment of an electronic health record system to Department of Veterans Affairs-run facilities, FedHealth IT reported Thursday.

CVS and Walgreens agree to pay $10 billion to settle opioid claims

November 2: CVS Health and Walgreens Boots Alliance have announced an agreement to pay $10 billion to substantially resolve all opioid lawsuits and claims against the companies. The payments will be made over 10-15 years, with neither company admitting wrongdoing.

RSV surge is overwhelming some hospitals and pediatric care capacity

November 7: The Centers for Disease Control and Prevention is warning of a surge in flu; Respiratory Syncytial Virus, or RSV; and other viral infections this season, especially among children and older adults. CDC says it is seeing the highest influenza hospitalization rates going back a decade.

Johnson & Johnson to acquire Abiomed

November 8: Johnson & Johnson on Tuesday announced its plans to acquire Abiomed, which develops technologies for heart, lung and kidney support, in a deal worth more than $16 billion.

As athenahealth CEO teases a second IPO, new customer board announced

December 1: In a recent local interview, athenahealth CEO Bob Segert said the transformed company has created a significant amount of value and could go public, again, after going private in 2019.

New HIPAA rule from CMS would streamline transactions with attachments, e-signatures

December 19: The Centers for Medicare and Medicaid Services on Monday put forth a new proposed rule that would modify HIPAA to better support both claims and prior authorization transactions – providing standards for electronic signatures to be used in conjunction with healthcare attachments transactions.

ATA applauds 2-year extension of telehealth flexibilities in Congressional Omnibus

December 22: The American Telemedicine Association this week cheered the bipartisan omnibus appropriations bill from both houses of Congress for including a two-year extension for Medicare telehealth flexibilities that have been in place since the COVID-19 public health emergency was declared in 2020.

About Healthcare Growth Partners 8

Healthcare Growth Partners (HGP) is an exceptionally experienced Investment Banking & Strategic Advisory firm exclusively focused on the transformational Health IT. We unlock value for our clients through our Sell-Side Advisory, Buy-Side Advisory, Capital Advisory, and Pre-Transaction Growth Strategy services, functioning as the exclusive investment banking advisor to over 130 health IT transactions representing over $4 billion in value since 2007.

Our passion for healthcare inspires us to not only create value for our clients, but to also generate broad, overarching improvements to the functionality and sustainability of health. With our focus, we deliver knowledgeable, honest and customized guidance to select clients looking to execute high value health IT, health information services, and digital health transactions. For more information, please visit www.hgp.com.

Securities offered through HGP Securities, LLC, member FINRA & SIPC, broker-dealer affiliate of Healthcare Growth Partners, LLC.

Sources of Information:
Company press releases, company SEC filings, Healthcare Growth Partners database, Cooley, Dealogic, Deloitte, EY, Fierce Healthcare, Forbes, Fortune, Guardian, Healthcare IT News, HIStalk, NBC News, NVCA, Pershing Square Capital, PitchBook, PwC, Refinitiv, Rock Health, Sequoia Capital, The New York Times, The Wall Street Journal, and The Washington Post.

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HEALTHCARE GROWTH PARTNERS
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HGP Transaction Experience

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Company	Transaction	Counterparty	Type	Year
BloodHub	has been acquired by	inVita	SELL-SIDE	2022
ALIVIA ANALYTICS	received funding from	Council Capital HEP	CAPITAL RAISE	2022
MoveSpring	has been acquired by	Reward Gateway	SELL-SIDE	2022
symplr	has acquired	GREENLIGHT MEDICAL	BUY-SIDE	2022
nthrive	has acquired	PELITAS	BUY-SIDE	2022
erexpress	has been acquired by	HARRIS	SELL-SIDE	2021
symplr	has acquired	halo health	BUY-SIDE	2021
symplr	has acquired	SpinFusion	BUY-SIDE	2021
radixhealth	has been acquired by	RELATIENT	SELL-SIDE	2021
MDTech	has been acquired by	EverCommerce	SELL-SIDE	2021
imprivata	has acquired	XTON technologies	BUY-SIDE	2021
medullan	has been acquired by	ZS	SELL-SIDE	2021
MILLENNIA	has acquired	Jellyfish	BUY-SIDE	2021
prognoCIS By Bizmatics	has been acquired by	HARRIS	SELL-SIDE	2021
symplr	has acquired	Phynd	BUY-SIDE	2021
pmg	has been acquired by	CORONIS	SELL-SIDE	2020
HIPAA One	has been acquired by	Intraprise HEALTH	SELL-SIDE	2020
patient matters	has been acquired by	firstsource	SELL-SIDE	2020
Digisonics	has been acquired by	Intelerad	SELL-SIDE	2020
ontellus	has acquired	INTERTEL	BUY-SIDE	2020
ePreop	has been acquired by	provation	SELL-SIDE	2020
symplr	has acquired	Wolters Kluwer ComplyTrack®	BUY-SIDE	2020
symplr	has acquired	the patient safety company	BUY-SIDE	2020
alertmd	has been acquired by	EverCommerce	SELL-SIDE	2020
ImPACT Applications, Inc.	has been acquired by	Riverside Insights	SELL-SIDE	2019
ACCUMEN	has acquired	SDR Laboratories	BUY-SIDE	2019
OmniSYS	has acquired	STRAND	BUY-SIDE	2019
clearwave	received funding from	FrontierCapital	CAPITAL RAISE	2019
Diameter Health	received funding from	OPTUM	GROWTH STRATEGY	2018
ChartSwap	has been acquired by	ontellus	SELL-SIDE	2018
RPA	has been acquired by	JENSEN HUGHES	SELL-SIDE	2017
ontellus	has acquired	Record Retrieval Service	BUY-SIDE	2017
Kognito	has been acquired by	ascend learning	SELL-SIDE	2017
Innovation Healthcare	has been acquired by	Azalea	SELL-SIDE	2017
callpointe	has been acquired by	west	SELL-SIDE	2017
symplr	has acquired	VISTAR	BUY-SIDE	2017

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ClockwiseMD	has been acquired by	DocuTAP	SELL-SIDE	2017
OmniSYS	has acquired	voiceTech	BUY-SIDE	2017
HIGH LINE HEALTH	has been acquired by	onecallcare	SELL-SIDE	2017
essette	has been acquired by	hms	SELL-SIDE	2016
Array Health	has been acquired by	GetInsured	SELL-SIDE	2016
Keais Records Retrieval	has acquired	second IMAGE NATIONAL	BUY-SIDE	2016
Lightbeam Health Solutions	has acquired	Browsersoft	BUY-SIDE	2016
symplr	has acquired	cactus	BUY-SIDE	2016
InformedDNA	received funding from	Anthem	CAPITAL RAISE	2016
docbookMD	has been acquired by	scrypt	SELL-SIDE	2016
Lightbeam Health Solutions	received funding from	HEARST corporation	CAPITAL RAISE	2016
Vivify health	received funding from	UPMC	CAPITAL RAISE	2016
Nextech	has acquired	SupraMed	BUY-SIDE	2016
Shareable	has been acquired by	Digital Reasoning	SELL-SIDE	2016
iVantage	has been acquired by	The Chartis Group	SELL-SIDE	2015
clienttell	has been acquired by	west	SELL-SIDE	2015
LWSI	has been acquired by	Netsmart	SELL-SIDE	2015
ClockwiseMD	received funding from	martin ventures	CAPITAL RAISE	2015
Med	has been acquired by	Modernizing Medicine	SELL-SIDE	2015
sentry data systems	received funding from	ABRY Partners	CAPITAL RAISE	2015
symplr	has acquired		BUY-SIDE	2015
Provider Advantage	has been acquired by	The SSI Group, Inc.	SELL-SIDE	2015
Lightbeam Health Solutions	received funding from	Strategic Investor	CAPITAL RAISE	2015
Generation Partners	has invested in	ZirMED	CAPITAL RAISE	2015
HealthUnity	has been acquired by	ZeOmega	SELL-SIDE	2015
MERGE Healthcare	has acquired	DR Systems	BUY-SIDE	2015
Keais Records Retrieval	has been recapitalized by	CapStreet	CAPITAL RAISE	2015
HSM Inc.	has been acquired by	Magellan Health	SELL-SIDE	2015
Vivify health	received funding from	LabCorp	CAPITAL RAISE	2014
Patient Prompt	has been acquired by	Stericycle	SELL-SIDE	2014
Array Health	received funding from	NMP	CAPITAL RAISE	2014
livongo health	received funding from	General Catalyst Partners	CAPITAL RAISE	2014
VCS	has acquired	Medkinetics	BUY-SIDE	2014
net health	has acquired	ReDoc	BUY-SIDE	2014
healthpost	has been acquired by	The Advisory Board Company	SELL-SIDE	2014
Immediate MD	received funding from	First Trust	CAPITAL RAISE	2014

livongo health	received funding from	7wire ventures	CAPITAL RAISE 2013
care team connect	has been acquired by	The Advisory Board Company	SELL-SIDE 2013
Conversio HEALTH	received funding from	HERITAGE GROUP	CAPITAL RAISE 2013
Medibis	has been acquired by	The SSI Group, Inc.	SELL-SIDE 2013
Integritas Inc.	has been acquired by	net health	SELL-SIDE 2013
Vivify health	received funding from	HERITAGE GROUP	CAPITAL RAISE 2013
GTN	has been acquired by	Greenway Health	SELL-SIDE 2012
HEARST corporation	has acquired	mcg	BUY-SIDE 2012
HEALTHTECH HOLDINGS, INC.	has acquired	acuitec	BUY-SIDE 2012
L&S Associates	has been acquired by	Human Arc	SELL-SIDE 2012
net health	has been acquired by	SPECTRUM EQUITY	SELL-SIDE 2012
studymanager	has been acquired by	MERGE Healthcare	SELL-SIDE 2012
Cgate	has been acquired by	SCI SOLUTIONS	SELL-SIDE 2012
DocuTAP	received funding from	BLUFFPOINT ASSOCIATES	CAPITAL RAISE 2012
Clinical Coding Solutions	has been acquired by	The TSYSTEM	SELL-SIDE 2012
OptiLink Division of The Advisory Board Company	has been acquired by	KRONOS	SELL-SIDE 2012
MEDDIRECT	has been acquired by	MedData	SELL-SIDE 2011
Emergisoft	has been acquired by	FIRERUN	SELL-SIDE 2011
QSI	has acquired	ViaTrack Systems	BUY-SIDE 2011
INNOVATION HEALTHCARE	has acquired	CREATIVE HEALTHCARE SYSTEMS INC.	BUY-SIDE 2011
INTUITIVE MEDICAL SOFTWARE	has been acquired by	endo Pharmaceuticals	SELL-SIDE 2011
OIS	has been acquired by	MERGE Healthcare	SELL-SIDE 2011
QSI	has acquired	cqi solutions	BUY-SIDE 2011
TAYLOR COMMUNICATIONS	has acquired	DialogMEDICAL	BUY-SIDE 2011
IntraNexus	has been acquired by	QSI	SELL-SIDE 2011
myhealth direct	received funding from	ARBORETUM VENTURES	CAPITAL RAISE 2011
CARDON	received funding from	Serent CAPITAL	CAPITAL RAISE 2011
SXC Health Solutions Inc.	has acquired	AssuranceRX, LLC	BUY-SIDE 2010
SXC Health Solutions Inc.	has acquired	MedfusionRx	BUY-SIDE 2010
MEDSOLUTIONS	received funding from	TA ASSOCIATES	CAPITAL RAISE 2010
fletcherflora	has been acquired by	MERGE Healthcare	SELL-SIDE 2010
Satori Labs	has been acquired by	QSI	SELL-SIDE 2010
INNOVATION	received funding from	openview	CAPITAL RAISE 2010
MERGE Healthcare	has acquired	OLIVIA Greets	BUY-SIDE 2010
MERGE Healthcare	has acquired	stryker	BUY-SIDE 2010
DocuSys	has been acquired by	MERGE Healthcare	SELL-SIDE 2010

eWebHealth	has been acquired by	Hyland	SELL-SIDE	2010
	has been acquired by	QSI	SELL-SIDE	2010
MEDHOST	has been acquired by	HealthTech Holdings, Inc.	SELL-SIDE	2010
myhealthdirect	received funding from	Chrysalis Ventures	CAPITAL RAISE	2009
TeleTracking	has acquired	AIONEX	BUY-SIDE	2009
ANS	has been acquired by	inMediata	SELL-SIDE	2009
IKOE	has been acquired by	VARIAN medical systems	SELL-SIDE	2009
SXC Health Solutions, Inc.	has acquired	JASCORP	BUY-SIDE	2009
TeleTracking	has acquired	Hill-Rom	BUY-SIDE	2009
eko systems	has been acquired by	MERGE Healthcare	SELL-SIDE	2009
SXC Health Solutions, Inc.	has acquired	Zynchros	BUY-SIDE	2008
Gesellschaft für Patientenhilfe	has been acquired by	inverness medical	SELL-SIDE	2008
Health Directions	has been acquired by	Undisclosed	SELL-SIDE	2008
prompte	has been acquired by	DocuSys	SELL-SIDE	2008
Vivalog Technologies	has been acquired by	McKesson	SELL-SIDE	2008
Optio Healthcare	has been acquired by	Bottomline Technologies	SELL-SIDE	2008
SXC Health Solutions, Inc.	has acquired	NMHC	BUY-SIDE	2008
Hilgraeve	has been acquired by	covisint	SELL-SIDE	2008
AcerMed	has been acquired by	OIS	SELL-SIDE	2008
NetRegulus	has been acquired by	ptc	SELL-SIDE	2007
Evolved	has been acquired by	Shimadzu	SELL-SIDE	2007
VantageMed	has been acquired by	Nightingale	SELL-SIDE	2007
mezzia	has been acquired by	VFA an accruent company	SELL-SIDE	2006

