Global Healthcare Private Equity and M&A Report 2023

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Acknowledgments

This report was prepared by Bain's Global Healthcare Private Equity practice and a team led by Samantha Gorang, an associate partner in Atlanta; Peter Accomando, a senior manager in Boston; and John Day, Americas Healthcare Private Equity practice director. The authors thank Olivia Pavco Giaccia, Dela Kpo, Javon Tai, James Porter, Robert Schrettl, and Samantha Tralka for their contributions; John Campbell and Robert Rosenberg for their editorial leadership; and Emily Lane, John Peverley, and Laura Caringella for their research assistance. We're grateful to Dealogic, AVCJ, S&P Capital IQ, Preqin, and DealEdge® for the valuable data they provided for this report.

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Welcome Letter: Healthcare Private Equity Is Down but Not Out

Macroeconomic forces and geopolitical dynamics shake healthcare dealmaking and valuations.

It was a tale of two halves. 2022 began at the same white-hot pace where 2021 left off as healthcare private equity (HCPE) sponsors were armed with dry powder and optimism coming out of the industry's best year on record.

Then the world changed.

Russia invaded Ukraine, energy prices skyrocketed, and inflation reached multi-decade highs. As central banks around the world hiked rates, public listings sank and credit markets dried up. This shift shook private equity activity globally, with healthcare no exception. Additionally, pressure from a tight labor market hit healthcare particularly hard. Buyout volume fell by more than 35% in the second half of 2022 compared with the first half of the year, and the fourth quarter had the lowest quarterly HCPE deal activity since 2017.

Yet even with the slowdown in the second half, 2022 was still the second-best year on record for healthcare private equity by many measures. Total disclosed deal value reached around $90 billion, down from $151 billion in 2021 but still over $10 billion more than the next-closest year. Deal volume in North America and Europe was the second highest on record. Asia-Pacific reached new heights for disclosed deal values, despite the slowdown in China.

Navigating continued uncertainty

The uncertainty from these macroeconomic and geopolitical dynamics—and now mounting turbulence in the banking sector—is far from resolved, but rising asset valuations and scale corporate merger and acquisition (M&A) deals late in 2022 suggest continued faith in healthcare investments. The S&P 500 healthcare index recovered in the fourth quarter and closed 2022 down only 4% from where it ended in 2021. Amgen's $28 billion acquisition of Horizon Therapeutics and CVS Health's $8 billion acquisition of Signify Health highlight impressive enterprise values of 20 to 30 times EBITDA. Did these green shoots portend a recovery in healthcare deal activity, or were they a false sign of spring? Time will tell.

Consistent with private equity writ large, the recovery of healthcare private equity activity hinges in part on the credit market. High rates aside, banks need some predictability of where the overnight rate will settle before they feel comfortable extending credit, especially for deals over $1 billion.

Meanwhile, we expect private equity sponsors to flock to a subset of investment strategies in 2023 as they continue to adapt to macroeconomic challenges:

- **Find creative ways to get deals done.** Some funds will look for ways to engineer the leverage they need for large deals. Others will pivot toward smaller deals where securing financing or writing larger equity checks may be more plausible. Still other funds are likely to build public-to-private pipelines to take advantage of depressed valuations. Sponsors with strong corporate relationships and exceptional operational due-diligence capabilities may consider carve-outs. Corporate partnerships may provide private equity sponsors both access to capital and a potential path to exit. Recapitalizations may be popular ways to provide exits for current limited partners.

- **Pick category leaders with defendable moats.** While it is hard to time markets, it is easier to bet on a company that will remain strong through bad markets. Category leaders have historically delivered higher profitability and are better able to withstand downturns. Factors to look for include category-leading operations, proprietary intellectual property, unmatched technical capabilities, or differentiated customer advocacy.

- **Build scale in existing assets.** As investors look inward to drive value in their existing portfolios, 2023 may be the year of tuck-in acquisitions. Add-ons in categories with known cash-flow potential may help funds secure financing or may be small enough for funds to finance without credit. Operational due diligence and clear integration theses will be increasingly important in these deals.

- **Identify margin improvement opportunities.** Historically, revenue growth and multiple expansion have been so strong in healthcare that funds have not had to focus on operations as much. Margin improvement contributed only 2% to healthcare deal returns between 2010 and 2021. Funds that identify the right operational levers early and execute their margin improvement playbooks will achieve the full potential of their assets.

Private equity funds may also use this moment of disruption to revisit their fund strategies and reconsider the subsectors they focus on and the investment themes they plan to prioritize.

Reasons for long-term optimism

Economies move in cycles, but the long-term growth of healthcare is powered by several immutable trends, such as aging populations and the rise of chronic diseases. Funds with conviction in this space, the ability to identify highly differentiated assets, and the expertise to develop a plan for operational excellence will find themselves ahead when favorable economic conditions return.

Beyond the familiar benchmarks we use to measure healthcare private equity activity, this year's report takes a close look at several other long-term trends: the continued rise of the biopharma and life sciences tools sectors, the shift to value-based care models as the payer and provider spaces blur, and a spotlight on successful strategies for scaling provider IT platforms.

As always, we hope you enjoy our report on private equity and M&A in the healthcare sector. We look forward to continuing our dialogue with investors and stakeholders around the world.

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Healthcare Private Equity Market 2022: The Year in Review

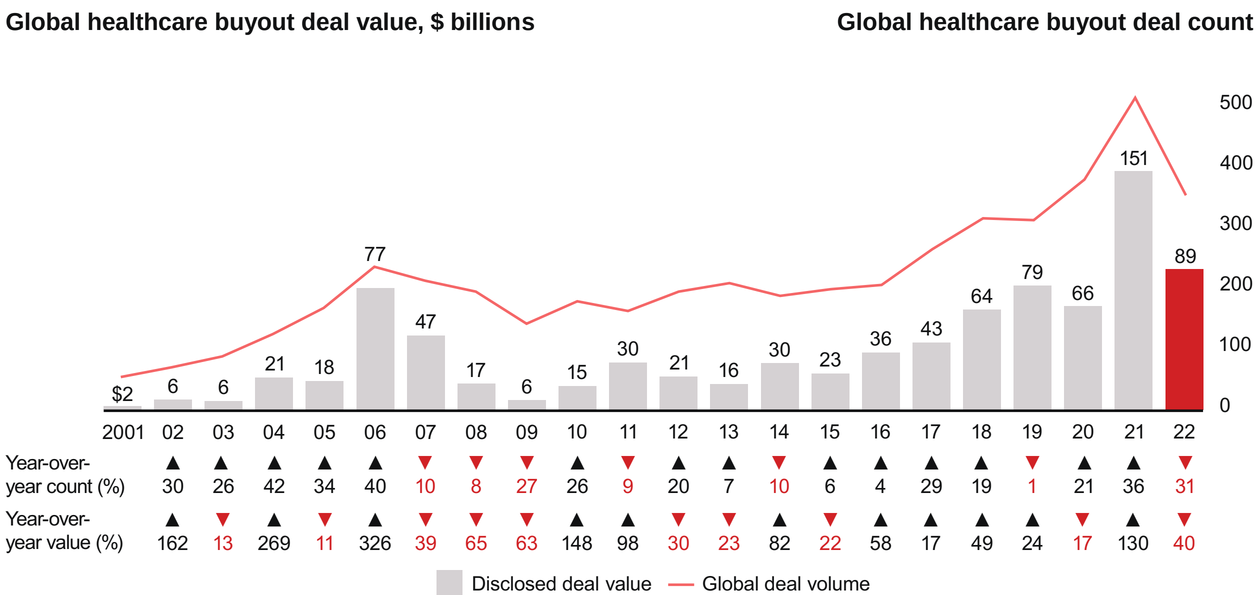
Down but not out: Healthcare private equity remained resilient in 2022.

At a Glance

- **Down but not out:** 2022 was the second-biggest year on record for healthcare private equity by many measures, even though overall activity declined sharply from 2021's record-breaking highs.
- **Tale of two halves:** The first half of 2022 saw a continuation of 2021's record-setting pace for healthcare private equity deal volume and deal value, but geopolitical uncertainty, inflation, tight credit, and labor force pressures caught up to the market in the second half.
- **Narrowing focus:** Funds shifted focus to find pockets of opportunity in certain subsectors and geographies. Interest in life sciences intensified, appeal of carve-outs and public-to-private deals increased, and attraction to Asia-Pacific's maturing healthcare space was punctuated by five buyouts valued over $1 billion in the second half.
- **Resilient outlook:** Healthcare private equity investors face intense competition, rising US interest rates, higher labor costs, and tight credit—but ample dry powder and a track record of returns ensure healthcare will remain a priority for top firms even if winning deals requires becoming more specialized and creative in their approach.

Healthcare private equity (HCPE) activity remained strong in the face of rising geopolitical tensions, high inflation, slumping stock markets, and spiking interest rates. Indeed, 2022 was the second-highest year on record for healthcare private equity in terms of disclosed deal value. The number of deals fell about 30% from 2021's all-time high of 515 deals to around 350 deals in 2022, roughly in line with 2020 *(see Figure 1)*.

Figure 1: Healthcare private equity deal volume and value fell from record highs in 2022



Notes: Excludes spin-offs, add-ons, loan-to-own transactions, special purpose acquisitions, and acquisitions of bankrupt assets; based on announcement date; includes announced deals that are completed or pending, with data subject to change; deal value does not account for deals with undisclosed values; values updated based on Dealogic 2020 sponsor classifications; values include net debt where relevant
Sources: Dealogic; AVCJ; Bain analysis

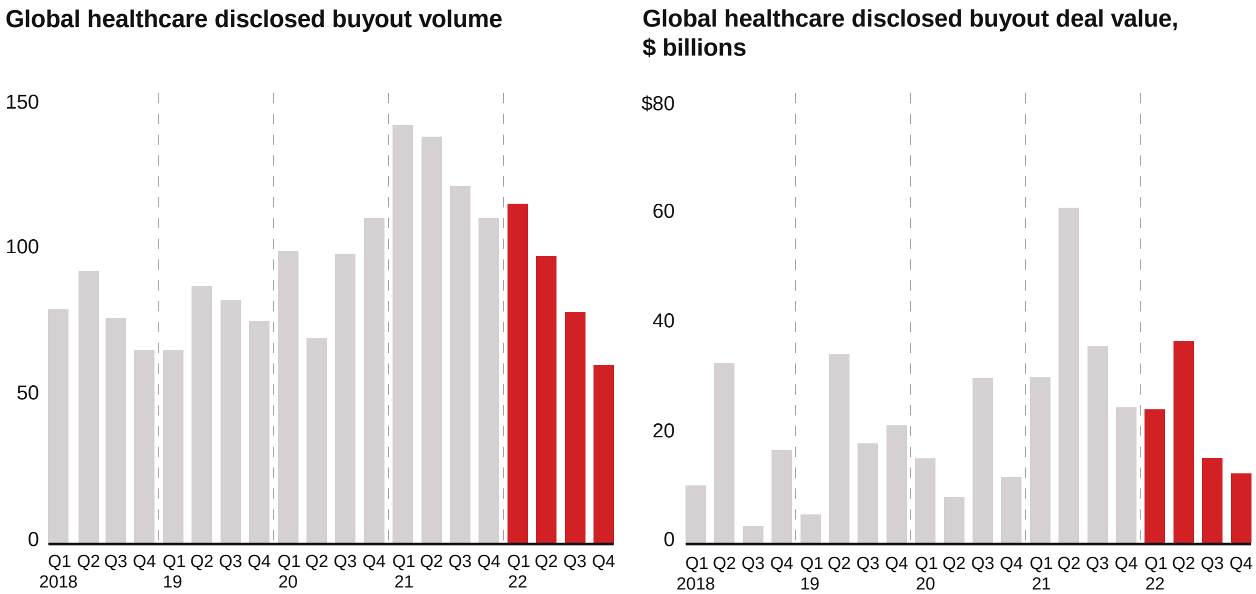
Deal flow in the first quarter of 2022 maintained the record-setting pace of 2021, and a strong first-quarter pipeline led to a strong second quarter for total disclosed value. That said, geopolitical uncertainty due to the Russian invasion of Ukraine in concert with global inflationary pressures changed the trajectory for the year. Global HCPE deal volume fell in each successive quarter of 2022 and reached its lowest quarterly level since the fourth quarter of 2017. Funds that had been slammed with deal flow in 2021 felt a marked slowdown from prior quarters *(see Figure 2)*.

Even with the global uncertainty that began early in the year, there were still some impressive exits, with more than 40 exits valued above $500 million for 2022. The year ended up with many strong showings for HCPE exits despite the slowdown from the record pace set in 2021. This demonstrates that investors are still willing to lean into compelling macro themes with strong platform assets. Notable exits include the following:

- Warburg Pincus exited its investment in primary, specialty, and urgent care provider Summit Health-CityMD through an $8.9 billion sale to VillageMD with support from Walgreens Boots Alliance (WBA) and an affiliate of Evernorth, a subsidiary of Cigna Corporation.

- Nordic Capital exited its investment in British specialty diagnostics firm The Binding Site in a deal with Thermo Fisher Scientific, valued at around $2.6 billion.

Figure 2: Buyout volume and deal value for the most part fell steadily in 2022



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Sources: Dealogic; AVCJ; Bain analysis

Narrowing focus: Activity shifted to more resilient investments

Beginning in the second quarter, funds started to become more selective, seeking pockets of opportunity in choice sectors, subsectors, and geographies. Funds looked for businesses resilient to a potential inflation-driven downturn or ways to take advantage of falling public valuations. Ultimately, large deal activity slowed down by the third quarter: Eight of the top 10 deals in 2022 occurred in the first half *(see Figure 3)*.

From a healthcare subsector perspective, life sciences continued to attract interest from buyout funds, and we have seen a shift in activity toward healthcare information technology (HCIT). Investors see long-term HCIT opportunity around redefining care delivery and accelerating clinical breakthroughs, and in 2022, there was particular interest in buyouts for businesses that will help optimize operations, especially given the possibility of a recession.

Seven of the top 10 deals were in biopharma, life sciences tools, and related services, demonstrating that PE funds found ways to mitigate the binary pipeline risk of biopharma assets, often by investing in organizations that provide products or services to a broad set of industry participants.

Figure 3: Eight of the 10 biggest buyouts in 2022 occurred in the first half

Target	Target region	Acquirers	Description	Deal type	Deal value, $ billions	Quarter
Advarra	North America	Blackstone; CPP Investments	Biopharma and related services	Sponsor-to-sponsor	$5.0	Q2
Covetrus	North America	CD&R; TPG	Provider (HCIT)	Public-to-private	4.0	Q2
IVIRMA Global	Europe	KKR	Provider—fertility platform	Private-to-sponsor	3.2	Q2
Evident *Olympus carve-out*	Asia-Pacific	Bain Capital	Life sciences tools and related services	Carve-out	3.1	Q3
Envirotainer	Europe	EQT; Mubadala	Biopharma and related services	Sponsor-to-sponsor	3.0	Q2
Gentiva Certified Healthcare *Kindred at Home carve-out*	North America	CD&R	Provider—hospice care	Carve-out	2.8	Q2
Corden Pharma	Europe	Astorg Partners	Biopharma CDMO	Private-to-sponsor	2.6	Q2
Pharma Intelligence *Informa carve-out*	Europe	Warburg Pincus; Mubadala	Biopharma and related services	Carve-out	2.6	Q1
PerkinElmer's Applied, Food, and Enterprise Services businesses *life sciences divestiture*	North America	New Mountain Capital	Life sciences tools	Carve-out	2.5	Q3
Kedrion	Europe	Permira; ADIA; Ampersand; Marcucci Family	Biopharma and related services	Sponsor-to-sponsor	2.5	Q1
Global top 10 healthcare buyout deal value 2022					$31B	
Global total healthcare buyout deal value 2022					$89B	
Top 10 as percentage of total					35%	

Notes: HCIT is healthcare IT; CDMO is contract development and manufacturing organization
Sources: Dealogic; AVCJ; Bain analysis

From a geographical perspective, activity slowed overall, but the Asia-Pacific region saw a strong interest in large deals, with six deals valued over $1 billion—five of them transacted in the second half of the year—reflecting the growing maturity of the market. Deals valued at more than $1 billion in Asia-Pacific in 2022 included Evident, CitiusTech, and iNova Pharmaceuticals.

Healthcare technology and technology-enabled businesses continued to be a very active sector, with investment themes focused on honing clinical, operational, and financial workflows as well as data plays across stakeholders.

- **Workflow management:** On payer workflow, TPG closed a $2.2 billion deal for Change Healthcare's claims-editing business, ClaimsXten. Bain Capital acquired LeanTaaS, which provides software solutions for optimizing operations and capacity management.

- **Remote/home care:** General Atlantic and CVS led a $300 million Series D investment in Biofourmis, a virtual care and digital medicine-focused HCIT company.

- **Revenue cycle:** Veritas Capital merged two revenue-cycle management (RCM) companies—Coronis Health and MiraMed Global Services—to create a multispecialty RCM platform.

- **Clinical data:** THL acquired a majority stake in Intelligent Medical Objects, an HCIT data enablement company that brings quality clinical data to a range of use cases to inform better patient care, including clinical documentation and population health management.

- **Life sciences data:** Norstella—which is backed by Hg Capital, Welsh, Carson, Anderson & Stowe, and Warburg Pincus—added Citeline (formerly Pharma Intelligence) to its pharmaceutical technology platform via merger. At deal close, the $5 billion company is one of the largest pharma intelligence solution providers, spanning five brands that make up Norstella: Evaluate, MMIT, Panalgo, The Dedham Group, and now Citeline.

Available credit has come at much higher interest rates than the past few years, which led funds to take different approaches to financing to get deals done.

Abrupt changes in central bank monetary policy to fight inflation in North America and Europe led to a tight credit market that limited large-check financing. Anecdotally, funds suggested that traditional credit financing above $1 billion was largely unavailable in the second half of 2022, which may delay potential megadeal activity into 2023 or beyond. Available credit has come at much higher interest rates than the past few years, which led funds to take different approaches to financing to get deals done.

- **All-equity deals:** Funds have signaled an interest in pursuing all-equity buyouts that they may recapitalize when the public credit market improves.

- **Club deals:** We are seeing a continuation of club deals. In 2021, funds pooled together on large assets like Medline and Athena, and in 2022 the motivation shifted to solve for funding availability. For example, GHO Capital Partners and Vistria Group joined hands to acquire Alcami, a biopharma contract development and manufacturing organization (CDMO).

- **Private credit:** Firms like Owl Rock Capital, Ares Management, and BlackRock were willing to step in and provide large-debt financing via private debt, with Owl Rock suggesting they had the most requests for checks over $1 billion in their history. Carlyle Group is in talks to acquire Cotiviti for $15 billion, and financing reportedly includes a $5.5 billion private loan.

As credit availability tightened, the average buyout deal size fell globally in the second half of 2022, most severely in Europe. Private equity sponsors are also shifting focus to mergers and acquisitions within their existing portfolios, for example, through healthcare IT tuck-ins and physician practice management roll-ups, especially in emerging specialties and midcap biopharma platform building.

Range of outcomes for 2023

There is likely to be a range of potential outcomes for healthcare private equity in 2023. See our "Healthcare Private Equity Outlook: 2023 and Beyond" for a discussion of potential scenarios and open questions facing the HCPE market in 2023.

Some signals continue to point to a global economic slowdown in 2023. In this scenario, funds may consider updating their downturn playbook based on the section "Healthcare Private Equity in a Downturn." On the flip side, in the face of uncertainty in 2023, funds that lean into new sectors may be rewarded. "Life Sciences: White-Hot Competition to Win the Right Deals" offers a view on the challenges involved with investing in biopharma and life sciences tools and highlights success stories from those subsectors.

Hot Topics

Hot Topics

Healthcare Private Equity in a Downturn

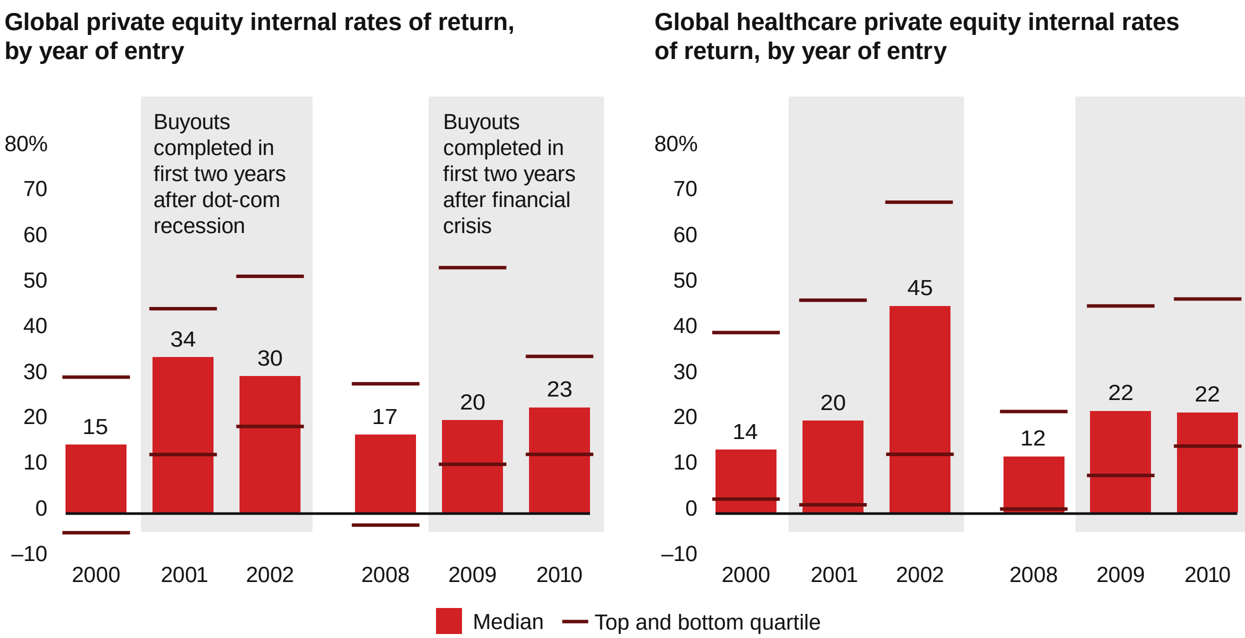
Winning investors will fine-tune their playbook to target recession-resilient themes.

At a Glance

- **Remaining confident:** Healthcare private equity has proved more resilient than overall PE activity in prior recessions, with a track record of quick rebounds and compelling returns coming out of the downturn.
- **Navigating current macro challenges:** However, the macro environment today is distinct from prior recessions, with inflationary and credit pressures shaping healthcare private equity as we head into 2023. While the effects of these dynamics are felt across the sector, the impact is most acutely felt in the provider space.
- **Winning in a downturn:** If recessionary trends continue, PE funds have an opportunity to tailor their strategies to meet current challenges by targeting downturn-resilient investment themes, being more creative in their deal strategies to make transactions happen in a credit-constrained environment, and updating value creation playbooks to respond to near-term headwinds against revenue expansion.

In prior downturns, healthcare private equity (HCPE) remained an attractive area for investment relative to private equity overall. After the 2000–01 downturn driven by the dot-com bubble, returns for healthcare deals that closed in the next two years averaged more than 30% *(see Figure 1)*. Similarly, coming out of the global financial crisis in 2008–09, healthcare deals rebounded quickly; healthcare deals completed in 2009–10 had higher median returns than deals that closed the year heading into the

Figure 1: Healthcare buyout returns have shown resilience in the face of recent recessions



Source: DealEdge

financial crisis. This trend holds true for private equity broadly, but for healthcare private equity the returns were particularly attractive: For HCPE transactions in the first two years coming out of a recession, the top quartile earned internal rates of return of roughly 40% or greater.

Current macro challenges: Inflation and interest rates make this downturn different

While we remain confident in healthcare private equity's relative attractiveness in a downturn, no two cycles are the same. If current trends continue, this downturn will have different implications for PE activity writ large and healthcare private equity specifically. Unlike the recessions in 2000-01 and 2008-09, current macro challenges are fueled by geopolitical uncertainty from Russia's ongoing invasion of Ukraine and resulting energy supply insecurity, inflation at levels not seen in decades, and rising interest rates restricting credit access. Additionally, the recent stream of high-profile bank failures creates a host of other uncertainties for HCPE investors and their portfolio companies.

Wage inflation has varied by geography but rose to elevated levels in 2022 (roughly 5% in the US and around 4% in the European Union). Healthcare wage inflation is driven by two factors: General goods inflation drives demand for higher compensation, and healthcare-specific labor shortages exacerbate the general trend. Provider businesses are markedly exposed to labor cost increases as workforce salaries and wages represent roughly 50% of operating expenses for hospitals; this can be even higher in more labor-intensive provider businesses such as home care, personal care services, and hospice. While costs are up, reimbursement is only modestly higher as rates are negotiated on a multiyear basis with payers or adjusted annually by governments.

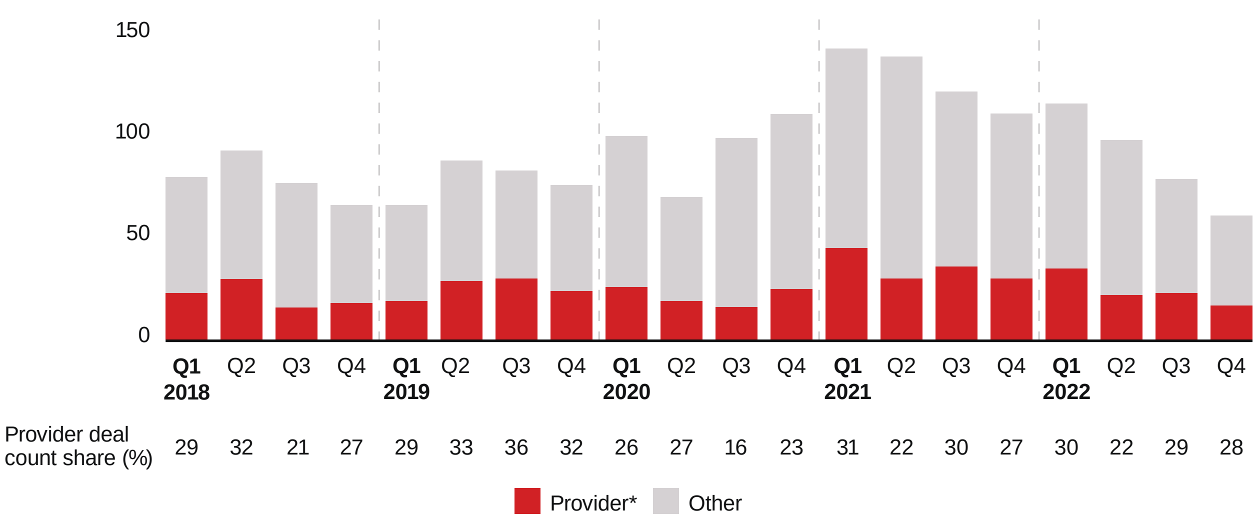
If these dynamics result in depressed 2022 EBITDA values for provider businesses, sponsors may look to hold their provider businesses through the downturn, reducing potential provider deal volumes further into 2023. Provider-based businesses (excluding related services and healthcare IT) typically represent around 20%–30% of HCPE buyout transactions. While we have not seen a disproportionate decline in provider activity on an annual basis, provider deals dropped nearly 50% from Q3 to Q4, and may continue to impact HCPE deal volumes in 2023.

In parallel to the challenges presented by labor inflation, changes in central banks' policies to temper price pressures in Europe and North America have restricted financing availability and driven up interest rates. Deal activity in the second half of 2022 reflects signs of these financing constraints, with fewer overall deals done compared with the first half of 2022 *(see Figure 2)*.

Financing constraints are affecting two areas in particular—later-stage growth assets and small and midcap (SMID-cap) biopharma assets. Later-stage growth equity assets have seen multiples decline

Figure 2: Despite inflationary and labor pressures, provider deal count held steady

Global healthcare buyout deal count



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Sources: Dealogic; AVCJ; Bain analysis

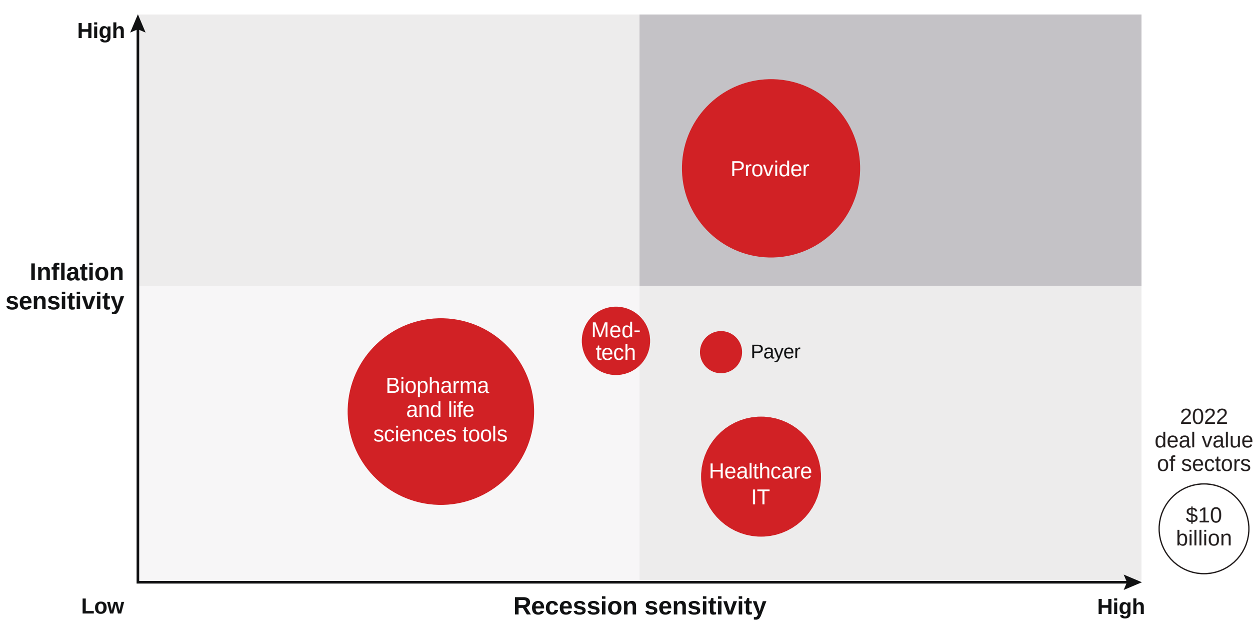
due to changes in the macro environment and far fewer deals announced. Some late-stage companies will be able to avoid fund-raising at a down round given strength in business and financial runway, but others will need to come back to the market to raise funds to survive. The focus of SMID-cap biopharma assets on earlier-stage drug development inherently creates a higher risk profile, making financing less available and more expensive for such deals. We expect the headwinds for SMID-cap biopharma to carry over to the service providers that focus on SMID-cap biopharma and early-stage drug development.

Winning in a downturn: Investing in recession-resilient themes

While the current macro context creates inherent challenges for investors, it also creates compelling pockets of opportunity. Sponsors are seeking out investment themes that play both to long-term trends and are poised to be resilient in a recession. Similarly, constraints on capital and inflationary pressures are causing PE sponsors to be more creative in how they get deals done.

Recessionary and inflationary pressures will have different consequences across healthcare subsectors. At a high level, we expect provider businesses to be hit harder by a recession and inflation, while biopharma and life sciences tools businesses are likely to be more insulated *(see Figure 3)*.

Figure 3: Inflation and recessionary concerns are affecting healthcare subsectors to varying degrees



Sources: Bain Global Healthcare Private Equity and M&A Report 2022; Bain 2022 Healthcare Provider IT Report

Within each subsector, however, assets face varying levels of exposure to the current macro challenges, including staffing shortages, rising labor costs, supply-chain constraints, and depressed consumer demand. Assets whose business models or broader end-market trends provide insulation from a downturn are well positioned as near-term investment opportunities; their fundamentals also position them to be attractive bets coming out of a recession.

- **Payer/provider**
  - **Nondiscretionary provider specialties with high private pay exposure:** Specialties with favorable payer mixes (such as more cash pay or private pay), attractive consumer demographics, and more limited reliance on patient financing are likely to be more insulated and better positioned to maintain margins. Specialties like veterinary, dental, radiology, oral surgery, and vision have historically been less affected in a downturn, making them interesting investment opportunities this go-round as well. Recent examples include AEA Investors and ADIA's acquisition of AmeriVet and TSG and Leon Capital Group's Specialty Dental Brands deal. That said, some subsectors that are more discretionary in nature, such as dermatology and medical aesthetics, may be hit harder.
  - **Next-generation office-based specialties:** Subsectors like cardiology and orthopedics that are riding site of care shift and value-based care penetration tailwinds are likely to remain attractive. This trend can be seen through the continued expansion of Webster Equity Partners' Cardiovascular Associates of America (CVAUSA) cardiology platform and Welsh, Carson, Anderson & Stowe's United Musculoskeletal Partners (UMP) orthopedics platform.
  - **Medicaid services:** Medicaid enrollment tends to increase in downturns due to a rise in unemployment; outsourced service providers are also positioned to help state agencies effectively manage their costs and spending. For example, Carlyle expanded on this theme by merging Kepro with CNSI. Investors considering plays in Medicaid services should take note of the impact of potential enrollment redetermination in 2023.
- **Healthcare IT**
  - **Operational efficiency:** Healthcare IT (HCIT) businesses that allow companies—whether provider groups or biopharma assets—to "do more with less" will likely be attractive as companies look to manage their labor costs and turn to tech as a tool to drive higher EBITDA. Bain Capital's LeanTaaS provides software solutions for optimizing operations and capacity management. Berkshire Partners' and Warburg Pincus's coinvestment in Ensemble Health Partners supports revenue cycle management through a combination of services and technology. In late 2021, WCAS brought together EnableComp and Argos Health, a revenue cycle platform specializing in the management and resolution of complex claims.

  - **Sticky revenue:** While new customer adoption typically slows during a downturn, mission-critical HCIT businesses with recurring revenue models tend to have sticky customer relationships and better visibility into financial outlook. LeanTaaS and Intelligent Medical Objects are both built on software-as-a-service-based models that should benefit from stable rates and a sticky user base.

- **Biopharma and life sciences tools**

  - **Contract services:** Three types of contracted biopharma assets are likely to prove more resilient in a recession: first, assets that focus on research and early development, such as clinical research organizations (CROs) and specialized contact development and manufacturing organizations (CDMOs); second, assets that focus on commercial-scale manufacturing, ideally for large pharma sponsors; and third, assets that focus on late-stage development work on drugs that are expected to enjoy clear clinical differentiation. For assets that fit one of those descriptions, their customers' revenue stream and ability to invest in new services and technologies are likely to be more protected than assets that serve late-stage biotechs focused on a single development program that has failed to attract a large pharma partner. Bridgepoint's investment in CDMO Novasep (via their PharmaZell portfolio company) highlights CDMOs' attractiveness. In a downturn, late-stage biotechs may cut their spending as debt financing dries up and issuing equity becomes unfavorable. Assets that serve those types of customers may face a harsher environment in 2023.

  - **Commercialization services:** Given their focus on later-stage drugs (and thus larger pharma sponsors) and the continued challenges of bringing new drugs to market, commercialization-services providers are expected to remain attractive. Astorg's acquisition of OPEN Health speaks to this type of asset.

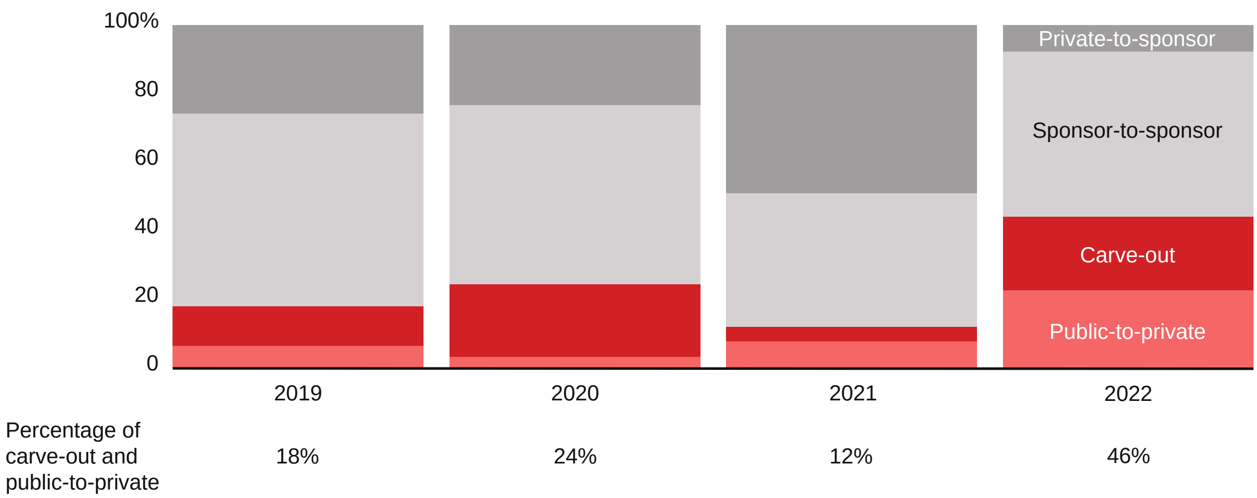
  - **Life sciences tools:** Life sciences tools companies with a "razor and blade" approach to products or subscription model for services may prove particularly recession resilient as they have a sticky user base with reasonable price elasticity. New Mountain Capital's acquisition of the three life sciences tools divisions from PerkinElmer, including OneSource, speaks to this type of asset. OneSource's equipment servicing business may prove sticky with customers even in a downturn as biotechs try to optimize performance with existing equipment vs. investing in new tools.

Downturn dealmaking: Applying creative deal strategies

Relative to prior years, 2022 has already seen a mix shift in deal types as sponsors look to get deals done within the current macro constraints. For example, in North America, public-to-private deals have made a much larger contribution to total deal value than in the past three years *(see Figure 4)*.

Figure 4: Public-to-private and carve-out deals accounted for about 45% of buyout value in North America

Percentage of North America disclosed buyout value



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Sources: Dealogic; AVCJ; Bain analysis

If tight credit continues into 2023, this may limit both the number of deals that come to market through traditional processes and the ability of sponsors to finance deals. In parallel, macro uncertainty may create concerns about near-term profitability negatively impacting deal quality.

To get deals done, funds may need to continue to broaden the aperture on their deal strategy. For example:

- **Public-to-private:** Off-peak public market valuations present opportunities for take-private deals. As public markets fluctuate in response to uncertainty, many companies may be unable to realize the valuations that characterized 2021 IPOs, creating opportunities to take companies private at favorable multiples. In May, Clayton, Dubilier & Rice and TPG announced plans to acquire Covetrus, a global leader in animal-health technology and services at an enterprise valuation of approximately $4 billion. Patient Square Capital took Hanger private in October in a deal valuing the company at over $1.25 billion.

- **Carve-outs and spin-offs:** We anticipate more carve-outs as companies refocus in a downturn and unlock cash for strategic priorities within their core. Scale deals that speak to this trend include Gentiva Certified Healthcare d/b/a Kindred at Home's carve-out from Humana by Clayton, Dubilier & Rice. Looking ahead to 2023, companies including Medtronic, Baxter International, 3M, and Johnson & Johnson have already announced plans to divest parts of their portfolios and/or create standalone healthcare-focused companies; and we expect other corporates may follow suit, creating potential opportunities for PE funds.

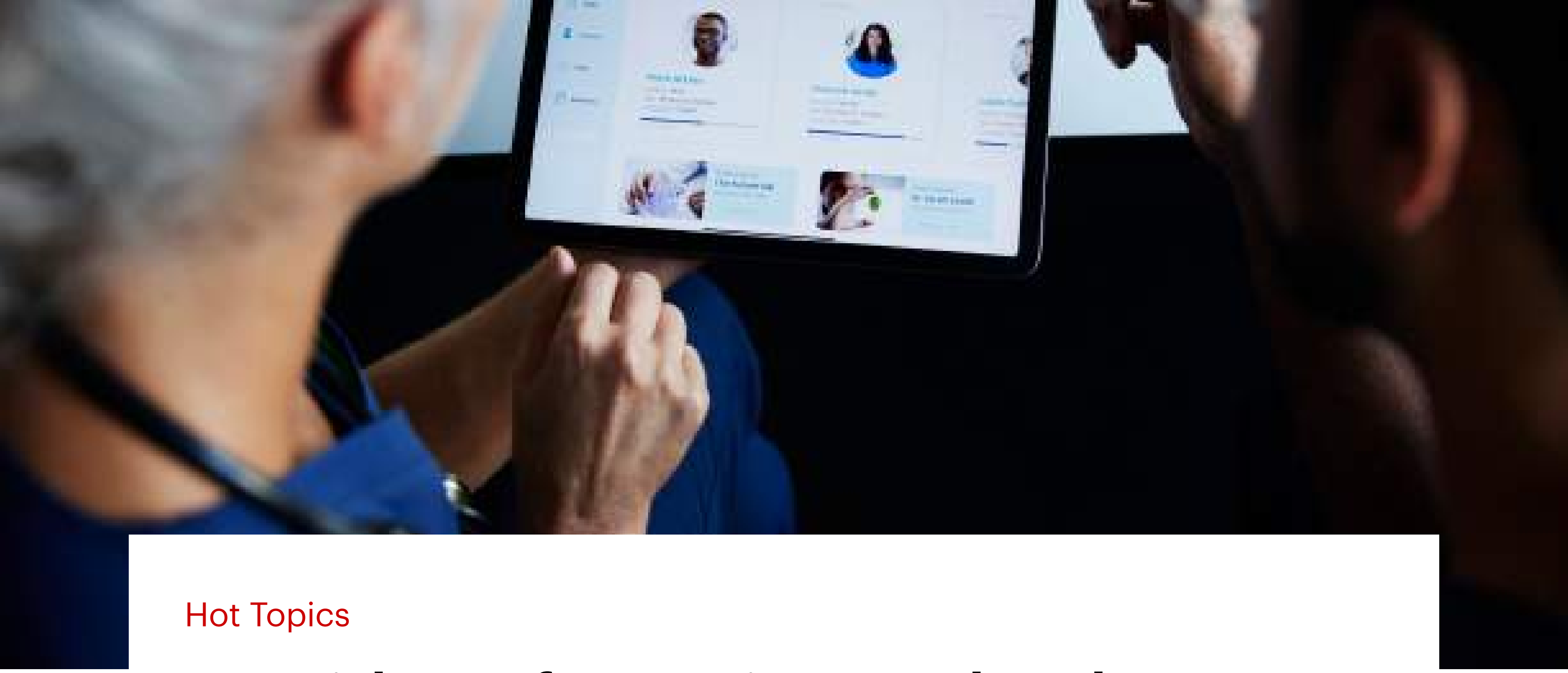
- **Minority recapitalizations:** This approach creates opportunities for both buyers and sellers in a capital-constrained world. For buyers, minority investments mean buyers can sidestep having to refinance existing leverage and can benefit from existing lenders' familiarity with the business. For sellers, partial exits offer PE funds a mechanism to drive returns for their existing limited partners while continuing to hold a stake in the asset to capitalize on future growth potential.

- **Opportunistic investing:** The downturn may create more opportunities to compete within distressed assets—for example, among SMID-cap biopharma companies, provider businesses that are differentially hit hard by macro trends, or assets affected by changes in regulation (for example, the No Surprises Act). Sponsors can be thoughtful in how they structure deal terms to bound the downside risk and/or prioritize assets where they have conviction in the assets' underlying strengths or longer-term secular tailwinds, with the hopes of generating a higher return at exit.

- **Platform buy and build:** While tuck-ins for existing platforms are tried-and-true value creation strategies, they may become differentially actionable in a recession. The smaller size of these deals makes them easier to fund in tight credit markets (through free-cash flow or by leveraging relationships with existing lenders who know the core business). Similarly, in the provider space, independent practices may be more interested to sell to the right PE partner to help them navigate the effects of a contraction on their business. Several scale PE platforms with potential for continued rollups traded, such as IVIRMA to KKR in fertility. In the gastroenterology space, GI Alliance announced a physician-led buyout facilitated by a $785 million noncontrol investment from Apollo Hybrid Value funds to support continued acquisition growth.

If investors are able to place the right bets, they stand to benefit from the strong returns seen by top-quartile HCPE deals in prior downturns.

2023 is likely to present new challenges for private equity investors—both in healthcare and beyond. Healthcare private equity's resiliency in prior cycles and underlying market tailwinds suggest this sector should remain well positioned in a downturn once again. However, investors will need to fine-tune their investment theses and develop new playbooks to win good deals in this environment. If investors are able to place the right bets, they stand to benefit from the strong returns seen by top-quartile HCPE deals in prior downturns.



Hot Topics

Provider Information Technology: Mind the Gap

Healthcare providers have historically underspent on information technology, but macroeconomic and secular trends are spurring investment in key areas.

At a Glance

- Healthcare providers are underinvested in IT, which presents an opportunity for healthcare technology companies and their investors.
- Amid growing vendor proliferation, private equity investors can build IT platforms that address a broad set of customer segments or a broad set of functional needs. But funds need to be selective about the initial asset they use as their foundation.
- While most activity in healthcare IT is provider focused, the lines between the payer IT and provider IT end markets are blurring.
- Investors should define value creation plans that appeal to customers and future investors.

As an industry, healthcare makes up nearly 20% of US GDP and only 6% of technology spending. This suggests that healthcare has historically underspent on technology and demonstrates upside for future technology spending. As highlighted in Bain and KLAS's *2022 Healthcare Provider IT Report*, a recent survey of providers shows that they are prioritizing their software budgets in five key areas: revenue cycle management (RCM), patient intake/flow, clinical systems/electronic health records (EHR), telehealth, and cybersecurity.

Macroeconomic and secular trends seem top of mind for providers. More than 50% of survey respondents cited labor shortages or inflation concerns as the top catalysts spurring new IT spending. Three of the five key areas for IT spending are tied to themes of optimizing resources and improving financial outcomes. Providers are also seeking software-based solutions to respond to the secular trends of value-based care and healthcare consumerism. Additionally, as providers add more nodes to their IT systems, they seem to be looking to cybersecurity solutions to protect their patients' information.

Several private equity investments over the past few years illustrate ways to participate in the five key areas where healthcare providers are prioritizing IT spending.

- **Revenue cycle management:** Given the financial pressures facing providers, half of providers cite investments in RCM as a top priority for 2023. The largest provider IT deal in 2022 was in RCM, with Berkshire Partners and Warburg Pincus investing $2.3 billion in Ensemble Health Partners, providing a partial exit for Golden Gate Capital. We also saw Veritas Capital merge Coronis Health and MiraMed to create a multispecialty RCM platform.

- **Patient intake/flow:** Providers continue to invest in solutions that enable seamless capacity management and boost productivity. THL and Premier, a leading healthcare improvement company, completed a $50 million growth round in Qventus, a patient flow automation platform. Bain Capital invested in LeanTaaS, a cloud solution optimizing hospital operations and capacity management, also highlighting the focus on patient intake/flow in a post-Covid world.

- **Clinical systems:** Electronic health record systems house critical patient data and integrations, and providers are continuing to look to optimize their EHRs. Marquee deals such as Oracle's $28 billion acquisition of Cerner and Hellman & Friedman and Bain Capital's $17 billion acquisition of Athenahealth closed in 2022, signaling investor confidence in the potential to turbocharge these assets.

- **Telehealth:** Telehealth enables better provider engagement with one another and with patients, and has become integral to care delivery. Patient Square Capital took SOC Telemed, the largest national provider of clinician-to-clinician acute care telemedicine, private in a deal worth over $300 million. Equip Health, a telemedicine company focused on eating disorder treatment, raised a Series B round; investors included Tiger Global and General Catalyst.

- **Cybersecurity:** Healthcare data breaches rose 17% annually from 2016 to 2021 with medical organizations the most common victims of third-party attacks. In 2021, Boston Children's Hospital was the target of an attack that was thwarted by the FBI. The past year saw a number of platform build plays: Abry-backed CloudWave's acquisition of Sensato, and Warburg-backed Claroty's acquisition of Medigate.

While quarterly buyout volume for provider IT assets had its weakest quarter since 2017 in the fourth quarter of 2022, the four deals announced during the quarter comprised assets in EHR (OneTouch Health), telemedicine (Werksarztzentrum Deutschland), procurement (Inprova), and enterprise resource planning (ERP)/financial controls solutions (UHB Consulting). Private equity can invest behind the broader theme of helping providers do more with less (see the chapter "Healthcare IT:

Two Very Different Half Years") but will need the right strategy to succeed, especially as the provider IT sector matures relative to other areas in healthcare IT. Furthermore, while most activity in healthcare IT is provider focused, payer IT is converging with provider IT as the line blurs between the end markets they serve.

Around 70% of providers plan to look to their existing vendors for IT needs before considering offerings from new vendors, according to the Bain and KLAS survey.

Amid growing vendor proliferation, PE investors can build IT platforms that address a broad set of provider segments or functional needs

The Bain and KLAS survey found that vendor proliferation and expanding tech stacks are driving changes in how providers plan to make software investments in 2023. Around 70% of providers plan to look to their existing vendors for IT needs before considering offerings from new vendors.

One implication for private equity investors is to consider platform plays that address either (1) a broader set of provider segments or (2) a broader set of functional needs. The first strategy expands the addressable market and will likely make the platform more appealing to providers that operate across several segments (such as health systems). The second strategy will make the platform more appealing to providers who are looking to enhance a range of complex processes. These two platform construction strategies can be accomplished through organic actions, but are generally accomplished via M&A.

Expand end-market coverage: Private equity investors can help unlock additional growth for their portfolio companies by backing expansion to new specialties/end markets, thereby growing total addressable market, including share of wallet and new logo opportunity. Investors should look to acquire assets with strong functional capabilities and develop a value creation plan focused on extending these core capabilities to different customer segments. M&A can serve as a key accelerant, bringing with it team members who understand these end markets and reference customers with whom to build.

Avista-backed XIFIN, historically a lab-focused RCM provider, showcases this strategy in acquiring OmniSYS and Computerized Management Services in 2021 to enter into the pharmacy and radiology segments, respectively. In pursuing end market expansion, investors should ensure that the new markets they enter are cohesive with the overall strategy of their platforms.

Expand solution set to grow: Investors can help providers reduce operational complexity and tech stack interoperability issues by solving a broader range of functional needs. Private equity investors can help their portfolio companies expand their solution suites to serve their end markets more comprehensively.

In 2022, a couple of deals demonstrated this strategy. Francisco Partners-backed Kyruus, a patient intake/access company that started as a provider directory but has grown in its offerings, acquired patient engagement company Epion. In RCM, Clearlake Capital-backed FinThrive added to its front-end RCM capabilities through its acquisition of PELITAS, which offers patient access/intake solutions.

Some funds may choose to pursue building an IT platform that offers broad functionality to a diverse set of end markets. Few companies have the benefit of being broad both in *whom* they serve and *what* they offer.

Funds attempting to expand their end markets and solution set should be selective about the initial asset they use as their foundation

Some funds may choose to pursue building an IT platform that offers broad functionality to a diverse set of end markets. Few companies have the benefit of being broad both in *whom* they serve and *what* they offer. It is possible, but it is easier to do when starting from (1) a system of record such as an EHR or ERP or (2) a workflow comprised of interconnected point solutions, such as RCM.

System of record: Private equity investors can take a well-established EHR and use M&A to expand capabilities and broaden market reach. Consider TPG and Leonard Green-backed WellSky. TPG agreed to acquire Mediware in 2016 and transformed it into WellSky in 2018 with the ambition to offer broad solutions across the continuum of care. WellSky expanded end markets into private duty and home health, via its Kinnser Software (2017) and ClearCare (2019) acquisitions. WellSky also expanded its solutions set, adding capabilities in care coordination and patient engagement via its CarePort Health (2020), Healthify (2021), and TapCloud (2022) acquisitions.

Workflow comprised of interconnected point solutions: Investors could look to workflows or processes that encompass a wide range of interconnected point solutions such as RCM, which has a host of front-, middle-, and back-end modules. The Waystar platform brought together one entity that was stronger in the hospital market and another in the ambulatory market, via the Navicure and ZirMed merger (2018). This strategy appealed to EQT and CPPIB, which acquired a majority stake in

Waystar from Bain Capital (which retained a minority stake) for $2.7 billion in 2019. Since then, Waystar further expanded its end market and solution set via its $1.3 billion acquisition of eSolutions (2020), a Medicare-focused RCM provider, and its $450 million acquisition of Patientco (2021), a patient billing and engagement platform. Waystar redefined itself as a company focused on simplifying and unifying payments across the revenue cycle.

Provider IT investors should define value creation plans that will increase appeal to customers and future investors

Provider IT investors that deliver on customer needs will enable growth and provide strong exit opportunities for their assets. This applies for assets of all sizes:

- **Point solutions with a narrow market focus:** These assets typically serve emerging customer needs. Value creation plans tend to focus on developing technology so compelling that providers are willing to adopt a solution from a new vendor. Assets in this size range are well positioned for sponsor-to-sponsor exits or platforms pursuing M&A if there is growth headroom in the current market. In 2022, venture capital-backed OnCall Health, a behavioral health telemedicine company, was acquired by Warburg-backed Qualifacts, a suite solution provider to behavioral health companies.

- **Subscale provider IT platforms serving several markets:** As discussed above, there are several ways to continue to broaden either market focus or product functionality to appeal to more providers and improve exit opportunities. These assets are attractive to sponsors, strategics, and public exits in the right market conditions.

- **Large-scale IT platforms with broad reach:** After a certain size, large platforms may become less likely to trade sponsor-to-sponsor and instead become well positioned for a public or strategic exit. Strategic exit opportunities extend beyond healthcare companies, as disrupters like Amazon and Microsoft have demonstrated meaningful interest in scale healthcare assets.

Regardless of the value creation strategy, provider IT assets with compelling customer value propositions will be attractive to future investors. Beyond M&A to build a platform, acquiring new customers, cross-selling products, and defining an efficient operating model will be key to value creation. As payers and providers continue to converge, this focus on defining a clear value creation plan will remain critical.

Hot Topics

Corporate M&A: Pressing “Pause”

Corporations took a hiatus from healthcare mergers and acquisitions, but excess cash and the need to buy growth should lead to a rebound in activity.

At a Glance

- Corporate healthcare deal activity fell in 2022 as companies pressed “pause” on mergers and acquisitions in the face of uncertainty in the debt and equity markets.
- Deal value increased for the provider sector, but pharma, payer, and medtech all saw total deal value fall.
- Given the cash on hand for many strategics, the allure of buying growth, and the looming patent cliff in biopharma, strong corporate deal activity is likely to recover relatively soon, particularly in pharma and medtech.
- Looking ahead, cross-sector competition for certain types of assets, ongoing portfolio management by corporate players, and increased regulatory scrutiny will impact private equity deal activity.

Corporate healthcare mergers and acquisitions (M&A) deal volume dropped in 2022 and average deal size fell, resulting in lower total deal value than in 2021. This state was not unique to healthcare, as corporations across industries took a wait-and-see approach to M&A given uncertainties in the debt and equity markets.

Nevertheless, the fundamentals of healthcare M&A remain strong, and 2022 featured multiple highlights. The provider sector showed resilience, with activity partially attributable to the availability of smaller assets allowing for multiple deal theses relative to other healthcare sectors. Additionally, two megadeals in the life sciences sector may point to more robust deal activity to come: Johnson & Johnson's nearly $17 billion acquisition of Abiomed in November and Amgen's $28 billion acquisition of Horizon in December.

For more details on sector trends, see the chapter "M&A in Healthcare and Life Sciences: Why the Industry's Wait-and-See Days Will End" from our *M&A Report 2023*.

Globally, the top 15 drugs coming off patent by 2030 generated more than $100 billion in sales in 2020.

Given the large amount of cash on hand and the growth M&A can provide, we think strong corporate deal activity will return relatively soon. This is particularly true for pharma, where there is the looming issue of patent expiry. Globally, the top 15 drugs coming off patent by 2030 generated more than $100 billion in sales in 2020. Additionally, cash balances are high, with the top 25 pharma, medtech, and payer companies all having at least 15% of their past 12 months' revenues on hand in the form of cash.

Several factors related to corporate M&A activity will impact the healthcare private equity buyout landscape.

Cross-sector competition

The past decade has seen a growing field of interest in payer and provider assets. This trend is continuing and perhaps accelerating as the line between retail, wellness, and healthcare continues to blur. Financial sponsors, large corporate healthcare businesses, and newer strategic disrupters may find themselves competing head-to-head for market-leading assets at the vanguard of healthcare.

Take Signify Health, for example. Before CVS announced the $8 billion acquisition in September, *Bloomberg* reported that Amazon, UnitedHealth Group, and Madison Dearborn-backed Option Care Health were all considering offers.

Given increased competition, private equity sponsors may want to carefully consider deals as the valuations applied by strategic competitors to deals could be difficult to match. Many deals that are considered large for private equity funds are small by corporate acquisition standards, and corporate bidders often have creative deal theses that layer synergies or long-term disruptive aspirations into their valuations.

Portfolio realignment

In 2022, several major healthcare companies reconsidered their portfolios as they focused on their core offering. This included both carve-outs that are directly addressable to private equity investors and spin-offs, which come with a different set of variables.

Some carve-outs came from healthcare-focused companies that had standalone assets that participated in markets outside their core strategic initiatives. Centene announced last year that it planned to exit the pharmacy benefits management and pharmacy space as part of its ongoing strategic review of its business. As a part of that review, Centene carved out specialty pharmacy PANTHERx, which was acquired by Nautic Partners, Vistria Group, and General Atlantic for $1.4 billion. In other cases, companies with broad technology platforms, including IBM and Informa, carved out healthcare-specific assets. Portfolio realignment is likely to continue to present opportunities for private equity carve-outs.

Meanwhile, the medtech sector saw a particularly busy year for spin-off and disposal announcements: 3M, GE, Johnson & Johnson, and Medtronic all signaled plans to realign or exit their medtech divisions—or parts of their medtech divisions—in 2023, with GE completing a spin-off of its health-care business in early January of 2023. Some of the newly created spin-offs may be small enough for a take-private play, and coverage from *Bloomberg* suggests private equity funds are already evaluating the two companies Medtronic plans to spin off. Depending on the state of the new offerings' finances, certain funds may have a more tailored value-creation plan to optimize profitability.

Portfolio realignment may also present exit opportunities as newly independent medtech companies look to M&A to drive their growth. Centene, UHG, CVS Health, and Johnson & Johnson have all been acquisitive of companies closer to their strategic initiatives even while they spin off and divest noncore assets.

Regulatory scrutiny

Deal approval is far from guaranteed, even for scope deals. Regulators are increasingly willing to pursue litigation to block deals. One example was the Department of Justice's challenge of UHG's acquisition of Change Healthcare on the grounds that the deal would harm competition in commercial health markets. While UHG prevailed, the lawsuit delayed the acquisition for close to a year and the deal was contingent on the divestiture of Change's ClaimsXten business.

Uncertainty over regulatory action may make corporate buyers think twice about scale asset acquisitions. Furthermore, assets considering bids from both corporate acquirers and private equity sponsors may prefer private equity when there is more surety the transaction will be approved.

Asset prices

Even as publicly listed asset prices receded in 2022, healthcare company prices remained relatively high in most sectors. The S&P 500 healthcare index was down around 4% in 2022, compared with about –19% for the S&P 500 overall. In addition, the largest corporate acquisitions had impressive multiples attached to them. Amgen paid around 25 times trailing EBITDA for Horizon Therapeutics, and Johnson & Johnson paid about 45 times trailing EBITDA for Abiomed. Pfizer paid 14 times revenue for Biohaven Pharmaceuticals, which did not generate EBITDA in 2022 but saw around 270% revenue CAGR from 2020 to 2022.

Even though the cost of debt has risen in the past year, prized healthcare assets still command high multiples. Private equity funds hold large stores of dry powder, and acquisitive corporate players have huge cash balances after record profitability in 2022. Bids are likely to remain competitive even with the challenging debt environment.

Strategic partnerships

Partnerships between corporate acquirers and private equity sponsors are becoming increasingly common and provide benefits to both parties. These strategic partnerships provide private equity sponsors both access to capital and a potential path to exit. Meanwhile, the corporate participant also benefits by sharing the financial burden and accessing the strategic playbooks honed by private equity sponsors.

Welsh, Carson, Anderson & Stowe is notable for this approach. In early 2022, WCAS coinvested in Liberty Dental Plan with Anthem (now part of Elevance Health), a Liberty customer since 2010. The agreement with WCAS will enable Liberty to expand into additional markets and serve a greater number of members. Later in the year, WCAS teamed up with Humana on a second CenterWell joint venture. The two will deploy $1.2 billion to develop 100 new senior-focused primary care clinics between 2023 and 2025.

Expect more competition for deals when the market recovers

As the equity and debt markets inevitably stabilize, corporate M&A activity in healthcare will recover. We expect to see corporate M&A recover across the board in pharma, medtech, payer, and provider, and even in healthcare IT as horizontal tech players get more excited about vertical healthcare software. As corporations remain flush with cash, private equity sponsors may look to corporate partnerships for both access to capital and an assured path to exit.

We have mentioned in past reports that the most successful acquirers have a clear plan to boost capabilities. This becomes even more critical when a broader set of competitors are all leaning into the same sectors and when asset prices remain historically high.

Hot Topics

Exits: Economic Environment Shapes Landscape

Tight credit and depressed valuations shift exit strategies and holding periods.

At a Glance

- Strong exit activity in the first half of 2022 overcame the sharp drop-off in the second half. Despite declines in exit volume and value, global healthcare private equity exits are on track for their second-best year.
- Macroeconomic conditions affected exit types differently, with sponsor-to-public exits nearly vanishing and sponsor-to-strategic exits shining. Sponsor-to-sponsor exits shrank in size in response to financing challenges.
- While it remains to be seen how 2023 will play out, a sustained downturn may shift the mix of exit strategies, decrease average exit size, and lengthen holding periods.
- That said, grounds for optimism range from record exit volume in certain pockets, to a wealth of sponsor-owned assets yet to retransact. About 45 healthcare assets purchased by sponsors four to five years ago for at least $500 million have yet to retransact.

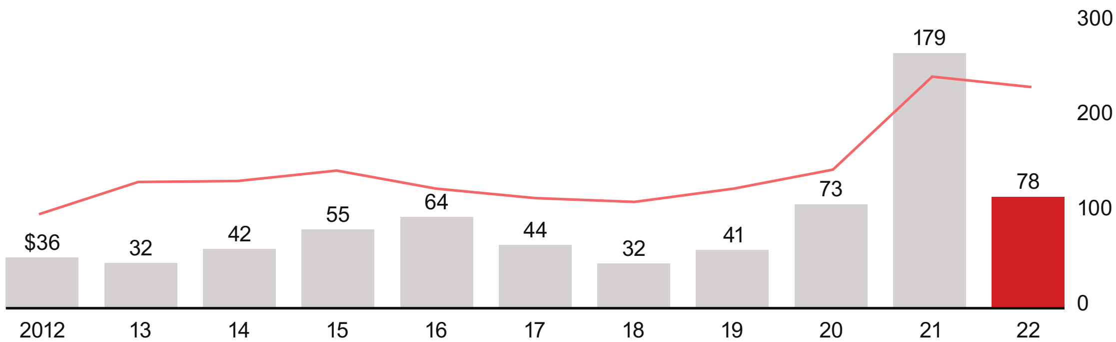
A tight credit market and depressed public and private market valuations led to a decline from 2021's record exit activity. Despite this, 2022 saw higher exit volume and value than any year besides 2021, making it the second-best year by both measures *(see Figure 1)*.

Total exit volume for 2022 was 233, down slightly from 244 in 2021. Deal value declined more sharply, from $179.3 billion to $78.4 billion. A few large exits inflated total deal value in 2021, with the top five exits worth $72 billion alone. Excluding those departures, exit value declined about 27% in 2022 from the previous year.

Figure 1: Despite falling, exit value in 2022 was the second best on record, while exit volume held steady

Global HCPE sponsor disclosed exit value ($ billions)

Global HCPE sponsor exit volume



Year-over-year change	13	14	15	16	17	18	19	20	21	22
Volume (%)	▲34	▲1	▲8	▼13	▼8	▼3	▲13	▲16	▲67	▼5
Value (%)	▼11	▲31	▲33	▲16	▼31	▼29	▲29	▲79	▲145	▼56

Value — Volume

Notes: Excludes spin-offs, add-ons, loan-to-own transactions, special purpose acquisitions, and acquisitions of bankrupt assets; based on announcement date; includes announced deals that are completed or pending, with data subject to change; deal value does not account for deals with undisclosed values; values updated based on Dealogic 2020 sponsor classifications; values include net debt where relevant
Sources: Dealogic; AVCJ; Bain analysis

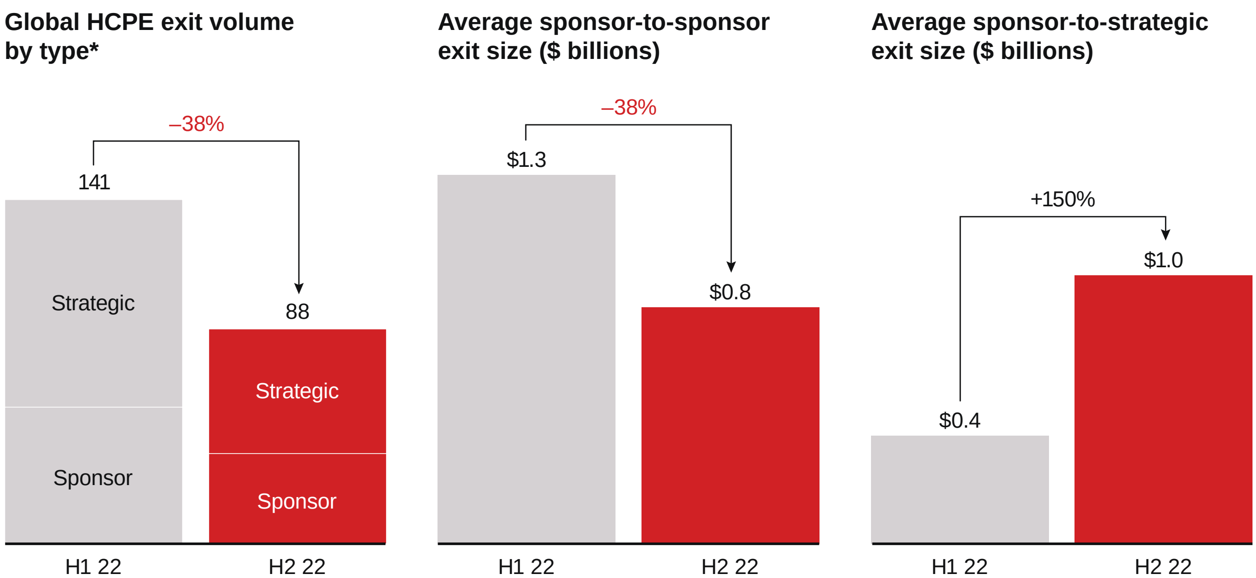
Macroeconomic conditions affected exit types

More than overall exit value and volume, the macro environment in 2022 had a pronounced impact on the mix of exit types.

Sponsor-to-public exits: We predicted in our report last year that exiting via public markets would become less attractive in 2022. This prediction played out as depressed public markets and proposed special purpose acquisition company (SPAC) regulations from the US Securities and Exchange Commission made sponsor-to-public exits all but vanish from the exit landscape. More specifically, we saw only four public exits in 2022 and none greater than $1 billion in disclosed value—a stark decline from the combined $37 billion in public exits of this size in 2021.

Sponsor-to-sponsor exits: Sponsor-to-sponsor exit volume hit a record in 2022 with a total of 93 exits, up 22% from the previous year. However, as the credit market tightened, large sponsor-to-sponsor exits slowed as the year progressed. The majority of sponsor-to-sponsor exits with a disclosed exit value greater than or equal to $1 billion occurred in the first half of 2022. As such, average sponsor-to-sponsor exit size shrank from $1.3 billion in the first half of the year to around $810 million in the second, a 38% decline *(see Figure 2)*.

Figure 2: Strategic exits were more viable for large assets in the second half of 2022



Notes: Excludes spin-offs, add-ons, loan-to-own transactions, special purpose acquisitions, and acquisitions of bankrupt assets; based on announcement date; includes announced deals that are completed or pending, with data subject to change; deal value does not account for deals with undisclosed values; values updated based on Dealogic 2020 sponsor classifications; values include net debt where relevant; *exit volume excludes initial public offerings and special purpose acquisition companies, of which there were four in 2022
Sources: Dealogic; AVCJ; Bain analysis

The Asia-Pacific region was a notable exception here, as sponsor-to-sponsor exits were an important driver of its resilience in the second half of 2022. Just under 80% of Asia-Pacific's total exit value for the year came from sponsor-to-sponsor exits in the second half.

Sponsor-to-strategic exits: With cash on hand, strategic buyers became an important driver of exit volume and value as 2022 progressed. In the first half of 2022, strategic exits accounted for 29% of disclosed exit value. This sharply increased to 68% in the second half. It was also a record year for sponsor-to-strategic exit volume, up about 9% from 2021 for a total of 136 exits.

A sustained downturn could change the exit landscape

While it remains to be seen how 2023 will play out, exit size, exit type, and holding period could all be affected if financing remains tight and public equity markets remain depressed.

Exit size: As mentioned, average sponsor-to-sponsor exit size declined 38% from the first half of 2022 to the second as large-check financing became increasingly difficult to secure. European and North American sponsor-to-sponsor exits felt this more acutely, declining in average size by 45% and 52%, respectively, between the first and second halves of the year. On the other hand, average strategic exit value increased by 150% between the first and second halves of 2022 as corporate buyers seized the chance to acquire assets with less competition from private equity. Aligned with the decline in average sponsor-to-sponsor exit size, this increase was felt particularly in Europe and North America.

Exit type: IPOs will remain less attractive in the face of depressed public equity markets, and strategic exits are likely to keep driving exit volume, especially if corporate buyers continue to have excess cash on hand. Partial recapitalizations and continuation funds could become more popular in a prolonged downturn as a means of providing returns to limited partners while also holding on to assets with more upside potential.

Holding periods: In the years following past downturns, we have seen holding periods extend as sponsors wait for favorable market conditions. While it is too early to tell how much of an impact the current macro uncertainty will have on holding periods, continuation funds and partial exits triggered by a prolonged downturn could contribute to longer holding periods.

Reasons for optimism vary across geographies

Despite these challenges, we see reasons for optimism across markets:

North America: Nearly 25 assets that transacted four to five years ago for at least $500 million have yet to retransact. More than half of these assets are provider businesses or provider-related services businesses. Additionally, 15 of these assets traded at valuations of at least $1 billion when they last transacted.

Europe: Europe had a record year when measured by total exit volume, with mega-exits—those in excess of $1 billion—continuing to drive exit value as they did in previous years. The share of European exits greater than $1 billion in disclosed value decreased from the first half of the year to the second half, both in terms of exit volume and value. However, in all, 2022 saw more $1 billion-plus exits in Europe than any other year aside from 2021. Looking ahead, roughly 10 European healthcare assets that were acquired four to five years ago for at least $500 million have yet to retransact.

Asia-Pacific: We saw more $1 billion-plus exits in the Asia-Pacific region than in any other year. The region produced the four largest sponsor-to-sponsor exits in the second half of 2022, totaling over $6.6 billion in value despite challenges in the macro environment. The region is on track for a record year when measured by total exit value, likely surpassing 2020's $7.6 billion total value, provided that deals announced in December transact. Looking ahead, at least 10 Asia-Pacific healthcare assets that were acquired four to five years ago for at least $500 million have yet to retransact.

Hot Topics

Life Sciences: White-Hot Competition to Win the Right Deals

More funds are on the hunt, but a small group of dealmakers account for most of the activity.

At a Glance

- **Biopharma and life sciences tools are attractive:** Within these two subsectors, more than 600 healthcare buyout deals have been executed over the past five years globally, fueled by strong end-market growth tailwinds, recession resistance, and attractive returns for private equity. Given that these trends are expected to continue, executing coherent deal strategy in biopharma and life sciences tools has become a must-have for US/EU funds.

- **Subsectors within life sciences matter:** Out of the roughly 410 US/EU biopharma and life sciences tools buyouts executed over the past five-and-a-half years, more than 80% have been in eight subsectors, each with a different set of dynamics.

- **Concentrated dealmakers, long tail of participants:** About 65% of biopharma and life sciences tools deals in the US and Europe were conducted by around 50 funds with a large amount of midmarket participation.

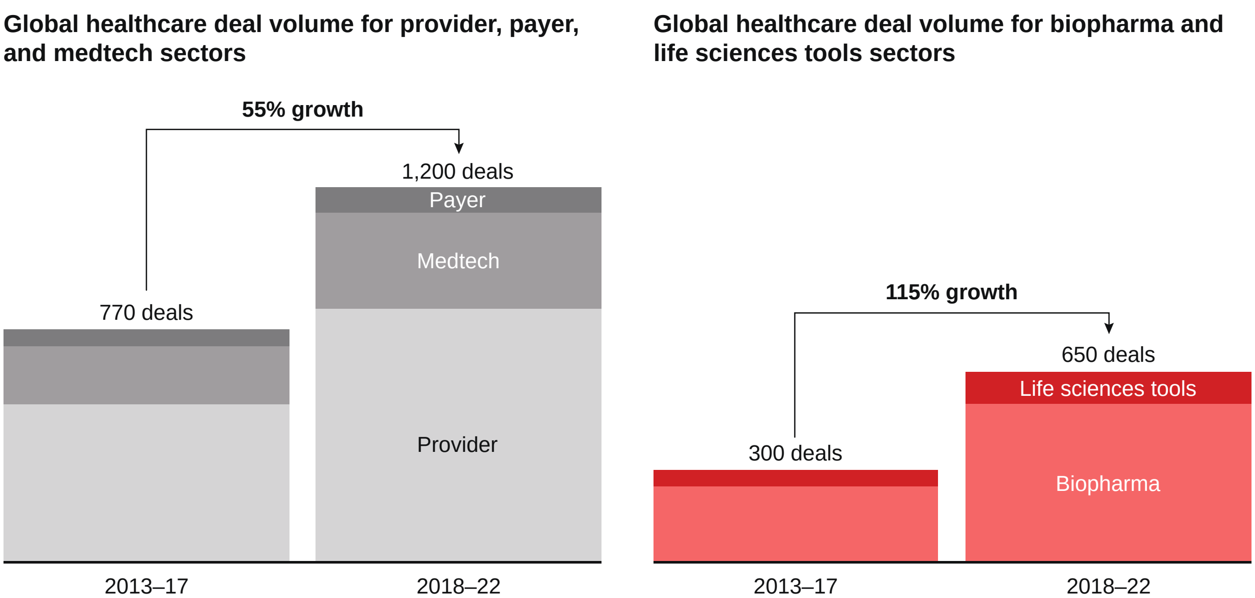
- **Lessons learned from dealmakers:** Funds that have a repeatable approach to closing deals have a very sharp perspective on "where to play" and "how to win" and have flexed the type of deal they are prepared to do to be successful. Differentiation in subsectors is increasingly driven by the quality of science and depth of expertise in a specific disease or technology.

The life sciences deal market—that is, marketed biopharma products and the ecosystem of companies supporting their research, development, and commercialization—has been an attractive place for private equity (PE) to put capital to work. These markets—which include life sciences tools (LSTs), diagnostics (Dx), lab services, outsourced biopharma services, and pharma software/IT—are historically recession resistant and have all been driven by strong end-market growth tailwinds. These sectors have also seen strong returns within healthcare, which itself is an attractive industry vertical.

Given all of these dynamics, the volume of PE dealmaking has increased significantly in this area, and it has become a must-win sector for funds. Deal volume in the past five years in biopharma and life sciences tools has increased 115% compared with the previous five-year period *(see Figure 1)*. Payer, provider, and medtech deal activity increased only 55% across those same two time periods. We count 650 unique buyout deals globally for life sciences assets completed since 2018 (excluding preclinical and clinical stage therapeutic investments given their risk/return profile).

The internal rate of return (IRR) for life sciences deals over the past 10 years has been around 25%, with the top quartile achieving more than 50% IRR across biopharma products and services, and life sciences tools and services. The variance in returns in life sciences sectors is also wider than other healthcare investment areas, highlighting the effects of technology and regulatory risk embedded in these investments and the value of specialization in mitigating those risks. These deals tend to be earlier in the life cycle of an asset, and therefore bear a spikier risk/return profile.

Figure 1: Deal growth in the life sciences sector outpaced other sectors over the past decade



Notes: Excludes spin-offs, add-ons, loan-to-own transactions, special purpose acquisitions, and acquisitions of bankrupt assets; based on announcement date includes announced deals that are completed or pending, with data subject to change; deal value does not account for deals with undisclosed values; values updated based on Dealogic 2020 sponsor classifications; values include net debt where relevant; deal totals are rounded
Sources: Dealogic; AVCJ; Bain analysis

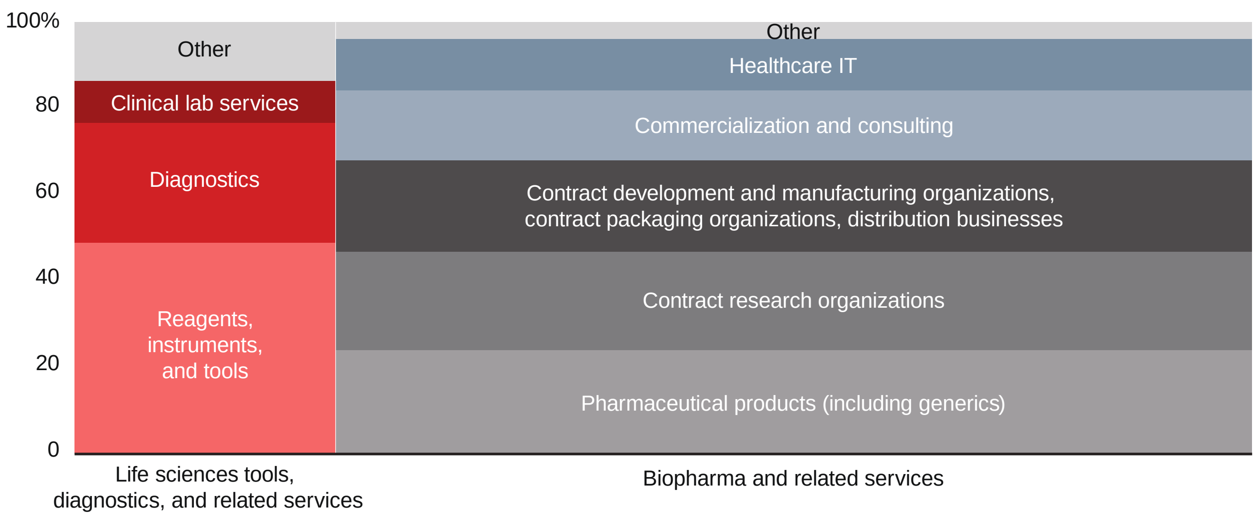
Placing the right bets: Subsectors within biopharma and life sciences tools matter

A sector-by-sector analysis of the deals done in the US and Europe reveals that eight subsectors represent the vast majority (85%–90%) of the deals done within private equity *(see Figure 2)*. Given that each sector has very different business models, sets of assets, and winning investment theses, it is our strong belief that funds need to develop a custom view on which assets they are going to "hunt" for.

Out of the roughly 410 unique life sciences deals completed for US/EU assets between 2017 and mid-2022, 75%–80% were pharma-related; the remaining 20%–25% were in life sciences tools or diagnostics. Within biopharma deals, there were five major sectors of activity that each represented at least 25 deals—contract research organizations (CROs); contract development and manufacturing company (CDMOs)/contract packing organizations/distribution businesses; commercial pharma products; commercialization services; and pharma IT. Within life sciences tools, two major sectors of activity represented at least 25 deals—reagents/instruments/tools and diagnostics. Clinical lab services represented a smaller number of deals completed but were mostly all in the EU.

Figure 2: The overwhelming majority of life sciences buyout activity occurred in eight categories

Private equity life sciences buyouts, 2017–H1 22, US and Europe



Notes: Excludes spin-offs, add-ons, loan-to-own transactions, special purpose acquisitions, and acquisitions of bankrupt assets; based on announcement date; includes announced deals that are completed or pending, with data subject to change; deal value does not account for deals with undisclosed values; values updated based on Dealogic 2020 sponsor classifications; values include net debt where relevant
Sources: Dealogic; AVCJ; SPS; fund websites; Bain analysis

Life sciences landscape: Despite upside, biopharma and life sciences tools remain fragmented, challenging spaces to play

Private equity buyout participation in biopharma and the life sciences tools subsector is widespread, with around 200 funds participating in around 410 unique deals. However, there is a concentration of high-velocity PE dealmakers who are responsible for most of the activity. A large fraction of dealmakers are the midmarket life sciences specialists, although some large-cap funds have been high-velocity dealmakers as well.

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There were roughly 460 PE transactions for US- and European-based biopharma and life sciences tools assets between 2017 and the end of the first half of 2022. Roughly 410 were "unique" deals, and roughly 50 deals were multifund. In total, around 200 private equity firms participated in at least one life sciences deal, and around 170 of those made one to two investments during that time.

The number of unique funds participating in a life sciences deal increased from about 45 in 2017 to around 80 in 2021, reflecting not only the presence of more "hunters," but also the increased productivity/activity of funds focusing on life sciences as a sector. Some 45 to 50 private equity firms were responsible for 290 deals (65%) of those closed (at least three-plus closed deals).

Midmarket PE funds with a life sciences focus represent 40%–50% of the top 50 dealmakers (which include Arsenal Capital Partners, Ampersand Capital Partners, GHO, ArchiMed). Some large-cap PE funds each closed four-plus life sciences deals—Carlyle, EQT, Astorg, GTCR, Nordic Capital, Advent, Blackstone, and KKR.

As the level of interest in biopharma and life sciences tools investments has increased, we have also observed changes in the deal processes—exacerbated by the boom in post-Covid dealmaking—and changes in the underlying nature of the businesses being acquired that have created additional complications for potential investors:

Auction processes: Sellers used auction processes with larger pools of bidders, shortened bid periods, and limited access to management data to drive more aggressive valuations and outcomes.

Competition with strategics: Rapid maturation and inflection points in demand related to areas such as cell and gene therapy created intense interest from strategic buyers for smaller assets that historically have traded sponsor to sponsor, driving multiples higher and creating a scarcity of available assets:

- This phenomenon was acutely felt at the intersection of LSTs and manufacturing, with Thermo Fisher Scientific and Catalent acquiring viral vector CDMOs Brammer Bio and Paragon Bioservices, respectively, and companies like Thermo Fisher, Sartorius, and Cytiva (Danaher) aggressively acquiring bioprocessing specialists with unique offerings for cell and gene therapy applications such as PeproTech (cytokines for research and good manufacturing practices) and BIA Separations (viral vector-focused chromatography technology).

Diligence complexity: Differentiation in subsectors is increasingly driven by the quality of science and depth of expertise in a specific disease or technology, and thus more challenging for many investors to evaluate.

Together, these challenges have raised the bar for private equity firms to execute successful investments within the biopharma and life sciences tools landscape. Funds that have closed five or more deals in biopharma and life sciences tools often have focused teams, great relationships with venture capital and small-cap-focused feeder funds, and a willingness to participate in more deals at smaller ticket sizes with a higher risk profile.

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Lessons learned from dealmakers: Sponsors can mitigate the challenges within biopharma and life sciences

Analysis of life sciences deal activity reveals the ways in which dealmakers have been thoughtful about where to play and how to win. They have deployed a set of strategies to overcome some of the main challenges we see in life sciences deal participation for private equity:

Networking: Build and utilize a wide network of outside advisers with scientific and commercial acumen to proactively vet scientific trends, identify subsectors of focus and gem assets within those areas, and prioritize deal strategies and value creation opportunities early in the investment process.

Talent strategy: Deal teams with scientific backgrounds (PhDs, MDs) focused on the life sciences sector—and sometimes subsectors within life sciences—can overcome scientific, technical, and regulatory expertise hurdles needed to build conviction on a theme and target early in a process (or preprocess) and effectively prewire and manage challenging dynamics with generalist investment committees to ensure competitive positioning in processes.

Portfolio effects: Dealmakers often double down and make multiple investments within a sector and across subsectors to leverage shared, collective expertise and employ pattern recognition to create value across their platforms:

- Arsenal Capital has built scale platforms across multiple areas of the outsourced services market (WCG in institutional review board and clinical trial support; Certara in software-aided drug discovery; CellCarta in biomarker and related lab services; Lumanity in commercialization).

- GHO has made a series of separate investments in a range of distinctive CDMOs (such as Ardena, FairJourney Biologics, RoslinCT, and Sanner).

Risk profile: While the risk profile of preclinical/clinical stage assets is addressable only for a subset of PE funds, some large-cap funds have been building out capabilities to support investment in this area.

Flexibility: Given vendor fragmentation, scale asset scarcity, and rich valuation multiples on category leaders, dealmakers have gotten creative in their structures to access a wider range of deals. Examples include:

- **Platform building:** Behrman Capital used tuck-in acquisitions to help its CRO Emmes build a set of unique capabilities that helped transform the business from a government-focused CRO to a specialty CRO serving industry sponsors.

- **Public-to-private:** Gurnet Point Capital and Patient Square Capital took Radius Health private to invigorate the trajectory of its commercial-stage osteoporosis asset, Tymlos, while sharpening the focus of its pipeline and reducing noncore development costs.

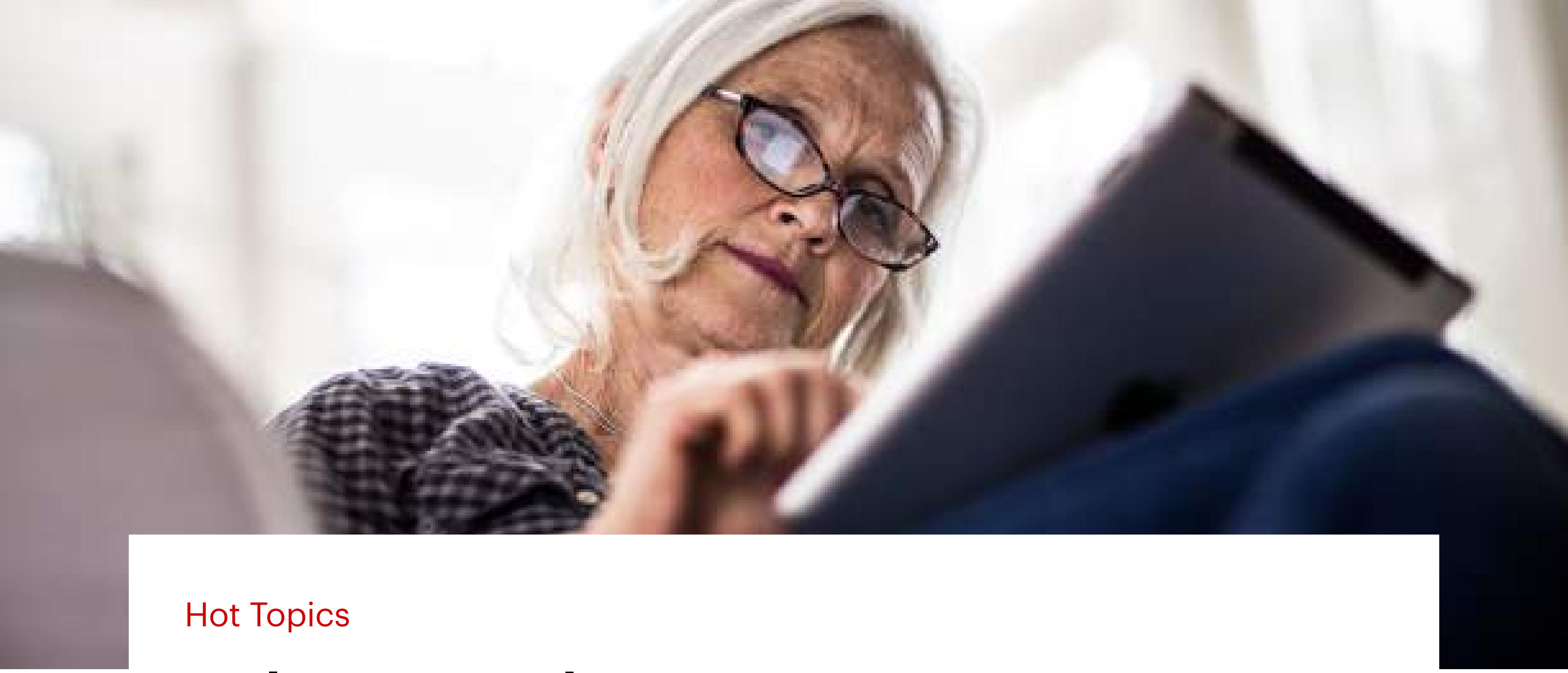
- **Technology/growth bets:** KKR has acquired through its Gamma Biosciences platform five earlier-stage companies that provide a variety of innovative biomanufacturing materials or equipment utilized in manufacturing of advanced therapeutics like cell and gene therapies.

Forging a path forward for private equity: Sponsors will need to define their unique strategies

We continue to believe that life sciences will be a long-term attractive place for private equity to participate, although there may be some nearer-term noise given the factors currently impacting the economy and the biotech funding-cycle dynamics. That said, it is not an easy place for funds to navigate successfully. We believe that funds have to wrestle with a number of questions to define their strategy:

- What is our participation model in life sciences deals?
  - Are we looking for only the premium, category leader assets? Are we prepared to dig deep to meet valuation expectations? Do we know, or are we tracking, the assets that are likely to come to market in the next few years? Are we developing unique angles around the deal thesis to invigorate the next wave of growth?
  - Are we going to compete with life sciences specialists and invest early in technology/growth/platform bets? If yes, what's our strategy to build our internal competencies and processes, along with external advisory teams? Are we going to use innovative deal strategies to put money to work?
- Which of the life sciences subsectors are we participating in (and which are we not)?
  - What are our unique investment thesis and connections in the space? How can we keep ahead of the competition as more funds enter the space? How can we avoid spending time on deals that are going to be fought over fiercely?
- Can we stretch the "type" of deal we do to cover a broader range of transactions?
  - Would a public-private, or a carve-out, or a growth-equity investment fund ever be on the table? Would we ever stretch into biopharma therapeutics?

Given the opportunities for compelling returns within life sciences, the bar is high to win the right deals as competition for these assets holds strong and valuations have run up, even within the current macro context. Clearly defining a life sciences strategy—where a fund will choose to play and what gives that fund a right to win—will be critical, both in the face of a downturn and beyond.



Hot Topics

Value-Based Care: Opportunities Expand

Value-based care adoption increases across a growing spectrum of payment models.

At a Glance

- Sustained macro trends continue to drive value-based care adoption across a spectrum of care models.
- While investment activity remains focused on primary care and Medicare Advantage, opportunities across other payer and specialty segments are expanding.
- Enabler models represent an attractive investment path, with adoption driven by a need for traditionally fee-for-service groups to participate in risk-based arrangements.
- Providers and value-based care enablers that can bend the cost curve with differentiated care models and advanced analytics are positioned to succeed.

For more than a decade, value-based care (VBC) has been positioned as healthcare's "next big thing." And while progress has been uneven until now, multiple forces are converging to inflect growth across an expanding set of risk-bearing models. Rising costs of care are putting pressure on stakeholders while key VBC enablers have matured—including data availability, analytics, and care management models.

Regulatory forces have also spurred growth. While only 7% of healthcare spending was in population-based payment models in 2021, the Centers for Medicare & Medicaid Services (CMS) has set a goal for all traditional Medicare beneficiaries to be in a care relationship with accountability for quality and total cost of care by 2030. Increased participation from other payers will be needed to unlock the full market potential.

Bain research shows that physician interest in VBC is high, but risk appetite is still a work in progress. It's true that the performance of participants in value-based models has varied. The number of accountable care organizations (ACOs) plateaued at around 1,000 in recent years, while 15 of the 53 entities participating in CMS's direct contracting program in 2021 experienced net savings losses.

Still, the longer-term outlook remains favorable. Value-based care stakeholders are doubling down on their commitment as healthcare spending outpaces GDP growth and CMS leans further into VBC models. This momentum is likely to accelerate as we see further regulation, more data from early adopters, and more capability-enhancing technology.

There is plenty of runway for investors to participate in VBC initiatives

It is no surprise that primary care to date has been the focus of VBC. Primary care providers (PCPs) serve as "gatekeepers" within the healthcare landscape, playing a key role in preventative care, screening, chronic condition management, and navigation to other providers.

There is still ample headroom for growth in value-based care adoption in the PCP space. As of 2021, nearly 60% of healthcare payments had at least some linkage to quality and value, but less than 20% incorporated two-sided risk (and capitated models are still under 8% of spending).

Many VBC models adopted to date benefit from heavy Medicare exposure where there is a large total addressable market, and where both payer-pull and the primary care relationships create opportunities for providers to inflect the cost curve.

This included some of the largest deals in 2022:

- In April 2022, Optum announced its acquisition of Houston-based Kelsey-Seybold Clinic for around $2 billion. Kelsey-Seybold operates multispecialty care centers and also owns its own Medicare Advantage plan for seniors, KelseyCare Advantage. The deal provided an exit for TPG Capital.

- In May 2022, Humana and Welsh, Carson, Anderson & Stowe announced a reinvestment of $1.2 billion in CenterWell Senior Primary Care, a network of value-based care clinics, to develop 100 new senior-focused primary care clinics by 2025.

- In July 2022, Amazon announced a $3.9 billion takeover of publicly listed One Medical, a membership-based primary care practice. One Medical owns the Iora Health clinics, which provide comprehensive primary care services for Medicare patients, and aims to move patients to a capitated reimbursement model.

Much of the focus of pure-play "disruptive primary care" providers is on Medicare Advantage, where up to 25% of all payments are through capitated models. There is significant upside for adoption across other payers—including commercial, Medicaid, and fee-for-service Medicare (such as ACO REACH).

Increasingly, the market will reward models that generate more meaningful savings and benefits for the population. Investors should look for winning models that have clear clinical pathways to impact patient health, a proven ability to adapt to multiple geographies, and flexibility to adapt to evolving regulatory landscapes. Sophisticated data analytics and risk adjustment are necessary but not sufficient on their own for long-term viability. Regardless of the model, patience is critical: Risk-based models take time to turn profitable for any patient population.

Investors should look for winning models that have clear clinical pathways to impact patient health, a proven ability to adapt to multiple geographies, and flexibility to adapt to evolving regulatory landscapes.

Investors are increasingly finding ways to extend value-based care to specialty care, but selective interest demonstrates the variable addressability across specialties

Meaningful adoption of value-based care has been slower outside of primary care, but stakeholders are eyeing the possibilities. Categories with more standardized and time-bound interventions (such as orthopedics, cardiology, OB/GYN maternal care, and others) have witnessed growth in episode-based payment models over the past few years:

- **Orthopedics:** Linden Capital Partners' Healthcare Outcomes Performance Company (HOPCo) has been growing its value-based care platform, including the 2020 acquisition of Stryker Performance Solutions' value-based care unit.

- **Cardiology:** Webster Equity Partners has continued to expand its Cardiovascular Associates of America (CVAUSA) platform, investing in its practices to add new services, support infrastructure development, and prepare for risk-based reimbursement arrangements.

The approach varies for other specialties that manage chronic or indeterminate-length conditions with high costs of care. For example, oncology and nephrology groups participate in specific Medicare VBC programs in addition to subcontracted models with other payers. Examples include:

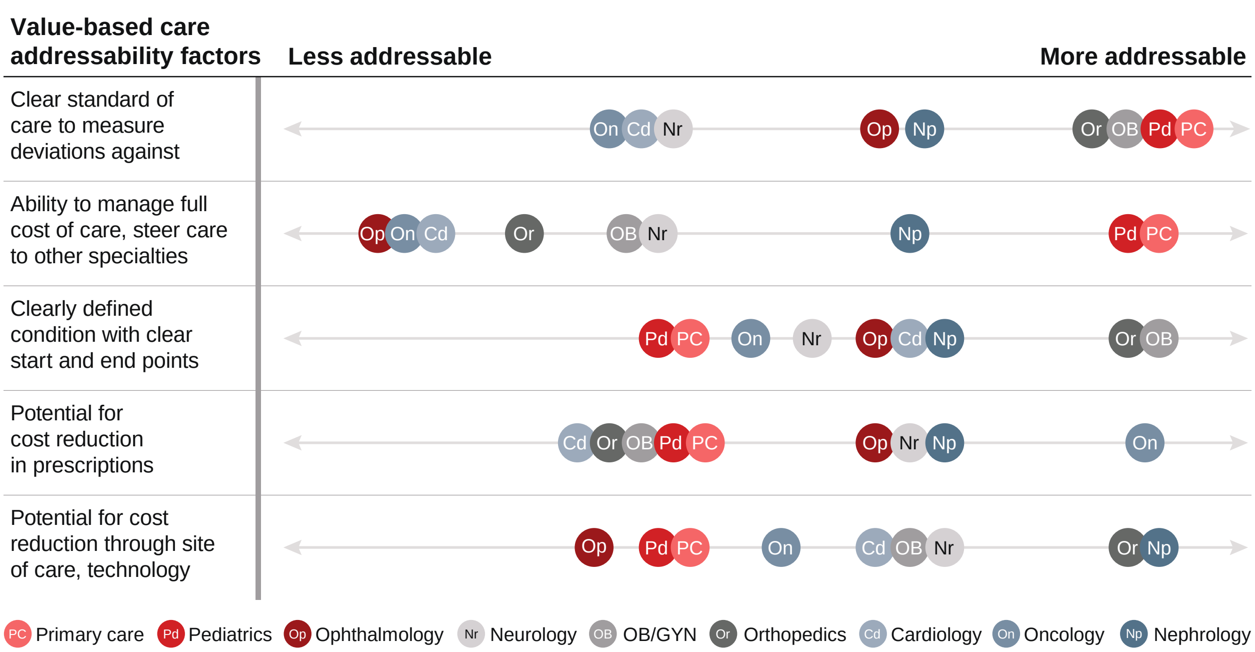
- **Oncology:** WCAS-backed Valtruis owns Oncology Care Partners, a cancer care provider purpose-built for value-based care.
- **Nephrology:** InterWell Health finalized a $2.4 billion merger with Fresenius Health Partners and Cricket Health to combine and expand their kidney care with advanced technology and value-based care capabilities.

Overall, the VBC "fit" and approach vary by specialty, but some common considerations apply *(see Figure 1)*.

Beyond the physical health-focused specialties discussed above, we are seeing growing interest in VBC models in behavioral health in light of the interconnected nature of physical and mental health. For instance, in 2021, WCAS-backed Valtruis announced it would invest in Wayspring, which provides a value-based medical home model for substance abuse disorder treatment.

As investors look outside Medicare-focused primary care, there is no one-size-fits-all model. Other specialties may require different payment models or operating models as a result of their served populations and reimbursement rates; investors are looking to emerging plays in behavioral health and pediatrics as examples given their role in serving Medicaid patients. Investors interested in

Figure 1: While value-based care is broadening, some specialties may be more addressable than others



Source: Bain analysis

specialty value-based care models should pay attention to where experimentation is occurring, and which models are most repeatable. As with all categories of VBC, the ability to truly measure, predict, and inflect health outcomes will be key to the success of these platforms.

Providers participating in value-based care need to have the right infrastructure to succeed

Research by Bain found that around 80% of PCPs are interested in value-based payment models but report technological and administrative constraints as the biggest barriers. Consequently, payers have historically struggled to find sufficiently sophisticated provider counterparties to enable global risk contracts.

There are few full-service tech platforms that enable value-based care; instead, physicians are pulling together a range of point solutions, spanning a mix of tech-centric and services-centric models.

This need has created high demand for both technology and services that enable VBC. There are few full-service tech platforms that enable value-based care; instead, physicians are pulling together a range of point solutions, spanning a mix of tech-centric and services-centric models. These enablers may be an attractive way to play VBC for investors interested in participating without taking on the direct financial risk associated with patient outcomes.

The key for investors is identifying the best entry point, given the breadth of solutions and business models available. Some examples are listed below.

- **Data and analytics:** services for risk stratification, care transitions, and data synthesis
- **Care management:** platforms that connect patients, providers, and other lines of service to align preventive care and ensure treatment plans are followed
- **Contract development:** services that create contract parameters, take on risk-based contracts, and facilitate third-party participation

Established companies like agilon health and Privia Health continue to enable the movement of traditional providers to VBC models. Three prominent examples of this angle on value-based care enablers in 2022 are Aledade's $123 million series E funding round for a reported $3.1 billion valuation, Edifecs' acquisition of Talix backed by TA Associates and Francisco Partners announced in 2021, and Vera Whole Health's completion of its acquisition of Castlight Health.

Looking ahead

The potential of value-based care models remains unrealized. As the VBC landscape evolves, there will be winners and losers. That said, we expect the transition toward capitated and other risk-bearing reimbursement models to continue. Our analysis suggests fee-for-value arrangements will capture 15%–20% market share from traditional FFS providers in primary care by 2030, creating strong macro tailwinds and supporting further investment in the space.

Our analysis suggests fee-for-value arrangements will capture 15%–20% market share from traditional FFS providers in primary care by 2030, creating strong macro tailwinds and supporting further investment in the space.

Potential VBC investors should consider two ways to play: (1) assets that participate directly in VBC models or (2) services and/or technology that enable the VBC transition.

Investors interested in provider assets that participate directly in VBC models will need to ensure that the businesses they acquire have the right data infrastructure and the appropriate risk models for the population they serve. The market will increasingly reward models that are generating more meaningful savings and better care outcomes. Similarly, enablers—whether tech or services-focused—that generate a compelling return on investment and reduce provider pain points around VBC are likely to be attractive.

As the darlings of the industry continue to await profitability, it raises questions for investors. Are current valuations aligned with these businesses' true value? Are business models appropriately nuanced to the specialty, payers, and populations they serve? When building a VBC-focused platform, what care model or enabler is the right point of departure? Incumbent investors are doubling down. What remains to be seen is if new sponsors will invest in the long-term potential, or choose to wait on the sidelines.

Geography Trends

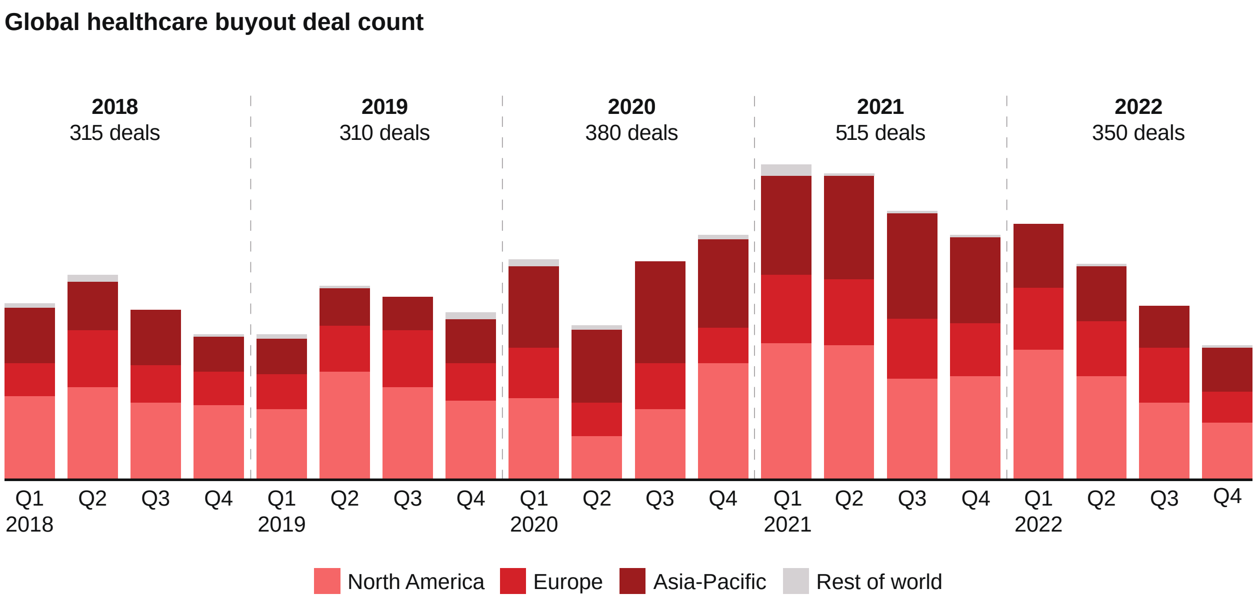
Overview

North America: North America retained its No. 1 position in 2022 in deal count and disclosed value. While activity was down from the 216 deals logged in 2021, the deal count of 167 still represents the second-best year on record. Disclosed value was also down from an unprecedented $107.5 billion in 2021, finishing at $45.7 billion. Unlike 2021, when we saw the $34 billion Medline deal and $17 billion Athenahealth deal, there were no deals greater than $5 billion in 2022. As a result, average disclosed deal value came to $831 million, down from $1.5 billion in 2021 ($830 million excluding Medline and Athenahealth).

Europe: Deal count fell to 92 in 2022, not far off from the 112 deals we saw in 2021, and positioning 2022 as the second-best year on record. Disclosed deal value in 2022 was $25.3 billion, with five deals greater than $2 billion, including IVIRMA Global, Envirotainer, Kedrion, CordenPharma, and Informa's Pharma Intelligence business. The average disclosed deal value was $1 billion, up from approximately $839 million in 2021. However, the second half of the year saw a steep drop-off, with only $3.2 billion in total disclosed deal value.

Asia-Pacific: The number of Asia-Pacific deals in 2022 came to 93, down from 2021 and 2020, which saw 179 and 156 deals, respectively. The decline was due to evolving market dynamics in China, where buyout activity dropped. In contrast, the rest of the region had one of its best years in terms of both deal count and value, capped by a strong second half with six deals at a disclosed value of $1 billion or greater. Overall, 2022 disclosed deal value was $19.4 billion. The year's largest deal was Bain Capital's approximately $3.1 billion acquisition of Evident, representing roughly 16% of the whole year's disclosed deal value. Deal value averaged $329 million in 2022, up from $158 million in 2021 *(see Figure 1)*.

Figure 1: Healthcare activity in 2022 saw year-over-year quarterly declines across all three regions



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Sources: Dealogic; AVCJ; Bain analysis

Geography Trends

North America: Strong Start, Weak End for Healthcare Private Equity Megadeals

Securing large-check financing grew more difficult as the year wore on.

At a Glance

- North America healthcare deal activity logged its second-best year in 2022, but the year proved to be a tale of two very different halves.
- Despite such difficulties, the biopharma and life sciences tools sectors collectively grew in deal volume and value.
- Provider remained the most active sector, but labor shortages and wage inflation are likely to give investors pause into 2023.
- Despite the decline in transactions in the second half, we expect a strong recovery of healthcare private equity deal activity, though the exact timing is uncertain.

Deal activity got off to a strong start in 2022: First-half volume exceeded that of the second half of 2021, while disclosed deal value was lower than 2021, which featured the mammoth $34 billion Medline and $17 billion Athenahealth deals. Starting in the third quarter, however, the macroeconomic environment began to impact North American buyout activity. Growing inflationary pressures, mounting Federal Reserve rate hikes, tightening credit conditions, rising geopolitical tensions from the war in Ukraine, and escalating concern over the slowing economy weighed on deal volume and value in the second half. While 2021 saw an average of roughly 50–60 deals announced each quarter, the second half of

2022 saw just 30 deals per quarter on average—a much steeper fall-off in volume than the European and Asia-Pacific markets. Of those deals over $1 billion, only around 30% were announced in the second half, reflecting the difficulty in securing large-check financing.

The economic situation impacted exits as well. IPOs, which accounted for roughly 25% of exits by volume in 2021, practically vanished in 2022. That share of exit volume was absorbed by corporations flush with cash after a stellar 2021. Strategic exits made up nearly 60% of exits in 2022 vs. the roughly 40% average from 2017 to 2021. On the plus side, depressed public market valuations presented buying opportunities for some. Six of the top 10 deals were carve-outs or public-to-private transactions. Overall, public-to-private and carve-out deal value represented around 44% of total buyout value in 2022, compared with an average of 15% from 2019–21.

Despite slowing deal activity in North America, the two largest deals globally took place in North America, with Blackstone and CPP's acquisition of Advarra for $5 billion from Genstar, and Clayton, Dubilier & Rice and TPG's acquisition of Covetrus for $4 billion.

Biopharma and life sciences tools: Focus on efficient drug development produces record year

Collectively, biopharma and life sciences tools were the only sectors where deal volume and value increased from 2021. Buyout activity in North America reached 48 deals in 2022, up from 42 in 2021. Disclosed deal value was $15.5 billion in 2022, up from $15.2 billion in 2021.

There was continued focus on more efficient drug development, with interest in pharma services assets. In addition to the Advarra purchase, New Mountain Capital's acquisition of Emmes for $800 million signaled confidence in contract research organizations (CROs). Investors also continued to push into contract development and manufacturing organizations (CDMOs), highlighted in the first half with Novo Holdings' acquisition of Ritedose for $915 million.

Life sciences tools and diagnostics drew investor attention, with 2 of the top 10 deals in 2022 represented by this sector. In reagents, instruments, and consumables, New Mountain Capital carved out PerkinElmer's Applied, Food, and Enterprise Services businesses for $2.5 billion and bought Covaris. In diagnostics, SD Biosensor and SJL Partners bought Meridian Bioscience for $1.5 billion. Lastly, in clinical lab services, GTCR, along with management, bought out PathGroup.

Provider: resilience in specialties but slowdown overall

Consistent with earlier years, the provider sector, inclusive of provider IT, remained the most active sector with 88 deals, accounting for 50%–60% of total North American deal volume and value. Six of the top 10 deals in North America were in provider *(see Figure 1)*. Disclosed deal value was down from nearly $40 billion in 2021 to around $25 billion in 2022. The second half of 2022 saw only 31 deals, compared with 57 in the first half, due to concerns over labor and wage pressures. The slowdown was most evident in the last quarter, when there were only seven deals.

Figure 1: Six of the top 10 North America buyouts targeted providers or provider-related services

Target	Acquirer(s)	Deal type	Sector description	Approximate value, $ billions	Quarter
Advarra	Blackstone; CPP Investments	Sponsor-to-sponsor	Biopharma and related services	$5.0	Q2
Covetrus	CD&R; TPG	Public-to-private	Provider (HCIT)	4.0	Q2
Gentiva Certified Healthcare *Kindred at Home carve-out*	CD&R	Carve-out	Provider—hospice care	2.8	Q2
PerkinElmer's Applied, Food, and Enterprise Services businesses *life sciences divestiture*	New Mountain Capital	Carve-out	Life sciences tools and related services	2.5	Q3
Ensemble Health Partners	Berkshire Partners; Warburg Pincus	Sponsor-to-sponsor	Provider (HCIT)	2.3	Q1
ClaimsXten	TPG	Carve-out	Payer (HCIT)	2.2	Q4
AmeriVet	AEA Investors; ADIA	Sponsor-to-sponsor	Provider—veterinary care	1.6	Q1
Meridian Bioscience	SD Biosensor; SJL Partners	Public-to-private	Life sciences tools and related services	1.5	Q3
Intelligent Medical Objects	Thomas H. Lee Partners	Sponsor-to-sponsor	Provider (HCIT)	1.5	Q1
PANTHERx	Nautic Partners; Vistria Group; General Atlantic	Carve-out	Provider—specialty Rx	1.4	Q2
North America top 10 healthcare buyout deal value 2022				$25	
North America total healthcare buyout deal value 2022				$44	
Top 10 as percentage of total				57%	

Sources: Dealogic; AVCJ; Bain analysis

As in 2021, deal activity was dispersed across several different pockets of the provider sector, including value-based care, home health, and specialty care.

Value-based care and advanced primary care continued to draw investment, primarily from strategic acquirers. Humana and Welsh, Carson, Anderson & Stowe (WCAS) invested $1.2 billion in a joint venture through CenterWell, a value-based primary care group focused on seniors. Strategic disrupters such as Amazon reached into primary care, with its $3.9 billion acquisition of One Medical, a primary care provider focused on delivering high-quality, affordable care. Lastly, Optum continued to acquire physician groups, most notably Kelsey-Seybold for $2 billion—an exit for TPG—and Atrius Health for $236 million.

As healthcare delivery shifts to sites outside the hospital, home health deal activity continued apace. Clayton, Dubilier & Rice acquired Gentiva Health Services, the divestiture of Kindred at Home's hospice and personal care business, for $2.8 billion. New Mountain Capital exited its investment in Signify Health, a technology company enabling value-based care in home health, to CVS Health for nearly $8 billion. Among strategics, UHG acquired home health provider LHC Group for $5.4 billion.

Specialty-care deal activity held up throughout 2022. To kick off the year, THL invested $1.2 billion in orthodontics chain Smile Doctors and subsequently completed two more acquisitions. There were a couple of notable exits: Shore Capital Partners' exit of ophthalmology company EyeSouth Partners to Olympus Partners for $1 billion, and OMERS' exit of Forefront Dermatology to Partners Group for $1.5 billion.

Payer: scarce activity and shift to quicker cost outcomes

The payer sector was hot in 2020 and 2021—with 20 deals each year—but activity declined sharply in 2022. There were only 11 North American deals in the payer and related services sector in 2022. Investors had less appetite for longer-term plays enabling health outcomes and more interest in investments with quicker near-term returns.

Substantial capital flowed in 2021 into companies focused on improving health outcomes, with one of the biggest buyouts of the year the $7.3 billion Inovalon deal. In 2022, investors pushed toward companies with a more immediate impact on medical and administrative costs. The interest in specialty insurance companies that enable carriers to manage supplemental and noncore medical benefits more efficiently illustrates this well. In dental, WCAS and Anthem (now part of Elevance Health) invested in Liberty Dental Plan. In the pharmacy benefit manager space, Prime Therapeutics bought Magellan Rx for $1.4 billion. Investors also looked to core administration platforms, with Revelstoke's growth equity investment in HealthAxis and Francisco Partners' acquisition of bswift.

The biggest buyout in the North American payer sector was TPG's $2.2 billion acquisition of ClaimsXten, a carve-out from Change Healthcare, in conjunction with approval of the Optum and Change merger.

Healthcare information technology: optimization

There were 37 healthcare information technology (HCIT) deals in 2022, down from a record 59 deals in 2021. Disclosed deal value fell to $13.8 billion, down sharply from 2021's $35.7 billion. Even excluding the $17 billion Athenahealth deal, disclosed deal value was still down 25%. While first half activity was in line with prior years, it dropped in the third quarter along with the broader technology slowdown. North America had the most active HCIT market, with over 70% of global HCIT deal volume and nearly 80% of value.

HCIT buyout activity remained concentrated in provider IT, which accounted for 70% of deal volume and 80% of disclosed deal value. Investors were active in software that enables better revenue realization and resource optimization toward addressing labor and wage pressures. Revenue cycle management (RCM) firm Ensemble Health Partners retransacted at $2.3 billion, giving Berkshire Partners and Warburg Pincus a combined 46% stake, with the previous majority stakeholder Golden Gate retaining 10%. LKCM Headwater Investments and Weave Growth Partners also invested in Knack Global. In electronic health records (EHR), GTCR invested $1.2 billion in Experity, an urgent-care-focused EHR company.

Payer IT deals declined 50% from 2021 but followed similar themes as the payer sector, with an emphasis on companies that generate bottom-line impact quickly. The largest exit was in pharmacy, where McCarthy Capital transacted Rx Savings Solutions, a technology company focused on reducing the cost of prescriptions, to McKesson for $875 million.

Also consistent with themes in the broader sector, biopharma HCIT focused on more efficient drug discovery and development through real world data. This was highlighted by Sixth Street's investment in ConcertAI, Frazier Healthcare Partners' acquisition of Apollo Intelligence, and LLR Partners' investment in RealTime Software Solutions.

Healthcare information technology will likely continue to follow broader healthcare industry trends as it adapts to meet customers' needs.

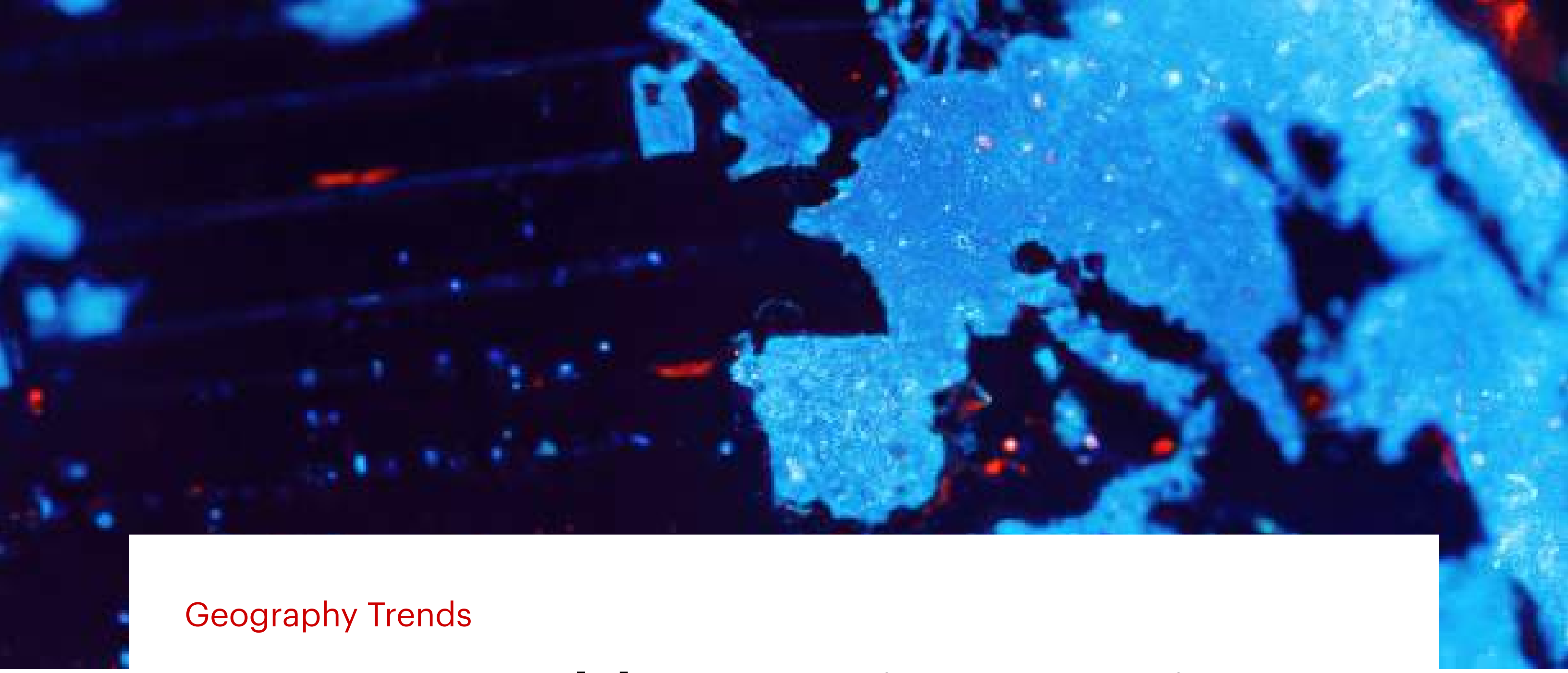
Medtech: Supply chain issues dampen activity

Deal volume in North America dropped to 20 from 28 in 2021, and disclosed deal value plunged from $38.8 billion in 2021 to $1.4 billion in 2022. Even without the $34 billion Medline deal, the 2021 value was still $4.8 billion, over three times higher than the 2022 disclosed deal value. There were just four medtech buyouts in the second half of the year, compared with 16 in the first half, with supply chain issues dampening activity in the space. Two large deals in 2022 were ArchiMed's $1.2 billion buyout of Natus Medical, a neurology-focused medtech company, and Blackstone's exit of Apria to Owens & Minor for $1.6 billion. Lastly, while strategic deal volume and value are down as well, medtech corporate M&A made up more of the deal activity in 2022 (around 15% in 2021 vs. roughly 20% in 2022).

Recovery is certain, but timing is not

North America healthcare private equity activity has trended upward since the 2008 financial crisis. While deal volume and value might have been down in 2022 compared with 2021, the volume of activity in the second half of last year provides reasons to remain encouraged: Even with the highest interest rates since 2008, there were still more than 60 deals in the second half of 2022, compared with an average 80 deals in the second halves of 2018, 2019, 2020, and 2021.

Over the long term, we are confident that North America healthcare investing will continue to perform well. Total healthcare expenditure in North America historically has grown every year, even during recessions. Furthermore, returns on assets acquired during a downturn are generally higher than assets purchased in the year prior. In North America, healthcare activity rebounded to near prerecession levels in 2010, less than two years into the recovery from the financial crisis. Recovery in North American healthcare private equity deal activity is certain, but timing depends on how several macro factors evolve. The biggest roadblock today is debt availability. Once the credit markets ease up, we expect a strong recovery.



Geography Trends

Europe: Healthcare Private Equity's First Six Months Flattened by Weak Second Half

Activity flagged in the latter half of the year in the face of macro woes.

At a Glance

- The first half of 2022 saw near-record levels of buyout activity, but deal numbers and values fell sharply in the second half as macroeconomic challenges mounted.
- Biopharma and related services deal value enjoyed a record year, demonstrating impressive breadth of coverage.
- Deal volume in retail health and services to providers remained robust as the segment continues to mature.
- We expect private equity to gravitate toward opportunities for operational improvement and assets with strong technological differentiation.

The first half of 2022 was one of the best on record for healthcare private equity in Europe. Buyout volume in the first half upheld the record pace set in 2021, with nine deals in excess of $1 billion, accounting for three-quarters of the $25.3 billion in disclosed deal value announced in 2022.

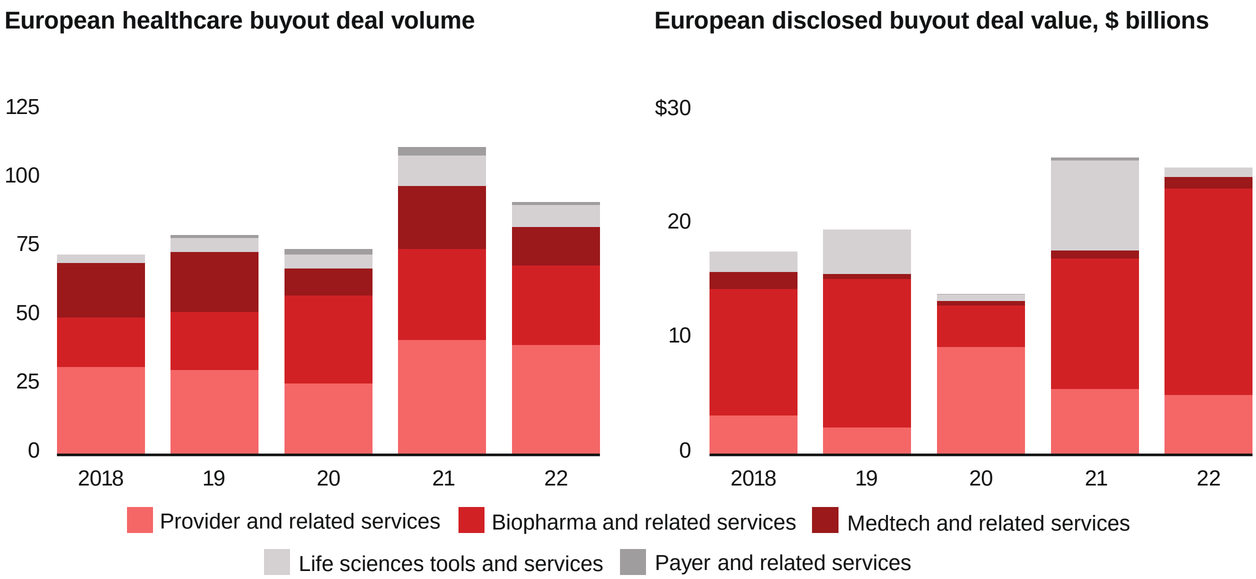
The second half of the year, however, told a very different tale as the impact of global events made itself felt. The same macroeconomic trends affecting other regions—uncertainty in the wake of Russia's invasion of Ukraine, rising inflation, tight credit markets, taut healthcare labor markets, and depressed public equity markets—hurt European buyout activity. As a result, there were far fewer large ($500 million-plus) buyout deals, and total disclosed deal value for the region amounted to roughly $3 billion.

Biopharma and related services: record year in deal value

The biopharma and related services sector, historically, has been a key driver of disclosed European buyout deal value. In 2022, the sector posted record numbers, representing more than 70% of disclosed deal value *(see Figure 1)*. Sector breadth impressed equally, with transactions that ranged from high-end science to generics to over-the-counter drugs.

Services continued to be an important biopharma subsector, with multiple distribution and contract development and manufacturing organization (CDMO) assets transacting. The largest CDMO deal of the year was Astorg Partners' acquisition of CordenPharma, a producer of active pharmaceutical ingredients (APIs), excipients, drug products, and associated packaging services (about $2.6 billion). Notable distribution deals included EQT and Mubadala's acquisition of Envirotainer, an air-transportation solution for temperature-sensitive pharmaceuticals (around $3 billion). Similar to 2021, there were only a few healthcare information technology deals in the sector, the most prominent of which was

Figure 1: European retail health (provider and related services sector) and biopharma and related services sectors proved robust in deal volume and value



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Sources: Dealogic; AVCJ; Bain analysis

Warburg Pincus and Mubadala's acquisition of Informa's Pharma Intelligence business (rebranded as Citeline) for approximately $2.6 billion. Norstella, which is backed by Hg Capital, Welsh, Carson, Anderson & Stowe, and Warburg Pincus, ultimately added Citeline to its pharmaceutical technology platform via merger.

Several factors led to biopharma and related services' record numbers in 2022. First, European biopharma investors continued to have access to a pool of mature, non-PE-owned assets; in 2022, over 40% of sector deals were private-to-sponsor transactions. For example, Goldman Sachs bought a majority stake in leading specialty pharmaceutical company Norgine following more than 110 years of family ownership.

Second, sponsors built expertise in biopharma and life sciences, and funds continued to become more specialized around the sector. This capability allowed biopharma-focused funds to grow more comfortable in understanding their risk exposure. For example, life-sciences-focused investor GHO Capital Partners invested in RoslinCT, an autologous and allogeneic cell therapy CDMO based in the UK.

Large funds interested in biopharma and related services assets are starting to take notice of smaller midcap funds whose primary assets are ready to reenter the market.

Third, earlier stage life sciences investments are beginning to pick up traction in the region. Carlyle acquired Abingworth and created a dedicated operating company, Launch Therapeutics, to create a life sciences investing platform. EQT completed its acquisition of LSP and launched it under a new name: EQT Life Sciences. Large funds interested in biopharma and related services assets are starting to take notice of smaller midcap funds whose primary assets are ready to reenter the market.

Finally, the European biopharma market benefited from the region's favorable dynamics regarding generic pharmaceuticals. Investors who are able to understand and underwrite country-specific regulatory and reimbursement models can find assets with strong country go-to-market capabilities allowing them to have sustainable 20%–30% EBITDA margins. TPG played into this trend with its acquisition of DOC Generici.

Deal volume in retail health and services to providers remained robust as the segment matures

The majority of the provider and related services sector in Europe was composed of retail health deals, followed by healthcare information technology and other services. A proliferation of smaller deals made it the largest sector by volume in Europe, driving overall deal count numbers for the region.

Retail health accounted for 2 of the region's top 10 deals by value—the only two nonbiopharma deals that made the list. Spanish fertility clinic chain IVIRMA Global was acquired by KKR for roughly $3.2 billion. Affidea, an advanced diagnostics, outpatient, and cancer-care services provider, was acquired by Groupe Bruxelles Lambert for around $1.1 billion.

Outside of these megadeals, roll-up activity in retail health persisted. Retail health returns over the past decade have been driven by revenue growth, and roll-up activity is a proven way to buy growth. For example: Innova Capital continued to consolidate the Polish dental sector with the purchase of two dental clinic chains in 2022, Medicadent and Dentaurus.

We expect PE to gravitate toward opportunities for operational improvement and assets with strong technological differentiation

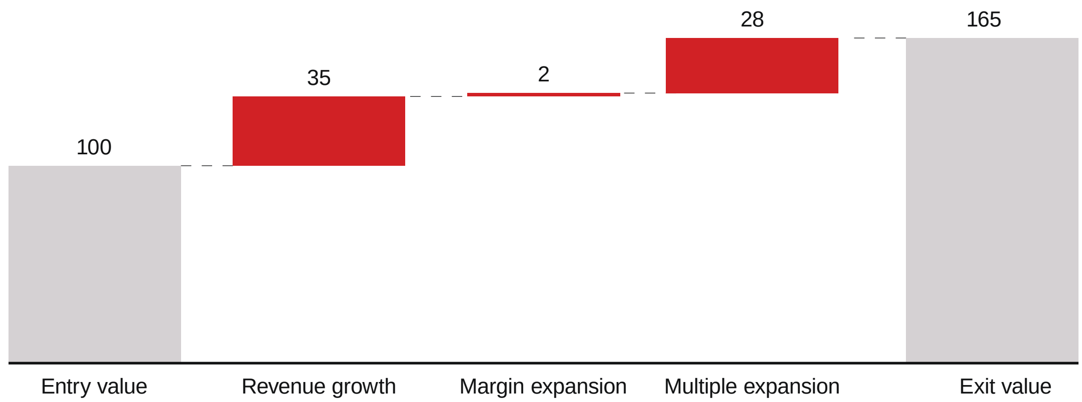
Our analysis of deal returns indicates that European healthcare private equity (HCPE) investors have relied on revenue growth and multiple expansion to drive returns over the past decade *(see Figure 2)*. In contrast, margin expansion has not been a meaningful contributor to investor returns. Within the region years of 2010 to 2021, revenue growth was responsible for 54% of healthcare private equity value created, multiple expansion was responsible for 43%, and margin expansion only 3%.

Within the region years of 2010 to 2021, revenue growth was responsible for 54% of healthcare private equity value created, multiple expansion was responsible for 43%, and margin expansion only 3%.

Moving forward, these value creation levers may be challenged in certain healthcare sectors in Europe. First, the increased cost of borrowing will make revenue growth through M&A activity more challenging. Second, wage inflation and the inability to pass on rising costs to customers threaten to constrain margin expansion in the near term. Third, overall valuations for public listings in the

Figure 2: Revenue growth and multiple expansion boosted European deal returns

Median European healthcare value creation, entry years 2010–21 (indexed)



	Revenue growth	Margin expansion	Multiple expansion
Multiple on enterprise value at entry	0.35	0.02	0.28
Percentage of value created	54%	3%	43%

Notes: Median value creation index for healthcare deals includes buyout and growth deals; fully and partially realized; all sizes; Europe-based; healthcare sector; year of entry 2010–21; all figures calculated in US dollars
Source: DealEdge powered by CEPRES data (N=134)

market have decreased, making the multiple expansion story more difficult for investors to count on. One sector, in our view, that will be particularly affected by these trends is provider and related services—specifically retail health. Inorganic revenue growth from M&A will slow while government-regulated pricing becomes increasingly insufficient to keep pace with the rapidly increasing costs of labor. Additionally, for those companies that charge customers out of pocket, competitive pressures will make achieving price increases progressively more difficult. These factors are likely to impact retail health valuations and deal activity in the short term.

However, these same macro conditions will create pockets of opportunity. Winning private equity firms will be prepared to actively contribute to steering management teams toward operational efficiency. Within the European healthcare private equity industry, we predict that margin expansion will gain share in terms of percentage of HCPE value created in the region. At the same time, assets with true technical differentiation will be less affected by adverse market conditions and may be better shielded from near-term multiple compression.

Geography Trends

Asia-Pacific: Growing Signs of Healthcare Private Equity Strength and Maturity

Total disclosed regional deal value maintained 2021's record pace.

At a Glance

- Signs of strength in Asia-Pacific: Total disclosed deal value maintained 2021's record pace, with six deals in excess of $1 billion, five of them from the second half.
- While deal count fell from its 2021 high due to evolving market dynamics in China, Asia-Pacific—outside of China—had its best year yet in terms of deal count.
- Provider sector activity remained resilient thanks in part to the burgeoning deal market in India, while dealmaking in biopharma and medtech was more constrained.
- Looking ahead, we expect investor interest in Asia-Pacific healthcare private equity to stay strong as an emerging pool of investable assets will continue to draw interest from large funds.

Private equity investments in the Asia-Pacific region continued their strong multiyear growth trajectory in 2022. Total disclosed deal value reached over $19 billion for the year, surpassing the previous year's record. Large deals in Japan, India, South Korea, and Australia accounted for the majority of 2022 Asia-Pacific deal value, including six buyouts valued over $1 billion. Seven of the 10 largest deals were announced in the second half of the year, defying the "tale of two halves" narrative seen in North America and Europe. India in particular had an impressive year. Buyouts for assets based in India accounted for 4 of the 10 top deals *(see Figure 1)*. This strong regional activity is a testament to these markets coming of age with geographical breadth, opportunities across sectors, and, on average, check sizes continuing to grow.

Time will tell if 2022's busy second half is a sign of more to come in 2023. The record number of $1 billion buyouts in Asia-Pacific could be attributable to several factors. Dry powder continues to stand high, and there is meaningful demand for the underlying healthcare services across industry cycles. Five of the top 10 deals were sponsor-to-sponsor transactions, and these large trades between sponsors demonstrate the region's maturity and attraction to global megacap funds.

Outside of China, Asia-Pacific had its best year yet in terms of deal count and disclosed value

While 2022 generated impressive value numbers, total Asia-Pacific healthcare private equity deal count slowed in 2022 compared with prior years. The region also lost ground in terms of global share of buyout volume. Deal volume in Asia-Pacific reached 35% to 40% of global activity in 2020 and 2021, but was only around 25% of global volume in 2022.

Figure 1: Asia-Pacific saw six deals in excess of $1 billion, five of them in the second half of the year

Target	Target country	Acquirer(s)	Deal type	Sector description	Deal value, $ billions	Quarter
Evident *Olympus carve-out*	Japan	Bain Capital	Carve-out	Life sciences tools OEM	$3.1	Q3
Manipal Health	India	Temasek	Majority recapitalization	Hospital operator	2+	Q4
Medit	South Korea	MBK Partners	Sponsor-to-sponsor	Medtech products	2.0	Q4
iNova Pharmaceuticals	Australia	TPG Capital Asia, Pacific Equity Partners	Sponsor-to-sponsor	Biopharma manufacturer	1.4	Q3
Max Healthcare	India	GIC and others	Sponsor-to-sponsor	Hospital operator	1.2	Q3
CitiusTech	India	Bain Capital	Sponsor-to-sponsor	Provider IT	1+	Q2
Suven Pharmaceuticals	India	Advent International	Public-to-private	Biopharma CDMO	0.8	Q4
Bushu Pharmaceuticals	Japan	KKR	Sponsor-to-sponsor	Biopharma CRO	0.7	Q4
Stockland Retirement Living	Australia	EQT Infrastructure	Private-to-sponsor	Senior care	0.7	Q1
Classys	South Korea	Bain Capital	Public-to-private	Medtech products	0.5	Q1
Asia-Pacific top 10 healthcare buyout deal value 2022					$13	
Asia-Pacific total healthcare buyout deal value 2022					$19	
Top 10 as percentage of total					68%	

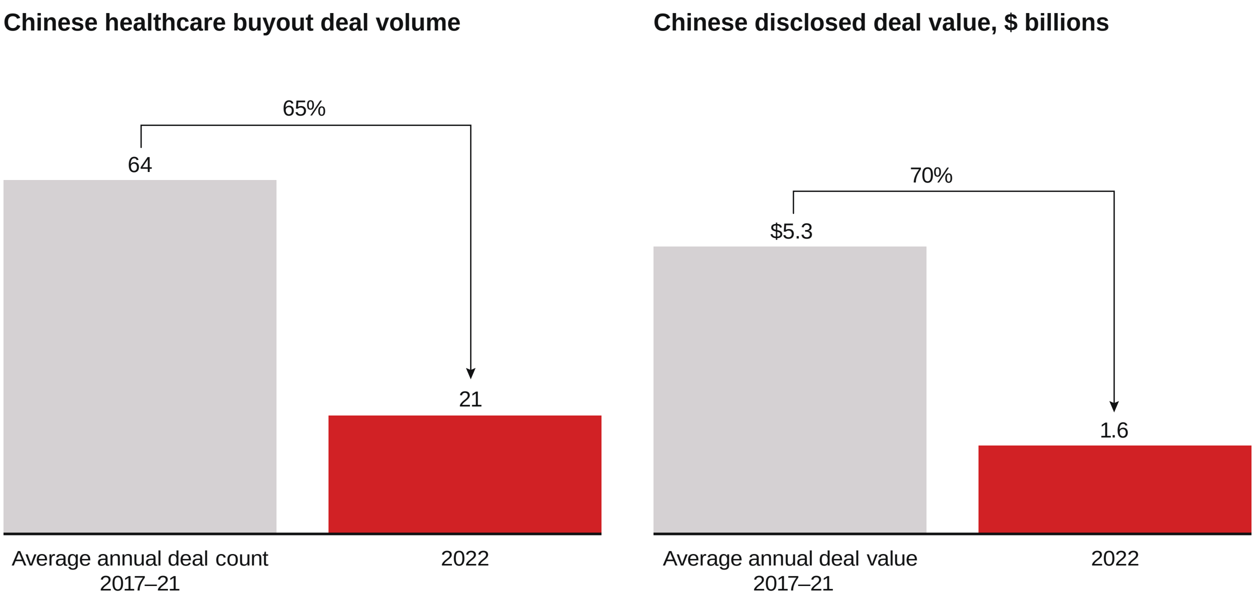
Notes: OEM is original equipment manufacturer; CDMO is contract development and manufacturing organization; CRO is contract research organization
Sources: Dealogic; AVCJ; Bain analysis

Evolving market dynamics in China decreased regional deal activity. The series of lockdowns driven by the country's zero-Covid policy and general geopolitical uncertainty led investors to sit on the sidelines. Slowing growth, evolving policy (including volume-based procurement for medtech devices), and a growing desire for pharma and medtech manufacturers to diversify supply chains played a role in China's 2022 market dynamics. The biopharma and related services sector, traditionally a major driver of buyout activity across the region, saw much lower deal volume in 2022 than the previous two years.

As a result of these trends, total annual deal value in China dropped from an average of around $5.3 billion across 2017–21, to $1.6 billion in 2022. Deal count in 2022 dropped by 67% from the 2017–21 average *(see Figure 2)*. Additionally, China's share of regional buyout deal value declined from an average of around 35% to 40% over the past 10 years, to about 7%–10% in 2022.

While total Asia-Pacific deal count was down for the year, outside of China the region had its best year ever in terms of deal count and disclosed value. This was driven mostly by activity in the provider sector.

Figure 2: Buyout activity in China slowed both on a volume and value basis



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Sources: Dealogic; AVCJ; Bain analysis

Provider sector activity remained resilient, while medtech and biopharma activity were more constrained

Activity in the provider sector proved resilient in 2022, nearly matching 2021 in terms of deal volume. Notably, the sector occupied around 23%–24% of deal volume share in 2020 and 2021 but surpassed 40% of deal volume share in 2022. India saw a particularly busy year for provider deals as demand for more accessible, high-quality care drove growth. Eleven of the 38 Asia-Pacific provider deals were for providers in India, the most of any country in the region. This activity was punctuated by two deals valued over $1 billion—both of which evidenced a trend of continued consolidation and expansion of traditional multispecialty hospitals. In the third quarter, GIC announced plans to acquire KKR's entire stake in Max Healthcare for roughly $1.2 billion. Late in the year, Temasek announced plans to raise its stake in Manipal Health to a majority share by buying out TPG and other privately held shares.

We are seeing a trend of sponsors supporting digital health natives to expand offline through the acquisition of physical sites of care.

Outside of India, there is a continued interest in specialty models. In Australia, Adamantem Capital invested to demerge CardioCo from KKR-backed GenesisCare, leaving GenesisCare to focus on oncology services. Additionally, we are seeing a trend of sponsors supporting digital health natives to expand offline through the acquisition of physical sites of care. In Singapore, a regional healthcare tech company called Doctor Anywhere (backed by Novo Holdings, Kamet Capital, and others) has already acquired Catalist-listed Asian Healthcare Specialists, an integrated healthcare provider in Singapore.

In contrast, biopharma deal volume was down in Asia-Pacific in 2022. The pullback was largely tied to market dynamics in China. Outside of China, biopharma deal activity persevered, and was responsible for 3 of the top 10 largest deals in the sector. Private equity investments in biopharma continue to focus on services and contract development. PAG, Samara Capital, and CX Partners acquired Optimus Group, which provides manufacturing, fabrication, and processing services for drugs. Hillhouse acquired George Clinical, which offers a full range of clinical trial services to biopharmaceutical customers. Advent International acquired Avra Laboratories as part of their larger strategy to build out an active pharmaceutical ingredients and contract development and manufacturing organization (CDMO) platform.

Businesses that participated in the medtech and life sciences tools sectors faced continuing supply chain issues. For medtech and life sciences tools original equipment manufacturers, persistent global commodity shortfalls made manufacturing difficult, and capital expenditure purchase cycles became longer due to limited availability of government funding. However, outside of China, buyout deal activity in both of these sectors improved in relation to 2021 numbers. Also, while activity was down, overall value for the medtech sector was up in relation to 2021, mostly due to the purchase of two large South Korean assets: MBK Partners purchased Medit for approximately $2 billion, and Bain Capital purchased Classys for more than $500 million. This marks the first time since 2019 that a medtech deal has made the top 10 deals list for the region.

An emerging pool of investable assets will draw interest from large funds

There are several reasons to remain optimistic in 2023, even with uncertainty still swirling in deal markets. Asia-Pacific-specific fund-raising is up, dry powder remains ample, and M&A in healthcare has created more large-cap targets. Several firms recently raised or are currently raising $1 billion-plus Asia-Pacific-specific funds that list healthcare as an explicit area of focus. These include Qiming Venture Partners Fund VIII ($2.5 billion) and Vivo Capital's RMB-denominated fund (targeting $1.5 billion). Healthcare-focused OrbiMed is also seeking $4.75 billion across three new funds that feature Asia-specific investment vehicles, and Quadria Capital may be raising close to $1 billion for its third healthcare-focused investment fund, betting on "market opportunities in Asia" as a vehicle for fund size growth.

There is an emerging pool of investable assets in Asia-Pacific, which could make 2023 an exciting year. Portfolio companies continue to resurface in the market, driving up deal value.

Additionally, there is an emerging pool of investable assets in Asia-Pacific, which could make 2023 an exciting year. Portfolio companies continue to resurface in the market, driving up deal value. Of the buyout deals that were $500 million-plus in 2018–19, more than 10 have yet to retransact. These assets are likely to return to market in the coming years, creating potential for private equity investors to step in.

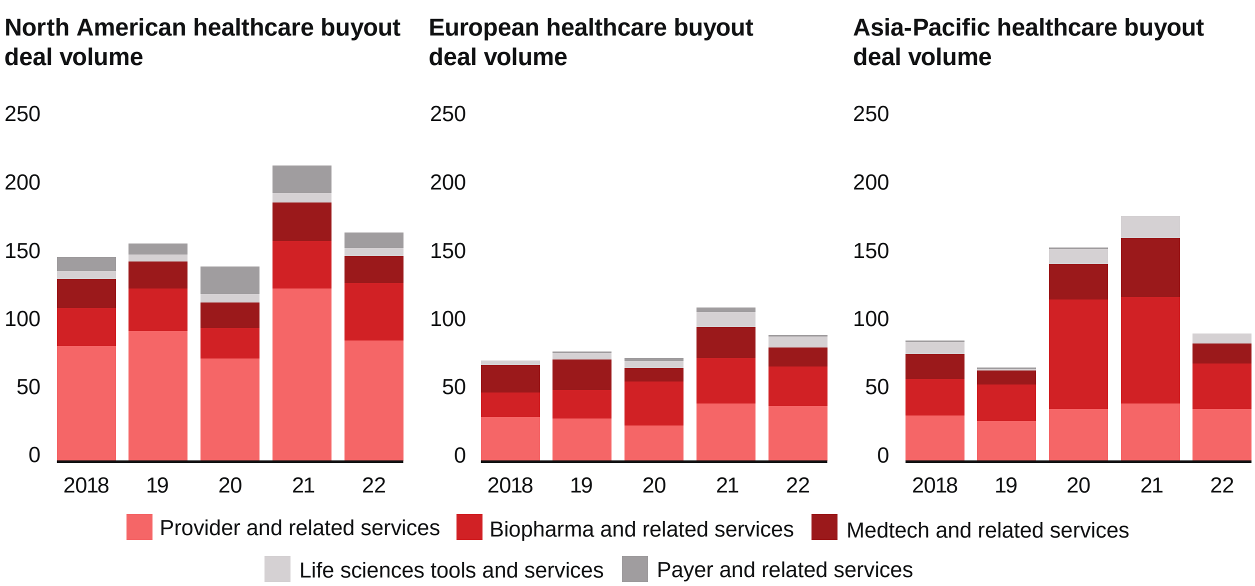
Finally, India and Southeast Asia continue to be markets to watch. In both regions, investors are likely to continue to bet on the large unmet healthcare need supporting the hospital sector. India will probably also see increased investments in pharma services and the application programming interface/CDMO space as global biopharma companies diversify their supply chains beyond China.

Sector Trends

Overview

Nearly every healthcare sector saw reduced buyout activity in 2022 compared with 2021. Notably, biopharma activity in North America stood out as the only sector where deal volume increased for any geography, mostly due to first-half activity. Private equity deal activity for European biopharma and related services assets was robust as well. Deal activity in Asia-Pacific for biopharma and medtech saw significant drops in 2022, mostly due to a pullback in activity in China. For the most part, healthcare deal activity concentration by geography and by sector was consistent with recent trends *(see Figure 1)*.

Figure 1: Apart from a slowdown in biopharma deal volume in Asia-Pacific, activity by sector and by geography was consistent with recent trends



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Sources: Dealogic; AVCJ; Bain analysis

Sector Trends

Biopharma: Healthcare Private Equity Scores a Record Year in Deal Value

Large buyouts in the first half of 2022 overcome the second-half slowdown.

At a Glance

- Following a strong first half, biopharma deal activity slowed in the second half of 2022, driven by macroeconomic factors and a mismatch in valuation expectations.
- Despite the slowdown in volume, deal value logged a record year, with private equity investors focusing buyout and add-on activity on pharma services.
- Private equity continues to shoulder “molecule risk” with growth-stage/crossover pharma, raising dedicated life sciences funds.
- As valuation expectations rebalance, we expect deal activity to recover, but the timing is uncertain.

Biopharma deal activity got off to a strong start in 2022 coming off record highs in 2021, but buyouts declined significantly in the back half as the overall deal market slowed. The first half of the year saw several large deals, particularly in Europe, where total disclosed buyout value surged to a record $18.3 billion for the year from $11.4 billion in 2021. Some of the largest European deals in biopharma and related services during the period were club deals. In the first quarter, Permira partnered with Abu Dhabi Investment Authority, Ampersand Capital Partners, and existing shareholders—the Marcucci family—to acquire Kedrion, which produces and distributes blood plasma-derived therapeutic products, for $2.5 billion. Investors merged Kedrion with BPL to create a global company for medicinal products derived from plasma. In the second quarter, EQT and Mubadala acquired Envirotainer, a provider of temperature-controlled air cargo containers—including –70°C containers for next-generation therapies—for $3 billion.

But deal activity came to a crawl in the latter half of the year as the biotech public market sell-off and other macroeconomic pressures came to bear. While sellers insisted on the high valuations seen in early 2022, buyers were made wary by the combination of tightened credit market conditions, concerns around biotech funding and its impact on services demand, and anticipation of near-term declines in valuations. In Asia-Pacific, activity in China was significantly lower, resulting in a sharp decline of regional transactions. While global biopharma deal volume declined to 104 in 2022 from 147 the prior year, disclosed deal value hit a record high at $35.1 billion, up from $32.9 billion in 2021, with at least 10 deals over $1 billion in the sector.

While sellers insisted on the high valuations seen in early 2022, buyers were made wary by the combination of tightened credit market conditions, concerns around biotech funding and its impact on services demand, and anticipation of near-term declines in valuations.

Pharma services still strong

Pharma services continued to be an area of high investor interest as a way to gain exposure to attractive pharma end markets without taking on scientific/pipeline risk. There was deal activity across the pharma value chain including in contract research organizations (CROs), contract development and manufacturing organizations (CDMOs), and commercialization services.

CROs continued to pique the interest of investors. New Mountain Capital bought Emmes for $800 million, which was an exit for Behrman Capital. Niche CROs were also met with attention, as highlighted by Great Point Partners' investment in biometrics-focused CRO Ephicacy and Essex Woodlands Management's acquisition of TherapeuticsMD, which develops products aimed at women's healthcare, with a therapeutic focus in family planning, reproductive health, and menopause management. Another notable deal around clinical stage services was Advarra, a provider of institutional review board (IRB) and other services for sponsors, CROs, and clinical trial sites, which traded hands from Genstar to Blackstone and CPP Investments in a deal valued at $5 billion, the largest healthcare buyout of the year.

Investors continued to gravitate toward CDMOs, with an interest in specialized and scaled assets. Astorg won the bid for CordenPharma, known for its lipid technologies used in mRNA vaccines, at $2.6 billion. This focus on owning scale companies was also evident with PharmaZell. Bridgepoint acquired PharmaZell back in 2020, and in 2022 launched Axplora from the merger of PharmaZell with Novasep. The scale provides Axplora the opportunity to support biopharma customers across the entire drug life cycle.

Further along the value chain, activity in commercialization services across traditional marketing/communications, market intelligence, and real-world data continued apace. At the start of the year, Novo Holdings acquired Medical Knowledge Group, an analytics-driven drug medical communication and marketing platform, for a reported $1.2 billion from Court Square Capital Partners and Aisling Capital. Warburg Pincus and Mubadala carved out Informa's Pharma Intelligence business (rebranded as Citeline) for $2.6 billion, later merging it with WCAS- and HG Capital-owned Norstella to provide end-to-end market intelligence solutions for clients. Frazier Healthcare Partners acquired Apollo Intelligence, a real-time data and insights company helping with early disease identification. Lastly, another notable investment in the space was Astorg's acquisition of OPEN Health Communications, a market access, medical communications, and health economics and outcomes research services provider from Amulet Capital Partners.

We expect to see more deals for software/services companies supporting clinical trials. The space is large and growing quickly, accelerated by clinical trial decentralization.

Going forward, we expect to see more deals for software/services companies supporting clinical trials. The space is large and growing quickly, accelerated by clinical trial decentralization. Additionally, it is complex, and there are more than 15 discrete product markets, with each product market having its own set of buying dynamics and different competitive sets. This creates significant opportunities for disruptive offerings and investment for financial investors in both best-in-breed product companies, and in multiproduct platforms. Recent examples of best-in-breed product company deals include Thoma Bravo's acquisition of Greenphire, a global leader in financial life-cycle management software for clinical trials, and Goldman Sachs's investment in 4G Clinical, a cutting-edge randomization and trial supply management company. Several multiproduct platforms received investments and/or underwent recapitalizations over the past few years, including Signant Health (backed by Genstar) and WCG (backed by Arsenal Capital Partners, Leonard Green & Partners, and Novo Holdings). While deal activity was limited in the space in 2022 outside of Blackstone and CPP Investments' acquisition of Advarra, we expect much more activity in 2023.

Growth of specialized vehicles for pharma product investments

The traditional private equity model tends to avoid pipeline risk associated with biopharma. Funds that do participate directly in pharma products typically pursue safer bets, such as investments in commercial stage platforms or in companies that make over-the-counter (OTC) products and generic medications. Examples of these kinds of deals from 2022 include TPG's acquisitions of iNova Pharmaceuticals (valued at $1.4 billion) and DOC Generici, and Goldman Sachs's acquisition of Netherlands-based Norgine.

However, in recent years a limited set of private equity investors have created or acquired specialized funds to invest in innovative pharma products through early-stage growth investments, crossover funding, and royalty deals. Blackstone's acquisition of Clarus to create Blackstone Life Sciences and Bain Capital's formation of Bain Capital Life Sciences are two examples of such funds. This trend continued in 2022 with notable private equity investors moving into life sciences both organically and through acquisition. The Carlyle Group acquired Abingworth and created a dedicated operating company, Launch Therapeutics, to create a life sciences investing platform. EQT completed its acquisition of LSP and launched it under a new name, EQT Life Sciences. TPG launched its Life Sciences Innovation Fund, J.P. Morgan launched a new life sciences private capital team, and Goldman Sachs raised a new $9.7 billion fund that counts life sciences as part of its mandate. These life sciences funds vary in their investment strategies as well as value-creation strategies but create a growing pool of private capital accessible to biopharma as an alternative to public markets.

Macro factors in tandem with uncertainty around late-stage biotech funding may go on throttling deal activity until there is a reset of valuation expectations.

Long-term bullish outlook but near-term uncertainty

We expect biopharma to continue to interest investors in 2023 as the underlying drivers of unmet need and innovation remain strong. However, the uncertainties that hampered deal activity in the second half of 2022 will persist for some time. Meanwhile, macro factors in tandem with uncertainty around late-stage biotech funding may go on throttling deal activity until there is a reset of valuation expectations.

Sector Trends

Providers: Healthcare Private Equity Narrows Its Deal Focus

Transactions targeted specialty physician practice management platforms, targeted care, and services that let providers "do more with less."

At a Glance

- Provider deals made up nearly half of deal volume and value in 2022, despite the downward trajectory in activity throughout the year.
- Global deal flow underscored new specialty physician practice management opportunities.
- Deal activity varied by geography. In the US, targeted value-based care drove buyouts; in Europe, retail health continued to propel activity; and in the Asia-Pacific region, the growth of hospital platforms continued.
- Service businesses that enable providers to "do more with less" drew activity.

Deal activity in 2022 saw a reversion to the mean following 2021's record highs, with provider-related deals accounting for 47% of healthcare buyout activity. 2022 began with a bang, with first-quarter activity almost on par with the first quarter of 2021. Volume, though, declined steeply starting in the second quarter, and the slowdown persisted throughout the year, with fourth-quarter deals roughly half that of the previous two quarters. Despite the sudden contraction and persistent labor concerns, provider activity in 2022 was the second highest in the past decade, with care delivery assets such as hospitals, ambulatory surgery centers, and physician offices accounting for more than half of all provider-related buyouts.

North America accounted for 53% of deal activity, defining many trends within the provider subsector, but was down 30% in terms of volume compared with 2021. Europe posed specific challenges both in terms of significant post-Covid pressures on the sector that were exacerbated by self-inflicted difficulties (such as Brexit in the UK) and avoided or delayed, but long overdue, reforms in markets such as Germany and France. Despite these challenges, deal volume in Europe was down just 5% compared with 2021, with 40 deals. Asia-Pacific was resilient as well, with 38 deals compared with 42 in 2021, driven by the continued trend toward high quality, specialized care.

Continued focus on physician practice management models

Tailwinds from ancillary opportunities and the resilience of buy-and-build models led to continued physician practice management (PPM) investment. This varied across and within geographies.

North America: Established specialties such as dermatology, ophthalmology, and gastroenterology attracted strong buyout activity. Concurrently, investment in specialty dental and cardiology rose.

In dermatology, Partners Group acquired Forefront Dermatology for $1.5 billion. In gastroenterology, Apollo Global Management facilitated a physician-led buyout of GI Alliance via its $785 million noncontrolling investment. There were notable exits as well, with Shore Capital exiting EyeSouth Partners to Olympus Partners after a five-year buy-and-build strategy that grew the ophthalmology chain from 12 practitioners to 270. In specialty dental, InTandem Capital Partners exited Paradigm Oral Health to BlackRock for more than $900 million and Thomas H. Lee Partners invested in Smile Doctors, joining Linden Capital Partners as a shareholder. Lastly, in cardiology, Webster Equity Partners' Cardiovascular Associates of America platform continued to expand, partnering with Southwest Cardiovascular Associates.

Europe: Investors focused on specialties such as women's health, ophthalmology, and radiology. Individual European localities moved at different speeds, with the exception of France, where fast-paced consolidation in veterinary, radiology, and dental has begun. In Europe, asset-light retail health chains are gradually emerging, and a new breed of chains that focus on operational efficiency as a value driver rather than self-pay will begin to take hold.

In women's health, Nordic Capital acquired CARE Fertility and KKR bought IVIRMA Global for $3.2 billion. In ophthalmology, Groupe Bruxelles Lambert (GBL) acquired a majority stake in Sanoptis, the second-largest ophthalmology services provider in Europe, with more than 250 facilities. GBL also acquired a majority stake in Affidea, a radiology provider, from B-FLEXION (formerly known as Waypoint Capital) for $1.7 billion. Also in radiology was EQT's joint acquisition of Meine Radiologie and Blikk, which EQT consolidated with Aleris to form evidia.

Asia-Pacific: Investors backed single and multispecialty providers given the large demand-supply mismatch for care. Other potential trends that bear watching include activity in residential care centers and veterinary medical practices.

Adamantem Capital carved out GenesisCare's cardiology business. In women's health, Kedaara Capital invested in Sadguru Healthcare Services' Oasis Fertility unit. Furthermore, there were a number of notable multispecialty provider deals. TPG exited India-based hospital operator Manipal Health as part of a transaction valuing the business at $2.1 billion. There were club investments in Max Healthcare for $1.2 billion and IMU Healthcare. Lastly, Everstone Group partially exited Sahyadri Hospitals to the Ontario Teachers' Pension Plan Board.

Specialty services such as home care, specialty pharma, and ambulatory infusion service providers continued to attract considerable interest in the US in 2022.

Enabling more tailored care delivery

Particularly in the US, care management aimed at specific populations gained momentum in 2022, accelerated by delivery model innovation, regulatory changes, payers' cost-containment efforts, and consumers' desire for convenience. This shift is exemplified in two areas:

Complex care populations

Specialty services such as home care, specialty pharma, and ambulatory infusion service providers continued to attract considerable interest in the US in 2022. Clayton Dubilier & Rice's acquisition of a majority stake in Gentiva Certified Healthcare for $2.8 billion underscores the effort to provide care closer to home. There were also two home health-related deals in Asia-Pacific potentially foreshadowing growth in other markets.

Within the specialty pharma space, there were two standouts focused on rare diseases, (1) Nautic Partners, the Vistria Group, and General Atlantic's acquisition of PANTHERx Rare, and (2) the Carlyle Group's investment alongside existing owner Consonance Capital, which rolled its equity, in Orsini Specialty Pharmacy.

Buyout activity within the infusion therapy space accelerated. Novo Holdings acquired KabaFusion, Ridgemont Equity Partners acquired American Outcomes Management, and InTandem Capital Partners merged two companies to form Vivo Infusion. While the business models vary, these deals demonstrate the increasing focus on specialty infusion and expansion of ambulatory care models.

Behavioral health services

We saw continued buyout activity in behavioral health, including age-specific services assets. Within children's behavioral health, KKR led a growth equity investment in Brightline, which provides virtual behavioral health services tailored to children and their families. Reflecting interest in the autism space, Charlesbank Capital Partners acquired Action Behavior Centers, an ABA therapy provider for children with autism, for a reported $840 million. On the other end of the age spectrum, Webster Equity Partners invested in Oceans Healthcare, which builds on its roots in geriatric behavioral health to provide both inpatient and outpatient care.

There are strong macro tailwinds behind investments in many pockets of behavioral health, most notably the supply gap and strong demand for behavioral health services. However, increasing valuations for behavioral health assets make buy-and-build plays more difficult, while labor shortages and the wage rate trend pose execution challenges. Investors should enter this space with eyes wide open, particularly in this macro context.

Resource optimization takes center stage

Given tight labor markets, service businesses that enable providers to "do more with less" maintained momentum. While much of the attention has been on healthcare information technology (HCIT) assets (see the chapters "Provider Information Technology: Mind the Gap" and "Healthcare IT: Two Very Different Half Years"), two other services also benefited from this focus: labor force management and revenue cycle management solutions.

Labor force management

Coming out of Covid, labor shortages fueled investments in traditional and innovative workforce management solutions. This was most notable in North America, where private equity sponsors played this trend from multiple angles, including locum tenens (such as H.I.G. Capital's acquisition of Barton & Associates), staffing outsourcing (The Pritzker Organization's acquisition of Epic Staffing Group), and travel nursing (One Equity Partners' acquisition of Prime Time Healthcare).

Revenue cycle management

Providers continue to outsource core revenue cycle functions to improve collections and cost savings. While this theme emerged across provider healthcare IT buyouts, it also holds for provider services. Notable deals in the revenue cycle management (RCM) services space include Berkshire Partners and Warburg Pincus's joint acquisition of Ensemble Health Partners and Veritas Capital's acquisition and subsequent merger of Coronis Health and MiraMed Global Services. Furthermore, at the end of 2021, Welsh, Carson, Anderson & Stowe brought together EnableComp and Argos Health, a revenue cycle platform specializing in the management and resolution of complex claims.

New models on the horizon

Despite headwinds from labor supply and inflation, we expect provider deal activity to remain a significant proportion of healthcare deals. Investors will continue to look for creative ways to compete within the subsector, for example placing bets within value-based care, investing in targeted care delivery models, and expanding next-gen PPMs to additional specialties.

In the US, next-generation primary care models like Oak Street Health continue to attract attention. As payers and providers become increasingly comfortable with value-based models, we expect to see continued investment in risk-bearing models across specialties beyond primary care and in segments beyond Medicare. Medicaid and commercial payers are earlier in their value-based care journey. In the past few years, we have seen companies like Cityblock Health and Vera Whole Health (which combined with Castlight in 2022) attract significant investment to expand value-based care to Medicaid and commercial populations. Serving Medicare, Medicaid, and commercial populations requires different models given differences in reimbursement rates and patient demographics. Opportunities exist for investors that can partner with organizations on the forefront of this shift to value (see the chapter "Value-Based Care: Opportunities Expand").

Opportunities exist for investors that can partner with organizations on the forefront of this shift to value.

In Europe, with several geographies catching up while others define new models beyond buy-and-build-driven consolidation, the retail health landscape has matured significantly. It now requires new investors to focus their value creation plans on realizing operational efficiencies and bringing the benefits of working in larger networks and of digitalization to their stakeholders.

Globally, provider IT and services businesses that support resource optimization and improve care delivery will continue to gain traction, both in the current macroeconomic climate and beyond. Wages in healthcare have increased faster than reimbursement rates. According to an analysis of data from Peterson-KFF, healthcare sector average weekly wages increased by 3.7% from January 2022 to November 2022, while the producer price index (PPI) for health services—which includes medical services paid for by commercial and government payers—increased only by 1.7%. Additionally, recent discussions in Washington about Medicare cuts continue raising concerns and generating pushback from providers and Medicare Advantage plans alike. While wage increases vary by setting and reimbursement rates vary by payer, providers will continue to focus on solutions that help improve profitability in the current environment.

Sector Trends

Payers: After Two Bumper Years, Healthcare Private Equity Payer Buyouts Grew Scarce

But payer services and technology, along with continued corporate deal activity, will lead to opportunities.

At a Glance

- Payer-related buyout activity declined in 2022.
- Deals reflect continued interest in technology and services businesses that perform administrative functions for payers.
- Payers identifying the right mix of outsourcing, acquiring, and partnering with related services and technology businesses will create competition and opportunity for private equity firms.
- Venture investment in innovative payer-related technology and services businesses suggests places to compete for private equity.

Following an active 2021, payer-related buyouts cooled in 2022, with the number of buyouts dropping from 24 to 12 and disclosed deal value declining from $15.3 billion to $2.2 billion, made up entirely by TPG's acquisition of ClaimsXten. The stark divide in part reflects 2021's outlier performance, as the number of payer-related buyouts in 2021 was roughly double that of any year between 2013 and 2019. Large deals in 2021 drove disclosed deal value to a record high, with the two biggest deals worth a combined $11.3 billion—alone enough to make 2021 the all-time best year for deal value.

While 2021 was a tough act to follow, other factors contributed to the drop in payer-related buyouts in 2022. Tight credit conditions limited financing across private equity, and antitrust litigation created uncertainty for payer-related deals specifically. Most of the drop, though, can be attributed to a scarcity of payer-related assets owing to the structure of the payer industry and the high deal volume of the previous two years.

Despite the smaller selection of deals, we highlight two trends relevant for private equity: first, the continued interest in payer services and technology, and second, corporate deal activity creating both competition and opportunities.

Continued interest in payer services and technology

Last year's report highlighted services and technology that can help payers and health services companies contain costs. Private equity activity in 2022 continued to reflect this focus.

Buyout activity was concentrated in point solutions with more immediate expected returns rather than longer-term plays around health outcomes. Private equity showed continued interest in services and technology that allow payers and health services companies to outsource certain administrative functions. ClaimsXten, for instance, offers claims management technology and analytics tools that help payers reduce appeals, generate administrative savings, and improve payment accuracy. TPG acquired the business for $2.2 billion in a carve-out from Change Healthcare after Optum merged with Change Healthcare.

We anticipate that businesses helping payers to automate and improve efficiency will remain attractive to private equity as payers continue to invest in services and technology that enable resource optimization. During a downturn, payers are especially likely to prioritize solutions that have an immediate and measurable return on investment. Sponsors should keep this top of mind as they make new investments and manage existing portfolio companies.

Large payers create competition and opportunities for private equity

For years, large payers have been evolving into diversified health services companies. They continue to fine-tune the right mix of outsourcing, acquisitions, and partnerships with payer-related services and technology. On the one hand, corporate deal activity leads to increased competition for limited payer-related assets. On the other hand, it creates opportunities for private equity in the form of carve-outs and exit options.

Within the payer space in 2022, corporate buyers made 3.7 acquisitions for every sponsor buyout. This represents a significant jump from 2021, when corporate buyers made just under 1.6 acquisitions for every sponsor buyout. The increase in strategic activity means that sponsors face greater competition for scale assets and potential tuck-in acquisition targets. The interest in specialty insurance companies, which enable carriers to manage supplemental and noncore medical benefits more efficiently, illustrates this well. Sun Life Financial acquired DentaQuest, a provider of supplementary dental benefits, for $2.5 billion toward the end of 2021. A few months later, Welsh, Carson, Anderson & Stowe acquired a majority stake in Liberty Dental Plan, a competing provider of supplementary dental benefits, alongside Anthem (now part of Elevance Health).

Alternatively, corporate activity can create opportunities for private equity in the form of carve-outs. A notable example from 2022 was Francisco Partners' acquisition of bswift from CVS Health. This carve-out will allow the provider of benefits technology to reach customers beyond those it acquired through the networks of Aetna and CVS Health.

Consistent with prior years, corporate buyers created a compelling exit pathway for some private equity-backed payer-related assets. New Mountain Capital's sale of Signify Health to CVS Health in a deal worth roughly $8 billion was the most notable example. But as the line between payers and providers blurs, selling to large payers proved to be an exit option for more than just payer-related assets. As UnitedHealth Group's Optum spent big on provider groups, it acquired Healthcare Associates of Texas for $300 million from Webster Equity Partners. Optum also bought Refresh Mental Health, a behavioral health provider group, providing an exit for Kelso & Company.

Growth equity and venture capital investments support the focus on services and tech, with large financing rounds falling along the same lines as payer-related buyouts.

A more active deal landscape on the horizon

We expect the focus on services and tech to remain a theme in the coming years as growth assets reach critical points of scale. Growth equity and venture capital investments support this, with large financing rounds falling along the same lines as payer-related buyouts. Nayya, a benefits administration platform, raised $55 million in an investment round led by ICONIQ Growth. General Atlantic led an investment round in NationsBenefits, a supplementary benefits and member engagement business. Distribution was also of interest to investors, with both BEA Group and AmeriLife Group successfully attracting investment.

We believe investors will need to be opportunistic as assets become available, particularly those that align with the current sector themes. Solutions with a demonstrated ability to improve patient outcomes or reduce costs for payers remain compelling. Sponsors making new investments or managing existing investments in this space should keep this concern top of mind, as differentiated businesses with a demonstrable return on investment will be more likely to produce strong returns.

Medtech: Healthcare Private Equity Deals Bounced Back to End 2022

Activity sputtered in the third quarter but recovered by year-end.

At a Glance

- Medtech deal activity returned to earth from 2021's astronomical levels, and while the third quarter saw little movement, activity picked up in the last quarter of the year.
- While sponsors have focused in the past on services and contract organizations, 2022 saw activity around technically differentiated device makers.
- Medical aesthetics investments point to the long-term trend in consumer wellness and healthy aging products.
- The changing OEM landscape creates ways to compete in 2023: Private equity sponsors can invest in medtech products via niche OEMs and corporate carve-outs, or in businesses outsourcing services to the largest medtech OEMs.

Following a record-breaking 2021, private equity deal activity in the first half returned to earth, falling back in line with historical averages. Deal volume declined sharply in the third quarter as macroeconomic challenges intensified, and the third quarter saw the lowest quarterly deal count in medtech in the past five years. Unlike other sectors, though, medical technology deal activity bounced back by the end of the year with 4 of the top 10 medtech buyouts by disclosed deal value occurring in the final quarter.

The contraction in buyout activity in the third quarter was particularly noteworthy in Asia-Pacific deal volumes, with a dramatic pullback in China. Outside of China, activity in the region remained relatively stable. As discussed in the chapter "Asia-Pacific: Growing Signs of Healthcare Private Equity Strength and Maturity," the regional downturn was driven primarily by adverse market conditions in China, including investors waiting for clarity on zero-Covid policies, slowing growth, tech trade embargoes, the expansion of China's value-based pricing program, and a growing desire to diversify supply chains.

While activity in some sectors is US-centric, medtech continues to see broad global exposure. For example, only 2 of the top 10 deals were for North American targets in 2022. The largest deal of the year was MBK Partners' acquisition of South Korea's Medit, which was announced in the fourth quarter. Medit is known as a low-cost provider of 3-D dental scanners, but its latest products have features that rival high-end designs.

Deal activity concentrated in OEMs with differentiated technology

In 2022, 9 of the 10 largest deals went to device original equipment manufacturers (OEMs). In most cases, these companies provide best-in-class products with strong technological barriers. This theme is highlighted in several large deals:

- In the fourth quarter, MBK Partners acquired Medit, the South Korea-based maker of 3-D dental scanners, for $2 billion. Medit is known for its best-in-class 3-D dental scanners.
- In the second quarter, ArchiMed took US-based Natus Medical private for $1.1 billion. Natus provides high-end medical screening products such as hearing tests, eye-imaging devices, and electroencephalogram (EEG) devices that are often considered the gold standard.
- In the first quarter, Warburg Pincus invested over $200 million in Micro Life Sciences, the parent of India's largest medical devices company, Meril Group, valuing the company at a reported $1.8 billion. The medical device OEM focuses on best-in-class vascular intervention products, orthopedic implants, diagnostics, and surgical equipment.
- In the fourth quarter, Nordic Capital invested $300 million for a 25% stake in the Israel-based Equashield. Equashield provides a branded, high-end compounding robot, and its closed system offers branded consumables compatible only with its proprietary design.

Some of the companies listed above have patented technology or offer first-of-its-kind FDA-approved technology. This technical differentiation creates a high barrier for competitors, and these types of companies are well positioned to weather a potential downturn—especially if demand from the end markets these assets serve does not depend on discretionary spending.

Medical aesthetics OEM activity plays on growing aesthetics interest

Aesthetic device companies featured more prominently in 2022 than in the past. While aesthetic device companies saw little or no deal activity in 2020 or 2021, there were multiple deals for medical aesthetic assets, including several large deals. Moreover, dealmaking was not limited to the first half but persisted throughout the year.

The aesthetic device deals suggest investor confidence in the long-term allure of the aesthetics end market.

- In the fourth quarter, Bridgepoint Group acquired Laboratoires Vivacy, a medical aesthetics company based in France, for roughly $830 million. The company provides high-end injectable devices related to antiaging, ophthalmology, rheumatology, and gynecology. The deal provides an exit for TA Associates.

- In the first quarter, Bain Capital acquired a controlling stake in the publicly listed South Korean company Classys for over $500 million. Classys, a medical aesthetics OEM, is known for devices that enable fat-reduction procedures and facelifts.

- In the first quarter, Charme Capital Partners and Miura Partners acquired INDIBA, based in Spain, for more than $100 million. INDIBA sells a product for active cell therapy that shrinks fat cells and improves skin elasticity. The deal provides an exit for Magnum Capital Industrial Partners.

The medical aesthetics space will be interesting to watch going forward. On one hand, these assets may face headwinds in a potential downturn if demand slows for these procedures. On the other hand, these services may cater to a demographic whose discretionary spending is less impacted during recessions. Regardless of the short-term considerations, there are long-term tailwinds to aesthetic services including shifting consumer attitudes about wellness and healthy aging, growing awareness of products, and expanded access to services.

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The changing OEM landscape creates opportunities for private equity

For years, medtech original equipment manufacturers have been stratified between the large, diversified players and their much smaller peers. In a list of the 100 largest publicly traded medtech companies, Medtronic, No. 1 on the list with over $31 billion in revenue, is more than 130 times larger than Cardiovascular Systems, the No. 100 company. Historically, these larger OEMs have leveraged their scale to enable long-standing, sticky relationships with large health systems, and created broad product portfolios to meet those customers' needs.

That said, the healthcare landscape is changing, and OEMs are adapting in several ways. Public medtech companies cite several trends that are driving changes to their operations. These trends suggest ways for private equity to participate in medtech in 2023 and beyond.

Pursuing niche OEM opportunities

Much of the medtech buyout activity from 2022 focused on OEMs that served niche applications, ranging from cardiology to med-aesthetics to dental imaging. Given the momentum behind this theme that carried into Q4, we expect to see continued opportunities for private equity sponsors to invest behind smaller OEMs serving end markets with favorable tailwinds.

Shifting the site of care closer to the patient

Medtronic's president of the Americas region recently said, "All of us have realized there is going to be a pivot where the site of care is going to be much closer to the patient's home." As sites of care continue to shift to patient homes and ambulatory surgery centers, there are opportunities to buy out assets that enable care delivery in lower-cost sites, such as remote patient monitoring.

Outsourcing the value chain

OEMs are increasingly outsourcing parts of their value chain, from research to manufacturing. Contract manufacturing organizations and contract development and manufacturing organizations are poised to be a bright spot as OEMs look to reduce the time and cost required to bring products to market, in addition to seeking out specialty manufacturing capabilities that OEMs typically lack.

Making supply chains more diversified and resilient

As supply chains remain tangled, we anticipate continued appetite for assets that enable supply chain resilience. OEMs are interested in diversifying their supply chains to more regions, so suppliers outside of China may be particularly appealing.

Finding ways to play corporate portfolio realignment

In 2022, several major medtech companies reconsidered their portfolios and made plans to spin off businesses. These announcements include the following:

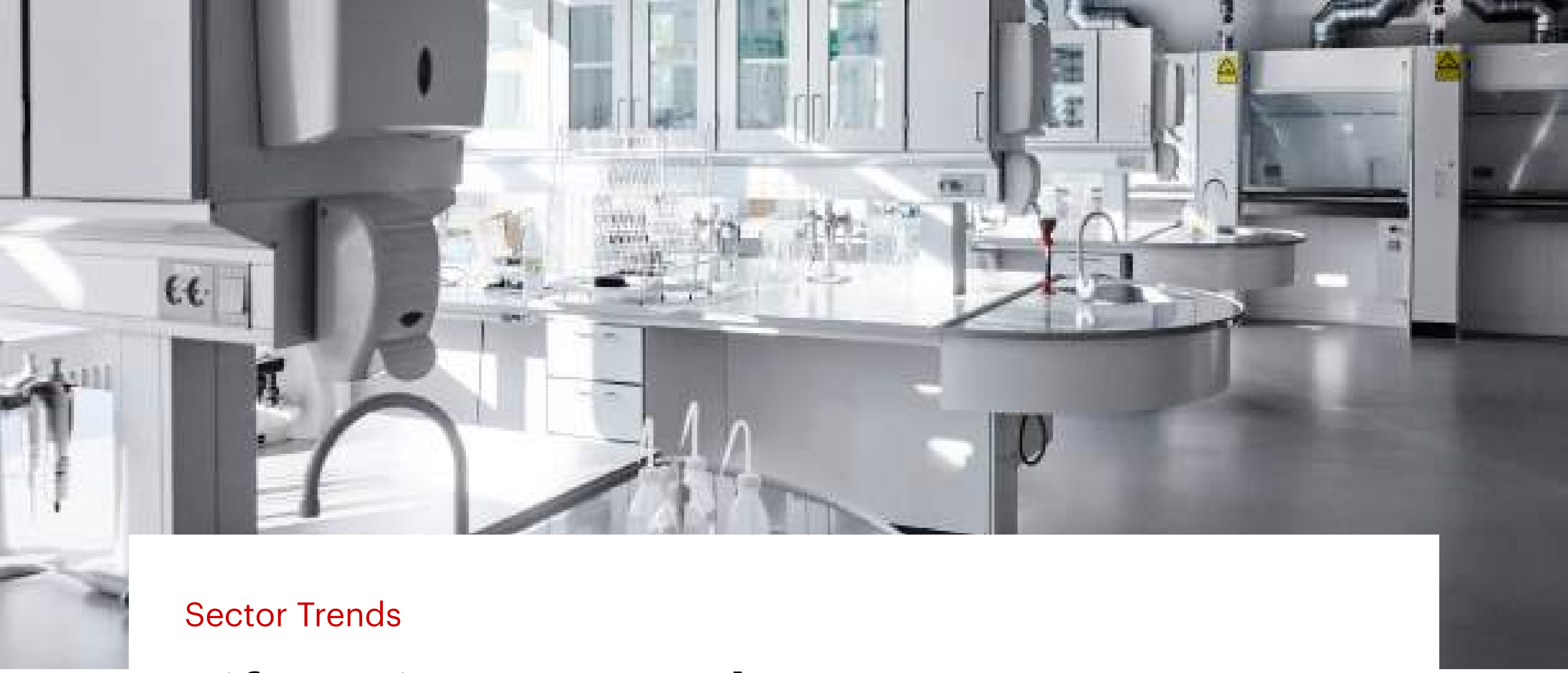
- 3M plans to spin off its $8.6 billion healthcare division that manufactures bandages, surgical supplies, and biopharmaceuticals.
- GE completed its spin-off of its healthcare business, which offers a range of products focused mostly on medical diagnostic imaging and was valued at nearly $30 billion on its IPO date.
- Johnson & Johnson plans to spin off its consumer health unit, which generated $14.6 billion in revenue in 2021, into a new company called Kenvue.
- Medtronic plans to spin off at least two units—patient monitoring and respiratory interventions—that contributed $2.2 billion in revenue in its 2022 fiscal year.

Portfolio realignment presents both buying and selling opportunities for private equity. On one hand, some of the newly created spin-offs may be small enough for a take-private play. Coverage from Bloomberg suggests both corporate sponsors and private equity funds are evaluating the Medtronic spin-offs for acquisition. Depending on the state of the new offerings' finances, certain funds may have a more tailored value-creation plan to optimize profitability. However, portfolio realignment may also present exit opportunities. Johnson & Johnson and Medtronic have both continued to be acquisitive of companies closer to their medtech core even as they spin off noncore assets.

While healthcare has historically been resilient during recessions, medtech is not insulated. As demonstrated during the 2008–09 recession, large equipment manufacturers are likely to be impacted as hospitals prioritize capital equipment repairs over replacement to reduce spending. In the event of a recession, history suggests we could see a bifurcated deal market, with some megadeal carve-outs accompanied by a softness in some subsectors.

In the event of a recession, history suggests we could see a bifurcated deal market, with some megadeal carve-outs accompanied by a softness in some subsectors.

In 2023, private equity sponsors will be likely to participate in the opportunities created by corporate activity as public medtech OEMs hone their product mix, reduce their manufacturing footprint, and optimize their outsourcing strategies. We expect sponsor-driven activity in medtech to rebound as sponsors find creative ways to play to their strengths.



Sector Trends

Life Sciences Tools: Carve-outs, Mature Assets, and Innovative Growth Draw Interest

Despite a decline in volume, the long-term trend in transactions continues to be healthy.

At a Glance

- The life sciences tools sector saw 21 deals (compared with 34 in 2021), and disclosed deal value was $8.2 billion (compared with $11.1 billion in 2021).
- Carve-outs of large, mature assets as well as small, innovative growth stories drew investors' interest.
- Diagnostics and lab services show the progress in the "democratization" of diagnostics and global growth of more complex, genomic tests.

Life sciences tools (LST) and diagnostics deal volume in the first half of the year was consistent with second-half deal activity in 2021, which averaged five to six deals per quarter. And while the second half of the year saw 10 deals, only two of those took place in the final quarter. Deals were split fairly evenly among major regions, with each region seeing between six and eight deals for the year. However, North America and Asia-Pacific together made up 90% of disclosed deal value. Globally, deal volume in 2022 declined to 21 from 34 in 2021. Disclosed deal value declined to $8.2 billion in 2022 from $11.1 billion the previous year. Deal volume in 2021 in part was driven by Covid-related dynamics, and while 2022 volumes declined from those levels, the long-term trend in transactions continues to be strong.

Clear value levers and path to exit in life sciences tools

Large life sciences tools companies have become widely diversified. Consequently, many companies are looking to simplify their business to shift focus toward areas of growth within their portfolio. This creates an opportunity for private equity to acquire, right-size, and commercially reinvigorate mature businesses. In 2022, this trend played out in two large carve-outs of reagents, instruments, consumables, and services companies. Bain Capital acquired life sciences microscopes maker Evident from Olympus for $3.1 billion, while New Mountain Capital acquired PerkinElmer's Applied, Food, and Enterprise Services businesses for $2.5 billion.

Many companies are looking to simplify their business to shift focus toward areas of growth within their portfolio. This creates an opportunity for private equity to acquire, right-size, and commercially reinvigorate mature businesses.

Investors also looked to smaller, innovative LST assets, focusing on companies with differentiated products, channels, and customer relationships in high-growth areas of research and development (R&D) that could be grown organically through commercial excellence programs, or serve as platforms for product and portfolio expansion via bolt-on acquisitions. There was strong activity in laboratory automation and sample-focused workflows, with a continued emphasis on genomic applications: EQT acquired SPT Labtech, a manufacturer of precision, automated liquid handling devices for sequencing and other genomic testing; Covaris, which sells a variety of instruments, consumables, kits, and reagents for sample preparation in next-generation sequencing and other testing applications, was acquired by New Mountain Capital; and Ampersand Capital Partners made an investment in BioEcho Life Sciences, a European company focused on nucleic acid extraction products. Lastly, Argosy Healthcare Partners completed its recapitalization and merger of automated laboratory tool companies Hudson Robotics and Art Robbins Instruments.

All of these deals reflect the increasing reliance on genomic tools in drug discovery and biomedical research, and are expected to be areas of strong interest for private equity investors.

Diagnostics and lab services highlight global opportunities

There were fewer transactions in 2022 in diagnostics and lab services, as volume declined from 12 in 2021 to 9 in 2022. However, diagnostics and lab services made up around 43% of deals in LST in 2022, up from about 35% the previous year. In diagnostics, as is the case in LST, interest is high in genomic testing and other technologies that may support faster, more accurate health assessments. SJL Partners and SD Biosensor completed a take-private transaction of Meridian Bioscience, a manufacturer of genomic and other specialized testing instruments; the company also sells a portfolio of LST products, giving it multiple vectors for growth.

In lab services, continued progress toward the "democratization" of more advanced diagnostics in less mature economies than the US and Europe was evident. India-based Redcliffe Lifetech, which provides clinical and molecular tests, received growth investments led by LeapFrog Investments, with participation from HealthQuad and others; OrbiMed invested in LifeWell, a new company created through the merger of Indian biotechnology company LifeCell's diagnostics division and health tech start-up MFine. Elsewhere in Asia-Pacific, Luha Private Equity invested in South Korean company LabGenomics, which sells a variety of genomic and sequencing products, as well as directly supplies next-generation sequencing testing services locally.

The growth in precision medicine and faster or cheaper sequencing technology is likely to continue to power interest in companies both directly and indirectly serving genomic diagnostics.

High bar to win prized assets

Businesses across the life sciences tools sector face different outlooks in 2023. LST should weather the recession well given a diversified end-market and sustained demand for R&D driving the need for instruments, consumables, reagents, and supporting services. But diagnostic companies that sell into hospital labs may face some headwinds in 2023 as hospitals face labor shortages and inflation costs that are likely to challenge profit margins and delay investment in new capital equipment; we expect lab services to continue to recover from the effects of Covid on their testing mix and volume.

We also expect large strategics like Thermo Fisher Scientific and Danaher to be active acquirers in this space. These major companies all have cash on hand: Thermo Fisher, Danaher, Quest Diagnostics, Labcorp, and PerkinElmer have more than $15 billion in combined cash reserves, and all have been active buyers in the past. Competition for assets in high-growth market segments, such as bioproduction, or specifically the manufacture of cell and gene therapies, is likely to continue to be intense.

As highlighted in the chapter "Life Sciences: White-Hot Competition to Win the Right Deals," the bar for winning the right deals is high. Proactively identifying markets and targets of interest, "prewiring" investment committees to allow for earlier, more aggressive bidding strategies, and leveraging more creative strategies beyond the traditional leveraged buyout model may give funds an edge as they seek to acquire gem assets in these highly competitive markets.

Sector Trends

Healthcare IT: Two Very Different Half Years

Dealmaking got off to a bang but settled down as macroeconomic factors weighed in.

At a Glance

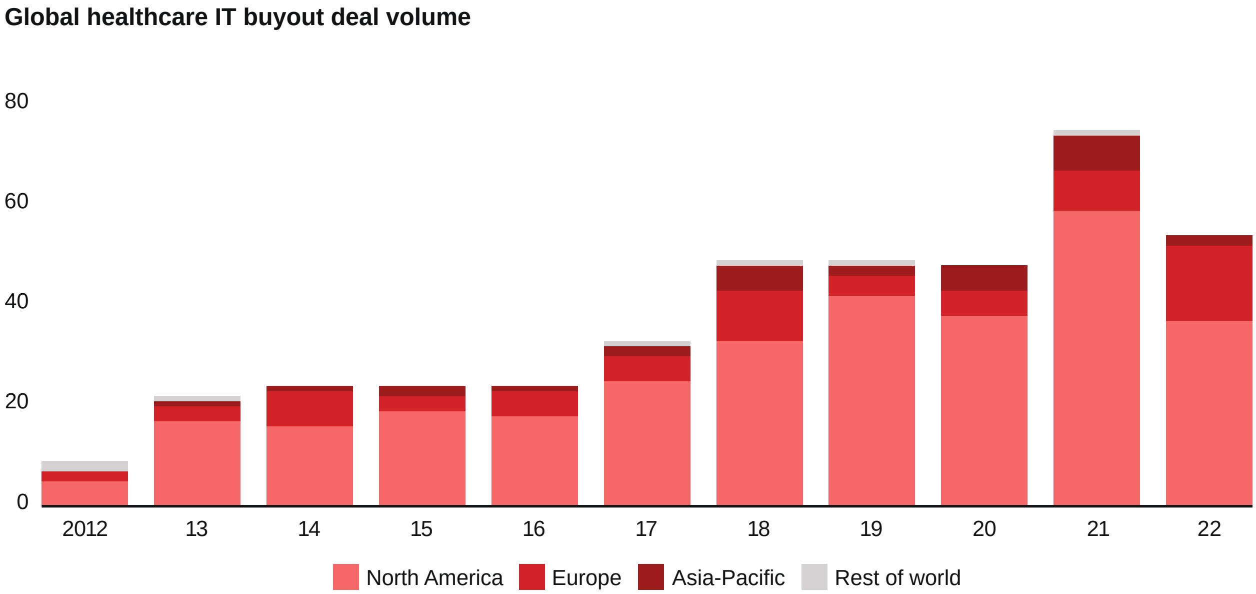
- Healthcare IT buyouts cooled off sharply after getting off to a hot start, reflecting macro environment challenges.
- Provider IT still accounts for the majority of healthcare IT deals, though the space is maturing as many assets have traded multiple times.
- As the fastest-growing subsectors in healthcare IT over the past 10 years, biopharma IT and payer IT present exciting opportunities for private equity investors.
- Growth equity investments suggest a bright future for healthcare IT.

Healthcare has historically underspent on technology, accounting for only 6% of technology spending despite making up 20% of GDP. In 2022, healthcare IT (HCIT) buyout activity was a tale of two halves: A robust start to the year quickly gave way to challenges in the macro environment. Despite that, HCIT buyout volume in 2022 added up to be the second highest on record *(see Figure 1)*.

Provider IT continues to drive healthcare IT, though the space is maturing

Inflation and labor shortages have left providers seeking ways to alleviate margin pressure. In 2022, private equity played this theme by investing in provider IT solutions that help providers optimize resources and improve margins.

Figure 1: Healthcare IT reached its second-best year in deal count, with European volume hitting a record



Notes: Excludes spin-offs, add-ons, loan-to-own transactions, special purpose acquisitions, and acquisitions of bankrupt assets; based on announcement date; includes announced deals that are completed or pending, with data subject to change; deal value does not account for deals with undisclosed values; values updated based on Dealogic 2020 sponsor classifications; values include net debt where relevant
Sources: Dealogic; AVCJ; Bain analysis

Businesses that optimize scarce provider resources focus on everything from personnel to durable assets. Intelligent Medical Objects, sold from Warburg Pincus to Thomas H. Lee Partners for $1.5 billion, standardizes clinical data in support of a range of patient care and clinical research use cases. The company's solutions help providers streamline and enhance clinical documentation, supporting quality care and alleviating clinician burnout. Coming at the same themes from another angle, LeanTaaS offers predictive analytics solutions to optimize the utilization of operating rooms, infusion chairs, hospital beds, and other critical assets. Bain Capital acquired a majority stake in LeanTaaS from Insight Partners and Goldman Sachs Asset Management for an undisclosed sum.

Private equity's investments in revenue cycle management (RCM) reflected providers' desire to support margins by improving collections and reducing the cost to collect. These investments spanned from large companies like Coronis Health and Ensemble Health (see the chapter "Provider Information Technology: Mind the Gap" for more detail) to smaller firms with more specialized offerings. Linden Capital Partners, for instance, acquired a majority stake in Aspirion, a provider of RCM technology built to navigate complex reimbursements, from Aquiline Capital Partners. Altogether, these investments reflect a range of ways private equity played the same themes in 2022.

Provider IT is more mature than other areas of healthcare IT, with many assets on their second or third round of private equity ownership. Consequently, defining the value creation plan up front has become increasingly important to successfully investing in provider IT. Value creation plans may encompass end-market expansion, solution set expansion, or both. This is discussed in greater detail in the "Mind the Gap" chapter cited above.

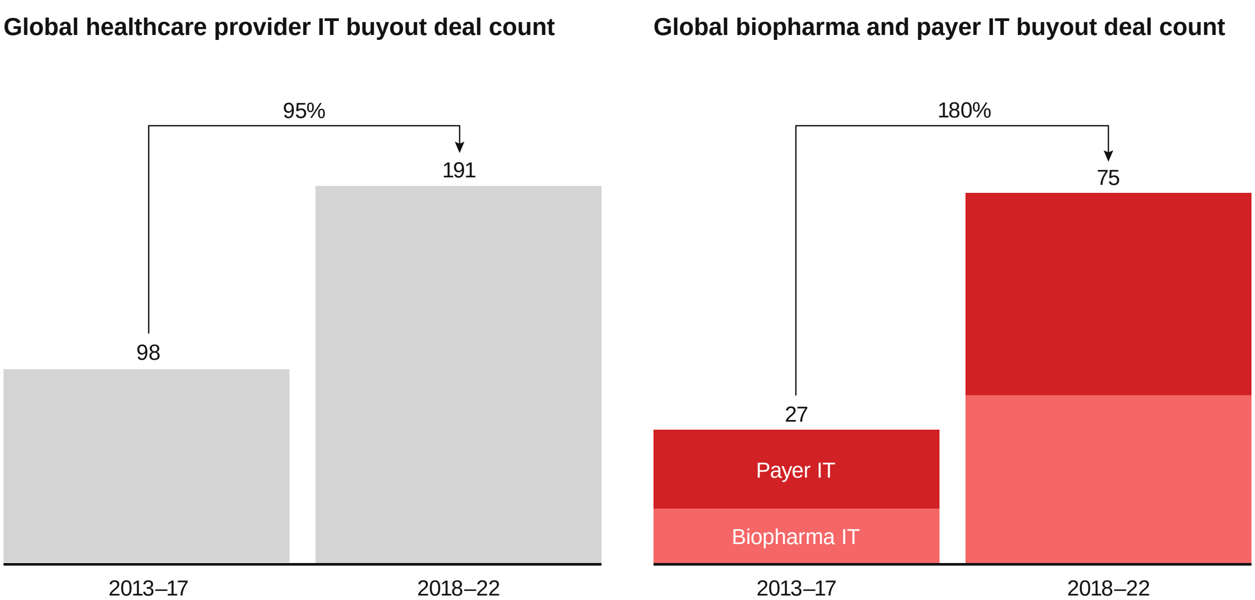
While provider IT deals continue to grow annually, their share of total healthcare IT deal volume is declining: Provider IT accounted for 67% of healthcare IT deal volume in 2020–22, down from 76% in 2013–19. Healthcare IT investments are increasingly shifting toward the sector's fastest-growing subsectors: biopharma IT and payer IT.

Biopharma IT and payer IT present exciting opportunities for investors

While the number of biopharma IT and payer IT deals is far smaller than the number of provider IT deals, deal volume for biopharma IT and payer IT has grown faster than that of provider IT over the past 10 years *(see Figure 2)*.

Within biopharma IT, we see interest in businesses that use technology to support workflow productivity and reduce clinical trial length. Workflow productivity businesses that attracted investor interest provide software solutions that streamline lab tasks, generate insights into lab operations, and support scientists' work while lowering costs. Summa Equity, for instance, acquired a majority

Figure 2: Biopharma and payer IT buyout activity outpaced provider IT over the past 10 years



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Sources: Dealogic; AVCJ; Bain analysis

stake in UgenTec, a software-as-a-service software provider focusing on workflow productivity for molecular diagnostic labs. Within the clinical trial technology space, investors targeted data and analytics solutions. Frazier Healthcare Partners played this theme in 2022, acquiring Apollo Intelligence. Warburg Pincus and Mubadala Investment Company similarly played this theme, carving out Informa's Pharma Intelligence business (rebranded as Citeline) for $2.6 billion. Norstella—which is backed by Hg Capital, Welsh, Carson, Anderson & Stowe, and Warburg Pincus—ultimately added Citeline to its pharmaceutical technology platform via merger.

Payer IT deals reflect a continued interest in technology focused on payer administrative functions. The marquee deal of the year was TPG's acquisition of ClaimsXten from UnitedHealth Group for $2.2 billion in conjunction with approval of the Optum and Change merger. ClaimsXten's technology allows payers to reduce appeals, generate administrative savings, and improve payment accuracy.

Growth equity's sustained activity in healthcare IT across all subsectors provides a preview of where private equity might participate in the coming years.

Growth equity suggests continued enthusiasm for healthcare IT

In the near term, growth equity investors will need to confront hard questions about down rounds and other challenges stemming from the macro environment. They will also need to consider the impact of large tech firms making investments in artificial intelligence with healthcare in mind as a relevant use case. We do not expect these developments to impact the fundamental reasons that make healthcare IT an attractive place to compete. Growth equity's sustained activity in healthcare IT across all subsectors provides a preview of where private equity might participate in the coming years.

In 2022, provider IT growth equity investment focused on innovative care delivery models, particularly those that improve patient outcomes by combining digital delivery and patient engagement capabilities. Biofourmis, Memora Health, Omada Health, and Equip Health—all of which fit this mold—completed financing rounds in 2022. Growth equity's investment in innovative care delivery is an area to watch for buyout funds that may eventually acquire mature assets or that can tuck these capabilities into a broader platform.

Growth equity investments in payer IT and biopharma IT in 2022 were more consistent with the current focuses of private equity. Payer IT growth equity investments focus on functions like analytics and administrative processing (such as Revelstoke Capital Partners' investment in HealthAxis) and benefits administration (such as Nayya's $55 million Series C led by ICONIQ Growth).

Biopharma IT growth equity investments largely focused on supporting clinical trials and accelerating drug discovery. ConcertAI, Reify Health, Unlearn, and MDClone collectively secured just under $500 million in financing in 2022 to build clinical trial solutions ranging from study site software to synthetic data analysis platforms. Providers of drug discovery technology, like InSilico Medicine, were also areas of focus for growth equity investors.

Investors with strong expertise in data monetization are also finding opportunities in biopharma IT. We have seen this within precision medicine, which is the use of analytics and big data to improve pharma research and development and drive more personalized care for patients. Blackstone Growth led a $200 million investment in DNAnexus, a bioinformatics platform that provides scalable, next-generation tools to support multiomic analysis used in multiple downstream applications. More opportunities may be on the horizon, with Qiagen announcing in early 2023 that it is offering a minority stake in its bioinformatics division. Together, these signal that precision medicine may be hitting a point of potential scale. However, there are many different ways to play precision medicine, with an open question on the winning model overall and within different healthcare stakeholders.

As each HCIT subsector evolves, there will be opportunities for sponsors to draw on the most promising ideas from growth equity, while also tailoring value creation strategies to the relative maturity of each subsector.

Healthcare Private Equity Outlook: 2023 and Beyond

Investors will get creative to get deals done.

Healthcare private equity (HCPE) investors face greater competition for assets, higher interest rates from several central banks, rising labor rates, tighter credit, and, most recently, questions arising from disruptions in the banking sector. But ample dry powder and a track record of returns ensured a strong year in 2022 for HCPE investing that continues to attract healthcare-specific funds, and we expect this trend to continue in 2023. Despite the slowdown in healthcare private equity deal flow in the second half of 2022, firms continued to create healthcare-focused funds and raise near-record levels of capital in 2022. Data from Preqin suggests that firms raised more than $15 billion in new buyout capital for funds where healthcare is the exclusive or core focus, which has happened in only two other years in the last two decades—2019 and 2021.

In 2023, each region will face discrete challenges.

- **North America:** The Federal Reserve recently announced its smallest rate hike since March 2022. However, uncertainty remains high given recent high-profile bank failures and questions about how the Federal Reserve will navigate the conflict between stamping out excess inflation and potentially exacerbating the recent issues in banking. Once the overnight rate begins to stabilize, it may give banks enough predictability to extend larger checks, and deal activity may pick back up. That said, if the Fed's policy moves induce a recession, or contribute to a banking crisis, funds may continue to shift investments to less risky, recession-resilient plays. In past recessions, government-focused businesses (such as Medicare/Medicaid), healthcare IT, and pharma services have generally done well. But there are different puts and takes this time around as we come off pandemic-high enrollment levels in spaces like Medicaid, and investors may need to see through some near-term turbulence in assets exposed to biotech funding and technology capital budgets.

- **Europe:** Europe saw the same limits in large-check financing as North America, and this may persist into 2023 as central banks respond individually to different signals. As more large-cap private equity companies move downstream toward smaller deals, midcap private equity companies are likely to respond to the increased competition by getting more specialized. Activity in the life sciences sectors is likely to continue to grow more competitive in Europe, where a strong track record of innovation in biopharma and life-sciences tools creates attractive investment opportunities for funds that know the space.

- **Asia-Pacific:** Within Asia-Pacific, the macro trends of rising labor rates, escalating interest rates, and tight credit all have country-specific nuances; central banks in China, Australia, India, and Japan have all responded differently. While each country faces specific short-term headwinds, healthcare private equity investors in Asia-Pacific benefit from long-term healthcare tailwinds, large stores of Asia-Pacific-specific HCPE dry powder, and a maturing market with a strong pipeline of investable assets. Some healthcare private equity investors have been diversifying their focus from China to markets like Southeast Asia, India, and Japan, as the market navigated the impact of multiple Covid-linked lockdowns, evolving policies, and geopolitical dynamics. That said, activity in China should remain robust, given growing interest from large buyout firms and venture capital.

Some signals continue to point to a global economic slowdown. However, signs of slowing inflation may mean we avoid the more severe downturn scenarios.

How will the macroeconomic environment impact the healthcare investment landscape in 2023?

There is a range of potential outcomes for healthcare private equity in 2023. Some signals continue to point to a global economic slowdown. However, potential signs of slowing inflation may mean we avoid the more severe downturn scenarios. This uncertainty raises the importance of thorough diligence and early planning for value creation.

There are several supporting questions to consider as we look ahead to 2023:

- **How will the key sources of capital and debt financing evolve?** Funds are pushing into new sources of capital, tapping high-net-worth individuals and retail investors. Meanwhile, sovereign wealth funds have emerged as both partners and competitors for private equity deals. On the debt side, as the syndicated financing markets cooled, investors turned to private credit. In this evolving landscape, private credit may have a larger share of the leveraged buyout market than ever before.

- **How broadly will investors look for carve-outs and public-to-private deals?** Several high-profile planned separations and potential public-to-privates have already been announced for 2023. While the S&P 500 healthcare index largely recovered lost ground, public listings remain depressed in sectors like medtech and life sciences tools. Can a more proactive approach to identifying potential public-to-privates or carve-outs yield better opportunities?

- **How will interest and competition in the life sciences sectors evolve?** Experienced life sciences investors are starting to consider earlier-stage assets. Sponsors with limited life sciences experience are building expertise and deal theses in targeted areas like biopharma IT. European funds have disproportionate exposure to Europe-based assets on the forefront of life sciences innovation. Will global funds reallocate capital to Europe to compete more actively?

- **What is the next frontier for value-based care?** Scale deals by corporations (such as CVS's purchase of Oak Street Health and Amazon's acquisition of One Medical) may signal that value-based care models are maturing. How will investors adapt value-based care models to new specialties and new populations?

- **How are investors considering capital allocation in Asia-Pacific?** Global megacap funds seem to be increasing their exposure to Asia-Pacific, but which countries see the most interest continues to evolve. Are India and Southeast Asia the next hot spot?

Use cases for generative AI are only just emerging, with stakeholders watching with a mix of enthusiasm and anxiety.

- **How will the healthcare industry adapt to recent artificial intelligence breakthroughs?** 2022 was a big year for generative artificial intelligence (AI), with new services emerging in imaging and text generation. AI is already accelerating therapeutic discovery, optimizing supply chains, and automating payer and provider back offices. Yet use cases for generative AI are only just emerging, with stakeholders watching with a mix of enthusiasm and anxiety.

- **How will regulatory changes shape the private equity landscape?** Regulatory changes will continue to shape investors' approach. For example, in the US the Inflation Reduction Act's implications for biopharma may be felt downstream in related services businesses and within pharma distribution. Recent CMS rulings may impact Medicare and Medicaid-focused businesses.

- **What is the outlook for exits?** The initial public offering (IPO) and special purpose acquisition company (SPAC) exit path largely dried up in 2022, but as the S&P 500 healthcare index rebounds to the levels and performance of 2021, healthcare may be one of the first industries where IPOs return. Sponsor-to-sponsor and sponsor-to-strategic exits remain common. For strategic exits, sponsors should think early about how to best position assets for exit and consider partnering with corporations as coinvestors.

Change is coming, and there will be winners who benefit from a new trajectory while others will have to pivot in response. Circumstances can always change fast, but healthcare investors are familiar with change and know that it creates opportunities to back the next winners.

This moment of disruption may prompt funds to reconsider their approach. Investors will be working hard to have their proactive strategies ready and connect with management teams so that they are able to act with speed and confidence.

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