Life sciences deals are back – making the right deals in a time of change

2024 EY M&A Firepower report

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CONTENTS

Welcome

In 2023, the life sciences companies started embracing large-scale mergers and acquisitions (M&A). Despite macro-economic and regulatory headwinds, the right deals are getting done. As this 2024 edition of the EY *Firepower* report went to press in mid-December, total M&A value had reached US$191 billion, up 34% on 2022.

Last year's EY *Firepower* report predicted this comeback. The industry has strong reasons to look for inorganic growth through acquisitions especially with the impending patent cliff leaving the large biopharma companies with a growth gap of over US$120 billion by 2028. As a result, nearly 70% of the deals were executed by big pharma companies.

We expect the M&A activity to continue into 2024. Facing topline pressures, life sciences companies will continue to depend on M&A for growth. The challenge ahead will be finding the right deal strategy to create value. Companies will pursue approaches including divesting to invest, focusing on building portfolio depth in key therapeutic areas, evaluating the implications of new disruptive opportunities (from GLP-1 to generative artificial intelligence (GenAI)), and looking for an effective mix of acquisitions, alliances and other partnership approaches.

Above all, in an uncertain operating environment, doing the right deals is only the starting point. Deploying the right expertise and disciplined execution to extract value and secure future growth will be key to successful dealmaking.

Subin Baral
EY Global Deals Leader, Life Sciences

BACK IN BUSINESS

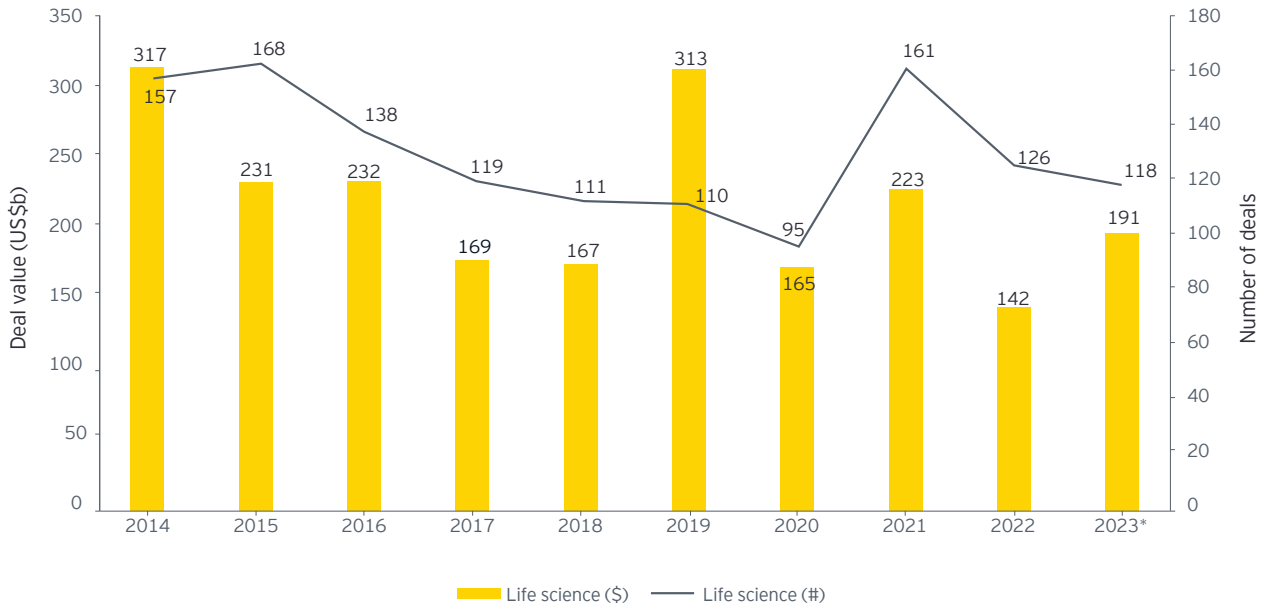
The life sciences 2023 spending surge

> With loss of exclusivity pressures increasing, big pharma is showing more urgency in its M&A strategy, contributing 69% of the total dealmaking spend in 2023.

Life sciences deals are back on the table. The industry's M&A investment hit US$191 billion by December 10, 2023, surpassing 2022's total by 34%. However, this rise was not because of a surge in deal volume; in fact, we have only recorded 118 deals in 2023 compared with 126 in 2022. However, 2023's deals were significantly larger, signaling that industry leaders are again ready to deploy their Firepower (which EY teams define as a company's capacity to do M&A based on the strength of its balance sheet) on more ambitious M&A strategies.

There are fundamental reasons to see the 2023 rebound as the beginning of a major trend. The biggest reason is the increased involvement in M&A from the life sciences sector's largest players – the big pharma multinationals. These companies began to dominate industry dealmaking once again in 2023, with 69% of M&A investment coming from big pharma, compared with only 38% in 2022. The return of these companies to M&A action has seen the average biopharma deal size increase 77% in 2023.

Figure 1: Life sciences M&A deal value and volume trends by year

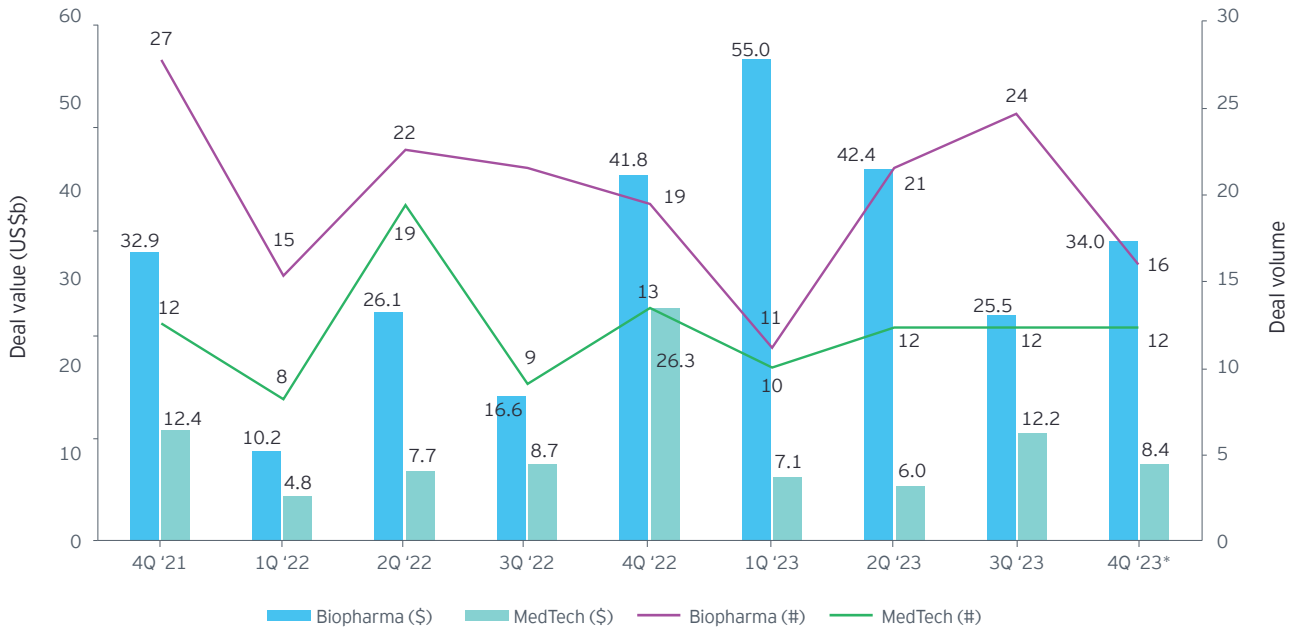


Source: Capital IQ, EY analysis | Note: M&A deals above US$100m analyzed and categorized based on the announcement date. | *4Q'23 includes deals until 10 December 2023.

Novo Nordisk, AstraZeneca, Amgen, AbbVie, Roche, GlaxoSmithKline, Eli Lilly, Sanofi, Novartis, Biogen and Bristol Myers Squibb all signed at least one deal of US$1 billion or more in value in 2023. Merck broke the US$10 billion barrier with its acquisition of immunology specialist Prometheus Biosciences in April. The year's unchallenged biggest spender was Pfizer, which continued to convert its COVID-19 commercial success into new acquisitions, by purchasing Seagen for US$43 billion in March. The Seagen deal was the largest life sciences acquisition since AbbVie paid US$63 billion for Allergan in September 2019, prior to the pandemic. We expect the big pharma companies to keep making these bigger deals in 2024; the 2023 uptick will not be a blip but the beginning of a major return to M&A.

In the decade since the EY organization began publishing *Firepower* in 2014, MedTech M&A investment has generally fallen well below biopharma's levels. In 2023, MedTech had another subdued year, with the industry's share of the life sciences dealmaking spend falling to 18% (compared to a five-year average of 26%). Despite completing 46 deals up to December 10, 2023, only slightly down on 2022's total of 49, MedTech's M&A spending fell 28% to US$34 billion (see Figure 2).

Figure 2: Life sciences M&A value and volume, Q4 2021-Q4 2023*



Source: Capital IQ, EY analysis | Note: M&A deals above US$100m analyzed and categorized based on the announcement date. | *4Q'23 includes deals until 10 December 2023.

> The medical devices sector has remained relatively quiet in dealmaking, compared to the uptick in biopharma acquisitions.

Despite the notable US$3.8 billion merger of spine and orthopedics specialists Globus Medical and NuVasive early in the year, the medical devices sector has subsequently remained relatively quiet in dealmaking terms, compared to the uptick in biopharma acquisitions. Companies continue to confront various headwinds including the general macroeconomic volatility, slowing topline growth, high costs and lack of high-growth potential targets.

Nevertheless, the laboratory equipment segment in particular has continued to see M&A investment with market leader Thermo Fisher Scientific consolidating its position with the acquisitions of the diagnostics specialist The Binding Site Group for US$2.8 billion in January and proteomics player Olink for US$3.3 billion in October. The MedTech sector also once again demonstrated its appeal to financial buyers, with private equity firm Bain Capital paying US$3.1 billion for Evident Corporation, the microscopy specialist division of Olympus Corporation. The fragmented nature of the MedTech sector means that financial buyers have opportunities to acquire a significant position in specific market segments through M&A.

LOOKING AHEAD

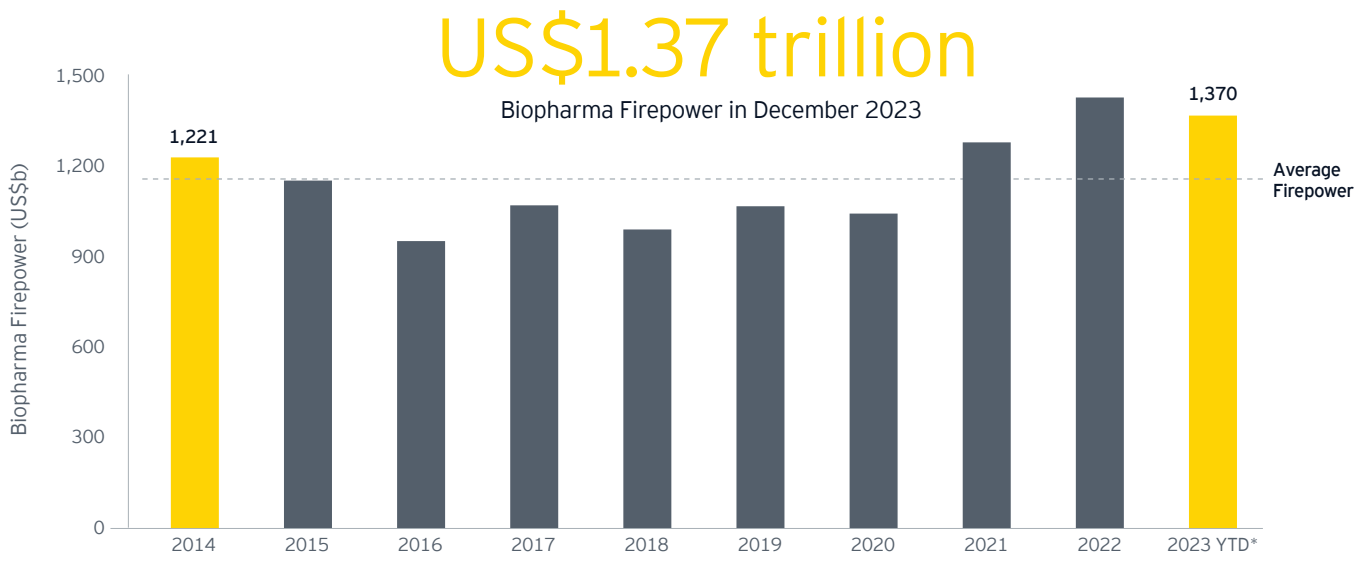
Why the 2023 uptick is just the beginning

There are three main reasons we expect the rising trend in M&A spending to continue and accelerate:

1. **The biopharma industry still holds near-record levels of M&A Firepower.**
2. **The industry faces major revenue challenges in the next five years and needs to secure inorganic growth, particularly in light of the continued high frequency of late-stage clinical trial failure.**
3. **Economic conditions mean there is limited access to capital favoring dealmaking.**

Despite its increased dealmaking activity, as of December 10, 2023, the industry still held a near-record US$1.37 trillion in M&A Firepower (see Figure 3). While some companies have seen their market capitalization decline over the past 12 months, others have seen major increases, replenishing the industry's collective Firepower. Novo Nordisk's market cap, for example, grew 41% compared with December 2022, and Eli Lilly's grew 52% over the same period, driven by these companies' leading positions in the emerging anti-obesity market. The net result is that the industry holds more dealmaking dry powder than at any time in the history of the *Firepower* report, since 2022.

Figure 3: Biopharma Firepower, 2014-2023 YTD*



Source: Capital IQ, EY analysis | *Firepower as of 10 December 2023.

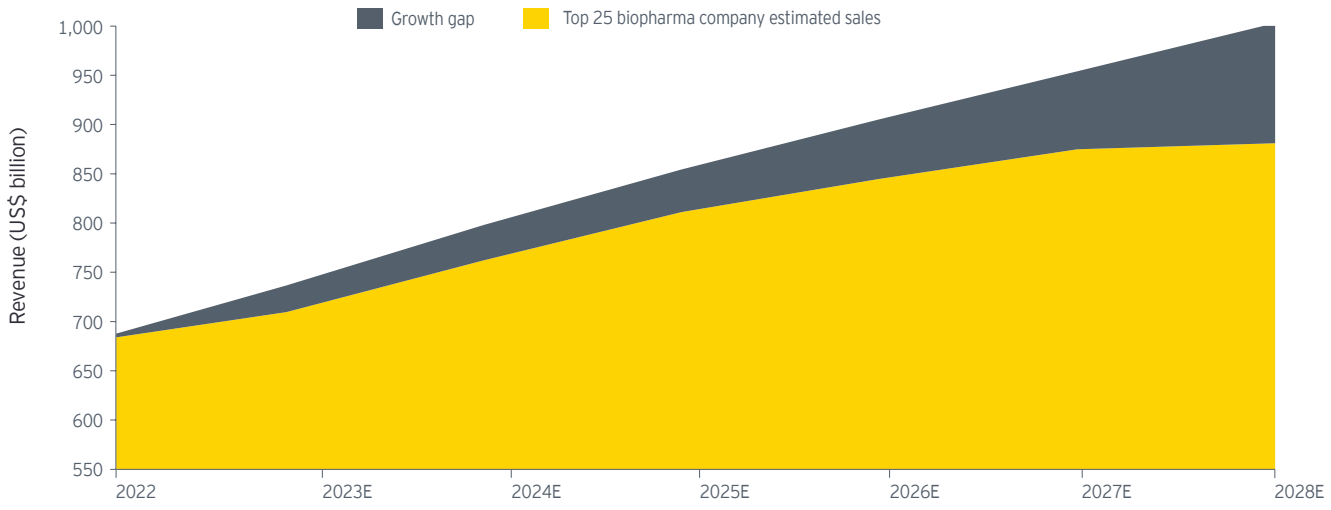
$120 billion

The growth gap for the top 25 biopharma companies are expected to double from US$60 billion in 2026 to US$120 billion by 2028 due to patent expiries of some of the biggest drugs.

Biopharma will continue to release significant Firepower in 2024 and onwards, because the industry is now reaching the much-anticipated "patent cliff," where there is a sharp decline in revenues upon the expiration of the patent for one or more leading products. 2023 saw a key milestone with the launch of biosimilar versions of adalimumab, the monoclonal antibody (mAb) which, under AbbVie's Humira brand, has been one of the dominant drugs of the past decade. As increasing numbers of key revenue-driving drugs begin to face biosimilar or generic competition, an estimated 70% of biopharma industry leaders will experience growth gaps within the next five years based on current projections.

Among the industry's top 25 companies by revenue, an estimated growth gap of $60 billion is set to open up by 2026, and this is estimated to more than double to US$120 billion by 2028 as patent expiries take a larger hold of the industry (see Figure 4). These figures exclude the distorting effect of COVID-19 revenues, which delivered an unsustainable one-off growth surge to certain leading companies. The growth gaps are unevenly distributed among the leading companies, as is the Firepower. Overall, the topline pressures will drive companies to acquire innovation if they are to maintain growth.

Figure 4: Projected growth gaps, 2022-2028E

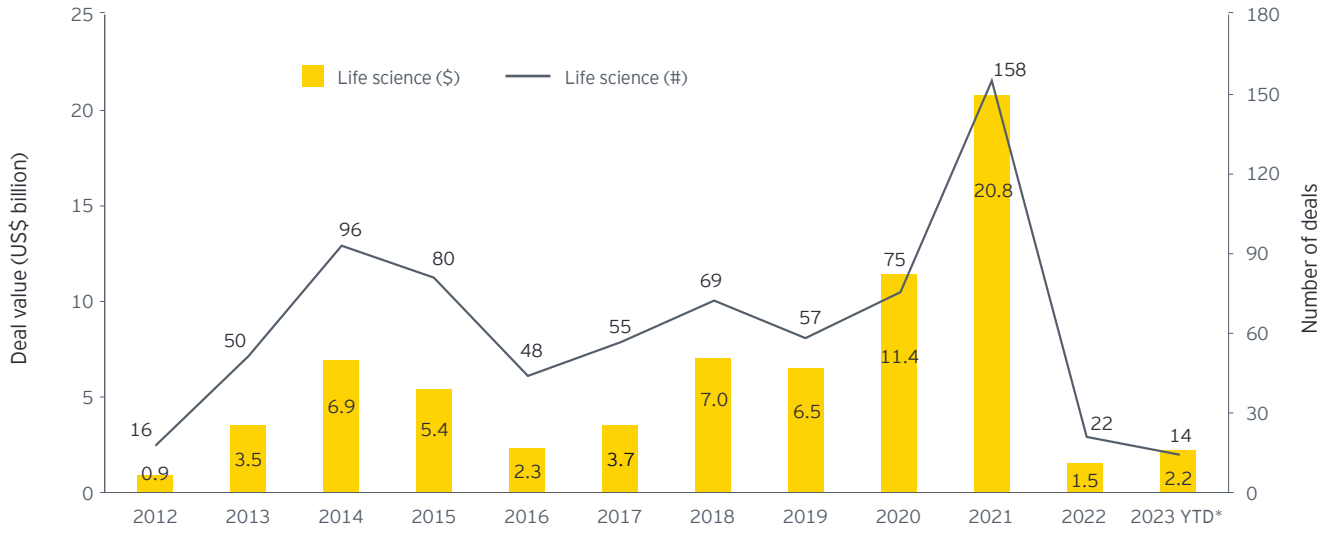


Source: EY, Evaluate Pharma. | Note: Growth Gap analysis is based on December 2023 EvaluatePharma data and excludes the impact of COVID-19 vaccines and therapies.

In the meantime, since mid-2021, operating conditions have become increasingly challenging for biotech companies. During the COVID-19 pandemic, valuations for biotechs soared, with investors viewing life sciences and health care as strong "defensive" sectors. Since the re-opening of the US economy, investors have rotated from defensive sectors to more cyclical investments, as the economic recovery in the US has resulted in rising inflation and interest rate hikes.

The net result is biotechs now face lower valuations and reduced ability to access financing, with the IPO market closed (see Figure 5) and follow-on funding substantially reduced. Under these circumstances, biotechs have strong motives to look for an exit via acquisition. And, as we have seen, big pharma companies have strong motives to acquire. So, what is keeping the brakes on M&A in the life sciences?

Figure 5: Biotech IPO market, 2012-2023 YTD*



Source: EY analysis, Capital IQ, Venture Source. | *Data as of 30 September 2023.

TARGETS ACQUIRED

The industry's search for high-growth opportunities

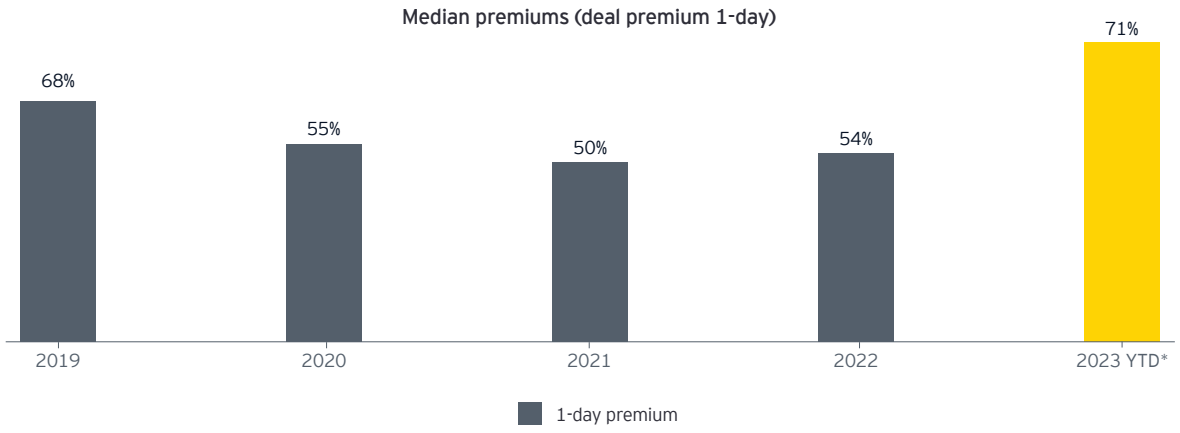
> The difficulty in securing value from dealmaking is one of the critical themes in M&A today.

Put simply, the problem for dealmakers is that the current business environment makes it hard to secure value from deals. As Nauman Shah, Global Head, Johnson & Johnson Innovative Medicine Business Development, says (see his guest perspective, "Collaborating to advance the innovation ecosystem" later in this report), "There continue to be challenges for dealmaking, with current macroeconomic, pricing, regulatory and valuation risks." In particular, Shah emphasizes "the impact on pricing resulting from the regulations various governments have imposed or are considering," and "their impact on the value of innovation."

As these comments indicate, the uncertainties facing potential biopharma acquirers go beyond the general volatility in the global operating environment and include also the regulatory risks posed by legislation such as the US Inflation Reduction Act (IRA). The initiative will potentially constrain companies' ability to set drug prices in the future, making it more difficult to accurately evaluate portfolio and pipeline assets of potential targets. Alongside other US regulatory developments, and parallel regulatory moves to constrain pricing in other geographies, these trends add a layer of complexity for companies trying to optimize their M&A strategies.

The difficulty in securing value from dealmaking is one of the critical trends in M&A today. Despite the buyer's market environment, biopharma acquirers actually paid higher premiums to acquire in 2023 compared to the recent average (see Figure 6).

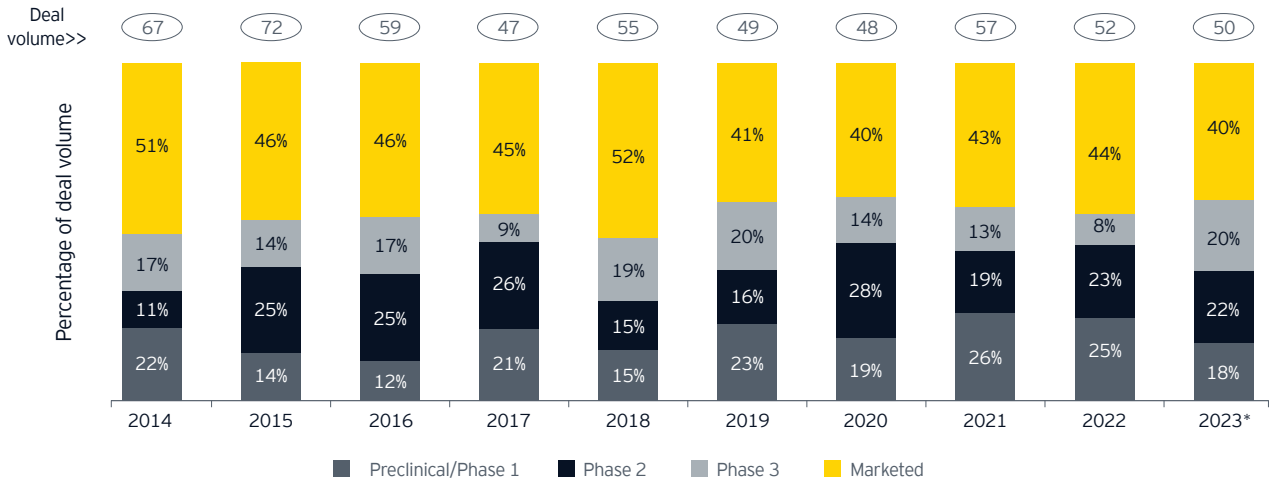
Figure 6: Biopharma companies are paying higher premiums for targets in 2023 YTD*



Source: EY analysis, Capital IQ | Note: 1-day stock premium analysis for public targets. | Data as of 10 December 2023.

Acquirers are not, in general, making opportunistic purchases. Rather, these companies are looking at low-risk investments that can deliver growth in the near term; companies with late-stage or marketed assets represented 60% of all innovative drug acquisitions in the first 11 months of 2023 (the highest proportion since 2019, before the pandemic; see Figure 7). With many companies competing for these high-potential, well-validated assets, there are still serious challenges to companies looking for competitively priced targets.

Figure 7: Biopharma M&A target phase analysis, 2014-2023*



Source: EY analysis, Capital IQ.
*2023 data as of 16 November. Phase analysis based on data for 562 biopharma deals, excluding over-the-counter, animal health, generics, CRO/CDMO transactions. Megadeals, valued at greater than US$40b, were also excluded from the phase analysis. If the deal involved multiple products, the most advanced product was used to characterize the deal's development stage. Numbers may not add up to 100 due to rounding.

Given these conditions, how can biopharma companies make the right deals to secure value?

Securing dealmaking value in a shifting life sciences landscape

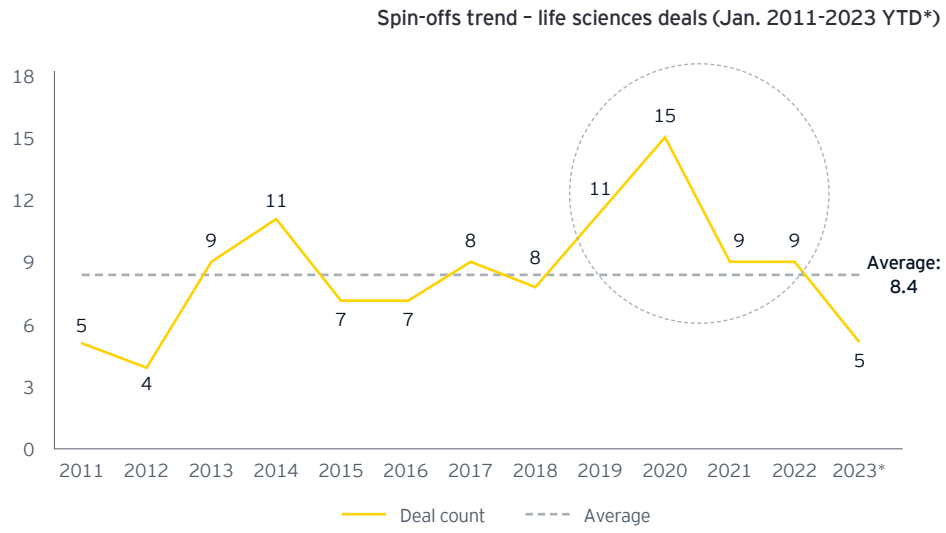
While there is ultimately no one-size-fits-all answer for which deals will deliver the best returns, we can highlight five strategies that will give companies a better chance of securing value in the future and help ensuring their M&A strategies help build that value:

1. Build more focused business models
2. Identify the therapeutic areas where you can add value
3. Be aware of emerging disruptive new opportunities
4. Find the right balance between acquisitions and partnerships
5. Build the right execution strategies to deliver value from M&A

Build more focused business models. The life sciences environment is getting more complex. This applies not just to macroeconomics, geopolitics and regulation but also to the way health care is evolving to incorporate more data, personalization, utilization of new technologies and flexibility of care. These changes represent the early signposts toward the emergence of an intelligent health ecosystem. In the future, this radical rethinking of care models will revolutionize health care. In the immediate present, the key takeaway for companies is that as care models become more complex and diversified, no company can excel across all business strategies, from innovative pharmaceuticals to commodity generic products to consumer health and personalized disease management.

Recognizing this, companies have in recent years begun "divesting to invest": shedding peripheral businesses and units to focus on their core value offering. Indeed, the period since 2019 has seen an acceleration in life sciences spin-offs as companies increase their focus on their key target areas (see Figure 8), with 2023 alone witnessing GE's spinout of GE HealthCare in January, Johnson & Johnson's of its consumer health unit (rebranded Kenvue) in May, and Novartis' of its Sandoz generics unit in October.

Figure 8: Life sciences spin-off deals, 2011-2023*



Key insight

- In 2020, the count for spin-offs touched a new peak, higher than the previous highs scaled in 2019.
- During 2019-2022, there was a noticeable increase in spin-offs, contributing about 40% of the total count of spin-offs in more than a decade.

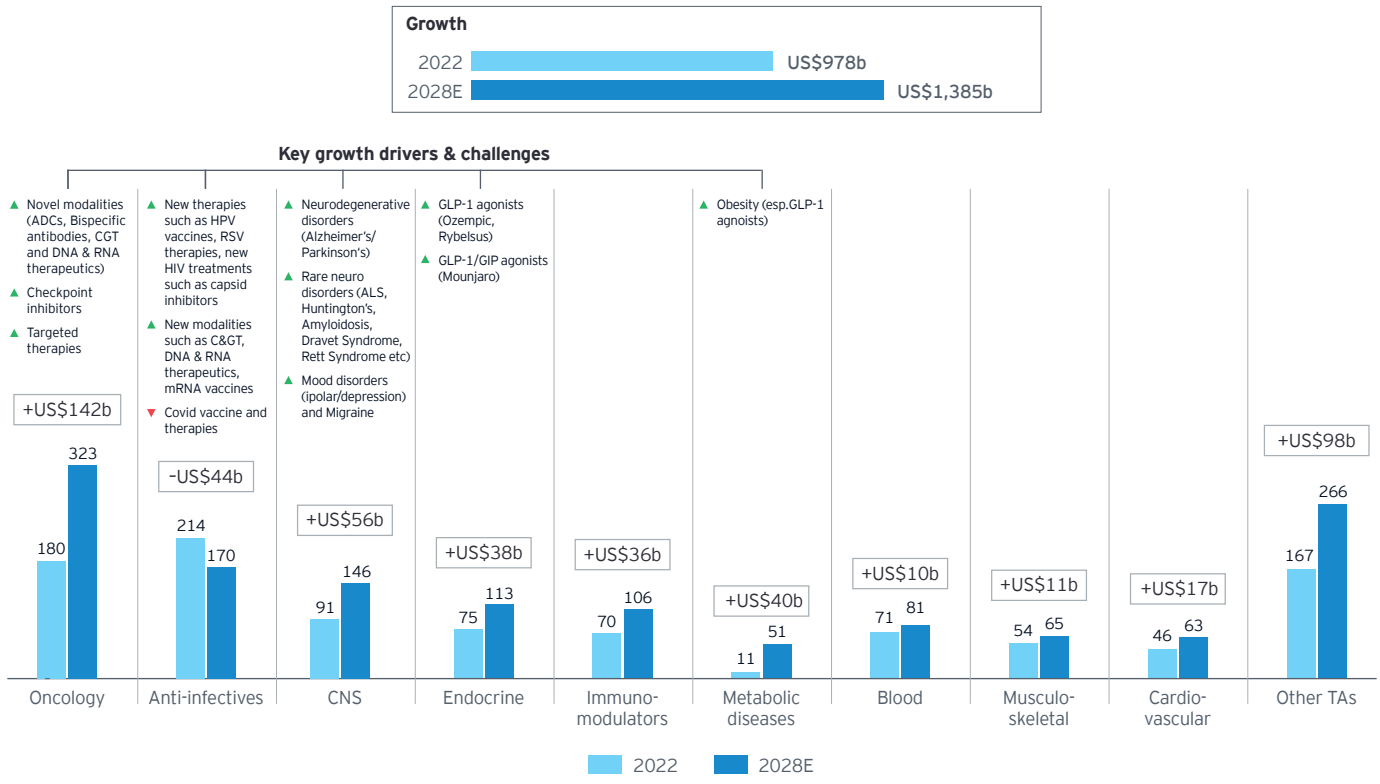
Source: Capital IQ, EY analysis | Note: M&A deals above US$100m analyzed and ategorized based on the announcement date. | * Includes deals until 10 December 2023.

These spin-outs illustrate the general trend for companies to get leaner and more focused, both in terms of their overall business strategy and their therapeutic focus. As Monika Vnuk, Senior Vice President, Global Partnering and Business Development, Sanofi (see her guest perspective, "Partnering to bring transformational science to patients," later in this report) says: "Focusing on a few, and preferably related, areas of science and medicine, allows us to build deep and lasting capabilities across research, development, manufacturing and commercialization. These in turn, allow us to drive innovation internally and attract partners."

Identify the therapeutic areas where you can add value. The need for specialization means that life sciences companies also need to focus their M&A strategies on areas where they can add value – and areas where they can generate revenues.

Companies that have an established footprint in specific disease markets are already well positioned to investments in improving their therapeutic depth. But across the biopharma industry, companies are also increasingly considering the strategic importance of specific therapeutic areas as they plan their M&A moves. In 2022, anti-infectives was the biggest single therapeutic area by revenue generation, but this is largely due to the impact of COVID-19. By 2028, it is estimated that the anti-infectives market will have contracted, but the overall global biopharma market will have grown ~US$407 billion, to reach US$1.39 trillion; of this growth, US$142 billion (35%) will come from oncology alone (see Figure 9).

Figure 9: Top therapeutic areas (TAs) expected to drive biopharma market growth, 2022-2028E

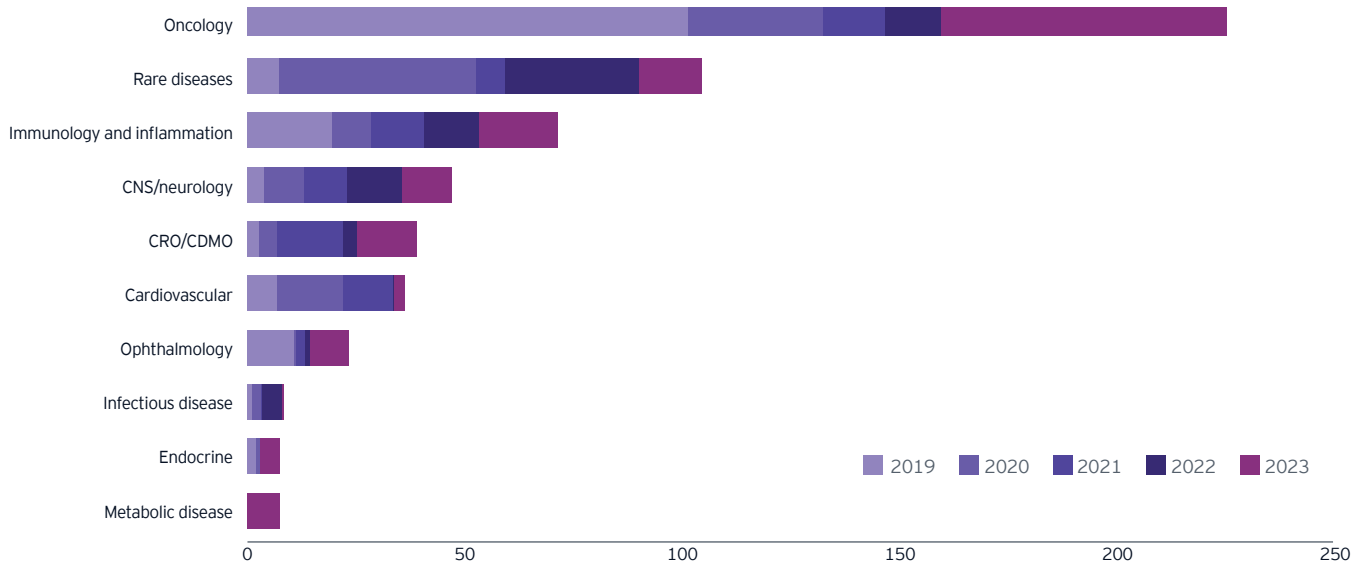


Source: EY analysis, Evaluate Pharma, IQVIA. | Note: Other TAs include Respiratory, Gastro-intestinal, Dermatology, Sensory Organs, Genito-urinary, and OTC Pharma.

The 10 market-leading companies in oncology held 77% of the market in 2022, but on current projections that will fall to 60% in 2028. This downward trend indicates that the growth-driving products lie outside the portfolios of the current leading companies, and these leading companies therefore have strong motivation to acquire these assets to maintain their leadership position in this key therapeutic area. Meanwhile, other new entrants have high incentives to try to acquire a stake in the rapidly expanding oncology space.

The growth potential of the oncology market is reflected in companies' M&A spending over the past five years, which has hugely prioritized oncology (see Figure 10). The competition for oncology assets has also ensured that companies are obliged to pay higher multiples for oncology acquisitions than for targets in other therapeutic areas (see Figure 11), averaging 11.9 times total revenues of the target company.

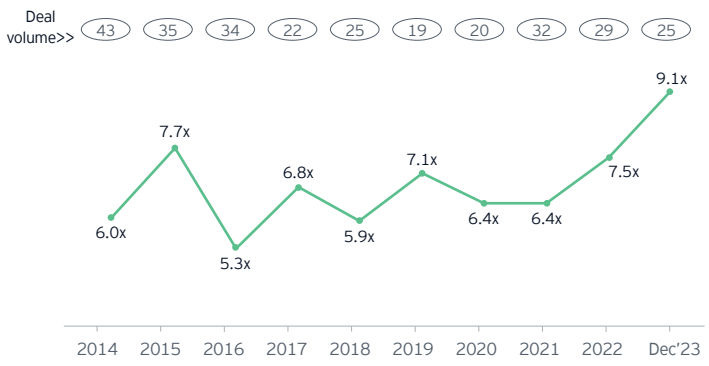
Figure 10: Biopharma M&A deal value by therapeutic area, 2019-2023



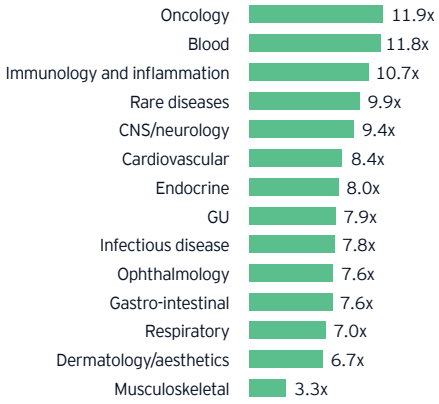
Source: EY analysis, Capital IQ | Note: M&A deals above US$100m analyzed and categorized based on the announcement date. | *2023 data as of 10 December 2023.

Figure 11: Biopharma M&A enterprise value-to-sales (EV/sales) multiples by therapeutic areas, 2014-Dec 2023

Average EV/sales multiple trend* (2014-Dec'23)



Average EV/sales multiple by Top TAs* (2014-Dec'23)



Source: Capital IQ, EY analysis | Note: M&A deals above US$100m analyzed and categorized based on the announcement date. | *Includes deals until 10 December 2023.

This intense competition for oncology assets increases the challenges for acquirers looking to ensure they extract value from deals. However, the life sciences landscape offers major opportunities besides oncology. At present, the changing regulatory landscape is also focusing attention on rare diseases, with legislation such as the IRA unlikely to affect the price-point for orphan drugs. Rare diseases have consequently become one of the biggest M&A targets, commanding high multiples, and driving some of the biggest deals of the past 12 months, including Amgen's US$27.8 billion acquisition of Horizon Therapeutics at the end of 2022 and Biogen's US$7.3 billion for Reata Pharmaceuticals in July 2023.

> The size of the anti-obesity market opportunity, driven by the GLP-1 drugs, could see biopharma companies targeting this space - but only if it fits their broader strategy.

Be aware of emerging disruptive new opportunities. The rise of rare diseases demonstrates how changing market conditions (in this case regulatory shifts) can open major new opportunities. While pursuing their own strategies and identifying their core areas for value generation, companies also need to maintain awareness of game-changing innovations that can disrupt the market and force a shift in strategy. GLP-1 receptor agonists have become one of the most prominent of these recent breakthroughs since the June 2021 approval of Novo Nordisk's Wegovy (semaglutide). Accumulating trial data has increasingly validated the effectiveness of Wegovy and other novel drugs to control obesity and improve cardiovascular and metabolic health (the resulting surge in market capitalization for the leading anti-obesity biopharmas was noted above).

Though supply constraints have limited revenues to date, the high levels of prevalence and unmet need for obesity, type 2 diabetes and related conditions means that the endocrine and metabolic therapeutic areas are forecast to grow US$78 billion in the next five years (see Figure 9), driven largely by the GLP-1 drug class and related products. The size of this opportunity could see pharma companies directing Firepower toward the space. In general, companies will not completely rethink their strategies simply because a new opportunity emerges; but if breakthroughs like GLP-1 align well with the existing strategic approach, companies will have increased incentive to acquire. Although, in 2023, the current leaders Novo Nordisk and Eli Lilly were also the most active acquirers, with Novo Nordisk spending US$1.1 billion to acquire Inversago Pharma in August and Lilly spending US$1.9 billion for Versanis in July.

Even more unconventional opportunities have also emerged in 2023, most notably generative artificial intelligence (GenAI). The power of the large language models (LLMs) associated with this technology have seen companies in all industries scrambling to identify the growth and efficiency opportunities that it may offer. Across the life sciences, companies have invested heavily in the past decade on AI algorithms to accelerate and optimize processes ranging from drug discovery to imaging diagnostics, and the sector continues to expand rapidly on multiple fronts. It remains to be seen whether the promise of GenAI will reshape M&A strategies, though one notable possible application of GenAI is in optimizing the dealmaking process itself, a concept which multiple companies are now exploring (see Figure 12).

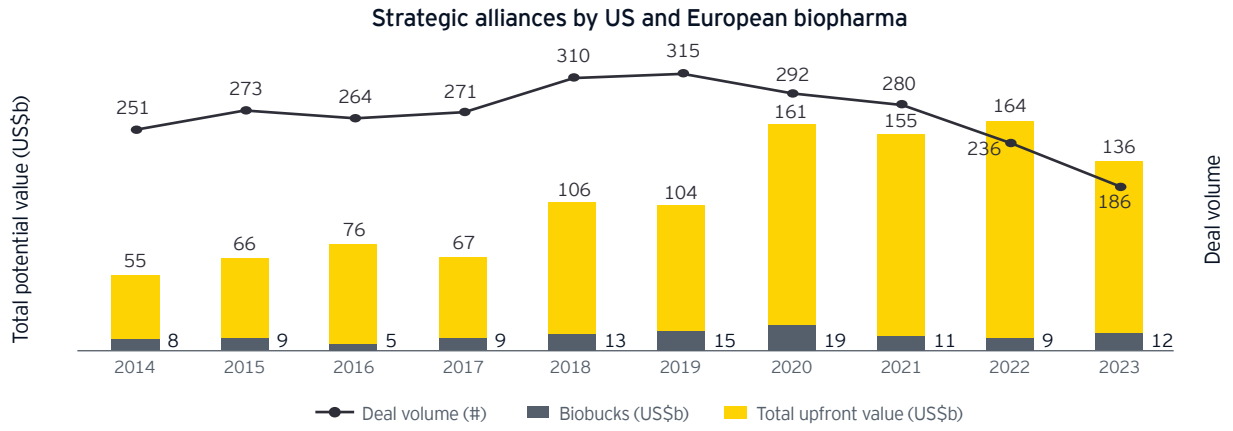
Figure 12: Potential AI and GenAI applications in M&A processes

Process		AI and GenAI applications	Benefits
Due diligence	One Medical	Leveraged **Datasite Cloud** solutions for **buy-side M&A** when Amazon acquired One Medical. Datasite buy-side solutions provide **AI-enabled auto-categorization,** document previews and in-app translation.	▸ Helped OneMedical acquisition for US$3.9 billion ▸ EU and UK GDPR/CPRA/APP compliant
	IDEXX Laboratories	Leveraged **Luminance's AI tool to read and understand contract lifecycle documents**, review incoming contracts automatically, understand **contract obligations** and **exposure** to the sanctioned entities, and analyze the key features of executed contracts. Luminance's AI platform has inbuilt GenAI capability as well.	▸ Analyzed **20K contracts in 20 minutes** ▸ **Automated** legal process of the contract lifecycle ▸ **Identified exposure** to Russian sanctions to speed up exit
	Synthorx	Used **Venue by DFIN Solutions**, an **AI-based data room** to help **manage the acquisition lifecycle.** Venue leverages AI-powered tools to streamline advanced permissions to ensure only authorized users can view, print and update files and folders. In December 2019, **Sanofi acquired Synthorx for US$2.5 billion**.	▸ Submit and access documents in minutes
	Alacrita	Used **Intralinks's AI-based VDR**[1] to expedite due diligence by **automating tasks** and reducing timelines, file distribution issues, and market and operational risk. It helped in **real-time monitoring of the deal process** and workflow transparency. it also used Intralinks' built-in IRM[2] to prevent the saving and sharing of files outside of the platform.	▸ **30% improved efficiency** for deals ▸ 200+ documents of high-value content
	Royalty Pharma	Leveraged the Expert Insights tool in AlphaSense platform for due diligence and analyzing the perspective of various stakeholders. The AI enabled tool was used to go through the transcripts of expert interviews and access insights from the same.	▸ 25,000+ transcripts reviewed ▸ Real-time investigation of biopharma insights
	Instituzt Mérieux	Leveraged Datasite **AI-embedded sell-side** solutions that helped the company sell 10% stake to Exor for US$8873 million.	▸ Provide real-time update on deal milestone and buyer engagement ▸ Reduced risk by leveraging machine learning (ML) models to organize content and identify PII[3]
Fundraising	Zenas BioPharma	Raised a US$118m series in partnership with Datasite, their fundraising solutions leverages **AI-enabled,** auto-categorization, **document previews and in-app document translation** for managing investors and track fund raising. Datasite also provides a tailored investor outreach program for premarketing and fund marketing.	▸ Customized marketing, ease in content loading on dashboards, tracking engagements and automating emails and other communications
	Erytech	Utilized Intralinks as a **VDR** that leverages **AI** to redact PII and other sensitive content from documents inside the data room. It provided real-time insights into each company's document viewing behavior, customizable dashboard to help measure engagement and helped manage access and security through a single platform.	▸ Five potential deals simultaneously being negotiated ▸ four or more weeks negotiation time saved per potential partner ▸ Raised US$18.37 million
Post-deal integration	A life sciences company	Accenture Strategy helped a life sciences company leverage **AI** for a divestiture, where the company's systems were filled with intellectual property. **AI** helped **search large volumes of unstructured content of contract terms,** and determine which documents should be included in the divestiture and those that should be retained by the company.	▸ Reduction in time required for analysis of large volumes of unstructured content from months to six days
	Pharmaceutical companies	The data used for authoring market authorization transfer **(MAT)** applications resides in multiple systems and databases. Pharmaceutical companies utilize **AI/ML** to analyze complex data derived from diverse sources, and help integrate and harmonize the data and help ensure consistency.	▸ Helps create a centralized and comprehensive database, to be used as a single source of truth ▸ Saves time spent searching for data in different locations ▸ Save efforts in manual extraction

Source: Company websites, secondary sources, EY analysis
1 Virtual data room
2 Information rights management
3 Personal identifiable information

Find the right balance between acquisitions and partnerships. Since companies cannot acquire a stake in every possible disruptive opportunity simultaneously, alliances and partnerships have become a major part of biopharma companies' innovation strategies, especially since the pandemic. Despite the high potential value (in "biobucks") of some of these partnership deals, the upfront value is generally far lower (see Figure 13), giving companies the opportunity to access innovation at a relatively low cost until these products win clinical validation.

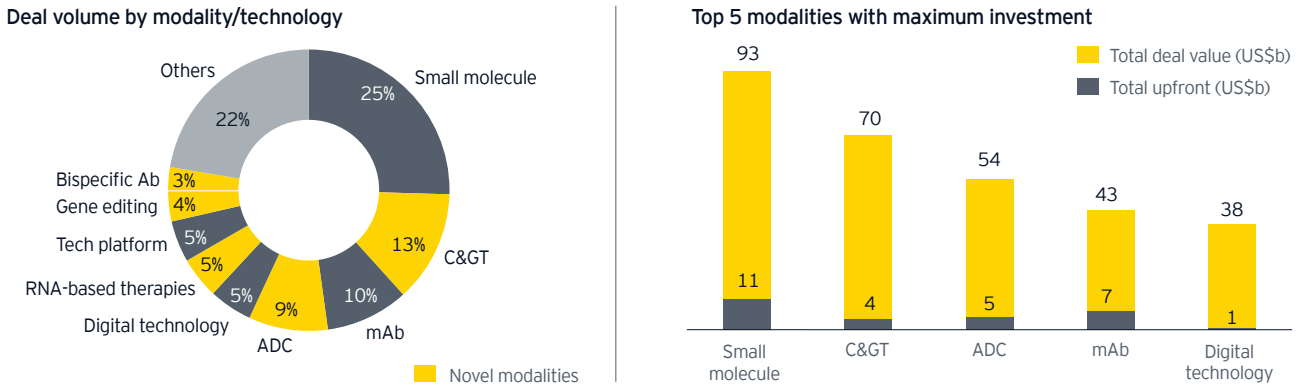
Figure 13: Biopharma alliance spending, upfront value vs biobucks, 2014-2023*



Source: EY analysis, Biomedtracker. Chart shows potential value, including up-front and milestone payments, for alliances where deal terms are publicly disclosed.
* 2023 data through 31 October 2023. Includes US$22b collaboration agreement between Merck and Daiichi Sankyo for development of three clinical phase ADC candidates.

As a result, companies have often used alliances to investigate assets such as the "new modalities": innovative clinical technology platforms with high long-term opportunity but with potentially lengthy development cycles before they make a market impact. New modalities including cell and gene therapy, antibody-drug conjugates (ADCs), and digital technologies have been among the five highest-value areas for alliance investment since 2020 (see Figure 14).

Figure 14: Alliance spending by modality 2020-H1 2023



Source: EY analysis | Note: Analysis basis 483 deals (between 2020-June-2023) with total deal value (including biobucks) > US$200m
* C&GT= Cell & Gene Therapy; Ab = antibody; mAb = monoclonal antibody

> ADCs, with proven clinical and commercial effectiveness in the vital oncology market, became a priority target in 2023 M&A.

The new modalities are set to be important growth drivers for pharma, projected to generate 27% of oncology segment growth to 2028 (9% of the entire biopharma market's growth). Once these major opportunities begin to translate into commercial realities, companies will be willing to deploy serious Firepower in their direction.

The ADC market has clearly reached this tipping point in 2023. In addition to Pfizer's March mega-deal for Seagen, October saw Merck signing a licensing deal with Daiichi Sankyo, valued at US$4 billion upfront, to acquire access to three ADC products. In addition, Amgen in November paid US$10.1 billion to acquire ImmunoGen and its ADC ovarian cancer treatment Elahere. As other new modalities trace the same path as ADCs from future potential to actual market breakthrough, biopharma strategies will again pivot toward outright acquisition. But while new modalities are still maturing, companies need a mix of alliances, partnerships, accelerator programs and other investments alongside M&A to help ensure they have access to new innovations without the need to fully commit to acquiring.

Build the right execution strategies to deliver value from M&A. The final and critical point is that the challenge of M&A is not only to do the right deals, but to "do the deals right." EY research has affirmed the general truth that across industries, M&A is indeed an effective strategy for driving growth in EV and total shareholder return (TSR). On average, active buyers across industries achieve an EV roughly three times higher than non-buyers and 1.6 times higher than that of infrequent buyers. With TSR, the terms where active buyers realize growth is roughly twice as high as for non-buyers.[1]

However, achieving these results is not simply a question of committing resources to M&A; successful dealmaking is a process rather than a single transaction. Finding the right business model and therapeutic focus and targeting the right assets with the right partnering strategy is only the beginning of this process. To help ensure their M&A strategies create value, companies need to get their execution right. In conclusion, we will examine the key moves companies need to make in their execution strategies.

[1] EY, "Why some acquirers are seeing a big boost in shareholder returns," September 2023. https://www.ey.com/en_us/strategy/how-mergers-and-acquisitions-can-create-value-defying-m-and-a-skeptics

HOW CAN COMPANIES ENSURE THEIR M&A ACTIONS DELIVER VALUE?

Though every deal brings unique opportunities and challenges, we can, in conclusion, identify four ways in which companies can better realize, preserve and enable value through M&A:

1. **Follow strategy-driven discipline**
   Successful M&A begins with identifying the target that best fits with the acquirer's growth strategy. While regulatory changes like the IRA have made it harder for companies to assess the future value of potential acquisitions, as Monika Vnuk re-iterates, "The key to long-term success is to invest in innovation that delivers transformational benefits for patients." Life sciences companies need to focus on the north star by delivering better outcomes for patients – including an improved, more personalized health experience.

2. **Perform due diligence and synergy estimation**
   Two key factors often observed in failed M&A transactions are the underestimation of costs and overestimation of synergies. In life sciences, the median integration cost is 10.3% of target revenue – which is higher than all other major sectors. Careful focus is needed in regulatory, safety and quality standards compliance, as well as potential consolidation in R&D.

3. **Execute effective M&A integration**
   It is important for the integration program to be detailed and transparent to promote efficient decision-making and rapid execution. Companies can clearly define how they plan to achieve synergies and how the combined business will be run to enhance value. The adage "Don't break the business" also applies to high-growth life sciences acquisitions. Careful consideration is needed on how much transformative change is feasible to pursue for the acquired business, particularly in the first three to six months following transaction close.

4. **Develop robust M&A processes and roadmaps for the future**
   Active buyers establish strong foundational capabilities to sustain consistent, repeatable M&A activity. This typically involves developing playbooks and building teams of highly skilled M&A professionals to execute future transactions.

Looking ahead to 2024, we can confidently predict that the rebound in M&A spending over the course of 2023 is only the beginning of a major ongoing investment in dealmaking on the part of the life sciences industry. As biopharma and MedTech companies look to navigate a period of ongoing global disruption, investment in external innovation will be a strategic necessity. As our analysis shows, the key challenge will be not only doing the right deals but having the right expertise and execution to extract value from those deals - and secure future growth.

GUEST PERSPECTIVES

Nauman Shah
Global Head, Johnson & Johnson Innovative Medicine Business Development

Collaborating to advance the innovation ecosystem

EY: M&A spending has rebounded in 2023, but what challenges do dealmakers still face today?

Nauman Shah (NS): After a dramatic drop in dealmaking toward the end of the pandemic, we are seeing an uptick to more traditional levels. The deal market is coming back, driven by the significant levels of Firepower available for biopharma companies and the need to supplement portfolio growth. Having said that, there continue to be challenges for dealmaking, with current macroeconomic, pricing regulatory and valuation risks.

In some cases, there may be a vast difference in assumptions between larger companies, or acquirers, already assessing potential risk and pressures on their in-market portfolios, and biotechs without marketed or near-term products. Companies with in-market portfolios and those without may have different vantage points on risks in valuing opportunities, and such alignment on value assumptions becomes critical to dealmaking. Consider, particularly, the impact on pricing resulting from the regulations various governments have imposed or are considering. It is imperative that the entire pharmaceutical innovation ecosystem understand these regulations, and their impact on the value of innovation.

EY: How important is strategic and therapeutic area focus in looking for value-creating deals today? How can companies balance strategic focus with an awareness of potential game-changers – GenAI in 2023, for example?

NS: At Johnson & Johnson, our Innovative Medicine business drives an industry-leading portfolio as we continue to transform the lives of patients through the delivery of multiple first-in-class and best-in-class treatment options. Our portfolio is a result of our innovation-based strategy and deep scientific expertise, world-class capabilities and a source-agnostic, win-win approach to external innovation, which includes a significant investment in both Business Development and Research & Development. We recognize that no one company can do everything, and strategic focus is necessary. We are investing deeply in therapeutic areas where our pipeline is poised to have the greatest impact for patients: oncology, immunology and neuroscience, alongside select areas in cardiovascular diseases, retina disorders and pulmonary hypertension. In these areas we are very well-positioned to deploy the expertise and global capabilities necessary to create incredible value, including, of course, for patients.

> We recognize that to solve the world's biggest healthcare challenges, partnerships are essential.

Nauman Shah
Global Head, Johnson & Johnson Innovative Medicine Business Development

While dedicated to our focus areas, we closely monitor the evolving landscape and retain the flexibility to enter areas where there is unmet need and where we believe we can make a significant impact. When incredible science comes to fruition, it is important to have the flexibility to explore these emerging opportunities. We certainly believe GenAI has significant potential and are making major investments to maximize and complement our know-how and capabilities. Precision medicine is a major focus for us, with our capabilities in diagnostics, biomarkers and genetic testing. Combining those technologies with AI will be paramount to elevating the standard of medicine to a new level, delivering the best outcomes by identifying patients who can maximally benefit from a given therapy.

EY: How do you strike the right balance between looking for value within the existing portfolio and looking beyond for new opportunities?

NS: Approximately 25% of sales at Johnson & Johnson come from products launched in the past five years. We are very proud of this and expect this trend to continue; we don't believe we have every single solution within the four walls of Johnson & Johnson. Despite being a company with significant resources and incredible capabilities, we recognize that to solve the world's biggest health care challenges, partnerships are essential, and we continue to live those principles as we pursue external innovation. Looking at our portfolio, we will always seek to identify assets where value can be optimized by an external partner, combining the strengths of two companies to unleash the full potential of a product to help patients.

We have recently executed deals enabling us to strengthen our pipeline and advance some very exciting innovation. This includes licensing a highly selective muscarinic M1 antagonist with significant potential across a range of nervous system disorders to broaden our neuroscience portfolio, and deepening our leadership in oncology and hematology, with two CAR-T therapies with transformational potential for patients with B-cell malignancies. We also established a strategic partnership that aims to accelerate and transform the local treatment of cancer through novel intratumoral drug delivery.

In addition, our recent partnership for our E.coli vaccine is a tremendous opportunity to combine the strengths of two companies to advance a potentially first-in-class vaccine to protect against invasive E. coli disease, which affects nearly 10 million adults each year, has only limited therapeutic options available and can cause life-threatening infections.

EY: How will you look to build on this strategically in 2024, in terms of M&A strategy?

NS: We remain highly active in sourcing external innovation, seeking opportunities that will best complement our existing in-market portfolio and pipeline to enable us to help elevate the standard of care for patients. Our goal is to identify collaborative opportunities and form active partnerships where we can bring the full strength of Johnson & Johnson to bear to create transformative value for our partners and the world. Looking ahead to 2024, we see tremendous opportunity to advance transformational science with the application of different modalities, including small molecule, large molecule, and cell and gene therapies. We are deeply connected across the scientific landscape and will continue to play an active and unique role in each element of the health care innovation ecosystem. We will continue to be very active in acquiring assets, companies and technologies as well as entering into strategic collaborations, licenses, profit splits and commercial partnerships. At Johnson & Johnson, we pride ourselves in being a partner-of-choice and will continue to advance and translate the best scientific breakthroughs into practical treatment options with differentiated value. We stand ready to work with stakeholders across the health care system, and through purpose-driven collaboration, can accomplish truly remarkable advances in human health.

GUEST PERSPECTIVES

Monika Vnuk
Senior Vice President, Global Partnering and Business Development, Sanofi

Partnering to bring transformational science to patients

At Sanofi, we chase the miracles of science to improve patients' lives. To achieve this goal, we team up and collaborate with our big pharma peers, with biotech companies, with academia and with financial investors. Over the last four years, we completed more than 70 deals, including 10 acquisitions and 60 licenses, collaborations and equity investments. These recent transactions, as well as our earlier deals, fuel our pipeline and allow us to develop and launch transformational medicines for patients. Our flagship product, Dupixent, is the result of a collaboration with Regeneron. The medicines we launched in 2023, including Altuviiio, Beyfortus and Tzield were sourced through partnerships or acquisitions. To benefit patients and drive innovation, collaboration within the life sciences ecosystem is essential.

When considering deal structures, we tailor our transactions to optimize the value and impact of the asset for patients, our partners and Sanofi. Collaborations and licensing arrangements may be the preferred structure when the science needs to mature and further draw on the distinct capabilities of each partner. That can mean Sanofi applying its development and regulatory capabilities honed over the years of designing and executing clinical trials. While our partners continue to focus on research and moving the molecule to the clinic, in a focused and nimble way of a biotech, we can apply our experience, such as in our recent deal with Recludix on the STAT6 target. An acquisition may be the preferred route if value optimization requires a single decision-maker and the entrepreneurs want to move on to pursue their next idea, as was the case with our recent acquisition of Provention Bio.

> We believe that strategic focus and deep therapeutic knowledge and capabilities are the formula for scientific, clinical and commercial success.

Monika Vnuk
Senior Vice President, Global Partnering and Business Development, Sanofi

In between these typical deal constructs lies a range of potential arrangements that address various needs of partners. For example, partnerships to share costs and risks, such as our collaboration with Blackstone, which enable us to expand our investment in the pipeline without increasing our internal budgets. Co-development and co-commercialization agreements with other pharmaceutical companies, such as our recent deals with Johnson & Johnson and Teva, allow us to combine the resources of experienced drug developers to accelerate timelines, and position assets for success.

At Sanofi, we believe that strategic focus and deep therapeutic knowledge and capabilities are the formula for scientific, clinical and commercial success. By focusing on a few, and preferably related, areas of science and medicine, it allows us to build deep and lasting capabilities across research, development, manufacturing and commercialization. These in turn, allow us to drive innovation internally and attract partners. With our therapeutic focus on inflammation and immunology, our ambition is to become the leading immunology company by the end of the decade. In addition to immunology, we are leaders in vaccines and rare disease, and we continue to invest for growth in neurology, as well as in a focused way in oncology.

Another key ingredient for success, especially in the future, is artificial intelligence (AI). At Sanofi, we are 'all-in' on AI and use the technology across the company. In research, we formed partnerships with leading AI companies to accelerate target discovery, optimize chemistry, identify patient populations to conduct better and faster clinical trials, and modernize our manufacturing network. In addition, we deploy AI across other areas of the company to streamline operations and improve decision-making. Our partnership with Aily Labs and the plai app gives us real-time insights into the performance of the company across various financial and operational metrics. This heightened level of insight allows our senior leaders and managers to make better, more informed decisions when deploying resources and identifying opportunities for growth.

The life sciences industry is a complex ecosystem affected by macro trends, as well as regulatory and pricing pressures specific to our sector. In dealmaking, we consider these macroeconomic factors when building our business cases. We thoughtfully analyze and reflect in our models the costs, risks and timelines resulting from the current environment. It is especially important for our biotech partners to understand how impactful these elements may be on the value of innovation and that this impact can't be solely borne by the pharmaceutical partner.

Our industry should be optimistic about 2024. While loss of exclusivity pressures will continue to drive dealmaking, maturing biotech and pharma pipelines, are poised to offer innovation to patients. At Sanofi, we are very excited about our immunology pipeline, including assets such as amlitelimab, our anti-OX40L antibody, frexalimab, our anti-CD40L antibody, and our TNF alpha small molecule, among others. Furthermore, the capital markets may improve for biotechs, as underperforming companies exit the market through either delisting, reverse mergers, or wind downs and public investors return to fund innovation. The key to long-term success is to invest in innovation that delivers transformational benefits for patients.

METHODOLOGY

Dealmaking and financing analyses

Life sciences dealmaking and financing activities were analyzed from January 1, 2014 to December 10, 2023 using data from Capital IQ, Biomedtracker and PitchBook.

M&A deals with disclosed values greater than US$100 million were categorized according to the target's subsector (e.g., biopharma or MedTech) and by rationale as follows:

- **Asset swap:** transaction in which the companies participate as both acquirers and sellers, negotiating the exchange of assets with each other
- **Bolt-on:** small-to medium-sized acquisitions that account for less than 25% of the buyer's market capitalization
- **Financial deal:** characterization used when the acquirer is a financial buyer (e.g., private equity) outside the life sciences industry
- **Geographic expansion:** acquisitions by a life sciences company specifically designed to access capabilities in a new geography

This does not include cross-border transactions that are part of larger, transformative transactions.

- **Megamergers:** acquisitions with valuations of roughly US$40 billion (biopharma) and US$10 billion (MedTech)
- **Transformative deals:** transaction in which the deal value is greater than 50% of the acquirer's market capitalization at the time of purchase

Acquired companies were classified by the stage and therapy area according to their lead asset, as defined by Evaluate Pharma. Unless otherwise noted, these analyses excluded deals for over-the-counter, generics or animal health products.

Firepower analysis

The EY organization defines Firepower as a company's capacity to fund transactions based on its balance sheet. It has multiple inputs, including (1) cash and equivalents; (2) debt capacity, including credit lines; and (3) market capitalizations. The following assumptions underpin the analysis:

- A company will not acquire targets that exceed 50% of its existing market capitalization.
- When a transaction results in a new company, the debt-to-equity ratio of the combined entity cannot exceed 30%.
- Equity is measured on a market value basis.
- The methodology does not calculate the ability to perform M&A via stock-for-stock transactions. However, increases in a company's stock price do increase a company's Firepower because increased equity enables companies to borrow more to finance transactions.

Firepower trends are measured across the biopharma and MedTech subsectors, as well as for individual companies. While some life sciences companies have made acquisitions that extend beyond the upper threshold defined in the Firepower methodology, the goal is to create a uniform approach to measure relative changes in Firepower.

The EY organization defines deployed Firepower as the ratio of capital spent on M&A or alliances by a company or subsector in a given period relative to the available Firepower as determined by the inputs described on the previous page. Unless otherwise noted, November 30, 2023 data was used to calculate annual Firepower results. In instances where transactions by companies in two different subsectors took place, Firepower calculations were performed for the separate entities until the close of the transaction.

The 25 biopharmas included in the analysis were:

- AbbVie Inc.
- Amgen Inc.
- Astellas Pharma
- AstraZeneca PLC
- Bayer AG
- Biogen Inc.
- Boehringer Ingelheim
- Bristol Myers Squibb Co.
- Daiichi Sankyo Co. Ltd.
- Eisai Co., Ltd.
- Eli Lilly and Company
- Gilead Sciences, Inc.
- GlaxoSmithKline PLC
- Johnson & Johnson
- Merck & Co., Inc.
- Merck KGaA, headquartered in Darmstadt, Germany
- Novartis AG
- Novo Nordisk A/S
- Otsuka Pharmaceutical Co., Ltd.
- Pfizer Inc.
- Regeneron Pharmaceuticals Inc.
- Roche Holding AG
- Sanofi
- Takeda Pharmaceutical Company Ltd.
- UCB S.A.

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How EY's Global Life Sciences Sector can help your business
As populations age and chronic diseases become commonplace, health care will take an ever larger share of GDP. Scientific progress, augmented intelligence and a more empowered patient are driving changes in the delivery of health care to a personalized experience that demands health outcomes as the core metric. This is causing a power shift among traditional stakeholder groups, with new entrants (often not driven by profit) disrupting incumbents. Innovation, productivity and access to patients remain the industry's biggest challenges. These trends challenge the capital strategy of every link in the life sciences value chain, from R&D and product supply to product launch and patient-centric operating models.

Our Global Life Sciences Sector brings together a worldwide network of 23,000 sector-focused professionals to anticipate trends, identify their implications and help our clients create competitive advantage. We can help you navigate your way forward and achieve sustainable success in the new health-outcomes-driven ecosystem.

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