

2024 – An Update on the Health of the CRO/CDMO Sector

An Improving Picture for Some, While Others Still Feeling The Pinch



Brian Scanlan

Operating Partner - Life Sciences, Edgewater Capital Partners



Introduction

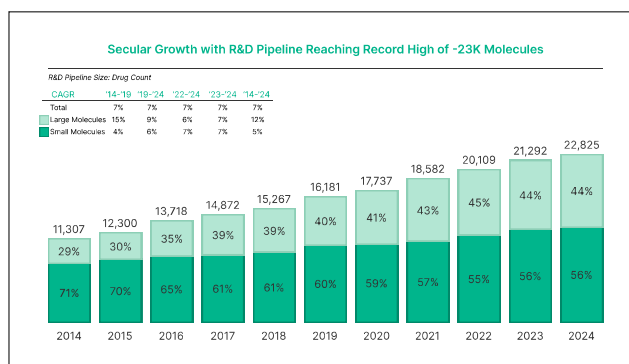
In last year's CPHI Annual Report, we discussed a period of re-alignment within the industry. While pandemic and geopolitical pressures were subsiding, inflation, higher interest rates, big pharma re-alignments, and the biotech funding supply/demand imbalance marshalled in a period of softening demand for services which was generally felt across the industry. Biotechs and emerging pharma companies generally migrated towards cash preservation mode, and while there were signs the funding environment had bottomed out, this needed to coincide with increasing pharma M&A and a more healthy IPO environment to get cash really flowing again. Our prediction was that CRO's and CDMO's would see a continued softening in demand (particularly from emerging pharma and in earlier phases of development) which we noted would likely extend well into 2024.

This year, we will take a look back at the past 12 months, and update our predictions on the health of the sector moving into 2025 and beyond. Generally speaking, we can say that our predictions from CPHI 2023 have generally lived up to expectations, and while demand remains somewhat soft in 2024, there are meaningful signs of a recovery in the sector. So what has happened since CPHI last year? Let's take a look.

Demand for Pharma Services and the Long-term Outlook:

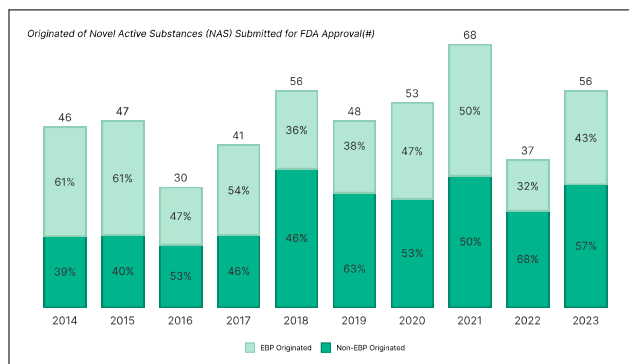
It is important to understand that the long-term growth drivers for the industry remain very strong, notwithstanding unforeseen geopolitical turmoil. A strong pharma services sector requires growth in the number of compounds in development to feed a healthy funnel of programs (Figure 1). Growth rates for small and large molecules are currently around 5% and 12% CAGR respectively, with slightly more than half of the compounds still favoring small molecule modalities. Over the next decade the split will likely favor large molecules, but a balance will settle in over time based on the relative risks and benefits of the various therapeutic modalities. The long-term outlook is strong for CRO/CDMO's across all therapeutic modalities.

Figure 1: Total Number of Compounds in Development Pipelines; Piper Sandler, Pharma Intelligence, Sept 2024



The industry's long term health also requires speed and innovation to bring the best therapies to market with an eye on managing development costs. Over the past 10+ years the number of Novel Active Substance (NAS) approvals has pivoted toward those developed by emerging pharma companies (Figure 2), and nearly two-thirds of drugs approved over the past six years have originated by emerging pharma where nimbleness, speed, and innovation enable faster progression of novel compounds into the clinic, and ultimately to launch.

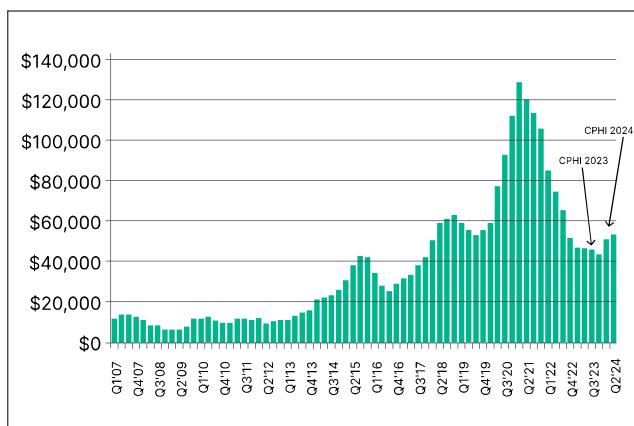
Figure 2: Origination of Novel Active Substances for FDA Approval; Pharma Intelligence, Piper Sandler Sept 2024



Update on Biopharma Funding – A Key Barometer for CRO/CDMO Health

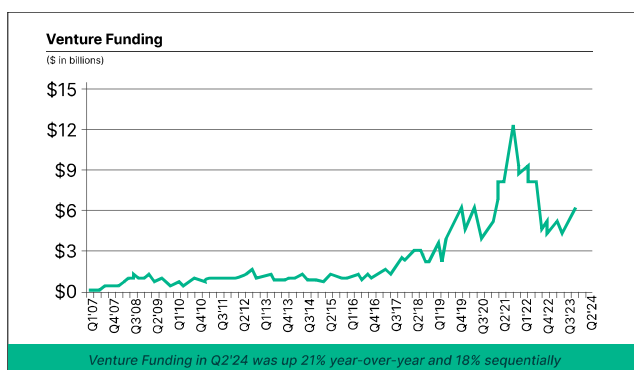
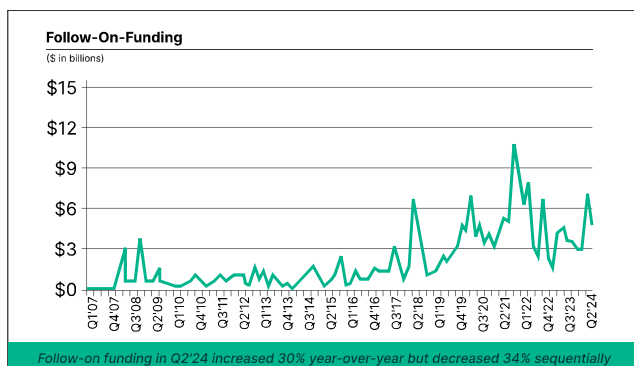
A proxy for determining the health of the CRO/CDMO sector is funding into the biotech (emerging pharma). As mentioned previously, nearly two-thirds of all drugs submitted for FDA approval originate from these companies. During last year's CPHI, total funding into the sector appeared to be bottoming out, and we asked "Is the worst behind us?". It is safe to say that through the first half of 2024, total funding into the sector is improving (Figure 3).

Figure 3: TTM Quarterly US Biotech Funding – All Sources.
William Blair Equity Research, August 2024



Looking at the underlying sources of funding into the sector (Venture, Follow-Ons, IPO's) reveals a mixed bag. Venture and Follow-On funding (figures 4) have trended quite well, and there is room for optimism here.

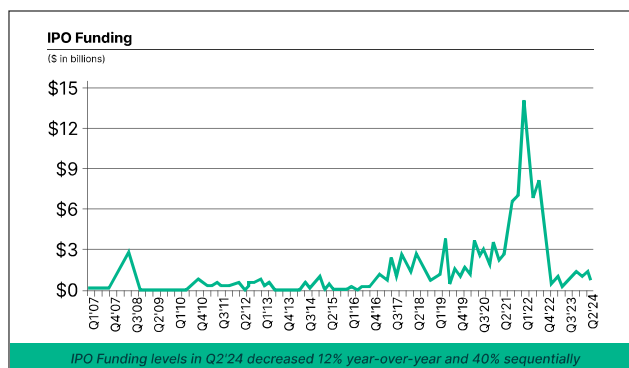
Figure 4: Quarterly US Biotech Follow-On and Venture Funding.
William Blair Equity Research, August 2024



Follow on's have improved significantly from the low point in Q2 2022 with generally positive trends, while Venture Funding has exceeded pre-pandemic levels in Q2.

IPO's are showing some signs of life, but continue anemic versus both the pandemic and pre-pandemic levels (Figure 5).

Figure 5: Quarterly US Biopharma IPO Funding. William Blair Equity Research, August 2024.

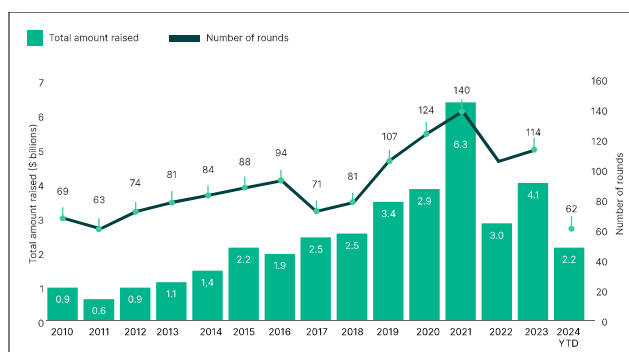


As of mid-September 2024, the US logged 18 biotech IPO's and just under \$3Bn raised which is close to the totals for full year 2023. Q3 2024 saw over \$900M of IPO activity. Very encouraging signs as we move into the final quarter of 2024. A recovering IPO market will fuel more investment across the sector including venture and follow on financings.

EU Biotech Venture Funding

Turning to Europe, venture funding has been quite strong in 2024 versus the prior two years, and is on pace to exceed every prior year except 2021 (Figure 6). Increasingly US investors have looked to Europe/UK for their emerging hubs of innovation.

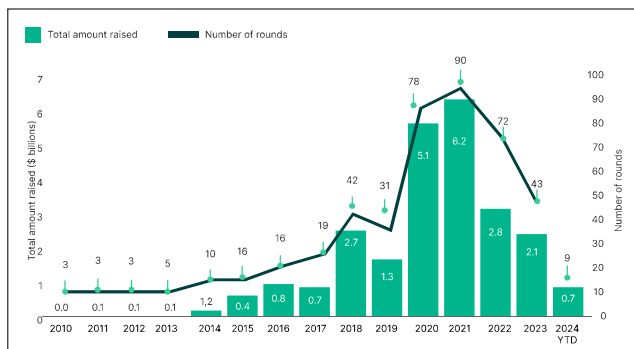
Figure 6: Total Venture Funding in Europe; Nature Biotechnology; DealForma Database



China Biotech Venture Funding

The Chinese venture market paints a different story, and continues a downward trajectory in 2024 which is on pace to end around 2019 levels, but well below 2022 and 2023 (Figure 7).

Figure 7: Total Venture Funding in China; Nature Biotechnology; DealForma Database

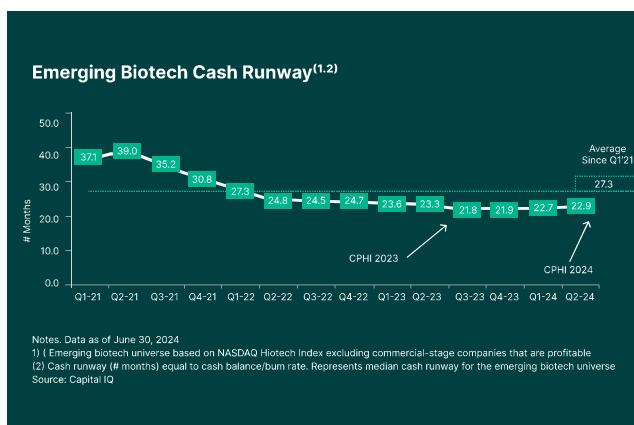


China is still trying to navigate geopolitical obstacles, fallout from the US BIOSECURE Act, and other economic issues which have affected venture investment.

Biotech Cash Runways Stabilizing:

Last year we looked at Biotech's cash runway given the lack of evidence of a sustained financial recovery. At that time, the cash runway was well under two years, and the trajectory was still declining (Figure 8). Biotechs were doubling down on cash preservation mode, and this rippled out into the CRO/CDMO sector. This year, with generally more solid evidence that we are in the beginning of the recovery phase, the cash runway seems to have stabilized from a trough in Q3/Q4 2023, and has now started a slow recovery.

Figure 8: Capital IQ; KPMG Corporate Finance - US Biopharma Services Industry Update H1 2024



An improving cash runway, along with improving economic conditions and interest rate cuts, means biotech's should start moving back into more traditional spending patterns with CRO/CDMO's reflecting more confidence in the next

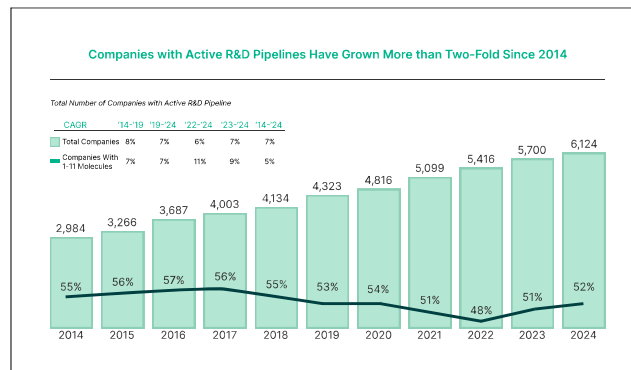
12+ months financial outlook. This will, however take time to start rippling over into the pharma services sector, and CRO/CDMO's should be monitoring closely average proposal value improvements, and time-to-close as leading indicators here.

Still Too Many Biotechs....Still Too Little Cash

In last year's CPHI annual report we discussed the capital supply/demand imbalance, and large number of biotech companies vying for too little capital which was putting pressure on valuations and distribution of capital across the sector.

In spite of some consolidations and rationalizations within the biotech sector, the total number of companies with active R&D pipelines has continued to grow through 2024 (figure 9). As of mid-year, there are now over 6000 pharma companies with active R&D pipelines, and over 50% of these companies have only 1-2 products in the pipeline.

Figure 9: Number of Biopharma Companies, Pharma Intelligence, Piper Sandler, Sept 2024



More biotechs mean more fuel required to progress pipelines, and while funding into the sector is generally showing signs of life, there are more companies today (versus last year) vying for available capital. Investors have nearly infinite choices on where to invest in the sector, and with more biotechs, more compounds in development, and only slightly more capital flowing, investors have been even more discriminating around where they are investing.

So Where are Investors Placing Their Bets in 2024?

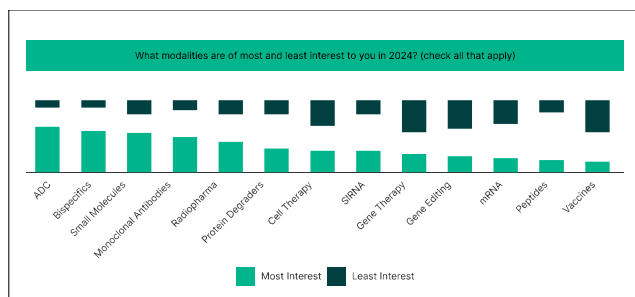
Generally speaking, in the current environment, investors have gotten more cautious and have

tended towards focusing on: 1) Therapeutic assets/modalities with more of a historical track record of success, and 2) Those therapeutic programs that are further advanced in the clinic. So where are investors placing their bets?

Biotech Investment By Therapeutic Modality

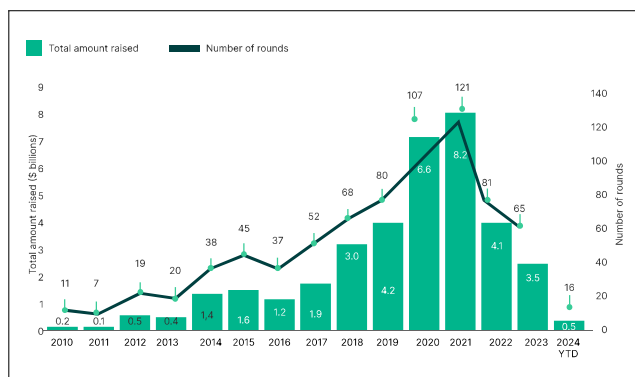
Highlighting current investor sentiment, Oppenheimer's 2024 proprietary survey pinpoints where investors view the best bets in the current biotech investing environment (Figure 10).

Figure 10: Oppenheimer 2024 Proprietary Investor Survey. Presented at Chemoutsourcing Sept 2024



According to the survey, ADC's, Bi-specifics, and Small Molecules top the list. Surprising is the lower interest noted in cell and gene categories, given the public funding into those companies has been strong in 2024. However looking at early stage venture funding into cell and gene reveals a deep trough in these modalities in 2024 (Figure 11).

Figure 11: Venture Funding - Cell and Gene companies; Nature Biotech August 2024, Dealforma Database H1 2024

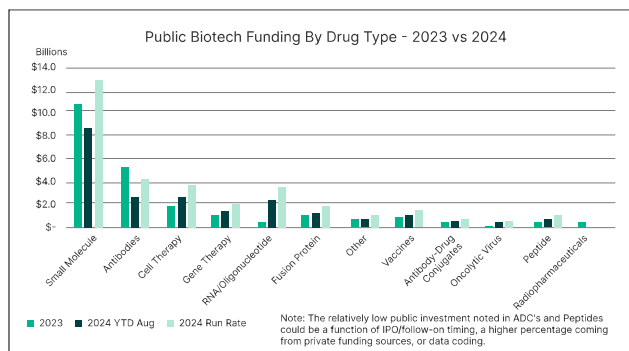


As of mid-year 2024, only 16 CGT companies received venture rounds totaling only \$500M, compared with 65 companies receiving \$3.5Bn in

all of 2023. Investors have cited clinical, manufacturing, and commercial hurdles as reasons to be more cautious.

Turning to public funding by drug type (Figure 12), the data reveals the top 5 modalities receiving public investment thus far in 2024 is small molecules, followed by antibodies, cell therapies, oligonucleotides and gene therapies. The biggest public funding increases versus 2023 came in oligonucleotides and cell therapies.

Figure 12: Public Biotech Funding (IPO's and Follow-ons only). Source: Dealogic funding data for public markets



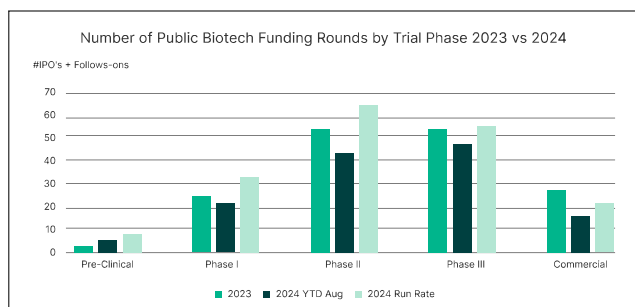
According to Biopharma Dive's US Biotech IPO tracker, as of September 2024, 18 IPO's launched thus far which is nearly the level of the number launched in all of 2023.

Biotech Investment By Stage of Development:

According to Pitchbook, through mid-year 2024, private venture investment into preclinical phase biotech was around 28% of the total (~\$3.5Bn), while 62% (~\$7.6Bn) went to support clinical stage companies. Overall the percentage is down from previous years. Notably, increasing investment in preclinical biotech drove 2021 and 2022 to record funding levels.

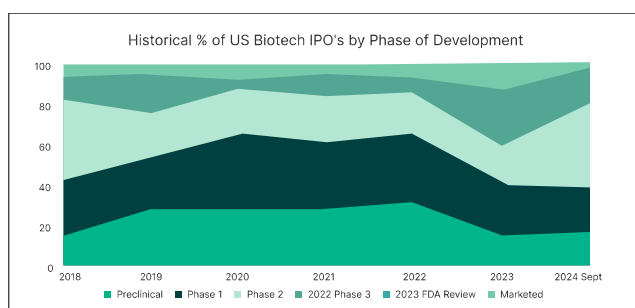
With less private funding going towards early-stage biotech, many have tried to turn to the public markets, however IPO's and public follow-ons are now heavily tilted towards clinical stage where more advanced ("de-risked") assets and more seasoned management teams are in place (Figure 13).

Figure 13: # of Biotech IPO's + Follow-ons by Lead Phase of Development; Dealogic funding data for public markets



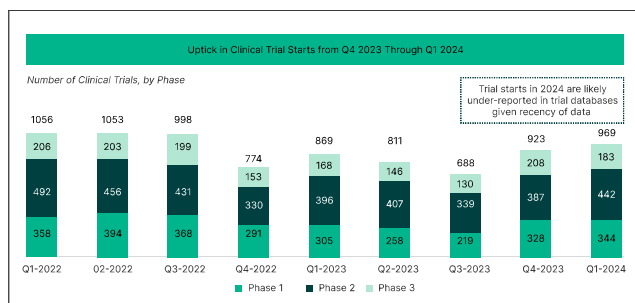
Also noteworthy is the percentage IPO's in preclinical companies is at about half the rate seen over the prior 4 years (Figure 14). With the overall share of public and private funding tipping towards clinical biotech, it is not surprising that the platform/preclinical stage biotechs have been feeling a significant funding pinch.

Figure 14: Percentage of US Biotech IPO's by Lead Phase of Development, Biopharma Dive.



Conversely, the jump in relative funding into clinical phase companies appears to be fueling an uptick in clinical trial activity. Starting in the fourth quarter of 2023 and continuing into 2024 there has been an increase in Phase 1 and Phase 2 clinical trial starts (Figure 15).

Figure 15: Clearview, Globaldata, Harris Williams Pharma Services Sector Brief Q2-2024



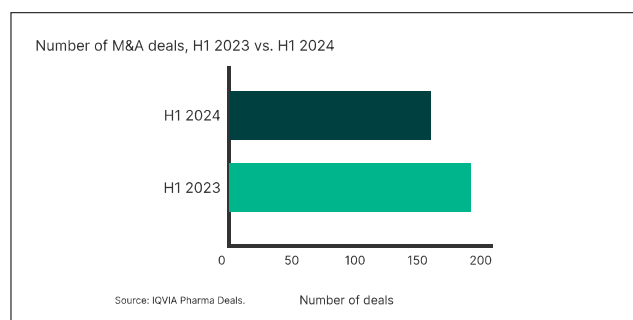
What's Going on at Big Pharma?

We can't overlook big pharma in this equation. In fact, big pharma is the life blood for many of the

largest CRO's and CDMO's in world, as they have historically relied on the larger integrated pharma service providers for more strategic long-term relationships. Over the past year, big pharma has generally continued its pattern of cost reductions in light of lingering economic issues, impending patent cliffs, and certain aspects of the Inflation Reduction Act. Big pharma may also be pursuing fundamental pivot away from outsourcing discovery and early R&D. So, what's going on at big pharma, and how might it impact the CRO/CDMO sector?

Impending Patent Cliffs and the Need to Accelerate M&A: Big pharma has around \$190 billion in patent exclusivity at risk between now and 2033. This is putting pressure on them to accelerate M&A, particularly given they are sitting on \$150 billion in dry powder. The industry expectation in 2024 was for accelerated M&A growth at big pharma to address this. However, the first half of 2024 is about 20% behind the 2023 pace in terms of deal volume (Figure 16).

Figure 16: Iqvia Pharma Deals Half Year Review 2024



Iqvia cited continued macroeconomic pressures and regulatory scrutiny that kept deal activity muted in the first half of this year. Even despite the patent expiries, and the market's anticipation of more M&A, big pharma's M&A momentum appears slower than anticipated. Big pharma will need to pick up the pace of M&A over the next 12 months to address this.

Interestingly, similar to biotech investors, big pharma M&A activity in both 2023 and YTD 2024 has tended towards more de-risked assets. Iqvia noted that for all of 2023, preclinical M&A activity accounted for less than 5% of the total. In fact, big pharma M&A has favored acquiring more clinical phase companies and assets to help bolster the mid/late phase pipelines. Not

surprisingly, the lack of preclinical M&A, combined with the anemic venture funding in early development has led to some alarm bells at some of the early phase outsourced providers.

Pivoting Away From Outsourced Early R&D - Towards M&A? As part of big pharma's streamlining, it appears that a fundamental shift in its discovery and R&D outsourcing may be underway. Charles River Labs (CRL) recently cited a shift in the way big pharma handles outsourced discovery and early stage R&D activities. CRL has historically dominated this space with large, strategic programs from big pharma. CRL announced in August 2024 that it was significantly cutting its forecast due to a material and sustained pullback from big pharma in outsourced discovery and R&D services. CRL surmised big pharma would accelerate its M&A activities to effectively buy more advanced pipelines. A fundamental realignment of big pharma outsourcing behaviors here could cause shockwaves through the CRO world, particularly among those who currently rely on big pharma for early-stage outsourced business. CRL noted that this shift would mean that it would likely be getting more early-stage business from emerging pharma, however as pointed out earlier, in the near term, demand will remain muted here as funding into the early stage biotech sector has been anemic.

Shortly after the CRL announcement, Evotec announced a challenging first half 2024, down 7% driven by softness in its early-stage business in what it called "a slowdown in early-stage R&D spending". Note that Evotec mentioned they rely on both big pharma and biotech's across its business units.

Implications for CRO/CDMO's: If big pharma does pivot its outsourced discovery and R&D resources towards M&A, the early development falls back to the biotech companies, placing more emphasis on them as a key customer demographic for both big and small CRO/CDMO's in early development.

Layoffs Continue, But Signs of Stabilization: One significant initiative by big pharma has been to address cost reductions in order to further streamline their organizations for the future. A

large component of this has been layoffs, and big pharma constitutes a large percentage of the layoffs industrywide. According to the Fierce Biotech Layoff Tracker, 2023 logged 187 total layoff events which was a 57% jump from 2022. As of September 12, 2024, 141 layoffs have been announced which is in line with last year's count at this time (138). It is estimated that around 25,000 employees have been let go in the pharma sector in 2024 as of mid-year.

Implications for CRO/CDMO's: Big pharma's continued streamlining means more R&D and manufacturing will need to be done externally. This only helps drive demand for outsourced pharma services.

Big Pharma "Owns" the GLP-1 Space: When asked "what's going on with big pharma?" GLP-1's cannot be omitted from the discussion. While big pharma has not originated all GLP-1's, they are clearly positioning to "own" this space. Several big players are all-in with these therapeutics, and it's not hard to understand why. Goldman Sachs estimates \$44 billion, and Barclays' \$100 billion by 2030. The current number one player in GLP-1's is Novo Nordisk, and at one point in 2023, Novo's growth exceeded Denmark's entire economic output. The key big pharma players are Novo Nordisk, Eli Lilly, Amgen, Pfizer, Boehringer Ingelheim, and Sanofi (Antaros). Several have either announced major capital expansions to plan for the ramp in demand, and Novo acquired Catalent specifically for the capacity needed to support growth of its GLP-1's. In addition to the internal investments by big pharma, GLP-1's are catalyzing another wave of major capacity expansions across the CDMO landscape.

Implications for CRO/CDMO's: Given the volumes of GLP-1's anticipated, the amount of capacity required will clearly be a net positive for the CDMO community, and the larger CDMO's will benefit, given their critical mass and ability to for further expansion. Note that manufacture of peptides is not trivial, and require specialized equipment. New technologies are also be developed which can plan an important role here as well.

Other Regulatory Factors Affecting Demand for CRO/CDMO Services

Update on the Inflation Reduction Act: In August of 2022, the Inflation Reduction Act (IRA) was passed in the US. One of the major elements of the IRA is the US government's ability to negotiate prices for top-spending Medicare drugs. The timing for small molecule price negotiations was 9 years after approval, and large molecules would be 13 years from approval. The pharma industry has estimated the potential impact of \$10's to \$100's of billions in future profit lost.

Iqvia provided an update at a recent JP Morgan conference. They noted that the pharma industry is looking at new clinical trial strategies to combat the impact of the IRA. For example, if a drug has multiple indications, innovators would consider running multiple indications simultaneously and launch simultaneously, rather than running more sequential trials. This is because price protections are by molecule and not by indication

Pharma companies are also looking closer at therapeutics with more marginal economic profiles, and some believe they may start favoring more large molecules over small, given the 4 years of additional price protections for them. Interestingly, the current venture, follow on, and IPO data suggests small molecules have continued a strong bet in 2024. We will see what 2025+ brings.

Implications for CRO/CDMO's: Enhanced regulation and government price negotiations will be a net negative for the financial health of the sector, and generally put downward pressure on CRO/CDMO demand. However, should pharma companies run indications simultaneously, this could lead to increased demand for services.

BIOSECURE Act – US Biotech Now Inextricably Linked to US National Security: Earlier this year, legislators in the US sent shockwaves through the industry with the release of the BIOSECURE Act. It effectively bans the federal agencies and recipients of federal loans or grants from contracting or purchasing goods or services from certain companies seen to be closely associated with adversaries of the United States for national

security reasons. A transition period of 8 years (2032) has been proposed for companies of concern. Five companies currently listed in House bill are WuXi AppTec, WuXi Biologics, BGI Group, MGI Tech, and Complete Genomics. The bill passed the US House of Representatives by a very wide margin (306-81) on September 9, 2024. The bill moves to the US Senate next, then on to the Presidents desk.

To be clear, the BIOSECURE Act does not explicitly prohibit all private U.S. companies from working with the companies cited in the bill, provided they have not taken any US grants or loans. However the disruption (and confusion) the bill has caused is as if the ban had extended to the broader biopharma community.

Companies across the industry are re-evaluating their supply chain strategies, and the potential impact of additional companies-of-interest being added to the list. WuXi in particular has been in the spotlight because of the prominent role it plays with US-based companies who are developing therapeutics. WuXi generates about 65% of its revenue came from U.S. customers, totaling \$3.6 billion. However, the ripple effect has gone far beyond WuXi as it relates to Chinese suppliers. In my discussions with several Chinese suppliers doing business in the US, few have said their businesses have not been impacted. Many have seen a noticeable downturn in at least parts of their business. They attribute this to US-based customers looking for alternative options, or looking to site new programs in alternate geographies.

Noteworthy however is the sheer scale of what has been built in China in terms of chemical and biologics capacity, and it is not realistic to consider that a wholesale shift will happen quickly. WuXi alone holds over 10% of the global biologics market share as of 2022 according to a Jefferies report. The world relies heavily on China for everything from raw materials to intermediates, to API's, and Biologics for any exodus to be rapid and wide spread.

Implications for CRO/CDMO's: A net positive for US-based CRO/CDMO's, and service providers in countries not considered foreign adversaries of the US. One risk is any retaliatory actions from

China that could disrupt the flow of key raw materials and intermediates.

Demand for CRO/CDMO Services – 6 Key Takeaways for the Coming Year

Given the current biotech, big pharma, and regulatory landscape what are Six Key Takeaways for CRO/CDMO's over the coming year?

1. Stability and Growth for Clinical CRO's and CDMO's:

Demand for CRO/CDMO services focused in clinical development programs should see stability and continued growth in demand over the next year. Both clinical stage biotech and big pharma continue to spend and invest in progressing clinical assets which have been considered less risky bets for investment over the past 18 months. Also noteworthy, is how the capital flows out to the CRO/CDMO community. Typically as spend picks up, the CDMO's will see the first signs as drug substance, then drug product will need to be secured first before the clinical CRO's take over on trial execution.

2. Continued Softness for Discovery/Pre-clinical CRO/CDMO's:

Given early stage funding has been anemic the past couple of years, the early-stage pharma service providers have felt the slowdown perpetuate and even accelerate over the past year. Anecdotally, our discussion with over 50 smaller CRO/CDMO's over the past year have revealed generally consistent feedback of an accelerated slowdown felt mid 2023 into 2024. This is likely to continue for the next 6-12 months before a meaningful rebound in funding flows through the system.

3. Stronger Demand for Services in ADC's, Small Molecules, and Biologics...For Now:

Investors have tended toward more "tried and true" therapeutic modalities over the past 12-18 months as they are considered less risky than CGT's or other advanced therapy platform investments. CRO/CDMO's with focus in R&D or manufacturing of therapeutic modalities such as ADC's, Biologics (Bi-specifics/mAbs), Small Molecules will likely see more stability, and a ramp in momentum through 2024 and into 2025.

4. Mixed Bag of Demand for Cell & Gene CRO/CDMO's:

Those service providers working with advanced therapies such as CGT's will likely see a continuing mix in demand profile which is reflective of the current funding environment. Clinical phase demand for services in this area should continue to improve, however early phase CGT companies have been hit disproportionately hard in 2023 and continuing into 2024. CRO/CDMO's focused here should expect slow demand to continue well into 2025.

5. Specialty CRO/CDMO's to Play an Important Role:

- Radiopharma: CDMO's with capabilities in handling radiopharmaceuticals are seeing strong demand, reflecting strength in these therapeutic modalities. Barriers to entry here are extremely high and could lead to a supply/demand imbalance in the near term as more radiopharmaceuticals make their way into the clinical pipelines.
- Peptides: While peptides certainly aren't considered "niche" or "specialty" therapeutic modalities, the drug substance manufacturing processes require specialized expertise not common to all CDMO's. GLP-1's in particular have gotten most of the attention, and rightfully so given the market size and potential. Traditional liquid and solid-phase synthesis approaches can have scalability issues, and the GLP-1 boom has brought attention to this issue. Technologies like continuous liquid-phase synthesis (ie. Snapdragon Chemistry) are niche approaches that could benefit here. CDMO's who are able to innovate more scalable and cost-effective manufacturing will have clear advantages here.

6. Biosecure's Ripple Effect to Expand:

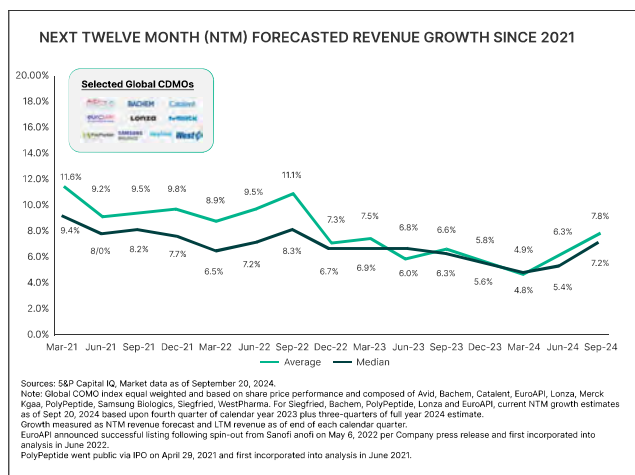
The US BIOSECURE Act is likely to pass in the next year based on the bipartisan political climate in the US. In spite of the limited scope of the bill, misunderstandings around the bill, and the future uncertainty of broader US scope or Chinese government retaliation, momentum could continue to further shift towards alternate sources of supply outside of China. These will include North America, EU, India, or other countries not considered adversarial to the US. The ripple effect is already being felt by Chinese CDMO's (those not referenced in

BIOSECURE feeling slowdown in demand). Conversely, our discussions with several CDMO's in the US, EU, and India have seen programs shifting to these geographies, although not widespread yet.

How are CDMO's Feeling About the Future?

A proxy for the health of the CDMO industry is how the larger public CDMO's are viewing the market and their outlook for the next 12 months (Figure 17).

Figure 17: Public CDMO Growth Outlook



anticipate increased growth over the next 12 months. A good sign generally that the CDMO market is in the beginning stages of the recovery.

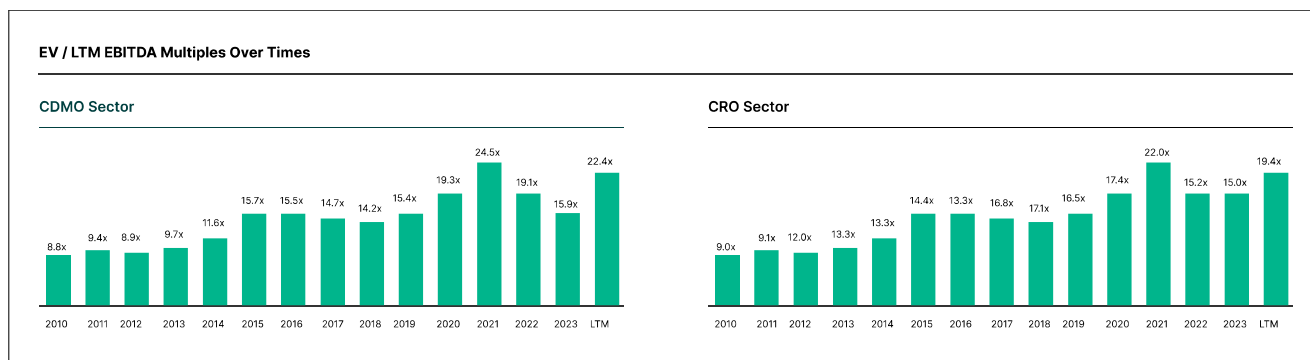
CRO/CDMO Valuations and the M&A Climate

[Body] Since last year's CPHI, public CRO/CDMO's valuations have generally improved (Figure 18). 2023 ended with public valuations around pre-pandemic levels for CDMO's and slightly lower for CRO's. 2024 has seen a rebound in public valuations through August TTM with CDMO's up ~35% and CRO's up ~30% from 2023.

After nearly three years of declines and a low point in March 2024, CDMO's on average,

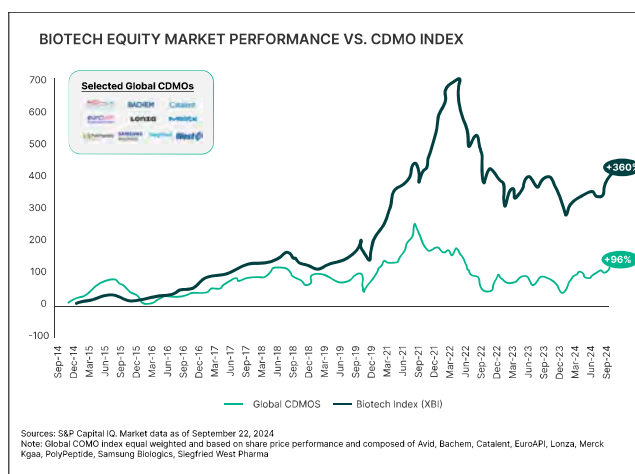
Figure 18: William Blair Equity Research, Pharma Services Update, August

Equity Performance									
	Companies	Market Cap (\$M)	YTD Price Performance	2024E Revenue	2024E EBITDA	23-24 Revenue Growth	2024E Gross Margin	2024E EBITDA Margin	EV/LTM EBITDA
CDMOs	AVID	\$451	9.8%	\$158	\$21	15.5%	10.6%	13.5%	NMF
	Catalent	\$10,161	22.2%	4,385	838	7.0%	17.9%	19.1%	32.2x
	Lifecore	\$195	(17.1%)	136	18	11.1%	0.0%	13.0%	22.1x
	Lonza	\$145,251	38.6%	7,283	2,061	(0.9%)	34.1%	28.3%	19.5x
	Mediatech	\$4,171	8.6%	1,424	314	2.3%	25.8%	22.1%	15.7x
	Median	\$4,171	9.8%	\$1,424	\$314	7.0%	17.9%	19.1%	20.8x
	Mean	\$11,246	13.0%	\$2,677	\$650	7.0%	17.7%	19.2%	22.4x
CROs	Charles River	\$12,462	(12.6%)	\$4,221	\$1,272	2.2%	36.7%	30.1%	14.2x
	Fortrea	\$3,479	(33.1%)	\$2,801	\$283	(9.9%)	18.4%	10.1%	19.0x
	Median	\$25,990	10.7%	\$8,645	\$1,840	6.5%	29.9%	21.3%	16.8x
	Mean	\$44,081	(8.6%)	\$15,477	\$3,760	3.3%	35.3%	24.3%	15.9x
	Novartis	\$12,786	34.4%	\$2,170	\$430	15.1%	19.8%	31.2%	29.2x
	Novartis	\$12,786	(8.6%)	\$4,221	\$1,272	3.3%	29.9%	21.3%	16.8x
	Mean	\$19,760	(1.9%)	\$6,663	\$1,517	3.4%	29.8%	21.1%	19.4x



The Public CDMO sector performance index has also fared well against its biotech cousin, the XBI (Figure 19), reflecting investor confidence in outsourced pharma services versus the underlying therapeutic asset.

Figure 19: Biotech equity market performance (XBI) vs CDMO index.

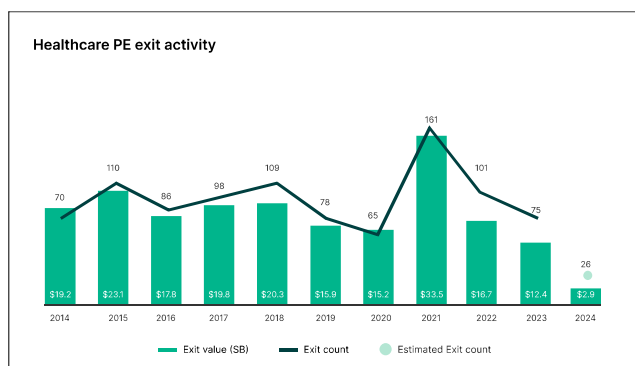


What's Going on in the Private Equity World?

PE Portfolio Exit Activity:

The private equity (PE) landscape has not been as rosy over the past year, as the number of PE exits continued a downward trajectory with 2024 shaping up to be significantly behind 2023 (Figure 20).

Figure 20: Healthcare PE exit activity; Pitchbook



Given the clogged exit and activity, Pitchbook notes the median hold period of PE investments reached a record of 6.4 years for US PE middle-market assets in 2023. Correspondingly, the exit/investment ratio fell to 0.36x in Q2 2024, a new low that reflects the sluggish PE exit climate, and the number of unsold portfolio companies is getting large, preventing distribution to investors.

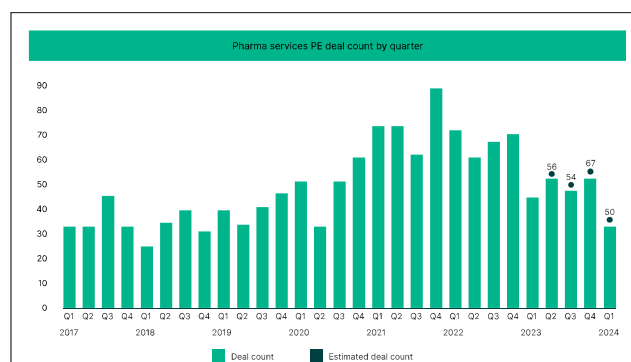
While the economic climate has not been cooperative for PE exits, their portfolio companies have been using the past two years to improve operational efficiencies in light of increasing interest rates, inflation and dealing with a generally more tepid market impacting

their performance. According to Bain Capital as rates ease in the coming year, exits should recover faster than they did in the wake of the global financial crisis.

PE Pharma Service Deal Activity:

In terms of Pharma Services PE activity, the number of deals per quarter has generally been trending down since the record quarter logged in Q1 of 2022. Q1 2024 was among the lowest number of deals in the past six years (Figure 21) in spite of the large amount of dry powder available for M&A.

Figure 21: Global PE Pharma Service Deals, *March 2024; Pitchbook

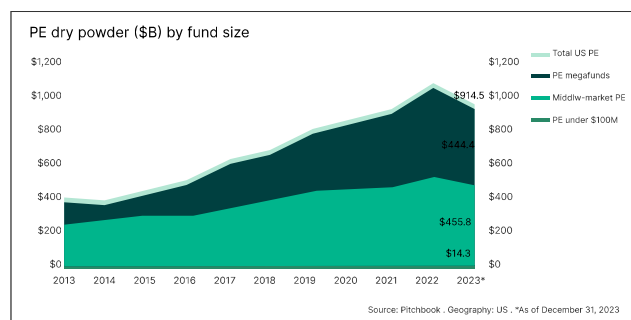


The PE Pharma Service subsector deal activity reveals an uptick in the percentage of minority capital investments in the CDMO sector over the past three years, with percentage of platform investments in CDMO generally shrinking. In the CRO sector there has been an increase in the percentage of add-on M&A activity as PE's pivot their focus on their growing their existing portfolio companies rather than more platforms in this environment.

PE Dry Powder Still Near Record Levels:

However there still remains plenty of dry powder in PE, and US PE firms are still sitting on nearly a trillion dollars of dry powder (Figure 22).

Figure 22: US PE Dry Powder; Pitchbook



According to Bain Capital, 26% of global PE dry powder is four years or older, and general partners are under increasing pressure to deploy capital. At the same time LP's are looking for a return on invested capital, however the M&A environment has been clogged on both sides.

Last year we noted that the investment banking community was signaling an increase in pitch volume later in 2023 and the expectation of PE deal volumes to increase in 2024. While this has not materialized, the broader economic landscape, lower inflation, improving funding into the biotech sector all point toward a better overall picture today versus last year's CPHI. As a result, there is room for more optimism around and an improving PE M&A climate over the next 12 months.

Summary on the Health of the CRO/CDMO Sector:

Since last year's CPHI, there are more clear signs that the funding environment is indeed improving, and the long-term demand drivers continue very positive for CRO's and CDMO's. As such, demand for services should generally improve in the CRO/CDMO sector the coming 12 months, however not all segments will feel this equally. A steadier improvement should be seen by those focused on supply services into clinical/commercial phase programs, and with expertise

in more traditional therapeutic modalities (ADC, Biologics, Small Molecules). Those service providers focused in earlier stages of development and advanced therapeutics (such as CGT's) will likely sluggishness continue until investors dial back their risk profile on early R&D and platform therapeutic investments. Note the recent US Federal Reserve rate cuts in September 2024 should act as a catalyst to accelerate investment (and optimism) into sector.

Public CRO/CDMO valuations have generally improved somewhat versus last year, and for private/PE-owned companies, we are hearing that valuations have modulated a bit, but quality businesses with some scale (>\$5M EBITDA) are generally trading at strong multiples.

For private equity, both deal volume and exits have continued sluggish over the past year, while PE is still sitting on near record levels of dry powder. However as the economic landscape improves, Fed rate cuts take hold, and portfolio company performance and valuations improve, the outlook is favorable for both PE exits to start to start flowing again, and M&A activity to pick up in the coming 12 months.

