

Recommendation: Long Medpace Holdings (NASDAQ:MEDP)

Date: 11/14/2024

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Medpace Statistics

Share Price	\$362.79	2024E Revenue	\$2,116	EV / 2024E EBIT	25.3x
Market Cap	\$11,641	2024E Growth %	12.2%	P / 2024E EPS	29.9x
Net Cash	\$657	2024E EBIT	\$434	FCF Yield	3.7%
Enterprise Value	\$10,984	2024E Diluted EPS	\$12.12	ROIC	65.3%

Note: LVS Estimates as of 11/08/2024.

Summary Investment Thesis

Medpace is a high-quality business available at an attractive price. The Company operates as a clinical research organization that manages clinical phase drug trials for biotech companies. Medpace dominates a lucrative niche within its industry, generates strong returns on capital, and has a decade's long runway for continued organic growth. The Company's stock has declined by over 20% this year due to temporary macro-economic factors impacting the biotech industry which are expected to abate within the next 2 years. I believe Medpace's stock could roughly double over the next 3 to 5 years as it clears the uncertainty of the current industry environment.

I also believe Medpace is a stock worth holding onto long-term. Medpace has been one of the best-performing stocks of the past 10 years, appreciating by over 1,100% since its 2016 IPO. Despite this, the stock has the potential to continue compounding at a high rate for many years to come as it benefits from secular tailwinds, market share gains, and intelligent capital allocation. With an enterprise value of ~\$11 billion, Medpace is less than one-fourth the valuation of IQVIA and less than half the valuation of Icon, its two direct competitors.



Medpace Business Overview

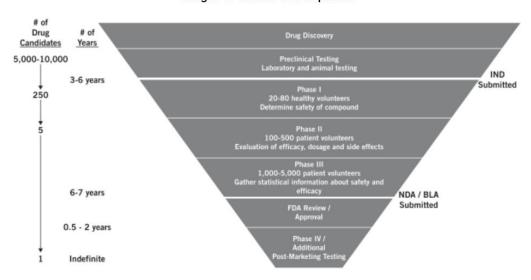
Medpace Holdings ("Medpace" or "MEDP") is a contract research organization ("CRO") headquartered in Cincinnati, Ohio. CROs manage the clinical trial process for pharmaceutical companies with an outsourced relationship. The scope of work can include everything from helping to design a study, recruiting study patients, monitoring patients, collecting study data, analyzing data, performing lab work, writing medical documentation, submitting findings to the FDA, and more.





Contract research organizations sign multi-year contracts with biotech companies for each phase of a clinical trial. The drug companies pay fees to the CRO for outsourced work. The costs of running the study (patient recruitment, clinical site management, lab fees) are passed through to the drug company. Medpace is focused on managing clinical trials for phase I through phase IV and does not engage in pre-clinical work.

Stages of Clinical Development



Full-Service Outsourcing vs. Functional Service Provider

The contract research organization industry is relatively fragmented today. There are four large CROs (IQVIA, Icon, Fortrea, and PPD) that primarily work with large pharmaceutical companies. Together the big four CROs generate approximately \$30 billion in revenue and account for half of the CRO addressable market. Below the big four, there are dozens of small and medium-sized CROs that contract with a mix of large pharma and smaller biotech companies. These smaller CROs tend to be niche players focused on clinical trials for specific diseases or geographic regions.

Medpace has several points of differentiation from the rest of the industry. Medpace is a mid-sized CRO by revenue and headcount and is the only global-scale CRO focused exclusively on a full-service outsourcing ("FSO") model.

Full-service outsourcing is a model where a CRO manages all aspects of a clinical phase trial. This is in contrast to the functional service provider ("FSP") model where a CRO is assigned a specific task (e.g. patient recruitment) and the pharmaceutical company insources aspects of the clinical trial. Larger pharmaceutical companies primarily contract with CROs under the FSP model because they have substantial resources to work on trials in-house. Smaller biotech companies primarily use the FSO model which means that Medpace primarily works with smaller biotechs.







Source: Medpace Q3 2024 earnings presentation.

For small and medium-sized biotech companies with only a handful of drug candidates, every clinical trial is absolutely mission-critical and existential to the future of the companies. Medpace is viewed as an important operational partner whose role extends beyond just clinical trial management but can also entail technical consulting and a degree of handholding. In other words, the full-service outsourcing model is more than just saving money on clinical trial costs. In return, FSO contracts tend to be stickier and higher margin vs. FSP contracts.

By contrast, functional service provider work is limited in scope and somewhat commoditized. Larger pharma companies push CROs around on contract terms. Therefore, function service provider contracts tend to be higher revenue (due to larger study sizes for potential blockbuster drugs) but lower margin, have inferior payment terms, and are more capital intensive for the CROs (greater utilization of resources), resulting in inferior cash economics and ROIC.

	Description	Revenue Per Employee	Return on Invested Capital
Fortrea	Majority FSP	\$172,722	2.4%
Icon	Primarily FSP	\$213,689	7.4%
IQVIA	IT Services & CRO	\$172,230	22.9%
Medpace	Only FSO	\$319,636	65.0%

Source: SEC filings, LVS estimates.

If the full-service outsourcing model is more lucrative, why don't more CROs pursue these contracts? Three key reasons. First, the dollar sizes of smaller biotech studies pale in comparison to the global studies conducted by large pharma. Many CROs simply don't have a cost structure that can justify taking on smaller projects or would rather focus resources on larger projects. Second, large pharma is more reliable because they have a solid capital base, providing more contract visibility. As we will discuss later, the biotech space is currently working through capital scarcity which has resulted in canceled studies and project delays, negatively impacting their CRO partners. Third and finally, the skillset for working with smaller companies that require more help with all aspects of the clinical trial study is different and most CROs are not well-equipped to serve these high-touch customers.

Competing CROs including Icon and Fortrea have separate divisions of their companies that handle FSO projects. However, industry experts have noted that these CROs tend to assign their top talent to work on the larger, "more important" projects, which has resulted in an inferior product for FSO customers.

Medpace refuses to work on an FSP basis. Its business model and operations are optimized around a full-service outsourcing model. Furthermore, Medpace has over 500 ongoing clinical trial products providing diversification across disease types and insulating the Company from much of the volatility that comes with working with smaller customers.





By contrast, CROs working with big pharma tend to have more customer concentration and live or die based on those key relationships.

Perhaps an apt analogy is that if Medpace's customer projects were represented by an investment portfolio of stocks and bonds, it would consist of a larger number of uncorrelated investments with higher risks and higher returns. Whereas competing CROs would have portfolios that are more concentrated and tend to be less risky but also lower yielding. If these were investment portfolios of stocks and bonds, Medpace would generate superior results.

What I am driving towards is that Medpace has a superior business model that cannot be easily replicated. For these reasons, Medpace deserves a higher valuation multiple than its peers.

A Better Mousetrap: The Sources of Medpace's Sustainable Competitive Advantage

Medpace has built a better mousetrap within the contract research organization industry. There are three pillars underpinning Medpace's superior model: a differentiated pricing strategy, a low-cost advantage, and a strong culture of execution.

As discussed earlier, Medpace's business model is optimized around its full-service outsourcing model. The tip of the spear is a differentiated value proposition that starts with a firm commitment to a fixed price. The most common complaint among CRO customers is the frequency of change orders and price increases after a clinical trial starts. For a large pharma company, small price increases may be acceptable but increased prices can put a significant strain on smaller companies with less flexibility.

Medpace is intentional about its pricing strategy. The Company holds an RFP committee meeting every morning at 10 am led by the CEO. Each contract proposal is assessed for its attractiveness to Medpace as well as the health of the customer. Part of the proposal is a fixed price guarantee which Medpace almost always honors even if the project becomes less profitable. This has helped the Company build its reputation in the industry as a reliable partner. Note that a fixed price guarantee is possible because most of the project costs subject to inflation are passed along to the customer, insulating the CRO from any real financial liability.

Medpace is not only able to differentiate itself with a fixed price guarantee, but it is also able to price below competitors because it maintains a low-cost advantage in the industry. This is driven by vertical integration, global scale, and a differentiated approach to talent development.

Regarding vertical integration, Medpace has built its own central lab facility operated at its headquarters in Cincinnati. The Company has also developed a proprietary technology system called ClinTrak which powers all the core data monitoring, collection, and analytics needed to run a clinical trial. This system has been developed organically over the past 30 years and is well-integrated into Medpace's operations. In contrast, most CROs outsource their technology to expensive vendors, such as Veeva Systems, which often don't integrate seamlessly.





ClinTrak® Modules



Clinical Trial Management System (CTMS) >

This study-specific web-portal provides the team with a set of collaboration pages for secure posting and sharing of study documents.



Interactive Response Technology (IRT)

Provides global access to web-based interfaces for authorized personnel, allowing real-time subject tracking, inventory management, and randomization.



Electronic Data Capture (EDC) >

Provides a centralized location for the study team to review real-time case report form (CRF) data.



Laboratory Information Management (LIMS) >

Full scale decision support management system that gives you the power to compare customized results from patients across the globe.



Imaging Management >

Integrates image tracking, quantitative and qualitative analysis, and data management to store and manage data from all reading centers.



ePRO/eCOA/eDiary >

Allows for the safe and secure collection of PRO and eCOA data directly from patients through multiple platforms.

Source: Medpace website.

Medpace's scale also helps to substantially lower its costs. The Company has a global footprint with ~6,000 employees in 42 countries. This puts Medpace's capabilities on par with larger CROs like IQVIA and clearly differentiates it vs. smaller CROs.



Source: Medpace investor presentation.

The last key element to Medpace's low-cost advantage is its talent development strategy. Medpace typically doesn't hire experienced employees from competing CROs. The Company prefers to hire fresh graduates, train them internally, and pay them less in exchange for greater career advancement opportunities. This trade-off is well understood and generally considered worth it. This is evidenced by Medpace having a much lower rate of employee turnover relative to competitors.

Medpace is also able to operate at a lower cost because it requires employees to report to Cincinnati, Ohio. Many competing CROs operate out of biotech hubs including New York, Boston, and San Francisco.

A strong culture of execution is the oil that powers the Medpace machine. While it is generally difficult to assess cultural advantages, there are circumstantial facts that support the thesis.





Medpace's culture has been a common theme and topic in our conversations with industry participants. Employees are generally given more responsibility and expected to do more than their equivalents at other firms. Some people thrive in this environment while others believe the culture is too intense. Metrics including higher revenue per employee and lower employee churn provide quantitative support.

August Troendle, Medpace's founder and current CEO, has been the most important driver of corporate culture. Despite founding the company over 30 years ago, Troendle is still highly engaged in the day-to-day operations of the Company. Former employees have disclosed that Troendle attends virtually every morning meeting and makes his presence felt on the corporate campus. Some employees have even noted that it has felt like the CEO is micromanaging the entire company.

Troendle's heavy involvement in the Company is a duel-edged sword. However, we feel that the pros overwhelm the cons and there is a deep talent bench that mitigates the key man risk. Importantly, Troendle has skin in the game not only as the Company's largest shareholder with 19% of stock but also in that Medpace is his life's work and legacy. He runs the Company effectively but conservatively and there have not been any significant scandals to note.

As an aside, we have had the experience of investing behind other owner-operator CEOs who have also been labeled as "micro managers" (Thomas Peterffy at Interactive Brokers and Steve Jobs at Apple come to mind) and those have been some of our best investments.

Despite Troendle's heavy influence, we are not worried about key man risk. Medpace has a deep talent bench. Jesse Geiger, Medpace's President, joined the Company in 2007 and has held multiple senior positions including CFO, COO, and has been President since 2021. Excluding Troendle and Geiger, the average tenure of the remaining 3 named executive officers listed in Medpace's proxy statement is 16 years. The operational leaders one step below the C-suite are also long-tenured (see below). This supports the notion that while Troendle is a key factor in Medpace's success, the organization will live beyond his era.

Senior Leadership - CRO



Susan Burwig, MA, BSN
Executive Vice President,
Operations
Joined Medpace in 1993





Reinilde Heyrman, MD

Chief Medical Officer,
Medical Department

Joined Medpace in 2017



Gina Leisring, MPH
Senior Vice President,
Clinical Monitoring
Joined Medpace in 2002



Traci Turner, MD

Vice President,
MRL Operations and MARC

Joined Medpace in 2011

Source: Medpace website.



Brad Hansman
Vice President,
Site Activation & Maintenance
Joined Medpace in 2011





Finally, Medpace has had a high degree of clarity and consistency in its stated mission and strategy. Case in point, the snippet below is the first paragraph of Medpace's IPO prospectus from 2016. This description is identical to the description in Medpace's 2024 annual report. The Company has had a clear vision that it has executed against without much variation.

Overview

We are one of the world's leading clinical contract research organizations, or CROs, by revenue, solely focused on providing scientifically-driven outsourced clinical development services to the biotechnology, pharmaceutical and medical device industries. Our mission is to accelerate the global development of safe and effective medical therapeutics. We differentiate ourselves from our competitors by our disciplined operating model centered on providing full-service Phase I-IV clinical development services and our therapeutic expertise. We believe this combination results in timely and cost-effective delivery of clinical development services for our customers. We believe that we are a partner of choice for small and mid-sized biopharmaceutical companies based on our ability to consistently utilize our full-service, disciplined operating model to deliver timely and high-quality results for our customers. Accordingly, we believe we are well positioned to continue to expand our market share and sustain margins in the growing \$23 billion overall Phase I-IV CRO market.

Source: Medpace's 2016 IPO Prospectus.

Most of Medpace's competitors have focused on levering their balance sheets to pursue M&A. IQVIA has focused on acquiring technology assets. Icon is a roll-up of several large and mid-sized CROs. PPD is captive to Thermo Fisher and is positioned to cross-sell other Thermo products. Fortrea was acquired by Lab Corp, heavily restructured to separate the core lab division, and then recently spun-off into the public market. Many other mid-sized CROs have been taken private by PE firms and are saddled with debt.

Another common theme in customer conversations is that Medpace's consistency is a differentiator. Customers do not like the idea of their CRO partners engaging in constant M&A and restructuring as it creates a degree of chaos in the organizations and can impact the personnel that work on the clinical trials.

Medpace's capital allocation has reinforced the Company's competitive advantages. The Company has prioritized organic investment and has not done any major M&A. The Company has been an opportunistic repurchaser of its own shares when it has excess cash. These moves have strengthened the low-cost advantage and allowed it to grow organically while not screwing up the culture.





Medpace's Financial Results

			Med	pace Ar	nual Fi	nancial	S				
	2014	2015	<u>2016</u>	2017	2018	<u>2019</u>	<u>2020</u>	<u>2021</u>	2022	2023	5Y CAGR
Total Revenue	\$326.4	\$359.1	\$421.6	\$436.2	\$704.6	\$861.0	\$925.9	\$1,142.4	\$1,460.0	\$1,885.8	21.8%
Growth %		10.0%	17.4%	3.5%	61.5%	22.2%	7.5%	23.4%	27.8%	29.2%	
Sales net reimbursement	\$290.0	\$320.1	\$370.6	\$386.5	\$467.8	\$566.7	\$633.2	\$769.2	\$967.3	\$1,162.8	20.0%
Growth %		10.4%	15.8%	4.3%	21.1%	21.1%	11.7%	21.5%	25.7%	20.2%	
EBIT	\$26.0	\$29.9	\$52.5	\$64.9	\$101.0	\$127.3	\$167.0	\$198.6	\$278.7	\$336.8	27.2%
Margin %	8.0%	8.3%	12.5%	14.9%	14.3%	14.8%	18.0%	17.4%	19.1%	17.9%	
Diluted EPS	(\$0.51)	(\$0.28)	\$0.37	\$0.98	\$1.98	\$2.67	\$3.86	\$4.82	\$7.29	\$8.88	35.0%
Growth %		N/M	N/M	165.7%	101.9%	34.8%	44.2%	25.1%	51.1%	21.9%	
Oper. Cash Flow	\$75.2	\$85.9	\$91.7	\$97.4	\$156.6	\$201.9	\$258.7	\$263.3	\$388.1	\$433.4	22.6%
Margin %	23.0%	23.9%	21.8%	22.3%	22.2%	23.4%	27.9%	23.1%	26.6%	23.0%	
Free Cash Flow	\$69.9	\$79.4	\$78.2	\$85.7	\$140.6	\$184.0	\$227.3	\$235.1	\$351.2	\$396.7	23.1%
Margin %	21.4%	22.1%	18.5%	19.6%	19.9%	21.4%	24.6%	20.6%	24.1%	21.0%	
Free Cash Flow Conversion			582.5%	219.0%	192.1%	183.1%	156.4%	129.3%	143.1%	140.3%	
ROIC %		2.7%	5.0%	6.6%	11.3%	14.5%	18.9%	24.9%	41.7%	65.3%	
											<u>Cumulative</u>
\$ Acquisitions	\$0.0	\$0.0	\$0.0	\$0.6	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$1
\$ Buybacks	\$0.0	\$0.0	\$0.0	(\$155.6)	\$0.0	\$0.0	\$98.3	\$62.1	\$847.8	\$144.0	\$997
\$ Dividends	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0

Source: Medpace SEC filings, LVS estimates.

Medpace has demonstrated strong financial results over the past decade. Over the past 5 years, Organic growth has exceeded 20% per year, earnings have grown faster than revenue, and ROIC has expanded to over 50%. It is worth noting that a significant accounting change in 2018 makes revenue and margins less comparable over a longer time frame.





CRO Peers Financial Benchmarking

\$2,596 10,412 \$705	\$2,806 \$11,088 \$861	2020 \$2,580 \$2,797 \$11,359	2021 \$3,058 \$5,481	2022 \$3,096 \$7,741	2023 \$3,109	<u>5Y CAGR</u> N/A
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•		\$11,359		T . , =	\$8,120	25.6%
\$705	Ć061		\$13,874	\$14,410	\$14,984	7.6%
	2001	\$926	\$1,142	\$1,460	\$1,886	21.8%
		EDI.	-			
2018	2019			2022	2023	5Y CAGR
2010	2013					N/A
\$386	\$127	'			, -	22.1%
		,				20.0%
						27.2%
J101	J127	7107	J133	7273	7337	27.2/0
		EBIT Ma	argin			
2018	<u>2019</u>	2020	<u>2021</u>	2022	2023	5Y Change
		4.5%	6.3%	8.9%	2.8%	N/A
14.9%	15.6%	14.6%	9.7%	11.2%	12.9%	(2.0%)
8.0%	7.9%	7.1%	10.4%	12.9%	13.8%	5.8%
14.3%	14.8%	18.0%	17.4%	19.1%	17.9%	3.5%
		Dilutod	EDC			
2010	2010			2022	2022	5Y CAGR
2018	2015	2020				N/A
¢5 80	\$6.70	\$6.1E	•	'	٠, ,	4.7%
			•		,	42.5%
		\$1.45 \$3.92	\$4.95 \$4.82	\$5.72 \$7.29	\$8.88	35.0%
	\$386 \$833 \$101 \$2018 14.9% 8.0%	\$386 \$437 \$833 \$875 \$101 \$127 2018 2019 14.9% 15.6% 8.0% 7.9% 14.3% 14.8% 2018 2019 \$5.89 \$6.79 \$1.24 \$0.96	EBIT M 2018 2019 2020 \$117 \$386 \$437 \$409 \$833 \$875 \$810 \$101 \$127 \$167 EBIT M 2018 2019 2020 4.5% 14.6% 8.0% 7.9% 7.1% 14.3% 14.8% 18.0% Diluted 2018 2019 2020 \$5.89 \$6.79 \$6.15 \$1.24 \$0.96 \$1.43	EBIT 2018 2019 2020 2021 \$117 \$193 \$386 \$437 \$409 \$534 \$833 \$875 \$810 \$1,445 \$101 \$127 \$167 \$199 EBIT Margin 2018 2019 2020 2021 4.5% 6.3% 14.9% 15.6% 14.6% 9.7% 8.0% 7.9% 7.1% 10.4% 14.3% 14.8% 18.0% 17.4% Dilute EPS 2018 2019 2020 2021 \$1.10 \$5.89 \$6.79 \$6.15 \$2.25 \$1.24 \$0.96 \$1.43 \$4.95	Teble First	EBIT 2018 2019 2020 2021 2022 2023 \$386 \$437 \$409 \$534 \$866 \$1,046 \$833 \$875 \$810 \$1,445 \$1,860 \$2,071 \$101 \$127 \$167 \$199 \$279 \$337 EBIT Margin 2018 2019 2020 2021 2022 2023 4.5% 6.3% 8.9% 2.8% 14.9% 15.6% 14.6% 9.7% 11.2% 12.9% 8.0% 7.9% 7.1% 10.4% 12.9% 13.8% 14.3% 14.8% 18.0% 17.4% 19.1% 17.9% Diluted EPS 2018 2019 2020 2021 2022 2023 \$1.10 \$2.17 (\$0.00) \$5.89 \$6.79 \$6.15 \$2.25 \$6.13 \$7.40 \$1.24 \$0.96 \$1.43 \$4.95 \$5.72 \$7.29

Source: SEC filings, LVS estimates.

Medpace's organic results crush their publicly traded competitors due to the factors discussed earlier. In the above table, IQVIA and ICON's financial results benefitted from billions of dollars spent on M&A over the past 5 years. I believe Medpace will continue to outperform other CROs.

Contract Research Organization Industry Overview

The contract research organization industry is a large and growing global industry. Medpace provides the below graphic to outline the total addressable market ("TAM"). The total CRO TAM is estimated to be \$65 billion, which represents the amount of pharma clinical trial spending that is currently being outsourced. Of that \$65 billion, Medpace believes it currently addresses about 40% or \$28 billion which represents the outsourced clinical trial spending by small and medium-sized biopharmaceutical companies.





Source: Medpace investor presentation.

The CRO space is fragmented with the largest 10 players accounting for approximately half of the industry's contract value. The industry should consolidate over time as larger companies like Icon continue M&A, reducing industry competition. Medpace holds ~5% share, providing a significant growth runway for the Company as it continues to take market share.

CRO Industry Tailwinds

The overall CRO industry is expected to grow by ~5% annually over the next 5 years. Icon estimates that the smaller biotech segment of the CRO market will grow at a high-single digit rate while the larger pharma segment will grow at a mid-single digit rate.

The trend of outsourcing should continue to benefit CROs. Today roughly 50% of pharma R&D is outsourced. Some industry experts believe that pharma companies will eventually outsource as much as 80% of R&D due to rising cost pressures and the need to fund more clinical trials to offset looming patent cliffs. However, Medpace's core customer base is already fully outsourced.

Over the past several decades there has been an explosion in the number of clinical trials funded and the amount of money spent on pharma R&D activities. I expect the number of clinical trials to continue rising over the long term driven by innovation in drug discovery (artificial intelligence, precision medicine, virtual and decentralized clinical trials, etc.) and therapeutic areas (cell and gene-based therapeutics, nuclear medicine).



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Figure 18: Total US R&D pipeline size, 1995—2024

Biotech Funding Issues

Over the past year, a slowdown in biotech R&D spending has been driven by a sluggish funding environment. This slowdown has led to a decrease in the expected growth rate of CRO billings and has created a dislocation in the stock prices of the publicly traded CROs. This includes Medpace, whose stock price has declined over 20% from recent highs.

For context, biotech funding surged during 2020 and 2021 driven by the need to fund solutions to the COVID-19 pandemic and low interest rates. However, funding slowed starting in 2022 and has recently fallen further.

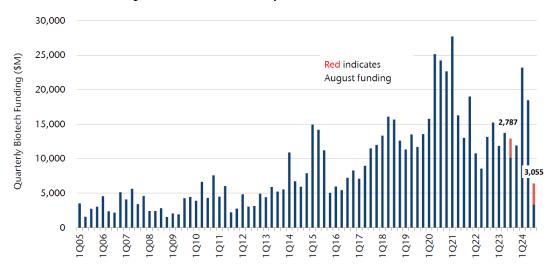


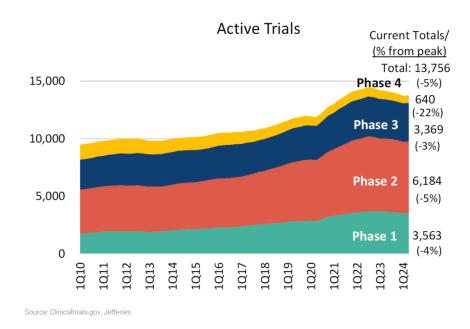
Exhibit 5 - Biotech Funding Has Softened Considerably in Recent Months

Source: Factset and Jefferies





This has caused the number of active clinical trials to drop as older trials end and fewer new trials are started. There has been a trend of R&D pipeline rationalization where firms have canceled secondary and tertiary pipeline candidates to ensure there is enough funding for primary indications.



The current operating environment has impacted CROs. Starting in Q2 2024 and continuing into Q3, Medpace reported tepid metrics for net new business wins. Several publicly traded CROs have walked back financial guidance as well, blaming the environment. Investor sentiment in the industry has soured.

However, the current industry dynamics should prove temporary due to the healthy long-term drivers of the drug pipeline. At the end of the day, pharma companies will still need to replace the lost revenue from the expected patent cliffs by funding development. After multiple years of pipeline rationalization, the obvious cost savings have already been identified and the industry should stabilize and re-accelerate.

During the Q3 2024 earnings call held on October 22, Medpace's CEO noted that the Company's pipeline and backlog are expected to recover in 2025. Further noting, "I actually think the business environment is pretty normalized if you take out the cancellations of stuff that was awarded during the COVID high. It is a pretty normalized business environment. I would think that we can get back to robust growth in the future."

It is worth pointing out that Medpace is still expected to grow revenue by 12% this year and grow EPS by 34%. This is a significant slowdown from prior years, but the business is not in distress by any stretch of the imagination.

A key question for investors is when the funding environment for biotech companies will improve. This is challenging to answer because it is not abundantly clear why the funding environment slowed down. There appears to be a combination of factors at play.





The market needed to work through the high valuations for the projects funded from 2020 to 2021. We are likely close to the end of that process given many of those assets have either had down rounds or have had to cancel projects.

Additionally, the biotech funding environment is somewhat sensitive to interest rates as high rates have created greater opportunity costs for the investor base. The recent interest rate cuts from the Federal Reserve should improve investor appetite for venture capital and biotech.

Finally, funding really slowed down in Q2 and Q3 of 2024 which coincided with the US presidential election cycle. I believe the conclusion of the election cycle has removed some of the uncertainty holding back capital markets activity.

Based on these factors, it would not be surprising to see the biotech funding market improve in 2025. However, there is a degree of uncertainty and the environment could get worse before it gets better (reflected in CRO stock prices).

Medpace Valuation Analysis

Medpace's enterprise value is \$10.9 billion, reflecting \$657m of cash and no debt. Based on Wall Street estimates, the stock trades for a forward EV/EBIT multiple of 24.6x and a forward P/E multiple of 29.4x. Since the 2016 IPO, Medpace's mean forward EV/EBIT multiple has been 21.0x and mean forward P/E multiple has been 26.8x.



Source: Wall Street estimates from Tikr.

Medpace trades at a premium multiple relative to the CRO group but the premium is justified due to Medpace's superior business quality and growth prospects.

Public Peer Trading Multiples

Company Name	<u>Ticker</u>	Enterprise Value	Market Cap	EV / NTM Revenue	EV / NTM EBIT	EV / NTM FCF
Charles River	CRL	\$13,160	\$10,562	3.3x	16.8x	28.0x
Thermo Fisher	TMO	\$236,252	\$207,277	5.3x	23.2x	24.5x
Fortrea	FTRE	\$3,010	\$1,909	1.1x	13.6x	146.8x
Icon	ICLR	\$19,755	\$16,834	2.4x	12.3x	13.8x
IQVIA	IQV	\$50,629	\$38,389	3.2x	15.5x	22.6x
	Mean	\$64,561	\$54,994	3.1x	16.3x	47.1x
	Median	\$19,755	\$16,834	3.2x	15.5x	24.5x
Medpace	MEDP	\$10,984	\$11,641	4.7x	21.8x	22.5x

Source: Wall St. Consensus Estimates, MEDP based on LVS Estimates.





The table below highlights the outputs of my projection analysis. My assumption is that revenue growth will reaccelerate in mid-2025 and continue into 2026. The Company (and the industry broadly) has started to flex cost discipline because of the slowing topline environment. Medpace has seen its employee productivity reach new highs in 2024 and I expect a modest continuation of this trend as the Company continues to utilize technology and benefits from operating leverage.

Medpace Projection Analysis

	2019	2020	2021	2022	2023	2024E	2025E	2026E	2027E	2028E		
Small biopharma revenue	\$611	\$694	\$880	\$1,139	\$1,471	\$1,677	\$1,878	\$2,254	\$2,682	\$3,165		
Growth %	25.7%	13.6%	26.7%	29.5%	29.2%	14.0%	12.0%	20.0%	19.0%	18.0%		
Mix %	71.0%	75.0%	77.0%	78.0%	78.0%	79.2%	80.2%	81.3%	82.3%	83.2%		
Mid-sized biopharma revenue	\$164	\$139	\$183	\$234	\$340	\$363	\$385	\$439	\$496	\$556		
Growth %	(3.3%)	(15.1%)	31.6%	27.8%	45.3%	7.0%	6.0%	14.0%	13.0%	12.0%		
Mix %	19.0%	15.0%	16.0%	16.0%	18.0%	17.2%	16.4%	15.8%	15.2%	14.6%		
Large biopharma revenue	\$86	\$93	\$80	\$88	\$75	\$76	\$78	\$79	\$81	\$82		
Growth %	74.6%	7.5%	(13.6%)	9.5%	(13.9%)	1.0%	2.0%	2.0%	2.0%	2.0%		
Mix %	10.0%	10.0%	7.0%	6.0%	4.0%	3.6%	3.3%	2.9%	2.5%	2.2%		
Total revenue	\$861	\$926	\$1,142	\$1,460	\$1,886	\$2,116	\$2,341	\$2,772	\$3,259	\$3,803		
Growth %	22.2%	7.5%	23.4%	27.8%	29.2%	12.2%	10.6%	18.4%	17.6%	16.7%		
EBIT	\$127	\$167	\$199	\$279	\$337	\$434	\$503	\$639	\$798	\$981		
Margin %	14.8%	18.0%	17.4%	19.1%	17.9%	20.5%	21.5%	23.0%	24.5%	25.8%		
Net Income	\$100	\$145	\$182	\$245	\$283	\$389	\$449	\$571	\$713	\$879		
Margin %	11.7%	15.7%	15.9%	16.8%	15.0%	18.4%	19.2%	20.6%	21.9%	23.1%		
Diluted EPS	\$2.67	\$3.92	\$4.82	\$7.29	\$8.88	\$12.12	\$14.01	\$17.78	\$22.23	\$27.38		
Growth	34.9%	46.6%	23.1%	51.0%	21.9%	36.5%	15.5%	26.9%	25.0%	23.2%		
Free Cash Flow	\$167	\$211	\$249	\$350	\$402	\$427	\$488	\$668	\$832	\$1,019		
Margin %	19.4%	22.7%	21.8%	24.0%	21.3%	20.2%	20.8%	24.1%	25.5%	26.8%		

Source: LVS Advisory estimates.

My projections for Medpace are above Wall Street consensus. However, I believe the street is not giving Medpace enough credit for its ability to take market share and drive efficiency. Medpace has driven significant margin expansion over the past 5 years despite high inflation in pass-through costs. The growth in pass-through costs has stabilized, which should set the stage for margin expansion in the coming years. What is odd to me is that the same analysts project a more dramatic revenue acceleration for Medpace's peers occurring in 2025 while assuming a dip in Medpace's growth rate.





Medpace Wall Street Consensus Estimates

Actuals & Forward Estimates TIKR.com	12/31/24 E	12/31/25 E	12/31/26 E	12/31/27 E	12/31/28 E
Revenue	2,108.15	2,289.70	2,597.03	2,819.93	3,209.87
% Change YoY ①	11.8%	8.6%	13.4%	8.6%	13.8%
EBITDA ⊙	459.59	485.17	558.24	616.32	732.71
% Change YoY ⊙	26.8%	5.6%	15.1%	10.4%	18.9%
% EBITDA Margins	21.8%	21.2%	21.5%	21.9%	22.8%
EBIT	430.63	455.06	525.73	581.10	694.67
% Change YoY ⊙	27.3%	5.7%	15.5%	10.5%	19.5%
% EBIT Margins	20.4%	19.9%	20.2%	20.6%	21.6%

Source: Tikr.

Using Medpace's long-term average EBIT multiple of 21.0x, my projections output a high-teens IRR over the medium term and imply that Medpace's stock will double over a 3 to 5 year time horizon.

Investment IRR			2024E	2025E	2026E	2027E	2028E
Stock Price (11/08/24)	\$362.79	Fair P/E Multiple	27.0	27.0	27.0	27.0	27.0
Diluted Shares	32.088	Cash Per Share	\$24	\$39	\$60	\$86	\$117
Market Cap	\$11,641	Share Price	\$351	\$417	\$540	\$686	\$857
Cash	\$657	IRR	-12%	12%	19%	22%	22%
Debt	\$0	_					
Enterprise Value	\$10,984		2024E	2025E	2026E	2027E	2028E
		Fair EBIT Multiple	21.0	21.0	21.0	21.0	21.0
		Implied TEV	\$9,108	\$10,559	\$13,411	\$16,753	\$20,609
		Net Cash	\$764	\$1,252	\$1,920	\$2,752	\$3,770
		Implied Equity	\$9,871	\$11,810	\$15,331	\$19,504	\$24,379
		Diluted Shares	32.088	32.088	32.088	32.088	32.088
		Implied Share Price	\$308	\$368	\$478	\$608	\$760
		IRR	-48%	1%	13%	17%	19%

Source: LVS Advisory estimates.

The above analysis is conservative on several fronts. First, implied revenue CAGR over the next 5 years is only 15% which compares to above 20% over the past 5 years. Second, the exit multiple is 3.6 turns below the current trading multiple. Finally, the analysis does not assume that cash will be allocated in any way that could create value.

Medpace has a solid track record of opportunistically repurchasing shares. In 2021, Medpace spent \$62.1 million acquiring 377,783 shares at an average price of \$164. In 2022, the Company spent \$800.5 million acquiring 5,463,244 shares at an average price of \$146. This compares to the current share price of \$362. In 2023, Medpace chose to pay down its debt rather than repurchase shares. Today the Company has a significant net cash position.

Concluding Thoughts

Medpace's stock feels particularly asymmetric today because the business quality is extremely high, limiting the downside risk for long term investors. The market hates the uncertainty of the biotech funding market, but it is equally difficult to imagine the existing drug pipeline not getting funded. In all likelihood, the current dislocation in CRO stocks





represents an attractive buying opportunity that should accrue to equity investors as the fundamentals re-accelerate in the coming 2 years.

Medpace's stock has appreciated by over 11x since its 2016 IPO. The gains have been driven by the Company's high organic growth rate and ability to convert billings into cash flow. Despite the stock's eye-popping shareholder returns, the future remains bright. With an enterprise value of \$11bn, Medpace is less than one-fourth the size of IQVIA and is half the size of Icon. With its superior business model and small market share, Medpace has a very clear growth runway for at least the next decade.





APPENDIX

Medpace Business Timeline

- 1992 Founded as Medical Research Services by August Troendle who remains as CEO and the largest shareholder
- 2011 CCMP acquired Medpace
- 2014 Cinven acquired Medpace from CCMP for \$915m
- 2016 Medpace IPO

Additional Notes On Medpace Business

- CRO revenue generating services:
 - Medical Department provides strategic direction for study design and planning, work with primary investigators, provide medical monitoring and meet with regulatory agencies
 - o Clinical Trial Management lead all aspects of study execution
 - Data-Driven Feasibility clinical experts analyze specific protocols, using many data sources to determine countries and sites that are most appropriate for the study
 - Study Start-up conducts trial start up activities, including study documentation submission processes to independent Institutional Review Boards, or IRBs, ethics committees and to ex-US competent authorities
 - o Patient Recruitment and Retention
 - Clinical Monitoring site management services including in-house, onsite and virtual monitoring
 - Risk-Based Monitoring comprehensive approach to monitoring to ensure adequate protection of the rights, welfare, and safety of human subjects and the quality and integrity of the study
 - Regulatory Affairs expert strategic, operational, and tactical regulatory guidance, and create thorough scientifically-grounded regulatory compliant documentation at each stage of the drug and biologics development process to regulatory agencies around the globe
 - Medical Writing work closely with medical experts, biostatisticians, and other members of the study team to develop study protocols, clinical and statistical study reports, and integrated submission documents according to regulatory guideline
 - Biometrics and Data Sciences high-quality data collected during clinical trials that supports regulatory submissions, including NDAs or Biologics License Application for approval by the FDA
 - Pharmacovigilance collects, evaluates, analyzes and reports safety information
 - Core Laboratory imaging services and cardiovascular core laboratory services. Partners with imaging experts to provide image reading with technology integrated into ClinTrak. Cardiovascular core lab provides electrocardiogram services and data analysis
 - Central Laboratory four locations, including Cincinnati, Ohio; Leuven, Belgium; Shanghai, China; and Singapore. specialized esoteric testing, including biomarkers for efficacy in addition to standard assay offerings. Also provide biorepository services offering solutions for comprehensive specimen life cycle





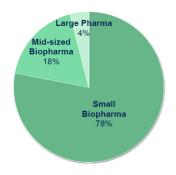
- management, and molecular and genetic testing for detection of pathogenic events at the genome level including viral load and viral shedding
- Bioanalytical Laboratory located on our clinical research campus in Cincinnati, Ohio. delivers method transfer, development, validation, sample analysis and metabolite screening and identification of preclinical and clinical biological samples with expertise in developing proprietary, highly scientific, esoteric and sensitive tests for small and large molecules
- Clinics conduct studies in normal healthy volunteers, special populations, and patient populations over a spectrum of diseases and is located on our clinical research campus in Cincinnati, Ohio
- Quality Assurance works closely with study teams to ensure compliance with protocols, SOPs and regulatory guidelines to ultimately protect research subject safety as well as the integrity and validity of study data
- Full-service Outsourcing" ("FSO") model for Phase I-IV clinical development
 - FTRE investor call 6/5/24
 - "the most attractive is full service outsourcing, and that has the best margins and frankly, a lot of growth potential in biotech"
 - FTRE investor call 11/8/24
 - "we really want to grow the full-service clinical business. We all know that, that is the strongest from a margin delivery. And so we're still focused on that."
 - Expert is a Vice President at CTI Clinical Trial and Consulting Services, responsible for the P&L of a business unit, Tegus call held on 06/27/2023
 - "Yeah. Full service means really performing identification of sites, getting a study up and running, getting [ethics] committee approval, project managing the sites and the study itself, monitoring those sites through CRA activity, and then collecting data, cleaning that data, and collating that data for submission. That to me is traditional full service. Additional full-service activities would include statistical analysis of that data and then preparing that data as dossier for submission to multiple regulatory authorities, and then working through that to gain different levels of approval. Functional service to me is taking a category of that work, data management per se or pharmacovigilance safety activities, and only doing that work for a customer across a series of studies or across a portfolio."
- Medpace's proprietary technology
 - o ClinTrak proprietary information management system for clinical trials
 - o Wearable Biosensor Technology remotely collect individual biometric data
 - Apps Supporting Patients and Sites suite of custom-built apps offers convenience, cleaner data, and enhanced user experiences. Through these dedicated tools, we can help improve both patient and site engagement – leading to higher recruitment and retention rates
- Medpace's revenue is less concentrated by revenue (see below)
 - o Icon Largest customer 8.9% of sales, top 5 customers are 26.8% of sales
 - o Fortrea top 20 customers 58% of sales
 - o PPD top 10 customers 52.1% of sales
 - o IQVIA does not disclose
 - Charles River Labs does not disclose

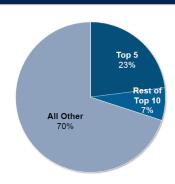






Low Customer Concentration(A)



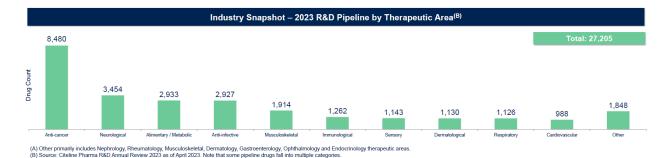


Medpace's therapeutic areas

Medpace's revenue vs. Industry by therapeutic area

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	Industry	Medpace
Oncology	31%	31%
Neurological	13%	8%
Metabolic	11%	20%
Anti-infective	11%	9%
Musculoskeletal	7%	
Immunological	5%	
Sensory	4%	
Dermatological	4%	
Respiratory	4%	
Cardiovascular	4%	10%
Other	7%	22%
Total	100%	100%

Source: Medpace.



- How do customers choose their CRO partner?
 - Expert was a Vice President at Covance, responsible for overseeing an alliance with a company, tegus call held on 8/25/2023
 - Large Biopharma: "If you are a large multinational pharmaceutical company, you generally do
 not outsource clinical trials in a transactional singular type of transaction structure]. If you're a
 large multinational pharma company, you generally have existing, very carefully negotiated,





- very large volume partnerships that have been defined with the largest contract research organizations in the world.... Again, the big pharma companies, it's generally preordained and all worked out who gets what. It's not transactional."
- Smaller Biopharma: "If you are a smaller biotech company, you're generally much more cost-sensitive, you generally don't have pre-arranged partnerships with contract research organizations, and you are generally dealing with them in a very transactional manner, meaning that you're looking for a supplier for one particular study at any one particular time..."
- Expert was a Vice President at Covance, responsible for overseeing an alliance with a company, tegus call held on 8/25/2023
 - "...the biotech company would make its decision on a few key factors, the primary one being that the CRO service provider has a strong track record of success in that specific therapeutic area, disease indication, patient population, molecular therapy. The other decision-making factors would be that they would have the adequate global footprint to handle the study. The third one is, of course, price. Most of the biotech companies are very dependent on venture capital and private equity. If their VCPE is healthy, then they can go ahead and make decisions that are truly based on criteria one and two, which are experience and geography, but if they're really pressed for money, then criterion number three, price, becomes much, much more important."
- Expert was the VP of Global Marketing at Thermo Fisher; tegus call held on 12/05/2022
 - Making sure obviously the project management piece of that and the customer relationship and the service piece of it were there because we used to have some clients say, "Oh, actually you're so big, I'm going to get lost. I'm just a small little biotech. You're going to give me your C-level project manager or CRAs because you have all your top notch people working for the top 50 pharma companies and I'm just some small little startup here with my first drug," and that was not the case. That's why all of these big CROs can separate branding for their "biotech CRO", which is all separate people, separate structure, nimble, quick and seasoned people."
- Medpace's pricing & pipeline management
 - Expert was a Director of Business Development at DP Clinicial Inc, tegus call held on 10/26/2023
 - "Everybody says they don't have money. I think out of all of the work that I've ever done, I've only known one company that didn't haggle about price. They actually were smart about it.
 Medpace has a different approach, which is "fixed pricing" which means that they are adverse to change orders. Medpace says, "We are going to analyze your request, and we are going to give you what we believe is feasible. We are not going to nickel and dime you if it turns out that we need more remote visits than we originally anticipated, or if there are more CRF pages than we originally anticipated, we're not going to go back and start doing amendments.
 However, if it's significant, if it turns out that you need to add three months or six months, or if you need to add additional countries, yes, we'll do a change order that we will agree to in unison with you. Most companies, specifically these small biotechs, they say, "Well, but our board approved this budget. We don't have a dollar more than what's in this budget." It's research. It's really hard to predict. Medpace does its best. If the request for proposal comes in with specifications and Medpace thinks they can't do it, if they say, "We need to have first patient in by November 5," and they look at today's date and they say, "It can't happen. The





setup would take too long to get the sites negotiated. There's no way," and they come back and say, "Well, but it has to be that date because that's our milestone payment," Medpace would then say, "No, thank you. We're not going to engage in something that we don't think is feasible."

- Expert was a Director of Business Development at DP Clinicial Inc, tegus call held on 10/26/2023
 - "Yeah. This always floored me. I thought it was brilliant, but pretty amazing that they did this. Every day at 10:00 A.M., the business development director who had a request for proposal would have to go before the court and provide reasons why this was something that should receive a proposal. There was a long process you went through of providing information, and it had to be in their hands by, I think it was like 8:00 A.M. the nextmorning for it to be discussed at 10:00 A.M.The meeting was all the executive team. Dr. Troendle was on almost every call, it was really rare for him not to participate, but also Susan Burwig, executive vice president for clinical operations, all the medical directors. At the time that I was there, I think there were like 50 or 55. I understand it may be like 75, 80 now, medical directors, every head of a department. You would literally make your case and the information was received more positively if you had a medical director who agreed that this was a good study. It could get killed for a number of different reasons... It could get killed if, let's say it was in an indication that they already were doing a number of studies and they were finding that recruitment was very difficult. Certain types of cancer where there's already a treatment for that particular type of cancer, had a neck cancer, let's say, and it was getting harder and harder to find patients who were treatmentnaive to try an experimental, and so they were having to go to other countries."

Medpace's culture

- Expert was a Director of Business Development at DP Clinicial Inc, tegus call held on 10/26/2023
 - "Even for the CRAs which is like an entry point into the industry, they do a lot of hiring of very bright people who have their undergraduate degree in the sciences. For CRAs and also even in business development, they start them out as what they call inside sales. It's like a support function. Those that can withstand the pressure, because there is a lot of pressure to perform, it's pretty amazing when you see the promotions that they make. They start them out at a pretty low salary, but then there's a lot of opportunity for advancement, especially since it's grown so much.... I knew some who would come from other CROs. This was, again, a Dr. Troendle thing, he didn't like hiring people from other CROs. You really had to be something special because he felt that he would have to retrain them. They had the bad habits of the other CROs."
- Expert was a Director of Business Development at DP Clinicial Inc, tegus call held on 10/26/2023
 - "Yeah. Retention is a tough one, particularly like the CRA position which used to involve a lot of travel. That always had a higher turnover. [Medpace has] always had a lower turnover than other CROs which isn't to say that they don't have turnover. The other thing too with CRAs, what they've done is within that, they have a path. You start out as being a junior working with someone more senior, and then they had specialty CRAs. You might end up being part of the oncology team or the nephrology team, and so you start getting a little bit more satisfaction out of your job because you're now a specialist."
- Expert was the Former Director of Business Development at Medpace.. tegus call held on 7/26/2023





- "Everybody wants to know what's the secret sauce and how do we replicate it. And it is amazing. And once again, it's like 30% up, which is just amazing. I think there's a combination of things going on. They do have a good reputation, and they haven't they haven't changed. For example, IQVIA was Quintiles and another company. And the other company sort of was a stronger company. And so IQVIA really focuses on data analytics. And then like Syneos was just purchased. There's going to be a lot of turmoil. They announced that they were going to be on the chopping block, maybe six months or nine months before it happened. And so people are like, "Oh, what's going on there? Do I really want to award a study that's not going to start until a year from now to a company that I don't know if it's going to be around."
- o Expert was the Former Vice President Clinical Division at Syneos Health, tegus call held on 1/26/2024
 - "But the ones like Medpace, and I think even INC at the time, they were more entrenched in the smaller biotech because that's all they did. They didn't really chase after a lot of the large pharmaceutical contracts, which a lot of the large CROs have so that's one. I think one is just the organic growth. The second reason, and this is just again experience from working directly with them is Medpace actually does do a good job in what they do. Their processes are much simpler because one of the challenges that you will find sometimes with CROs is, okay, you win the data and everything like that, but you get into doing the study with them and you find that even though they the large ones say, "Okay, we have this small division that's really here to help you", you find that you still have the same bureaucracy of the really large CRO. So, it's not as flexible. It could be more nimble in terms of changing things. But when you look at the Medpace, they are more flexible. They can make the changes a bit more quicker than some of the more larger one can. The other thing, and again, this is just from first-hand knowledge as I was working directly with them, is that lot of the clients say that they are easier to work with. The processes are simpler. There's more flexibility. And that's critical when you're working with a small biotech company. You don't have a lot of resources. And they are relying on you. They don't have a lot of time usually to make major decisions because they are waiting to get to the next milestone, so they can't fund raise. Understanding the dynamics on what's important to them, I think, is also important."

Medpace Management Team Bios

- August Troendle, Founder, CEO, Chairman
 - o Founded MEDP in 1992
 - Maintains 19.2% stock ownership
 - Previously manager at Sandoz from 1986 1992
 - Previously a Medical Reviewer at the FDA from 1986 1987
 - o Director
 - Coherus Biosceinces 2012 2018
 - Xenon Pharma 2007 2008
 - LIB Thereapeutics since 2015
 - CinCor Pharma 2018 2021





- o Received a Medica Degree from University of Maryland
- MBA from Boston University
- Jesse Geiger, President
 - o Joined Medpace in 2007 as Corporate Controller
 - Appointed CFO 2011
 - Became COO 2017
 - Became president 2021
 - Previously worked for Sencorp in FP&A 2007 2007
 - Previously worked for Cincinnati Bell in Capital Markets 2002-2004
 - o Previously worked at Arther Andersen
 - o BA in Accounting from University of Cincinnati, inactive CPA license
- Kevin Brady, CFO
 - Joined Medpace 2018
 - Appointed CFO 2021
 - o Previously corporate controller of Assurex Health 2015 2016
 - Previously at Myriad Genetics
 - Previously at E&Y, holds a CPA
- Susan Burwig, EVP Operations
 - Joined Medpace in 1993
 - SVP of Clinical Operations from 2003 2015
 - o Appointed to EVP operations in 2015
 - Previously a researcher at University of Cincinnati studying heart failure
 - BA in Nursing
 - o MA in Sports Administration from Kent State University
- Stephen Ewald, General Counsel
 - Joined Medpace as General Counsel in 2012
 - Has also led the HR department since 2017
 - o Previously chief legal officer at Brevet Capital Management 2011 2012
 - Previously assistant general counsel at Cantor Fitzgerald 2009 2011
 - o Previously a managing director at Bank of America from 1999 2009





NAME OF BENEFICIAL OWNER	NUMBER	PERCENTAGE
5% or Greater Stockholders		
Medpace Investors, LLC (1)	4,733,019	15.3%
BlackRock, Inc. (2)	2,417,994	7.8%
The Vanguard Group (3)	2,556,443	8.3%
Wasatch Advisors LP (4)	1,186,181	3.8%
Named Executive Officers		
August J. Troendle (5)	6,046,852	19.2%
Kevin M. Brady (6)	18,000	*
Jesse J. Geiger (7)	78,304	*
Susan E. Burwig (8)	157,725	*
Stephen P. Ewald (9)	13,341	*
Non-Employee Directors		
Brian T. Carley (10)	45,625	*
Fred B. Davenport, Jr. (11)	22,534	*
Femida H. Gwadry-Sridhar (12)	2,342	*
Ashley M. Keating (13)	9,102	*
Robert O. Kraft (14)	24,399	*
Cornelius P. McCarthy III (15)	20,925	*
All executive officers and directors as a group (11 persons) (16)	6,439,149	20.3%

^{*} Less than one percent.

Additional Financial Analysis Metrics

			Medpa	ice Annu	ial KPIs					
	<u>2015</u>	<u>2016</u>	2017	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	2022	2023	5Y CAGR
Revenue by Customer Segment										
Small biopharma revenue	\$201.1	\$274.0	\$279.1	\$486.2	\$611.3	\$694.4	\$879.6	\$1,138.8	\$1,471.0	24.8%
Growth %		36.3%	1.9%	74.2%	25.7%	13.6%	26.7%	29.5%	29.2%	
Mid-sized biopharma revenue	\$104.1	\$97.0	\$109.0	\$169.1	\$163.6	\$138.9	\$182.8	\$233.6	\$339.5	15.0%
Growth %		(6.8%)	12.4%	55.1%	(3.3%)	(15.1%)	31.6%	27.8%	45.3%	
Large biopharma revenue	\$53.9	\$50.6	\$48.0	\$49.3	\$86.1	\$92.6	\$80.0	\$87.6	\$75.4	8.9%
Growth %		(6.1%)	(5.1%)	2.7%	74.6%	7.5%	(13.6%)	9.5%	(13.9%)	
Net New Business Awards	\$359.5	\$427.0	\$426.1	\$899.4	\$1,094.4	\$1,175.0	\$1,610.4	\$1,829.5	\$2,356.7	21.2%
Growth %		18.8%	(0.2%)	111.1%	21.7%	7.4%	37.1%	13.6%	28.8%	
Book-to-Bill	1.12	1.15	1.10	1.28	1.27	1.27	1.41	1.25	1.25	
Ending Backlog	\$428.7	\$483.9	\$524.4	\$1,057.9	\$1,283.2	\$1,541.7	\$1,997.1	\$2,339.6	\$2,813.0	21.6%
Growth %		12.9%	8.4%	101.7%	21.3%	20.1%	29.5%	17.1%	20.2%	
Backlog Conversion	19.7%	20.3%	19.6%	18.6%	18.9%	17.3%	16.9%	17.2%	18.7%	0.1%
Ending Headcount	2,084	2,480	2,442	2,909	3,476	3,586	4,459	5,165	5,870	15.1%
Revenue / Head	\$172,293	\$169,993	\$178,604	\$242,210	\$247,690	\$258,206	\$256,196	\$282,671	\$321,268	5.8%
ROIC %	1.9%	5.0%	6.6%	11.3%	14.5%	18.9%	24.9%	41.7%	65.3%	



			Med	pace Qu	uarterly	Financ	ials					
	Q4' 21	Q1' 22	Q2' 22	Q3' 22	Q4' 22	Q1' 23	Q2' 23	Q3' 23	Q4' 23	Q1' 24	Q2' 24	Q3' 24
Total Revenue	\$308.6	\$330.9	\$351.2	\$383.7	\$394.1	\$434.1	\$460.9	\$492.5	\$498.4	\$511.0	\$528.1	\$533.3
Y/Y Growth %					27.7%	31.2%	31.2%	28.3%	26.5%	17.7%	14.6%	8.3%
Sales net reimbursements	\$206.9	\$224.1	\$231.1	\$255.7	\$256.4	\$281.3	\$282.8	\$297.6	\$301.1	\$326.6	\$325.4	\$340.5
Y/Y Growth %					23.9%	25.5%	22.4%	16.4%	17.4%	16.1%	15.0%	14.4%
EBITDA	\$60.3	\$69.3	\$65.8	\$83.6	\$82.3	\$92.2	\$84.9	\$91.8	\$94.3	\$111.1	\$112.4	\$119.8
Margin %	19.5%	20.9%	18.7%	21.8%	20.9%	21.2%	18.4%	18.6%	18.9%	21.7%	21.3%	22.5%
Diluted EPS	\$1.33	\$1.69	\$1.46	\$2.05	\$2.12	\$2.27	\$1.93	\$2.22	\$2.46	\$3.21	\$2.75	\$3.01
Y/Y Growth %					59.8%	34.5%	32.0%	8.5%	16.2%	41.4%	42.4%	35.3%
KPIs												
Net New Business Awards	\$459	\$423	\$451	\$471	\$485	\$556	\$575	\$612	\$615	\$616	\$551	\$534
Y/Y Growth %	4 40	4 20	4 20	4 22	5.8%	31.4%	27.6%	29.9%	26.7%	10.8%	(4.1%)	(12.7%)
Net Book-To-Bill	1.49	1.28	1.28	1.23	1.23	1.28	1.25	1.24	1.23	1.20	1.04	1.00
LTM Book-To-Bill	1.41	1.38	1.35	1.31	1.25	1.26	1.25	1.25	1.25	1.23	1.18	1.12
Ending Backlog	\$1,997	\$2,088	\$2,168	\$2,236	\$2,340	\$2,460	\$2,572	\$2,690	\$2,813	\$2,907	\$2,925	\$2,927
Y/Y Growth %					17.1%	17.8%	18.6%	20.3%	20.2%	18.2%	13.7%	8.8%
Backlog Conversion Rate	16.7%	16.6%	16.8%	17.7%	17.6%	18.6%	18.7%	19.1%	18.5%	18.2%	18.2%	18.2%
Headcount	4,459	4,652	4,809	4,958	5,165	5,385	5,602	5,811	5,870	5,817	5,821	5,919
Growth %					15.8%	15.8%	16.5%	17.2%	13.6%	8.0%	3.9%	1.9%

Notes From Medpace's Recent Quarterly Earnings:

- Q1 2024
 - The funding environment remains guarded but stable and improved from last year. We believe the current environment is strong enough for us to grow backlog nicely and generate accelerating revenue growth next year. RFP dollar value and quality remains stable to improving from Q4
 - Our profit margin was strong in the first quarter, and we have raised our full year guidance for EBITDA and therefore, our implied margin for 2024. We are committed to delivering year-over-year margin improvement on a full year basis. This past year, we've increased our investment productivity through automation, process improvements and optimizing geographic distribution of staff
- Q2 2024
 - Key Stats
 - Total revenue +14.6% y/y
 - EBITDA +34.2% y/y
 - EBITDA Margin 21.3% vs. 18.1% prior year
 - Net Income +44.7% y/y
 - Diluted EPS +42.5% y/y
 - Outlook commentary
 - As several of the cancellations involved awarded work not yet recognized in backlog, we also anticipate a depressed book-to-bill ratio in Q3. The business environment remains robust, and we continue to be optimistic about our future growth but it may take a few quarters to





replenish the flow of opportunities converting into backlog at a more normalized rate. I should stress that despite the challenge backlog growth, we continue to anticipate industry-leading organic revenue growth and profitability. In fact, we are raising our 2024 EPS guidance

- o General commentary
 - Elevated Cancellations in Q2
 - Net new business awards entering backlog were down in Q2 compared to the same quarter of 2023. This was primarily the result of significantly elevated project cancellations including backlog cancellations that were more than 2x the quarterly average of the calendar year 2023. Gross bookings were strong and had the cancellation rate been equal to the average quarterly rate in 2023, our net book-to-bill would have been 1.24. Cancellations were disproportionately high in the month of June with April and May cancellations in line with our expectations for a strong quarter. Reasons for cancellations included reprioritization, impaired sponsor liquidity and an acquisition of 1 sponsor by large pharma with subsequent decision to move the work to an existing preferred provider
 - Was the revenue miss attributed to a decline in win rate?
 - No. The win rate was good, not outstanding, but it came back, snapback from -- it was down a bit in Q1. It was -- the business environment again looks very good. I really think we're in a position to rebuild kind of that pipeline
 - RFP activity update
 - RFPs were strong. I think they were up about 16%, both sequentially and year-over-year
- Q3 2024
 - Key Stats
 - Revenue \$533.3, +8.3% y/y
 - EBITDA \$118.8m, +31.7% y/y
 - EBITDA Margin 22.3% vs. 18.3% prior year
 - Net Income \$96.4m, +36.7% y/y
 - Diluted EPS \$3.01, +35.6% v/v
 - Free Cash Flow \$138.5m, +31.0% y/y
 - Balance sheet
 - Net Cash \$656.9m
 - KPIs
 - Net new business awards \$533.7, -12.7% y/y
 - Book-to-bill 1.00
 - LTM Book-to-Bill 1.12
 - Ending Backlog \$2,927.4m, +8.8%y/y
 - Headcount 5,919, +1.9%y/y
 - Outlook Commentary
 - Assuming cancellations return to a normal range and the business environment remains stable, we will be able to rebuild our pipeline of opportunities and our reported book-to-bill numbers should approach a more usual range, that is greater than 1.15 in the second half of 2025
 - General Commentary





- Weak bookings & backlog was driven by elevated cancelations
 - In terms of backlog, recognized portion of the cancellations versus that, that is part of the pipeline, but not yet in the backlog, either the amount of revenue was part of a project that was in backlog, but was not because of a regulatory threshold where there was withholding because either time or some event that prevented us from recognizing the remainder of the amount of that award or just things that hadn't gotten to start-up. And so we're in the awarded status, but hadn't started
 - we still would have had relatively bookings somewhat below kind of what we've been running at sort of 1.2 sort of range. It would have been well below that just because of the prior -- the cumulative prior cancellations in Q1 and Q2. So it's a mix the cancellations over that entire period, Q1 to Q3, that causes the reduced bookings.
 Again, if you cancel stuff that's in the pipeline that hasn't gotten to backlog, it's going to show up in future backlog awards and book-to-bill, and that's what we've seen
- The primary driver of cancellations is running out of money due to the funding environment
 - But I do think that the environment, we've had a great deal of cancellations that are
 many of them related to running out of funding and not being able to refresh from the
 capital markets. It is an unusual situation
- How long will it take for the funding from covid to wash out and the industry to fully reset?
 - we still have some clients that are kind of taking it quarter-to-quarter and continuing programs that really were funded in that period and are not well-funded companies.
 - a number of them have gone bankrupt. We gave -- noticed a fair number of companies because of inability to pay and terminated. Most of those didn't make it
 - I'm hoping that that's done, but it kind of depends on the future business environment. If things turn south again, you get more of these cancellations potentially. Certainly, the overhang is less, I guess, you'd say. But I can't say it's entirely eliminated.
- The pricing environment is stable
 - we've seen improvement. I think that if you look back toward early in the year, we
 might have seen a little bit of that. But I actually think the business environment is
 pretty normalized if you take out the cancellations of stuff that was awarded during the
 COVID high. But no, I've not seen lately any sort of trend toward dropping pricing or
 overly aggressive pricing
- Do you expect to gain any more efficiency out of labor?
 - We got low turnover and good utilization of staff. So plenty of staff in terms of the
 individuals that we're sourcing and putting onto new projects. And then also just good
 efficiency of existing seasoned staff because we're not hiring as much right now or
 haven't been hiring as much the burden then on the existing employee base in terms of
 training and mentoring and bringing up to speed. Those newer individuals is lower, and
 therefore, their productivity on billable work is higher
 - we do expect to accelerate hiring as we move through next year. But the rate of that and the size of that will largely be dependent upon what the bookings look like and what the future opportunities turn out to be.





- our turnover is the lowest -- the last 2 quarters has been the lowest possibly ever, certainly in the last 5 years
- I think we're at good efficiency now. I don't think there's a lot more of margin expansion in terms of leveraging lower turnover and greater productivity than we currently are experiencing

Additional Projections and Valuation Analysis

Small blopharma revenue S201 S274 S279 S486 S611 S694 S880 S1,139 S1,471 S1,677 S1,878 S2,254 S2,682 S3,165 Mink % S6.0% 66.0% 69.0% 71.0% 73.0% 77.0% 78.0% 7	Income Statement	<u>2015</u>	2016	2017	<u>2018</u>	2019	2020	2021	2022	2023	2024E	2025E	2026E	2027E	2028E
Mix										·					
Mid-sized biopharma revenue	Growth %		36.3%	1.9%	74.2%	25.7%	13.6%	26.7%		29.2%	14.0%	12.0%	20.0%	19.0%	18.0%
Mile Sized biopharma revenue S104 S97 S109 S169 S164 S139 S183 S234 S340 S363 S385 S439 S496 S556 Growth % (8.8%) 12.4% S5.1% (3.3%) (15.1%) 31.6% 12.6% 45.3% 7.0% 6.0% 14.0% 13.0% 12.0%	Mix %	56.0%	65.0%	64.0%	69.0%	71.0%	75.0%	77.0%	78.0%	78.0%	79.2%	80.2%	81.3%	82.3%	83.2%
Growth %	Mid-sized biopharma revenue	\$104	\$97	\$109	\$169	\$164	\$139	\$183	\$234	\$340	\$363	\$385	\$439	\$496	\$556
Large biopharmarevenue	•	,					(15.1%)								
Crowth % Crowth %	Mix %	29.0%	23.0%	25.0%	24.0%	19.0%	. ,	16.0%	16.0%	18.0%	17.2%	16.4%	15.8%	15.2%	14.6%
Nik % 15.0% 12.0% 11.0% 7.0% 10.0% 10.0% 7.0% 6.0% 6.0% 4.0% 3.6% 3.3% 2.9% 2.5% 2.2% 2.3%	Large biopharma revenue	\$54	\$51	\$48	\$49	\$86	\$93	\$80	\$88	\$75	\$76	\$78	\$79	\$81	\$82
Total revenue S359 S422 S436 S705 S861 S926 S1,142 S1,460 S1,886 S2,116 S2,341 S2,772 S3,259 S3,803 Growth % 17.4% 34.4% 61.6% 22.2% 7.5% 23.4% 27.8% 29.2% 12.2% 10.6% 18.4% 17.6% 16.7%	Growth %		(6.1%)	(5.1%)	2.7%	74.6%	7.5%	(13.6%)	9.5%	(13.9%)	1.0%	2.0%	2.0%	2.0%	2.0%
Property Property	Mix %	15.0%	12.0%	11.0%	7.0%	10.0%	10.0%	7.0%	6.0%	4.0%	3.6%	3.3%	2.9%	2.5%	2.2%
Direct Costs S164 S199 S212 S252 S321 S354 S441 S535 S638 S686 S741 S843 S954 S1,074 S61es % 45,6% 47,1% 48,6% 35,8% 37,3% 38,3% 38,6% 36,6% 33,8% 32,4% 31,6% 30,4% 29,3% 28,2% G7owth % 21,3% 6.7% 19,1% 27,2% 10,4% 24,5% 21,3% 19,3% 7,5% 8,0% 13,8% 13,2% 12,5% Reimbursed expenses S39 S51 S50 S237 S294 S293 S373 S493 S723 S783 S866 S1,026 S1,407 S61es % 10,8% 12,1% 11,4% 33,6% 34,2% 31,6% 32,7% 33,7% 38,3% 37,0% 37,	Total revenue	\$359	\$422	\$436	\$705	\$861	\$926	\$1,142	\$1,460	\$1,886	\$2,116	\$2,341	\$2,772	\$3,259	\$3,803
Soles% 45.6% 47.1% 48.6% 35.8% 37.3% 38.3% 38.6% 36.6% 33.8% 32.4% 31.6% 30.4% 29.3% 28.2% Growth % 23.3% 555 550 5237 5294 5233 5333 5433 5723 5733 5866 51.026 51.205 51.407 Soles % 10.8% 12.1% 11.4% 33.6% 34.2% 31.6% 32.7% 33.7% 38.3% 37.0%	Growth %		17.4%	3.4%	61.6%	22.2%	7.5%	23.4%	27.8%	29.2%	12.2%	10.6%	18.4%	17.6%	16.7%
Soles% 45.6% 47.1% 48.6% 35.8% 37.3% 38.3% 38.6% 36.6% 33.8% 32.4% 31.6% 30.4% 29.3% 28.2% Growth % 23.3% 555 550 5237 5294 5233 5333 5433 5723 5733 5866 51.026 51.205 51.407 Soles % 10.8% 12.1% 11.4% 33.6% 34.2% 31.6% 32.7% 33.7% 38.3% 37.0%															
Growth % 21.3% 6.7% 19.1% 27.2% 10.4% 24.5% 21.3% 1.5% 8.0% 13.8% 13.2% 12.5% Reimbursed expenses 539 551 550 5237 5294 \$293 \$373 \$493 \$723 \$783 \$866 \$1,026 \$1,407 Growth % 30.8% (2.5%) 376.5% 24.3% (0.5%) 27.4% 32.0% 46.6% 8.3% 10.6% 18.4% 17.6% 16.7% SG&A 557 562 \$63 \$76 \$95 \$92 \$108 \$131 \$161 \$18.4 \$199 \$226 \$256 \$288 Soles % 15.9% 14.6% 14.5% 10.7% 11.1% 10.0% 9.5% 9.0% 8.6% 8.7% 8.5% 8.2% 7.8% 7.6% Gowth % 7.9% 3.0% 19.5% 25.9% (3.2%) 17.6% 21.2% \$2.7 \$30 \$33 \$42 \$49 Sole	Direct Costs	\$164	\$199	\$212	\$252	\$321	\$354	\$441	\$535	\$638	\$686	\$741	\$843	\$954	\$1,074
Reimbursed expenses \$39 \$51 \$50 \$237 \$294 \$293 \$373 \$783 \$783 \$866 \$1,026 \$1,206 \$1,076 Sole's % 10.8% 12.1% 11.4% 33.6% 34.2% 31.6% 32.7% 33.3% 37.0%	Sales %	45.6%	47.1%	48.6%	35.8%	37.3%	38.3%	38.6%	36.6%	33.8%	32.4%	31.6%	30.4%	29.3%	28.2%
Sales % 10.8% 12.1% 11.4% 33.6% 34.2% 31.6% 32.7% 33.7% 37.0% 30.0% 10.5% 50.5 \$9.5 \$9.5 \$1.1 \$1.1 \$1.0% \$1.2% \$1.2% \$1.2% \$1.2% \$1.2% \$1.2% \$1.2% \$2.5 \$2.2% \$2.	Growth %		21.3%	6.7%	19.1%	27.2%	10.4%	24.5%	21.3%	19.3%	7.5%	8.0%	13.8%	13.2%	12.5%
Growth % 30.8% (2.5%) 376.5% 24.3% (0.5%) 27.4% 32.0% 46.8% 8.3% 10.6% 18.4% 17.6% 16.7% SGBA 557 562 563 576 595 592 5108 5131 5161 5184 5199 5226 5256 5288 Soles % 15.9% 14.6% 14.5% 10.7% 11.1% 10.0% 9.0% 8.6% 8.7% 8.5% 8.2% 7.8% 7.6% Growth % 7.9% 3.0% 1.9.5% 25.9% (3.2%) 17.6% 21.2% 22.8% 14.0% 8.0% 13.3% 1.2% 12.5% 9.0% 8.3% 1.2% 12.2% 12.2% 12.2% 10.6% 13.3% 1.3% <td>Reimbursed expenses</td> <td>\$39</td> <td>\$51</td> <td>\$50</td> <td>\$237</td> <td>\$294</td> <td>\$293</td> <td>\$373</td> <td>\$493</td> <td>\$723</td> <td>\$783</td> <td>\$866</td> <td>\$1,026</td> <td>\$1,206</td> <td>\$1,407</td>	Reimbursed expenses	\$39	\$51	\$50	\$237	\$294	\$293	\$373	\$493	\$723	\$783	\$866	\$1,026	\$1,206	\$1,407
SG&A \$57 \$62 \$63 \$76 \$95 \$92 \$108 \$131 \$161 \$184 \$199 \$226 \$256 \$288 Sales % 15.9% 14.6% 14.5% 10.7% \$11.1% 10.0% 9.5% 9.0% 8.6% 8.7% 8.2% 7.8% 7.6% Growth % 7.9% 3.0% 19.5% 25.9% (3.2%) 17.6% 22.8% 14.0% 8.0% 13.8% 12.2% 7.6% Sales % 1.8% 1.8% 2.0% 1.3% 1.0% 1.3% 1.4% 1.3%	Sales %	10.8%	12.1%	11.4%	33.6%	34.2%	31.6%	32.7%	33.7%	38.3%	37.0%	37.0%	37.0%	37.0%	37.0%
Sales % 15.9% 14.6% 14.7% 10.7% 11.1% 10.0% 9.5% 9.0% 8.6% 8.7% 8.2% 7.8% 7.6% Growth % 7.9% 3.0% 19.5% 25.9% (3.2%) 17.6% 21.2% 22.8% 14.0% 8.0% 13.8% 13.2% 12.5% Depreciation \$6 \$7 \$9 \$9 \$8 \$12 \$16 \$19 \$24 \$27 \$30 \$35 \$42 \$49 Sales % 1.8% 1.8% 2.0% 1.3%	Growth %		30.8%	(2.5%)	376.5%	24.3%	(0.5%)	27.4%	32.0%	46.8%	8.3%	10.6%	18.4%	17.6%	16.7%
Growth % 7.9% 3.0% 19.5% 25.9% (3.2%) 17.6% 21.2% 22.8% 14.0% 8.0% 13.8% 13.2% 12.5% Depreciation \$6 \$7 \$9 \$9 \$8 \$12 \$16 \$19 \$24 \$27 \$30 \$35 \$42 \$49 Sales % 1.8% 1.8% 2.0% 1.3% 1.0% 1.3% 1.1% 1.6% 16.7% 8.7 <t< td=""><td>SG&A</td><td>\$57</td><td>\$62</td><td>\$63</td><td>\$76</td><td>\$95</td><td>\$92</td><td>\$108</td><td>\$131</td><td>\$161</td><td>\$184</td><td>\$199</td><td>\$226</td><td>\$256</td><td>\$288</td></t<>	SG&A	\$57	\$62	\$63	\$76	\$95	\$92	\$108	\$131	\$161	\$184	\$199	\$226	\$256	\$288
Depreciation \$6 \$7 \$9 \$9 \$8 \$12 \$16 \$19 \$24 \$27 \$30 \$35 \$42 \$49 Sales % 1.8% 1.8% 2.0% 1.3% 1.0% 1.3% 1.4% 1.6% 6.6% 50 \$42 \$53 \$54 \$43 \$43 \$54 \$43 \$54 <t< td=""><td>Sales %</td><td>15.9%</td><td>14.6%</td><td>14.5%</td><td>10.7%</td><td>11.1%</td><td>10.0%</td><td>9.5%</td><td>9.0%</td><td>8.6%</td><td>8.7%</td><td>8.5%</td><td>8.2%</td><td>7.8%</td><td>7.6%</td></t<>	Sales %	15.9%	14.6%	14.5%	10.7%	11.1%	10.0%	9.5%	9.0%	8.6%	8.7%	8.5%	8.2%	7.8%	7.6%
Sales % 1.8% 1.8% 2.0% 1.3% 1.0% 1.3% 1.6% 2.7% 2.8 \$ \$ 2.7 \$	Growth %		7.9%	3.0%	19.5%	25.9%	(3.2%)	17.6%	21.2%	22.8%	14.0%	8.0%	13.8%	13.2%	12.5%
Growth % 16.7% 15.2% 7.8% (9.5%) 39.4% 37.4% 18.6% 27.1% 12.2% 10.6% 18.4% 17.6% 16.7% Amortization \$63 \$51 \$38 \$30 \$15 \$8 \$55 \$3 \$22 \$22 \$3 \$3 \$4 \$4 Sales % 17.6% 12.0% 8.7% 4.2% 1.7% 0.9% 0.4% 0.2% 0.1%	Depreciation	\$6	\$7	\$9	\$9	\$8	\$12	\$16	\$19	\$24	\$27	\$30	\$35	\$42	\$49
Amortization \$63 \$51 \$38 \$30 \$15 \$8 \$5 \$3 \$2 \$2 \$3 \$3 \$4 \$4 Sales % 17.6% 12.0% 8.7% 4.2% 1.7% 0.9% 0.4% 0.2% 0.1% 0.2% 0.2% 0.2% 0.2% 0.2% 0.2% 0.2% 0.2% 0.2% 0.2%	Sales %	1.8%	1.8%	2.0%	1.3%	1.0%	1.3%	1.4%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%
Sales % 17.6% 12.0% 8.7% 4.2% 1.7% 0.9% 0.4% 0.2% 0.1% 0.2% 0.0% 0.2 0.53 530 \$535	Growth %		16.7%	15.2%	7.8%	(9.5%)	39.4%	37.4%	18.6%	27.1%	12.2%	10.6%	18.4%	17.6%	16.7%
Growth % (19.7%) (25.2%) (22.0%) (49.8%) (46.9%) (35.1%) (34.4%) 12.2% 10.6% 18.4% 17.6% 16.7% EBIT \$30 \$53 \$65 \$101 \$127 \$167 \$199 \$279 \$337 \$434 \$503 \$639 \$798 \$981 Margin % 8.3% 12.5% 14.9% 14.3% 14.8% 18.0% 17.4% 19.1% 17.9% 20.5% 21.5% 22.0% 25.8% D&A \$70 \$58 \$46 \$39 \$22 \$22 \$26 \$30 \$33 \$39 \$45 \$53 Adjusted EBITDA \$99 \$111 \$111 \$140 \$150 \$187 \$220 \$301 \$363 \$463 \$535 \$677 \$843 \$1,034 Margin % 27.7% 26.2% 25.5% 19.8% 17.5% 20.1% \$12.9% \$2.6% \$2.4 \$2.2 \$2.2 \$2.2 \$2.2 \$2.2 \$2.	Amortization	\$63	\$51	\$38	\$30	\$15	\$8	\$5	\$3	\$2	\$2	\$3	\$3	\$4	\$4
EBIT \$30 \$53 \$65 \$101 \$127 \$167 \$199 \$279 \$337 \$434 \$503 \$639 \$798 \$981 Margin % 8.3% 12.5% 14.9% 14.3% 14.8% 18.0% 17.4% 19.1% 17.9% 20.5% 21.5% 23.0% 24.5% 25.8% D&A \$70 \$58 \$46 \$39 \$23 \$20 \$21 \$22 \$26 \$30 \$33 \$39 \$45 \$53 Adjusted EBITDA \$99 \$111 \$111 \$140 \$150 \$187 \$220 \$301 \$363 \$463 \$535 \$677 \$843 \$1,034 Margin % 27.7% 26.2% 25.5% 19.8% 17.5% 20.1% 19.2% 20.6% 19.3% 21.9% 22.9% 24.4% 25.9% 27.2% Interest & Other (\$19) (\$9 (\$8 (\$7 \$21 \$1 \$3 \$4 (\$1 \$24 \$24 <td>Sales %</td> <td>17.6%</td> <td>12.0%</td> <td>8.7%</td> <td>4.2%</td> <td>1.7%</td> <td>0.9%</td> <td>0.4%</td> <td>0.2%</td> <td>0.1%</td> <td>0.1%</td> <td>0.1%</td> <td>0.1%</td> <td>0.1%</td> <td>0.1%</td>	Sales %	17.6%	12.0%	8.7%	4.2%	1.7%	0.9%	0.4%	0.2%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
Margin % 8.3% 12.5% 14.9% 14.3% 14.8% 18.0% 17.4% 19.1% 17.9% 20.5% 21.5% 23.0% 24.5% 25.8% D&A \$70 \$58 \$46 \$39 \$23 \$20 \$21 \$22 \$26 \$30 \$33 \$39 \$45 \$53 Adjusted EBITDA \$99 \$111 \$111 \$140 \$150 \$187 \$220 \$301 \$363 \$463 \$535 \$677 \$843 \$1,034 Margin % 27.7% 26.2% 25.5% 19.8% 17.5% 20.1% 19.2% 20.6% 19.3% 21.9% 22.4% \$2.4 \$2.4 \$2.4 \$2.4 \$2.2 \$2.0% \$2.0% \$2.0% \$2.0% \$2.0% \$2.0% \$2.0% \$2.0% \$2.1 \$2.4 \$2.4 \$2.4 \$2.4 \$2.2 \$2.2 \$2.0% \$2.0% \$2.0% \$2.0% \$2.0% \$2.0% \$2.0% \$2.0 \$2.0 \$2.0 \$2.0 <td>Growth %</td> <td></td> <td>(19.7%)</td> <td>(25.2%)</td> <td>(22.0%)</td> <td>(49.8%)</td> <td>(46.9%)</td> <td>(35.1%)</td> <td>(34.5%)</td> <td>(34.4%)</td> <td>12.2%</td> <td>10.6%</td> <td>18.4%</td> <td>17.6%</td> <td>16.7%</td>	Growth %		(19.7%)	(25.2%)	(22.0%)	(49.8%)	(46.9%)	(35.1%)	(34.5%)	(34.4%)	12.2%	10.6%	18.4%	17.6%	16.7%
D&A \$70 \$58 \$46 \$39 \$23 \$20 \$21 \$22 \$26 \$30 \$33 \$39 \$45 \$58 Adjusted EBITDA \$99 \$111 \$111 \$140 \$150 \$187 \$220 \$301 \$363 \$463 \$535 \$677 \$843 \$1,034 Margin % 27.7% 26.2% 25.5% 19.8% 17.5% 20.1% 19.2% 20.6% 19.3% 21.9% 22.9% 24.4% 25.9% 27.2% Interest & Other (\$19) (\$9) (\$8 (\$77 (\$22 \$1 \$3 \$4 (\$11 \$24 \$24 \$24 \$24 \$24 \$24 Earnings Before Taxes \$11 \$43 \$57 \$94 \$125 \$169 \$202 \$283 \$336 \$458 \$527 \$663 \$822 \$1,005 Income tax expense (benefit) \$1 \$9 \$18 \$21 \$24 \$23 \$20 \$37 \$53	EBIT	\$30	\$53	\$65	\$101	\$127	\$167	\$199	\$279	\$337	\$434	\$503	\$639	\$798	\$981
Adjusted EBITDA \$99 \$111 \$111 \$40 \$150 \$187 \$220 \$301 \$363 \$463 \$535 \$677 \$843 \$1,034 Margin % 27.7% 26.2% 25.5% 19.8% 17.5% 20.1% 19.2% 20.6% 19.3% 21.9% 22.9% 24.4% 25.9% 27.2% Interest & Other (\$19) (\$9) (\$8 (\$7 (\$2 \$1 \$3 \$4 (\$1) \$24 \$24 \$24 \$24 Earnings Before Taxes \$11 \$43 \$57 \$94 \$125 \$169 \$202 \$283 \$336 \$458 \$527 \$663 \$822 \$1,005 Income tax expense (benefit) \$1 \$9 \$18 \$21 \$24 \$23 \$20 \$37 \$53 \$69 \$77 \$92 \$109 \$127 Tax Rate 7.8% 19.6% 31.3% 22.1% 19.5% 13.7% 9.9% 13.3% 15.75% 15.0%	Margin %	8.3%	12.5%	14.9%	14.3%	14.8%	18.0%	17.4%	19.1%	17.9%	20.5%	21.5%	23.0%	24.5%	25.8%
Margin % 27.7% 26.2% 25.5% 19.8% 17.5% 20.1% 19.2% 20.6% 19.3% 21.9% 22.9% 24.4% 25.9% 27.2% Interest & Other (\$19) (\$9) (\$8) (\$7) (\$2) \$1 \$3 \$4 (\$1) \$24 \$24 \$24 \$24 Earnings Before Taxes \$11 \$43 \$57 \$94 \$125 \$169 \$202 \$283 \$336 \$458 \$527 \$663 \$822 \$1,005 Income tax expense (benefit) \$1 \$9 \$18 \$21 \$24 \$23 \$20 \$37 \$53 \$69 \$77 \$92 \$109 \$127 Tax Rate 7.8% 19.6% 31.3% 22.1% 19.5% 13.7% 9.9% 13.3% 15.75% 15.0% 15.00% 15.00% 15.00% 15.00% 15.00% 15.00% 15.00% 15.00% 15.00% 15.00% 15.00% 15.00% 15.00% 15.00% 15.00%	D&A	\$70	\$58	\$46	\$39	\$23	\$20		\$22	\$26	\$30	\$33	\$39	\$45	\$53
Interest & Other (\$19) (\$9) (\$8) (\$7) (\$2) \$1 \$3 \$4 (\$1) \$24 \$22 \$283 \$336 \$458 \$527 \$663 \$822 \$1,005 \$1,006 \$1,006 \$1,006 \$1,006 \$1,006 \$1,006 \$1,006 \$1,006 \$1,006 \$1,006 \$1,006	Adjusted EBITDA		•	•			\$187	•					\$677		. ,
Earnings Before Taxes \$11 \$43 \$57 \$94 \$125 \$169 \$202 \$283 \$336 \$458 \$527 \$663 \$822 \$1,005 Income tax expense (benefit) \$1 \$9 \$18 \$21 \$24 \$23 \$20 \$37 \$53 \$69 \$77 \$92 \$109 \$127 \$127 \$127 \$127 \$127 \$127 \$127 \$127	•														
Income tax expense (benefit) \$1 \$9 \$18 \$21 \$24 \$23 \$20 \$37 \$53 \$69 \$77 \$92 \$109 \$127 Tax Rate 7.8% 19.6% 31.3% 22.1% 19.5% 13.7% 9.9% 13.3% 15.75% 15.00% 13.3% 15.00% 13.3% 24.9 \$28.8 \$2.8 \$3.9 \$4.8 \$4.8 \$4.8 \$4.8 \$4.8 \$4.8 \$4.8 \$4.8 \$4.8	Interest & Other										<u> </u>				
Tax Rate 7.8% 19.6% 31.3% 22.1% 19.5% 13.7% 9.9% 13.3% 15.75% 15.00% 16.00% 15.00% 15.00% 16.00% 16.00% 16.00% 16.00% 16.00% 16.00% 16.00% 16.00% 16.00% 16.00% 16.00% 16.00%	•												•		
Net Income to Common Margin % \$10 \$35 \$39 \$73 \$100 \$145 \$182 \$245 \$283 \$389 \$449 \$571 \$713 \$879 Margin % 2.8% 8.3% 9.0% 10.4% 11.7% 15.7% 15.9% 16.8% 15.0% 18.4% 19.2% 20.6% 21.9% 23.1% Diluted EPS \$0.32 \$0.96 \$0.98 \$1.98 \$2.67 \$3.92 \$4.82 \$7.29 \$8.88 \$12.12 \$14.01 \$17.78 \$22.23 \$27.38	. , ,											'		,	
Margin % 2.8% 8.3% 9.0% 10.4% 11.7% 15.7% 15.9% 16.8% 15.0% 18.4% 19.2% 20.6% 21.9% 23.1% Diluted EPS \$0.32 \$0.96 \$0.98 \$1.98 \$2.67 \$3.92 \$4.82 \$7.29 \$8.88 \$12.12 \$14.01 \$17.78 \$22.23 \$27.38	-														
Diluted EPS \$0.32 \$0.96 \$0.98 \$1.98 \$2.67 \$3.92 \$4.82 \$7.29 \$8.88 \$12.12 \$14.01 \$17.78 \$22.23 \$27.38	Net Income to Common				, -	,							•		
	Margin %	2.8%	8.3%	9.0%	10.4%	11.7%	15.7%	15.9%	16.8%	15.0%	18.4%	19.2%	20.6%	21.9%	23.1%
	Diluted EPS	\$0.32	\$0.96	\$0.98	\$1.98	\$2.67	\$3.92	\$4.82	\$7.29	\$8.88	\$12.12	\$14.01	\$17.78	\$22.23	\$27.38
		7 3.02										•	•		
Diluted Shares 31.346 36.329 39.839 36.912 37.576 37.080 37.697 33.671 31.841 32.088 32.088 32.088 32.088 32.088		31.346													





Cash Flow Items	<u>2015</u>	2016	2017	2018	2019	2020	2021	2022	2023	2024E	2025E	2026E	2027E	2028E
Change in NWC	\$3	\$7	\$13	\$40	\$36	\$66	\$67	\$106	\$106	\$78	\$76	\$128	\$142	\$156
Sales %	0.9%	1.7%	3.0%	5.6%	4.1%	7.2%	5.8%	7.3%	5.6%	3.7%	3.3%	4.6%	4.3%	4.1%
Capex	(\$6)	(\$13)	(\$12)	(\$16)	(\$18)	(\$31)	(\$28)	(\$37)	(\$37)	(\$53)	(\$54)	(\$53)	(\$52)	(\$53)
Sales %	(1.8%)	(3.2%)	(2.7%)	(2.3%)	(2.1%)	(3.4%)	(2.5%)	(2.5%)	(1.9%)	(2.5%)	(2.6%)	(2.5%)	(2.5%)	(2.5%)
SBC	\$22	\$10	\$4	\$6	\$21	\$14	\$14	\$21	\$21	\$32	\$32	\$32	\$32	\$32
Sales %	6.2%	2.3%	1.0%	0.9%	2.4%	1.5%	1.3%	1.5%	1.1%	1.5%	1.5%	1.5%	1.5%	1.5%
FCF Bridge:														
Adj. EBITDA	\$99	\$111	\$111	\$140	\$150	\$187	\$220	\$301	\$363	\$463	\$535	\$677	\$843	\$1,034
Net Interest	\$19	\$9	\$8	\$7	\$2	(\$1)	(\$3)	(\$4)	\$1	(\$24)	(\$24)	(\$24)	(\$24)	(\$24)
Taxes	(\$1)	(\$9)	(\$18)	(\$21)	(\$24)	(\$23)	(\$20)	(\$37)	(\$53)	(\$69)	(\$77)	(\$92)	(\$109)	(\$127)
SBC	\$22	\$10	\$4	\$6	\$21	\$14	\$14	\$21	\$21	\$32	\$32	\$32	\$32	\$32
Change in NWC	\$3	\$7	\$13	\$40	\$36	\$66	\$67	\$106	\$106	\$78	\$76	\$128	\$142	\$156
Capex	(\$6)	(\$13)	(\$12)	(\$16)	(\$18)	(\$31)	(\$28)	(\$37)	(\$37)	(\$53)	(\$54)	(\$53)	(\$52)	(\$53)
Free Cash Flow	\$137	\$115	\$107	\$156	\$167	\$211	\$249	\$350	\$402	\$427	\$488	\$668	\$832	\$1,019

Transaction Comps

Announce Date	<u>Target</u>	<u>Acquiror</u>	Enterprise Value	EV/Revenue	EV/EBITDA	Revenue	EBITDA
5/10/2023	Syneos Health	PE Group	\$7,100	1.3x	8.9x	\$5,393	\$801
4/15/2021	PPD	Thermo Fisher	\$17,400	3.9x	22.3x	\$4,515	\$779
2/24/2021	PRA Health	ICON Plc	\$12,000	3.8x	22.5x	\$3,183	\$533
6/20/2017	Paraxel	Pamplona Capital	\$5,000	2.0x	14.8x	\$2,442	\$339
5/3/2016	Quintiles	IMS Health	\$23,000	3.2x	13.5x	\$7,200	\$1,700
			Mean	2.8x	16.4x		
			Median	_	14.8x		

Additional Notes On the CRO Industry

- Total Addressable Market
 - Fortrea projects the TAM for CROs will increase by 5%/6% over the next 4 years driven by increased R&D and a higher penetration of outsourcing
 - Fortrea estimates a 53% penetration of R&D outsourcing today which will steadily increase over time







Source: Statista Total Global Pharmaceutical R&D Spend 2014-2028 as of October 2023. Wall Street Research, Global Market for Contract Research Organization Services, January 2022, BCC Publishing Staff Report. Pharma & Biotech Clinical Development Spend Estimated at \$100bn in 2022 in Simoners S and Hugs I (2021) R&D Casts of New Medicines: A Landscape Analysis: Front. Med. 8:760762. doi: 10.3389/fmed.2021.760762

**Total Pharma R&D Spend Includes worldwide predictions and clinical finewarder and autosurcedy. Peer announced near term guidance, Valid Street Research and Labscaps analysis. 3 CRO Outsourcing rate is the U.S. rate from 2020A-2026E per Wall Street Research.

**Labscaps Clinical Development and Commercialization Services business is now Fortrea (NASDAQ: FIRE).

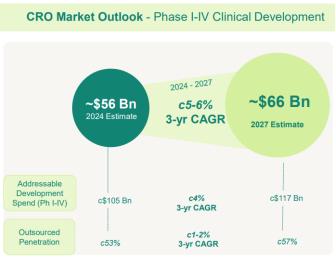
**Fortrea

Icon Plc 2024 Analyst day:

2023E 2024E 2025E 2026E 2027E 2028E

"To spend a moment or on what we think the market is doing and where it's going. As you can see, we believe, overall, about a 5% to 6% growth in our market, and that's made up of something like 4% of overall of R&D spend growth. And if we break that down a little bit, we'd see something like 3% in the large pharma space. And more like high single digits in the biotech space. I think we're all in this room, encouraged by what we've seen in the first quarter in terms of biotech spending, some increases there, some stability in that market. We're certainly seeing that as we come through and starting the year."

drive additional business to CROs



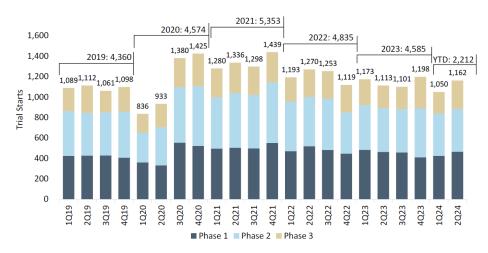
Sources: Industry Standard Research (2023); Wall Street Research; Management estimate:





- Expert is a Vice President at CTI Clinical Trial and Consulting Services, responsible for the P&L of a business unit, tegus call held on 06/27/2023
 - "Yeah, I think that those trends will continue. Just as you've described that there's been more outsourcing from pharma. The outsourcing of work has continued to grow over the last 15, 20 years. It's primarily been because there's been a credibility increase in the CROs and their experience and their delivery and the fact that in this day and age, there are more PhDs and MDs that sit on the CRO side than sit in pharma. Some of that expertise is shifted from pharma to the CRO. I think that that's been another reason why you continue to see growth. I do see that we're seeing certain niche CROs pop up for very specific types of disease states or types of studies. That's an interesting phenomenon. I think that some of them will gain traction."
- Current industry operating environment

Exhibit 6 - Clinical Trial Starts Resetting Post-COVID

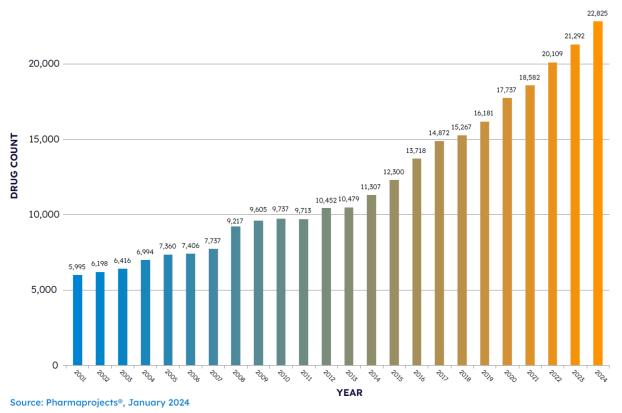


Source: Clinicaltrials.gov, Jefferies





Figure 1: Total R&D pipeline size by year, 2001—24



- Competitive landscape
 - Key competitors today
 - IQVIA Holdings
 - Publicly traded (IQV), \$43bn market cap
 - Largest CRO in the world by revenue & market cap
 - o Result of the 2016 merger between Quintiles & IMS Health
 - Combination of a CRO & technology solution for R&D
 - Does both full and functional CRO work, works with all types of customers
 - Business mix
 - 40% technology
 - o 60% CRO
 - ICON plc
 - Publicly traded (ICLR), \$24bn market cap
 - Pure-play CRO with an emphasis on M&A
 - o 2021 acquired PRA for \$12bn
 - o 2020 Acquired MedPass
 - 2019 Acquired Symphony Clinical Research, MediNova, & Molecular MD
 - o 2017 Acquired MAPI Group
 - o 2014 acquired Aptiv solutions





- Does both full and functional CRO work, works with all types of customers
- PPD
 - Subsidiary of Thermofisher
 - Acquired in 2021 for \$17.4bn
- Fortrea
 - Publicly traded (FTRE), \$1.7bn market cap
 - Former known as Covance, was spun-off from Labcorp in 2023
 - Has struggled since the spin-off
 - Roughly evenly split between large pharma and small bio
 - Roughly evenly split between full service and functional service provider contracts
- Charles River Labs
 - Publicly traded (CRL), \$10bn market cap
 - Primarily a non-clinical CRO focused on drug discovery
- And a number of smaller specialty and regional CROs
 - The CRO industry remains fragmented, with several hundred smaller, narrowly focused service providers and a small number of full-service companies with global capabilities





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