

# **ThermoFisher** S C I E N T I F I C

## Thermo Fisher Scientific (NYSE: TMO)

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*Market Data as of 01-Dec-2023*

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## *High-quality healthcare platform and compounder at a fair price*

### Business Overview

- Thermo Fisher Scientific is a world-leading provider of analytical instruments, reagents, consumables, software, and services to tackle complex analytical challenges in research, diagnostics, and clinical laboratories

### Investment Thesis

#### Why Is This a Good Business?

- Competitive advantage given scale and position as the largest player in the space as well as because of its strong recurring revenue base
  - TMO is a facilitator of scientific research without taking on individual clinical trial risk
  - TMO continues to capitalize on growing areas such as biological manufacturing, air and environmental testing, and diagnostics
- TMO has a proven track record as a serial acquirer having properly integrated and synergized companies into existing portfolio
- TMO has remained resilient in relation to its industry peers however, it has had its valuation deflated over macro fears

#### What Is The Market Missing?

- Market remains concerned about TMO's future acquisition prospects given that they have expanded into adjacencies (i.e., CRO and CDMO space)

*We recommend for YUSIF to **BUY** TMO with an implied upside of ~10.7%*

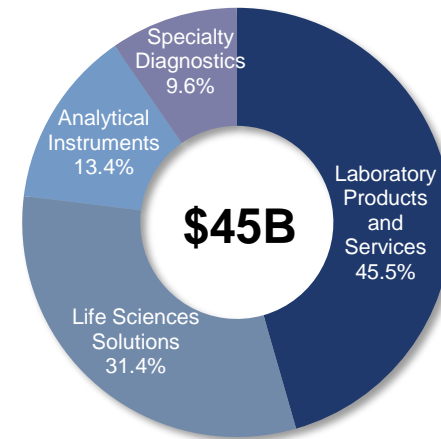
# Business Overview

*TMO is a leading provider of pharmaceutical and industrial healthcare products and services*

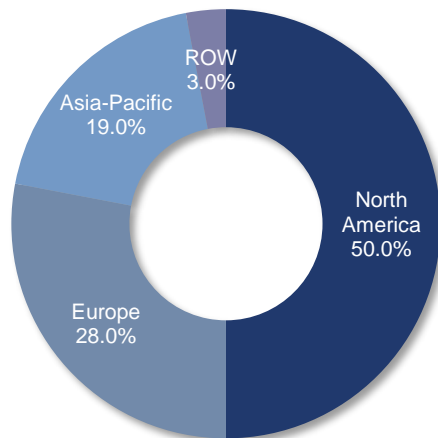
## Business Description

- Thermo Fisher Scientific is a global leader in scientific research services, equipment, consumables, and software to facilitate advancements in life sciences
- TMO serves its end markets through its four segments: analytical instruments, life sciences solutions, specialty diagnostics, and laboratory products and services
  - Key industries served by TMO primarily include Pharma & Biotech (52%), Diagnostics & Healthcare (23%), Academic & Government (13%), and Industrial & Applied (12%)
- Consumables and services make up nearly 82% of sales and drive strong recurring revenues among clients
  - Increasing adoption of single-use technologies due to efficiency advantages

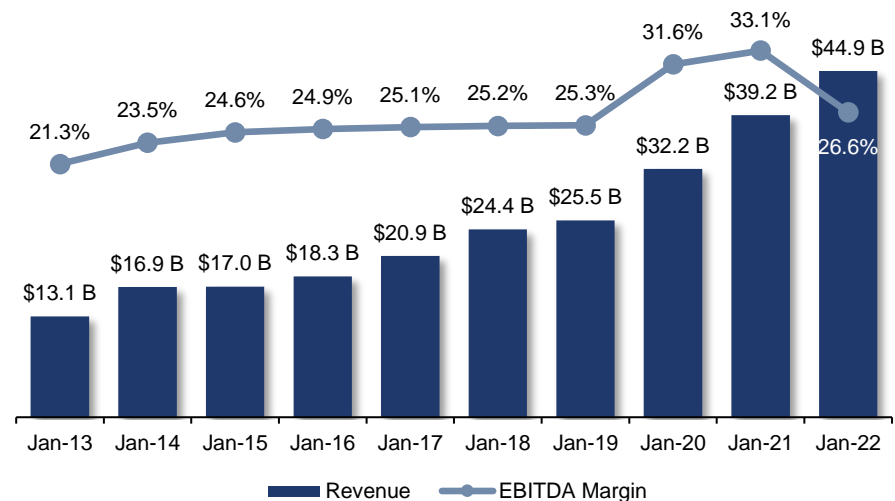
## Revenue Segmentation



## Global Revenue Breakdown



## Historical Revenue and EBITDA Margin



## Thermo Fisher Products Overview

### Lab Products and Services

#### Equipment and consumables



- Freezers, labware, pipettes, centrifuges for use in labs

#### Chemicals



- Acids, bases, biochemicals, buffers/standards, solvents, organometallics and metalloids
- Includes Afla Aesar and Acros Organics product line

#### Research and Safety Channels



- Product inspection, metal analysis, threat detection, pathogen surveillance

#### Pharma and Research Services



- Service and maintenance plans, cell engineering, training

#### Genetic Sciences



- TMO provides scalable research solutions and proven clinical services/diagnostics for use in processing genetic information
- TMO is a key player in polymerase chain reaction and DNA/RNA processing

### Life Sciences Solutions

#### Biosciences



- TMO provides gene editing and cell observation systems as well as reagents for growing cell cultures

#### Bioproduction



- TMO provides purification, single-use technologies, cell cultures, and centrifugal solutions for use in the production of microorganisms used in biotherapy

## Thermo Fisher Products Overview

Analytical Instruments	<b>Chromatography &amp; Mass Spectrometry</b>		<ul style="list-style-type: none"><li>Chromatography is the process of separating components within a mixture, mass spectrometry is used to measure the mass-to-charge ratio of molecules</li><li>TMO provides full suite of chromatography and spectrometry systems and consumables adaptable to many scenarios</li></ul>
	<b>Electron Microscopy</b>		<ul style="list-style-type: none"><li>Electron microscopes utilize beam of electrons for illumination to produce a highly magnified image</li><li>TMO also provides supplemental equipment and consumables for electron microscopy</li></ul>
	<b>Chemical Analysis</b>		<ul style="list-style-type: none"><li>TMO provides a varied selection of devices for use in chemical detection and analysis, field and safety instruments, and environmental and process instruments</li></ul>
Speciality Diagnostics	<b>Clinical Diagnostics</b>		<ul style="list-style-type: none"><li>Liquid, ready to use, lyophilized immunodiagnostic reagent kits, calibrators, controls, and calibration verification fluids</li></ul>
	<b>Immunodiagnosics</b>		<ul style="list-style-type: none"><li>Complete blood-test systems to support the clinical diagnosis and monitoring of allergy, asthma, and autoimmune diseases</li></ul>
	<b>Microbiology</b>		<ul style="list-style-type: none"><li>Dehydrated and prepared culture media, collection and transport systems, instrumentation and consumables to detect pathogens, diagnostic and rapid direct specimen tests, quality-control products</li></ul>
	<b>Transplant Diagnostics</b>		<ul style="list-style-type: none"><li>Leukocyte antigen (HLA) typing and testing for the organ transplant market</li></ul>
	<b>Healthcare Market</b>		<ul style="list-style-type: none"><li>Broad array of consumables, diagnostic kits and reagents, equipment, instruments, solutions, and services</li></ul>

# 5-Year Share Price Performance

Event timeline largely driven by acquisition strategy

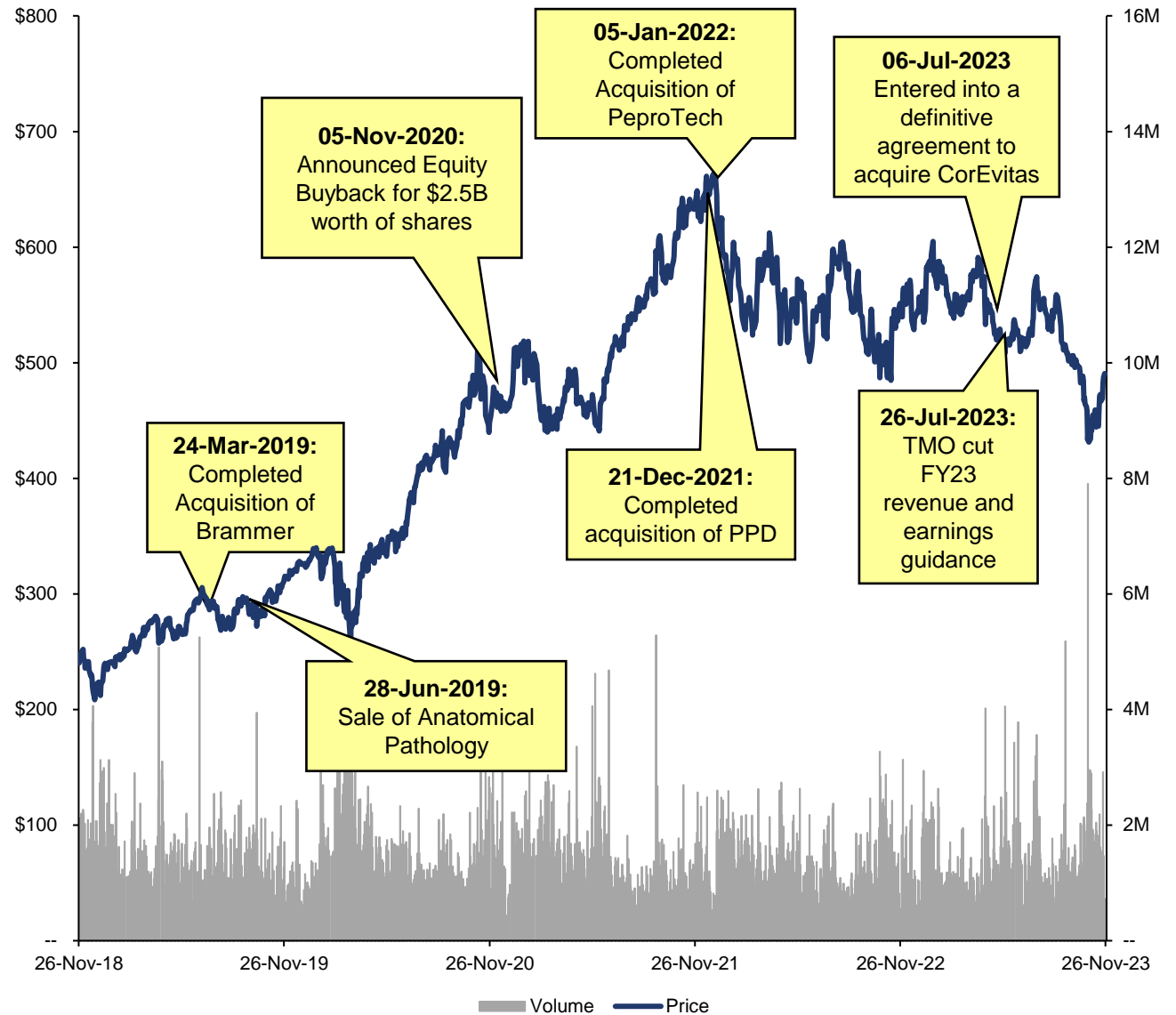
## Commentary

- TMO alongside industry players, have faced macro headwinds especially from China, which have depressed valuations
- Industry is adjusting to post-COVID-19 normalization
- Industry players have downgraded guidance due to macro headwinds
- M&A events have historically led to major stock price movements

## Trading Statistics

Market Cap	\$192B
Share Price	\$496.13
YTD Return	(10.3%)
LTM Return	(10.9%)
FCF/Share	\$14.03
52-week range	\$415.60 - \$609.85

## Share Price Performance



## Life Science Tools and Services – Positioned to grow due to industry characteristics

### Sector Analysis

- Life Science research is inherently risky, characterized by a low success rate and costly clinical trials
- Life Science Tools companies provide **services, instruments, and consumables** to customers and facilitate research and production
  - These are the “**picks and shovels**” of life science research, and **do not assume** the risks associated with clinical trials
- The rapidly expanding market for chronic disease therapy presents Life Science Tools companies a platform for opportunity
  - Personalized healthcare is emerging as a prominent investment opportunity – **the race for breakthrough drives innovation**
- M&A in the Life Sciences Tools industry serves as a major avenue to unlock shareholder value through acquiring proven and developed platforms

### COVID-19 Normalization

- Customers would likely utilize excess capacity and supplies from the pandemic first
  - During the pandemic TMO noted how customers have two to three-quarters of excess safety stock vs the normal one-quarter
  - This supply chain normalization has put pressure on growth
- Companies in the space saw outsized returns during the pandemic and are facing a hangover from the pandemic with the return of normal spending for Life Science Tools
  - TMO has used their excess returns during the pandemic to reinvest into the business with increased spend on R&D and M&A

### Industry Trends

- **Increasing Productivity Requirements**
  - TMO’s emphasis on R&D and innovation allows them to serve customers demanding more efficient equipment
- **Increasingly Stringent Regulatory Environment**
  - Growing adoption of testing requirements for a variety of industries such as food safety, and environmental testing
  - Increased demand for TMO’s single use technologies and Research & Safety Channels
- **Convergence of Life Science and Diagnostics**
  - Increasing applications of Life Science Tools such as mass spectrometry diagnostics in hospital settings to create more personalized care
  - Increased demand for TMO’s analytical instruments

### Benchmarking to Industry Peers<sup>(1)</sup>

Company Name	Mkt. Cap	Mean Forward P/E NTM	Net Income Normalized CAGR	Country
Thermo Fisher Scientific	\$192.5	22.8x	19.4%	USA
Danaher Corporation	\$166.4	28.1x	23.5%	USA
Lonza Group AG	\$28.6	27.1x	6.4%	CHE
Agilent Technologies	\$37.7	22.7x	15.3%	USA
Mettler-Toledo International	\$24.1	28.7x	14.2%	USA

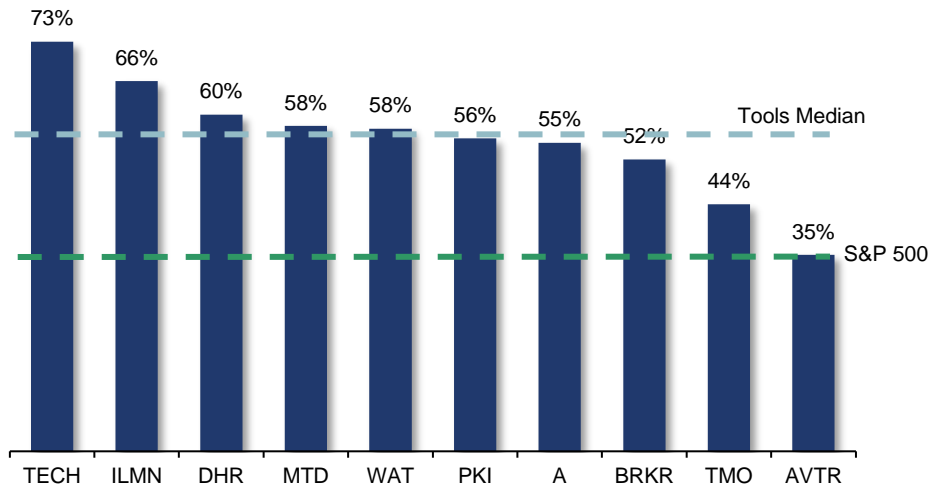
Source(s): Company Filings

1. Best Performers in the Life Sciences Industry – Net Income Normalized CAGR is FY-5 to FY0.

# Industry Overview

*The life sciences tools industry is naturally resilient given its irreplaceable role in research and development*

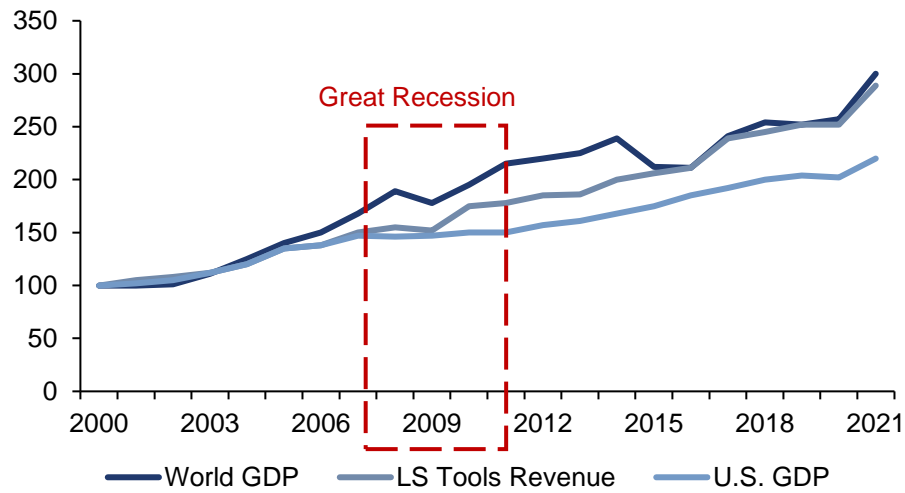
## Gross Margins for Life Science Tools vs S&P 500



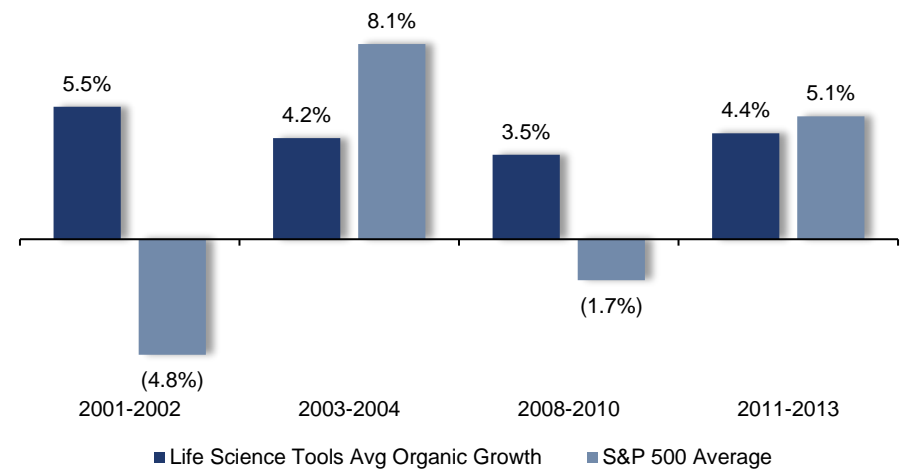
## Gross Margin – Life Science Tools vs S&P 500

Industry	Life Science Tools		S&P 500		Tools vs. S&P 500	
	2019	2022	2019	2022	2019	2022
Gross Margin	54.3%	55.7%	33.5%	33.0%	20.8%	22.7%
Operating Margin	24.5%	26.5%	13.1%	14.6%	11.4%	11.9%
FCF Margin	16.7%	15.5%	14.3%	11.5%	2.4%	4.0%

## Historical Growth Rates (Normalized At 100)



## Tools Industry Growth During Recessions<sup>(1)</sup>



Source(s): Deutsche Bank, Bloomberg  
1. Average every 2 years of the life science sales growth



# Industry Comparable Table

*TMO and Danaher are the largest players in a still fragmented industry*

Metrics	Thermo Fisher	Danaher	Agilent	Mettler Toledo
Market Cap	\$192.5B	\$166.4B	\$37.7B	\$24.1B
Recurring Revenue	80%	70%	58%	31%
Biopharma End Market	58%	30%	36%	29%
R&D Spending	\$1.5B	\$1.7B	\$0.49B	\$0.18B
ROIC	7.8%	7.9%	13.4%	N/A

# Investment Thesis: Why Is This a Good Business?

## TMO is an industry leader with an ecosystem of sticky revenues

### Market Dominance Due to Breadth of Offering

- TMO's value proposition is that they are a "one-stop shop" for customers in life science research
  - **Early Stage:** Instrumentation such as microscopes allow customers to innovate in the early discovery process
  - **Mid Stage:** Testing products such as bioreactors as well as process optimization services provide support to customers during development and trial phases
  - **Late Stage:** Products for manufacturing facilitates scale-up to commercial production stages for their customers such as centrifuges
- TMO has a broad product portfolio, with multiple lines in the same category of equipment
  - TMO offers different tiers of products in each category, including more features as the price of the product goes up

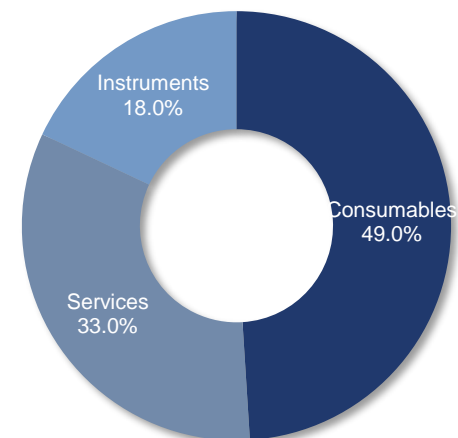
### Service and Consumable-Based Revenue

- TMO sells a wide range of consumables, such as chemicals, reagents, and test kits, which are essential for laboratory research and diagnostic work. Customers need to continually purchase these items to perform their scientific experiments
- TMO provides maintenance and service contracts for their analytical instruments. Customers pay for ongoing support to keep their equipment functioning optimally
  - For their more advanced equipment, the company offers software solutions for data analysis and laboratory management, sold via a software license, which must be renewed continually
- An increasing trend towards single-use technologies in the pharmaceutical industry is due to an emphasis on sterilisation and reducing cross-contamination. This results in consistent re-ordering of instruments, which TMO is well-positioned to benefit from

### High Degree of Stickiness

- There is significant regulation in the drug manufacturing process that benefits companies like TMO
  - When seeking to patent a new medication, an approval application must be submitted to the relevant authorities (ex. FDA)
  - In the approval application, the materials, instruments, processes, and suppliers to be used must be specified
  - Once a medication is approved, it can only be developed with the established suppliers, and if any changes are desired, it needs to be approved by the regulatory bodies
- The regulatory environment helps ensure a strong relationship between TMO and its clients
  - Long term contracts with clients such as research institutions, healthcare providers, and pharmaceutical companies can span 10+ years, ensuring a steady stream of revenues

### Strong Mix of Defensive Revenue



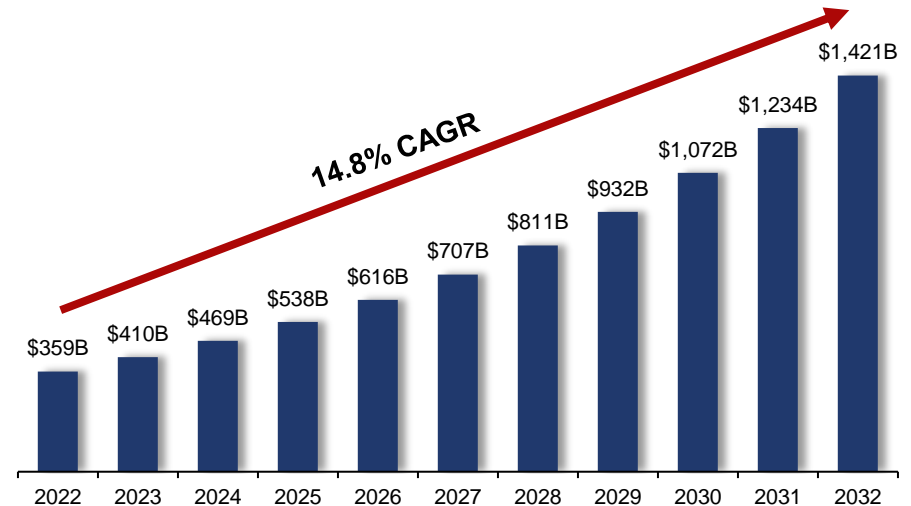
# Investment Thesis: Why Is This a Good Business?

**Strong organic growth opportunities across all business segments**

## Long-term Macroeconomic Tailwinds

- Biotech, pharma, health & diagnostics, academic & government, and industrial end-markets all have strong growth prospects
  - There have been significant advancements (mRNA, genomics) in life science research in recent years. More research requires more equipment and consumables, fueling more demand for TMO's analytics products
  - Breakthroughs in material sciences enables rapid growth in semiconductors, advanced materials and clean energy transition, which will increase demand for TMO's industrial products
  - Investments by governments in infrastructure and scientific capabilities provides more funding towards updated instruments (US government 2024 Budget includes \$210B in federal R&D)
- Aging demographics will continue to drive increased healthcare demand, which will result in revenue growth for TMO, especially in diagnostics products

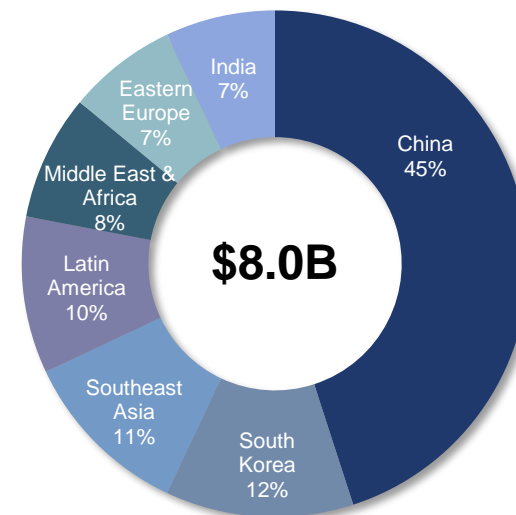
## Global Biopharma Market Projected Growth



## High Growth in Emerging Markets

- TMO continues to expand into emerging markets (i.e., China, South Korea, Southeast Asia, Latin America), which represent higher growth opportunities
  - TMO's unique depth of product offerings across all stages of development and strong supply chain capabilities allow them to penetrate these markets
- In China, TMO is developing bioprocessing solutions locally for drug development and manufacturing
  - The company's approach is aligned with China's 14<sup>th</sup> 5-year plan investment priorities of advancing local industry in biopharma
  - TMO has leading local capabilities and capacity, allowing them to be the prioritized source of products and equipment
- In South Korea, TMO is working closely with local customers to co-develop new products, such as semiconductor and battery equipment, which gives them increased trust in the local market

## Expanding Markets by Revenue



# Investment Thesis: Why Is This a Good Business?

*TMO has a strong acquisition strategy that will continue to drive growth*


## Disciplined Capital Allocation Strategy

- Mergers and acquisitions is the primary focus of TMO's capital deployment strategy
  - Approximately 60-75% of capital expected to be deployed over time
- Despite consolidation, the Life Science Tools industry remains highly fragmented, offering opportunities for further consolidation.
  - The top three players comprise only 30% of global industry revenues
  - There are hundreds of smaller players, representing ample opportunities for acquisition
  - M&A allows industry players to buy a proven platform without relying solely on R&D for new innovations
- Acquisitions allow TMO to further diversify their product portfolio, filling gaps in their service offerings and enhancing their value proposition as a "one stop shop" for healthcare customers

## Proven Management Team

- TMO's M&A playbook allows them to consistently create value
  - Selection of companies that strengthen the value proposition and strategic positioning of TMO's products
  - Disciplined decision-making and commitment to integration of acquired companies
  - Average NTM sales multiple is less than 4.0x for acquired companies, demonstrating that TMO pays fair prices for assets
- TMO has a proven track record of enhanced financial and operational performance of their acquired companies
  - TMO's acquisitions have generated \$150M of annual synergies, representing 6% of revenues
  - TMO successfully executes on revenue synergies as the acquired business becomes integrated with TMO's distribution network

## Extensive History of Value Creation

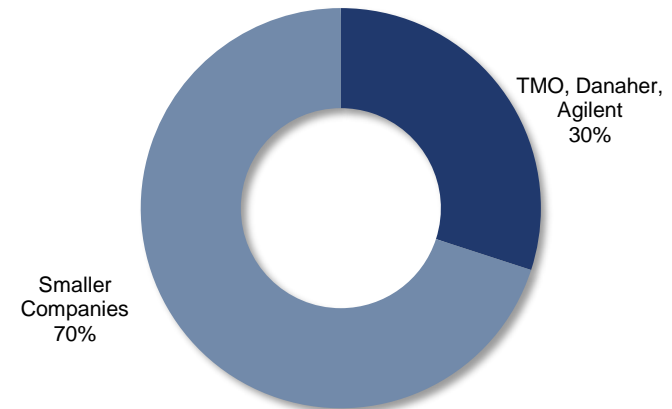
Transaction	Rationale	Price	EV/Sales	Annual Synergies	Results
 (2014)	<ul style="list-style-type: none"> <li>■ Established leadership in enabling life sciences research</li> </ul>	\$15.8B	5.3x	\$275M	<ul style="list-style-type: none"> <li>■ Revitalized sales growth</li> <li>■ Business is 2.6x larger today</li> </ul>
 (2016)	<ul style="list-style-type: none"> <li>■ Added leading electron microscopy offering</li> </ul>	\$4.2B	3.4x	\$80M	<ul style="list-style-type: none"> <li>■ Catalyzed R&amp;D investments to increase life sciences presence</li> <li>■ Business is 2.3x larger today</li> </ul>
 (2017)	<ul style="list-style-type: none"> <li>■ Expanded CDMO capabilities</li> </ul>	\$7.2B	3.8x	\$120M	<ul style="list-style-type: none"> <li>■ Accelerated path to building the leading CDMO</li> <li>■ Business is 2.3x larger today</li> </ul>
 (2021)	<ul style="list-style-type: none"> <li>■ Added leading CRO capabilities</li> </ul>	\$20.9B	3.2x	\$125M	<ul style="list-style-type: none"> <li>■ Acquisition off to a strong start and is currently undergoing integration</li> </ul>

## Successful M&A playbook which has and continues to drive value for company

### Role of M&A and Inorganic Growth at TMO

- M&A continues to be the primary focus of TMO's capital allocation strategy
- M&A Strategy
  - Company continues to pursue both scale and bolt on transactions
  - Management has highlighted that its pipeline is deep in all four operating segments with the potential to complete mid-to-large sized transactions
  - Areas of focus will likely include expansion of its biopharma capabilities, specialty diagnostics and cloud-based technologies
  - Company plans to capitalize on fragmentation life sciences space

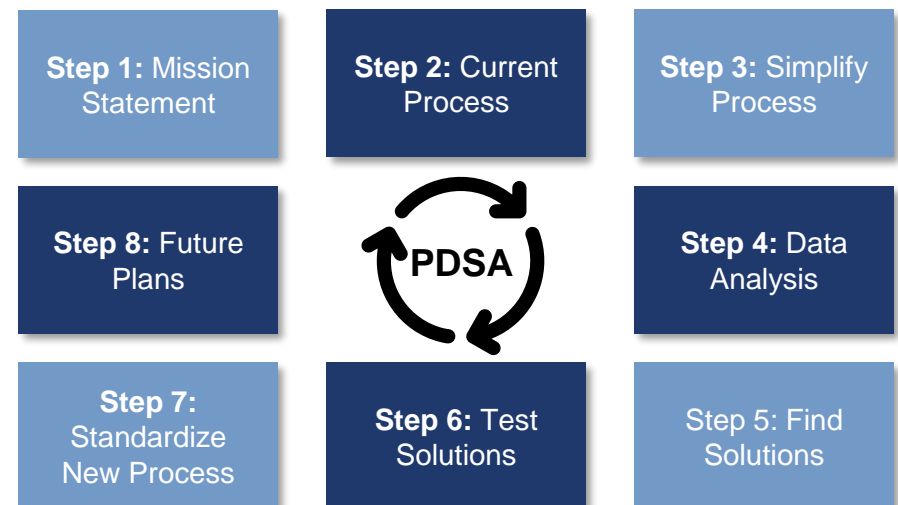
### Highly Fragmented Industry



### Integration Process

- The PPI (Practical Process Improvement) Business System is central to TMO's business
  - Focusing on continuous improvement that drives quality, productivity, and customer loyalty
  - Crucial for the successful integration of acquisitions and achieving differentiated financial performance
- Proven Integration Process which:
  - Enhances financial and operational performance with organic growth and margin expansion
  - Drives both cost and revenue synergies

### PPI Eight Step Method



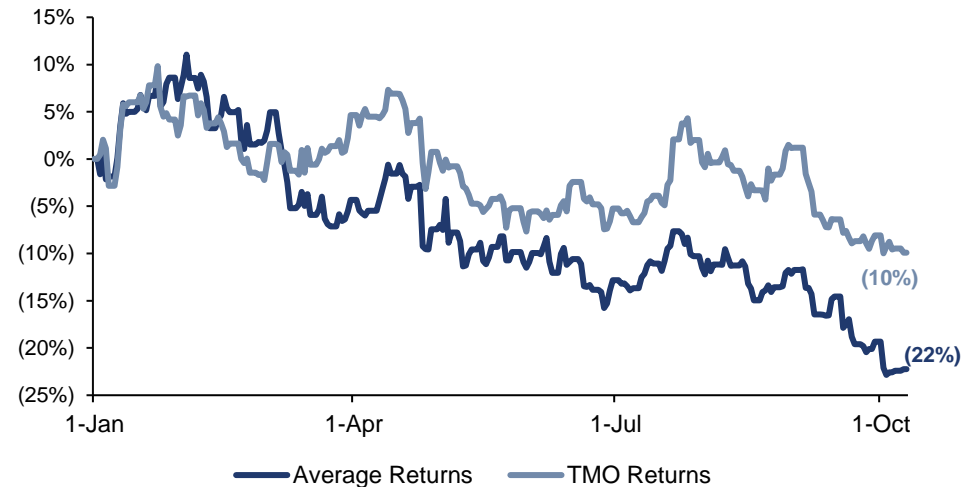
# Investment Thesis: Why Is This A Good Business?

*Positioned better against peers given limited Asia exposure and a diversified business model*

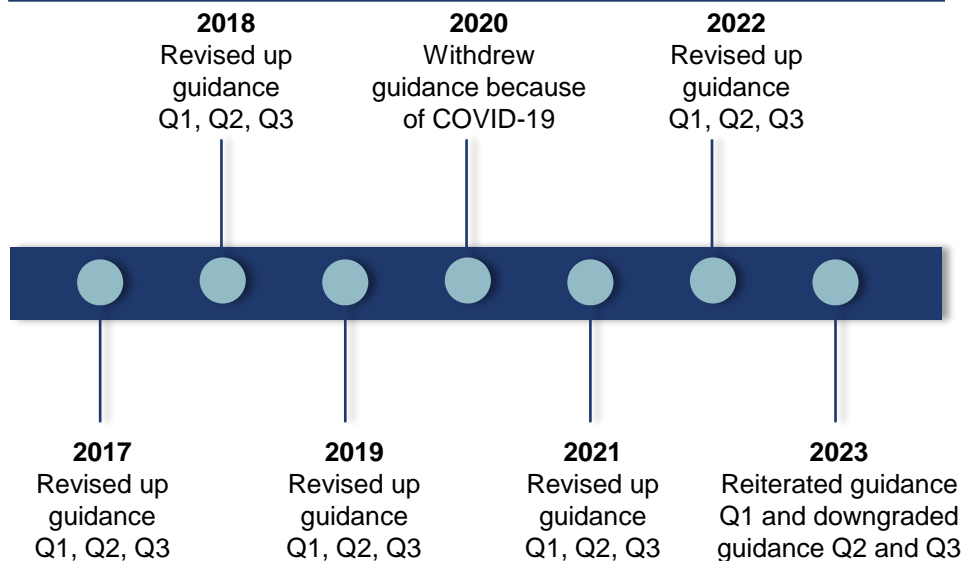
## Industry Headwinds

- TMO has downgraded its guidance for the first time in recent months which is notable given the company hasn't revised down guidance in years
- TMO's scale and diversification have allowed the company to weather downturns better than other industry players
- Investors remain concerned about China exposure, however TMO maintains less exposure to the region against its peers
- TMO remains further insulated from headwinds due to its localization strategy
  - 40-50% of production for the market occurs locally which allows the company to better tailor products to the Chinese market

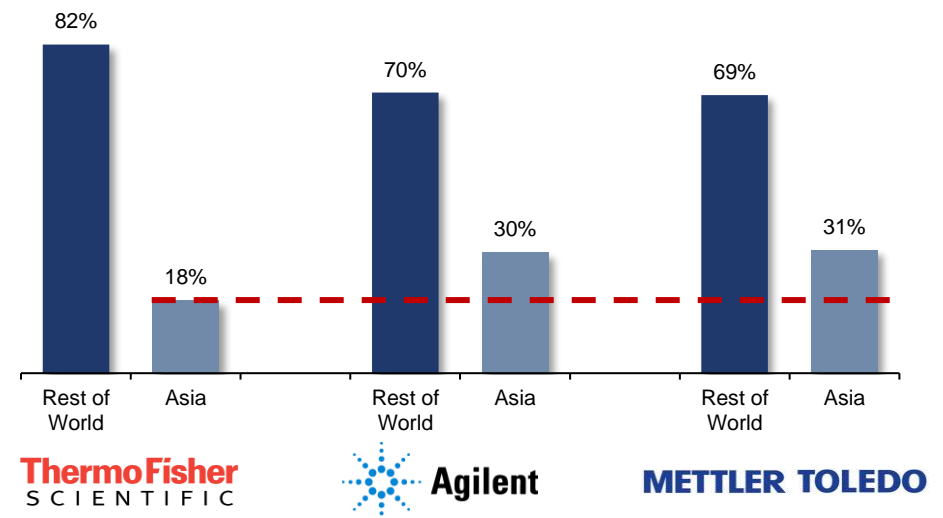
## Industry Performance



## Revenue and EPS Guidance Revisions



## TMO Has Lowest Asia Exposure to Peers



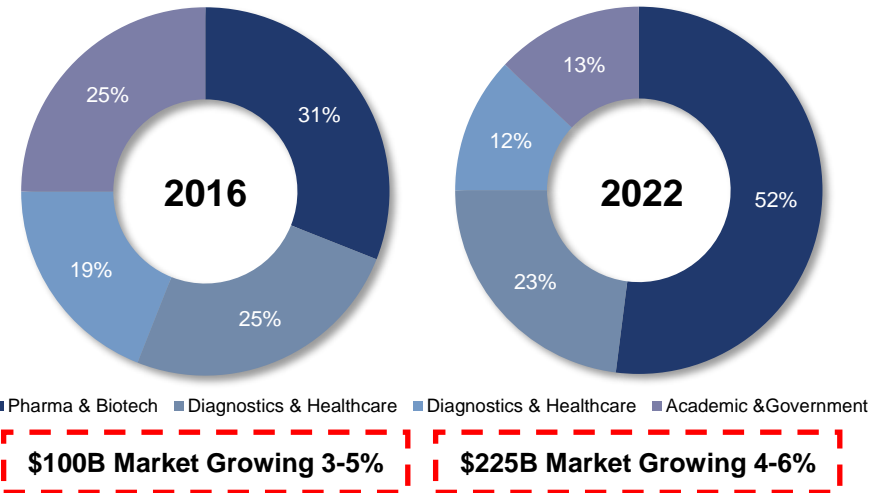
Source(s): Company Filings, S&P Capital IQ, RBC Capital Markets.

## Fears about future M&A prospects after PPD and Patheon Acquisitions

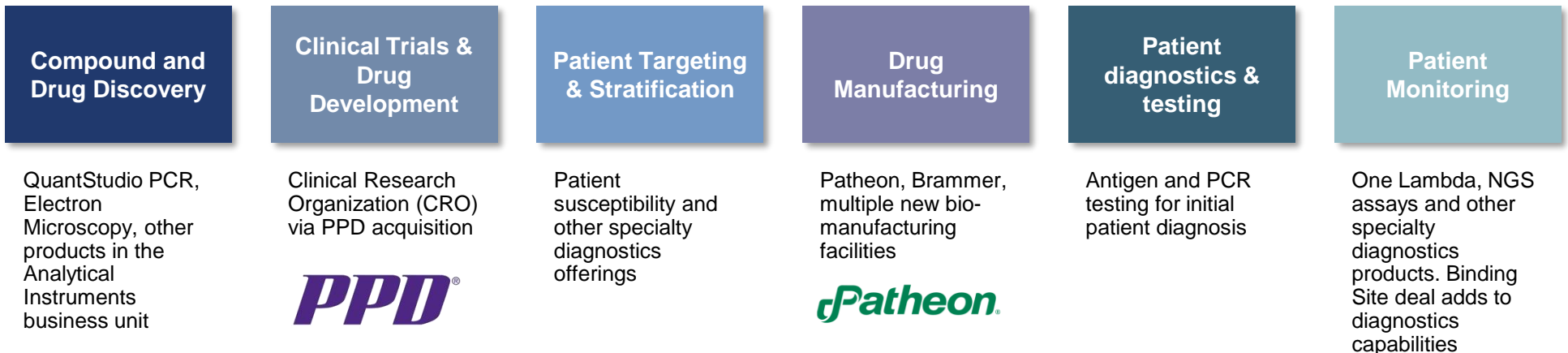
### Fears of M&A Prospects and Biopharma Strategy

- TMO has continued to expand its presence in the biopharma business through its acquisition of contract research organization (CRO), PPD, and contract development & manufacturing organization (CDMO) Patheon
  - These businesses have historically maintained lower margins than previous acquisitions and has sparked worries about TMO's ability to find new acquisition targets
- TMO is well positioned to capitalize on this growing segment given its comprehensive offerings that can support developments end to end
- Increasing demand for clients to have fewer suppliers and require better efficiency/costs management which further drives TMO's value proposition
  - TMO is better positioned to capitalize on this trend, having the widest portfolio-breadth among vendors

### Chasing More Attractive End Markets



### Expanding the One-Stop Shop Offerings for BioPharma





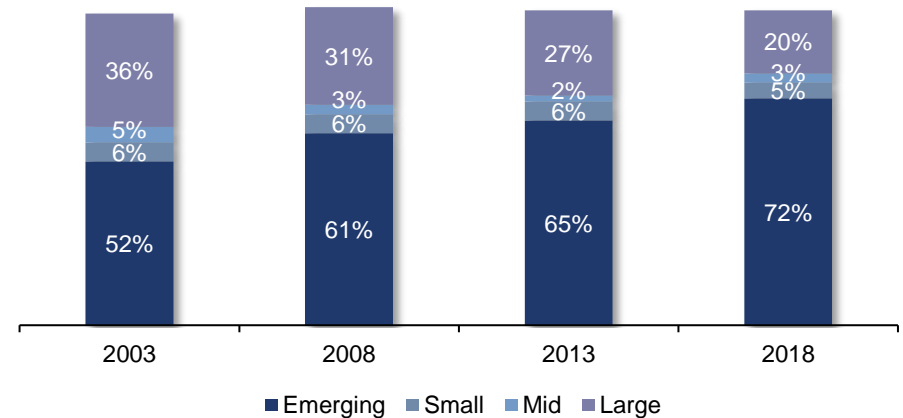
# Investment Thesis: What Is The Market Missing?

*Shift to BioPharma connotes compelling growth opportunity*

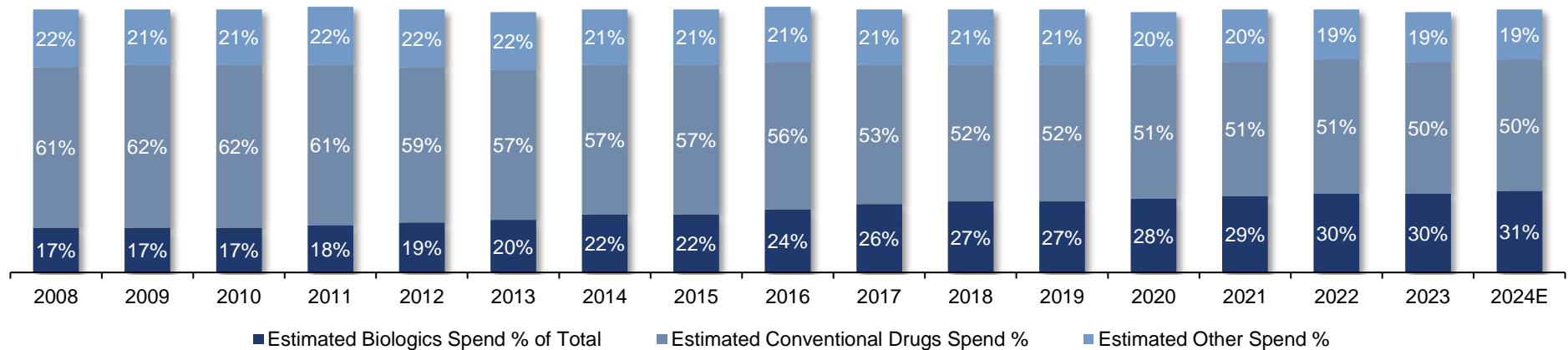
## BioPharma is a Growing Opportunity

- Strong R&D Pipeline within BioPharma
  - Sales of biologics are expected to continue growing as manufacturers focus on developing more complex drugs
  - With increasingly larger molecules and drugs being developed in the market, spending is expected to continue growing due to increased complexity
- Increasing opportunity with small to mid-sized biopharma companies since they are growing significantly faster than the top 20 global BioPharma companies
  - Companies today are better funded and have more active R&D pipelines which presents opportunity for TMO

## Percentage of Late-Stage Pipeline



## Biologics Represents Rising Proportion of Pharmaceutical Sales





# The Bear Case (What Could Go Wrong?)

## Manageable risk from both M&A strategy and rising interest rates

### Inability to Execute on M&A strategy

- Risk of overpaying for an acquisition and overleveraging the company
- Failing to properly integrate and realize cost and revenue synergies
- Inability to find and structure transactions to grow business
  - ❑ Failed to acquire Qiagen for \$12.5 billion
- **Mitigation:** TMO and management have a proven track record of delivering on acquisitions
  - ❑ Company remains confident in being able to deliver value through M&A and realize synergies given its existing integration frameworks and prior experience

### Rising Interest Rates

- Rising debt servicing costs coupled with normalizing margins worsen debt service ratios
  - ❑ Potential to slow down or limit M&A activity with reduced financing capacity to fund acquisitions
- **Mitigation:** The company continues to be able to raise debt at attractive rates
  - ❑ 14-Nov-22, Senior Secured Notes, ~\$530m, 3.2% interest due 21-Jan-26
  - ❑ 07-Aug-23, Senior Secured Notes, \$600mm, 4.93% interest due 10-Aug-26

### Additional Risks

- Given its size, TMO's largest customers are also significant competitors and changes in competitive dynamics or discontinuation of these relationships may affect performance
  - ❑ In addition, it manufactures products that compete directly with products that it sources from third-party suppliers
- Risk of increased competition from leading players such as Danaher and Agilent Technologies, if competition eclipses TMO with more technologically advanced products, market share can be lost
  - ❑ TMO remains focused on R&D and expanding its capabilities through M&A, which will help to mitigate the risk of significant market share changes

### Upcoming Maturing Securities

Debt	Maturity Date	Amount (\$M)
Senior Unsecured	Oct-18-2024	2,500.0
Senior Unsecured	Sep-12-2024	1,061.6
Senior Unsecured	Apr-15-2025	679.4
Senior Unsecured	Mar-01-2025	849.3
Senior Unsecured	Nov-18-2025	583.9

## Management aligned with shareholders and long-term value creation

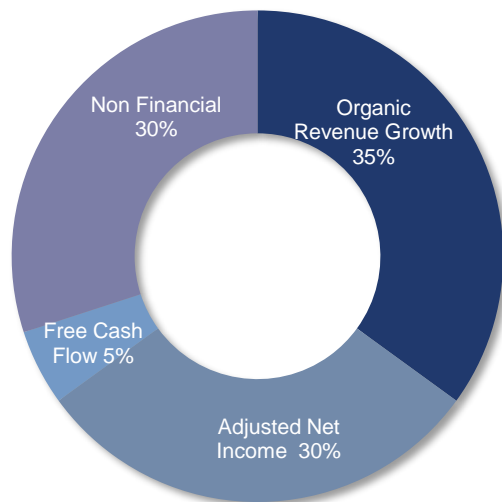
### Board Composition

- Board is broken down into 5 committees: Audit, Compensation, Nominating & Corporate Governance, Strategy & Finance, and Science & Technology
  - Audit, Compensation, Nominating & Corporate Governance consist of entirely independent board members
  - Strategy & Finance, Science & Technology consist of 2/5 independent and 1/3 independent respectively
- 8 out of 11 Board members are independent
  - Audit, Compensation, Nominating & Corporate Governance consist of entirely independent board members
  - Strategy & Finance, Science & Technology consist of 2/5 independent and 1/3 independent respectively
- Average 8.8 years tenure on board. High: 17 years, Low: 1 year
- Any director who reaches the age of 72 retires from the board at the end of their term
  - 5 new directors and 5 retired directors since 2017

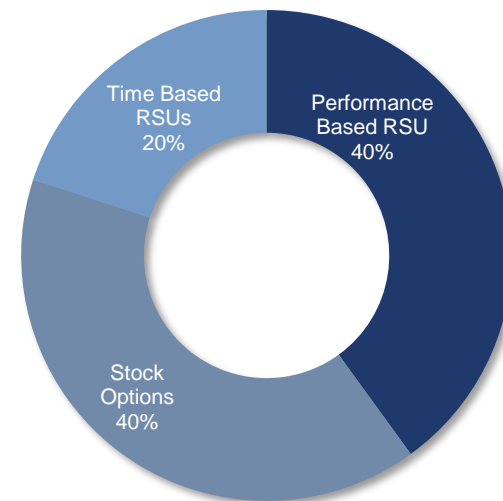
### Management Compensation

- Fixed base salary: 9% of TC for CEO, 16% for NEO.
  - Reviewed annually, accounts for responsibility, tenure, performance
- Cash Bonus: 18% of TC for CEO, 16% for NEO
  - Based on performance goals tied 70% to financial metrics (top line growth, FCF, Adjusted Net Income), 30% to other metrics such as ESG
- Long term incentives: 73% of TC for CEO, 68% for NEO
  - Performance Based RSUs rewarding financial performance
  - Stock Options rewarding stock price appreciation
  - Time Based RSUs rewarding retention

### Performance Metrics



### 2022 Equity Reward Mix



## Strong ESG initiatives alongside management team aligned with shareholders

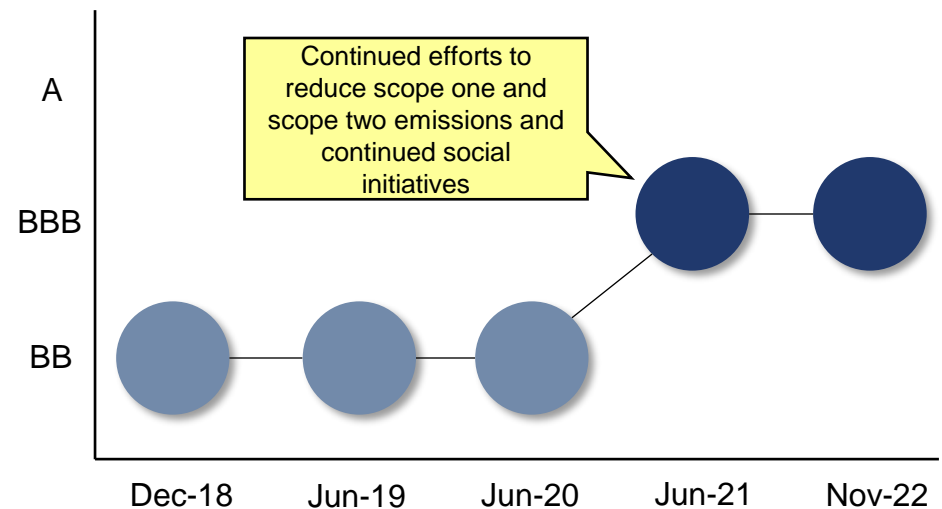
### Environmental Responsibility

- “Our Mission to enable our customers to make the world healthier, cleaner, and safer inspires our 125,000 colleagues every day. We are proud of the progress we are making across our CSR commitments and ESG priorities and we’re excited about the opportunities ahead to continue making a positive impact.”  
- Marc N. Casper, President & CEO
- Progressed the company’s net-zero emissions goals—approved by the Science Based Targets initiative (SBTi)—for Scopes 1, 2, and 3; achieving a 25% reduction in Scopes 1 and 2 compared to 2018; reaching fossil fuel-free status at 20 sites; and powering 150 sites with renewable electricity.
- Expanded its Design for Sustainability program to accelerate the integration of environmental considerations in product innovation, furthering a long-standing colleague-driven commitment to deliver new solutions that help customers reach their business and sustainability goals.
- Delivered on the company’s commitment to climate and nature by introducing near-term targets aimed at addressing water scarcity and reducing waste.

### Social Responsibility

- Reached more than 89,500 students through global programming to advance STEM education access and equity, completed a record number of community engagement events resulting in over 120,000 colleague volunteer hours, and launched the Thermo Fisher Scientific Junior Innovators Challenge, the premier middle school STEM competition in the U.S.
- Advanced global health equity in more than 100 low- and middle-income countries and developed public-private partnerships to save more lives by making a positive impact in the management of infectious diseases like HIV/AIDS.

### MSCI ESG Rating History



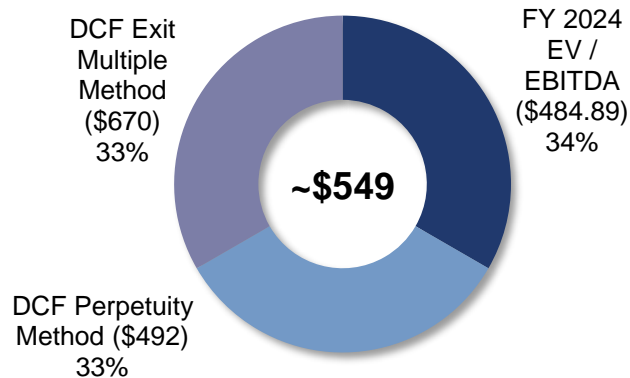
# Valuation Summary

## Football Field

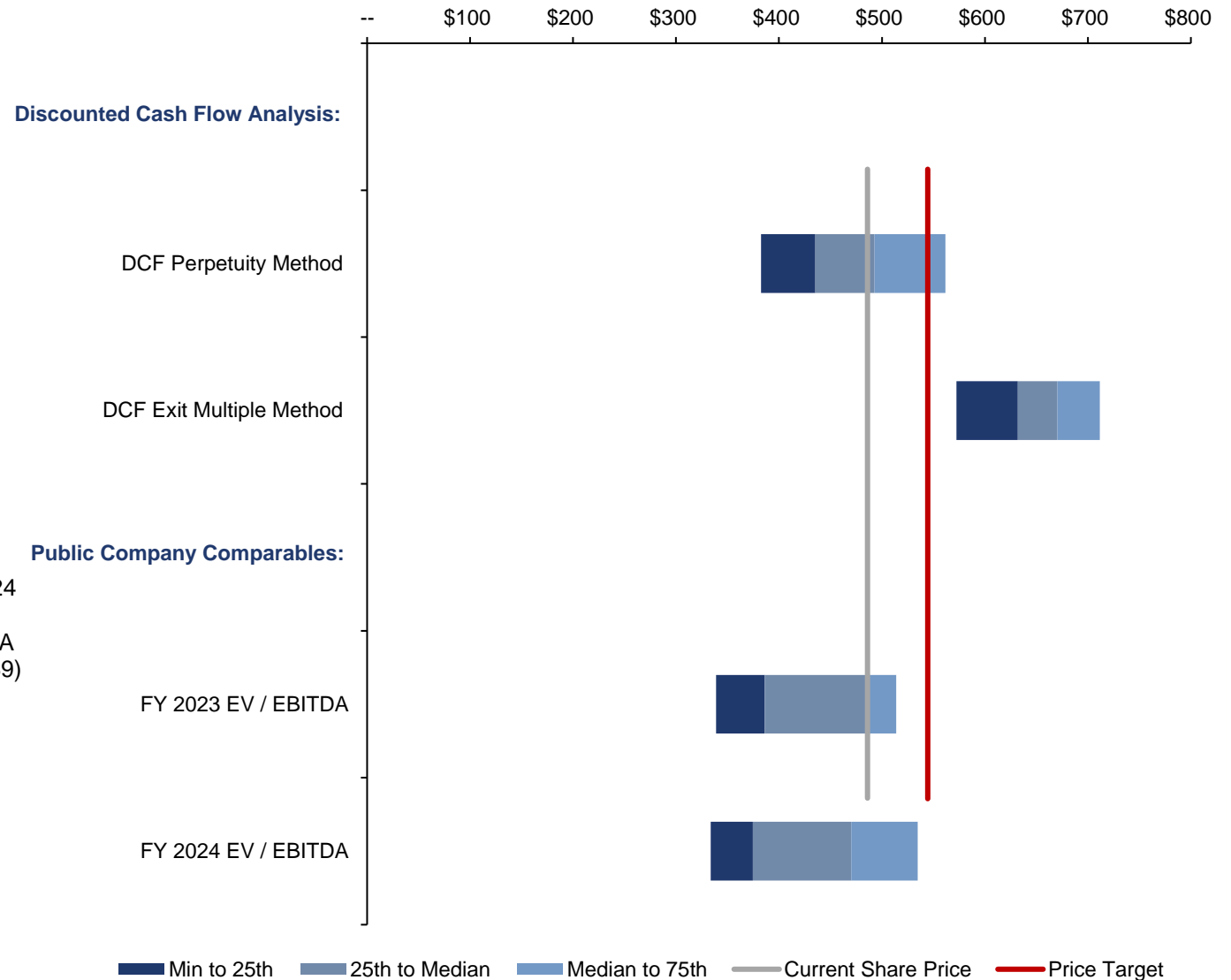
We recommend YUSIF **BUY** Thermo Fisher Scientific with an implied upside of **~10.7%**

### Results and Weighting

- **Current Price:** \$496.13
- **Target Price:** ~\$549.32
- **Implied Upside:** ~10.7%



### Football Field Valuation Summary



# Discounted Cash Flow Analysis

## Intrinsic Valuation

Discounted Cash Flow Analysis (In \$ Millions)	Historicals						Projections							
	2020A	2021A	2022A	Q1'23A	Q2'23A	Q3'23A	Q4'23E	2023E	2024E	2025E	2026E	2027E	2028E	2029E
<b>Revenue:</b>														
Life Sciences Solutions	12,168.0	15,631.0	13,532.0	2,612.0	2,463.0	2,433.0	2,271.0	9,779.0	8,814.0	8,902.0	9,436.1	10,096.6	10,904.4	11,667.7
Analytical Instruments	5,124.0	6,069.0	6,624.0	1,723.0	1,749.0	1,754.0	2,039.0	7,265.0	7,444.0	7,891.0	8,601.2	9,461.3	10,312.8	11,137.9
Specialty Diagnostics	5,343.0	5,659.0	4,763.0	1,108.0	1,109.0	1,083.0	1,142.0	4,442.0	4,867.0	5,061.0	5,314.1	5,553.2	5,775.3	6,006.3
Laboratory Products and Biopharma Services	12,245.0	14,862.0	22,511.0	5,763.0	5,831.0	5,728.0	5,713.0	23,035.0	23,383.0	24,786.0	26,149.2	27,456.7	28,692.2	29,839.9
Eliminations	(2,662.0)	(3,010.0)	(2,515.0)	(496.0)	(465.0)	(424.0)	(447.0)	(1,832.0)	(1,780.0)	(1,729.5)	(1,680.4)	(1,632.7)	(1,586.3)	(1,541.3)
<b>Total Revenue</b>	<b>32,218.0</b>	<b>39,211.0</b>	<b>44,915.0</b>	<b>10,710.0</b>	<b>10,687.0</b>	<b>10,574.0</b>	<b>10,718.0</b>	<b>42,689.0</b>	<b>42,728.0</b>	<b>44,910.5</b>	<b>47,820.2</b>	<b>50,935.1</b>	<b>54,098.4</b>	<b>57,110.5</b>
% Growth		21.7%	14.5%	(9.4%)	(2.6%)	(1.0%)	(6.4%)	(5.0%)	0.1%	5.1%	6.5%	6.5%	6.2%	5.6%
Cost of Goods Sold	(16,214.0)	(19,573.0)	(25,917.0)	(6,539.0)	(6,429.0)	(6,253.0)	(6,295.4)	(25,516.4)	(24,898.8)	(25,496.9)	(26,431.5)	(27,516.6)	(28,549.2)	(29,424.9)
<b>Gross Profit</b>	<b>16,004.0</b>	<b>19,638.0</b>	<b>18,998.0</b>	<b>4,171.0</b>	<b>4,258.0</b>	<b>4,321.0</b>	<b>4,422.6</b>	<b>17,172.6</b>	<b>17,829.2</b>	<b>19,413.6</b>	<b>21,388.7</b>	<b>23,418.6</b>	<b>25,549.2</b>	<b>27,685.6</b>
Gross Profit Margin	49.7%	50.1%	42.3%	38.9%	39.8%	40.9%	41.3%	40.2%	41.7%	43.2%	44.7%	46.0%	47.2%	48.5%
<b>Total Other Operating Expenses</b>	<b>(8,137.0)</b>	<b>(9,266.0)</b>	<b>(10,411.0)</b>	<b>(2,457.0)</b>	<b>(2,494.0)</b>	<b>(2,372.0)</b>	<b>(2,468.5)</b>	<b>(9,791.5)</b>	<b>(9,642.7)</b>	<b>(10,023.0)</b>	<b>(10,552.8)</b>	<b>(11,112.9)</b>	<b>(11,667.8)</b>	<b>(12,174.6)</b>
<b>Operating Income</b>	<b>7,867.0</b>	<b>10,372.0</b>	<b>8,587.0</b>	<b>1,714.0</b>	<b>1,764.0</b>	<b>1,949.0</b>	<b>1,954.1</b>	<b>7,381.1</b>	<b>8,186.5</b>	<b>9,390.6</b>	<b>10,835.9</b>	<b>12,305.7</b>	<b>13,881.4</b>	<b>15,511.0</b>
EBIT Margin	24.4%	26.5%	19.1%	16.0%	16.5%	18.4%	18.2%	17.3%	19.2%	20.9%	22.7%	24.2%	25.7%	27.2%
Income Tax	(850.0)	(1,109.0)	(703.0)	(46.0)	(52.0)	(53.0)	(195.4)	(346.4)	(818.7)	(939.1)	(1,083.6)	(1,230.6)	(1,388.1)	(1,551.1)
<b>NOPAT</b>	<b>7,017.0</b>	<b>9,263.0</b>	<b>7,884.0</b>	<b>1,668.0</b>	<b>1,712.0</b>	<b>1,896.0</b>	<b>1,758.7</b>	<b>7,034.7</b>	<b>7,367.9</b>	<b>8,451.5</b>	<b>9,752.3</b>	<b>11,075.1</b>	<b>12,493.3</b>	<b>13,959.9</b>
Add: Depreciation and Amortization	2,325.0	2,592.0	3,381.0	859.0	855.0	853.0	819.2	3,386.2	3,265.9	3,432.7	3,655.1	3,893.2	4,135.0	4,365.2
% of Revenue	7.2%	6.6%	7.5%	8.0%	8.0%	8.1%	7.6%	7.6%	7.6%	7.6%	7.6%	7.6%	7.6%	7.6%
Less: Capital Expenditures	(1,474.0)	(2,523.0)	(2,243.0)	(458.0)	(284.0)	(332.0)	(385.8)	(1,536.8)	(2,538.7)	(1,616.8)	(1,721.5)	(1,833.7)	(1,947.5)	(2,056.0)
% of Revenue	(4.6%)	(6.4%)	(5.0%)	(4.3%)	(2.7%)	(3.1%)	(3.6%)	(3.6%)	(5.94%)	(3.6%)	(3.6%)	(3.6%)	(3.6%)	(3.6%)
Add / (Less): Change in Net Working Capital		(7,663.0)	(529.0)	(1,480.0)	(568.0)	53.0	1,174.5	(820.5)	867.0	(191.8)	(584.8)	(638.6)	(648.6)	(617.8)
% of Change of Revenue		(109.6%)	(9.3%)	133.6%	200.7%	(51.5%)	(160.5%)	36.9%	2.7%	(8.8%)	(20.1%)	(20.5%)	(20.5%)	(20.5%)
<b>Unlevered Free Cash Flow</b>	<b>7,868.0</b>	<b>1,669.0</b>	<b>8,493.0</b>	<b>589.0</b>	<b>1,715.0</b>	<b>2,470.0</b>	<b>3,366.6</b>	<b>8,063.6</b>	<b>8,962.1</b>	<b>10,075.6</b>	<b>11,101.1</b>	<b>12,496.0</b>	<b>14,032.1</b>	<b>15,651.3</b>
% Growth							20.3%	(5.1%)	na	25.0%	10.2%	12.6%	12.3%	11.5%
<b>PV of Unlevered Free Cash Flow</b>							<b>3,302.4</b>	<b>7,324.1</b>	<b>8,623.8</b>	<b>8,473.6</b>	<b>8,644.4</b>	<b>9,009.9</b>	<b>9,368.0</b>	<b>9,675.0</b>

Perpetuity Growth Method	
Cumulative PV of UFCF	55,797.5
% of Enterprise Value	25.3%
<b>Terminal Value</b>	
Final Year UFCF	15,651.3
Perpetuity Growth Rate	2.0%
Terminal Value	266,071.6
PV of Terminal Value	164,475.1
% of Enterprise Value	74.7%
<b>Total Enterprise Value</b>	<b>220,272.5</b>
Plus: Cash	3,133.0
Less: Total Debt	(32,140.0)
<b>Total Equity Value</b>	<b>191,102.5</b>
Diluted Shares Outstanding	387.9
<b>Implied Share Price</b>	<b>\$492.64</b>
Current Share Price	\$496.13
<b>Implied Margin of Safety</b>	<b>(0.7%)</b>

Exit Multiple Method	
Cumulative PV of UFCF	55,797.5
% of Enterprise Value	19.3%
<b>Terminal Value</b>	
Final Year EBITDA	19,876.2
Exit EBITDA Multiple	19.0x
Terminal Value	377,646.9
PV of Terminal Value	233,446.5
% of Enterprise Value	80.7%
<b>Total Enterprise Value</b>	<b>289,244.0</b>
Plus: Cash	3,133.0
Less: Total Debt	(32,140.0)
<b>Total Equity Value</b>	<b>260,074.0</b>
Diluted Shares Outstanding	387.9
<b>Implied Share Price</b>	<b>\$670.44</b>
Current Share Price	\$496.13
<b>Implied Margin of Safety</b>	<b>35.1%</b>

## Commentary

- Company will continue to face macro headwinds and sales slowdown normalizing from COVID-19
- Gross margins expected to compress as company slows down sales due to COVID-19 normalization.
- Model is based on forecasts prior to acquisitions
- Expansion of gross margins over time with synergy realizations from prior M&A, and fixed cost leverage (scale).
- R&D and CapEx expected to remain in line with historic figures

# Discounted Cash Flow Analysis

## Sensitivity Analysis

		Perpetuity Growth Rate				
		1.5%	1.8%	2.0%	2.3%	2.5%
Discount Rate	7.0%	\$561.49	\$585.98	\$612.92	\$642.69	\$675.77
	7.5%	\$505.45	\$525.45	\$547.27	\$571.17	\$597.46
	8.0%	\$458.10	\$474.68	<b>\$492.64</b>	\$512.16	\$533.45
	8.5%	\$417.58	\$431.49	\$446.47	\$462.65	\$480.18
	9.0%	\$382.51	\$394.31	\$406.95	\$420.53	\$435.15

		Exit EBITDA Multiple				
		17.0x	18.0x	19.0x	20.0x	21.0x
Discount Rate	7.0%	\$644.35	\$677.92	\$711.49	\$745.06	\$778.63
	7.5%	\$625.41	\$658.02	\$690.63	\$723.23	\$755.84
	8.0%	\$607.09	\$638.76	<b>\$670.44</b>	\$702.11	\$733.78
	8.5%	\$589.35	\$620.12	\$650.90	\$681.67	\$712.44
	9.0%	\$572.18	\$602.08	\$631.98	\$661.88	\$691.78

		Perpetuity Growth Rate				
		1.5%	1.8%	2.0%	2.3%	2.5%
Discount Rate	7.0%	13.2%	18.1%	23.5%	29.5%	36.2%
	7.5%	1.9%	5.9%	10.3%	15.1%	20.4%
	8.0%	(7.7%)	(4.3%)	<b>(0.7%)</b>	3.2%	7.5%
	8.5%	(15.8%)	(13.0%)	(10.0%)	(6.7%)	(3.2%)
	9.0%	(22.9%)	(20.5%)	(18.0%)	(15.2%)	(12.3%)

		Exit EBITDA Multiple				
		17.0x	18.0x	19.0x	20.0x	21.0x
Discount Rate	7.0%	29.9%	36.6%	43.4%	50.2%	56.9%
	7.5%	26.1%	32.6%	39.2%	45.8%	52.3%
	8.0%	22.4%	28.7%	<b>35.1%</b>	41.5%	47.9%
	8.5%	18.8%	25.0%	31.2%	37.4%	43.6%
	9.0%	15.3%	21.4%	27.4%	33.4%	39.4%

# Comparable Company Analysis

## TMO trades at a premium compared to market peers

Company Name	Equity	Enterprise	EV / Revenue			EV / EBITDA			P / E			Leverage
	Value (\$M)	Value (\$M)	LTM	2023E	2024E	LTM	2023E	2024E	LTM	2023E	2024E	Debt/EBITDA
Danaher Corporation	\$166,437	\$177,328	6.0x	6.6x	7.4x	19.1x	21.6x	22.5x	28.1x	27.1x	28.1x	2.4x
Agilent Technologies, Inc.	\$37,669	\$38,814	5.7x	5.8x	5.6x	23.9x	20.0x	18.7x	30.4x	24.2x	22.7x	1.7x
Revvity, Inc.	\$11,265	\$13,849	5.0x	5.1x	5.0x	15.6x	16.1x	15.8x	15.2x	19.8x	19.9x	4.3x
Illumina, Inc.	\$17,435	\$18,774	4.2x	4.2x	4.0x	59.2x	45.9x	34.8x	nmf	nmf	nmf	5.5x
Mettler-Toledo International Inc.	\$24,104	\$26,143	6.7x	6.8x	6.9x	21.0x	21.3x	21.2x	27.7x	28.0x	28.7x	1.6x
Becton, Dickinson and Company	\$68,911	\$83,897	4.3x	4.3x	4.1x	16.6x	14.9x	14.6x	46.4x	20.5x	17.7x	3.2x
Maximum	\$166,437	\$177,328	6.7x	6.8x	7.4x	59.2x	45.9x	34.8x	46.4x	28.0x	28.7x	5.5x
75th Percentile	\$61,101	\$72,626	5.9x	6.4x	6.5x	23.2x	21.6x	22.1x	30.4x	27.1x	28.1x	4.0x
Median	\$30,886	\$32,478	5.3x	5.5x	5.3x	20.1x	20.6x	19.9x	28.1x	24.2x	22.7x	2.8x
Average	\$54,303	\$59,801	5.3x	5.5x	5.5x	25.9x	23.3x	21.2x	29.6x	23.9x	23.4x	3.1x
25th Percentile	\$19,102	\$20,616	4.5x	4.5x	4.3x	17.3x	17.1x	16.5x	27.7x	20.5x	19.9x	1.9x
Minimum	\$11,265	\$13,849	4.2x	4.2x	4.0x	15.6x	14.9x	14.6x	15.2x	19.8x	17.7x	1.6x

Thermo Fisher Scientific Inc.	\$192,457	\$221,878	5.1x	5.2x	5.2x	20.5x	20.5x	20.3x	32.4x	23.0x	22.8x	3.1x
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Company Name	Revenue Growth		EBITDA Growth		Net Income Growth		EBITDA Margin			Return Metrics (LTM)		
	2023E	2024E	2023E	2024E	2023E	2024E	LTM	2023E	2024E	ROIC	ROA	ROE
Danaher Corporation	(15.0%)	(10.2%)	(25.2%)	(3.7%)	(14.7%)	(3.8%)	31.4%	30.6%	32.8%	7.9%	5.2%	11.9%
Agilent Technologies, Inc.	(3.8%)	4.2%	(3.9%)	7.0%	17.9%	6.4%	23.7%	29.2%	30.0%	13.4%	7.9%	22.2%
Revvity, Inc.	(17.7%)	1.5%	(33.3%)	2.2%	(0.2%)	(0.1%)	31.7%	31.5%	31.7%	3.3%	2.1%	2.9%
Illumina, Inc.	(2.9%)	5.9%	(28.6%)	32.1%	102.4%	53.1%	7.1%	9.2%	11.5%	(1.2%)	(0.7%)	(17.8%)
Mettler-Toledo International Inc.	(2.0%)	(0.8%)	0.8%	0.8%	(1.3%)	(2.6%)	31.8%	31.9%	32.4%	nmf	22.2%	na
Becton, Dickinson and Company	4.2%	5.2%	17.9%	2.3%	108.9%	15.8%	26.0%	28.8%	28.0%	nmf	3.3%	6.0%
Maximum	4.2%	5.9%	17.9%	32.1%	108.9%	53.1%	31.8%	31.9%	32.8%	13.4%	22.2%	22.2%
75th Percentile	(2.3%)	4.9%	(0.4%)	5.8%	81.3%	13.4%	31.6%	31.3%	32.3%	9.3%	7.2%	11.9%
Median	(3.4%)	2.8%	(14.6%)	2.3%	8.8%	3.1%	28.7%	29.9%	30.8%	5.6%	4.2%	6.0%
Average	(6.2%)	1.0%	(12.1%)	6.8%	35.5%	11.5%	25.3%	26.9%	27.7%	5.9%	6.7%	5.0%
25th Percentile	(12.2%)	(0.2%)	(27.8%)	1.1%	(1.0%)	(2.0%)	24.3%	28.9%	28.5%	2.2%	2.4%	2.9%
Minimum	(17.7%)	(10.2%)	(33.3%)	(3.7%)	(14.7%)	(3.8%)	7.1%	9.2%	11.5%	(1.2%)	(0.7%)	(17.8%)

Thermo Fisher Scientific Inc.	(4.8%)	0.6%	(9.7%)	1.0%	20.3%	1.0%	25.0%	25.3%	25.4%	7.8%	4.9%	13.3%
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## Commentary

- Danaher remains the be closest competitor to TMO however a variety of competitors also compete against the company within similar categories and similar end markets
- TMO continues to trade at a premium against its peers and has ROIC performance in-line with peers

*TMO is a quality business that is currently trading at a fair price*

## Final Thoughts

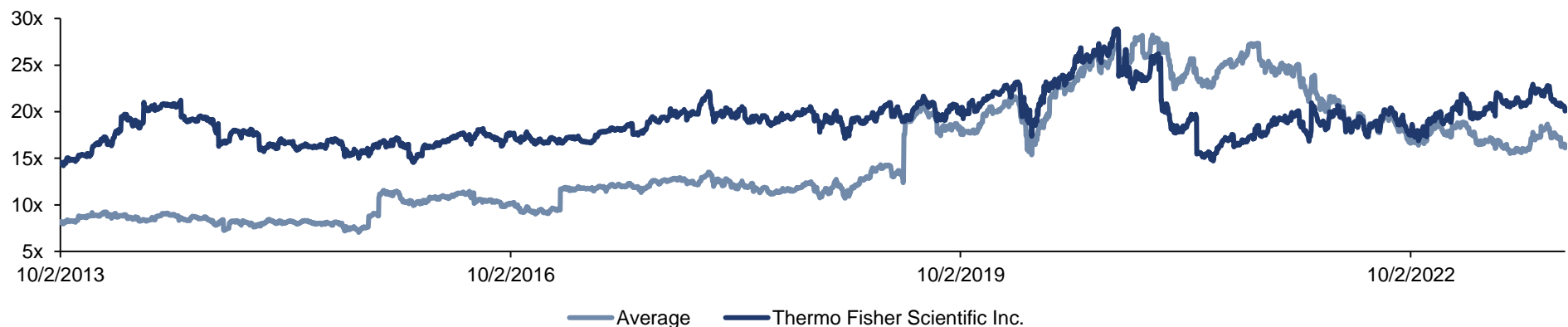
### Investment Thesis

- TMO has performed better than many industry peers given its diversified portfolio with strong recurring revenue which stabilizes cash flows
- We have continued confidence that TMO can capitalize on its position as the market leader
  - We believe that the Company can continue to grow both organically (above industry growth of 4-6%) and inorganically through strategic tuck-in acquisitions (although not built into our model)

### Recommendation to YUSIF

- We recommend that YUSIF should **BUY** TMO
- TMO is a company that continues to have strong growth prospects and has proven its resiliency having faced recent macro headwinds
  - We think that TMO can be a strong replacement for Baxter in the portfolio and be an anchor in our healthcare allocation
- The company for most of its history has never been “cheap” or traded at a significant discount to peers. We think that YUSIF has an opportunity to buy a high-quality, compounding business at a fair price

## 10-Year Historical LTM EV / EBITDA Multiple



*We recommend that YUSIF should buy **TMO** with an implied upside of ~10.7%*



# Appendix

# Discounted Cash Flow

## Assumptions

Assumptions										
(In \$ Millions)	2020A	2021A	2022A	2023E	2024E	2025E	2026E	2027E	2028E	2029E
<b>Life Sciences Solutions Growth</b>		28.5%	(13.4%)	(27.7%)	(9.9%)	1.0%	6.0%	7.0%	8.0%	7.0%
Bull Case				(27.7%)	(7.9%)	3.0%	8.0%	9.0%	10.0%	9.0%
Base Case				(27.7%)	(9.9%)	1.0%	6.0%	7.0%	8.0%	7.0%
Bear Case				(27.7%)	(11.9%)	(1.0%)	4.0%	5.0%	6.0%	5.0%
<b>Analytical Instruments Growth</b>		18.4%	9.1%	9.7%	2.5%	6.0%	9.0%	10.0%	9.0%	8.0%
Bull Case				9.7%	4.5%	8.0%	11.0%	12.0%	11.0%	10.0%
Base Case				9.7%	2.5%	6.0%	9.0%	10.0%	9.0%	8.0%
Bear Case				9.7%	1.5%	5.0%	8.0%	9.0%	8.0%	7.0%
<b>Specialty Diagnostics</b>		13.1%	(16.4%)	(6.7%)	9.6%	4.0%	5.0%	4.5%	4.0%	4.0%
Bull Case				(6.7%)	11.6%	6.0%	7.0%	6.5%	6.0%	6.0%
Base Case				(6.7%)	9.6%	4.0%	5.0%	4.5%	4.0%	4.0%
Bear Case				(6.7%)	8.1%	2.5%	3.5%	3.0%	2.5%	2.5%
<b>Laboratory Products and Biopharma Services</b>		21.4%	51.5%	2.3%	1.5%	6.0%	5.5%	5.0%	4.5%	4.0%
Bull Case				2.3%	3.5%	8.0%	7.5%	7.0%	6.5%	6.0%
Base Case				2.3%	1.5%	6.0%	5.5%	5.0%	4.5%	4.0%
Bear Case				2.3%	0.5%	5.0%	4.5%	4.0%	3.5%	3.0%
<b>Eliminations</b>		13.1%	(16.4%)	(27.2%)	(2.8%)	(2.8%)	(2.8%)	(2.8%)	(2.8%)	(2.8%)
Bull Case				(27.2%)	(2.8%)	(2.8%)	(2.8%)	(2.8%)	(2.8%)	(2.8%)
Base Case				(27.2%)	(2.8%)	(2.8%)	(2.8%)	(2.8%)	(2.8%)	(2.8%)
Bear Case				(27.2%)	(2.8%)	(2.8%)	(2.8%)	(2.8%)	(2.8%)	(2.8%)
<b>Cost of Goods Sold</b>	(50.3%)	(49.9%)	(57.7%)	(59.8%)	(58.3%)	(56.8%)	(55.3%)	(54.0%)	(52.8%)	(51.5%)
Bull Case				(59.8%)	(56.3%)	(54.8%)	(53.3%)	(52.0%)	(50.8%)	(49.5%)
Base Case				(59.8%)	(58.3%)	(56.8%)	(55.3%)	(54.0%)	(52.8%)	(51.5%)
Bear Case				(59.8%)	(59.3%)	(57.8%)	(56.3%)	(55.0%)	(53.8%)	(52.5%)
<b>Selling General &amp; Admin Exp.</b>	(21.5%)	(20.0%)	(19.9%)	(19.8%)	(19.6%)	(19.3%)	(19.1%)	(18.8%)	(18.6%)	(18.3%)
Bull Case				(19.8%)	(17.6%)	(17.3%)	(17.1%)	(16.8%)	(16.6%)	(16.3%)
Base Case				(19.8%)	(19.6%)	(19.3%)	(19.1%)	(18.8%)	(18.6%)	(18.3%)
Bear Case				(19.8%)	(20.6%)	(20.3%)	(20.1%)	(19.8%)	(19.6%)	(19.3%)
<b>R &amp; D Exp.</b>	(3.7%)	(3.6%)	(3.3%)	(3.1%)	(3.0%)	(3.0%)	(3.0%)	(3.0%)	(3.0%)	(3.0%)
Bull Case				(3.1%)	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Base Case				(3.1%)	(3.0%)	(3.0%)	(3.0%)	(3.0%)	(3.0%)	(3.0%)
Bear Case				(3.1%)	(4.0%)	(4.0%)	(4.0%)	(4.0%)	(4.0%)	(4.0%)

# Discounted Cash Flow Analysis – Bear Case

## Intrinsic Valuation

Discounted Cash Flow Analysis		Historicals					Projections							
(In \$ Millions)	2020A	2021A	2022A	Q1'23A	Q2'23A	Q3'23A	Q4'23E	2023E	2024E	2025E	2026E	2027E	2028E	2029E
<b>Revenue:</b>														
Life Sciences Solutions	12,168.0	15,631.0	13,532.0	2,612.0	2,463.0	2,433.0	2,210.1	9,718.1	8,564.7	8,478.9	8,818.1	9,259.0	9,814.5	10,305.3
Analytical Instruments	5,124.0	6,069.0	6,624.0	1,723.0	1,749.0	1,754.0	2,001.4	7,227.4	7,333.2	7,700.3	8,316.3	9,064.7	9,789.9	10,475.2
Specialty Diagnostics	5,343.0	5,659.0	4,763.0	1,108.0	1,109.0	1,083.0	1,119.7	4,419.7	4,776.3	4,895.0	5,066.3	5,218.3	5,348.8	5,482.5
Laboratory Products and Biopharma Services	12,245.0	14,862.0	22,511.0	5,763.0	5,831.0	5,728.0	5,831.9	23,153.9	23,272.2	24,435.8	25,535.4	26,556.9	27,486.3	28,310.9
Eliminations	(2,662.0)	(3,010.0)	(2,515.0)	(496.0)	(465.0)	(424.0)	(447.0)	(1,832.0)	(1,780.0)	(1,729.5)	(1,680.4)	(1,632.7)	(1,586.3)	(1,541.3)
<b>Total Revenue</b>	<b>32,218.0</b>	<b>39,211.0</b>	<b>44,915.0</b>	<b>10,710.0</b>	<b>10,687.0</b>	<b>10,574.0</b>	<b>10,716.1</b>	<b>42,687.1</b>	<b>42,166.4</b>	<b>43,780.5</b>	<b>46,055.8</b>	<b>48,466.2</b>	<b>50,853.2</b>	<b>53,032.6</b>
% Growth		21.7%	14.5%	(9.4%)	(2.6%)	(1.0%)	(6.4%)	(5.0%)	(1.2%)	3.8%	5.2%	5.2%	4.9%	4.3%
Cost of Goods Sold	(16,214.0)	(19,573.0)	(25,917.0)	(6,539.0)	(6,429.0)	(6,253.0)	(6,508.6)	(25,729.6)	(25,204.9)	(25,513.1)	(26,148.1)	(26,910.8)	(27,600.5)	(28,120.5)
<b>Gross Profit</b>	<b>16,004.0</b>	<b>19,638.0</b>	<b>18,998.0</b>	<b>4,171.0</b>	<b>4,258.0</b>	<b>4,321.0</b>	<b>4,207.5</b>	<b>16,957.5</b>	<b>16,961.5</b>	<b>18,267.5</b>	<b>19,907.7</b>	<b>21,555.4</b>	<b>23,252.7</b>	<b>24,912.1</b>
Gross Profit Margin	49.7%	50.1%	42.3%	38.9%	39.8%	40.9%	39.3%	39.7%	40.2%	41.7%	43.2%	44.5%	45.7%	47.0%
<b>Total Other Operating Expenses</b>	<b>(8,137.0)</b>	<b>(9,266.0)</b>	<b>(10,411.0)</b>	<b>(2,457.0)</b>	<b>(2,494.0)</b>	<b>(2,372.0)</b>	<b>(2,789.6)</b>	<b>(10,112.6)</b>	<b>(10,571.0)</b>	<b>(10,866.2)</b>	<b>(11,315.8)</b>	<b>(11,786.9)</b>	<b>(12,240.2)</b>	<b>(12,632.2)</b>
<b>Operating Income</b>	<b>7,867.0</b>	<b>10,372.0</b>	<b>8,587.0</b>	<b>1,714.0</b>	<b>1,764.0</b>	<b>1,949.0</b>	<b>1,418.0</b>	<b>6,845.0</b>	<b>6,390.5</b>	<b>7,401.3</b>	<b>8,591.9</b>	<b>9,768.6</b>	<b>11,012.5</b>	<b>12,279.9</b>
EBIT Margin	24.4%	26.5%	19.1%	16.0%	16.5%	18.4%	13.2%	16.0%	15.2%	16.9%	18.7%	20.2%	21.7%	23.2%
Income Tax	(850.0)	(1,109.0)	(703.0)	(46.0)	(52.0)	(53.0)	(141.8)	(292.8)	(639.0)	(740.1)	(859.2)	(976.9)	(1,101.2)	(1,228.0)
<b>NOPAT</b>	<b>7,017.0</b>	<b>9,263.0</b>	<b>7,884.0</b>	<b>1,668.0</b>	<b>1,712.0</b>	<b>1,896.0</b>	<b>1,276.2</b>	<b>6,552.2</b>	<b>5,751.4</b>	<b>6,661.1</b>	<b>7,732.7</b>	<b>8,791.7</b>	<b>9,911.2</b>	<b>11,051.9</b>
Add: Depreciation and Amortization	2,325.0	2,592.0	3,381.0	859.0	855.0	853.0	819.1	3,386.1	3,223.0	3,346.3	3,520.2	3,704.5	3,886.9	4,053.5
% of Revenue	7.2%	6.6%	7.5%	8.0%	8.0%	8.1%	7.6%	7.6%	7.6%	7.6%	7.6%	7.6%	7.6%	7.6%
Less: Capital Expenditures	(1,474.0)	(2,523.0)	(2,243.0)	(458.0)	(284.0)	(332.0)	(385.8)	(1,536.7)	(2,538.5)	(1,576.1)	(1,658.0)	(1,744.8)	(1,830.7)	(1,909.2)
% of Revenue	(4.6%)	(6.4%)	(5.0%)	(4.3%)	(2.7%)	(3.1%)	(3.6%)	(3.6%)	(6.02%)	(3.6%)	(3.6%)	(3.6%)	(3.6%)	(3.6%)
Add / (Less): Change in Net Working Capital		(7,663.0)	(529.0)	(1,480.0)	(568.0)	53.0	1,531.0	(464.0)	1,406.1	(37.3)	(440.7)	(479.0)	(474.4)	(433.3)
% of Change of Revenue		(109.6%)	(9.3%)	133.6%	200.7%	(51.5%)	(208.6%)	20.8%	4.5%	(2.3%)	(19.4%)	(19.9%)	(19.9%)	(19.9%)
<b>Unlevered Free Cash Flow</b>	<b>7,868.0</b>	<b>1,669.0</b>	<b>8,493.0</b>	<b>589.0</b>	<b>1,715.0</b>	<b>2,470.0</b>	<b>3,240.5</b>	<b>7,937.5</b>	<b>7,842.0</b>	<b>8,394.0</b>	<b>9,154.3</b>	<b>10,272.4</b>	<b>11,493.0</b>	<b>12,762.9</b>
% Growth							15.8%	(6.5%)	na	5.8%	9.1%	12.2%	11.9%	11.0%
<b>PV of Unlevered Free Cash Flow</b>							<b>3,178.7</b>	<b>7,209.5</b>	<b>7,546.0</b>	<b>7,059.4</b>	<b>7,128.5</b>	<b>7,406.6</b>	<b>7,672.9</b>	<b>7,889.5</b>

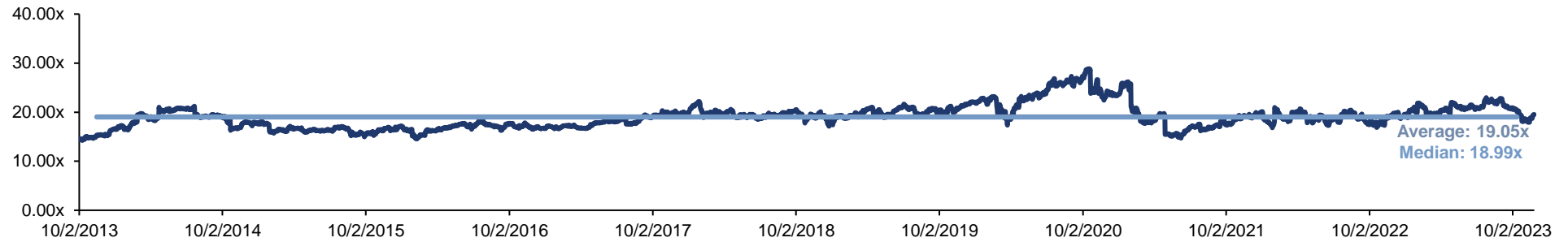
Perpetuity Growth Method		Exit Multiple Method	
Cumulative PV of UFCF	47,545.2	Cumulative PV of UFCF	47,545.2
% of Enterprise Value	26.2%	% of Enterprise Value	22.7%
<b>Terminal Value</b>		<b>Terminal Value</b>	
Final Year UFCF	12,762.9	Final Year EBITDA	16,333.4
Perpetuity Growth Rate	2.0%	Exit EBITDA Multiple	16.0x
Terminal Value	216,969.5	Terminal Value	261,334.4
PV of Terminal Value	134,122.0	PV of Terminal Value	161,546.7
% of Enterprise Value	73.8%	% of Enterprise Value	77.3%
<b>Total Enterprise Value</b>	<b>181,667.2</b>	<b>Total Enterprise Value</b>	<b>209,091.9</b>
Plus: Cash	3,133.0	Plus: Cash	3,133.0
Less: Total Debt	(32,140.0)	Less: Total Debt	(32,140.0)
<b>Total Equity Value</b>	<b>152,497.2</b>	<b>Total Equity Value</b>	<b>179,921.9</b>
Diluted Shares Outstanding	387.9	Diluted Shares Outstanding	387.9
<b>Implied Share Price</b>	<b>\$393.12</b>	<b>Implied Share Price</b>	<b>\$463.82</b>
Current Share Price	\$496.13	Current Share Price	\$496.13
<b>Implied Margin of Safety</b>	<b>(20.8%)</b>	<b>Implied Margin of Safety</b>	<b>(6.5%)</b>

## Commentary

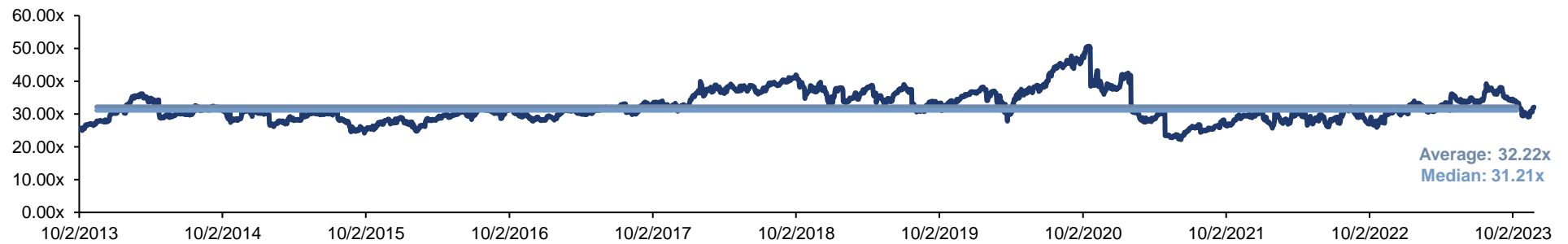
- Rebound from COVID-19 normalization and macro headwinds takes longer than expected
- Fewer synergies realized from transactions slowing down margin expansion

## TMO trades at historic multiples

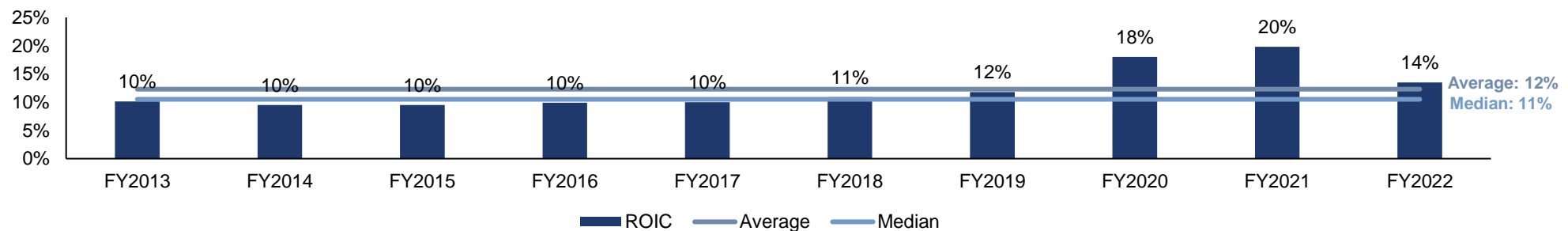
### Enterprise Value to EBTIDA Multiple



### Price to Earnings Multiple



### Adjusted Return on Invested Capital<sup>(1)</sup>



Source(s): Company Filings, S&P Capital IQ

(1) Adjusted ROIC is equal to TTM adjusted net income excluding net interest expense, net of tax benefit therefrom, divided by trailing five quarters average invested capital

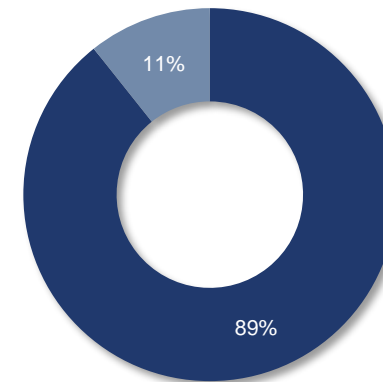
# Thermo Fisher Scientific Ownership

*Institutional investors hold the majority of shares outstanding*

## Major Owners

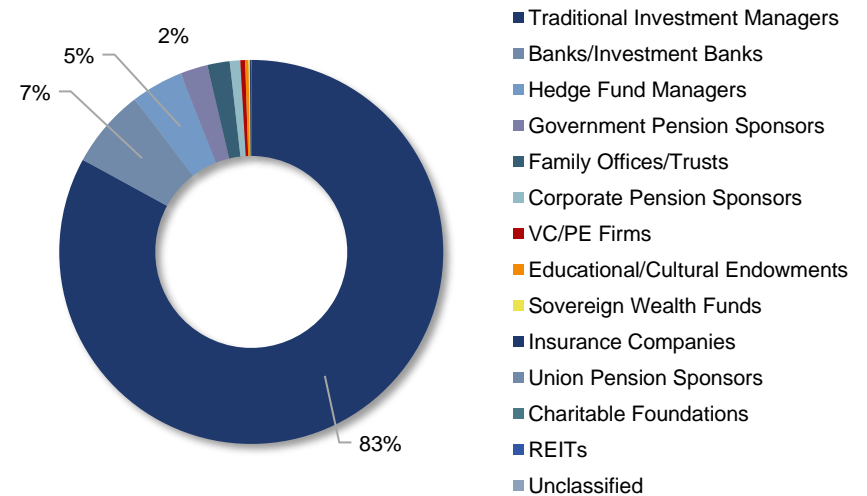
	Common Stock Equivalent Held	% Of CSO
The Vanguard Group, Inc.	32,580,120	8.33%
BlackRock, Inc. (NYSE:BLK)	30,044,597	7.68%
Capital Research and Management Company	19,151,358	4.90%
State Street Global Advisors, Inc.	16,116,956	4.12%
T. Rowe Price Group, Inc. (NasdaqGS:TROW)	10,997,502	2.81%
FMR LLC	8,485,200	2.17%
Geode Capital Management, LLC	6,978,869	1.78%
Massachusetts Financial Services Company	6,794,864	1.74%
Norges Bank Investment Management	5,575,563	1.43%
Morgan Stanley, Investment Banking and Brokerage Investments	4,913,954	1.26%
Morgan Stanley Investment Management Inc.	4,082,349	1.04%
Northern Trust Global Investments	3,829,848	0.98%
JP Morgan Asset Management	3,768,337	0.96%
UBS Asset Management AG	3,757,131	0.96%
Eaton Vance Management	3,370,207	0.86%
TCI Fund Management Limited	3,173,182	0.81%
BNY Mellon Asset Management	3,153,365	0.81%
Arthur M. Cohen & Associates LLC	3,124,051	0.80%
PRIMECAP Management Company	3,078,107	0.79%
Amundi Asset Management SAS	2,862,785	0.73%

## Ownership Breakdown

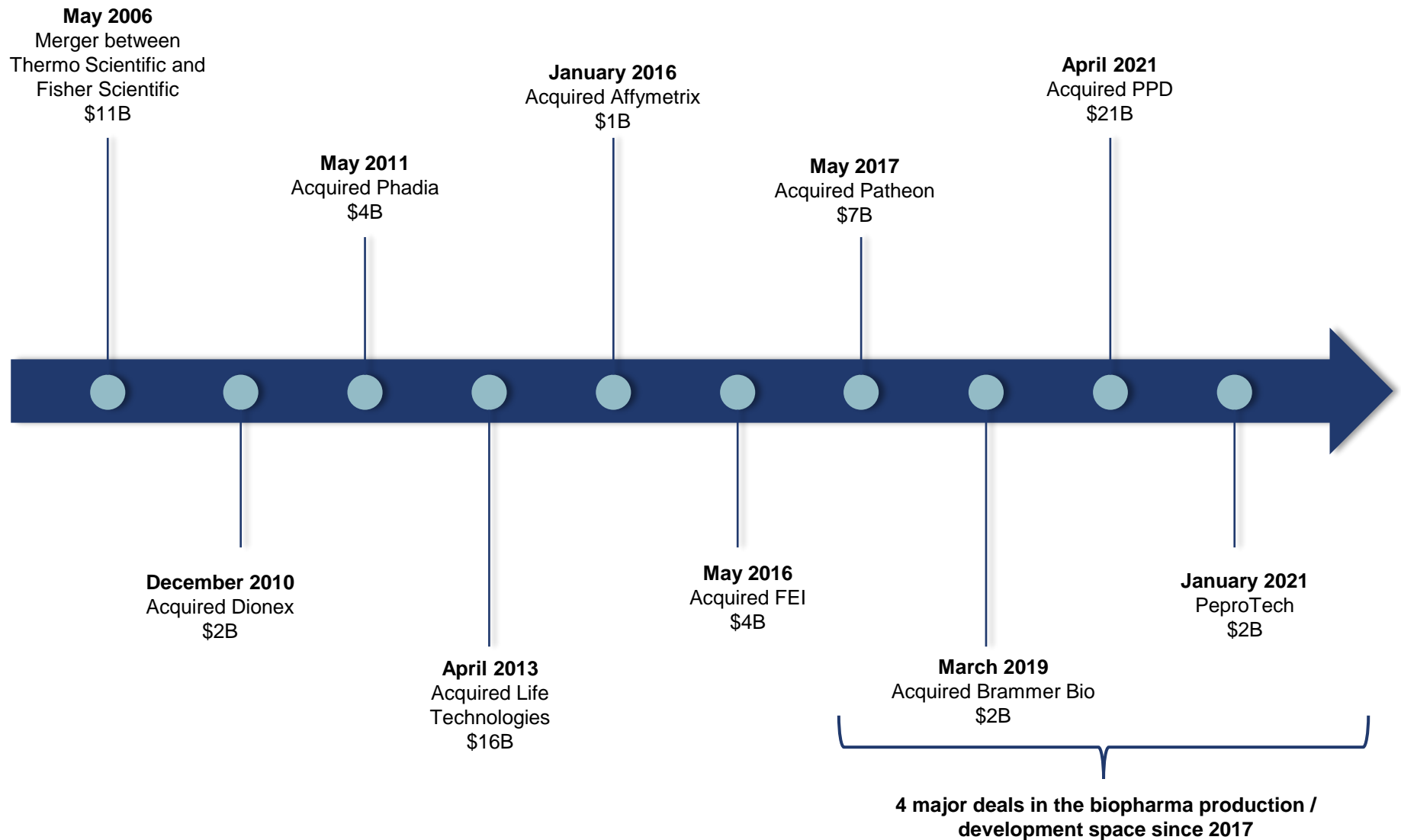


■ Institutions ■ Public and Other

## Institutional Ownership Details



## Thermo Fisher M&A history



# Management Overview

*Experienced management with long-term experience in the industry*

## Marc N. Casper: Chairman, President, and CEO



- Marc has been President and CEO since October 2009
- He joined Thermo Electron in 2001 as VP of Lice Sciences
- Prior to joining TMO, he served as President and CEO of Kendro Laboratory Products
- He holds an MBA from Harvard Business School and worked at Bain & Co. and Bain Capital

## Michel Lagarde: EVP and COO



- Michel joined the company in 2017 as Senior Vice President and President, of Pharma Services, following the acquisition of Patheon
- He was named EVP in 2019 and became Chief Operating Officer in 2022
- Previously, he served as CEO and COO of Philips Electronics North America

## Aditya Joshi: Vice President and CSO



- Aditya joined TMO in 2014 as VP of Corporate Strategy
- In 2019, he was promoted to VP of Corporate Strategy & Marketing
- In 2022, he became VP and Chief Strategy Officer
- Prior to joining TMO, he was a partner at Bain & Co. and received his MBA from Harvard Business School

## Alan Sachs: Chief Medical Officer



- Alan joined the company in 2014 as a Chief Scientific Officer for Life Sciences Solutions, following the acquisition of Life Tech
- In 2016, he became Chief Scientific Officer for TMO, leading R&D innovation. In 2021, he was named to the new role of CMO
- He holds a Ph.D. from Stanford and has experience at a medical research firm and as a professor

# Executive Compensation Table

Name and Principal Position	Year	Salary	Stock Awards	Option Awards	Non-Equity Incentive Plan		Total (\$)
					Compensation	Other	
<b>Marc N. Casper</b>	2022	1,687,260	10,336,396	9,861,822	5,547,713	775,718	28,208,909
<i>Chairman, President and Chief Executive Officer</i>	2021	1,624,247	8,460,843	4,090,719	6,334,565	723,984	21,234,358
	2020	1,550,000	8,050,380	8,232,516	7,750,000	807,177	26,390,073
<b>Stephen Williamson</b>	2022	974,808	2,340,271	1,564,106	1,762,843	211,045	6,853,073
<i>Senior Vice President and Chief Financial Officer</i>	2021	933,411	2,575,043	1,226,715	2,002,168	214,989	6,952,326
	2020	855,191	2,616,374	2,879,280	2,475,000	230,561	9,056,406
<b>Michel Lagarde</b>	2022	1,068,630	2,856,932	1,910,056	2,020,353	207,552	8,063,523
<i>Executive Vice President and Chief Operating Officer</i>	2021	959,153	3,195,811	3,541,191	2,057,386	230,365	9,983,906
	2020	908,197	2,740,226	3,199,592	2,543,750	35,486	9,427,251
<b>Gianluca Pettiti</b>	2022	768,630	2,176,836	1,455,183	1,263,628	76,430	5,740,707
<i>Executive Vice President</i>	2021	611,647	2,506,068	2,493,936	958,176	36,057	6,605,884
<b>Michael A. Boxer</b>	2022	728,613	816,116	545,848	898,380	129,891	3,118,848
<i>Senior Vice President and General Counsel</i>							



# Thermo Fisher vs Danaher: Who Wins?

## Differing Strategies Among The Two Biggest Players – They **BOTH** can win

### Danaher Has a Decentralized Business Model

- Danaher Corporation is a global conglomerate known for its diverse portfolio of businesses across various industries such as life sciences, diagnostics, environmental and applied solutions, and dental
- Danaher operates through a **decentralized business model**. Each of its operating companies **functions independently** with its own management team
- Danaher emphasizes innovation across its businesses. The company invests heavily in developing new products, improving existing technologies, and staying at the forefront of scientific advancements

### TMO Is Highly Integrated

- TMO operates across four main business segments: Life Sciences Solutions, Analytical Instruments, Specialty Diagnostics, and Laboratory Products and Services. Each segment specializes in different areas but **works synergistically** to offer comprehensive solutions to customers
- The company strategically acquires businesses that **complement its existing portfolio**, enhance its technological capabilities, or provide access to new markets. It **integrates** these acquisitions efficiently into its operations to drive growth and **expand its product offerings**
- Thermo has a **customer-centric approach**. The company focuses on understanding and meeting the needs of its diverse customer base, which then drives innovation during the customization process

### Importance of Cross Selling

- Both companies are large, serial acquirers with global presences
- Both companies emphasize innovation. This involves investing in R&D to create new products, improving existing ones, and staying ahead in technology and market trends
- While both companies benefit significantly from economies of scale, **TMO makes more use of economies of scope**. Thermo's businesses are all integrated under the same umbrella, taking advantage of the company's reputation and reliability in order to **maximize cross-selling benefits**
- Operating Structure:
  - Danaher operates more as a conglomerate of distinct businesses, where the performance of individual companies combined determines performance of overall company
  - TMO operates in four key segments that each have their own specialization, but **ultimately work together** to provide a complete, end-to-end service for customers
- Acquisition Strategy:
  - Danaher makes acquisitions where it feels it can use its "Danaher Business System" methodologies to make improvements to manufacturing, innovation, operational efficiency, and structure
  - Thermo makes acquisitions with the primary goal of filling any gaps in its product offering, **enhancing its value proposition** of being a one-stop shop. Acquired companies are then integrated into the broader TMO network
- In February 2023, Danaher had interest in acquiring Catalent, a CDMO offering drug development and manufacturing services. The acquisition would allow them to compete with Thermo by adding a business in the value chain of biopharma companies

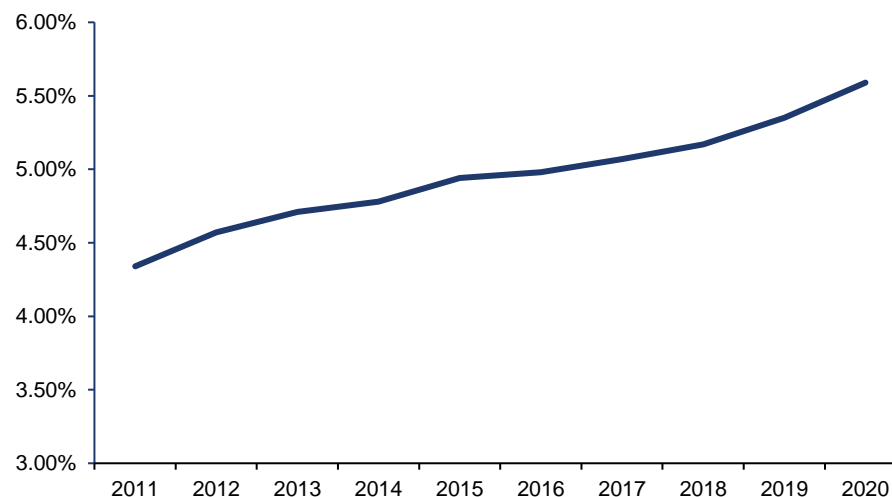
# Chinese Market: Is There Long-Term Growth?

## Despite Fears of Slowing Growth, Chinese Biopharma Has Strong Prospects

### Fundamental Growth Drivers

- Market capitalization of Chinese biopharma companies grew to over US\$200 billion in 2020 from US\$1 billion in 2016
  - An important subsector of biotech, China's biopharma industry has much attention home and abroad, especially after Chinese companies developed multiple COVID-19 vaccines now in wide circulation
- China's healthcare market is predicted to expand from around \$900B in 2019 to \$2.3T in 2030, and its market size is second to only the US
  - Specifically to the biopharma industry, the market size will likely grow from \$47.60B in 2020 to \$111.76B in 2025, a 135% increase over five years
- The Chinese government has poured money into expanding the healthcare and biopharma sectors, and this investment is set to continue

### Chinese Healthcare Spending as % of GDP



### Strong Cross-Border Partnership Deal Flow

- On a regular basis, China companies with viable drug candidates have been able to forge partnerships for ex-China rights to their assets with foreign companies for large sums of money
- In 2022, overall out-licensing in the sector totaled 152 -- 90 of them with domestic companies and 62 with foreign companies
  - Foreign out-licensing were worth almost five times as much as the domestic transactions: \$28 billion for cross-border transactions compared to only \$6 billion for China-China deals
- In 2023, China Biopharma companies needed just seven months to sign at least \$26 billion in out-licensing deals with foreign companies, almost as much as in all of 2022

### Venture Capital Remains Robust

- In 2022, after the decline of biopharma stock prices, three major China-focused venture capital companies announced plans to raise more money for new funds
  - OrbiMed, the world's largest healthcare-dedicated investor, announced plans to raise \$4.75 billion in new funds: OrbiMed Asia V with \$1.1 billion, OrbiMed Flagship IX with \$1.9 billion and OrbiMed Royalty & Credit Opportunities with \$1.75 billion
  - Vivo Capital, a US-China healthcare investor, held its first closing of a yuan-denominated private equity fund at 4 billion yuan (\$600 million), with a target of bringing the fund to 10 billion yuan (\$1.5 billion)
  - Qiming Venture Partners raised \$3.2 billion, \$2.5 billion for USD Fund VIII and it held the first closing of RMB Fund VII at RMB 4.7 billion (\$700 million)

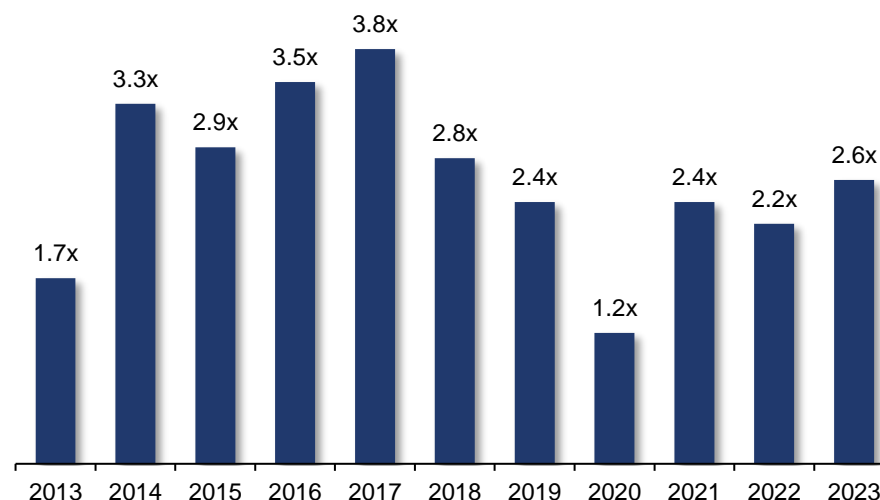
# Debt Profile

*TMO maintains manageable cost of debt with investment grade credit rating*

## Commentary

- It is expected that TMO will maintain its investment grade credit rating over the foreseeable future
- Debt and net interest expense increased which reflect the risk towards acquisition of CorEvitas
- Although TMO's debt is slightly elevated today, the company is still able to raise debt at attractive rates
  - 14-Nov-22, Senior Secured Notes, ~\$530m, 3.2% interest due 21-Jan-26
  - 07-Aug-23, Senior Secured Notes, \$600mm, 4.93% interest due 10-Aug-26

## Net Debt to EBITDA



## Debt Summary

	Millions	% of Total
Total Commercial Paper	0	0.0%
Total Revolving Credit	0	0.0%
Total Senior Bonds and Notes	35291	99.6%
Total Lease Liabilities	200	0.6%
General/Other Borrowings	76	0.2%
<b>Total Principal Due</b>	<b>35567</b>	<b>100.4%</b>
Total Unamortized Discount	-108	(0.3%)
Total Adjustments	-23	(0.1%)
<b>Total Debt Outstanding</b>	<b>35436</b>	-
Undrawn Revolving Credit	5000	-
<b>Total Undrawn Credit</b>	<b>5000</b>	-

## Upcoming Maturity Dates

Debt	Maturity Date	Amount (\$M)
Senior Unsecured	Oct-18-2024	2,500.0
Senior Unsecured	Sep-12-2024	1,061.6
Senior Unsecured	Apr-15-2025	679.4
Senior Unsecured	Mar-01-2025	849.3
Senior Unsecured	Nov-18-2025	583.9

# Key Players

## Main Competitors Across the Health Care Industry

Life  
Science  
and  
Specialty  
Diagnosis



- Danaher is an industrial and healthcare conglomerate with subsidiaries that provide medical and dental services
- It operates in 60 countries and receives 40% of its revenue from U.S customers



- Revvity operates in 2 segments: Discovery & Analytical Solutions and Diagnostics
- Discovery & Analytical Solutions provides instruments, reagents, informatics, services
- Diagnostics provides genetic disorder detection instruments, reagents, and software



- One of the prominent leaders in developing next-generation sequencing tools used by life sciences and drug researchers
- Illumina's proprietary BedArray technology that researchers to determine which genetic combinations yield various diseases, allowing for faster diagnosis, and stronger prescriptions



- Global leader in distributing, manufacturing, and selling medical devices and instruments
- Its life sciences segment produces instruments used to transport diagnostic specimens and detect cancer/infections



- Agilent was founded in 1999 as a divestiture of Hewlett-Packard's operations
- Agilent provides bioanalytical and electronic measurement technologies to pharmaceutical, petrochemical, biotech, academic, and food safety industries



- Mettler Toledo provides precision instruments and services including balances, titrators, pH meters, weighing systems, metal detection, and x-ray systems
- Serves life sciences, food and beverage, chemicals, transportation, and electronics industries

Analytical  
Instruments

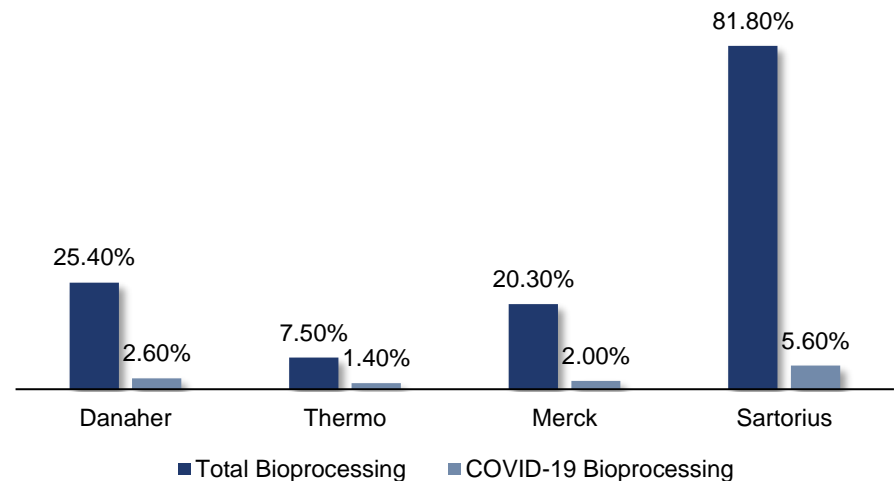
# COVID-19 Industry Normalization

*Industry faces headwinds with the return to normal out of the pandemic*

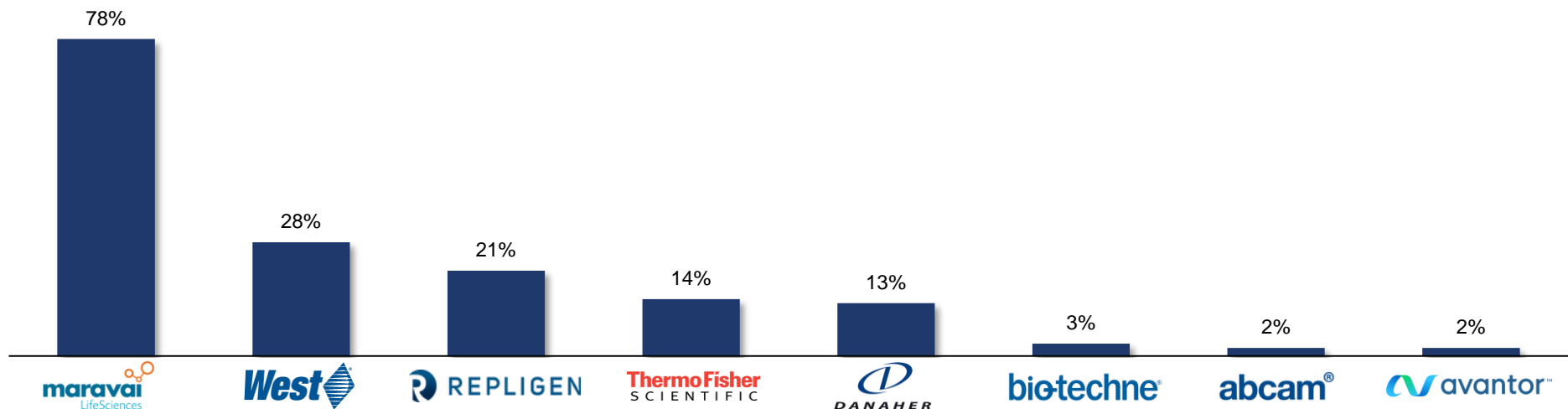
## Commentary

- Customers would likely utilize excess capacity and supplies from the pandemic first
  - During the pandemic TMO noted how customers have two to three quarters of excess safety stock vs the normal one quarter
  - This supply chain normalization would likely put pressure on growth coming out of the pandemic
- Companies in the space saw outsized returns during the pandemic and are facing hangover from the pandemic with the return of normal spending
  - TMO intends on leveraging its returns from during the pandemic to reinvest into the business and complete M&A

## Bioprocessing Revenues as % of Total Revenues



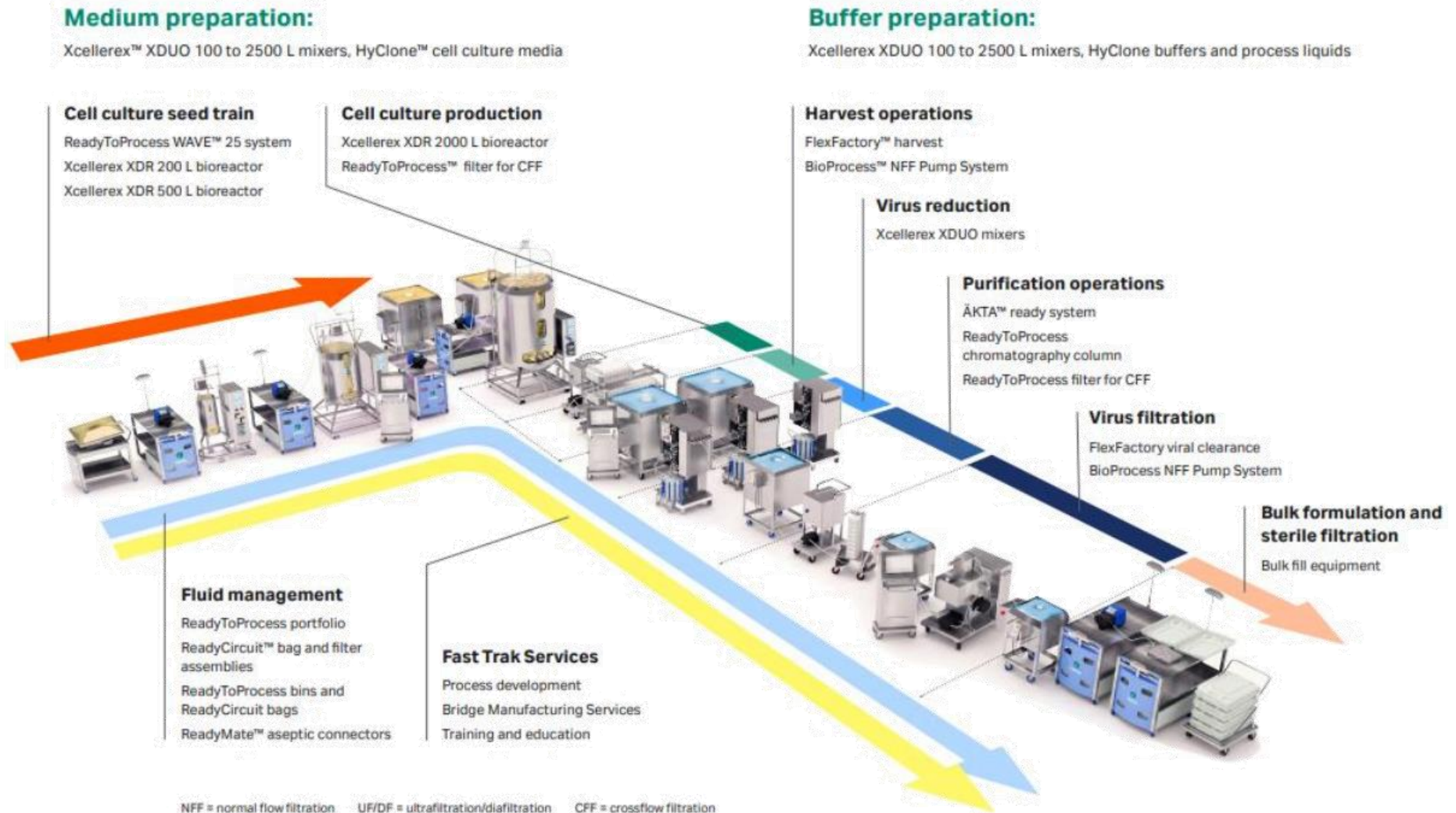
## 2022 Company Earnings Exposed to COVID-19





# Investment Thesis: Why Is This a Good Business?

*A typical bioprocessing workflow – TMO is well positioned at all stages*



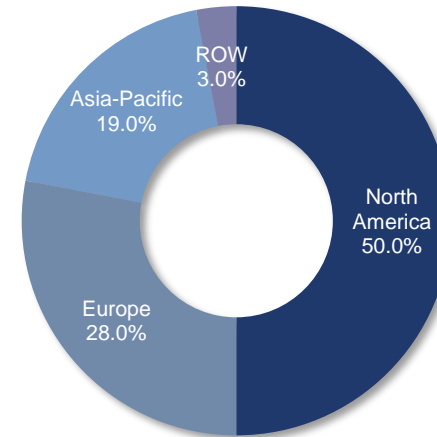
- Thermo's products cover many stages of the workflow, from bioreactors, mixers, to heat systems, which are all highly complementary
- **Significant proportion of products have consumable and/or service elements**
  - Bioreactor machines have software licenses and maintenance contracts necessary for equipment function
  - Fluid management systems require continual purchase of bag and filter consumables

## Revenue segmentation

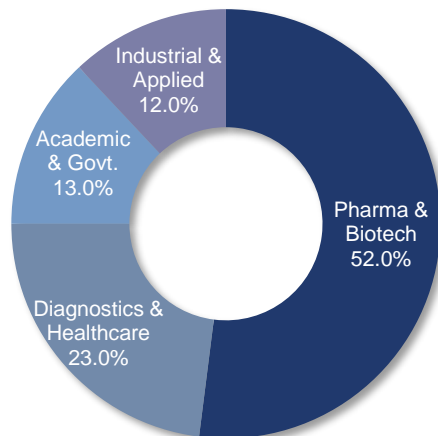
### Commentary

- Majority of revenue is generated in North America and Europe (representing 78% of revenues), and are expanding in international markets
  - New biologics manufacturing facility in China to provide clinical & commercial drug product and substance capabilities
  - New bioprocess manufacturing supply center in South Korea to provide raw materials for biopharma production
- Consumables and services make up nearly 82% of sales and drive strong recurring revenues among clients
  - Increasing adoption of single-use technologies due to efficiency advantages
- TMO's portfolio has shifted more towards Pharma and Biotech, which now makes up 52% of revenues (vs. 31% in 2016)

### Global Revenue Breakdown



### Customer End Markets



### Product Revenue Breakdown

