

The background features a financial chart with a red overlay. The chart shows a line graph with a shaded area underneath, representing a stock price trend. The y-axis is labeled 'Share Price' and has values 200, 300, and 350. The x-axis has dates 'Aug 13', 'Sep 13', and 'Oct 13'. A callout box points to a peak in the line with the text 'Change on day 32.30'. In the top left, there is a table of stock prices with columns for 'Change on day' and 'Share Price'.

# ***Fundamental Analysis – Caterpillar Inc***

## ***Macro Mercenaries***

***Jack Perry, Elias Stewart, Tim Odjav, Kyler Zarate***

***11/11/2024***

## Company Overview

Company Name	Caterpillar Inc.
Ticker	CAT: <i>Caterpillar Inc. Manufactures and sells construction and mining equipment, off-highway diesel and natural gas engines, industrial gas turbines, and diesel-electric locomotives</i>
Business Summary	
Current Price	\$393.37
Current Date	11/8/2024
Target Price	\$355.44 (-9.64%)
Target Date	Buy date Q1 2025 – 12/31/2027
Industry	Construction Machinery and Heavy Transportation Equipment
Sector	Industrials
Change in Shares Outstanding (TTM)	(24,000,000) -5%, (Q3 FY23 – Q3 FY24) 482.8MM Current Shares Outstanding, (11/08/2024)
Market Cap	\$189.9 Billion
Monthly Trading Volume	43.54 Million
Beta	1.10
Sharpe Ratio	1.89
EPS	21.55
PE Ratio	18.25
52-week Low/High	234.62/418.59

## Investment Thesis

BUY \$5,000 of CAT funded by cash in School Fund in Q1 if –10% price decrease

### PROS

Undisputed Industry Leader

Outperformed SPY 5 Yr Return (79.46%), DIA (111.29%) 5YTD

Beneficiary of 'Red Wave'

### CONS

Currently Overvalued

Insider selling in past year



# Business Model

Investment Thesis

**Business Model**

Historicals

Industry Analysis

Governance

Risk and Growth

Valuation

Conclusion

**Caterpillar Inc.** - Manufactures and sells construction and mining equipment, off-highway diesel and natural gas engines, industrial gas turbines, and diesel-electric locomotives in worldwide.

## Business Segments & Revenue Streams Q3:

- *Construction Industry* - 36.62%
- *Resource* - 17.74%
- *Energy & Transportation* - 39.92%
- *Financial Products* - 5.7%

## Customer Incentives:

- Expanded product offerings across various sectors
- Cat Financial, wholesale financing
- Network of dealers, across 180 countries
- Reputable brand name, reliable, trustworthy

## Marketing Strategy/Business & Operating Model:

- Sales channels: dealer network, direct sales, e-Commerce
- Marketing: caters towards different geographical needs

## SALES BY REGION

(in billions)



● North America	<b>\$34.6</b>
● EAME	<b>\$13.7</b>
● Asia/Pacific	<b>\$12.1</b>
● Latin America	<b>\$6.7</b>



**~2M**

active construction  
machines globally



**1.5M+**

connected assets



**7.5B+**

metric tonnes moved  
autonomously with zero  
lost-time injuries



**~30M**

engines built



# Historical Analysis

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## Important Events

**Founded** - 1925

**2000s** – Caterpillar invests in significant R&D also aggressive entry into railroad industry.

**2010s** – Notable acquisitions, Electro-Motive Diesel (locomotive) and Bucyrus International (mining equipment).

**2017** – Appointed new CEO, Jim Umpleby.

**2023** – Strong rebounding financial performance after COVID-19, record breaking performance with global group.

**2024** – \$20B share buyback, PBOC stimulus helping Asia market growth. Decrease in Q3 performance.

## SMA (As of 11/10/2024)

+0.95% - 20-day SMA

+4.4% - 50-day SMA

+12.59% - 200-day SMA

## Historical Pricing

52 Week Range High/Low

(\$418.5 - \$234.62)

11/8 close is 67.7% above 52-week low

11/8 close is 6% below 52-week high



# Historical Analysis

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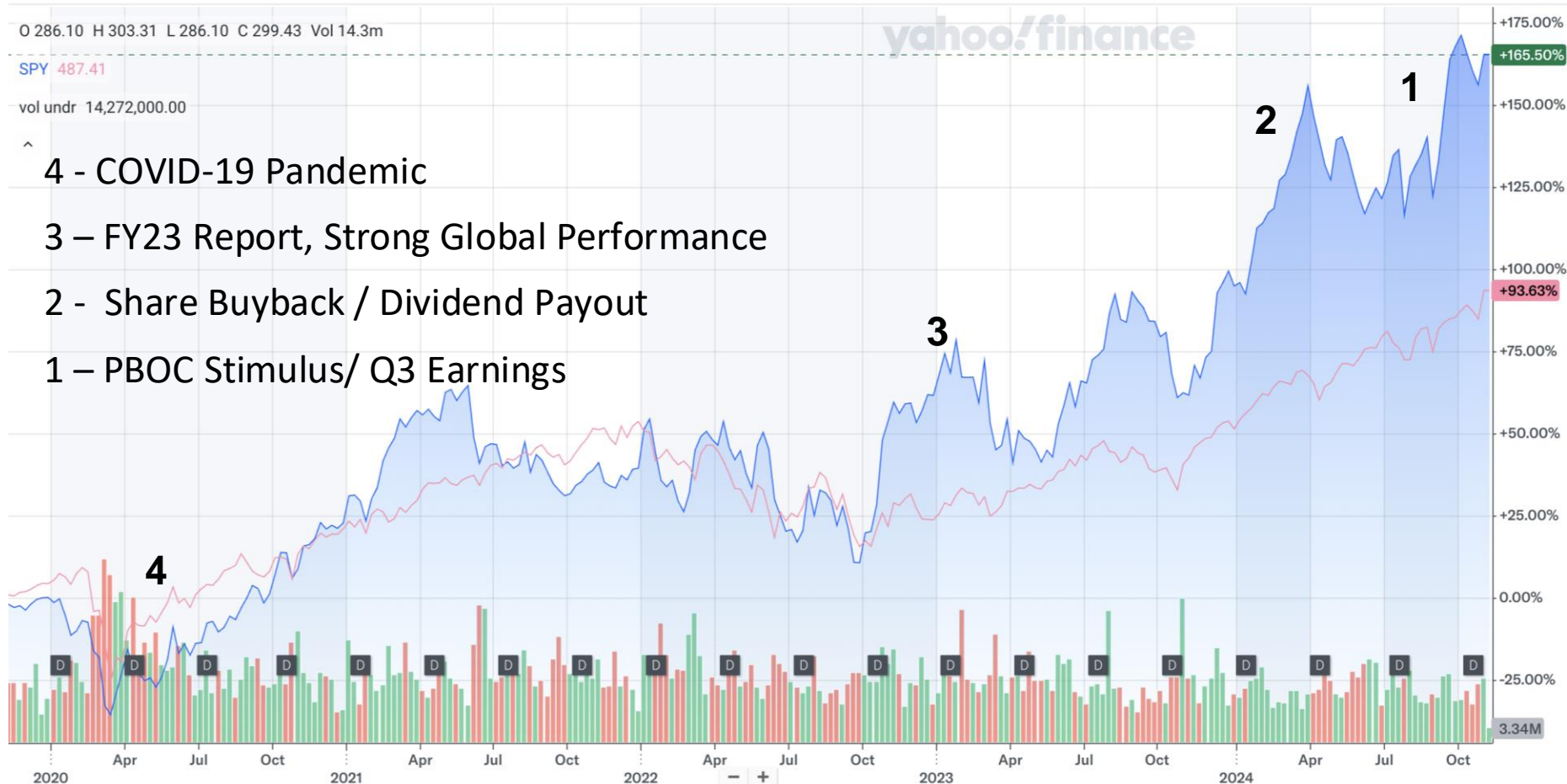
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# Financial Statement Analysis

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## Financial Statement Overview

All numbers in millions

TTM Basis

Revenue	\$66,356
Net Income	10,005
Operating Margin	18.36%
Operating Cash Flow	12,645
CAPEX	(1,821)
Free Cash Flow	10,824
Total Assets	85,273
Total Liabilities	66,870
Dividends	\$1.41 (2.1% Average Over Past 5 Years)
ROA	11.48%
ROE	51.36%
ROI	29.36%
Goodwill / Intangibles	5,979
Debt to Equity	1.95

## MD&A/Footnotes

- Sales across all 3 segments decreased in Q3 due to lower sales volume.
- Enterprise operating cash flow was \$3.6 billion in the third quarter of 2024.
- Deployed \$1.5 billion of cash for share repurchases and dividends in the third quarter.
- Increased sales/market share in Latin America. Caterpillar benefiting from diversity of end markets.



# Industry Trends – Present and Historically

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## Past Heavy Machinery Trends

- **1950s-1970s:** Creation of suburban communities and westward expansion lead to many diverse machine developments.
- **1980s:** Total demand lowered, companies merged or went out of business. Caterpillar becomes America's biggest heavy equipment company.
- **1990s:** Demand for more compact machines.
- **2000s:** Demand for machine rentals, leading to new types of cash flow for businesses.
- **2010s-Present:** Demand for remote control machines, more efficient machines, and technology integration.

## Future Heavy Machinery Trends

- Sustainable fuel sources and construction practices.
- Fully automated machines.
- Carbon elimination pressures.
- Performance metrics and data analytics integration.
- 3D printing.



**P**

Political

Government Regulation

Tariffs on Raw Materials

Government Contracts

**E**

Economical

Lower Tax Rates

Lowering Interest Rates

Economic Cycles

Tariffs

**S**

Social

Sustainable Construction

Growing Urbanization

**T**

Technological

Automated Machinery

Increased R&D Requirements

Data Analysis Integration

15,931 Active Patents Globally

**E**

Environmental

Bloomberg > 5 Leading

MSCI A Rating

Renewable Energies

Emissions Laws

**L**

Legal

Product Lawsuits

International Regulations





# Competitive Landscape

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## Caterpillar's Competitive Advantage

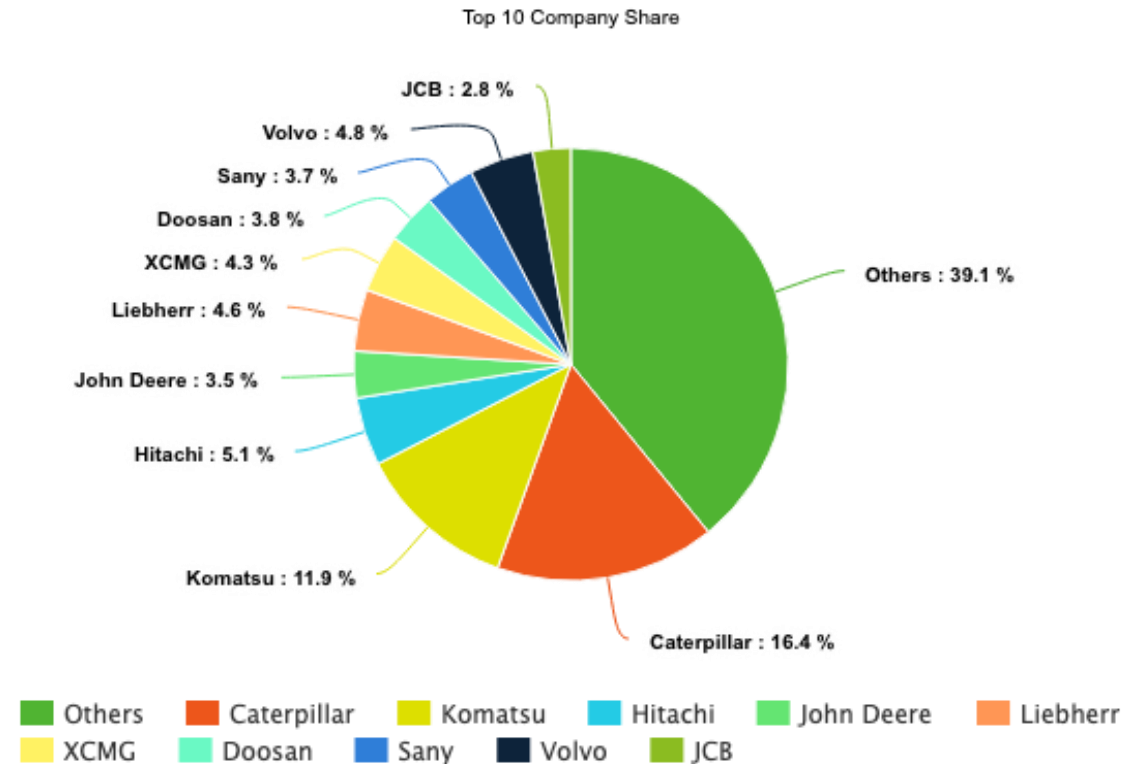
- World leader in market share
- Innovation and product quality
- Diversified product sectors

## Heavy Equipment CAGR of 6.5%

- Projected to grow to \$289.3 Billion in 2030 globally
- Worth \$204.41 Billion in 2023 globally

## P/E ratio relative to industry average

- 15.3x industry average
- Analysts put CAT at 18.25x, 2.92 above industry average



# Competitive Landscape

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## Threat of New Entrants

(Low)

- **High Barriers to Entry:** Significant start-up capital requirement, regulatory requirements.
- **Brand Recognition:** Top companies are already trusted and hold significant market share.

## Threat of Substitutes

(Low)

- **Specialized Equipment:** Caterpillar already provides a diverse portfolio of products for any job.
- **Limited Alternatives:** Manual labor is usually not feasible, limited options otherwise.

## Industry Rivalry

(High)

- **High Competition:** Many players, like Volvo, Hitachi, John Deere, etc. compete for global market share and price advantages.
- **Product Differentiation:** Other players specialize in one type of equipment.
- **Technology Advancements:** Each player wants to capitalize on new market for automated machines.

## Bargaining Power of

Buyers

(Moderate)

- **Order Negotiations:** Due to high volume purchases, buyers may demand discounts.
- **High Switching Costs:** Limits customer loss, can restrict growth.

## Bargaining Power of

Suppliers

(Low)

- **Negotiations:** Caterpillar's size allows it to negotiate favorable pricing or switch providers easily.
- **Standardization:** Due to government regulations, many parts must fit specific requirements.



# Management and Employees

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- Management:
  - C suite have all been with Caterpillar Inc. for significant time and have held positions as VPs of different divisions.
  - Chairman and CEO – Jim Umpleby, joined Caterpillar Inc in 1980, became CEO in 2017.
  - CFO – Andrew Bonfield, appointed in 2018, held roles at similarly technical companies.
  - COO – Joseph Creed, joined the company in 1997, appointed COO in 2021.
- Board of directors consists of 9 members, 8 of whom are independent.
- Stock based compensation awarded to executives for positive performance.
- Faced several legal and regulatory challenges including tax disputes and environmental compliance issues, addressed through internal investigation, cooperation, and corrective measures.
- Industry is heavily unionized; Caterpillar Inc. has a history of negotiating in a positive way with employees.
- Company culture emphasizes innovation, operational excellence, and commitment to sustainability.



# SWOT Analysis

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## Strengths

*Large Range of Products*  
*Global Brand Recognition*  
*Loyal Customer Base*  
*Innovative Product Design*

## Weaknesses

*High Capital-Expenditure Industry*  
*Reliance on External Suppliers*  
*Influenced by Cyclical Mining Market*  
*Subject to Regulations From Foreign Governments*

## Opportunities

*Expansion Into Developing Countries*  
*Continuous Diversification of Product Offerings*  
*Leveraging Technology and Innovation*  
*Future Acquisitions and Partnerships*

## Threats

*Intense International Competition*  
*Economic Downturns and Policy Changes*  
*Technological Advancement Making Certain Mining Techniques Obsolete*  
*Geopolitical Forces*



# DCF - WACC

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## WACC Calculations

### Capital Structure

Total Debt	\$67,973.00
Total Equity	\$192,357.93
Debt-to-Total Capitalization	26.1%
Equity-to-Total Capitalization	73.9%

### Cost of Debt

Cost of Debt	4.2%
Tax Rate	21.4%
After-Tax Cost of Debt	3.3%

### Cost of Equity

Risk-free Rate	4.5%
Market Risk Premium	5.7%
Levered Beta	1.10
Cost of Equity	10.8%

<b>WACC</b>	<b>8.8%</b>
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# DCF – Assumptions Base

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## Select Operating Data

Period				Projected Annual Forecast				
	2021	2022	2023	2024	2025	2026	2027	2028
				1	2	3	4	5
Revenue	\$50,971.0	\$59,427.0	\$67,060.0	\$74,436.6	\$83,369.0	\$95,040.7	\$107,395.9	\$121,357.4
Growth Rate (%)		16.6%	12.8%	11.0%	12.0%	14.0%	13.0%	13.0%
EBITDA	\$9,685.0	\$11,613.0	\$16,140.0	\$15,631.7	\$19,841.8	\$21,859.3	\$24,701.1	\$27,912.2
EBITDA Margin (%)	19.0%	19.5%	24.1%	21.0%	23.8%	23.0%	23.0%	23.0%
EBIT	6,968.0	9,128.0	13,764.0	\$13,398.6	\$13,339.0	\$15,206.5	\$17,183.3	\$19,417.2
EBIT Margin (%)	13.7%	15.4%	20.5%	18.0%	16.0%	16.0%	16.0%	16.0%
Depreciation & Amortization	\$2,352.0	\$2,219.0	\$2,144.0	\$2,233.1	\$2,501.1	\$2,851.2	\$3,221.9	\$3,640.7
D&A as a % of revenue	4.6%	3.7%	3.2%	3.0%	3.0%	3.0%	3.0%	3.0%
Cash Growth (%)				2.4%	2.0%	5.3%	5.0%	5.0%
Accounts Receivable Growth (%)				2.4%	2.0%	5.3%	5.0%	5.0%
Inventories Growth (%)				2.0%	2.0%	5.3%	5.0%	5.0%
Prepaid Expenses Growth (%)				5.0%	5.0%	5.0%	5.0%	5.0%
Accounts Payable Growth (%)				2.0%	2.0%	5.3%	5.0%	5.0%
Accrued Expenses Growth (%)				2.0%	2.0%	5.3%	5.0%	5.0%
Capital Expenditures Growth (%)				5.0%	5.0%	5.5%	5.5%	5.5%



# DCF - Calculations

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Sum of present values of FCFs **\$53,296.5**

## Terminal Value

### *Growth in perpetuity method:*

Long term growth rate 3.0%

WACC 8.8%

Free cash flow (t+1) 17,647.1

Terminal Value 303,221.8

**Present Value of Terminal Value** **\$198,709.8**

### DCF

### Implied Share Price

Approach	Base	Downside	Upside
Perpetuity	\$390.62	\$224.79	\$532.53

## Enterprise Value to Equity Value

Enterprise Value \$252,006.2

Less: Net debt 60,995.0

**Equity Value** **\$191,011.2**

Diluted Shares Outstanding 489.0

Equity Value Per Share **\$390.62**



# Multiples

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		Peer Group Relevance		
Company Name	Industry	Sector	Largest Geographical Segment	Largest Revenue Segment
<b>Target</b>				
Caterpillar Inc. (CAT)	Industrials	Farm & Heavy Construction Machinery	North America	Construction Machinery
<b>Market Leaders Comparables</b>				
Hitachi (TKS: 6501)	Industrials	Conglomerates	Asia	Construction Machinery
Deere & Company (DE)	Industrials	Farm & Heavy Construction Machinery	North America	Agriculture Machinery
<b>Market Supporters Comparables</b>				
AB Volvo (VOLV-B.ST)	Industrials	Farm & Heavy Construction Machinery	Europe	Commercial Vehicles
Mitsubishi Heavy Industries (7011.T)	Industrials	Specialty Industrial Machinery	North America	Energy Systems
Cummins, Inc. (CMI)	Industrials	Specialty Industrial Machinery	North America	Engines
CNH Industrial N.V. (CNH)	Industrials	Farm & Heavy Construction Machinery	North America	Agriculture Machinery
Komatsu Ltd (6301.T)	Industrials	Farm & Heavy Construction Machinery	North America	Construction Machinery
Sany Heavy Industry Company (SHA: 600031)	Industrials	Farm & Heavy Construction Machinery	Asia	Heavy Machinery





# Multiples

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	Market and Financial Data						Valuation		
Company Name	Price	Market Cap (B)	Enterprise Value (B)	LTM Sales (B)	LTM EBITDA (B)	Earnings (B)	EV / Sales	EV / EBITDA	P/E
<b>Target</b>									
Caterpillar Inc. (CAT)	\$393.37	\$192.36	\$253.35	\$63.87	\$16.14	\$10.97	4.0x	15.7x	18.25
<b>Market Leaders Comparables</b>									
Hitachi (TKS: 6501)	26.45	121.89	122.55	63.49	8.80	3.85	1.9x	13.9x	27.94
Deere & Company (DE)	394.49	107.82	165.78	55.57	15.02	10.17	3.0x	11.0x	13.44
<b>Market Supporters Comparables</b>									
AB Volvo (VOLV-B.ST)	26.21	53.41	70.18	50.90	8.13	4.90	1.4x	8.6x	11.16
Mitsubishi Heavy Industries (7011.T)	15.26	51.00	40.00	31.71	2.46	0.98	1.3x	16.3x	32.70
Cummins, Inc. (CMI)	356.46	48.90	50.19	34.07	2.79	0.74	1.5x	18.0x	23.36
CNH Industrial N.V. (CNH)	10.66	13.37	37.60	24.69	3.08	2.37	1.5x	12.2x	23.36
Komatsu Ltd (6301.T)	27.74	25.64	33.62	25.32	4.80	2.58	1.3x	7.0x	10.3
Sany Heavy Industry Company (SHA: 600031)	2.54	21.95	22.13	10.62	0.83	0.64	2.1x	26.7x	29.37



# Multiples

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			EV / Sales	EV / EBITDA	P/E
<b>Market Leaders Comparables</b>	Weight	70%			
Mean			2.5x	12.5x	20.7x
Median			2.5x	12.5x	20.7x
25 Percentile			2.2x	11.8x	17.1x
75 Percentile			2.7x	13.2x	24.3x
Standard deviation			0.745	2.043	10.253
<b>Market Supporters Comparables</b>	Weight	30%			
Mean			1.5x	14.8x	21.7x
Median			1.4x	14.2x	23.4x
25 Percentile			1.3x	9.5x	14.2x
75 Percentile			1.5x	17.6x	27.9x
Standard deviation			0.298	7.191	9.235
<b>Weighted Average</b>					
Mean			2.2x	13.2x	21.0x
Median			2.1x	13.0x	21.5x
25 Percentile			1.9x	11.1x	16.2x
75 Percentile			2.4x	14.5x	25.4x
Standard deviation			0.611	3.587	9.948



# Precedent Transactions

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Date	Target	Buyer	Target Business Description	Transaction Value (B)	Revenue (B)	EBITDA (B)	EV / Revenue	EV / EBITDA	
10/8/2024	Environmental Solutions Group	Terex	Waste compaction machines and collection vehicles	\$2.00	\$0.75	-	2.67x	-	
10/7/2024	Barnes Group	Apollo Global Management	Manufactures industrial and aerospace parts	\$3.60	1.62	0.23	2.22x	15.65x	
3/31/2024	Destaco Manufacturing	Stabilius	Reed valves and material handling tools	\$0.68	0.21	-	3.30x	-	
10/10/2023	CIRCOR International	Kohlberg Kravis Roberts	Delivers flow control products to OEMs and construction	\$1.70	0.82	0.15	2.07x	11.33x	
3/27/2023	Altra Industrial Motion	Regal Rexnord	Construction crane manufacturing	\$5.13	1.95	0.34	2.64x	15.31x	
							Mean	2.58x	14.10x
							Median	2.64x	15.31x
							25 Percentile	2.22x	13.32x
							75 Percentile	2.67x	15.48x
							Standard deviation	0.478	2.402



# Weighted Valuation

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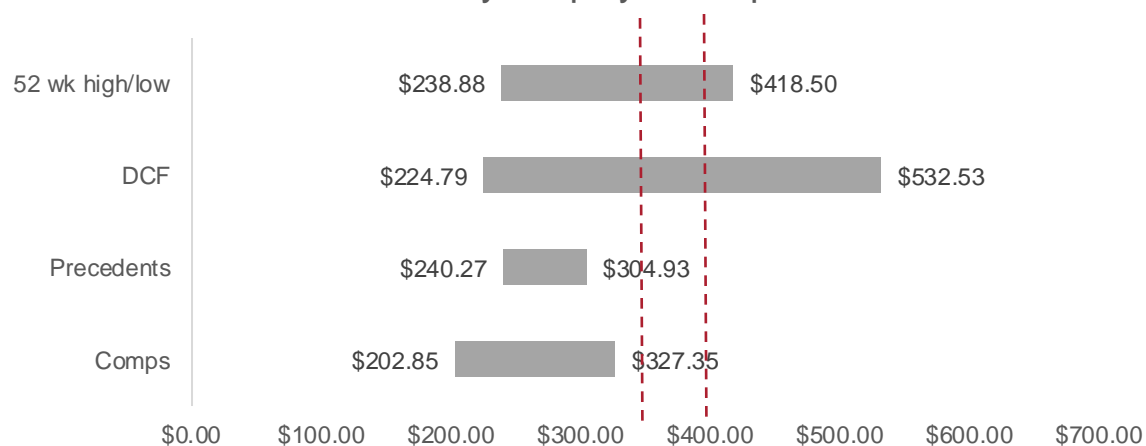
**Valuation**

Conclusion

## Football Field Data

	Low bar	Difference	High Bar
Comps	\$202.85	\$124.50	\$327.35
Precedents	\$240.27	\$64.66	\$304.93
DCF	\$224.79	\$307.74	\$532.53
52 wk high/low	\$238.88	\$179.62	\$418.50

## Valuation Summary - Equity Value per Share



## Implied Stock Price

Total DCF	\$390.62
Comparables	\$271.81
Precedent Transactions	\$276.44

## Weights

DCF	70%
Comparables	20%
Precedent Transactions	10%

**Target Price** 355.44

**Current price** 393.37



# Conclusion

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**Investment Thesis/Company Overview** – *BUY \$5,000 of CAT @355.44*

**Business Model** – *Construction and mining equipment leader*

**Industry Analysis** – *High expected growth, fairly saturated industry*

**Risks and Growth** – *Cyclical industry, but industry leader expanding into new markets*

**Governance** – *Experienced and skilled management team*

**Valuation** – *Implied Stock Price at \$355.44, which is 9.64% lower than Friday close*

**Recommendation** - *BUY \$5,000 of CAT (equal to 13.13 shares), target price: \$355.44 before end of Q1 2025, target sell date: 12/31/2027 into School Fund*



The background of the image is a blurred financial market chart. It features a red semi-transparent overlay. In the center of this overlay, the word "Exhibits" is written in a white, bold, sans-serif font. The background chart includes various elements: a line graph showing price fluctuations, a table of stock prices with columns for "High", "Low", "The Pte 1000s Stock", and "Price Chng", and a section titled "HIGHEST MOVEMENTS" listing various stocks like "ImgnTech" and "K+S".

# Exhibits

# DCF – Assumptions Downside

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## Select Operating Data

Period	Historical			Projected Annual Forecast				
	2021	2022	2023	2024	2025	2026	2027	2028
				1	2	3	4	5
Revenue	\$50,971.0	\$59,427.0	\$67,060.0	\$70,413.0	\$76,750.2	\$84,425.2	\$92,023.5	\$98,925.2
Growth Rate (%)		16.6%	12.8%	5.0%	9.0%	10.0%	9.0%	7.5%
EBITDA	\$9,685.0	\$11,613.0	\$16,140.0	\$15,490.9	\$16,731.5	\$17,729.3	\$19,324.9	\$20,774.3
EBITDA Margin (%)	19.0%	19.5%	24.1%	22.0%	21.8%	21.0%	21.0%	21.0%
EBIT	6,968.0	9,128.0	13,764.0	\$12,674.3	\$12,280.0	\$13,508.0	\$14,723.8	\$15,828.0
EBIT Margin (%)	13.7%	15.4%	20.5%	18.0%	16.0%	16.0%	16.0%	16.0%
Depreciation & Amortization	\$2,352.0	\$2,219.0	\$2,144.0	\$2,112.4	\$2,302.5	\$2,532.8	\$2,760.7	\$2,967.8
D&A as a % of revenue	4.6%	3.7%	3.2%	3.0%	3.0%	3.0%	3.0%	3.0%
Cash Growth (%)				3%	3%	6%	6%	6%
Accounts Receivable Growth (%)				3.4%	3.0%	6.3%	6.0%	6.0%
Inventories Growth (%)				3.0%	3.0%	6.3%	6.0%	6.0%
Prepaid Expenses Growth (%)				5.0%	5.0%	5.0%	5.0%	5.0%
Accounts Payable Growth (%)				2.0%	2.0%	5.3%	5.0%	5.0%
Accrued Expenses Growth (%)				2.0%	2.0%	5.3%	5.0%	5.0%
Capital Expenditures Growth (%)				6.7%	6.7%	6.7%	6.7%	6.7%



# DCF – Calculations Downside

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**Valuation**

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Sum of present values of FCFs \$44,046.7

## Terminal Value

### Growth in perpetuity method:

Long term growth rate	2.0%
WACC	8.8%
Free cash flow (t+1)	13,141.6
Terminal Value	192,862.9
<b>Present Value of Terminal Value</b>	<b>\$126,422.8</b>

## DCF

## Implied Share Price

Approach	Base	Downside	Upside
Perpetuity	\$390.62	\$224.79	\$532.53

## Enterprise Value to Equity Value

Enterprise Value	\$170,469.5
Less: Net debt	60,995.0
<b>Equity Value</b>	<b>\$109,474.5</b>
Diluted Shares Outstanding	487.0
<b>Equity Value Per Share</b>	<b>\$224.79</b>





# DCF – Assumptions Upside

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## Select Operating Data

Period				Projected Annual Forecast				
	2021	2022	2023	2024	2025	2026	2027	2028
				1	2	3	4	5
Revenue	\$50,971.0	\$59,427.0	\$67,060.0	\$75,107.2	\$85,246.7	\$98,033.7	\$111,758.4	\$127,404.6
Growth Rate (%)		16.6%	12.8%	12.0%	13.5%	15.0%	14.0%	14.0%
EBITDA	\$9,685.0	\$11,613.0	\$16,140.0	\$12,768.2	\$20,459.2	\$23,528.1	\$26,822.0	\$30,577.1
EBITDA Margin (%)	19.0%	19.5%	24.1%	17.0%	24.0%	24.0%	24.0%	24.0%
EBIT	6,968.0	9,128.0	13,764.0	\$13,519.3	\$13,639.5	\$15,685.4	\$17,881.3	\$20,384.7
EBIT Margin (%)	13.7%	15.4%	20.5%	18.0%	16.0%	16.0%	16.0%	16.0%
Depreciation & Amortization	\$2,352.0	\$2,219.0	\$2,144.0	\$2,253.2	\$2,557.4	\$2,941.0	\$3,352.8	\$3,822.1
D&A as a % of revenue	4.6%	3.7%	3.2%	3.0%	3.0%	3.0%	3.0%	3.0%
Cash Growth (%)				5%	5%	5%	5%	5%
Accounts Receivable Growth (%)				2.0%	2.0%	4.5%	4.5%	4.5%
Inventories Growth (%)				2.0%	2.0%	4.5%	4.5%	4.5%
Prepaid Expenses Growth (%)				5.0%	5.0%	5.0%	5.0%	5.0%
Accounts Payable Growth (%)				2.0%	2.0%	5.3%	5.0%	5.0%
Accrued Expenses Growth (%)				2.0%	2.0%	5.3%	5.0%	5.0%
Capital Expenditures Growth (%)				4.0%	4.0%	4.5%	4.5%	4.5%



# DCF – Calculations Upside

Investment Thesis

Business Model

Historicals

Industry Analysis

Governance

Risk and Growth

**Valuation**

Conclusion

Sum of present values of FCFs \$56,686.2

## Terminal Value

### Growth in perpetuity method:

Long term growth rate	4.0%
WACC	8.8%
Free cash flow (t+1)	19,362.3
Terminal Value	402,211.7
<b>Present Value of Terminal Value</b>	<b>\$263,652.3</b>

## DCF

## Implied Share Price

Approach	Base	Downside	Upside
Perpetuity	\$390.62	\$224.79	\$532.53

## Enterprise Value to Equity Value

Enterprise Value	\$320,338.4
Less: Net debt	60,995.0
<b>Equity Value</b>	<b>\$259,343.4</b>
Diluted Shares Outstanding	487.0
<b>Equity Value Per Share</b>	<b>\$532.53</b>



# Multiples

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## Key Assumptions - CAT

Current Price	\$393.37
Shares Outstanding (M)	489
Debt (M)	67,973
Cash (M)	6,978
Revenue (M)	63,869
EBITDA (M)	16,140
Earnings	10,972

## Implied Stock Price

25 Percentile	202.85
75 Percentile	327.35
Mean	271.81

## SUMMARY

Metrics	Comps	Implied EV	Net Debt	Equity Value	Shares	Share Price
EV/Sales						
25 Percentile	1.9x	123,752.83	60,995.00	62,757.83	489	128.34
75 Percentile	2.4x	150,548.03	60,995.00	89,553.03	489	183.14
Mean	2.2x	138,730.74	60,995.00	77,735.74	489	158.97
EV/EBITDA						
25 Percentile	11.1x	178,978.67	60,995.00	117,983.67	489	241.28
75 Percentile	14.5x	234,188.80	60,995.00	173,193.80	489	354.18
Mean	13.2x	212,643.41	60,995.00	151,648.41	489	310.12
P/E						
25 Percentile	16.2x	177,839.66	60,995.00	116,844.66	489	238.95
75 Percentile	25.4x	278,477.59	60,995.00	217,482.59	489	444.75
Mean	21.0x	230,362.63	60,995.00	169,367.63	489	346.36



# Precedent Transactions

Investment Thesis

Business Model

Historicals

Industry Analysis

Governance

Risk and Growth

**Valuation**

Conclusion

## Key Assumptions - CAT

Current Price	\$393.37
Shares Outstanding (M)	489
Debt (M)	67,973
Cash (M)	6,978
Revenue (M)	63,869
EBITDA (M)	16,140
Earnings	10,972

## Implied Stock Price

25 Percentile	240.27
75 Percentile	304.93
Mean	276.44

## SUMMARY

Metrics	Comps	Implied EV	Net Debt	Equity Value	Shares	Share Price
EV/Sales						
25 Percentile		2.2x	141,931	60,995	80,936	489 165.51
75 Percentile		2.7x	170,317	60,995	109,322	489 223.56
Mean		2.6x	164,781	60,995	103,786	489 212.24
EV/EBITDA						
25 Percentile		13.3x	215,039	60,995	154,044	489 315.02
75 Percentile		15.5x	249,892	60,995	188,897	489 386.29
Mean		14.1x	227,568	60,995	166,573	489 340.64

