

CATERPILLAR®

Chase Webber
FIN-421-02
Caterpillar Inc. Stock Evaluation Project
8 May 2023

Catepillar Inc. | NYSE: CAT

Current Price : \$214.79*

*as of 5/8/23

Recommendation:

SELL

12-Mo. Target Price % : -7.19%

12-Mo. Target Price \$: \$199.35

Sector: Industrials

Industry: Machinery & Manufacturing

Profile *	(Figure 1, Blmg.)
Closing Price	\$214.79
52 Wk H/L	266.04/160.6
Mkt Cap	111,131.3M
Shrs Out	515.4M
Beta	1.09
12 Mo. EPS	16.16
12 Mo. Return	3.32%

Abstract

Catepillar Inc. (NYSE: CAT) is a global leader in construction machinery manufacturing, mining equipment, and engine production. Based on CAT's current and future economic outlook, a SELL is the recommended action, with \$199.35 being the 12-month target price. This valuation was estimated through a forecast of revenue growth (Figure 3) which gave findings (Figure 2) to estimate a 12-month target price. The valuation methodology used to determine the 12-month target price is broken down in Figure 2, also, all the multipliers' price ratios are based off the averages of CAT and John Deere. Though CAT has experiencing revenue growth in the past few years and still expecting growth, their stock price is forecasted to decrease. Reasoning for the decrease is CAT being a cyclical business -- when the economy is struggling, businesses like CAT struggle even more.

Findings *		
Model	Price (\$)	Weight (%)
FCF	133	25
MVA	188	25
P/B Price	216.93	12.5
P/Sales Price	259.55	12.5
P/EPS Price	249.02	12.5
P/EBIDA Price	227.58	12.5
Valuation	\$199.35	

(Figure 2, Analysis)



Key Financials (Figure 3, Ana.)

FY	2020	2021	2022	2023E	2024E	2025E	2026E
Revenue	39022 MM	48188 MM	56574 MM	63645 MM	65873 MM	70155 MM	73663 MM
Rev. Growth	-27.5%	23.5%	17.4%	12.50%	3.50%	6.50%	5%
EPS	\$ 6.56	\$ 10.81	\$ 13.84	\$ 14.64	\$ 15.15	\$ 16.14	\$ 16.95
NOPAT	\$ 3,908.69	\$ 4,414.40	\$ 6,527.85	\$ 6,812.27	\$ 7,050.70	\$ 7,508.99	\$ 7,884.44

Business Description

Caterpillar Inc. (NYSE: CAT), an American-based industrial company, is a global leader in construction machinery manufacturing, mining equipment, and engine production. Founded in 1925, CAT's primary goal has "been helping customers build a better, more sustainable world... for over 95 years." CAT constantly looks to improve themselves and the world around them. Now headquartered in Irving, Texas, CAT seeks to continue to produce innovative products and services that give customers the ability to succeed.

Products and Services

CAT currently offers more than 300 products and services to consumers, mainly focusing on Machinery, Energy, & Transportation. Today, there are more than four million CAT products in working condition spread throughout the globe (Appendix 3). CAT also has a portfolio that incorporates about 20 related brands, including machines, engines, services, and much more (Appendix 4). Interestingly enough, CAT has been producing a line of rugged smartphones since 2012. More specifically, Caterpillar Inc. has 2 different segments used for organizing their products and services in their business model: Machinery, Energy & Transportation and Financial Products, totalling 2022 sales and revenues of \$59.4B (Figure 4).

Machinery, Energy & Transportation

CAT specializes in resources for 3 different categories: construction industries, resource industries, and energy & transportation (Appendix 2); this sector of their business is referred to as ME&T (Appendix 2). CAT's construction industry's goal is giving customers the equipment to build what the "world needs", which include excavators and tractors. The resource industry offers customers tools to harvest resources; the product portfolio includes trucks, compactors, and heavy shovels. Finally, the energy & transportation segment delivers equipment for customers' constant innovating energy & transportation needs – the products in the energy & transportation sector include engines and trains.

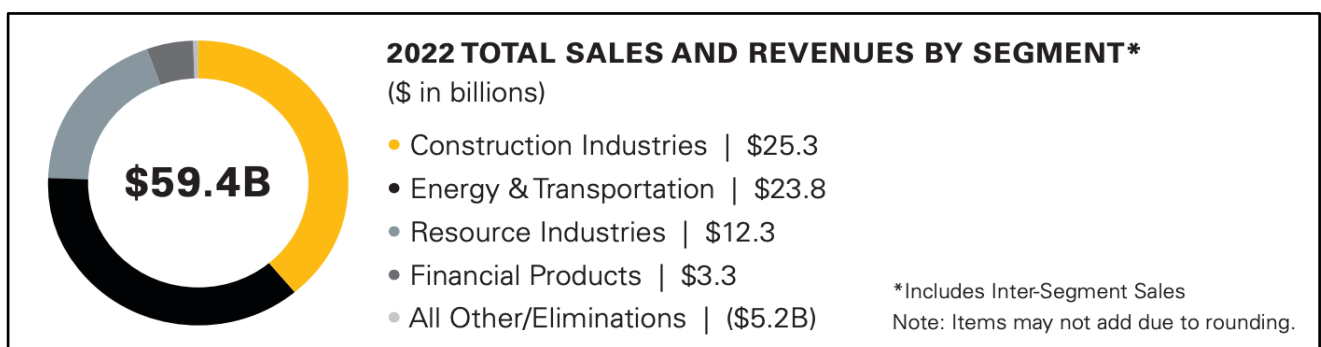
Financial Products

The majority of the financial products segment of CAT involves services provided through Caterpillar Financial Services Corp. (Cat Financial) (Appendix 2). Cat Financial provides retail loans and leases, as well as financing for CAT products and services. Cat Financial's retail loans include loans to customers for the use of CAT equipment and installment sale contracts, loans paid back in installments. Cat Financial's retail leases include both finance and tax leases to individuals looking to become owners of CAT equipment. CAT prides itself on the services they can provide through CAT Financial, as they believe this segment separates them from their competitors.

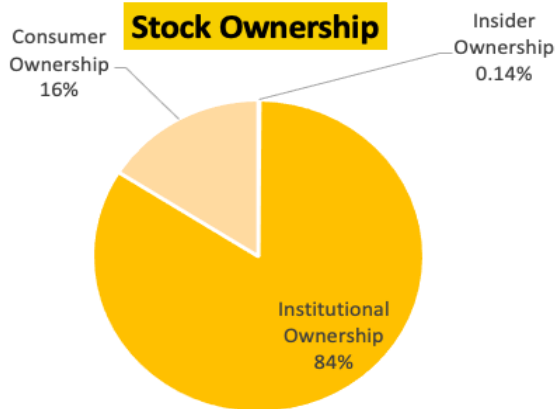
Corporate Governance

Being around for nearly 100 years, CAT has sought to build strong governance within the company. Recently, CAT moved their headquarters from Illinois to Texas to continue to build that strong governance. Chairman & CEO Jim Umpleby backed-up the movement, declaring that he "believe[s] it's in the best strategic interest of the company... and supports Caterpillar's strategy for profitable growth." Jim Umpleby became CEO and Chairman of the Board of Directors in 2017 and 2018, respectively, working alongside CFO Andrew Bonfield and Group President Denise Johnson.

(Figure 4, CAT.com)



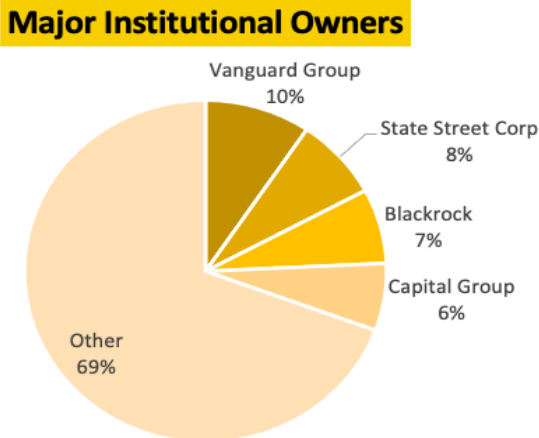
(Figure 5, Bloomberg)



Stock Ownership

The Board of Directors and high level executives do not own large shares of the company, 0.14%, a number that may be alarming to investors. Insiders owning only about 721,560 shares compared to the total number of outstanding shares of 515.4M is a ratio that may be a sign to potential investors that the company's highest executives do not have strong faith. Along with that, there have been numerous recent occasions of high-volume insider selling. However, there are many companies that continue to have faith in Caterpillar's success, with institutional owners and mutual fund holdings Vanguard Group, Inc., State Street Corp., and Blackrock Inc. all owning over 5% of CAT's total common stock (Figure 5). Owning 9.45%, 7.73%, 7.07%, respectively, institutional shareholders who have filed 13D/G or 13F forms with the SEC is over 83% of total shares, with nearly 3200 institutional owners owning 432.24M shares, proving CAT's credibility in the markets (Figure 6).

(Figure 6, Bloomberg)



Corporate Controversy

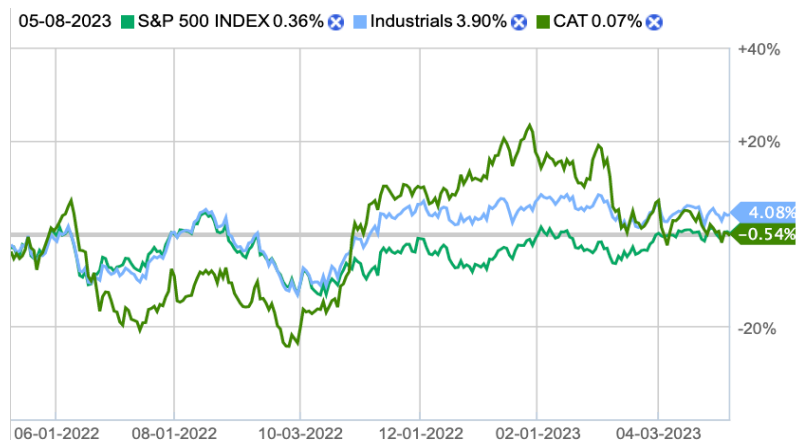
Caterpillar Inc. had a strenuous tax dispute with the IRS that lasted from tax years 2007 through 2016, and an agreement was finally reached in 2022. "On September 8, 2022... [CAT] reached a settlement with the... IRS that resolves all issues... without any penalties."ii CAT was ordered to pay \$490 million plus another \$250 million in interest.

Industry Overview & Competition Position

Caterpillar Inc. is in the industrial sector, one that thrives during expansion in the business cycle. In this sector, cyclical businesses like CAT and Deere & Company (DE) "should outperform"iii during expanding stages of the economy. CAT has a strong presence in the industrial sector, one that ranks in the top 10 in terms of market cap; compared to all 11 sectors, industrial market cap ranks in the top 5 (Figure 6). Because of this, CAT nearly mimics the movements of .GSPI, the S&P 500 Industrials Sector (Figure 7). CAT experiences competition amongst businesses in the industrial sector, as well as competing businesses in each category of ME&T.

(Figure 6, Fidelity)

Sector Performance		
Sector	Market Cap	1-Yr % Change
Com. Services	\$4.56T	-2.43%
Consumer Discretionary	\$6.82T	-6.27%
Consumer Staples	\$4.69T	-0.02%
Eneergy	\$3.36T	-2.03%
Financials	\$8.71T	-7.11%
Health Care	\$7.88T	2.05%
Industrials	\$5.74T	4.08%
Information Tech.	\$12.26T	7.36%
Materials	\$2.40T	-6.72%
Real Estate	\$1.37T	-17.18%
Utilities	\$1.67T	-4.86%



(Figure 7, Fidelity)

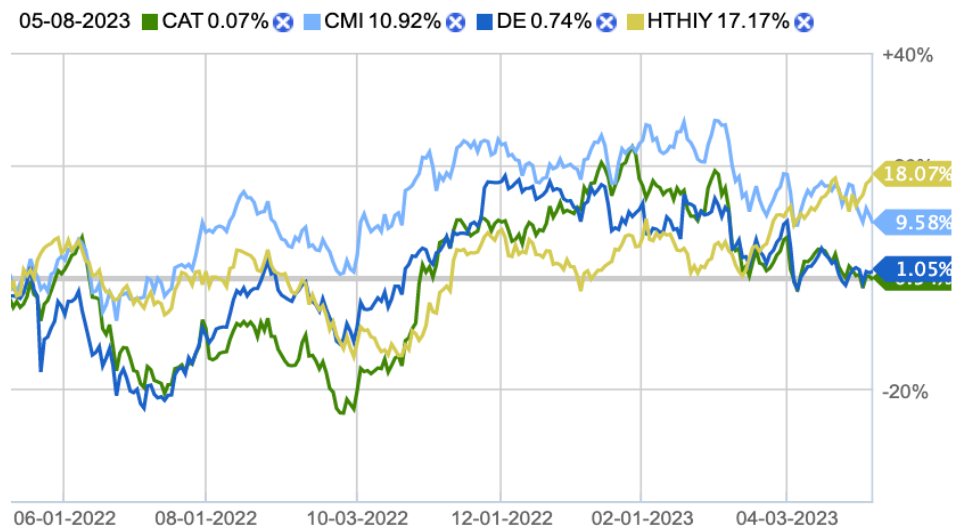
Industry Analysis

In terms of industry, CAT is a manufacturing industry. CAT falls under NAICS Code 333: Machinery Manufacturing, “where assembling is a key activity [and] parts and accessories for manufactured products are classified in the industry of the finished manufactured item.”ⁱⁱⁱⁱ More specifically, Caterpillar Inc.’s most informative codes NAICS: 333120, Construction Machinery Equipment, and NAICS: 333618, Other Engine Equipment Manufacturing, place themselves in an industry comprised of “establishments primarily engaged in manufacturing construction machinery [and] internal combustion engines”ⁱⁱⁱⁱ (Appendix 8). CAT also belongs to SIC Code 3531: Construction Machinery and Equipment. Like CAT, most of their competitors, including Deere, are in cyclical industries with high sensitivity to volatility in the markets and economic cycle.

Competitive Positioning

CAT performs in a highly competitive and cyclical industry, striving to be the most esteemed company in every product and service they offer. Caterpillar sells products and services worldwide, into extremely competitive markets, competing on many levels including services offered, quality, product performance, and much more. CAT believes that the services they offer is what sets them apart from the competition, proving how crucial Cat Financial is to the business model. Their services are defined “as the value [they] provide to customers after the equipment purchase”ⁱ, which is unique to every customer’s business model.

With that, CAT is aware that their ME&T line is constantly working under very high competitive pressure, which includes pricing. CAT believes that “no one competitor is believed to produce all of the same types of equipment that we do, there are numerous companies, large and small, which compete with us in the sale of each of our products” (10K). CAT’s three main publicly-traded competitors in the ME&T product and service industry would likely be DE, Hitachi, and Cummins (Figure 8). Caterpillar experiences great competition from Deere & Company and Hitachi in both the construction and resource industry, through Deere Construction and Forestry and Hitachi Construction Machinery Co., respectively;



(Figure 8, Fidelity)

CAT’s principal competitor in the energy and transportation sector is Cummins Inc.. Though Caterpillar has many competitors in every product and service they offer, its most relatable competitor in terms of business model and financials would be John Deere (Figure 9).

Comparison to DE

Company	Stock Price	Shrs. Out.	Mkt. Cap.	P/E	T12M EPS	Inst. Owners	ROA	ROE
Caterpillar Inc.	\$217.49	515.4M	111,131.3M	13.34	16.16	83.90%	8.60%	40.40%
Deere & Company	\$380.25	296.3M	112,676.5M	14.28	26.62	86.70%	9.60%	41.80%

(Figure 9, Bloomberg)

Determinants of Competition

Better known as Porter's Five Forces, is a model that can determine the level of competition an industry/company faces. With the *Five Forces* being: 1. Threat of entry, 2. Rivalry between existing competitors, 3. Pressure from substitute products, 4. Bargaining power of buyers, and 5. Bargaining power of suppliers; a company like CAT can determine their competitive stance in the massive industry of machinery & manufacturing.

- 1. Threat of Entry: Low** – Being around for nearly 100 years and having many products and services to customers, CAT has proven themselves to allow them to stand on top of the industry. The machinery and manufacturing industry's top companies are ones that have been around for multiple decades. Due to how trusted and long standing CAT is, they are not worried about new entrants to the industry.
- 2. Rivalry between existing competitors: Medium** – Though CAT does not have many competitors that mirror their business model, CAT has rivals in its industry. Cummins directly competes with CAT in producing engines. Deere & Company, more commonly known, also manufactures machinery and both companies' machines are commonly seen. DE being known for their green machines, and CAT their yellow, are both very well-known and compete with each other to produce top-of-the-line products.
- 3. Pressure from substitute products: Low** – CAT believes that there is no one company that offers the amount of products and services as they do. Because of this, there is no company that can deliver to consumers what CAT delivers, so there is no substitute company for Caterpillar. Again, though there may be companies who produce similar products to CAT, there is no one substitute to the world-renown Caterpillar Inc..
- 4. Bargaining power of buyers: High** – As a cyclical business, CAT is extremely susceptible to consumer's buying power. In periods of economic downfall, CAT knows and has stated that their sales and revenues will drastically decrease, which shows the power the buyers hold. Bargaining power of buyers is the highest level of competition CAT faces because if consumers stop buying, CAT will fall.
- 5. Bargaining power of suppliers: Low** – CAT experiences very low levels of competition from bargaining power of suppliers, because they are the suppliers to other companies. CAT sells their products to original equipment manufacturers (OEMs) to create the final product. Of course, CAT still needs suppliers to build the products they send to OEMs and consumers, but CAT has been using the same reliable suppliers for decades.

Investment Summary

Given Caterpillar's and economy's future outlook, a **SELL** is the recommended investment action. Though CAT's revenue has been increasing in the past couple years and is still expected to grow throughout 2023 (growth chart), in the next 12 months, CAT's stock price is expected to fall by 7.19%. With the economy at the brink of a recession, a cyclical business like CAT is one that could still struggle with growing revenue.

Sustainability

Though CAT's stock may not be trending upwards, CAT's sustainability and social governance has been. Per Bloomberg, CAT has a *leading* Governance score at 7.67, which is a good indicator that CAT has been an industry leader for decades. But, Caterpillar is still seeking to improve their environmental and social scores; they are looking to do this by 2030, where all their products produced will be fully sustainable. Along with this, CAT has been in the early stages of producing a zero-emission autonomous mining truck to help support Rio Tinto in Australia. Group President Denise Johnson announced that since these trucks are the most plentiful machinery on job sites and creating the most emissions, she hopes the company will be fully producing these trucks to all consumers by 2025. Also, in 2021 Biden announced the Bipartisan Infrastructure Deal for the US, with over \$1T in its budget, which requires infrastructure advancements to be made in the US. CAT will likely be able to reap some benefits from this deal, since their products are commonly used across America for construction & infrastructure. If CAT can successfully accomplish these goals and remain strong with recession worries and/or taking place in the near future, CAT's stock price may reflect how strong they are. But, with uncertainty in our economy and dealers not expected to increase their inventory much in 2023, it is recommended that shareholders look to sell in the near future.

Valuation

A target price of \$199.35 was found using multiple valuation techniques. These techniques consist of Free Cash Flow (FCF), Market Value Added (MVA), and the Multipliers' P/B Price, P/Sales Price, P/EPS Price, and P/EBIDA Price. CAT, a large cap industrial stock, does not have many comparable companies besides John Deere – the multiplier prices seen are a combination of both CAT and DE's financials. A forecasted value of \$133 was found through the **FCF** model (Appendix 5), \$188 for the **MVA** model (Appendix 6), and an average of \$238.27 for the multipliers' prices (Appendix 7). The two valuation techniques clearly represent that the stock price of CAT is currently overvalued and shareholders should look to sell before the price drops further. In order to determine the final target price, a weighted average was taken of all these values, with the two valuation models each holding ¼ of the weight and each multiplier price holding ¼ of the total weight (Figure 2). Finally, the weighted average outputted a 12-month target price of \$199.35, or a 7.19% decrease from the current price, \$214.79 (Figure 10).

Financial Analysis

CAT ended 2022 with sales and revenues totalling \$59.4B, noticing an increase in all categories of ME&T and their Financial products from 2021 to 2022, which net a 17% increase in revenue. Since COVID eased-up near the end of 2021, CAT has been thriving off of revenue growth, but during COVID, CAT struggled. Noticing over a 22% decrease in sales and revenues from 2019 to 2020, this once again demonstrated that CAT is a cyclical business, majorly affected by changes in the economy (Figure 11). But, CAT is still expecting growth to increase, on the basis of their upcoming zero-emission products and the Infrastructure Deal. In CAT's 10-K they predicted that Q1 would have the lowest amount of sales throughout 2023; 2023 Q1 sales and revenues ended up over 17% higher than 2022 Q1 sales and revenues. With all of these factors in mind, including their sustainability notes and a recession in the US economy looming, CAT's sales and revenues are expected to grow by 12.5% from 2022 to 2023 (Figure 12). This revenue forecast was created by: looking at historic trends of CAT's yearly revenue growth; company, industry, and economy news; and with the expectation that the US GDP will fall in 2023, resulting in a drop in Caterpillar Inc.'s revenue.

Forecast Data					
Year	1	2	3	4	5
g	12.50%	3.50%	6.50%	5.00%	2.50%

(Figure 12, Analysis)



(Figure 11, Analysis & 10K)

	P 0	P 1	Include
DDM			NO
FCFM	\$ 130	\$ 133	YES
RIM			NO
MVAM	\$ 158	\$ 188	YES
Average	\$ 144	\$ 160.43	

Multipliers' Prices			
P/B Price	\$ 216.93	\$ 216.93	YES
P/Sales Price	\$ 259.55	\$ 259.55	YES
P/EPS Price	\$ 249.02	\$ 249.02	YES
P/FCF Price	\$ 773.18		NO
P/EBIDA Price	\$ 227.58	\$ 227.58	YES
Average		\$ 238.27	

EPS1/K	\$ 153.06	
Average	\$ 191.27	\$ 199.35

(Figure 10, Analysis & Bloomberg)

Inventory Management

CAT's balance sheet provides relevant information about their methodology for optimizing all aspects of inventory. Given CAT's business model, cost of goods sold (COGS) clearly would be the largest operating cost within their business. COGS in 2022 equated to \$41,350 million, or over 80% of the total operating costs. Continuing, CAT uses a last-in, first-out (LIFO) method for the majority of their inventory (65%) to determine inventory cost. The LIFO method assumes that the most recent inventory purchased is also the first to be sold. LIFO, compared to FIFO, increases the speed at which you can move items from the balance sheet to income statement, which then increases cash flow and decreases tax. Taxable income is decreased due to COGS increasing, which would then decrease gross profit. Inventory ended 2022 at \$16,270 million, and would have been \$3,321 million higher if the FIFO method was used; LIFO provides better results for CAT's business model because they need to be constantly producing innovative products for consumers. Using LIFO, CAT's earnings do not look as exciting but they become much more tax efficient. (Appendix 9)

CAT also uses straight-line (SL) depreciation methods on their inventory, where CAT's products depreciate at a constant value during its useful life. Since CAT uses SL, their average useful life can be found given their depreciable asset cost and expense. In 2022 and 2021 CAT's average useful life for their depreciable assets (not including land or construction-in-progress) was 13.64 yrs. and 13.37 yrs., respectively. Comparing these numbers to its closest competitor, DE, who had an average useful life of 16.15 yrs. in 2022 and 13.58 yrs. in 2021, CAT may be struggling here. However, if you compare CAT and DE's PPE percent used up in 2022 and 2021, 60.69% and 61.22% v 62.84% and 62.58%, CAT has used up less assets. Though there are slight differences between CAT and DE's average useful life and percent used up, they are very comparable and better than the industry average as they are strong, renowned corporations.

2022 Inventory Management		
Ratio	CAT	DE
Avg. Useful Life	13.64 yrs.	16.15 yrs.
PPE % Used up	60.69%	62.86%

(Figure 13, 10-K)

Investment Risk

Like all businesses, especially cyclical ones, CAT understands there are many potential risks that could negatively impact their business. CAT has several risks associated with their business that can be separated into four categories: macroeconomic, operational, financial, and finally, the risk of investing in Caterpillar Inc..

Macroeconomic Risks

Mainly having to do with economic policies of a country, CAT experiences several macroeconomic risks. CAT's main macroeconomic risk is that they are a cyclical business, highly susceptible to volatility in both the US and global economy. CAT is also subject to global catastrophic events not in their control, like COVID-19. The COVID-19 pandemic severely affected CAT (Figure 11, 2020-2021 revenue drop) and now "has led to volatility in customer demand for the Company's products and services" ii. CAT is also subject globally to government policy and political risks that could potentially negatively impact their business. CAT's main global risks have to do with interest rates and exchange rates. If foreign central banks decide to adjust interest rates, CAT's entire economic growth will be affected due to how heavily interest rates affect consumer purchasing decisions. Fluctuating exchange rates can also harm CAT and are normally the aftermath of changes in monetary and/or fiscal policies of a foreign government.

Operational Risks

Though CAT has been around for nearly 100 years, they are still subject to operational risks. It is important to note that corporations who have been around for a long time should not get too comfortable and always be aware of possible risks within their business operations. CAT's success is dependent on them constantly producing "high quality, innovative, [and] competitive products to the marketplace" ii; failure to do this would result in a negative outlook on the business and their operations. CAT is also subject to inventory, supply, and employee issues that could disrupt their business flow.

Financial Risks

Aa cyclical business, CAT is dependent on a strong economy in the US and worldwide – unexpected volatility in the markets, interest rates, or exchange rates can be very harmful to CAT’s earnings and liquidity levels. Due to constant pressing financial risk, CAT and CAT Financial both heavily rely on their credit ratings. CAT Financial too is also subject to risks associated with the financial industry. Credit ratings represent the risk associated with the borrower to cover their financial obligations from the perspective of the creditor. Since 2009 and per Fitch Ratings, CAT and CAT Financial’s issuer default rating has been an A, which represents high credit quality, relatively low borrowing costs, and lower default risk. CAT also has a rating of A2 and A from Moody’s and S&P, respectively (Figure 14). Though CAT can reap the benefits of this rating, CAT has noticed their rating fall through history (Appendix 10), causing borrowing costs to increase.

Investing Risks

Caterpillar Inc., listed on the NYSE in 1929, has been a reliable American company for almost 100 years. But, in terms of the next 12 months, current shareholders should look to sell soon. CAT is a cyclical company, and with uncertainty in the United States economy, CAT could be subject to harmful repercussions, including slowed revenue growth and decreased stock price. Along with uncertainty in our economy, CAT recently hit an all-time high stock price only 4 months ago, and it is not expected that CAT will return to that value in the next 12 months. CAT continues to seek to be a fully-sustainable company, which would then increase their public image and hopefully stock price. But, CAT is still far away from being there and because of that, investors should stay away from the stock too.

Credit Ratings	Rating
Fitch	A
Moody's	A2
S&P	A

(Figure 14, Bloomberg)

Appendix 1: Citations

i = "Caterpillar Inc." *CAT*, <https://www.caterpillar.com/>.

ii = "Caterpillar Inc. 10-K." *SEC Edgar*,

<https://www.sec.gov/ix?doc=%2FArchives%2Fedgar%2Fdata%2F18230%2F000001823023000011%2Fcat-20221231.htm>.

iii = Bodie, Zvi, et al. *Investments, 12th Edition*. McGraw-Hill, 2022.

iiii = "NAICS Association." *NAICS*, <https://www.naics.com/>.

Appendix 2: Glossary

Construction Industries: “A segment primarily responsible for supporting customers using machinery in infrastructure and building construction applications. Responsibilities include business strategy, product design, product management and development, manufacturing, marketing and sales and product support. The product portfolio includes asphalt pavers; backhoe loaders; compactors; cold planers; compact track and multi-terrain loaders; mini, small, medium and large track excavators; forestry machines; material handlers; motor graders; pipelayers; road reclaimers; skid steer loaders; telehandlers; small and medium track-type tractors; track-type loaders; wheel excavators; compact, small and medium wheel loaders; and related parts and work tools.” ii

Resource Industries: “A segment primarily responsible for supporting customers using machinery in mining, heavy construction and quarry and aggregates. Responsibilities include business strategy, product design, product management and development, manufacturing, marketing and sales and product support. The product portfolio includes large track-type tractors; large mining trucks; hard rock vehicles; longwall miners; electric rope shovels; draglines; hydraulic shovels; rotary drills; large wheel loaders; off-highway trucks; articulated trucks; wheel tractor scrapers; wheel dozers; landfill compactors; soil compactors; select work tools; machinery components; electronics and control systems and related parts. In addition to equipment, Resource Industries also develops and sells technology products and services to provide customers with fleet management, equipment management analytics, autonomous machine capabilities, safety services and mining performance solutions. Resource Industries also manages areas that provide services to other parts of the company, including strategic procurement, lean center of excellence, integrated manufacturing, research and development for hydraulic systems, automation, electronics and software for Cat machines and engines.” ii

Energy & Transportation: “A segment primarily responsible for supporting customers using reciprocating engines, turbines, diesel-electric locomotives and related services across industries serving Oil and Gas, Power Generation, Industrial and Transportation applications, including marine- and rail-related businesses. Responsibilities include business strategy, product design, product management, development and testing manufacturing, marketing and sales and product support. The product and services portfolio includes turbines, centrifugal gas compressors, and turbine-related services; reciprocating engine-powered generator sets; integrated systems and solutions used in the electric power generation industry; reciprocating engines, drivetrain and integrated systems and solutions for the marine and oil and gas industries; reciprocating engines, drivetrain and integrated systems and solutions supplied to the industrial industry as well as Cat machinery; electrified powertrain and zero-emission power sources and service solutions development; and diesel-electric locomotives and components and other rail-related products and services, including remanufacturing and leasing. Responsibilities also include the remanufacturing of Caterpillar reciprocating engines and components and remanufacturing services for other companies; and product support of on-highway vocational trucks for North America.” ii

Financial Products Segment: “Provides financing alternatives to customers and dealers around the world for Caterpillar products and services, as well as financing for vehicles, power generation facilities and marine vessels that, in most cases, incorporate Caterpillar products. Financing plans include operating and finance leases, installment sale contracts, repair/rebuild financing, working capital loans and wholesale financing plans. The segment also provides insurance and risk management products and services that help customers and dealers manage their business risk. Insurance and risk management products offered include physical damage insurance, inventory protection plans, extended service coverage and maintenance plans for machines and engines, and dealer property and casualty insurance. The segment also earns revenues from Machinery, Energy & Transportation, but the related costs are not allocated to operating segments. Financial Products’ segment profit is determined on a pretax basis and includes other income/expense items.” ii

Machinery, Energy & Transportation (ME&T) – “The company defines ME&T as Caterpillar Inc. and its subsidiaries, excluding Financial Products. ME&T’s information relates to the design, manufacturing and marketing of its products.” ii

Appendix 3: Global Distribution

PRODUCT LINE



4M+

Cat[®] Products
at Work Around
the World*

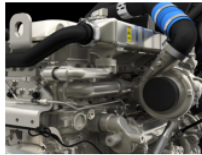
* Includes discontinued products.



Construction
Equipment



Mining
Equipment



Off-highway
Diesel & Natural
Gas Engines

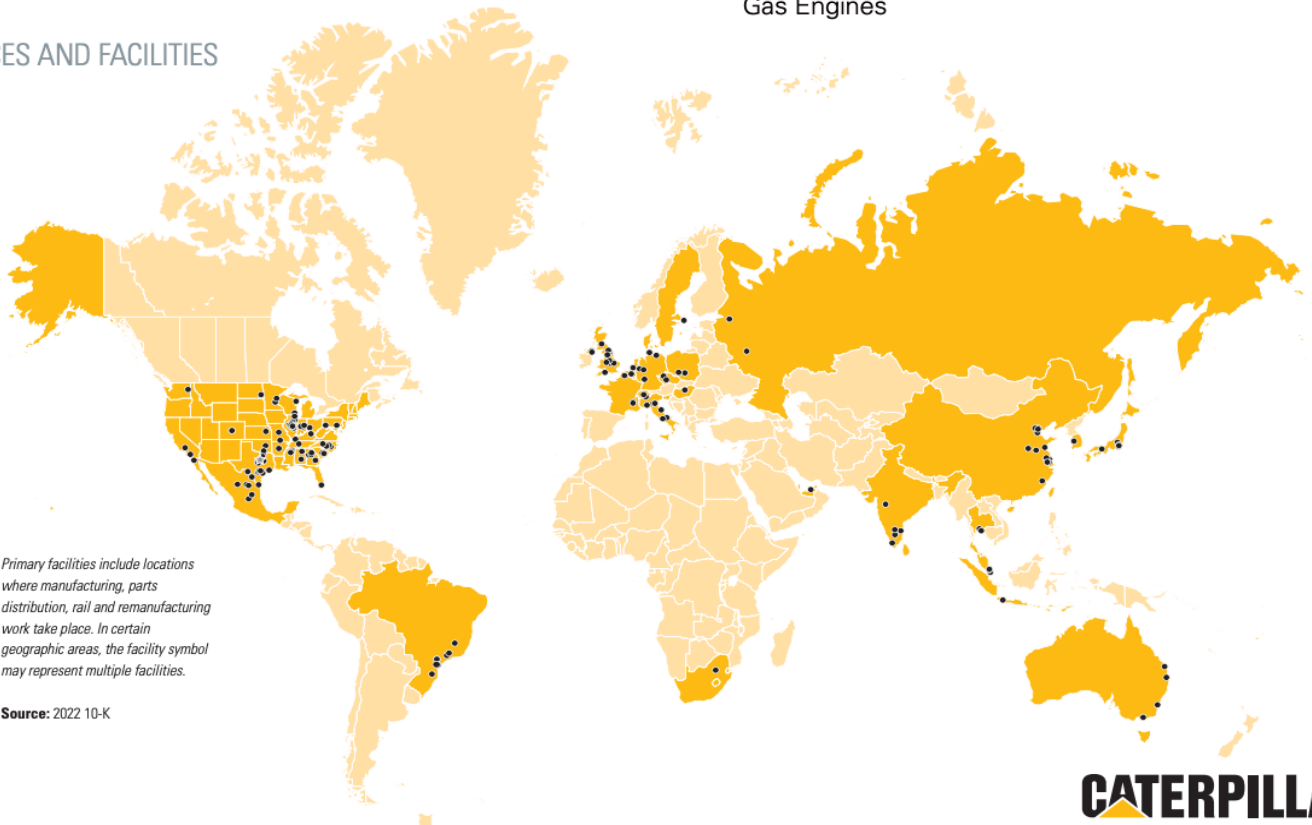


Industrial Gas
Turbines



Diesel-Electric
Locomotives

OFFICES AND FACILITIES



Primary facilities include locations where manufacturing, parts distribution, rail and remanufacturing work take place. In certain geographic areas, the facility symbol may represent multiple facilities.

Source: 2022 10-K

CATERPILLAR[®]

Appendix 4: Product Portfolio

CATERPILLAR FAMILY OF BRANDS

Caterpillar Inc. has a portfolio of brands offering machines, engines, components, services and solutions to meet the unique needs of a variety of industries and customers around the world. To learn more about our family of brands, visit caterpillar.com/brands.



HINDUSTAN



Progress Rail
A Caterpillar Company



Solar Turbines
A Caterpillar Company

SPM Oil & Gas
A Caterpillar Company



Appendix 5: FCF

Year	0	1	2	3	4	5
g		12.50%	3.50%	6.50%	5.00%	2.50%
FCF	\$ 6,356.00	\$ 6,156.55	\$ 6,372.03	\$ 6,786.21	\$ 7,125.52	\$ 7,303.66
WACC		7.861%				
Horizon Value (Vop 4)					\$ 136,249.62	
PV		\$5,707.88	\$5,477.13	\$5,408.04	\$105,931.26	
			\$5,907.66	\$5,833.14	\$114,257.99	
		Vop	\$ 122,524.32	\$125,998.79		
+		Short-Term Investments	\$ -	\$ -		
+		Non-Operating Assets	\$ 9,254.00	\$ 7,004.00		
		Value of Firm	\$ 131,778.32	\$ 133,002.79		
-		Total debt	\$ 37,572.00	\$ 37,572.00		
-		Preferred Equity and Minority Interest	\$ (26,967.00)	\$ (26,967.00)		
-		Value of Equity	\$ 67,239.32	\$ 68,463.79		
		Current Shares Outstanding	515.36	515.36		
		FCF Price	\$ 130.47			
		12-month Target		\$ 132.85		

Appendix 6: MVA

Year	0	1	2	3	4	5
g		12.50%	3.50%	6.50%	5.00%	2.50%
NOPAT	\$ 6,527.85	\$ 6,812	\$ 7,051	\$ 7,509	\$ 7,884	\$ 8,082
Capital	53,463.0000	\$ 70,365	\$ 72,827	\$ 77,561	\$ 81,439	\$ 83,475
WACC		7.86%				
EROICt = NOPAT t+1 /Capital t		10.020%	10.311%	10.165%	9.923%	9.923%
MVA		\$ 1,519.68	\$ 1,784.39	\$ 1,787.74	\$ 1,680.01	\$ 1,722.01
Horizon Value MVA					\$ 32,124.12	
PV		\$1,408.93	\$1,533.78	\$1,424.68	\$24,975.84	
MVA0		\$29,343.23				
MVA1		\$30,130.07	\$1,654.35	\$1,536.66	\$26,939.06	
	P0	P1				
Vop = MVA + Capital =	\$82,806	\$100,494.79				
Vop	\$ 82,806	\$100,495				
Short-Term Investments		\$ -				
Non-Operating Assets	\$ 9,254.00	\$ 7,004.00				
Value of Firm	\$ 92,060	\$ 107,499				
Total debt	\$ 37,572	\$ 37,572				
Preferred Equity and Minority Interest	\$ (26,967)	\$ (26,967)				
Value of Equity	\$ 81,455	\$ 96,894				
Current Shares Outstanding	515.36	515.36				
MVA Price	\$ 158.06					
12-month Target		\$ 188.01				

Appendix 7: Market Multipliers

	Competitors' Average Multipliers	Price
PX_TO_BOOK_RATIO	7.05855	\$ 216.93
PX_TO_SALES_RATIO	2.30125	\$ 259.55
PX_TO_EPS_BEFORE_ABNORMAL_ITEMS	17.58145	\$ 249.02
PX_TO_FREE_CASH_FLOW	78.8442	\$ 773.18
PX_TO_EBITDA	11.63055	\$ 227.58
	Average	238.2709165

Appendix 8: NAICS Chart

DUNS#: 00-507-0479	
Company Name: Caterpillar Inc	Tradestyle: Caterpillar
Top Contact: Restricted	Title: Restricted
Street Address: 510 Lake Cook Rd Ste 100, Deerfield IL 60015	
Phone: Restricted	
URL: www.caterpillar.com	
Total Emps: 97,300	Emps On Site: 1,176
Sales Volume: \$50,971,000,000	
Public/Private: Public	Year Started: 1925
Lat: 42.1557734	Long: -87.8407778
NAICS 1: 333120	Construction Machinery Manufacturing
NAICS 2: 333618	Other Engine Equipment Manufacturing
SIC 1: 35310000	Construction machinery
SIC 2: 35190102	Engines, diesel and semi-diesel or dual-fuel
Number of Family Members: 576	
Date of Report: 2022-07-01	

Appendix 9: Balance Sheet

	2022	2021
Assets		
Current assets:		
Cash and cash equivalents	\$ 7,004	\$ 9,254
Receivables – trade and other	8,856	8,477
Receivables – finance	9,013	8,898
Prepaid expenses and other current assets	2,642	2,788
Inventories	16,270	14,038
Total current assets	43,785	43,455
Property, plant and equipment – net	12,028	12,090
Long-term receivables – trade and other	1,265	1,204
Long-term receivables – finance	12,013	12,707
Noncurrent deferred and refundable income taxes	2,213	1,840
Intangible assets	758	1,042
Goodwill	5,288	6,324
Other assets	4,593	4,131
Total assets	\$ 81,943	\$ 82,793
Current liabilities:		
Short-term borrowings:		
Machinery, Energy & Transportation	\$ 3	\$ 9
Financial Products	5,954	5,395
Accounts payable	8,689	8,154
Accrued expenses	4,080	3,757
Accrued wages, salaries and employee benefits	2,313	2,242
Customer advances	1,860	1,087
Dividends payable	620	595
Other current liabilities	2,690	2,256
Long-term debt due within one year:		
Machinery, Energy & Transportation	120	45
Financial Products	5,202	6,307
Total current liabilities	31,531	29,847
Long-term debt due after one year:		
Machinery, Energy & Transportation	9,498	9,746
Financial Products	16,216	16,287
Liability for postemployment benefits	4,203	5,592
Other liabilities	4,604	4,805
Total liabilities	66,052	66,277
Shareholders' equity		
Common stock of \$1.00 par value:		
Authorized shares: 2,000,000,000		
Issued shares: (2022 and 2021 – 814,894,624 shares) at paid-in amount	6,560	6,398
Treasury stock: (2022 - 298,549,134 shares; and 2021 - 279,006,573 shares) at cost	(31,748)	(27,643)
Profit employed in the business	43,514	39,282
Accumulated other comprehensive income (loss)	(2,457)	(1,553)
Noncontrolling interests	22	32
Total shareholders' equity	15,891	16,516
Total liabilities and shareholders' equity	\$ 81,943	\$ 82,793

Appendix 10: Historic Fitch Credit Ratings

Fitch Credit Ratings		
Year	CAT	CAT Financial
1976	AA	
1978	AA+	
1982	AA-	
1983	A+	
1984	A-	
1995	A	
1997	A+	
2001	A+	
2002	A+	
2003	A+	A+
2004	A+	A+
2005	A+	A+
2006	A+	A+
2007	A+	A+
2008	A+	A+
2009	A	A
2010	A	A
2011	A	A
2012	A	A
2013	A	A
2014	A	A
2015	A	A
2016	A	A
2017	A	A
2018	A	A
2019	A	A
2020	A	A
2021	A	A
2022	A	A