

KEYVALUE
GLOBAL RESEARCH

Equity Research

ANALYSIS OF CATERPILLAR INC.

DATE:
18/12/2024

[Keyvalueam.com](https://www.keyvalueam.com)

Hold: \$345,5(-8,82%)

Equity Research Division
18/12/2024

Summary

UNITS

Country	United States
Sector	Construction Machinery
Current Price	378,92 \$
Target Price	345,50 \$
Downside	-9% %
Ticker	CAT
Stock Exchange	NYSE

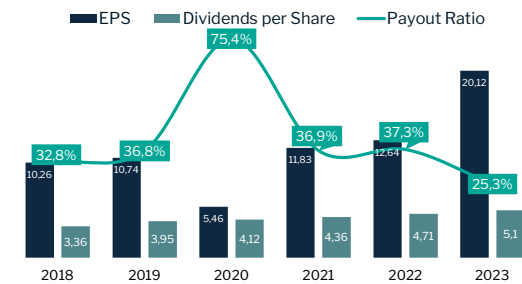
Shares Outstanding	496 m
Market Capitalization	187.793 m
EPS (2023)	20,1 \$



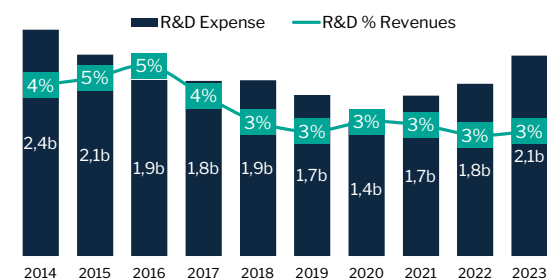
Analyst: Gabriele Bondanza
Team Leader: Filippo Sciarpa
Head of Equity Research: Marco Tempestini



Source: Team Analysis



Source: Company data, Team Analysis



Source: Company data, Team Analysis

INVESTMENT SUMMARY

We issue a HOLD recommendation for Caterpillar with a one-year target price of \$345.50, representing a -13.08% downside from the closing price of \$397.49 on 22/11/2024. The target price is based on a DCF method and supported by Relative Valuation. Our recommendation is driven by the following key factors:

1. Caterpillar's strong market position where it remains the leader in the construction and mining sectors
2. Growth, Opportunities and threats, understanding Caterpillar's ability to capitalize on them
3. Sector Dynamics and Competition taking into account Caterpillar's positioning and long-term resilience

OPERATIONAL AND FINANCIAL SOLIDITY

Caterpillar is a solid company with a proven track record of creating long-term value for its shareholders. Operationally, it remains the global leader in heavy machinery and equipment, with a dominant market position in the U.S., where it continues to benefit from its unmatched dealer network and strong customer loyalty. However, despite its operational strengths, Caterpillar faces potential challenges in securing raw materials due to global supply chain disruptions and rising input costs. These challenges could constrain production and affect margins, especially as the company expands into international markets.

Financially, Caterpillar is in a strong position, supported by robust cash flows, a solid balance sheet, and intelligent capital allocation. The company's ability to manage costs effectively has helped stabilize its performance in turbulent markets.

Despite this operational excellence and financial resilience, current macroeconomic uncertainties suggest limited upside in the near term, leading to a balanced risk-reward profile. As such, a hold recommendation is appropriate, reflecting confidence in Caterpillar's stability but caution regarding its near-term growth potential. In issuing a hold rather than a sell recommendation, we also considered the stock's recent price history. Notably, events such as Trump's election to the White House provided a significant boost to the broader stock market. We factored in that Caterpillar's stock price benefited from this boost despite no fundamental drivers significantly changing.

GROWTH OUTLOOK

Caterpillar's growth outlook reflects a challenging environment, with revenue trends pointing to slow expansion in the medium term. From 2018 to 2023, the company achieved a CAGR of 4.2% in revenues, but the latest LTM data shows a decline of 2%. Looking forward, we project a modest recovery, with revenues expected to grow at a 2.5% rate by 2028, translating to a flat CAGR of 0% from 2023 to 2028, indicating limited top-line momentum.

Despite sluggish revenue growth, we anticipate improvements in Caterpillar's cost efficiency. A declining COGS as a percentage of revenue should support margin expansion, driving an expected 2.4% CAGR in EBIT over the same period. Net income is forecasted to grow at a slightly stronger rate of 3.7% CAGR from 2023 to 2028, though this is significantly lower than the 11% CAGR achieved during the 2018-2023 period. As a mature and well-established company, Caterpillar's ability to grow its top line is constrained, though its operational excellence enables it to protect margins. However, the company must capitalize on market opportunities to avoid losing market share, particularly as competition intensifies and economic uncertainties persist. While Caterpillar's focus on efficiency and profitability is commendable, its long-term growth outlook remains moderate, with risks tied to its ability to drive innovation and adapt to evolving market dynamics.

REWARDING SHAREHOLDERS

Caterpillar has demonstrated a consistent commitment to rewarding its shareholders, making it a cornerstone of the company's strategy. Over the past decade, Caterpillar has repurchased approximately \$27 billion worth of shares, with an impressive \$5 billion spent on buybacks in 2023 alone. This robust buyback program not only returns capital to shareholders but also enhances EPS by reducing the number of outstanding shares.

Dividends are another crucial pillar of Caterpillar's shareholder reward strategy. The company has steadily increased its dividend payments, with dividends per share rising from \$2.7 in 2014 to \$5.1 in 2023. This reflects both Caterpillar's profitability and its focus on providing reliable income to shareholders. During the same period, EPS saw significant growth, increasing from \$3.9 in 2014 to \$20.1 in 2023. This trend is expected to continue, supported by Caterpillar's operational strength and disciplined capital management.

Caterpillar's ability to consistently reward shareholders highlights its financial solidity and commitment to delivering value. By balancing aggressive buybacks with growing dividends, Caterpillar has positioned itself as a leader in shareholder returns within the industrial sector. We expect this strategy to persist, further reinforcing investor confidence in the company's long-term vision.

NEW OPPORTUNITIES

Caterpillar faces a key moment, as stagnant revenues highlight the need to focus on new growth areas. The first opportunity is the growing demand for integrated systems, IT solutions, and after-sales support and maintenance. More clients are looking for technologies that help control their machinery and connect with other devices. Caterpillar must continue to add these advanced features to its products, providing more than just machinery and offering valuable services that improve customer operations.

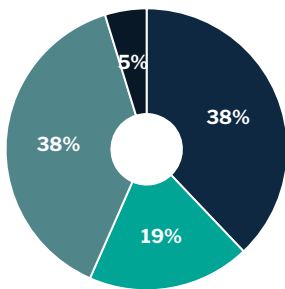
The second opportunity lies in global expansion, particularly in Asia, the biggest and fastest-growing market. Caterpillar needs to strengthen its position in this region, either by expanding its dealer network or through acquisitions.

Business Model

OVERVIEW

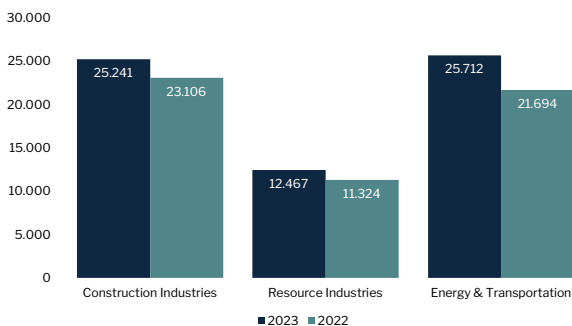
Caterpillar Inc. is the world's largest construction and mining equipment company, headquartered in Irving, Texas. Founded 100 years ago, Caterpillar has undergone multiple mergers, splits, and divestitures that have shaped it into the company it is today. Originally producing steam tractors, Caterpillar now offers a diverse range of products and services related to construction, mining, energy, and financing. The company has a vast distributor network spanning 190 countries, ensuring its solutions reach clients worldwide.

Revenues by sector 2023

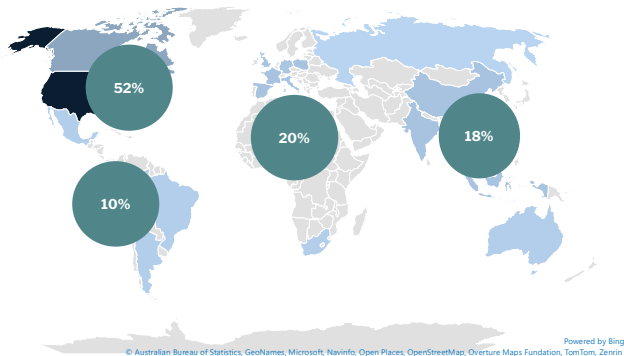


■ Construction Industries ■ Resource Industries
■ Energy & Transportation ■ Financial Products

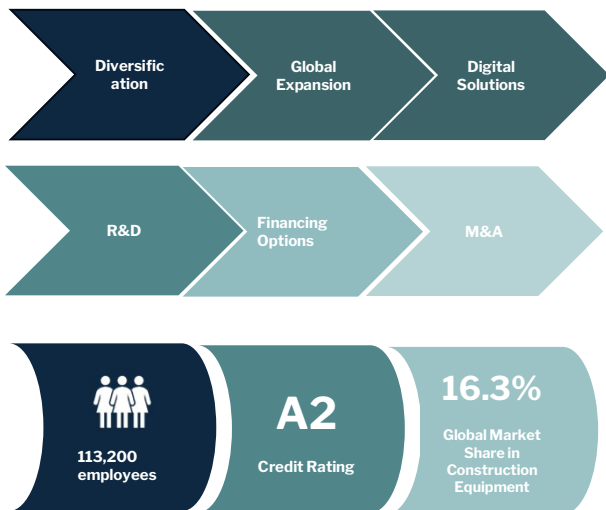
Source: 10K



Source: Company Data, Team Analysis, Statista



Source: Company Data



Source: Company Data, Moody's, Team Analysis, Statista

BUSINESS SEGMENTS & GEOGRAPHIC REACH

Cat's offerings are divided into: A. Machinery, Energy & Transportation, and B. Financial Products.

A1. Construction Industries: Cat's offerings for the construction segment are comprehensive and customizable, catering to a variety of project needs. It includes asphalt pavers, excavators of various types, forestry machines, compactors, pipelayers, and a range of loaders, all available in different sizes to accommodate projects of various scales. Additionally, Cat provides integrated systems to manage and optimize the use of this machinery, ensuring efficient operations on the job site.

A2. Resource Industries: This product line is specifically designed for mining and quarrying operations. It includes electric and hydraulic shovels, rotary drills, off-highway and articulated trucks, dragline excavators, soil compactors, and various work tools and machinery components. Cat also provides essential safety devices and integrated fleet management systems, allowing operators to monitor and control their equipment efficiently, enhancing productivity and reducing downtime.

A3. Energy & Transportation: Cat's offerings in this category support energy production and transportation infrastructure. This includes piston engines, turbines, centrifugal gas compressors, and systems for the electric power generation industry. Cat also provides diesel locomotives, rail-related products, and services designed to enhance the efficiency and reliability of energy transport and generation across industries, ensuring optimal performance in demanding environments.

B. Financial Products: Cat Financial is a subsidiary of Caterpillar that provides financing options to customers and dealers to purchase Cat products. It also finances large mining and construction projects in which Cat is involved. For retail customers, Cat Financial offers working capital loans, capital loans, finance leases, and operating leases. For wholesale customers, it offers inventory and rental fleet financing. In addition, Cat Financial includes other subsidiaries, such as Cat Insurance and Cat Life Insurance, providing comprehensive risk management solutions to businesses and individuals.

Geographical Reach:

North America is by far the largest and most trusted market for the company, with the sector in growth, and Caterpillar's position is expected to remain as the market leader.

EMEA is the second most important region by revenues, accounting for 20%. Expectations are that competition, regulation, and stagnant demand will limit growth in this market.

APAC revenues are growing, and it is an increasingly important market for Cat, with heavy investments in dealers in the region.

LATAM accounts for 10% of revenues, with moderate growth expected in the future.

COMPANY STRATEGY

Goal: At Caterpillar, success is defined as profitable growth that drives innovation, supports its people, and enhances value for its customers. By diversifying its product portfolio, expanding its global footprint, committing to sustainability, and providing flexible financing options, Caterpillar is positioned for long-term success. The company is strengthening its position as a global leader, delivering superior solutions to its customers, and creating new opportunities for its people, partners, and shareholders.

Offering Diversification: "Buy the Iron, Get the Company" – Caterpillar has significantly expanded its product offerings beyond traditional heavy machinery to include services, technology solutions, and integrated systems. Its portfolio now spans construction equipment and energy solutions to advanced services such as remote monitoring, connected solutions, and data analytics. Many of these services are either included with the machinery or offered as flexible, customizable options that clients can choose based on their needs. This strategic diversification enables Caterpillar to provide customers with end-to-end solutions, combining high-performance equipment with cutting-edge technology and services that drive efficiency and profitability.

Sustainability: In 2022, Caterpillar included sustainability as part of its strategy, committing to reducing greenhouse gas emissions while helping customers meet their climate-related objectives. The company is investing in lower-carbon products, technologies, and services and has developed a "2030 Sustainability Goal" plan, periodically monitoring its progress.

Strategic Acquisitions: Caterpillar's strategy includes expanding its capabilities through strategic acquisitions that strengthen its position in key markets. By acquiring complementary businesses, Caterpillar enhances its technological capabilities and expands its service offerings. Recent acquisitions in the last 10 years include: Berg Propulsion, a Swedish producer of propellers and marine engines; MWM GmbH, a German manufacturer of gas and diesel engines; and investments in a robotics company.

Global Expansion: Caterpillar has a strong presence in the U.S., but its growth strategy is focused on expanding its reach into international markets. The shift toward digital solutions and connected equipment enables Caterpillar to easily scale its services globally, meeting the needs of customers across diverse regions.

Financing Options: Caterpillar understands that purchasing machinery and equipment is a significant financial investment for its customers. To support them, the company offers flexible financing options that make it easier to acquire and maintain its products. Through Cat Financial, Caterpillar provides customized solutions, including leasing, loans, and extended payment terms, designed to match the financial needs of businesses of all sizes.



PRODUCTION

Caterpillar's manufacturing process is tightly integrated with its global supply chain, ensuring efficient production and high-quality standards. The company operates over 110 manufacturing facilities worldwide, including major hubs in the U.S., China, and Brazil, where heavy machinery and engines are produced using advanced assembly techniques and precision engineering. Steel and iron are among the most critical raw materials used, sourced from a global network of suppliers. Caterpillar acquires unformed steel products for cutting and forming, rough castings and forgings for machining to final specifications, and finished parts ready for assembly. Some components, particularly for machines, engines, and power units, are machined and assembled in-house to meet stringent standards.

Caterpillar relies on strategic partnerships to build strong, long-term supplier relationships. These partnerships help secure enterprise-wide spending efficiencies and ensure the timely delivery of high-quality materials and components. Suppliers are held to rigorous standards, including ISO certifications, to ensure consistent quality and delivery performance. However, increases in demand or supply chain disruptions, such as recent global challenges, have occasionally caused constraints in the availability of parts and components.

In recent years, Caterpillar has started integrating recycled steel into its processes and leveraging supplier partnerships for efficient resource use. The company also employs agreements to protect its intellectual property and mitigate supply chain risks, addressing factors such as financial stability, production adaptability, business continuity, and quality assurance. This approach to supply chain management allows Caterpillar to meet global demand while maintaining its leadership in heavy equipment manufacturing.

This combination of robust internal production capabilities and effective supplier management underscores Caterpillar's global competitiveness and operational excellence.

DISTRIBUTION

Caterpillar's global distribution system is central to its success, consisting of an extensive network of dealers and distributors serving 191 countries. The dealer network includes 43 dealers in the United States and 113 internationally, with some serving more than one country. These independently owned and operated dealers primarily focus on selling and servicing Caterpillar machinery and engines, often making Caterpillar products the core of their businesses. The company also owns and operates the Nippon Caterpillar Division, a major player in the Japanese market, alongside three other independent dealers. This mix of independent and company-owned dealerships ensures Caterpillar's presence in key global markets.

The success of Caterpillar's distribution model lies in the balance between its independent dealership structure, which fosters strong local relationships, and direct operations where strategic control is required. This approach allows the company to maintain flexibility, ensure high standards in sales and servicing, and respond effectively to regional market needs. Together, these networks provide Caterpillar with a competitive advantage in delivering its equipment, engines, and power systems worldwide.

COMPETITIVE ADVANTAGE

Caterpillar's competitive advantage stems from its ability to combine a global presence with local expertise. With operations spanning most of the world, the company can reach nearly every market, gaining insights into local customer needs. This enables Caterpillar to tailor its products and services effectively, reinforcing its position as a leader in the heavy machinery industry.

In addition to its global presence and dealer network, Caterpillar's competitive advantage is supported by its strong brand reputation for reliability and high-quality products. This brand loyalty is a significant factor in customer retention, particularly in industries like construction and mining, where equipment durability is critical. The company's ongoing investments in technological advancements, such as automation and smart connectivity through Cat Connect, also play a vital role in differentiating its offerings. These innovations help customers improve efficiency and reduce costs, positioning Caterpillar as a leader in machine performance and fleet management. Caterpillar's financial strength further enables the company to pursue strategic acquisitions and partnerships, enhancing its market position.

Caterpillar has long been recognized for its customer-centric approach, offering highly customizable solutions to meet the specific needs of different industries. From construction to mining, the company tailors its product offerings to suit a range of project scales, from small construction sites to large, complex mining operations. By working closely with customers, Caterpillar ensures that each piece of machinery is adapted to the unique demands of the job, whether in terms of size, capacity, or specific functionality. The company's ability to offer individualized solutions, combined with its flexible financing options, strengthens its customer relationships and reinforces its position as an industry leader in delivering value-driven services.

Most competitors in the industry, or other companies heavily reliant on complex supply chains, periodically face challenges in securing raw materials, particularly when global demand shifts or prices fluctuate. Caterpillar, however, manages these issues better than most, thanks to strong partnerships with suppliers like U.S. Steel and Worthington Steel. Historically, these partnerships have been concentrated in the U.S.; however, given its global expansion plans, the company is actively seeking to partner with local producers of raw materials and components outside its home country. These relationships ensure a steady, reliable supply of high-quality materials critical to production.

Furthermore, Caterpillar actively reduces exposure to commodity price swings by using forward and option contracts to lock in prices for key inputs, such as metals, natural gas, and diesel fuel. This approach helps the company stabilize costs over the long term and maintain operational efficiency, even in times of market volatility.

MWM GmbH

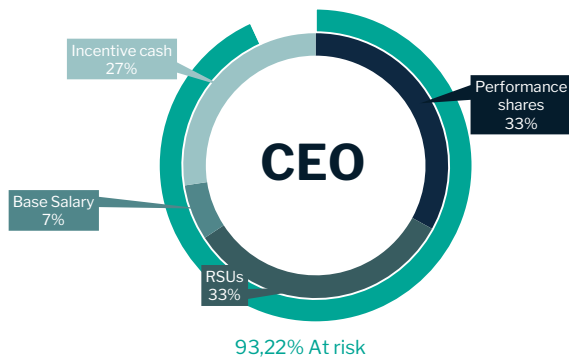
Acquired for \$810 million in 2011, MWM GmbH (Now Cat Energy Solutions) is a German manufacturer of gas and heat engines and plants. MWM is renowned for its highly efficient, eco-friendly cogeneration plants and is often voted one of the most environmentally friendly energy company in Europe. This acquisition shows Cat's commitment to develop abroad through acquisitions, while complementing its existing portfolio of energy solutions and machinery.

Bucyrus-Erie

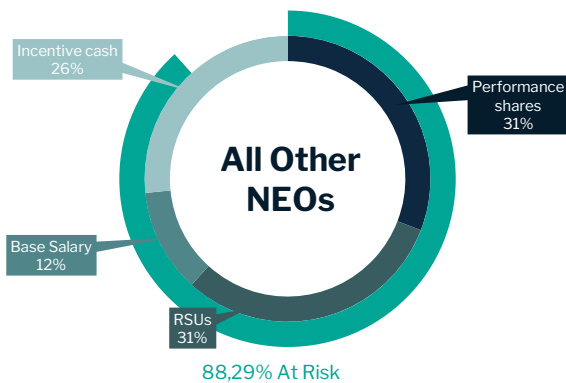
Bought for \$8.6 billion in 2011, Bucyrus is a manufacturer of mining equipment, known for its surface and underground machinery, including draglines, power shovels, and hydraulic excavators. Integrating Bucyrus into Caterpillar's portfolio was a key step in its diversification strategy, giving it a strong foothold in the mining industry.

Tangent Energy Solutions

In 2022, Caterpillar acquired Tangent Energy Solutions, a U.S.-based Energy-as-a-Service company. Specializing in energy efficiency, cost reduction, and emissions reduction, Tangent Energy leverages advanced analytics to optimize energy use for its clients. The acquisition bolstered Caterpillar's Electric Power Division, adding innovative software solutions to its portfolio.



Source: Team Analysis, Company Data



Source: Team Analysis, Company Data



CAPITAL ALLOCATION

Caterpillar's management demonstrates a highly effective capital allocation strategy, which has been fundamental to the company's long-term success.

First, Caterpillar effectively balances reinvestments in growth with substantial returns to shareholders. Operating in a mature industry, the company recognizes that the marginal return on new investments is lower compared to younger, high-growth sectors, allowing it to prioritize stable dividend distributions.

A standout feature of Caterpillar's strategy is its consistent dividend growth for more than 25 consecutive years, a remarkable achievement that has earned it a place among the S&P 500 Dividend Aristocrats. This reflects management's confidence in the company's financial resilience and ability to generate strong cash flows over the long term. Furthermore, Caterpillar has continued to invest in innovation and strategic initiatives, ensuring competitiveness in its core markets while maintaining its commitment to rewarding shareholders.

Caterpillar also uses the cash generated to pursue acquisitions that enable entry into new markets and diversification of its portfolio. A notable example is the acquisition of Berg Propulsion, a Swedish leader in marine propulsion systems. This acquisition underscores Caterpillar's broader diversification strategy, demonstrating its commitment to long-term growth and adaptability to changing market dynamics.

BACKGROUND AND COMPENSATION

Jim Umpleby is the CEO of Caterpillar and leads the company's strategy. Like many others on the leadership team, he has a technical background, holding a bachelor's degree in mechanical engineering. After graduation, he joined Solar Turbines, a Caterpillar subsidiary specializing in gas turbines. Umpleby has served as CEO since 2017.

In the past year, D. James Umpleby, Chairman of the Board and CEO, received a total executive compensation package reflecting both his base salary and performance-driven incentives. His total annual cash compensation amounted to \$25.8 million, with a base salary of just \$1.8 million. Caterpillar's strategy of incorporating significant variable pay in management salaries demonstrates its commitment to aligning leadership incentives with company performance. By tying a substantial portion of executive compensation to Cat's performance, the company ensures that its leaders remain focused on achieving strategic objectives and delivering shareholder value. This performance-driven approach fosters accountability and rewards results, motivating the management team to prioritize long-term growth and operational excellence. It also helps attract and retain top-tier talent, ensuring leadership continuity at the highest level.

Other members of the Board of Directors include:

Andrew Bonfield, CFO since 2018, oversees Caterpillar's financial strategy and global information services. With prior leadership roles at National Grid, Cadbury, and Reckitt Benckiser, he brings deep expertise in multinational financial operations and governance.

Otto Breitschwerdt, CTO, oversees the Building Construction Products Division, guiding the innovation of Caterpillar's construction equipment. With over 30 years at the company, he has held roles in engineering, supply chain, and sales across multiple countries, including Brazil and the U.S. Breitschwerdt's leadership has been instrumental in product development and global operations.

Joseph Creed, COO, is a CPA with a degree in Accounting from Western Illinois University. He brings financial and operational expertise gained during his 26-year tenure at the company. Previously serving as Group President of Energy & Transportation, Creed has also held leadership roles across divisions, including Financial Services, Oil & Gas, and Electric Power, spearheading investments in innovative technologies.

William Schaupp, Chief Accounting Officer, ensures the integrity of Caterpillar's financial reporting and adherence to accounting standards. A CPA, Schaupp joined the company in 2022, bringing extensive experience from PPG Industries and PwC, where he held various leadership roles in corporate controllership and financial reporting. His rigorous approach to financial accountability and strategic vision plays a key role in maintaining investor confidence and Caterpillar's global reputation for transparency.

COMMUNICATION

Caterpillar's communication style emphasizes clarity, inclusivity, and alignment with strategic goals. Internally, the company prioritizes simplifying complex, technical information into accessible messages, creating an inclusive and supportive workplace culture. In 2022, Caterpillar launched a manager development program focused on building core leadership capabilities, claiming to have reached around 70% of its global front-line manager population with the training and development. This initiative reflects the company's dedication to equipping leaders with the skills necessary for driving engagement, fostering collaboration, and supporting Caterpillar's long-term business objectives across its geographically diverse workforce.

CONSTRUCTION EQUIPMENT MARKET GROWTH

The global construction equipment market is expected to grow from \$195 billion in 2023 to \$251 billion in 2029 with a projected CAGR of around 4.5%. This growth is driven by a surge in infrastructure development, especially in emerging markets across Asia-Pacific, where countries like China, India, and Japan lead the demand for construction machinery. Major projects, such as China's South-North Water Transfer Project and extensive urbanization efforts, are key contributors. The demand for cranes and heavy machinery is also rising, fueled by large-scale construction projects like tunnels, bridges, and residential complexes. Europe and North America are seeing strong demand for cranes due to urbanization and infrastructure projects.

Renting construction equipment has gained popularity due to high upfront costs and maintenance requirements, with many companies opting for leasing models that include operators. While the machinery itself is the main driver of this segment, the importance of post-sale (or rental) services and assistance cannot be overlooked. Companies are increasingly selling automation, digitalization, and connectivity services, diversifying their revenues and creating a continuous source of income.

MINING EQUIPMENT MARKET GROWTH

The mining equipment market is on track for growth, with an estimated market size of \$142 billion in 2023, expected to reach \$166 billion by 2027. This represents a CAGR of 3.14% during the forecast period. Several key factors are driving this expansion, including increased demand for metals and commodities, as well as the growing adoption of electric machinery in underground mining. The transition to electric vehicles and more sustainable practices is helping reduce emissions and enhance operational efficiency.

Technological advancements are also playing a critical role in shaping the market, with innovations such as automation, IoT integration, 3D imaging, and telematics improving productivity and safety. These innovations not only optimize mining processes but also extend the life of older mines by enhancing ore grades. The Asia-Pacific region is expected to dominate the market, fueled by significant mining projects in countries like China and India, which present strong potential for increased demand. As mining companies increasingly focus on energy-efficient, cost-effective machinery, the demand for advanced mining equipment is set to grow, benefiting from both regional and technological expansion.

ENERGY EQUIPMENT & TRANSPORTATION MARKET GROWTH

The global power equipment market is poised for significant growth, with an estimated market size of USD 120 billion in 2024, expected to reach USD 160 billion by 2029, reflecting a CAGR of 5.6%. This growth is driven by factors such as increasing investments in renewable energy, rising electricity demand, and advancements in grid modernization. Technological innovations, including smart grids, energy storage systems, and AI integration, are reshaping the market by enhancing operational efficiency and optimizing energy distribution. The Asia-Pacific region is expected to lead the market, with China and India driving demand through infrastructure development and energy transition efforts.

MARKET COMPETITION OVERVIEW

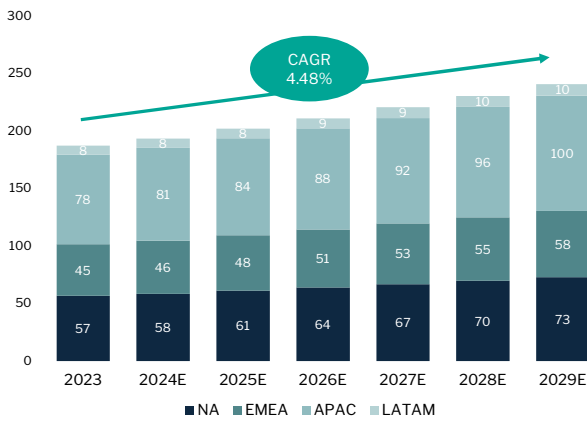
Competition in the construction, mining, and power equipment markets is intense, with major U.S.-based companies such as Deere, Paccar, and Cummins other than Japanese giants Komatsu and Hitachi. In the US each company specializes in a specific area: Deere in construction machinery, Paccar in large trucks, and Cummins in engines. The competition for raw materials is fierce, as these companies rely on the same suppliers for essential resources, putting pressure on supply chain stability.

However, competition goes beyond just pricing. While cost efficiency is important for attracting clients, other factors are often more decisive in the decision-making process. Integration capabilities—such as how well machinery fits into existing workflows—and the ease of use of equipment tend to be of greater importance. Moreover, the ability to form long-term partnerships is critical, as clients value manufacturers who offer not only top-quality products but also robust service networks, technical support, and innovative solutions tailored to complex projects. This focus on customer-centric solutions gives companies like Caterpillar a competitive edge, even in highly contested markets.

During economic downturns, competition intensifies, particularly over raw materials and key clients. Caterpillar and its competitors often face strained supply chains when demand for essential components—such as steel and semiconductors—remains high but availability drops. This can lead to price wars as companies fight to secure contracts and maintain production levels amid reduced market activity. As a result, operational efficiency and supply chain resilience become critical factors for survival.

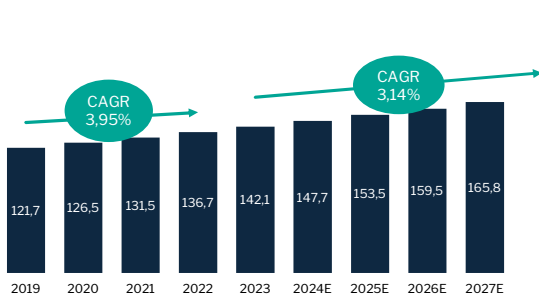
In addition to competition from established players, smaller regional companies—especially in Asia and the Far East—are making inroads. These local competitors often have an advantage due to their proximity to customers, allowing them to better understand regional preferences and adapt their products accordingly. While the global giants have more resources and reach, these regional firms are agile and culturally attuned to local markets, which can present a real challenge, particularly in emerging economies. This growing competition forces larger companies to continuously innovate in order to retain market share and meet the rising demand for specialized products and services across different regions.

Revenues of the construction equipment market 2023-2029 (in billion U.S. dollars)



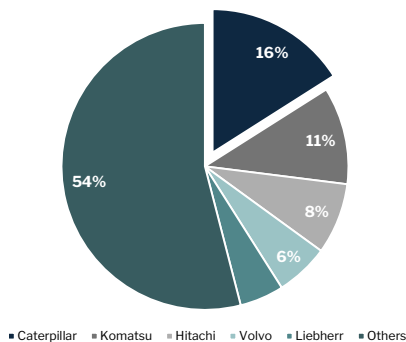
Source: Statista, Team Analysis

Revenues of the mining equipment market 2019-2027 (in billion U.S. dollars)



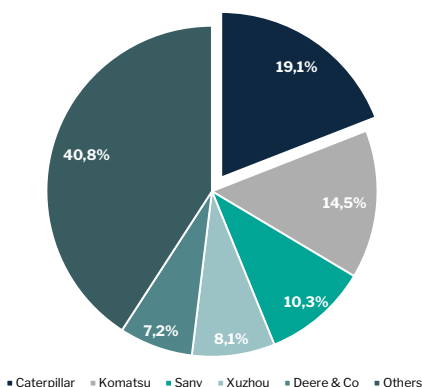
Source: Statista market insights, Team Analysis

Construction Equipment Market Share 2023



Source: Statista market insights, Team Analysis

Mining Equipment Market Share 2023



Source: Statista market insights, Team Analysis

External Analysis

SWOT ANALYSIS

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Strengths

- Global leadership in construction machinery.
- Diverse and highly customizable offering.
- Extensive worldwide network of dealers and distributors.
- Robust financial performance and resilience.
- Long-standing customer loyalty.

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Weaknesses

- High dependence on traditional machinery, with a slow adaptation to new technologies
- Medium-High level of competition, especially abroad
- Limited brand presence and market share in some fast-growing asian Markets

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Opportunities

- Increased importance in service-based and comprehensive solutions.
- Rising demand in emerging markets.
- Partnerships with governments for large-scale projects

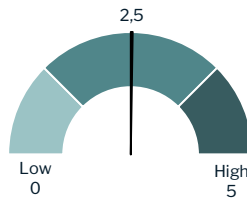
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Threats

- Exposure to geopolitical risks and supply chain disruptions.
- Operates in an industry with increasing stringent regulations.
- Rising pressures for customers to adopt green technologies
- Fluctuations in currency exchange rates

5 PORTER'S FORCES

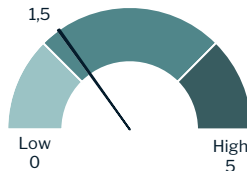
BARGAINING POWER OF SUPPLIERS



Bargaining power of suppliers

The bargaining power of suppliers for Caterpillar is moderate. Cat heavily relies on domestic and international suppliers for primary components, especially steel and iron. These suppliers are generally large, trusted and have long lasting relationships. However, increase in demand or supply chain disruptions could negatively affect suppliers ability to deliver the large quantity of raw material Cat needs at the same price. Cat is currently working on a variety of agreements to mitigate such risks.

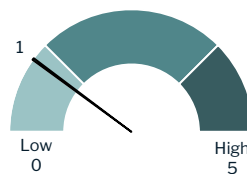
BARGAINING POWER OF BUYERS



Bargaining power of customers

The bargaining power of customers for Caterpillar is relatively low. The company has a broad and diverse customer base that spans industries including construction, mining, energy, and transportation. Many of Cat's customers, especially large enterprises and government contracts, rely heavily on its machinery and services for critical operations, creating a strong brand loyalty that reduces customer bargaining power. Additionally, Cat offers integrated solutions that combine equipment with after-sales services, maintenance, and financing, creating a "lock-in" effect that makes it difficult for customers to easily switch to competitors. While large customers can negotiate discounts on bulk orders, smaller customers face fewer options to replace Cat's high-performance equipment with alternatives that offer comparable reliability and support.

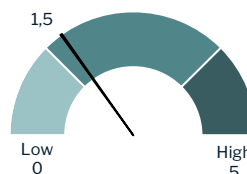
THREAT OF NEW ENTRANTS



Threat of new entrants

The threat of new entrants in the heavy machinery industry is low. The capital investment required to enter this industry is substantial, with high costs related to manufacturing plants, research and development, and meeting regulatory standards. Cat's position as a global leader in heavy machinery, supported by decades of innovation, has made it difficult for new entrants to compete. Cat also benefits from economies of scale and a vast dealer network, which provide a competitive edge that new companies would struggle to replicate. While niche players focusing on emerging technologies and markets may present some competition in certain geographical areas, the high barriers to entry make it unlikely for new companies to threaten Cat's dominant position in the market.

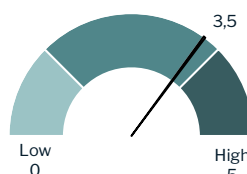
THREAT OF SUBSTITUTE PRODUCTS



Threat of substitute products

The threat of substitutes to Caterpillar's products is relatively low. While there are alternative solutions such as smaller machinery, rental equipment, or specialized robotics for certain tasks, Cat's comprehensive range of heavy-duty equipment, combined with its technology-driven solutions and services, offers unique value that substitutes cannot match. The company's investments in innovation, including automation, electrification, and digital services, ensure that its products remain relevant and competitive across industries.

COMPETITIVE RIVALRY



Competition

The level of competition in the heavy machinery and construction equipment industry is relatively high. Caterpillar faces competition from other global giants such as Komatsu, Volvo Construction Equipment, and Liebherr, all of whom offer similar product lines in construction, mining, and energy sectors. Competition is also increasing at a regional level where much smaller companies, often located in the same geographical region as the mine or construction site can offer the needed machinery and proximity to the client. However, Cat maintains a competitive advantage through its long-standing reputation, robust dealer network, comprehensive product offerings, and strong focus on service and innovation.

Financial Analysis

INCOME STATEMENT

Performance Review (2014–2023)

From 2014 to 2023, Caterpillar experienced stagnation in revenues, with a modest CAGR of just 1.97%. However, the company showed a much stronger performance in profitability. Gross Profit CAGR was 5.32%, while Net Income grew at an impressive 15.47%. This highlights Caterpillar's strategic focus on improving operational efficiency and increasing margins. The remarkable growth in net income is largely due to a reduction in COGS as a percentage of revenue. This was driven primarily by Caterpillar's ability to leverage strategic partnerships for cost-efficient procurement of raw materials. The COGS-to-revenue ratio decreased significantly, from 73.8% in 2014 to 62.3% in the LTM. Caterpillar's shift toward higher-margin services, which typically have lower COGS, is a key factor in this improvement, and we expect this trend to continue in the future.

Future Growth Scenarios (2024–2028)

For the period from 2024 to 2028, we identified three key scenarios based on Caterpillar's strategic threats and opportunities, as well as its ability to capitalize on or protect against them. The analysis also considers external factors, such as potential supply chain disruptions and geopolitical tensions—two factors on which Caterpillar's future profitability heavily relies. We formulated and tested hypotheses using past cases, reflecting on management's current and past strategies.

Base Scenario

In the Base Scenario, Caterpillar is expected to see stagnation in revenue, while increasing margins—mirroring trends from the past decade. Revenues in FY28 are projected to match FY23 levels, with a modest increase in margins driving net income growth at a CAGR of 3.7%. This scenario reflects the expected continuation of the current management strategy's ability to capitalize on existing opportunities.

Pessimistic Scenario

In the Pessimistic Scenario, Caterpillar is expected to stagnate in both revenues and margins, following the trends of the past few years. Revenue growth CAGR from FY23 to FY28 is projected at -0.9%. Net income growth is expected at a modest CAGR of 0.5%, driven by slight margin increases. This scenario reflects the company's failure to capitalize on two of its most significant growth opportunities: emerging markets and services.

Optimistic Scenario

In the Optimistic Scenario, Caterpillar successfully capitalizes on emerging markets and service opportunities. This leads to a revenue growth CAGR of 1.1% and net income growth at a strong 7.1% CAGR, fueled by further Caterpillar has demonstrated a remarkable improvement in its profit margins over the past decade, showcasing the effectiveness of its strategic initiatives.

Caterpillar's Gross Profit grew from \$14 billion in 2014 to \$24 billion in 2023, achieving a CAGR of 5.32%. This growth reflects a steady reduction in COGS as a percentage of revenue, driven by Caterpillar's ability to leverage strategic partnerships, enabling cost-efficient procurement of raw materials.

The EBITDA margin improved significantly, rising from 17% in 2014 to 28% in 2023. This highlights effective cost management and operational efficiency. Similarly, the EBIT margin grew from 11.3% to 26.1%, reflecting enhanced profitability driven by better management of operating expenses and sustained productivity improvements.

Net Income surged from \$2 billion in 2014 to \$10 billion in 2023, representing an impressive CAGR of 15.47%. This sharp increase underscores Caterpillar's commitment to margin expansion while maintaining stable revenue levels.

The FCF margin saw a notable rise, increasing from 9% in 2014 to 21% in 2023. This remarkable growth in FCF highlights Caterpillar's enhanced ability to generate cash, ensuring sufficient liquidity to finance future growth opportunities.

These improvements illustrate Caterpillar's disciplined approach to financial management, focusing on strengthening profitability across all levels of the income statement. As a mature company that dominates its segment, Caterpillar has prioritized productivity over top-line growth in recent years, successfully increasing its margins and solidifying its competitive position.

Caterpillar's EPS has shown impressive growth, increasing from \$3.90 in 2014 to \$20.10 in 2023, reflecting a robust CAGR of 14.4%. This significant rise highlights Caterpillar's ability to create shareholder value through consistent profitability improvements and effective capital allocation.

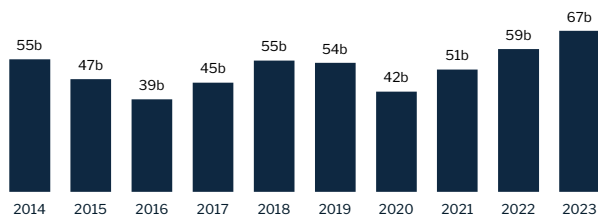
Looking ahead, we forecast Caterpillar's EPS to reach \$25 by 2028 in our base scenario, representing a more moderate CAGR of 4.4% from 2023 to 2028. This stabilization in growth reflects Caterpillar's evolution into a mature company, with strategic priorities shifting towards sustaining profitability and enhancing operational efficiency in its established markets.

Caterpillar's ROA has demonstrated significant growth, increasing from 3% in 2015 to 12% in 2023. This improvement highlights the company's enhanced efficiency in asset utilization, driven by operational improvements and strategic investments.

Looking forward, we expect the ROA to reach 13% by 2028, indicating a plateau in growth as the company consolidates its recent gains and enters a more mature phase of its business cycle.

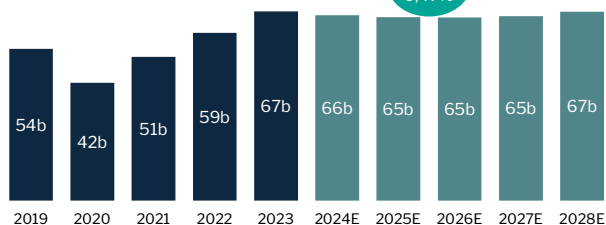
Total Revenues

CAGR
2.19%



Source: Company data, Team Analysis

CAGR
5.66%



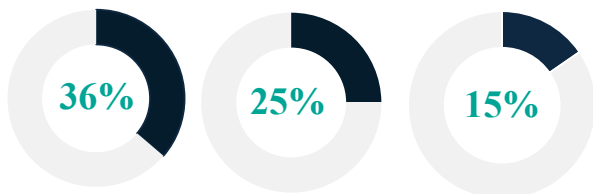
Source: Company data, Team Analysis

CAGR
0.47%

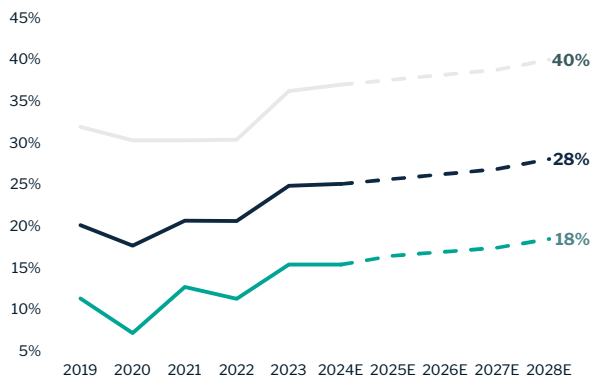
Gross Profit Margin

Ebit Margin

Net Income Margin



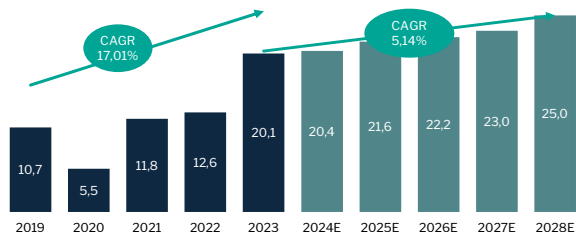
— Ebit Margin — Net Income Margin — Gross Profit Margin



Source: Company data, Team Analysis

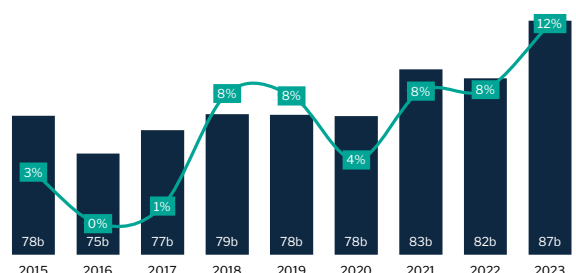
EPS

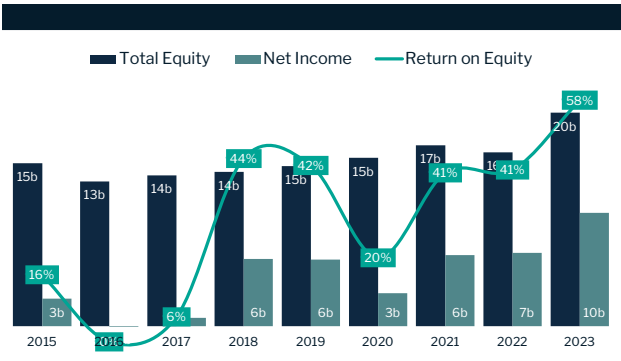
CAGR
17.01%



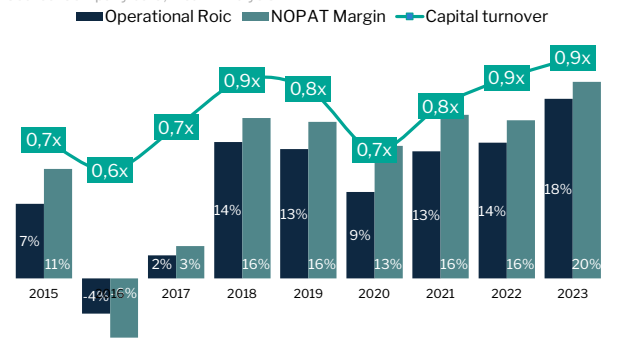
Source: Company data, Team Analysis

— Total Assets — Return on Assets

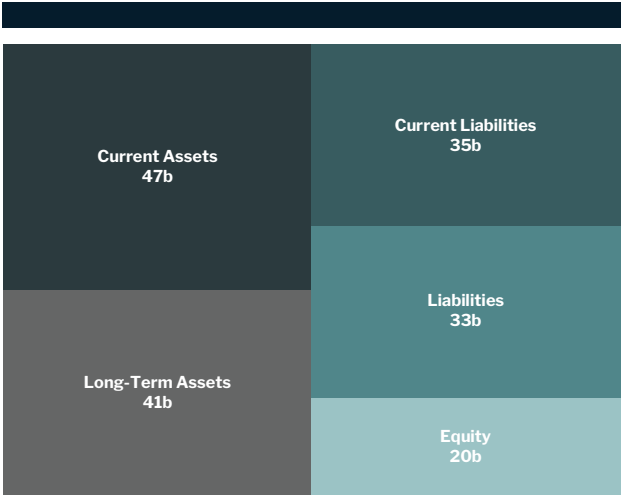




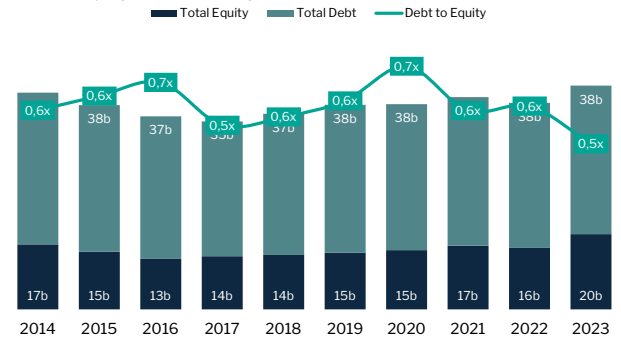
Source: Company data, Team Analysis



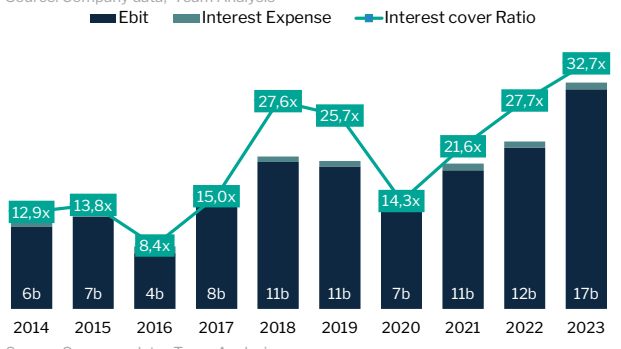
Source: Company data, Team Analysis



Source: Company data, Team Analysis



Source: Company data, Team Analysis



Source: Company data, Team Analysis

ROE

Caterpillar's ROE has grown significantly, from 16% in 2015 to an impressive 58% in 2023, reflecting the company's strategic shift toward rewarding shareholders and optimizing equity utilization. This trend illustrates Caterpillar's ability to enhance profitability relative to its equity base. A pivotal moment occurred in 2018, when ROE surged from 6% to 44%, signaling a clear shift in strategy.

Looking forward, we expect ROE to stabilize around 50%, with a gradual decline to 44% by 2028. Despite this slight decrease, these figures remain exceptionally high, aligning with Caterpillar's ongoing commitment to equity efficiency and maximizing shareholder returns.

Operating ROIC is calculated by multiplying the NOPAT Margin by Capital Turnover, two key metrics that provide insight into operational efficiency and capital utilization. The NOPAT Margin measures the operating profit generated per unit of revenue, while Capital Turnover reflects how effectively the company generates revenue for each unit of invested capital.

Caterpillar's operating ROIC has shown consistent growth, rising from 6% in 2015 to 16% in 2023. The only significant deviation occurred in 2016, when a slight negative net income briefly impacted profitability. This steady increase underscores the company's solid operational framework and the effectiveness of its capital investments.

Looking ahead, we expect Caterpillar's operating ROIC to stabilize around 16% in the near term, supported by continued efficiency in capital allocation and operational improvements, as the company balances reinvestment needs with the dynamics of a mature growth phase.

BALANCE SHEET

Caterpillar's capital structure is well-balanced, supported by a prudent and sustainable allocation of resources. The 2023 Equity of \$20 billion, combined with Long-Term Assets of \$41 billion, indicates that the company employs a balanced approach to funding durable investments. While long-term assets are partially supported by equity, the presence of long-term liabilities underscores a more moderate leverage strategy compared to ultra-conservative firms. This strategy, characterized by a measured use of debt, allows Caterpillar to maintain flexibility for growth initiatives while managing financial risks effectively.

In addition, the presence of Current Assets of \$47 billion, comfortably exceeding Current Liabilities of \$35 billion, demonstrates the company's robust short-term financial health. This surplus of liquid and short-term resources highlights Caterpillar's effective treasury management and its ability to meet operational and financial obligations without significant reliance on external funding. The strong liquidity position ensures the company's ability to navigate short-term challenges and sustain its operations efficiently.

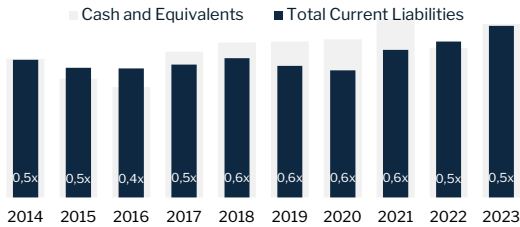
Caterpillar's prudent management of its debt-to-equity ratio is evident in its historical stability. Since 2014, the company has maintained moderate leverage, with the debt-to-equity ratio consistently hovering around 0.5x, reflecting a balanced and sustainable capital structure. Notably, the ratio has experienced a slight decline over the years, decreasing from 0.7x in 2020 to 0.4x in the latest twelve months (LTM). This reduction demonstrates the company's ongoing effort to manage its debt exposure prudently, even amidst periods of growth. Looking ahead, Caterpillar's debt-to-equity ratio is expected to stabilize at approximately 0.5x, signaling its commitment to financial discipline while maintaining flexibility for strategic investments.

The company's financial solidity is further highlighted by its ability to manage interest expenses effectively, supported by consistent earnings and strong operational performance. Caterpillar's interest coverage ratio rose from 12.9x in 2014 to 32.7x in 2023, reflecting its growing capacity to service debt through operational earnings. This metric is projected to improve further, reaching approximately 40.2x by 2028, driven by continued earnings growth and stable debt levels.

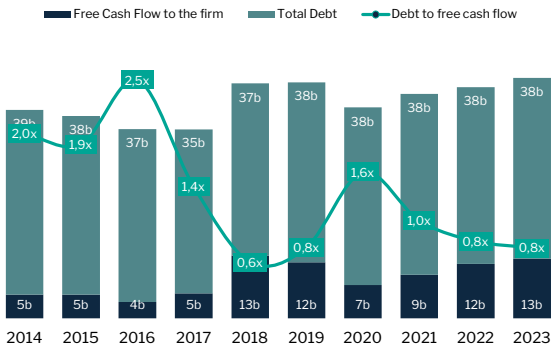
This balance between leveraging debt for growth and maintaining financial health ensures Caterpillar's position as a resilient and stable player in its industry. The firm's conservative yet strategic capital allocation aligns with its long-term growth objectives, while simultaneously minimizing default and liquidity risks.

Caterpillar holds a solid credit rating with Moody's, currently rated A2 for long-term debt and P-1 for short-term debt. This reflects the company's strong financial position and ability to meet its obligations in both the short and long term. The positive outlook further highlights the confidence Moody's has in Caterpillar's future financial stability and operational resilience. Caterpillar's credit impact score is classified as CIS-2, indicating a neutral effect on its creditworthiness from ESG factors. The company has demonstrated consistent profitability, strong cash flow, and prudent capital management, which supports its ability to maintain a low-risk credit profile. With its A2 rating, Caterpillar is positioned as an investment-grade company, signaling a low default risk and providing a solid foundation for future growth and strategic investments.

Quick Ratio

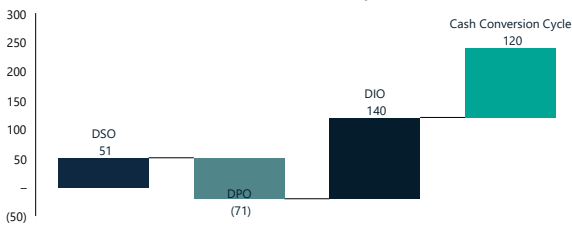


Source: Company data, Team Analysis

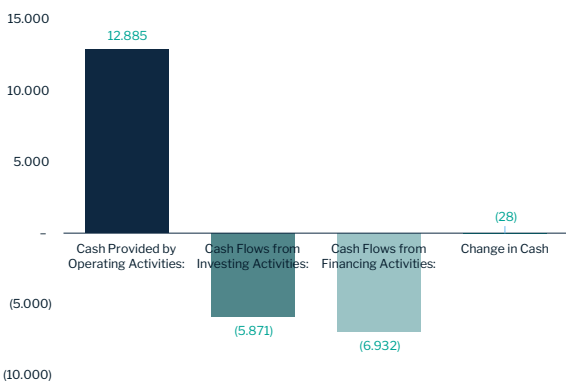


Source: Company data, Team Analysis

Cash Conversion Cycle

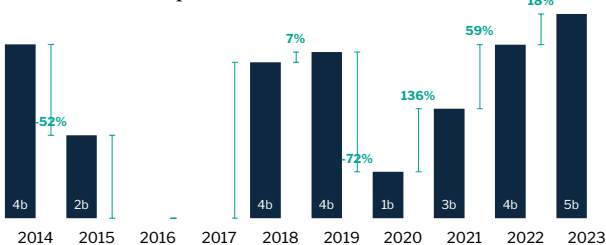


Source: Company data, Team Analysis



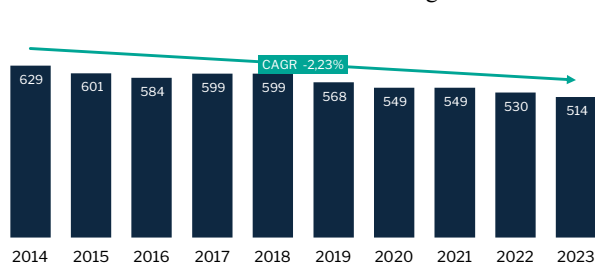
Source: Company data, Team Analysis

Repurchase of Common Stock



Source: Company data, Team Analysis

Diluted Shares Outstanding



Source: Company data, Team Analysis

Caterpillar's Quick Ratio analysis from 2014 to LTM reveals a steady but cautious liquidity management approach. The Quick Ratio has remained relatively stable between 0.4x and 0.6x during this period, reflecting a conservative liquidity stance. In 2014, the ratio stood at 0.5x and fluctuated slightly around the same level for several years. From 2020 to 2023, the Quick Ratio remained at 0.5x-0.6x, signaling that while the company maintains a modest liquidity cushion, it is consistently able to meet its short-term obligations with its most liquid assets. Looking ahead, the Quick Ratio is expected to stabilize at around 0.5x indicating that Caterpillar plans to maintain stable its liquidity position without significantly over-accumulating or falling short on cash. This measured increase reflects the company's ongoing focus on ensuring sufficient liquidity while managing operational efficiency.

Caterpillar's Current Ratio, on the other hand, presents a more favorable picture of the company's short-term financial health. From 2014 to LTM, the Current Ratio has remained consistently strong, fluctuating between 1.2x and 1.5x. In particular, from 2017 onward, the ratio has stabilized at around 1.4x-1.5x, highlighting Caterpillar's ability to comfortably cover its current liabilities with its current assets. This steady ratio reflects effective working capital management, ensuring the company can meet its short-term financial obligations while maintaining a solid buffer against liquidity risks. With this trend expected to continue, the Current Ratio's stability signals Caterpillar's commitment to maintaining a healthy balance between liquidity and operational needs, further solidifying its ability to withstand short-term financial pressures.

The analysis of Caterpillar's Debt-to-Free Cash Flow ratio shows a clear improvement in recent years, indicating a stronger ability to manage debt with its operating cash flow. From 2014 to LTM, the ratio has decreased from 2.0x to 0.6x, with significant progress seen between 2017 and 2023. This decline reflects both a reduction in debt levels and a steady increase in free cash flow, which has allowed the company to reduce its financial leverage. In particular, the ratio stands at 0.6x in LTM, indicating that Caterpillar's free cash flow is now more than sufficient to cover its debt obligations. This improvement in financial flexibility is indicative of the company's strengthened position, allowing it to allocate resources to strategic investments, such as capital expenditures and acquisitions, without compromising its financial stability. The trend towards a lower Debt-to-Cash Flow ratio underlines Caterpillar's prudent financial management and growing capacity to generate cash from operations, a key strength moving forward.

Caterpillar's Cash Conversion Cycle (CCC) provides further insight into the company's working capital efficiency. The CCC is currently at 120 days, driven by a Days Sales Outstanding of 51 days, a Days of Payables Outstanding of 51 days, and a Days Inventory Outstanding of 140 days. While a relatively long CCC is typical for large industrial companies, it indicates that Caterpillar requires a significant amount of time to convert its investments in inventory and receivables into cash. However, this is not necessarily a cause for concern, as the company has consistently managed to balance its cash flow needs through effective credit and inventory management. By maintaining a stable working capital cycle, Caterpillar continues to optimize its liquidity while ensuring it can support its operational and growth needs. As such, the company's strong working capital management remains a key factor in mitigating any potential liquidity risks and improving its overall cash flow generation.

CASHFLOW STATEMENT

Caterpillar's cash flow composition reveals a healthy and consistent performance in operating activities, highlighting the company's ability to generate strong and stable cash inflows. Operating cash flow has steadily increased, rising from \$8.1 billion in 2014 to approximately \$12.9 billion in 2023, a clear indication of continued revenue growth and effective cost management. This growth reflects Caterpillar's strong operational efficiency, driven by its global market presence and diversified business segments. Furthermore, cash flow from investment activities has been largely negative, reflecting the company's strategic investments, including acquisitions and capital expenditures. Although there are fluctuations, such as the sharp decline to -\$5.9 billion in 2023, largely due to higher investment costs, this does not significantly impact Caterpillar's ability to generate positive free cash flow, thanks to its solid operating performance.

An important observation is that Caterpillar's investment activities showed a consistent outflow from 2014 to 2023, with the most significant drawdowns occurring in 2023, when the company made substantial investments. Despite these temporary spikes in investment outflows, the company has managed to maintain a robust and resilient free cash flow position. The ability to sustain positive free cash flow during periods of heavy investment indicates Caterpillar's effective capital allocation and the long-term value generated from these strategic investments.

Caterpillar's share buyback program over the past decade demonstrates a well-defined strategy to return value to shareholders. Through share repurchases, the company reduces the number of shares outstanding, which helps to increase earnings per share and enhance long-term shareholder value. The share buybacks are particularly pronounced during periods when the company perceives its stock to be undervalued, enabling Caterpillar to purchase shares at favorable prices. This approach maximizes the value delivered to shareholders, as the repurchased shares benefit from market price appreciation over time.

From 2014 to 2023, Caterpillar's share buybacks have shown a fluctuating yet consistent trend. In 2014, the company repurchased \$4 billion worth of shares, with amounts steadily ranging from \$1 billion to \$5 billion in the following years. This pattern suggests that Caterpillar strategically capitalizes on favorable market conditions to repurchase shares when they are undervalued, generating additional returns for shareholders. In the most recent period (LTM), the company continued its commitment to share repurchases, with \$1 billion spent on buybacks in 2020, \$3 billion in 2021, \$4 billion in 2022 and \$5 billion in 2023. By consistently maintaining this buyback strategy, Caterpillar not only returns capital to shareholders but also strengthens its financial structure, contributing to a more efficient allocation of resources and enhanced shareholder value.

Valuation

DCF VALUATION

Weighted Average Cost of Capital

Risk free rate (R_f)	4326,00% ⁽¹⁾
Country risk premium	1,00% ⁽²⁾
Equity risk premium ($R_m - R_f$)	5,54% ⁽³⁾
Equity Beta	1,09 ⁽⁴⁾
Cost of Equity (K_e)	4333,04%
Cost of debt	4326,59% ⁽⁵⁾
Tax rate	22,50%
After-tax Cost of Debt (K_{dt})	3353,30%

Capital Structure

Equity	83%
Debt	17%
Weighted Average Cost of Capital	4168,51%

We estimate a WACC of 4168,51% for CATERPILLAR. To determine the cost of debt, we add CATERPILLAR' debt rating-implied corporate spread to the risk-free rate. To reflect CATERPILLAR' global operations, we use a revenue-weighted spread plus the risk-free rate (US5y), adjusted based on regional revenue distribution. The cost of equity is calculated using the CAPM formula, incorporating a revenue-weighted equity risk premium. The Beta is derived from a direct correlation with the S&P 500, as we believe this benchmark aligns more closely with CATERPILLAR' global reach and its potential market movements.

We expect the terminal growth rate to stabilize at 2% after 2028 based on (1) projected real GDP growth in core markets, (2) Growth of the industry, and (3) long term inflation goals of company' main countries of operation. We see potential upside for the terminal growth rate based on the possible favorable market position and economic conditions. This will result in further appreciation of the share price far beyond our target price. Our terminal value also implies an exit EV/EBITDA multiple of 12.46x.

SCENARIOS

BEAR CASE

BASE

BULL CASE



Global competitive situation in the sector

Caterpillar maintains market dominance, we don't see Cat losing a significant market share even in the bear case

Caterpillar maintains its market dominance with no notable changes in performance or innovation.

A successful capitalization on current opportunities could allow Caterpillar Market share to slightly improve

Market share

-1%

-0.5%

+0.5%



Improvement in the top line

A drop in price, declining orders, scandals, or other factors undermine Caterpillar's growth strategy

Caterpillar's revenues align with current expectations, showing a slight initial decline followed by a gradual recovery

Acquisitions, or an increase in selling price in this scenario allow Caterpillar to slowly grow its revenues

Revenues

-0.9% CAGR

0% CAGR

+1.1% CAGR



Improvement in Margins

Caterpillar faces challenges in expanding its margins, limiting potential for further profitability growth

Caterpillar continues to follow current trends while successfully reducing costs

Caterpillar successfully identifies and implements margin improvement strategies

Net Profit Margin

+0.5% CAGR

+3.7% CAGR

+7.1% CAGR

Price target CAT

307,60

345,50

391,14

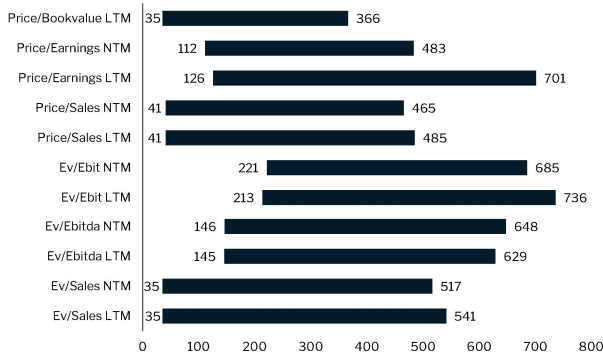
% Change from current price

-19%

-9%

3%

RELATIVE VALUATION



To confirm our recommendation, we conducted a multiples valuation to contextualize Caterpillar's value relative to comparable companies in the heavy equipment and machinery industry, as well as firms with similarly stable market positions. By selecting peers based on industry alignment and market dynamics, we ensured a meaningful comparison in terms of operational stability and risk exposure. Based on this analysis, we derived an average implied target price for Caterpillar of \$284, indicating a 25.7% downside from its current market price, supporting our sell recommendation. This reflects Caterpillar's leadership position in the industry, characterized by greater stability, superior capabilities, and a distinct market positioning. Caterpillar's multiples are generally higher than those of its competitors, reflecting its premium status.

We identify EV/EBITDA as the most appropriate multiple due to the capital-intensive nature of the industry and the focus on operational performance. This choice is supported by Caterpillar's ability to generate strong EBITDA margins despite cyclical market conditions. For Caterpillar, the trailing LTM EV/EBITDA multiple averages 12.0x, compared to a peer group average of 12.1x.

We ultimately decided not to incorporate the relative valuation in the target price as Caterpillar occupies a specific position within the market, additionally, some of cat's competitors, such as Volvo Construction Equipment, are subsidiaries of larger corporations that do not directly compete in the same market.

Based on our analysis, Caterpillar does not perfectly align with our investment philosophy, though it remains a strong and resilient company. While Caterpillar demonstrates operational excellence and benefits from its global reach, it lacks the ability to consistently generate top-line revenue growth. Despite recent improvements in margins, we anticipate a slowdown in this trend in the near term. Additionally, Caterpillar does not exhibit a unique business model, as its large competitors offer products of roughly comparable quality. However, the company has been diversifying through its growing services segment, and if this momentum continues, we may reassess our view in the future.

Quantitatively, Caterpillar falls short of several of our key metrics, the 5-year revenue CAGR of over 5%, a 5-year average ROIC of over 15%, and a 5-year EBITDA CAGR of over 7%. These challenges are typical of large, established companies focused on maintaining margins rather than pursuing aggressive growth.

We recommend a Hold for Caterpillar, with a 12-month target price of \$345.50, representing a 13% downside from the closing price on November 22, 2024. Our recommendation reflects Caterpillar's leadership, resilience, and fair or slight over valuation by the market despite its challenges in meeting all our criteria.

Qualitative Factors	
Unique business model	<input type="checkbox"/>
Operates globally	<input checked="" type="checkbox"/>
Diversified customer base	<input checked="" type="checkbox"/>
Capable of Growing	<input type="checkbox"/>
Competitive advantages	<input checked="" type="checkbox"/>
Pricing Power	<input checked="" type="checkbox"/>
Leading Market position	<input checked="" type="checkbox"/>
Capable Management	<input checked="" type="checkbox"/>
Recession resistant	<input checked="" type="checkbox"/>
Immune to disruption	<input checked="" type="checkbox"/>

Quantitative Factors	
Debt/Equity <0.8	Yes
Ebit/interst exp. >5	Yes
Revenue 5y CAGR > 5%	No
ROIC 5y Avg > 15%	No
FCF/Net income > 80%	Yes
Ebitda 5y CAGR > 7%	No

Investment risks

SUPPLY CHAIN, COMPETITORS IN OTHER MARKETS, STAGNATION EVEN IN MARGINS, GEOPOLITICS

We have identified four key risks that could significantly undermine Caterpillar's operations and long-term growth potential. These risks stem from both internal and external factors, ranging from supply chain vulnerabilities to geopolitical tensions. Any disruption in the company's ability to manage raw material costs, maintain its profit margins, or successfully compete in emerging markets could create substantial challenges. Additionally, geopolitical instability, particularly in key regions such as East Asia, could hinder Caterpillar's strategic expansion efforts. These risks, if not properly managed, could have serious consequences for the company's financial stability and overall market position.

1. Risks Related to Supply Chain and Purchases of Raw Materials

Caterpillar operates in a highly capital-intensive industry, where a significant portion of its production relies on raw materials like steel, iron, and other essential commodities, as well as pre-assembled parts such as specialized engines and turbines. Although Caterpillar primarily sources these materials from large multinational suppliers based in the U.S., there is inherent risk associated with fluctuations in the global supply chain. Any unexpected surge in demand, geopolitical tensions, or natural disasters could lead to material shortages or price hikes, which would strain Caterpillar's production schedules and profitability. Even slight price increases in key raw materials could significantly impact its cost structure, as these materials make up a large portion of its production expenses. Furthermore, global supply chain disruptions, such as those caused by trade restrictions or transportation bottlenecks, could delay deliveries and hinder Caterpillar's ability to fulfill customer orders on time, eroding customer trust and impacting the company's competitive position in the market.

2. Risks Related to Margin Stagnation

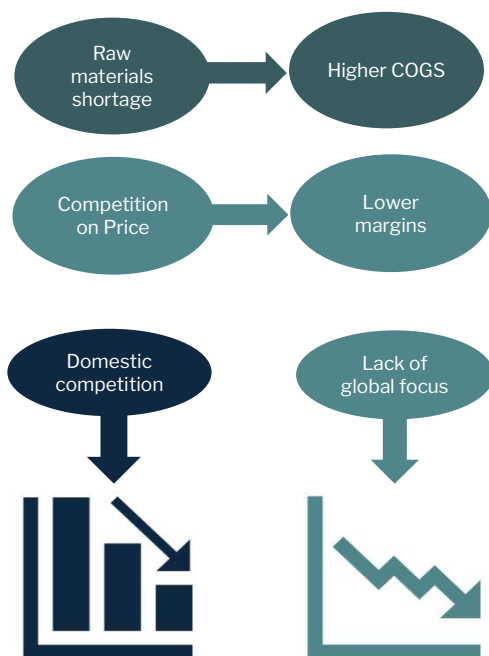
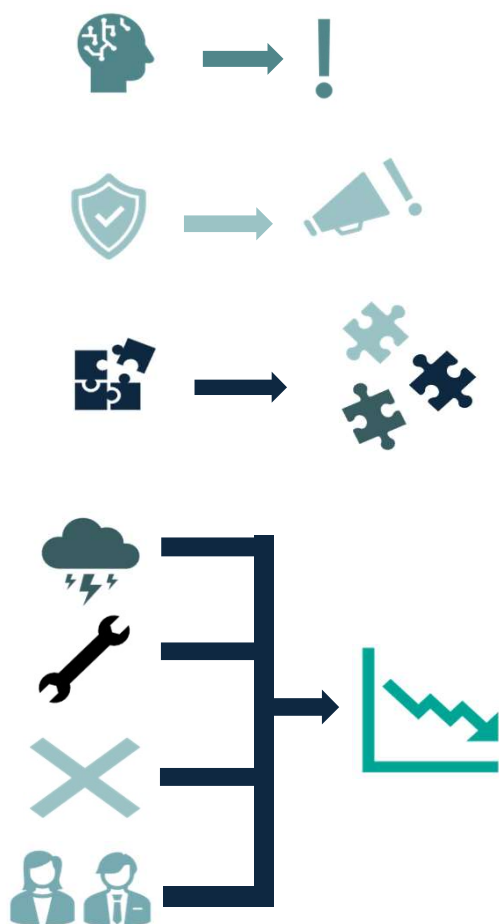
Over the past decade, Caterpillar has placed considerable emphasis on enhancing its profit margins, prioritizing operational efficiencies rather than top-line revenue growth. The company has achieved impressive progress in improving margins, but this focus now faces diminishing returns. As margins have expanded, the scope for further productivity gains becomes increasingly limited, and the rate of improvement is expected to decelerate. Unlike revenue, which can grow linearly with market demand, margin expansion depends on a broader set of factors such as cost control, labor efficiency, and economies of scale. External pressures, such as rising raw material costs, increasing labor expenses, or higher tax rates, could erode these margins. Additionally, Caterpillar's reliance on optimizing productivity across multiple operational lines, rather than focusing on specific revenue drivers, exposes the company to a broader set of risks. If these external factors lead to a slowdown in margin improvement, Caterpillar would not only fail to achieve its profitability targets but also risk disappointing investors who have come to expect consistent margin growth. The market may view such stagnation as a failure in the company's core strategy, potentially leading to negative sentiment and a decrease in stock price.

3. Risks Related to Competitors in New Markets

Caterpillar has been actively pursuing growth in new, emerging markets, where it aims to diversify its revenue streams and reduce its dependence on mature markets. However, these regions are often highly competitive, with local players who have a deeper understanding of the regional market dynamics, culture, and customer preferences. Local competitors are often able to offer more tailored, cost-effective solutions that cater specifically to the needs of customers in these markets. As a result, Caterpillar faces significant challenges in these regions, as it is competing against companies that are often more agile and have closer relationships with customers. Moreover, Caterpillar's larger capital expenditures and longer production cycles may put it at a disadvantage when compared to these more nimble, local firms. Should Caterpillar fail to gain significant market share in these regions, its ability to scale in these markets and fully benefit from international diversification could be compromised. This would hinder the company's future growth prospects and potentially limit its long-term profitability, as the failure to break into key markets could reduce the company's global footprint and its revenue diversification efforts.

4. Risks Related to Geopolitical Tensions

Caterpillar's growth strategy heavily relies on expanding its footprint in emerging markets, with a specific focus on regions such as East Asia, including China, India, and Indonesia. However, as a U.S.-based multinational corporation, Caterpillar is exposed to a wide range of geopolitical risks that could undermine its operations in these markets. Tensions between the U.S. and countries such as China, India, and other emerging economies could lead to trade barriers, tariffs, or regulatory changes that make it more difficult for Caterpillar to operate effectively in these countries. For instance, increasing tariffs or restrictions on U.S. companies could significantly increase the cost of doing business in these regions, making Caterpillar's products less competitive compared to local manufacturers. Moreover, rising geopolitical tensions could result in a more protectionist environment, with governments in these markets favoring domestic companies over foreign entrants. Caterpillar's ability to secure contracts, establish partnerships, or execute strategic deals in these countries could therefore be severely hindered. This geopolitical risk is particularly concerning as part of Caterpillar's strategy is to diversify its revenue streams and reduce reliance on more developed markets. Any adverse geopolitical developments in key markets could result in a substantial setback for the company's global expansion efforts, ultimately undermining its long-term growth prospects.



APPENDIX



SLOAN RATIO						
	FY2019A	FY2020A	FY2021A	FY2022A	FY2023A	LTM
Net Income	6.093	2.998	6.489	6.705	10.335	10.677
Cash Flow from Operations	6.912	6.327	7.198	7.766	12.885	12.645
Cash Flow from Investing	(1.928)	(1.485)	(3.084)	(2.541)	(5.871)	(1.358)
Total Assets	78.453	78.324	82.793	81.943	87.476	86.273
Sloan Ratio	1,41%	-2,35%	2,87%	1,81%	3,80%	-0,71%
Interpretation	Good Quality	Good Quality	Good Quality	Good Quality	Good Quality	Good Quality

The profits reported in the income statement, along with revenue, are among the key financial metrics closely monitored by investors, as they directly influence the short-term performance of the stock price. However, this focus can place pressure on management, pushing them to adopt accounting practices aimed at meeting market expectations, potentially resulting in profits that may not be sustainable in the long run. Provisions, being subject to discretionary estimates, are one of the areas where more aggressive management can intervene.

Sloan highlighted that companies with a high level of accruals, meaning a high proportion of provisions, tend to generate lower stock returns compared to those with a lower provision ratio. The Sloan ratio, which represents the percentage of provisions relative to total assets, is thus a useful indicator for assessing the quality of a company's earnings.

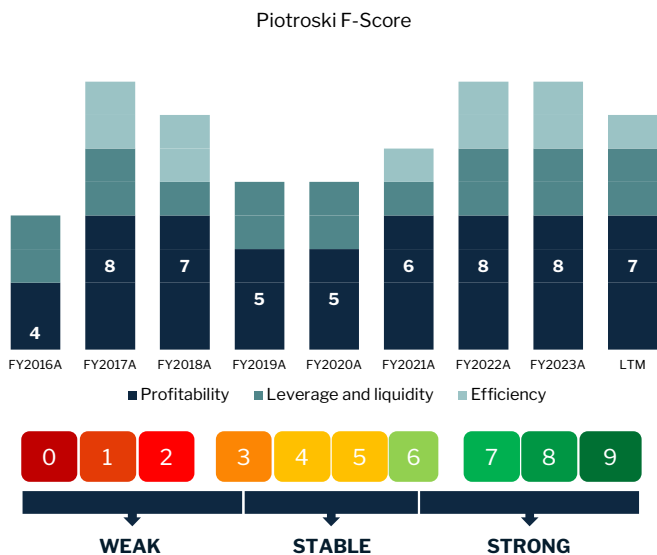
Our analysis indicates that the company's Sloan Ratio falls within the optimal range of -10% to 10%. This figure reflects a high quality of earnings, suggesting that the company's profitability is solid and sustainable in the long term. In this context, we believe the risk for investors is limited, with an optimal balance between provisions and operating earnings. This positioning indicates prudent management and a healthy financial foundation.

PIOTROSKI F-SCORE

The Piotroski F-Score is a fundamental analysis tool developed by accounting professor Joseph D. Piotroski to assess a company's financial health. This score comprises nine financial criteria, divided into three main categories: profitability, operational efficiency, and capital structure. Each metric within these categories is assigned one point if it meets certain favorable conditions, resulting in a cumulative score that ranges from 0 to 9.

Over the past 20 years, a stock selection strategy within the S&P 500 that used a Piotroski F-Score greater than 6 and included annual rebalancing would have outperformed the S&P 500, achieving a compound annual growth rate (CAGR) of 14.8%. This superior performance highlights how the Piotroski F-Score can enhance returns within a value investing strategy, demonstrating its effectiveness in selecting financially strong companies relative to the broader market.

Our analysis indicates that the company's Piotroski F-Score in 2023 is within the optimal range of 7 to 9, reflecting a strong financial position and robust fundamentals. This high score suggests the company excels across profitability, operational efficiency, and capital structure management. In this context, we consider the investment risk to be limited, as the financial indicators demonstrate effective management and resilience. With this strong foundation, the company is well-positioned for sustainable growth, making it an attractive option for value-focused investors.



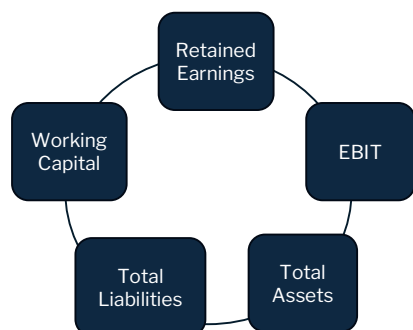
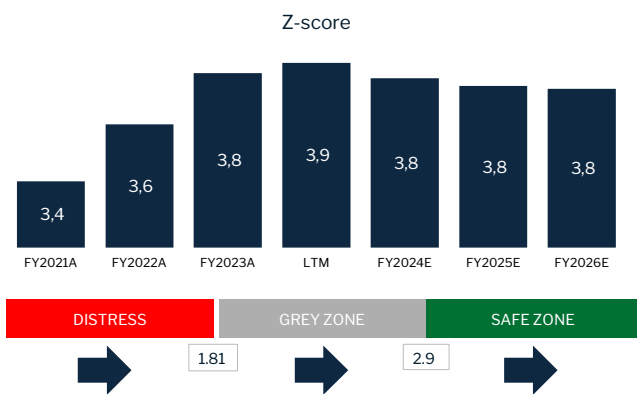
ALTMAN Z-SCORE

	Historical				Projected		
	FY2021A	FY2022A	FY2023A	LTM	FY2024A	FY2025A	FY2026A
1.	0,5	0,5	0,5	0,5	0,5	0,5	0,5
2.	0,1	0,1	0,1	0,1	0,1	0,1	0,1
3.	0,1	0,1	0,2	0,2	0,2	0,2	0,2
4.	3	3	3	3	3	3	3
5.	0,62	0,73	0,77	0,76	0,76	0,73	0,71
Z-score	3,4	3,6	3,8	3,9	3,8	3,8	3,8
Interpretation	Safe zone	Safe zone	Safe zone	Safe zone	Safe zone	Safe zone	Safe zone

The Altman Z-score is a predictive financial metric designed to assess the likelihood of a company's insolvency within the next two years. Developed to anticipate bankruptcy risk, Altman's model has demonstrated an accuracy rate of 95% one year before bankruptcy, decreasing to 72% two years before and 52% three years before.

This formula measures the "distance" between a company's financial ratios and those typical of distressed companies. A high Z-score indicates a lower risk of failure, while a low score signals higher risk, providing investors and analysts with a key parameter to evaluate a company's creditworthiness and financial stability.

Based on our analysis, the company is in a safe zone, with a low risk of default in the short to medium term. This high score indicates a solid financial structure and a stable capacity to generate operating cash flows. Assets are efficiently utilized, and leverage is maintained at manageable levels, making this company an attractive option for investors seeking stability and resilience to market shocks. This positioning inspires confidence in the company's management reliability and long-term sustainability.



INCOME STATEMENT														
Amounts in million	FY2016A	FY2017A	FY2018A	FY2019A	FY2020A	FY2021A	FY2022A	FY2023A	LTM	FY2024E	FY2025E	FY2026E	FY2027E	FY2028E
Revenues	38,537	45,462	54,722	53,800	41,748	50,971	59,427	67,060	65,664	65,719	64,996	64,866	65,320	66,953
% YoY Growth	-18.0%	18.0%	20.4%	-1.7%	-22.4%	22.1%	16.6%	12.8%	-2.1%	-2.0%	-1.1%	-0.2%	0.7%	2.5%
Cost of goods sold	(28,044)	(31,260)	(36,997)	(36,630)	(29,082)	(35,513)	(41,350)	(42,767)	(40,894)	(41,403)	(40,557)	(40,087)	(39,976)	(40,172)
Gross Profit	10,493	14,202	17,725	17,170	12,666	15,458	18,077	24,293	24,770	24,316	24,438	24,779	25,344	26,781
% YoY Growth	-22.1%	35.3%	24.8%	-3.1%	-26.2%	22.0%	16.9%	34.4%	2.0%	0.1%	0.5%	1.4%	2.3%	5.7%
SG&A expenses	(4,476)	(4,425)	(4,806)	(4,796)	(3,957)	(3,432)	(4,111)	(5,620)	(5,805)	(5,849)	(5,785)	(5,773)	(5,813)	(5,959)
R&D expenses	(1,853)	(1,842)	(1,850)	(1,693)	(1,415)	(1,686)	(1,814)	(2,108)	(2,142)	(2,103)	(2,080)	(2,076)	(2,090)	(2,142)
Other operating expenses	78	19	89	140	80	204	115	120	338	120	120	120	120	120
Operating Income	4,242	7,954	11,158	10,821	7,374	10,544	12,267	16,685	17,161	16,484	16,694	17,050	17,560	18,800
% YoY Growth	-39.5%	87.5%	40.3%	-3.0%	-31.9%	43.0%	16.3%	36.0%	2.9%	-1.2%	1.3%	2.1%	3.0%	7.1%
± Non-operating income(ε)	(3,614)	(3,330)	(2,909)	(2,561)	(2,856)	(1,825)	(3,052)	(3,058)	(3,200)	(3,200)	(2,670)	(2,670)	(2,670)	(2,670)
– Interest Expense	(503)	(531)	(404)	(421)	(514)	(488)	(443)	(511)	(531)	(467)	(467)	(467)	(467)	(467)
Pretax Income	125	4,093	7,845	7,839	4,004	8,231	8,772	13,116	13,430	12,817	13,556	13,912	14,423	15,662
– Tax Provision	(192)	(3,339)	(1,698)	(1,746)	(1,006)	(1,742)	(2,067)	(2,781)	(2,753)	(2,692)	(2,847)	(2,922)	(3,029)	(3,289)
Net Income	(67)	754	6,147	6,093	2,998	6,489	6,705	10,335	10,677	10,125	10,710	10,991	11,394	12,373
% YoY Growth	-102.7%	-1225.4%	715.3%	-0.9%	-50.8%	116.4%	3.3%	54.1%	3.3%	-2.0%	5.8%	2.6%	3.7%	8.6%
Ebit	4,242	7,954	11,158	10,821	7,374	10,544	12,267	16,685	17,161	16,484	16,694	17,050	17,560	18,800
Depreciation & Amortization	3,034	2,877	2,766	2,577	2,432	2,352	2,219	2,069	2,068	2,300	2,275	2,270	2,286	2,343
Ebitda	7,276	10,831	13,924	13,398	9,806	12,896	14,486	18,754	19,229	18,784	18,969	19,320	19,847	21,143
% YoY Growth	-27.6%	48.9%	28.6%	-3.8%	-26.8%	31.5%	12.3%	29.5%	2.5%	0.2%	1.0%	1.9%	2.7%	6.5%

INCOME STATEMENT DRIVERS														
	FY2016A	FY2017A	FY2018A	FY2019A	FY2020A	FY2021A	FY2022A	FY2023A	LTM	FY2024E	FY2025E	FY2026E	FY2027E	FY2028E
Cost of sales % Rev.	72.8%	68.8%	67.6%	68.1%	69.7%	69.7%	69.6%	63.8%	62.3%	63.0%	62.4%	61.8%	61.2%	60.0%
SG&A % of Rev.	11.6%	9.7%	8.8%	8.9%	9.5%	6.7%	6.9%	8.4%	8.8%	8.9%	8.9%	8.9%	8.9%	8.9%
R&D expenses % of Re'	4.8%	4.1%	3.4%	3.1%	3.4%	3.3%	3.1%	3.1%	3.3%	3.2%	3.2%	3.2%	3.2%	3.2%
D&A % of revenues	7.9%	6.3%	5.1%	4.8%	5.8%	4.6%	3.7%	3.1%	3.1%	3.5%	3.5%	3.5%	3.5%	3.5%
Interest Expense % Det	1.4%	1.5%	1.1%	1.1%	1.4%	1.3%	1.2%	1.3%	1.4%	1.4%	1.4%	1.4%	1.4%	1.4%
Effective tax Rate	153.6%	81.6%	21.6%	22.3%	25.1%	21.2%	23.6%	21.2%	20.5%	21.0%	21.0%	21.0%	21.0%	21.0%
EPS	(0.1)	1.3	10.3	10.7	5.5	11.8	12.6	20.1	21.5	20.4	21.6	22.2	23.0	25.0
% YoY Growth	-102.7%	-1197.2%	715.1%	4.7%	-49.1%	116.5%	6.9%	59.2%	7.1%	-5.2%	5.8%	2.6%	3.7%	8.6%
Diluted Shares Outstan	584	599	599	568	549	549	530	514	496	496	496	496	496	496
Dividends per Share	3.08	3.11	3.36	3.95	4.12	4.36	4.71	5.1	5.42	0	0	0	0	0
Payout Ratio	-2686.0%	247.2%	32.8%	36.8%	75.4%	36.9%	37.3%	25.3%	25.2%	24.6%	22.9%	21.2%	19.4%	16.0%

BALANCE SHEET														
Amounts in millions	FY2016A	FY2017A	FY2018A	FY2019A	FY2020A	FY2021A	FY2022A	FY2023A	LTM	FY2024A	FY2025A	FY2026A	FY2027A	FY2028A
Total Cash	5,257	7,381	6,968	7,299	8,822	8,428	6,042	6,106	4,760	2,611	5,540	6,631	8,042	10,480
Short Term Investments	-	-	-	-	-	964	-	1,900	-	1,900	1,900	1,900	1,900	1,900
Cash & short-Term Invest.	5,257	7,381	6,968	7,299	8,822	9,392	6,042	8,006	4,760	4,511	7,440	8,531	9,942	12,380
Accounts Receivable	5,919	7,376	8,714	8,484	7,178	8,664	9,103	9,556	9,304	9,858	9,749	9,730	9,798	10,043
Inventory	8,614	10,018	11,529	11,266	11,402	14,038	16,270	16,565	17,312	16,561	16,223	16,035	15,990	16,069
Other Current Assets	12,177	11,469	11,392	12,144	12,062	11,361	12,370	12,822	13,570	13,801	13,649	13,622	13,717	14,060
Total Current Assets	31,967	36,244	38,603	39,193	39,464	43,455	43,785	46,949	44,946	44,731	47,062	47,918	49,448	52,552
Net PP&E	10,899	9,823	9,085	9,230	8,912	8,797	8,750	9,250	8,943	9,929	10,904	11,877	12,857	13,861
Other Non-Current Assets	25,835	24,712	24,604	23,834	23,554	24,217	24,120	25,969	27,067	25,969	25,969	25,969	25,969	25,969
Goodwill	6,003	6,183	6,217	6,196	6,394	6,324	5,288	5,308	5,317	5,400	5,400	5,400	5,400	5,400
Total Assets	74,704	76,962	78,509	78,453	78,324	82,793	81,943	87,476	86,273	86,029	89,334	91,163	93,673	97,781
Accounts Payable	4,614	6,487	7,051	5,957	6,128	8,154	8,689	7,906	7,705	7,867	7,706	7,617	7,595	7,633
Short Term Debt	507	6	10	16	1,420	45	120	1,044	46	1,044	1,044	1,044	1,044	1,044
Other Current Liabilities	21,011	20,438	21,157	20,648	18,169	21,648	22,722	25,778	24,467	25,630	25,348	25,298	25,475	26,112
Total Current Liabilities	26,132	26,931	28,218	26,621	25,717	29,847	31,531	34,728	32,218	34,541	34,098	33,958	34,114	34,788
Long Term Debt	8,368	7,492	8,005	9,013	9,646	9,667	9,442	8,507	8,634	8,634	8,634	8,634	8,634	8,634
Other non-current Liabilities	26,991	28,773	28,206	28,190	27,583	26,763	25,079	24,738	26,018	24,738	24,738	24,738	24,738	24,738
Total Liabilities	61,491	63,196	64,429	63,824	62,946	66,277	66,052	67,973	66,870	67,913	67,470	67,330	67,486	68,160
Total Equity	13,213	13,766	14,080	14,629	15,378	16,516	15,891	19,503	19,403	18,331	22,079	24,048	26,402	29,836
Total Liabilities and Equity	74,704	76,962	78,509	78,453	78,324	82,793	81,943	87,476	86,273	86,244	89,549	91,378	93,888	97,996

BALANCE SHEET DRIVERS														
Accounts Receivable % Rev.						17%	15%	14%	14%	15.0%	15.0%	15.0%	15.0%	15.0%
Inventory % COGS						40%	39%	39%	42%	40.0%	40.0%	40.0%	40.0%	40.0%
Other Current Assets % Rev.						22%	21%	19%	21%	21.0%	21.0%	21.0%	21.0%	21.0%
Accounts Payable % COGS						23%	21%	18%	19%	19.0%	19.0%	19.0%	19.0%	19.0%
Other CL % Revenues						42%	38%	38%	37%	39.0%	39.0%	39.0%	39.0%	39.0%
Book Value / Share						3076%	3073%	3904%	4018%					
TBV / Share						1701%	1902%	2728%	2824%					
Total Debt						38,431	37,572	38,452	37,901					



	INDICATORS													
	FY2016A	FY2017A	FY2018A	FY2019A	FY2020A	FY2021A	FY2022A	FY2023A	LTM	FY2024E	FY2025E	FY2026E	FY2027E	FY2028E
Margins														
Gross Profit Margin	27%	31%	32%	32%	30%	30%	30%	36%	38%	37%	38%	38%	39%	40%
EBITDA Margin	19%	24%	25%	25%	23%	25%	24%	28%	29%	29%	29%	30%	30%	32%
EBIT Margin	11%	17%	20%	20%	18%	21%	21%	25%	26%	25%	26%	26%	27%	28%
Net Income Margin	0%	2%	11%	11%	7%	13%	11%	15%	16%	15%	16%	17%	17%	18%
Free Cash Flow Margin	9%	12%	24%	22%	17%	18%	20%	19%	21%	17%	20%	20%	21%	22%
Profitability														
Return on Assets	0%	1%	8%	8%	4%	8%	8%	12%	12%	12%	12%	12%	12%	13%
Return on Equity	0%	6%	44%	42%	20%	41%	41%	58%	55%	54%	53%	48%	45%	44%
Return on invested capital	-3%	2%	11%	11%	7%	10%	11%	16%	16%	15%	15%	15%	15%	16%
Growth														
Operational Roic	-4%	2%	14%	13%	9%	13%	14%	18%	18%	17%	17%	17%	17%	18%
NOPAT Margin	-6%	3%	16%	16%	13%	16%	16%	20%	21%	20%	20%	21%	21%	22%
Capital turnover	0,6x	0,7x	0,9x	0,8x	0,7x	0,8x	0,9x	0,9x	0,9x	0,9x	0,8x	0,8x	0,8x	0,8x
Reinvestment rate (5%)	-143%	216%	37%	39%	58%	39%	37%	28%	28%	30%	30%	29%	29%	27%
Reinvestment rate (10%)	-286%	433%	74%	77%	116%	79%	74%	56%	56%	59%	59%	58%	57%	55%
Liquidity														
Current Ratio	1,2x	1,3x	1,4x	1,5x	1,5x	1,5x	1,4x	1,4x	1,4x	1,3x	1,4x	1,4x	1,4x	1,5x
Quick Ratio (Acid Test)	0,4x	0,5x	0,6x	0,6x	0,6x	0,6x	0,5x	0,5x	0,4x	0,4x	0,5x	0,5x	0,6x	0,6x
Activity														
Asset Turnover	0,5x	0,6x	0,7x	0,7x	0,5x	0,6x	0,7x	0,8x	0,8x	0,8x	0,7x	0,7x	0,7x	0,7x
DSO	60	53	54	58	68	57	55	51	52	54	55	55	55	54
DPO	63	65	67	65	76	73	74	71	70	69	70	70	69	69
DIO	119	109	106	114	142	131	134	140	151	146	148	147	146	146
Cash Conversion Cycle	116	97	93	107	135	114	114	120	134	131	133	132	131	131
Leverage														
Debt to Equity	0,7x	0,5x	0,6x	0,6x	0,7x	0,6x	0,6x	0,5x	0,4x	0,5x	0,4x	0,4x	0,4x	0,3x
Debt to Capital	0,4x	0,4x	0,4x	0,4x	0,4x	0,4x	0,4x	0,3x	0,3x	0,3x	0,3x	0,3x	0,3x	0,2x
Debt to free cash flow	2,5x	1,4x	0,6x	0,8x	1,6x	1,0x	0,8x	0,8x	0,6x	0,9x	0,7x	0,7x	0,7x	0,7x
Debt / EBITDA	1,2x	0,7x	0,6x	0,7x	1,1x	0,8x	0,7x	0,5x	0,5x	0,5x	0,5x	0,5x	0,5x	0,5x
Coverage														
Interest cover Ratio	8,4x	15,0x	27,6x	25,7x	14,3x	21,6x	27,7x	32,7x	32,3x	35,3x	35,7x	36,5x	37,6x	40,2x

VALUATION

Weighted Average Cost of Capital	
Risk free rate (Rf)	4326,00% ⁽¹⁾
Country risk premium	1,00% ⁽²⁾
Equity risk premium (Rm - Rf)	5,54% ⁽³⁾
Equity Beta	1,09 ⁽⁴⁾
Cost of Equity (Ke)	4333,04%
Cost of debt	4326,59% ⁽⁵⁾
Tax rate	22,50%
After-tax Cost of Debt (Kdt)	3353,30%
Capital Structure	0
Equity	83%
Debt	17%
Weighted Average Cost of Capital	4168,51%

- (1) Based on the current US\$y
- (2) W.average of CRPs according to the revenue divided by geographical area
- (3) W.average of ERPs according to the revenue divided by geographical area
- (4) Based on a 5 year weekly correlation with the S&P 500
- (5) Based on weighted average historical cost of debt

Discounted Cash Flow	Units	Projected				
		FY2024E	FY2025E	FY2026E	FY2027E	FY2028E
<i>Amounts in millions, except per share amount</i>						
EBIT	\$	16.484	16.694	17.050	17.560	18.800
% YoY Growth	%	-1%	1%	2%	3%	7%
Taxes	\$	(2.692)	(2.847)	(2.922)	(3.029)	(3.289)
Tax Rate/Ebit	%	16%	17%	17%	17%	17%
NOPAT	\$	13.792	13.847	14.128	14.532	15.511
+ Depreciation and Amortization	\$	2.300	2.275	2.270	2.286	2.343
D&A % of Revenues		3,5%	3,5%	3,5%	3,5%	3,5%
± Changes in working capital	\$	(1.464)	156	95	37	8
% YoY Growth current Assets		-5%	5%	2%	3%	6%
% YoY Growth current Liabilities		-1%	-1%	0%	0%	2%
- Capital expenditures	\$	(3.286)	(3.250)	(3.243)	(3.266)	(3.348)
Capex % of Revenue		5%	5%	5%	5%	5%
Unlevered Free Cash Flows	\$	11.343	13.028	13.250	13.589	14.514
Discount rate	%	4,168,51%	4,168,51%	4,168,51%	4,168,51%	4,168,51%
Discount period		0,0	1,0	2,0	3,0	4,0
Discount factor		0,87	0,02	0,00	0,00	0,00
Present Value of Unlevered Free Cash Flow	\$	9.923	267	6	0	0

DCF Value - Perpetuity Growth	
NPV of UFCF 2024 - 2028	10.197
PV of Terminal Value	0
Implied Enterprise Value	10.197
Less: Debt	37.901
Add: Cash	4.760
Add: short-term investments	-
Implied Equity Value	(22.944)
Diluted shares	496
Implied Value Per Share	(46,30)

Wacc		Perpetuity growth Rate				
		(46)	1,50%	1,75%	2,00%	2,25%
4168,0%	-46,30	-46,30	-46,30	-46,30	-46,30	-46,30
4168,3%	-46,30	-46,30	-46,30	-46,30	-46,30	-46,30
4168,5%	-46,30	-46,30	-46,30	-46,30	-46,30	-46,30
4168,8%	-46,30	-46,30	-46,30	-46,30	-46,30	-46,30
4169,0%	-46,30	-46,30	-46,30	-46,30	-46,30	-46,30

Wacc		Exit Multiple				
		(46)	12,0x	12,2x	12,5x	12,7x
4168,0%	-46,30	-46,30	-46,30	-46,30	-46,30	-46,30
4168,3%	-46,30	-46,30	-46,30	-46,30	-46,30	-46,30
4168,5%	-46,30	-46,30	-46,30	-46,30	-46,30	-46,30
4168,8%	-46,30	-46,30	-46,30	-46,30	-46,30	-46,30
4169,0%	-46,30	-46,30	-46,30	-46,30	-46,30	-46,30

Method	Weight
Exit Multiple	50%
Perpetuity growth rate	50%

RELATIVE VALUATION

Enterprise Value Multiples

	LTM	FY2024E	FY2025E	FY2026E	FY2027E	FY2028E
EV / Revenue	3,4x	3,4x	3,4x	3,4x	3,4x	3,3x
EV / Ebitda	11,5x	11,8x	11,6x	11,4x	11,1x	10,4x
EV / Ebit	12,9x	13,4x	13,2x	13,0x	12,6x	11,8x

Equity Value Multiples

	LTM	FY2024E	FY2025E	FY2026E	FY2027E	FY2028E
Price / Sales	2,9x	2,9x	2,9x	2,9x	2,9x	2,8x
Price / Earnings	17,6x	18,5x	17,5x	17,1x	16,5x	15,2x
Price / BV	9,7x	10,2x	8,5x	7,8x	7,1x	6,3x
Price / UFCF	13,8x	16,6x	14,4x	14,2x	13,8x	12,9x

Trading Comparables Company	Equity Value	Enterprise Value	Ev / Sales		Ev / Ebitda		Price / sales		Price / Earnings		Price / Book		Price / UFCF	
			LTM	NTM	LTM	NTM	LTM	NTM	LTM	NTM	LTM	NTM	LTM	NTM
Deere & Company (NYSE:DE)	109.153	170.117	3,0x	4,1x	11,9x	18,9x	2,0x	2,7x	13,6x	19,1x	4,8x			
PACCAR Inc (NasdaqGS:PCAR)	58.858	65.318	1,9x	2,1x	11,0x	14,7x	1,7x	1,9x	12,6x	15,3x	3,2x			
Cummins Inc. (NYSE:CMI)	49.639	56.608	1,7x	1,7x	12,4x	10,4x	1,5x	1,5x	24,2x	16,5x	9,1x			
United Rentals, Inc. (NYSE:URI)	54.860	68.796	4,6x	4,4x	15,2x	9,3x	3,7x	3,5x	21,9x	18,4x	6,4x			
CRRC Corporation Limited (SHSE:601700)	30.861	31.032	0,9x	0,8x	10,1x	8,1x	0,9x	0,8x	18,1x	16,0x	1,4x			
Traton SE (XTRA:8TRA)	15.617	38.850	0,8x	0,8x	5,5x	5,6x	0,3x	0,3x	5,8x	5,5x	0,9x			
Westinghouse Air Brake Technologies C	34.191	37.842	3,7x	3,5x	17,9x	16,5x	3,3x	3,1x	32,6x	23,7x	3,3x			

Equity Value	123.838	141.479	200.106	201.395	200.106	201.395	125.761	138.210	191.302	171.018	83.828	-	-
Diluted shares	496	496	496	496	496	496	496	496	496	496	496	496	496
Implied Share price	250	285	404	406	404	406	254	279	386	345	169	-	-
					0	0	0	0	0	0	0	0	0
High	541	517	629	648	629	648	485	465	701	483	366		
Low	35	35	145	146	145	146	41	41	126	112	35		



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