

Tesla (TSLA)

November 15, 2023

Automotive Company- Consumer Discretionary

Investment Thesis

We recommend a BUY rating on Tesla, which is a market leader in the global electric vehicle (EV) industry and is investing in segments that present significant growth opportunity. Our DCF model has given us a fair value of \$165, which is 22% lower than the current share price of \$214. However, looking at the opportunity and execution track record of Tesla, we recommend a BUY range of \$165 to \$190.

Drivers of Thesis

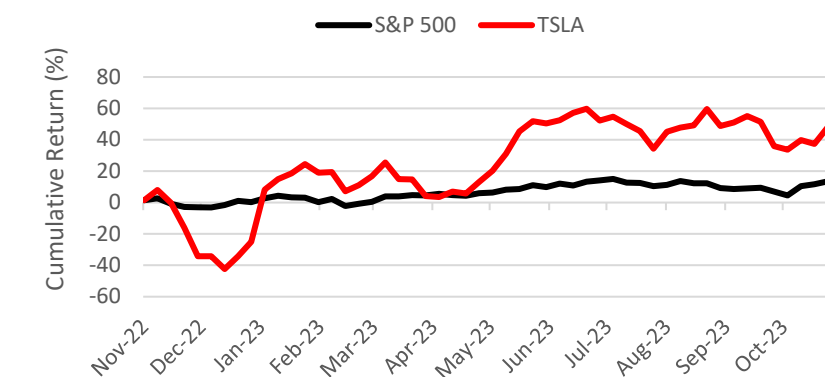
- Tesla's market leadership position with 20%+ market share in the global EV industry. With other manufacturers losing money on their products and the current high interest rate scenario, Tesla is well poised to consolidate its market share.
- Tesla's technological prowess is unmatched when it comes to AI and Full Self Driving (FSD) system, which is developed using data collected from nearly 5 million cars.
- We expect Tesla to deliver revenue growth of 26.7% CAGR over the forecast horizon, benefitting from the changing mix in new vehicles sold. It is projected that 60% of new vehicles sold globally by 2030 will be electric.

Risks to Thesis

- The biggest risk to Tesla and its business is a slowdown in growth and delivery of proposed developments. Elon Musk is very vocal about his grand plans which seem too aggressive at times. Tesla has often missed its promised deadlines on new products and technologies alike.
- Tesla's technologies are heavily integrated. What that means is, FSD, Robotaxi and car sales are somewhat codependent. Failure in any one category could adversely affect the others significantly, which poses a great risk at the rich valuations Tesla trades at.

Earnings Estimates						
Year	2020	2021	2022	2023E	2024E	2025E
EPS	\$0.26	\$1.87	\$4.01	\$2.69	\$3.48	\$5.13
HF est.				\$3.13	\$4.62	\$5.88
Growth	179%	624%	115%	-22%	47%	27%

12 Month Performance



Stock Rating

Limit BUY

Target Buy Price

\$165-190

Henry Fund DCF	\$165
Henry Fund DDM	NA
Relative Multiple (PE)	NA

Price Data

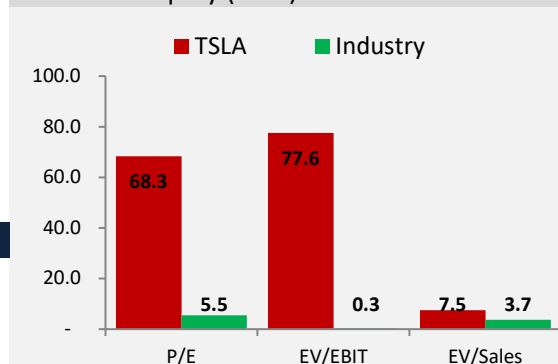
Current Price	\$214
52wk Range	\$101-299
Consensus 1yr Target	\$240

Key Statistics

Market Cap (B)	\$744.82
Shares Outstanding (M)	3,179
Institutional Ownership	44.49%
Beta	1.33
Dividend Yield	NA
Est. Growth (5yr)	19.49%
Price/Earnings (TTM)	75.45
Price/Earnings (FY1)	76.28
EV/Sales (FY1)	7.5
EV/EBIT (FY1)	77.6

Profitability (FY22)

Operating Margin	16.98%
Profit Margin	15.41%
Return on Assets (TTM)	15.25%
Return on Equity (TTM)	39.76%



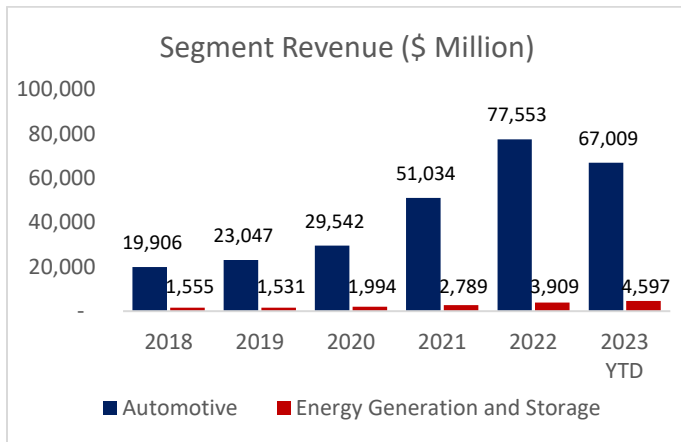
Company Description

Tesla is an American EV and Energy company based out of Austin, Texas. The company is the market leader in electric vehicles with a 21% market share in the global battery electric vehicle (BEV) industry. The company operates 6 factories around the world and manufactures 4 models. In 2022, Tesla posted revenues of \$81.4 billion, EBIT of \$13.8 billion with a net margin of 15.41%. the company is led by Elon Musk, who is a serial entrepreneur.

COMPANY DESCRIPTION

Tesla, Inc. operates in the Auto Manufacturers industry and is known for designing, developing, manufacturing, leasing, and selling electric vehicles, as well as energy systems. The company operates in two main segments: Automotive, and Energy Generation and Storage.

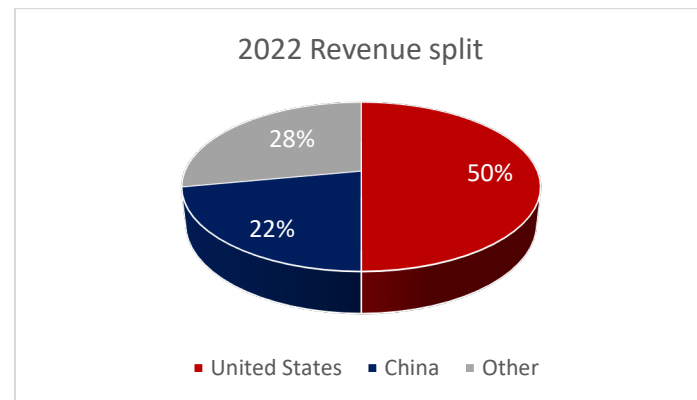
While the Automotive business was started in 2003, the Energy Generation and Storage business was launched in 2015. Since then, both divisions have grown into multi-product businesses.



Source: Tesla 10-K

As we can see, Tesla has delivered robust revenue growth over the last few years. This has mainly been driven by the success of the Model 3 and Model Y cars, and Elon Musk going as far as setting a long-term revenue growth target of 50% CAGR in early 2021.

Geographical Breakdown



Source: Tesla 10-K

Tesla reports its geographical revenues as United States, China and Other, with Other primarily being Europe and

Scandinavia. The United States is the largest market for Tesla, generating 50% of its total revenue.

Automotive Segment

Tesla's Automotive segment is primarily focused on the production and sale of electric vehicles (EVs). The company has a diverse range of models spanning an SUV, Luxury Sedan, Crossover and Compact Sedan. These models have captured a significant market share in the luxury EV segment. According to Experian's Automotive Consumer Trends Report, during the first half of 2023, the Model Y and Model 3 made up 47.36% and 27.30% of the luxury EV segment respectively.

The Model Y is likely to become the best-selling car of 2023 globally, outselling its smaller sibling, the Model 3 by 2x. Together the Model 3 and Model Y, which are built on the same platform, make up 95% of the sales volumes for Tesla today.

Years	Model S/X units	Model S/X market share	Model 3/Y units	Model 3/Y market share
2018	99,451	41%	146,055	59%
2019	66,746	18%	300,815	82%
2020	57,025	11%	442,284	89%
2021	24,965	3%	911,126	97%
2022	66,705	5%	1,247,146	95%
2023E	61,091	3%	1,728,674	97%

Source: Tesla Quarterly Press Releases

While the Model S and Model X have been reduced to just 3% of overall volumes, these are important cars for Tesla. For starters, the Model S played a critical role in instilling the belief that Electric Cars can compete with traditional Internal Combustion Engine operated cars. The Model X came with unique gull-wing doors, which helped grab attention along with the same high-performance features as the Model S. These two cars managed to deliver on Tesla's promise of creating electric cars that were better, quicker, and more fun to drive than gasoline cars.

Today, the Model S/X segment continues to appeal to enthusiasts and the 'Plaid' models offer high performance equipment with 1000+ horsepower. These low volume cars have better gross margins compared to the Model 3/Y segment. Another factor contributing to Tesla's industry leading margins is its control of its product. The company

does not follow the dealership model like traditional automakers, spends barely any money on advertising (Tesla spent \$151,947 on advertising in the U.S. in 2022, in comparison Ford and Toyota spent \$370 million and \$1.1 billion respectively) and has more control on its supply chain which is vertically integrated.

In terms of sales numbers, for the first 3 quarters of 2023, Tesla has sold 45,905 units of the Model S/X platform and 1,278,169 units of the Model 3/Y platform worldwide. We expect them to sell a total of 1.79 million units for 2023E.

In our forecasts, we expect the Model 3/Y platform to continue to dominate the sales volumes going forward. We are forecasting the platform to grow at a CAGR of 29% over the next 10 years and the Model S/X platform to grow at a CAGR of 5% over the same period.

It is important to note here that we are not including any upcoming models and new products since Tesla has a history of missing production deadlines. However, we do expect the average revenue per car to be in a similar range as upcoming models include both, an affordable car platform (the \$27,000 car which was announced early November) and cars with higher starting prices (Cybertruck and Roadster). The Tesla Semi is also not included in the projections.

The automotive business is also characterized by its commitment to innovation and technological advancement. The company is heavily investing in AI related technologies such as Full Self Driving (FSD), and Dojo. We will discuss these in more detail later in this section. For the overall Auto business, we are forecasting revenues to grow at a CAGR of 27% over the forecast horizon.

Energy Generation and Storage Segment

Tesla's Energy Generation and Storage business is a key part of its mission to accelerate the advent of sustainable energy. This business segment includes the production of battery storage products and solar energy products.

The products in this segment include solar panels, solar roof, Powerwall and Megapack, as well as the manufacturing and sourcing of batteries for its vehicles.

The solar panels and solar roof help generate electricity, the Powerwall is an integrated battery system that stores your solar energy for backup protection when the grid

goes down. The home system detects outages and powers the house and electric vehicle with backup energy and automatically recharges with sunlight.

The Megapack is a large-scale energy storage product designed to store energy from renewable sources like solar and wind. The Megapack is crucial for Tesla's vision of a sustainable energy future, as it allows for the storage of energy when the sun isn't shining, or the wind isn't blowing. This product is aimed at industrial and large-scale projects.

On the residential side, Tesla has surpassed 0.5 million Powerwalls installed. The company has launched Charge on Solar, which allows Tesla Powerwall and vehicle customers to charge their vehicles using their excess solar and drive on the sunshine that hits the roof. Tesla has also begun paying customers in Texas for participating in its virtual power plant to provide grid support to ERCOT (Electric Reliability Council of Texas).

Coming to the battery business, Tesla manufactures batteries in-house as well as uses outside suppliers to meet its demand. Tesla entered a long-term partnership with Panasonic in 2009 to manufacture batteries for its EVs. Panasonic even invested \$30 million in Tesla and both companies collaborated on developing the next generation of battery cells for electric vehicles. The other major supplier of batteries for Tesla is CATL (Contemporary Amperex Technology Co. Ltd), which is a private Chinese company, and was the largest manufacturer of lithium-ion batteries in 2022. Since then, the company has made significant advances in battery technology, but it does not intend to displace its suppliers of battery cells. Tesla's battery cell production is in addition to what its suppliers can do. The company wants its suppliers to grow their battery output as fast as they can. The fundamental rate limiter for transitioning to sustainable energy is how fast the entire supply chain from mining to refining to cell production can grow.

Tesla's battery production is focused on 4680 cells, which reached a production rate of 1,000 cars a week at the end of last year. The company is increasing the capacity for these cells by another 100 gigawatt-hours. Tesla's long-term goal is to produce more than 1,000 gigawatt-hours of cells internally while continuing to use other cell providers. The demand for lithium-ion batteries is expected to remain extremely high and Tesla plans to scale faster by using both suppliers and internally produced cells. The

company has a plan for making the 4680-cell low-cost and high energy density. The new LFP (Lithium Iron Phosphate) batteries are a step in this direction, which deliver higher energy density and better performance in cold weather.

It is tricky to estimate the total available batteries for Tesla since it is constantly adding capacity both internally and externally. A fair estimate of total available battery capacity is around 135 GWh, across the supply chain. A new CATL facility has started operating next to Giga Shanghai, which will provide 4680 cells for the Model Y.

We have forecast this segment to grow at a CAGR of 20% over the forecast horizon, keeping our growth estimates conservative like with the automotive segment.

Additional Company Analysis

Manufacturing Capabilities

Tesla is the world's largest electric vehicle manufacturer. They operate 6 manufacturing facilities globally. These factories are built with an intent to add capacity over time and Tesla is current utilizing a fraction of the total production potential of each site.

Region	Product	Capacity
Fremont, California	Model 3/Y	550,000
	Model S/X	100,000
	4680 cells	
Giga Nevada Gigafactory 1	Lithium-ion batteries 2170 and 4680 Semi (pilot production)	50,000
New York Gigafactory 2	solar and energy storage products	
Shanghai, China Gigafactory 3	Model 3/Y	750,000+
Berlin, Germany Gigafactory 4	Model Y	375,000+
Austin, Texas Gigafactory 5	Model Y Cybertruck 4680 cells	250,000+ *125,000
Monterrey, Mexico Gigafactory 6	\$27,000 platform Robotaxi	production starts 2026
Lathrop, California	Megapack	*40 GWh/year ~10,000 units
Shanghai, China	Megapack	*40 GWh/year ~10,000 units

* marked figures are anticipated, not yet executed

Source: Inside EVs

While the current production capacity of Tesla stands at around 2.35 million vehicles per year, these existing

facilities can be ramped up to produce 10 million vehicles per year, with additional capital expenditures. Tesla, however, plans to add 10 to 12 more Gigafactories by 2030 with an aim to manufacture over 20 million cars per year.

Technology- Full Self Driving (FSD) and Dojo

Tesla Full Self Driving (FSD) is a suite of advanced driver-assistance systems offered by Tesla, Inc. It aims to enable full autonomous driving capabilities in Tesla vehicles. This technology uses various sensors, cameras, and artificial intelligence algorithms to navigate and control vehicles without human intervention. Over 400,000 people have enrolled in Tesla's FSD Beta testing program. This helps Tesla collect data and train its AI with real world driving environments.

Tesla Dojo is a neural network training computer designed to significantly reduce the cost of neural net training and optimize video training, which is essential for Tesla's autonomous driving technology. The Dojo computer has the potential to offer an order of magnitude improvement in the cost of training and may become a sellable service that Tesla could offer to other companies, like how Amazon Web Services offers web services.

The importance of data and training data is fundamental to achieving full autonomy in Tesla's vehicles. Tesla has a massive amount of data collected from its vehicles on the road, which is crucial for the success of its AI endeavors. The company is investing in both NVIDIA GPUs and its Dojo computer to improve its neural net training capabilities. Tesla expects to use both NVIDIA and Dojo for its neural net training and aims to reach an in-house neural net training capability of 100 exaflops by the end of next year.

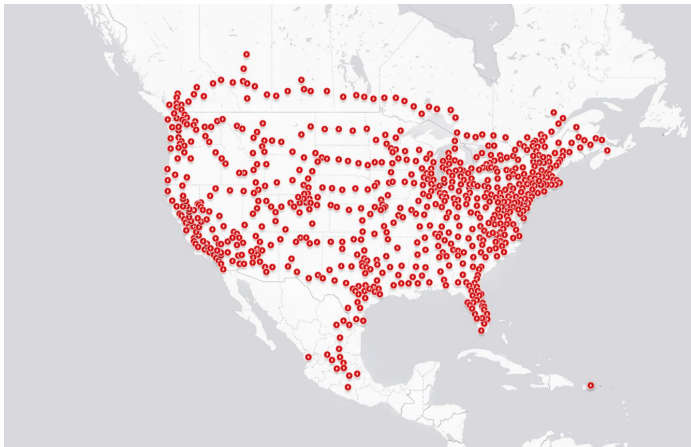
The architecture of Dojo is believed to be the right one to outperform NVIDIA GPUs for neural net training, but its success depends on how well Tesla executes that architecture. The company expects to use the Dojo computer operationally later this year.

All Tesla cars come equipped with the hardware required for FSD, however all features require purchase of the FSD package to become functional. Every new car comes with standard Autopilot features. Enhanced Autopilot and Full Self Driving (FSD) can be purchased for \$6,000 and \$12,000 respectively. There is also a monthly subscription model available. Elon Musk has expressed his intent to license FSD system to other automakers and OEMs in the future.

This could potentially be worth billions of dollars in very high margin revenue for Tesla.

Supercharger Network

Tesla operates over 50,000 charging stations where drivers can power up their vehicles. This is the largest global, fast charging network in the world. A wave of competing auto manufacturers have recently signed up for access to Tesla's charging system.



Source: Tesla website

This could potentially become a multi-billion-dollar annual revenue opportunity for Tesla, as vehicles from other manufacturers pay to use Tesla's charging network.

RECENT DEVELOPMENTS

Recent Earnings Announcement

Tesla announced its Q3 2023 earnings on October 18, 2023. Tesla reported a revenue of \$23.35 billion, with a gross profit of \$4.18 billion. The company's operating income was \$1.76 billion, and its net income was \$1.85 billion. The gross profit margin was 18%, and the net profit margin was 8%. Tesla's operating cash flow per share was \$1.04, and its free cash flow per share was \$0.27.

During the earnings call, Tesla's CFO, Vaibhav Taneja, highlighted that vehicle deliveries in Q3 outpaced production, and the company had a record quarter of profitability in its energy business. Despite planned downtimes for factory upgrades, the cost per vehicle decreased to approximately \$37,500 due to sequential decreases in material cost and freight. The company's R&D expenses continued to rise due to Cybertruck prototype

builds and pilot production testing combined with spend on AI technologies like full self-driving, Optimus, and Dojo.

Elon Musk, during the earnings call, emphasized the company's significant investment in AI development, which he believes could make Tesla the most valuable company in the world. He also mentioned the challenges in reaching volume production with the Cybertruck and making it cash flow positive.

The company's third-quarter revenue of \$23.35 billion represented an increase of just 8.8% compared to the same quarter last year. However, its net income shrank by 44% due to price cuts affecting Tesla's financials. Despite this, Tesla delivered 435,059 cars in Q3, which was below Wall Street's forecast due to planned downtime for factory upgrades.

New sub \$27,000 car that could potentially be the Robotaxi

On November 6, 2023, Tesla announced its plans to build a €25,000 (\$27,000) new electric car model from its Berlin Gigafactory. This will be Tesla's cheapest offering and could compete with budget EVs from Europe and particularly China. Tesla could be planning to use this vehicle as its Robotaxi, which Elon Musk announced in April 2022. This can be achieved by pairing the FSD system with the new affordable vehicle. Ashwath Damodaran, in his valuation of the business, equated the Robotaxi industry to the ridesharing companies. The industry is expected to grow to \$300 billion+ in 2033 with expected sustainable operating margins of 30%.

Considering Tesla's historical lead time to go from product announcement to product delivery, we expect this business to start seeing vehicle deliveries sometime in early 2027. We have not factored in any sales from this segment in our current forecasts.

Cybertruck deliveries

The Tesla Cybertruck, a pickup truck with an unconventional design, is an important product for Tesla in the American market. The Cybertruck was announced in 2019 and is a significant part of Tesla's overall strategy. It represents a new product line with a lot of new

technology, which could potentially contribute to Tesla's growth and diversification in the automotive industry.

The demand for the Cybertruck is high, with over 1 million people having reserved the car. However, Musk has cautioned that it will take around a year to 18 months before the Cybertruck becomes a significant positive cash flow contributor. This is due to the difficulties in manufacturing the vehicle at a price that people can afford. In terms of production, Tesla is aiming to eventually produce 200,000 Cybertrucks a year.

Geo-political Tension Exposure

The conflicts in Ukraine and Israel have had an indirect impact on Tesla's business operations. According to Tesla's Q3 2023 Earnings Call, global conflicts such as wars can affect consumer sentiment, which in turn can impact the demand for new cars. As Elon Musk stated, when people are reading about wars, buying a new car tends not to be at the forefront of their minds.

In addition to affecting consumer sentiment, geopolitical risks can also impact Tesla's capacity expansion. As Tesla continues to grow, it faces the risk of putting other companies out of business, which can have impacts on regional economies. To manage these risks, Tesla has adopted a strategy of having factories in many parts of the world. This way, if things get difficult in one part of the world, Tesla keeps things going in the rest of the world.

However, it's important to note that these impacts are not directly tied to the conflicts in Ukraine and Israel, but rather to the general state of global geopolitical instability. The specific impacts of the conflicts in Ukraine and Israel on Tesla's business can be estimated by the fact that Tesla had sold 10,000 cars in Israel by November 2022. It did sell some cars in Russia but pulled out after Russia's attack on Ukraine.

Furthermore, Tesla's business operations have also been affected by other factors such as rising interest rates, raw material costs, and inefficiencies in the early ramp of their Austin and Berlin factories. The company has also faced labor issues in Sweden, which have disrupted its operations.

INDUSTRY TRENDS

The major trends currently shaping the industry in which Tesla operates include:

1. Increasing demand for electric vehicles (EVs): Tesla continues to capture a significant market share in the luxury EV segment, with four of the top five models being Tesla vehicles. The Model Y and Model 3 hold 47.36% and 27.30% of the market share, respectively. This trend indicates a growing consumer preference for electric vehicles, which is positively impacting Tesla's operations.

2. Autonomous driving technology: Tesla is a leader in fully autonomous driving technology, with 5 million cars on the road constantly collecting data in beta mode. This positions Tesla as a potential market leader in the autonomous vehicle space, which could significantly increase the company's gross profit margin on vehicle production from 17.9% today to 70% or higher over time.

3. Economic factors affecting demand: Tesla has been slashing prices to spur demand as consumers pull back on their spending due to broader economic challenges. While this strategy has worked throughout most of the year, it has affected Tesla's financials, with net income shrinking by 44% in the third quarter. However, Tesla's long-term outlook remains positive, as the company aims to dominate the EV market and lay the foundation for its lucrative robotaxi business.

4. Rising interest rates: As interest rates rise, the affordability of anything bought with debt decreases, effectively increasing the price of cars. Tesla has had to reduce the price of its cars in response to rising interest rates, which has impacted on its operations.

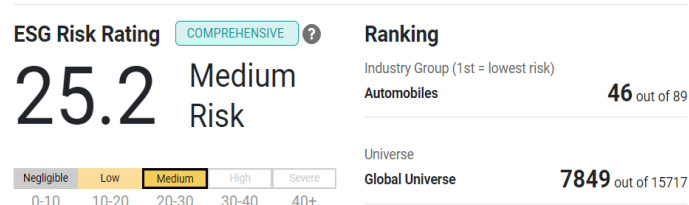
5. Raw materials and inflation: Tesla's cost of goods sold (COGS) per unit has increased on a year-over-year basis, driven primarily by factors such as raw materials and inflation led by lithium prices. This has affected Tesla's operations, as the company must navigate these challenges while maintaining its growth trajectory.

Sustainability and Social Responsibility

Environmental, Social, and Governance (ESG) refers to the three central factors in measuring the sustainability and societal impact of an investment in a company or business.

These criteria help to better determine the future financial performance of companies (return and risk).

Tesla's Environmental, Social, and Governance (ESG) initiatives are primarily reflected in its core business model of producing electric vehicles and renewable energy products, which inherently contribute to environmental sustainability.



Source: Morningstar Sustainalytics

Company	ESG Score	Risk Rating
Tesla	25.23	Medium
Ford Motor Company	23.23	Medium
General Motors	28.46	Medium
Rivian	28.12	Medium
Lucid Motors	24.62	Medium

Source: MorningStar Sustainalytics

PEER COMPARISON

Tesla, or the electric vehicle industry, is in a unique position when it comes to peer comparisons. On the one hand, we have the legacy car companies like Ford, GM, BMW, Mercedes- Benz, Hyundai, Toyota, etc. who have just started adding EVs to their product line. On the other hand, there is a host of new companies who are investing billions in the EV segment, like Rivian, Lucid, BYD in China, NIO. Fisker, Mullen Automotive, etc.

We believe that no company from either group comes close to Tesla as the legacy manufacturers still rely heavily on Internal Combustion Engine (ICE) powered cars to generate most of their revenues and are losing money on their EV offering, and the new EV focused companies haven't quite found their footing and continue facing financial hurdles.

It is important to note that Tesla's CEO, Elon Musk, has expressed support for other EV companies and is open to helping them accelerate the EV revolution. Tesla has also

made its patents available for free and is open to licensing its full self-driving software and hardware to other car companies. This collaborative approach could potentially benefit the entire EV industry, including the companies mentioned above.

Ford Motor Company (F)

Ford's EV business is a key part of its overall strategy, with a focus on battery capacity as a crucial factor for growth. The company has recognized the importance of securing raw materials, processing precursors, and setting up battery production in the U.S. and globally.

Ford's EV business is divided into three segments: Ford Blue, Model E, and Ford Pro. Ford Blue is focused on delivering a vibrant and profitable ICE business, which will serve as the profit and cash engine for the enterprise in the short term. Model E is responsible for delivering breakthrough EV designs, advanced electric architectures, and partial autonomy. Ford Pro is a business segment within Ford Motor Company that focuses on providing commercial vehicle services and solutions.

However, Ford's EV business has faced challenges. Despite the company's bullish outlook, there has been a significant increase in global entrants and pricing pressure in the EV market. The company has also faced persistent supply chain disruptions. Furthermore, the EV adoption rate is still growing, but the paradigm has shifted, with EV price premiums over internal combustion vehicles falling significantly. Ford is currently losing \$4.5 billion on Electric Vehicles.

In response to these challenges, Ford is making organizational changes to ramp up its Ford+ growth plan. This includes creating an effective and efficient end-to-end global industrial system as the operational engine behind all Ford vehicles – gas, hybrid, and electric. The company is also exploring capabilities and possibilities for electric vehicles, battery plants, and other EV components.

General Motors (GM)

General Motors has been investing heavily in EV technology and infrastructure, with a focus on creating a future that is all electric. This commitment is reflected in the company's workforce, with over 40% of its salaried employees and a higher percentage of its technical talent

having joined the company in the last 5 years, primarily due to the mission for EVs.

GM's EV strategy is built on a foundation of key decisions made 2018 onwards, which have enabled the company to take the lead in EV execution with scale and high reuse. The company has also been focusing on reducing fixed costs, with a target of \$2 billion in reductions, which it expected to flow to the bottom line faster than originally anticipated.

In terms of product offerings, GM has been expanding its EV lineup. The Cadillac brand, which is part of the GM group, announced its fourth EV, the Optiq, which is expected to be a compact sized crossover.

The EV business has faced many challenges. GM has announced that it will be slowing down its electric vehicles production in North America due to lower than forecast demand. This decision, they say, will help save \$1.5 billion next year. GM does not report losses to its EV business but is losing money on the segment for now.

Lucid Motors (LCID)

Lucid Group is an auto manufacturer that specializes in electric vehicles. The company's revenue for 2022 was just over \$608 million, a significant increase from the \$27 million reported in 2021. However, the company also reported an adjusted EBITDA loss of \$1.97 billion in 2022, compared to a loss of \$952 million in 2021. In Q3 2023, Lucid delivered 1,457 vehicles, generating revenue of only \$137.8 million and posting an operating loss of \$753 million. The company's free cash flow over the last 12 months was negative \$3.5 billion.

Lucid is one of the most exciting Tesla rivals today, with expensive, luxurious and high-performance cars. The company was started by Peter Rawlinson, an ex-Tesla engineer. While the company is making good strides with its Lucid Air and recently launched Lucid Gravity, it certainly is trailing Tesla by a good distance for now. The company's future will likely depend on its ability to increase sales and achieve positive cash flow.

Rivian (RIVN)

Rivian is a company backed by Jeff Bezos. The company started off by selling fully electric trucks before adding an SUV to the mix. They have also added delivery vehicles to supply to Amazon Prime.

The company's revenue stands at \$1.658 billion. However, it reported a gross loss of \$3.123 billion, indicating a significant loss. Rivian has been focusing on cost-cutting efforts and has made significant technological upgrades at its factories to reduce manufacturing costs. The company has also raised its vehicle production projections for the full year. Rivian has boosted its production guidance twice this year and now expects to manufacture 54,000 electric vehicles in 2023. Despite the rising borrowing costs, Rivian continues to report growing production/delivery trends and improving gross margins over the past few quarters.

However, Rivian is still a growth stage company with a limited operating history and history of losses. It expects to incur significant expenses and continuing losses for the foreseeable future. While the automaker has a robust net cash position of \$6.41 billion, its lack of profitability over the next few years implies a sustained trend of cash burn, share dilution and debt reliance.

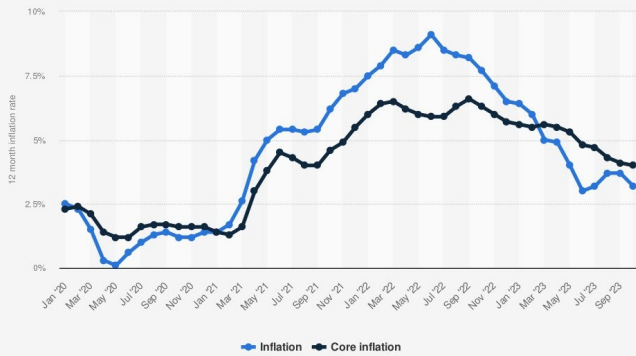
In Conclusion, Tesla has a significant advantage over the other players in the EV industry today, which can be attributed to its first mover advantage as well as the aggressive growth targets set by company leadership. Tesla is already the leading EV company in sales volumes in the world, and with legacy automakers pausing EV production to reduce cash burn, its market share is likely to increase in the coming years.

ECONOMIC OUTLOOK

Inflation

Inflation is a major concern for Tesla and the auto industry in general, and for good reason. Inflation in the U.S. has gone from 0.33% in April 2020 when the pandemic hit, to 6.04% as of February 2023. It reached a high of 9.06% in June 2022. A strong labor market and issues in the supply chain led the CPI to remain high. The Russia-Ukraine conflict disrupted energy markets around the world, causing energy prices to rise. While inflation has declined to under 4% over the last 3 months. At the Henry Fund, we expect inflation to remain around 3.7% the near term (6 months).

Monthly inflation rate and core inflation rate in the United States from January 2020 to October 2023 (not seasonally adjusted)



Source: Statista

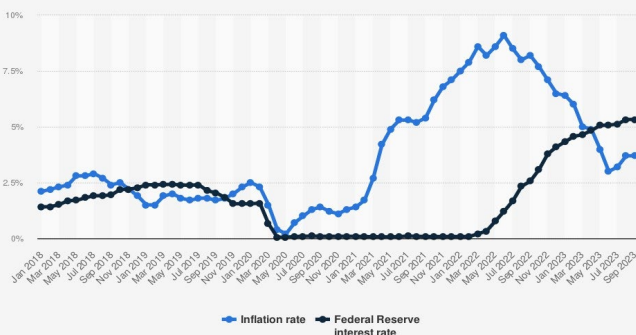
Inflation is perhaps the most important economic metric to consider right now as it is driving the Fed policy on Interest Rates, which is affecting business and consumer activity in the United States and driving Interest rates higher. The most recent CPI report suggests inflation is finally cooling down, which is a good sign for the industry.

Interest Rates

Interest rates are key macroeconomic indicators affecting businesses. Currently, the Fed Funds Rate is at 5.25%-5.50%. The Henry Fund analysts expect the Fed Funds Rate to remain in this range in the near term (6-months).

Higher interest rates can negatively impact Tesla's business operations and financial performance in several ways. First, it adds to the burden for customers who plan on financing or leasing their car. This might cause some customers to defer their purchase. Secondly, higher borrowing costs affect Tesla's expansion plans. Tesla has received all necessary permissions to begin construction at the Mexico factory but is considering if they should delay the construction work due to interest rates.

Inflation rate and Federal Reserve interest rate monthly in the United States from January 2018 to September 2023



Source: Statista

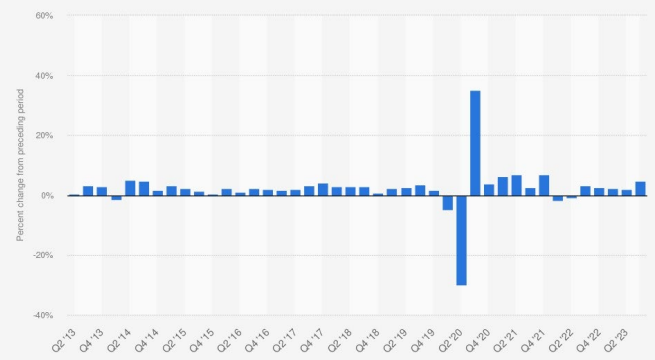
Persistently high interest rates could affect Tesla's aggressive growth plans, despite a significant amount of cash on the balance sheet.

GDP Growth

GDP Growth is an important economic factor for credit rating agencies as it is a proxy for healthy business activity. In 2022, the GDP growth dropped in the first couple of quarters but rebounded in the second half of the year. Thus, the economy entered 2023 with a healthy amount of forward momentum in spending and income.

The Henry Fund analysts believe the GDP will grow by 1.85% to 2.00% in the short term. This belief is based on the broader consensus in the market, which believes the US economy could pull off a soft landing over the next 12 months.

Annualized growth of real GDP in the United States from the first quarter of 2013 to the third quarter of 2023



Source: Statista

Macroeconomic conditions such as a general slowdown in economic growth can affect Tesla as potential customers might defer car purchases.

VALUATION

Revenue Decomposition

Tesla derives its revenue from 2 business segments.

The primary segment is the Automotive business. This involves sale of cars and related products to customers globally. For 2022, Tesla's automotive segment's revenue was \$77.5 billion. For the first 9 months of 2023, the segment has earned revenues of \$67.0 billion and is expected to close the year at \$91.9 billion.

This is mainly driven by the strong sales of its Model 3/Y vehicles, which make up 97% of total car sales by volume. Tesla's go to market strategy was to start with low volume high price vehicles, which are the Model S and Model X cars. Once these cars attracted enough customers and generated cash flows for Tesla, they launched more affordable cars in the form of Model 3 and Model Y, which are lower cost and much higher volumes. This strategy has worked but brought the average revenue per car down as expected. In 2018, when the Model 3/Y cars were launched, the Model S/X platform made up for over 40% of total sales volumes, with average revenue per car at \$ 87,415. As the sales mix changed, dominated by the Model 3/Y vehicles, this has slipped down to \$62,002 in 2022. We expect this to further slip down to \$54,854 in 2023 due to the price cuts Tesla has given to customers to carry on with the sales momentum. Tesla is prioritizing market share over margins for now.

In our forecasts, we expect the average revenue per car to remain in the same range, as there is not much room for Model S/X to lose market share, the lineup of upcoming products is a mix of expensive and affordable vehicles. While we have not added any upcoming products to our lineup, their volumes can potentially be substituted with our volumes for Model 3/Y forecast assumptions. We forecast automotive revenues to grow at a CAGR of 27% over our forecast horizon.

The next business segment for Tesla is the Energy Generation and Storage Business. This is an important business for the company, with potentially higher gross margins as well. The products under this segment are solar roof and panels for energy generation and Powerpack and Megapack for Energy Storage. This segment also produces the batteries for all the vehicles as well as the supercharger network.

The Energy business has grown from a revenue of \$1.55 billion in 2018 to \$ 3.91 billion in 2022. In 2023E we expect the business to bring in revenues of \$6.22 billion with \$4.97 billion already earned in the first 3 quarters.

Over our forecast horizon, we expect this business to grow into a \$23.7 billion business segment, growing at a CAGR of 20% over the forecast horizon. We are being conservative with our estimates here since we cannot project the revenue impact of opening the supercharger network for other manufacturers and OEMs.

Cost Structure Analysis

Tesla's primary costs include cost of goods sold (COGS), which comprise ~70% of the revenues, followed by Research and Development expenses, which used to be ~12%+ before 2018 but since have come down to under 5%. The third cost segment is SG&A expenses, which are also under 5%.

Tesla enjoys better gross margins compared to other automakers due to its unique distribution model. Tesla does not use the traditionally established dealership model and instead sells its cars directly to customers.

Company	Gross Profit Margin	Net Margin
Tesla	19.8%	11.2%
Ford Motor Company	10.2%	5.3%
General Motors	19.0%	6.6%
Rivian	-64.0%	-149.0%
Lucid Motors	-207.0%	-377.0%

Source: Bloomberg

In our forecasts, we have projected these expenses to remain in line with historical trends to keep our margin estimates conservative. The more likely outcome will be that margins improve as newer models, especially the affordable ones, will require less of expensive raw materials and R&D expenditure, and economies of scale will come into play which will reduce SG&A and COGS. Additionally, Tesla is constantly reducing the cost of its batteries, which will support margin expansion as well.

Tesla also benefits significantly from tax incentives received for setting up its gigafactories. These are long term tax breaks provided to the company for its positive impact on the environment and local employment in the regions.

Balance Sheet

Tesla, for a growth company, has a very strong balance sheet. As of 2022, the company had cash and cash equivalents more than \$22 billion. The debt, in comparison is a modest \$5.75 billion.

Other key items on the balance sheet include PP&E, which stood at \$26.1 billion, Inventories worth \$12.8 billion, which mainly includes raw material inventory as opposed to finished goods inventory. Intangible assets have grown over the years as Tesla accumulated patents, trademarks and things like water rights near its production facilities.

Usually these are forecast as Intangibles minus accumulated amortization expense. However, in Tesla's case, since they spend a significant amount of money on research and development, which results in intellectual property rights such as patents and trademarks, as well as addition of Gigafactories is expected in more purchases of natural resource rights, we have forecasted these proportional to revenues.

On the liabilities side, the largest account is the payables and accruals account, which makes sense considering the nature of the business.

WACC

For our WACC assumption, we used the Henry Fund's equity risk premium, which we base off Dr. Ashwath Damodaran's forward looking ERP estimates. We used an equity risk premium of 5.0%. We use the 5-year historical stock beta which is 1.33 and the 10-year U.S. Treasury rate of 4.88%. Using these inputs, we calculated a cost of equity of 11.54%. For our cost of debt calculation, we used the long-term debt issuance cost for the company on Bloomberg. Our calculated post-tax cost of debt is 3.87%. We assigned market weights of 98.78% to cost of equity and 1.22% to cost of debt to arrive at a WACC of 11.44%.

Payout Policy

Tesla doesn't pay a dividend since it is heavily reinvesting in its growth. We do not expect Tesla to start paying a dividend over the forecast horizon.

DCF Valuation

We utilized the Discounted Cash Flow and Economic Profit Model as the first of our two valuation models. Our discounted cash flow model derived an intrinsic value of \$165. The key assumptions that we made for this model are (a) the continuous value for Return on Invested Capital (ROIC) which is 36.10%, (b) the continuous value of the NOPLAT, which according to our model is projected as \$1,349.45 billion. We believe our forecasts are conservative when we compare them to the industry potential and management's growth targets over the next decade.

DDM Valuation

Since Tesla doesn't pay a dividend and we are not expecting it to pay one over the forecast horizon, we have not used the Dividend Discount Model to calculate the intrinsic value of the company.

Relative Valuation

We tried to compare Tesla's closest peers (in terms of product offering) across multiple relative valuation measures like P/E, EV/Sales and EV/EBIT. However, given the vast difference in market positioning for each company despite being in the same business, it was not possible to arrive at a reasonable relative valuation mainly because Tesla trades at a much higher relative valuation compared to the companies in the peer set. Tesla is also much further in its EV development and profitability. Therefore, we will not be using Relative Multiples to value Tesla.

Growth Narrative

Tesla's leadership has been very vocal about its aggressive growth plans, be it a long-term growth target of 50% CAGR or to manufacture 20 million cars by 2030. But how much of these steep targets is achievable?

We looked at the global automobile industry to understand this. Currently, in 2023, the total number of new cars sold each year is around 67 million. Out of this, roughly 14% are electric vehicles. Which means out of 67 million cars, around 9.5 million cars are EVs. Tesla is on track to sell 1.9 million cars this year, which makes its market share around 20% of the total EVs sold globally.

For 2030, the year by which Tesla plans to sell 20 million cars annually, annual new car sales are anticipated to reach 100 million units. However, the sales mix is expected to shift drastically in favor of electric vehicles, with 60% of these new vehicles sold expected to be EVs. Assuming all this comes true, Tesla would have to sell a third of the world's EVs to reach their target of 20 million units.

This seems highly unlikely. To achieve this target, assuming Tesla can fund the additional manufacturing capacity and start rolling out cars at a faster pace, they would still need to increase their market share from 20% to 33%. And they will have to do this in an environment where all the legacy automakers will be competing for market share with Tesla.

But, coming back to today, all the legacy car manufacturers are losing a significant amount of money on their EVs. They are in the development stage and are heavily investing in ramping up their battery capacity and production lines. However, the current economic environment means the cash burn has really started to hurt these companies and their cars aren't seeing as many buyers. This has led to legacy automakers choosing to reduce their EV development processes in order to conserve cash. Meanwhile, Tesla is charging forward with its new battery technology, new car launches and Gigafactory construction.

When we put all this together, there might be a way Tesla is able to achieve its target, obviously with the caveat that Tesla achieves all of its internal goals and doesn't have to slow down due to the economy, although we fully expect it to be delayed on its targets by a couple of years as always.

The global automobile industry is facing its biggest technological overhaul since the introduction of the internal combustion engine. The industry composition is changing with battery electric vehicles (BEVs) and plug-in hybrids gaining market share as more manufacturers start adding models. Government regulation across countries is in favor of electric vehicles and most major economies want to transition to electric vehicles as soon as possible.

KEYS TO MONITOR

Drivers

1. **Strong Revenue Growth:** Tesla has been experiencing strong revenue growth and is expected to continue this trend. The company's CEO, Elon Musk, has stated that Tesla aims to grow deliveries and revenue production at a 50% or greater compound annual growth rate. This guidance has been modified to 40% recently, however that is still quite aggressive.
2. **Technological Advancements:** Tesla is a leader in fully autonomous driving technology. The company has 5 million cars on the road constantly collecting data, which is more than every other company combined. This gives Tesla a competitive edge in the market and is a potential future customer.
3. **Expanding Product Portfolio:** Tesla is continuously innovating and expanding its product portfolio. The

company is investing heavily in AI-related technologies such as full self-driving, Optimus, and Dojo, as well as new products such as Cybertruck, the next-generation platform, and the Semi.

4. **Global Expansion:** Tesla is aggressively expanding its operations globally. The company is working on the early ramp of inefficiencies of its Austin and Berlin and in-house cell production factories.
5. **Market Share:** Tesla continues to capture most of the electric vehicle market share. According to Experian's Automotive Consumer Trends Report: Q2 2023, four of the top five models in the luxury EV segment were Tesla.
6. **Cost Reduction:** Tesla is focusing on per unit cost of goods sold (COGS) reductions in each of its key businesses, as well as working capital improvements on raw materials, work in process inventory, and customer AR.

Risks

1. **Market Volatility:** Tesla's CEO, Elon Musk, has acknowledged that the stock market can be unpredictable and turbulent, which can affect Tesla's stock price. He advises against margin loans in turbulent times and suggests a buy and hold strategy for long-term investors. However, the unpredictability of the market can pose a risk to investors.
2. **Rising Interest Rates:** Tesla has noted that rising interest rates had effectively increased the price of their cars in the U.S. by nearly 10% in 2022. This could potentially impact demand for Tesla's vehicles and subsequently, its revenues.
3. **Increased Costs:** Tesla has also highlighted that the cost of goods sold (COGS) per unit has increased on a year-over-year basis, driven primarily by factors such as raw materials and inflation led by lithium prices, inefficiencies in the early ramp of their Austin and Berlin and in-house cell production factories, and a shift in vehicle mix towards Model Y, which carries a slight cost premium to Model 3.
4. **Competition and Market Share:** While Tesla currently dominates the luxury EV market, competition in the EV

space is intensifying. Any loss in market share could impact Tesla's revenues and profitability.

5. **Dependence on Technological Advancements:** Tesla's future growth is heavily dependent on the successful development and implementation of new technologies, such as autonomous driving. Any setbacks in these areas could potentially impact Tesla's future profitability.
6. **Financial Performance:** Tesla's third-quarter revenue of \$23.4 billion represented an increase of just 8.8% compared to the same quarter last year, and its net income shrunk by 44%. This could be a potential concern for investors.

CONCLUSION

Tesla is an investment story where the narrative means more than the numbers. This is mainly due to the aggressive and somewhat outrageous growth targets that the company, or Elon Musk, set out to achieve. However, recent history has shown us that despite falling short on promised deadlines, Tesla has managed to deliver on most of its goals and aspirations. And that's what we are basing our rating on.

Our discounted cash flow model yielded an intrinsic value of \$165, based on our conservative assumptions. We can interpret this as a safe fair value for Tesla. At 214 per share, Tesla looks overvalued compared to our model. However, we are recommending a Limit BUY rating for Tesla as the future growth opportunity is significantly huge, and our model estimates were intentionally conservative. Tesla's track record of executing on its seemingly outrageous goals backs this recommendation. We add a 15% price range to our DCF value to determine a buy range for the stock, which comes to \$165 to \$190.

The three factors driving our narrative are:

1. **Market leadership:** Tesla is currently the undisputed leader in the EV market. The current economic environment has only made it harder for Tesla's peers to chip into their market share as all of them are currently losing money on their EV products. Legacy manufacturers are even backing out of their EV projects since they are bleeding cash. Meanwhile Tesla has been able to maintain positive margins despite providing price cuts on its vehicles to attract

customers. All these factors will help Tesla gain even more market share and consolidate its position.

2. **FSD and Robotaxi potential:** Tesla's FSD system is getting better day by day and carries huge revenue potential for the company. Tesla plans to license this to other auto manufacturers as well as use it for its Robotaxi business, both of which will be highly margin accretive.
3. **The Energy Business:** Tesla has a well-rounded suite of products in this segment. Energy generation and energy storage products for both residential and commercial applications are well received by customers. Tesla's battery technology is also the best in the industry and so is their supercharger network. This segment is expected to continue contributing to both revenues and margins over the forecast horizon.

We want to tap into the changing dynamics in the auto industry and believe Tesla is best positioned to come out the winner given its years of perseverance in developing the necessary technologies and more importantly the infrastructure to gain significant market share.

REFERENCES

- 1) Tesla's Investor Relations.
- 2) Rivian.
- 3) Lucid Motors.
- 4) Ford Motor Company.
- 5) General Motors.
- 6) FactSet.
- 7) Bloomberg.
- 8) FRED.
- 9) Statista.
- 10) BLS.gov
- 11) Conference Board.
- 12) Wall Street Journal
- 13) Morningstar Sustainability
- 14) SEC.
- 15) InsideEVs.
- 16) Yahoo Finance.
- 17) YouTube.
- 18) Investopedia.
- 19) Reuters.

DISCLAIMER

Henry Fund reports are created by graduate students in the Applied Securities Management program at the University of Iowa's Tippie College of Business. These reports provide potential employers and other interested parties an example of the analytical skills, investment knowledge, and communication abilities of our students. Henry Fund analysts are not registered investment advisors, brokers or licensed financial professionals. The investment opinion contained in this report does not represent an offer or solicitation to buy or sell any of the aforementioned securities. Unless otherwise noted, facts and figures included in this report are from publicly available sources. This report is not a complete compilation of data, and its accuracy is not guaranteed. From time to time, the University of Iowa, its faculty, staff, students, or the Henry Fund may hold an investment position in the companies mentioned in this report.

Tesla
Revenue Decomposition

Fiscal Quarters	Q1 FY22	Q2 FY22	Q3 FY22	Q4 FY22	Q1 FY23	Q2 FY23	Q3 FY23	Q4 FY23E	Q1 FY24E	Q2 FY24E	Q3 FY24E	Q4 FY24E	Q1 FY25E	Q2 FY25E	Q3 FY25E	Q4 FY25E
Automobiles Sold Worldwide																
Model S / X																
Vehicles Sold - Worldwide	14,724	16,162	18,672	17,147	10,695	19,225	15,985	15,186	15,489	15,799	16,115	16,438	16,766	17,102	17,444	17,793
QoQ% growth	25.14%	9.77%	15.53%	-8.17%	-37.63%	79.76%	-16.85%	-5.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
YoY% growth	628.91%	755.13%	101.01%	45.73%	-27.36%	18.95%	-14.39%	-11.44%	44.83%	-17.82%	0.81%	8.24%	8.24%	8.24%	8.24%	8.24%
Vehicles Produced - Worldwide	14,218	16,411	19,935	20,613	19,437	19,489	13,688	15,194	15,498	15,808	16,124	16,446	16,775	17,111	17,453	17,802
QoQ% growth	8.46%	15.42%	21.47%	3.40%	-5.71%	0.27%	-29.77%	11.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
YoY% growth	#DIV/0!	601.32%	122.96%	57.24%	36.71%	18.76%	-31.34%	-26.29%	-20.27%	-18.89%	17.79%	8.24%	8.24%	8.24%	8.24%	8.24%
Model 3 / Y																
Vehicles Sold - Worldwide	295,324	238,533	325,158	388,131	412,180	446,915	419,074	450,505	484,292	520,614	559,660	601,635	646,758	695,264	747,409	803,465
QoQ% growth	-0.53%	-19.23%	36.32%	19.37%	6.20%	8.43%	-6.23%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%
YoY% growth	61.57%	19.65%	40.09%	30.73%	39.57%	87.36%	28.88%	16.07%	17.50%	16.49%	33.55%	33.55%	33.55%	33.55%	33.55%	33.55%
Vehicles Produced - Worldwide	291,189	242,169	345,988	419,088	421,371	460,211	416,800	450,561	484,353	520,679	559,730	601,710	646,838	695,351	747,503	803,565
QoQ% growth	-0.53%	-16.83%	42.87%	21.13%	0.54%	9.22%	-9.43%	8.10%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%
YoY% growth	61.47%	18.66%	51.16%	43.16%	44.71%	90.04%	20.47%	7.51%	14.95%	13.14%	34.29%	33.55%	33.55%	33.55%	33.55%	33.55%
Total Worldwide Sales	310,048	254,695	343,830	405,278	422,875	466,140	435,059	465,690	499,782	536,414	575,776	618,072	663,524	712,366	764,853	821,257
QoQ% growth	0.45%	-17.85%	35.00%	17.87%	4.34%	10.23%	-6.67%	7.04%	7.32%	7.33%	7.34%	7.35%	7.35%	7.36%	7.37%	7.37%
YoY% growth	67.77%	26.56%	42.44%	31.31%	36.39%	83.02%	26.53%	14.91%	18.19%	15.08%	32.34%	32.72%	32.76%	32.80%	32.84%	32.87%
Total Worldwide Production	305,407	258,580	365,923	439,701	440,808	479,700	430,488	465,754	499,850	536,487	575,854	618,156	663,613	712,462	764,955	821,367
QoQ% growth	-0.14%	-15.33%	41.51%	20.16%	0.25%	8.82%	-10.26%	8.19%	7.32%	7.33%	7.34%	7.35%	7.35%	7.36%	7.37%	7.37%
YoY% growth	69.35%	25.27%	53.86%	43.77%	44.33%	85.51%	17.64%	5.93%	13.39%	11.84%	33.77%	32.72%	32.76%	32.80%	32.84%	32.87%
Revenues:																
Automotive & Service and others																
Revenue	18,140.0	16,068.0	20,337.0	23,008.0	21,800.0	23,418.0	21,791.0	24,944.8	26,732.2	28,651.9	30,713.9	32,928.8	35,308.0	37,863.9	40,609.6	43,559.4
% growth	6.51%	-11.42%	26.57%	13.13%	-5.25%	7.42%	-6.95%	14.47%	7.17%	7.18%	7.20%	7.21%	7.23%	7.24%	7.25%	7.26%
Energy Generation and Storage																
Revenue	616.0	866.0	1,117.0	1,310.0	1,529.0	1,509.0	1,559.0	1,625.3	1,694.3	1,766.3	1,841.4	1,919.7	2,001.3	2,086.3	2,175.0	2,267.4
% growth	-10.47%	40.58%	28.98%	17.28%	16.72%	-1.31%	3.31%	4.25%	4.25%	4.25%	4.25%	4.25%	4.25%	4.25%	4.25%	4.25%
Total Revenue	18,756	16,934	21,454	24,318	23,329	24,927	23,350	26,570	28,426	30,418	32,555	34,848	37,309	39,950	42,785	45,827
% growth	5.85%	-9.71%	26.69%	13.35%	-4.07%	6.85%	-6.33%	13.79%	6.99%	7.01%	7.03%	7.04%	7.06%	7.08%	7.09%	7.11%

Annual Total Production	2018	2019	2020	2021	2022	2023E	2024	2025	2026	2027	2028	2029	2030	2031	2032	CAGR
Model S/X	99,451	66,746	57,025	24,965	66,705	61,091	63,842	69,104	74,800	80,966	87,641	94,865	102,685	109,101	114,660	5.57%
Model 3/Y	146,055	300,815	442,284	911,126	1,247,146	1,728,674	2,166,202	2,892,896	3,863,373	5,159,416	6,890,241	9,201,704	12,288,591	14,526,846	16,034,919	29.10%
Total Production	245,506	367,561	499,309	936,091	1,313,851	1,789,764	2,230,044	2,962,000	3,938,174	5,240,382	6,977,881	9,296,569	12,391,276	14,635,947	16,149,579	28.52%
Average Revenue per car	87,415	66,868	63,159	57,498	62,002	54,854	56,613	56,000	55,470	55,012	54,617	54,276	53,980	53,855	53,810	
Auto Business Total revenue	19,906	23,047	29,542	51,034	77,553	91,954	119,027	157,341	208,375	276,386	367,057	487,975	649,275	766,306	845,282	
% growth		15.78%	28.18%	72.75%	51.96%	18.57%	29.44%	32.19%	32.44%	32.64%	32.81%	32.94%	33.05%	18.02%	10.31%	
% of total revenue	92.75%	93.77%	93.68%	94.82%	95.20%	93.66%	94.28%	94.86%	95.39%	95.87%	96.31%	96.71%	97.07%	97.22%	97.27%	
Enery Business Revenue	1,555	1,531	1,994	2,789	3,909	6,222	7,222	8,530	10,075	11,900	14,056	16,602	19,610	21,914	23,720	
% growth		-1.58%	30.27%	39.87%	40.16%	59.18%	16.06%	18.11%	18.11%	18.11%	18.11%	18.11%	18.11%	11.75%	8.24%	
% of total revenue	7.25%	6.23%	6.32%	5.18%	4.80%	6.34%	5.72%	5.14%	4.61%	4.13%	3.69%	3.29%	2.93%	2.78%	2.73%	

Tesla
Quarterly Income Statement

Fiscal Years Ending Dec. 31																
Fiscal Quarters	Q1 FY22	Q2 FY22	Q3 FY22	Q4 FY22	Q1 FY23	Q2 FY23	Q3 FY23	Q4 FY23E	Q1 FY24E	Q2 FY24E	Q3 FY24E	Q4 FY24E	Q1 FY25E	Q2 FY25E	Q3 FY25E	Q4 FY25E
Revenues	18,756	16,934	21,454	24,318	23,329	24,927	23,350	26,570	28,426	30,418	32,555	34,848	37,309	39,950	42,785	45,827
Cost of Goods Sold	12,416	11,778	15,116	17,552	17,772	19,240	17,937	19,145	20,631	22,319	24,043	25,885	27,810	29,697	31,652	33,739
Depreciation and Amortization	880	922	956	989	1,046	1,154	1,235	1,445	1,401	1,401	1,401	1,401	1,633	1,633	1,633	1,633
Research and Development Expense	865	667	733	810	771	943	1,161	1,047	1,112	1,164	1,241	1,345	1,465	1,600	1,725	1,794
Other SG&A Expenses	992	961	961	1,032	1,076	1,191	1,253	1,424	1,414	1,501	1,577	1,704	1,854	2,003	2,158	2,293
EBIT	3,603	2,606	3,688	3,935	2,664	2,399	1,764	3,509	3,868	4,033	4,294	4,514	4,546	5,017	5,617	6,367
Non-Operating Interest Income	28	26	86	157	213	238	282	272	302	334	346	374	402	428	460	493
Other Income (Expenses)	55	34	(81)	(77)	(32)	326	25	72	82	82	82	82	97	97	97	97
Interest Expenses	61	44	53	33	29	28	38	224	96	96	96	96	120	120	120	120
Unusual Expenses	(1)	148	4	(1)	16	(2)	(12)	-	-	-	-	-	-	-	-	-
Pre-Tax Income	3,626	2,474	3,636	3,983	2,800	2,937	2,045	3,629	4,156	4,353	4,626	4,875	4,926	5,423	6,054	6,837
Tax Expenses	346	205	305	276	261	323	167	634	695	719	753	784	820	882	961	1,059
Minority Interest	8	8	8	8	6	6	6	6	9	9	9	9	12	12	12	12
Net Income	3,272	2,261	3,323	3,699	2,533	2,608	1,872	2,988	3,452	3,625	3,863	4,081	4,094	4,528	5,081	5,766
Net Margin	17.45%	13.35%	15.49%	15.21%	10.86%	10.46%	8.02%	11.25%	12.14%	11.92%	11.87%	11.71%	10.97%	11.34%	11.88%	12.58%
EPS	1.05	0.72	1.06	1.18	0.80	0.82	0.59	0.94	1.07	1.12	1.19	1.26	1.24	1.37	1.54	1.75
Shares outstanding	3,130	3,130	3,130	3,130	3,176	3,176	3,176	3,176	3,236	3,236	3,236	3,236	3,296	3,296	3,296	3,296

Tesla

Income Statement

Fiscal Years Ending Dec. 31	2020	2021	2022	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E	2032E
Revenues	31,536	53,823	81,462	98,176	126,248	165,871	218,451	288,286	381,113	504,577	668,885	788,220	869,002
Cost of Goods Sold	22,584	37,306	57,066	74,094	92,878	122,898	161,626	213,269	282,009	373,303	494,903	583,178	642,954
Depreciation and Amortization	2,322	2,911	3,543	4,880	5,604	6,533	7,664	9,048	11,478	14,372	18,158	23,332	29,127
Research and Development Expense	1,491	2,593	3,075	3,922	4,862	6,583	8,563	11,355	14,989	19,851	26,315	31,008	34,187
Other SG&A Expenses	3,145	4,517	3,946	4,944	6,197	8,309	10,843	14,367	18,966	25,122	33,299	39,240	43,262
EBIT	1,994	6,496	13,832	10,336	16,708	21,547	29,755	40,249	53,670	71,930	96,210	111,461	119,472
Non-Operating Interest Income	30	56	297	1,005	1,356	1,783	2,347	3,097	4,094	5,421	7,186	8,468	9,336
Other Income (Expenses)	(86)	122	(69)	391	328	390	477	598	767	992	1,293	1,697	2,235
Interest Expenses	748	371	191	319	383	479	600	764	983	1,274	1,664	2,019	2,324
Unusual Expenses	36	(40)	150	2	-	-	-	-	-	-	-	-	-
Pre-Tax Income	1,154	6,343	13,719	11,411	18,010	23,241	31,978	43,180	57,548	77,069	103,025	119,606	128,718
Tax Expenses	292	699	1,132	1,385	2,952	3,722	4,955	6,528	8,628	11,430	15,148	17,867	19,731
Minority Interest	141	125	31	25	38	49	68	92	122	164	220	254	272
Net Income	721	5,519	12,556	10,001	15,020	19,470	26,956	36,560	48,797	65,475	87,657	101,485	108,715
<i>Net Margin</i>	<i>2.29%</i>	<i>10.25%</i>	<i>15.41%</i>	<i>10.19%</i>	<i>11.90%</i>	<i>11.74%</i>	<i>12.34%</i>	<i>12.68%</i>	<i>12.80%</i>	<i>12.98%</i>	<i>13.10%</i>	<i>12.88%</i>	<i>12.51%</i>
EPS	0.26	1.87	4.01	3.13	4.62	5.88	8.00	10.66	14.20	19.06	25.51	29.54	31.64
Shares outstanding	2,799	2,958	3,130	3,190	3,250	3,310	3,370	3,430	3,436	3,436	3,436	3,436	3,436

Tesla

Balance Sheet

Fiscal Years Ending Dec. 31	2020	2021	2022	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E	2032E
Assets													
Cash and Equivalents	19,384	17,576	16,253	25,912	36,471	50,985	70,840	94,573	126,564	169,353	226,047	290,483	358,364
Short term Investments	-	131	5,932	6,725	7,990	9,769	12,257	15,714	20,330	26,506	34,770	45,801	59,977
Accounts Receivable	1,886	1,913	2,952	3,707	4,871	6,195	7,747	10,233	14,059	18,527	24,325	28,515	31,564
Inventories	4,101	5,757	12,839	11,994	14,840	19,176	24,826	33,860	44,546	58,682	77,547	91,456	101,255
Other short term assets	1,346	1,723	2,941	3,452	4,671	6,069	7,727	10,392	13,733	18,270	24,114	28,331	31,333
Total Current Assets	26,717	27,100	40,917	51,790	68,842	92,195	123,398	164,772	219,231	291,339	386,803	484,586	582,493
Net Property, plant and equipment	14,305	23,395	26,111	30,066	35,194	41,930	50,650	62,360	78,321	99,270	127,934	159,777	191,481
Long term investments and receivables	-	-	-	-	-	-	-	-	-	-	-	-	-
Intangible assets	520	457	593	736	947	1,244	1,638	2,162	2,858	3,784	5,017	5,912	6,518
Other long term assets	10,606	11,179	14,717	19,064	23,662	31,648	41,311	54,762	72,233	95,741	126,846	149,518	164,819
Total Non Current Assets	25,431	35,031	41,421	49,867	59,802	74,823	93,600	119,283	153,413	198,795	259,797	315,207	362,817
Total Assets	52,148	62,131	82,338	101,657	128,645	167,018	216,998	284,055	372,644	490,134	646,600	799,794	945,311
Liabilities and Equity													
Liabilities													
Accounts payable & accruals	9,620	15,376	21,912	24,444	31,041	41,296	53,714	70,763	93,864	124,472	164,941	194,045	213,986
Short term debt	2,418	1,957	1,987	2,244	2,691	3,367	4,212	5,368	6,904	8,946	11,691	14,184	16,327
Other short term liabilities	2,210	2,372	2,810	3,857	4,657	6,317	8,189	10,893	14,344	19,028	25,200	29,710	32,747
Total Current Liabilities	14,248	19,705	26,709	30,545	38,389	50,980	66,115	87,024	115,112	152,446	201,831	237,939	263,060
Long term debt	10,810	6,916	3,761	4,987	5,980	7,482	9,360	11,928	15,341	19,880	25,980	31,521	36,282
Deferred revenue	1,284	2,052	2,804	4,095	5,153	6,495	8,486	11,240	15,208	19,952	26,279	30,988	34,245
Other long term liabilities	2,076	1,875	3,166	4,566	5,059	6,936	9,349	11,982	16,029	21,263	28,039	33,136	36,527
Total Non Current Liabilities	14,170	10,843	9,731	13,648	16,192	20,913	27,195	35,150	46,578	61,094	80,298	95,645	107,053
Total Liabilities	28,418	30,548	36,440	44,192	54,581	71,894	93,310	122,174	161,689	213,540	282,129	333,584	370,113
Equity													
Share Capital	27,261	29,804	32,180	33,721	35,262	36,803	38,344	39,886	40,040	40,040	40,040	40,040	40,040
Retained Earnings	(5,399)	331	12,885	22,886	37,906	57,376	84,332	120,891	169,689	235,164	322,821	424,306	533,021
Other Equity	363	54	(361)	(361)	(361)	(361)	(361)	(361)	(361)	(361)	(361)	(361)	(361)
Minority Interest	1,505	1,394	1,194	1,219	1,257	1,306	1,373	1,465	1,587	1,751	1,971	2,225	2,498
Total Equity	23,730	31,583	45,898	57,465	74,064	95,124	123,688	161,881	210,955	276,594	364,470	466,210	575,197
Total Liabilities and Equity	52,148	62,131	82,338	101,657	128,645	167,018	216,998	284,055	372,644	490,134	646,600	799,794	945,311

Tesla

Historical Cash Flow Statement

Fiscal Years Ending Dec. 31	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Operating Activities										
Net Income / Starting Line	(74)	(294)	(889)	(773)	(2,241)	(1,063)	(775)	862	5,644	12,587
Depreciation, Depletion & Amortization	106	232	423	947	1,636	1,901	2,154	2,322	2,911	3,747
Depreciation and Depletion	103	229	423					2,271	1,910	2,420
Amortization of Intangible Assets	3	3						51	1,001	1,327
Other Funds	134	262	435	396	1,041	1,201	1,375	2,575	2,424	2,298
Funds from Operations	166	199	(31)	570	436	2,040	2,754	5,759	10,979	18,632
Changes in Working Capital	92	(257)	(493)	(694)	(497)	58	(349)	184	518	(3,908)
Receivables	(22)	(184)	46	(213)	(25)	(497)	(367)	(652)	(130)	(1,124)
Inventories	(463)	(1,050)	(1,574)	(2,466)	(1,701)	(1,238)	(1,193)	(1,494)	(1,709)	(6,465)
Accounts Payable	-	253	263	751	388	1,723	682	2,102	4,578	6,029
Other Accruals	67	162								
Other Assets/Liabilities	511	562	771	1,234	841	70	529	228	(2,221)	(2,348)
Net Operating Cash Flow	258	(57)	(524)	(124)	(61)	2,098	2,405	5,943	11,497	14,724
Investing Activities										
Capital Expenditures	(264)	(970)	(1,635)	(1,440)	(4,081)	(2,320)	(1,437)	(3,242)	(8,014)	(7,172)
Capital Expenditures (Fixed Assets)	(264)	(970)	(1,635)	(1,440)	(4,081)	(2,320)	(1,432)	(3,232)	(6,514)	(7,163)
Capital Expenditures (Other Assets)					-		(5)	(10)	(1,500)	(9)
Net Assets from Acquisitions			(12)		(115)	(18)	(45)	(13)	-	(45)
Sale of Fixed Assets & Businesses				415	790	437	279	24	2	-
Purchase/Sale of Investments	-	(17)	(26)	(189)	(223)	-	-	-	(132)	(5,813)
Purchase of Investments	-	206	26	206	223	-	-	-	132	5,835
Sale/Maturity of Investments	-	189	-	17	-	-	-	-	-	22
Other Funds	15	(4)	-	-	-	-	46	123	278	1,012
Other Uses	-	(4)	-	-	-	-	-	-	-	-
Other Sources	15	-	-	-	-	-	46	123	278	1,012
Net Investing Cash Flow	(249)	(990)	(1,674)	(1,215)	(3,629)	(1,900)	(1,157)	(3,108)	(7,866)	(12,018)
Financing Activities										
Change in Capital Stock	631	490	857	1,866	712	296	1,285	12,686	707	541
Sale of Common & Preferred Stock	631	490	857	1,866	712	296	1,285	12,686	707	541
Proceeds from Sale of Stock	415	-	750	1,702	400	-	848	12,269	-	-
Proceeds from Stock Options	216	490	107	164	312	296	437	417	707	541
Issuance/Reduction of Debt, Net	22	1,685	684	1,718	3,386	89	798	(2,494)	(5,741)	(3,866)
Change in Long-Term Debt	22	1,685	684	1,718	3,386	89	798	(2,494)	(5,741)	(3,866)
Issuance of Long-Term Debt	660	2,300	888	3,623	7,649	6,176	10,669	9,707	8,874	-
Reduction in Long-Term Debt	(638)	(615)	(204)	(1,904)	(4,264)	(6,087)	(9,871)	(12,201)	(14,615)	(3,866)
Other Funds	(17)	(32)	(17)	(41)	(473)	(248)	(833)	(243)	(171)	(157)
Other Uses	(17)	(35)	(17)	(41)	(760)	(248)	(833)	(243)	(171)	(157)
Other Sources	-	3	-		287	-	-			
Net Financing Cash Flow	635	2,143	1,524	3,542	3,625	137	1,250	9,949	(5,205)	(3,482)
Changes in Cash	644	1,096	(674)	2,203	(65)	335	2,498	12,784	(1,574)	(776)

Tesla

Forecasted Cash Flow Statement

Fiscal Years Ending Dec. 31	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E	2032E
Cash from operating Activities										
Net Income	10,001	15,020	19,470	26,956	36,560	48,797	65,475	87,657	101,485	108,715
Depreciation	4,880	5,604	6,533	7,664	9,048	11,478	14,372	18,158	23,332	29,127
Changes in short term investments	(793)	(1,264)	(1,780)	(2,488)	(3,457)	(4,615)	(6,176)	(8,264)	(11,031)	(14,176)
Changes in accounts receivable	(755)	(1,164)	(1,324)	(1,551)	(2,486)	(3,826)	(4,469)	(5,798)	(4,190)	(3,050)
Changes in Inventories	845	(2,846)	(4,336)	(5,650)	(9,034)	(10,686)	(14,137)	(18,865)	(13,909)	(9,799)
Changes in other short term assets	(511)	(1,218)	(1,399)	(1,658)	(2,664)	(3,342)	(4,537)	(5,844)	(4,217)	(3,002)
Changes in accounts payable and accruals	2,532	6,597	10,256	12,418	17,049	23,101	30,607	40,469	29,104	19,942
Changes in short term debt	257	447	676	845	1,156	1,536	2,042	2,745	2,493	2,142
Changes in other short term liabilities	1,047	801	1,660	1,872	2,704	3,451	4,685	6,171	4,511	3,037
Net Cash from Operations	17,502	21,975	29,756	38,406	48,876	65,895	87,862	116,430	127,578	132,936
Cash from Investing Activities										
Capital Expenditures	(8,836)	(10,731)	(13,270)	(16,384)	(20,757)	(27,440)	(35,320)	(46,822)	(55,175)	(60,830)
Changes in long term investments and receivables	-	-	-	-	-	-	-	-	-	-
Changes in Intangible assets	(143)	(211)	(297)	(394)	(524)	(696)	(926)	(1,232)	(895)	(606)
Changes in other long term assets	(4,347)	(4,598)	(7,987)	(9,663)	(13,450)	(17,472)	(23,507)	(31,106)	(22,672)	(15,301)
Net Cash from Investing Activities	(13,326)	(15,539)	(21,554)	(26,441)	(34,731)	(45,608)	(59,754)	(79,160)	(78,743)	(76,737)
Cash from Financing Activities										
Changes in long term debt	1,226	994	1,502	1,878	2,568	3,413	4,538	6,100	5,541	4,761
Changes in deferred revenue	1,291	1,058	1,342	1,991	2,754	3,967	4,744	6,327	4,709	3,257
Changes in other long term liabilities	1,400	493	1,877	2,413	2,632	4,047	5,234	6,777	5,097	3,390
Changes in Other equity	-	-	-	-	-	-	-	-	-	-
Changes in Minority Interest	25	38	49	68	92	122	164	220	254	272
Dividend paid	-	-	-	-	-	-	-	-	-	-
New Issues	1,541	1,541	1,541	1,541	1,541	154	-	-	-	-
Repurchases	-	-	-	-	-	-	-	-	-	-
Net Cash from Financing Activities	5,483	4,123	6,311	7,891	9,588	11,704	14,680	19,423	15,601	11,681
Changes in Cash	9,659	10,559	14,514	19,856	23,733	31,991	42,789	56,694	64,436	67,881
Opening Cash Balance	16,253	25,912	36,471	50,985	70,840	94,573	126,564	169,353	226,047	290,483
Closing Cash Balance	25,912	36,471	50,985	70,840	94,573	126,564	169,353	226,047	290,483	358,364

Tesla

Common Size Income Statement

<i>Fiscal Years Ending Dec. 31</i>	2020	2021	2022	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E	2032E
Revenues	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Cost of Goods Sold	71.61%	69.31%	70.05%	75.47%	73.57%	74.09%	73.99%	73.98%	74.00%	73.98%	73.99%	73.99%	73.99%
Depreciation and Amortization	7.36%	5.41%	4.35%	4.97%	4.44%	3.94%	3.51%	3.14%	3.01%	2.85%	2.71%	2.96%	3.35%
Research and Development Expense	4.73%	4.82%	3.77%	4.00%	3.85%	3.97%	3.92%	3.94%	3.93%	3.93%	3.93%	3.93%	3.93%
Other SG&A Expenses	9.97%	8.39%	4.84%	5.04%	4.91%	5.01%	4.96%	4.98%	4.98%	4.98%	4.98%	4.98%	4.98%
EBIT	6.32%	12.07%	16.98%	10.53%	13.23%	12.99%	13.62%	13.96%	14.08%	14.26%	14.38%	14.14%	13.75%
Non-Operating Interest Income	0.10%	0.10%	0.36%	1.02%	1.07%	1.07%	1.07%	1.07%	1.07%	1.07%	1.07%	1.07%	1.07%
Other Income (Expenses)	-0.27%	0.23%	-0.08%	0.40%	0.26%	0.24%	0.22%	0.21%	0.20%	0.20%	0.19%	0.22%	0.26%
Interest Expenses	2.37%	0.69%	0.23%	0.33%	0.30%	0.29%	0.27%	0.27%	0.26%	0.25%	0.25%	0.26%	0.27%
Unusual Expenses	0.11%	-0.07%	0.18%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Pre-Tax Income	3.66%	11.78%	16.84%	11.62%	14.27%	14.01%	14.64%	14.98%	15.10%	15.27%	15.40%	15.17%	14.81%
Tax Expenses	0.93%	1.30%	1.39%	1.41%	2.34%	2.24%	2.27%	2.26%	2.26%	2.27%	2.26%	2.27%	2.27%
Minority Interest	0.45%	0.23%	0.04%	0.03%	0.03%	0.03%	0.03%	0.03%	0.03%	0.03%	0.03%	0.03%	0.03%
Net Income	2.29%	10.25%	15.41%	10.19%	11.90%	11.74%	12.34%	12.68%	12.80%	12.98%	13.10%	12.88%	12.51%

Tesla
Common Size Balance Sheet

[illegible]

Tesla
Value Driver Estimation

Fiscal Years Ending Dec. 31	2020	2021	2022	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E	2032E
NOPLAT													
Revenue	31,536	53,823	81,462	98,176	126,248	165,871	218,451	288,286	381,113	504,577	668,885	788,220	869,002
Cost of Goods Sold	(22,584)	(37,306)	(57,066)	(74,094)	(92,878)	(122,898)	(161,626)	(213,269)	(282,009)	(373,303)	(494,903)	(583,178)	(642,954)
Depreciation and Amortization	(2,322)	(2,911)	(3,543)	(4,880)	(5,604)	(6,533)	(7,664)	(9,048)	(11,478)	(14,372)	(18,158)	(23,332)	(29,127)
Research and Development Expense	(1,491)	(2,593)	(3,075)	(3,922)	(4,862)	(6,583)	(8,563)	(11,355)	(14,989)	(19,851)	(26,315)	(31,008)	(34,187)
Other SG&A Expenses	(3,145)	(4,517)	(3,946)	(4,944)	(6,197)	(8,309)	(10,843)	(14,367)	(18,966)	(25,122)	(33,299)	(39,240)	(43,262)
Plus: Implied Interest on Operating Leases	48	61	79	104	-	-	-	-	-	-	-	-	-
EBIT	1,994	6,496	13,832	10,336	16,708	21,547	29,755	40,249	53,670	71,930	96,210	111,461	119,472
Adjusted Taxes:													
Provision for Income Taxes	292	699	1,132	1,385	2,952	3,722	4,955	6,528	8,628	11,430	15,148	17,867	19,731
Less: Non-Operating Interest Income	(4)	(7)	(37)	(126)	(170)	(223)	(293)	(387)	(512)	(678)	(898)	(1,058)	(1,167)
Less: Other Income	11	(15)	9	(49)	(41)	(49)	(60)	(75)	(96)	(124)	(162)	(212)	(279)
Plus: Interest Expenses	94	46	24	40	48	60	75	96	123	159	208	252	291
Plus: Unusual Expenses	5	(5)	19	0	-	-	-	-	-	-	-	-	-
Plus: Interest on Operating Leases	2	2	3	4	-	-	-	-	-	-	-	-	-
Total Adjusted Taxes	399	720	1,149	1,255	2,789	3,510	4,677	6,162	8,143	10,788	14,296	16,849	18,575
NOPLAT	1,595	5,776	12,683	9,081	13,919	18,037	25,077	34,087	45,526	61,142	81,914	94,612	100,897
Invested Capital													
Normal Cash	5,416	9,243	13,990	16,860	21,681	28,486	37,516	49,509	65,450	86,653	114,871	135,365	149,238
Plus:Accounts receivable	1,886	1,913	2,952	3,707	4,871	6,195	7,747	10,233	14,059	18,527	24,325	28,515	31,564
Plus: Inventories	4,101	5,757	12,839	11,994	14,840	19,176	24,826	33,860	44,546	58,682	77,547	91,456	101,255
Plus: other short term assets	1,346	1,723	2,941	3,452	4,671	6,069	7,727	10,392	13,733	18,270	24,114	28,331	31,333
Less: accounts payable & accruals	(9,620)	(15,376)	(21,912)	(24,444)	(31,041)	(41,296)	(53,714)	(70,763)	(93,864)	(124,472)	(164,941)	(194,045)	(213,986)
Less: other long term liabilities	(2,210)	(2,372)	(2,810)	(3,857)	(4,657)	(6,317)	(8,189)	(10,893)	(14,344)	(19,028)	(25,200)	(29,710)	(32,747)
NOWC	919	888	8,000	7,713	10,366	12,313	15,913	22,337	29,580	38,633	50,716	59,911	66,657
Plus: PPE, net	14,305	23,395	26,111	30,066	35,194	41,930	50,650	62,360	78,321	99,270	127,934	159,777	191,481
Plus: long term investments and receivables	-	-	-	-	-	-	-	-	-	-	-	-	-
Plus: Intangible assets	520	457	593	736	947	1,244	1,638	2,162	2,858	3,784	5,017	5,912	6,518
Plus: other long term assets	10,606	11,179	14,717	19,064	23,662	31,648	41,311	54,762	72,233	95,741	126,846	149,518	164,819
Totals:	25,431	35,031	41,421	49,867	59,802	74,823	93,600	119,283	153,413	198,795	259,797	315,207	362,817
Less: long term debt	(10,810)	(6,916)	(3,761)	(4,987)	(5,980)	(7,482)	(9,360)	(11,928)	(15,341)	(19,880)	(25,980)	(31,521)	(36,282)
Less: deferred revenue	(1,284)	(2,052)	(2,804)	(4,095)	(5,153)	(6,495)	(8,486)	(11,240)	(15,208)	(19,952)	(26,279)	(30,988)	(34,245)
Less: other long term liabilities	(2,076)	(1,875)	(3,166)	(4,566)	(5,059)	(6,936)	(9,349)	(11,982)	(16,029)	(21,263)	(28,039)	(33,136)	(36,527)
Totals:	(14,170)	(10,843)	(9,731)	(13,648)	(16,192)	(20,913)	(27,195)	(35,150)	(46,578)	(61,094)	(80,298)	(95,645)	(107,053)
Invested Capital (IC):	12,180	25,076	39,690	43,932	53,976	66,223	82,318	106,470	136,415	176,334	230,215	279,474	322,421
Free Cash Flow (FCF):													
NOPLAT	1,595	5,776	12,683	9,081	13,919	18,037	25,077	34,087	45,526	61,142	81,914	94,612	100,897
Change in IC	4,104	12,896	14,614	4,242	10,044	12,247	16,095	24,152	29,945	39,919	53,881	49,259	42,947
FCF	(2,509)	(7,121)	(1,931)	4,838	3,876	5,790	8,982	9,935	15,581	21,223	28,033	45,353	57,950
Return on Invested Capital (ROIC):													
NOPLAT	1,595	5,776	12,683	9,081	13,919	18,037	25,077	34,087	45,526	61,142	81,914	94,612	100,897
Beginning IC	8,076	12,180	25,076	39,690	43,932	53,976	66,223	82,318	106,470	136,415	176,334	230,215	279,474
ROIC	19.75%	47.42%	50.58%	22.88%	31.68%	33.42%	37.87%	41.41%	42.76%	44.82%	46.45%	41.10%	36.10%
Economic Profit (EP):													
Beginning IC	8,076	12,180	25,076	39,690	43,932	53,976	66,223	82,318	106,470	136,415	176,334	230,215	279,474
X (ROIC - WACC)	8.31%	35.98%	39.14%	11.44%	20.24%	21.98%	26.43%	29.97%	31.32%	33.38%	35.01%	29.66%	24.66%
EP	671.14	4,381.97	9,813.76	4,539.66	8,892.81	11,861.68	17,500.52	24,668.46	33,344.61	45,534.53	61,738.59	68,272.26	68,921.32

Tesla

Weighted Average Cost of Capital (WACC) Estimation

Cost of Equity:

Risk-Free Rate	4.88%
Beta	1.33
Equity Risk Premium	5.00%
Cost of Equity	11.54%

ASSUMPTIONS:

10-year U.S. Treasury

5-year adjusted beta from Bloomberg

Henry Fund Equity Risk Premium Assumption

Cost of Debt:

Risk-Free Rate	4.88%
Implied Default Premium	-0.46%
Pre-Tax Cost of Debt	4.42%
Marginal Tax Rate	13%
After-Tax Cost of Debt	3.87%

10-year U.S. Treasury

Company's long term bonds, sourced from Bloomberg

Market Value of Common Equity:

Total Shares Outstanding	3,190.01
Current Stock Price	\$214.00
MV of Equity	682,662.61

MV Weights

98.78%

Market Value of Debt:

Short term debt	1,987.00
Long-Term Debt	3,761.00
PV of Operating Leases	2,689.40
MV of Total Debt	8,437.40

1.22%

Market Value of the Firm

691,100.01

100.00%

Estimated WACC

11.44%

Discounted Cash Flow (DCF) and Economic Profit (EP) Valuation Models

CV Growth of NOPLAT	5.00%
CV Year ROIC	36.10%
WACC	11.44%
Cost of Equity	11.54%

DCF Model:

Value of Operating Assets:	579,243.81
Non-Operating Adjustments	
Add:	
excess cash	2,263.14
non-controlling interest	(1,194.00)
short term investments	5,932.00
Less:	
Short-term debt	(1,987.00)
Long-term debt	(3,761.00)
ESOP	(59,190.79)
Other Liabilities	(4,566.19)

EP Model:

Total PV of EP	539,553.96
Invested Capital (last FYE)	39,689.86
Value of Operating Assets:	579,243.81
Non-Operating Adjustments	
Add:	
excess cash	2,263.14
non-controlling interest	(1,194.00)
short term investments	5,932.00
Less:	
Short-term debt	(1,987.00)
Long-term debt	(3,761.00)
ESOP	(59,190.79)
Other Liabilities	(4,566.19)

Value of Equity	516,739.98
Shares Outstanding	3,436.06
Intrinsic Value of Last FYE	\$ 150.39
Implied Price as of Today	\$ 165.20

Tesla

Relative Valuation Models

Ticker	Company	Price	EPS 2023E	EPS 2024E	P/E 2023	P/E 2024	EV/Sales 2023	EV/Sales 2024	EV/EBIT 2023	EV/EBIT 2024
	Lucid	\$4.25	(\$1.42)	(\$1.04)	(2.99)	(4.09)	11.89	5.20	(2.58)	(3.00)
	Rivian	\$16.70	(\$5.51)	(\$4.22)	(3.03)	(3.96)	2.33	1.65	(1.84)	(2.31)
	Ford Motor Company	\$10.27	\$1.48	\$0.65	6.94	15.80	0.19	0.19	3.09	3.29
	General Motors	\$28.03	\$6.81	\$6.29	4.12	4.46	0.18	0.17	2.52	2.87
	Average				5.53	10.13	3.65	1.80	0.30	0.21

TSLA	Tesla	\$214.00	3.13	4.62	68.3	46.3	7.5	6.2	77.6	56.43
------	-------	----------	------	------	------	------	-----	-----	------	-------

Implied Relative Value:

P/E	\$	30.36
EV/Sales	\$	90.29
EV/EBIT	\$	0.87

Tesla

Key Management Ratios

Fiscal Years Ending Dec. 31	2020	2021	2022	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E	2032E
Liquidity Ratios:													
Cash Ratio (Cash/ Current Liabilities)	1.36	0.89	0.61	0.85	0.95	1.00	1.07	1.09	1.10	1.11	1.12	1.22	1.36
Quick Ratio (Cash & Short Term Investments/ Current Liabilities)	1.36	0.90	0.83	1.07	1.16	1.19	1.26	1.27	1.28	1.28	1.29	1.41	1.59
Current Ratio (Current Assets / Current Liabilities)	1.88	1.38	1.53	1.70	1.79	1.81	1.87	1.89	1.90	1.91	1.92	2.04	2.21
Asset-Management Ratios:													
Receivables Turnover (Sales/ Accounts Receivable)	16.72	28.14	27.60	26.48	25.92	26.77	28.20	28.17	27.11	27.23	27.50	27.64	27.53
Average Collection Period (365/(Sales/Accounts Receivable)	21.83	12.97	13.23	13.78	14.08	13.63	12.94	12.96	13.46	13.40	13.27	13.20	13.26
Total Asset Turnover (Sales/ Total Assets)	0.60	0.87	0.99	0.97	0.98	0.99	1.01	1.01	1.02	1.03	1.03	0.99	0.92
Financial Leverage Ratios:													
Debt to Assets (Total Debt/ Total Assets)	0.25	0.14	0.07	0.07	0.07	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
Debt to Capital (Total Debt/ Total Liabilities & Equity)	0.25	0.14	0.07	0.07	0.07	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
Debt to EBIT (Total Debt / Earnings Before Interest & Taxes)	6.63	1.37	0.42	0.70	0.52	0.50	0.46	0.43	0.41	0.40	0.39	0.41	0.44
Debt to Equity (Total Debt/ Total Equity)	0.56	0.28	0.13	0.13	0.12	0.11	0.11	0.11	0.11	0.10	0.10	0.10	0.09
Profitability Ratios:													
Return on Equity (NI/Total Shareholder's Equity)	8.89%	23.26%	39.76%	21.79%	26.14%	26.29%	28.34%	29.56%	30.14%	31.04%	31.69%	27.84%	23.32%
Profit Margin (Net Income/ Revenue)	2.29%	10.25%	15.41%	10.19%	11.90%	11.74%	12.34%	12.68%	12.80%	12.98%	13.10%	12.88%	12.51%
Return on Assets (Net Income/ Total Assets)	1.38%	8.88%	15.25%	9.84%	11.68%	11.66%	12.42%	12.87%	13.09%	13.36%	13.56%	12.69%	11.50%

Tesla
Present Value of Operating Lease Obligations

Fiscal Years Ending Dec. 31	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Year 1	27.0	56.5	88.6	279.4	387.3	501.6	296.0	366.0	458.0	610.0
Year 2	27.4	60.1	86.7	250.8	328.5	418.3	262.0	327.0	412.0	558.0
Year 3	26.6	56.6	78.5	191.7	242.7	270.8	210.0	279.0	366.0	490.0
Year 4	24.7	49.0	69.0	148.0	177.1	186.8	174.0	245.0	319.0	383.0
Year 5	55.8	184.6	248.0	145.4	176.8	188.8	146.0	204.0	232.0	300.0
Thereafter				2122.1	2492.5	2469.7	372.0	425.0	595.0	805.0
Total Minimum Payments	161.5	406.8	570.9	3137.5	3804.9	4036.1	1460.0	1846.0	2382.0	3146.0
Less: Cumulative Interest	21.4	57.9	79.7	989.1	1156.9	1137.9	210.1	259.7	344.8	456.6
PV of Minimum Payments	140.1	348.9	491.2	2148.3	2647.9	2898.2	1249.9	1586.3	2037.2	2689.4
Implied Interest in Year 1 Payment		6.2	15.4	21.7	94.9	117.0	128.0	55.2	70.1	90.0
Pre-Tax Cost of Debt	4.42%	4.42%	4.42%	4.42%	4.42%	4.42%	4.42%	4.42%	4.42%	4.42%
Years Implied by Year 6 Payment	1.0	1.0	1.0	14.6	14.1	13.1	2.5	2.1	2.6	2.7
Expected Obligation in Year 6 & Beyond	0	0	0	145.423	176.752	188.809	146	204	232	300
Present Value of Lease Payments										
PV of Year 1	25.9	54.1	84.9	267.6	371.0	480.4	283.5	350.5	438.6	584.2
PV of Year 2	25.1	55.2	79.5	230.0	301.3	383.7	240.3	299.9	377.9	511.8
PV of Year 3	23.4	49.7	69.0	168.4	213.2	237.9	184.5	245.1	321.5	430.4
PV of Year 4	20.8	41.2	58.1	124.5	149.0	157.1	146.4	206.1	268.3	322.2
PV of Year 5	44.9	148.7	199.8	117.2	142.4	152.1	117.6	164.3	186.9	241.7
PV of 6 & beyond	0.0	0.0	0.0	1240.7	1471.2	1487.1	277.7	320.4	444.0	599.2
Capitalized PV of Payments	140.1	348.9	491.2	2148.3	2647.9	2898.2	1249.9	1586.3	2037.2	2689.4

Tesla

Valuation of Options Granted under ESOP

Current Stock Price	\$214.00
Risk Free Rate	4.88%
Current Dividend Yield	0.00%
Annualized St. Dev. of Stock Returns	45.00% Do this on bloomberg

(in millions)

Range of Outstanding Options	Number of Shares	Average Exercise Price	Average Remaining Life (yrs)	B-S Option Price	Value of Options Granted
Options outstanding as of December 2022	305	25.68	5.08	\$ 194.16	\$ 59,191
Total	305	\$ 25.68	5.08	\$ 194.16	\$ 59,191

Tesla

Effects of ESOP Exercise and Share Repurchases on Common Stock Account and Number of Shares Outstanding

Number of Options Outstanding (shares):	305
Average Time to Maturity (years):	5.08
Expected Annual Number of Options Exercised:	60.012

Current Average Strike Price:	\$ 25.68
Cost of Equity:	11.54%
Current Stock Price:	\$214.00

Fiscal Years Ending Dec. 31	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E	2032E
Increase in Shares Outstanding:	60.012	60.012	60.012	60.012	60.012	6.001	-	-	-	-
Average Strike Price:	\$ 25.68	\$ 25.68	\$ 25.68	\$ 25.68	\$ 25.68	\$ 25.68	\$ 25.68	\$ 25.68	\$ 25.68	\$ 25.68
Increase in Common Stock Account:	1,541	1,541	1,541	1,541	1,541	154	-	-	-	-
Share Repurchases (\$)	0	0	0	0	0	0	0	0	0	0
Expected Price of Repurchased Shares:	\$ 214.00	\$ 238.68	\$ 266.22	\$ 296.93	\$ 331.18	\$ 369.38	\$ 411.98	\$ 459.51	\$ 512.51	\$ 571.63
Number of Shares Repurchased:	-	-	-	-	-	-	-	-	-	-
Shares Outstanding (beginning of the year)	3,130	3,190	3,250	3,310	3,370	3,430	3,436	3,436	3,436	3,436
Plus: Shares Issued Through ESOP	60.012	60.012	60.012	60.012	60.012	6.001	0.000	0.000	0.000	0.000
Less: Shares Repurchased in Treasury	-	-	-	-	-	-	-	-	-	-
Shares Outstanding (end of the year)	3,190	3,250	3,310	3,370	3,430	3,436	3,436	3,436	3,436	3,436

Tesla
Sensitivity Tables

Equity Risk Premium	Beta						
	165.20	1.00	1.15	1.25	1.33	1.45	1.55
	6.00%	192.96	156.26	137.03	123.74	107.13	95.33
	5.75%	205.35	166.82	146.61	132.64	115.18	102.75
	5.50%	218.95	178.41	157.14	142.43	124.02	110.92
	5.00%	250.53	205.35	181.62	165.20	144.62	129.97
	4.50%	289.61	238.74	211.99	193.46	170.23	153.66
	4.00%	339.14	281.07	250.53	229.35	202.78	183.81
	3.50%	403.77	336.35	300.87	276.26	245.37	223.29

Equity Risk Premium	WACC						
	165.20	10.50%	10.75%	11.00%	11.44%	11.75%	12.00%
	6.00%	211.55	198.17	185.98	166.89	155.13	146.41
	5.75%	211.02	197.67	185.50	166.47	154.73	146.04
	5.50%	210.48	197.17	185.03	166.04	154.34	145.67
	5.00%	209.40	196.16	184.09	165.20	153.55	144.93
	4.50%	208.33	195.16	183.14	164.35	152.76	144.18
	4.00%	207.25	194.15	182.20	163.50	151.97	143.44
	3.50%	206.18	193.14	181.25	162.65	151.18	142.69

Cost of Debt	CV NOPLAT Growth						
	165.20	3.50%	4%	4.50%	5%	5.50%	6%
	5.50%	140.45	147.45	155.46	164.70	175.50	188.28
	5.00%	140.62	147.64	155.66	164.93	175.75	188.57
	4.50%	140.80	147.82	155.87	165.16	176.01	188.86
	4.42%	140.82	147.86	155.90	165.20	176.05	188.91
	4.25%	140.88	147.92	155.97	165.27	176.14	189.01
	4.00%	140.97	148.02	156.08	165.39	176.27	189.16
	3.75%	141.06	148.11	156.18	165.51	176.40	189.31

Risk Free Rate	CV NOPLAT Growth						
	165.20	3.50%	4%	4.50%	5%	5.50%	6%
	5.50%	124.51	130.14	136.51	143.78	152.17	161.93
	5.25%	130.78	136.92	143.91	151.93	161.21	172.10
	5.00%	137.46	144.19	151.87	160.72	171.03	183.20
	4.88%	140.82	147.86	155.90	165.20	176.05	188.91
	4.50%	152.24	160.35	169.69	180.58	193.42	208.80
	4.25%	160.43	169.37	179.71	191.84	206.25	223.64
	4.00%	169.24	179.11	190.60	204.15	220.37	240.14

WACC	Forecasted Marginal Tax Rate						
	165.20	8%	9%	10%	12.5%	15%	20%
	12.50%	143.05	140.04	137.04	129.53	122.03	107.01
	12.00%	159.68	156.40	153.12	144.93	136.73	120.34
	11.75%	168.99	165.56	162.13	153.55	144.97	127.81
	11.44%	181.57	177.93	174.29	165.20	156.10	137.90
	11.00%	201.97	198.00	194.02	184.09	174.15	154.28
	10.75%	215.00	210.82	206.63	196.16	185.69	164.76
	10.50%	229.30	224.88	220.46	209.40	198.35	176.25