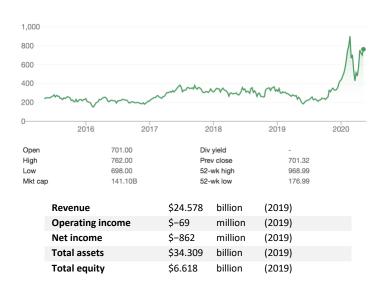
15.493 Perspectives on Investment Management Tesla Report Po-Han Lin May 6rd, 2020



# **Price Performance and Key Facts**



| Туре         | Public                     |
|--------------|----------------------------|
| Trade Symbol | NASDAQ: TSLA               |
| Industry     | Automotive                 |
|              | Energy storage             |
|              | Energy production          |
| Founded      | July 03, 2003              |
| Founders     | Martin Eberhard            |
|              | Marc Tarpenning            |
| Headquarters | Palo Alto, California      |
| Key people   | Robyn Denholm (Chairwoman) |
|              | Elon Musk (CEO)            |
|              | Drew Baglino (CTO)         |
|              | Zachary Kirkhorn (CFO)     |
| Products     | Electric vehicles          |
|              | Tesla batteries            |
|              | Solar panels and roofs     |
| Production   | 367,500 vehicles (2019)    |
| Website      | www.tesla.com              |

#### **Company Overview**

Tesla is a California-based public company engaging in the design, development, manufacture, and sale of fully electric vehicles, solar energy generation, and storage systems. The company is vertically-integrated and aims to accelerate the world's transition to sustainable energy by offering high-performance electric automobiles and end-to-end clean energy products. Its car models include Model S, Model X, Model Y, and Model 3. The company is generally regarded as the pioneer and market leader in the full-electric vehicle market and its products have dominated the market direction. The company also offers battery storage and solar energy systems that it plans to increase production in the coming years.

Tesla was founded by engineers Martin Eberhard and Marc Tarpenning in 2003 and currently has a market cap of \$100.2 billion (six-month average). As of 2019, the company had a revenue of \$24.6 billion and a net income of -\$862 million. Tesla currently has a main factory in Fremont, California and three Gigafactories in Reno, Nevada, Buffalo, New York, and Shanghai, China. A new site near Berlin, Germany has been selected to build the fourth Gigafactory for the European market.

## **Key Products and Services**

Full-electric Automotive

#### 1. Model S

First delivered in June 2012, Model S is a four-door full-size sedan featuring the highest performance characteristics and longest ranges. As an earlier model, Model S is equipped with a touchscreen driver interface, Autopilot hardware, over-the-air software updates, and fast charging through the Supercharger network.

### 2. Model X

First delivered in September 2015, Model X is a mid-size SUV with seating for up to seven adults. As Tesla's SUV product with the best performance, the model is equipped with a standard dual-motor all-wheel drive powertrain, falcon-wing doors, and all-glass panoramic windshield.

## 3. Model 3

Launched in 2016, Model 3 is a four-door mid-size sedan appealing to the mass-market at an affordable price, currently manufactured at the Fremont Factory and Gigafactory Shanghai. There are three versions available: Standard Range Plus, Long Range, and Performance.

## 4. Model Y

Expected to begin delivery in mid-2020, Model Y is a compact SUV with relatively affordable price and the capability for seating for up to seven adults. It was launched with the expectation to fill the market space between Model 3 and Model X. The model is currently offered in dual-motor all-wheel drive Long Range and Performance versions.

# 5. Future automotive products

Cybertruck is an all-electric, battery-powered, light commercial vehicle aimed to provide a sustainable-energy substitute to the conventional pickup trucks. The new Tesla Roadster is a four-seater sports car capable of 0 to 60 mph in 1.9 seconds that is named after Tesla's first production car. Tesla Semi is a commercial heavy-duty truck in development first announced in 2017 with a 500-mile travel distance.





Tesla Semi

Tesla Cybertruck

**Energy Storage Solutions** 

Tesla currently has three energy storage products: Powerwall, Powerpack, and Megapack. Powerwall is a 13.5-kilowatt-hour (kWh) rechargeable lithium-ion battery with integrated inverter, designed to store energy at home or at a smaller scale. Powerpack and Megapack are energy storage solutions for commercial uses and industrial customers, and are capable of reaching gigawatt-hours (GWh) capacity when grouped to form larger installations. In addition, Tesla

develops software for controlling and optimal dispatching of energy storage systems that is sent to customers.

# Solar Energy Generation

## 1. Solar Panels

Tesla sells retrofit solar energy systems, including solar panels, inverters, racking, electrical hardware, and monitoring device to customers and partners. Additionally, Tesla offers lease and 20-year power purchase agreement (PPA) arrangements with a subscription-based sale of solar power in California.

#### 2. Solar Roof

Solar Roof is comprised of durable glass roofing tiles with solar panel functionalities. The product is currently provided to direct customers and through channel partner sales. The company plans to increase the production at Gigafactory New York and scale up installation capabilities by training Tesla personnel and third-party partners.





# **Competitive Strengths**

# 1. Brand recognition and value proposition

Tesla has successfully built its image as the leader in the electric car industry and enjoys its brand recognition through innovation and marketing. All of its car models share a unique appearance and sleek design that can be easily differentiated from its competitors. Originally considered as a luxury brand in the automotive industry, the brand is often related to positive values and considered as advanced, efficient, and futuristic. Additionally, the bold mission statement to "accelerate the world's transition to sustainable energy" and the personal charisma of its CEO Elon Musk helped gather media attention and public focus.

Operating initially in the high-end personal electric vehicle market, the company recently expanded to wider market segments with new models – Model 3 and Model Y targets towards the mid-price market; the new Tesla Roadster aims at the fast sports car enthusiasts; Cybertruck and Semi are the first attempts to enter the commercial vehicles market tailoring to the transportation and shipping businesses. Although the outcome of the new ventures into the commercial market

has yet to be observed, the brand remains an important factor for personal vehicle buyers. With no other competitors sharing the same reputation, Tesla is expected to continue possessing its current brand recognition in the near future, directly contributing to its personal electric vehicle sales.

# 2. Leading Technology for Electric Vehicles and Energy Systems

As a leader with a heavy focus on R&D, Tesla's most unique advantage lies in its intellectual properties. A recent teardown of Model 3 revealed that its electronics is six years ahead of Toyota and Volkswagen (Nikki Asian Review). The company identifies its technology competencies in four main areas -- battery and powertrain, vehicle control and infotainment software, self-driving development, and energy generation and storage.

Battery and Powertrain. The advantage is composed of three parts – core technology, system development, and manufacturing. Firstly, Tesla optimizes its lithium-ion cells and battery packs to achieve high energy density at decreasing costs and it has the ability to drive large currents into small battery packages when recharging with high efficiency. Secondly, Tesla developed an integrated system for energy storage, cooling, safety, charge balancing, structural durability, and electronics management. The dual-motor powertrain controls torque to the front and rear wheels digitally and independently, resulting in a short response time. Thirdly, Tesla is capable of manufacturing battery packs at scale, with high quality and low cost. It is also ramping up production of vehicles by investing in new factories.

Vehicle Control and Infotainment Software. Tesla sources its own processors for electric vehicles and writes custom firmware/software to ensure optimized vehicle behaviors. A completely internally developed system is better integrated, adds flexibility, and can be updated more quickly. This includes algorithms for controlling traction, vehicle stability, acceleration and deceleration, and climate control.

Self-Driving Development. Currently, Tesla cars are equipped with driving assist systems including auto-steering, traffic aware cruise control, automated lane changing, automated parking, and a smart summon feature. Additionally, all vehicles are equipped with an on-board computer capable of full self-driving in the future. The software utilizes neural networks to continuously improve performance and receives regular updates remotely. This is the most advanced self-driving system up to date.

Energy Generation and Storage. The biggest competitive advantage of Tesla in the energy segment is the software and services. The bi-directional, grid-tied power electronics enable interconnection with the electricity grid; the solar power software reduces solar energy system design and installation timelines and costs.

# 3. Extensive Charging Stations Network

Tesla has the most extensive network of charging stations in the US and worldwide compared to other electric vehicle competitors and continues to increase the coverage. The company has over 13,000 supercharger stations that recharge Tesla batteries within an hour and over 21,000 destination stations that provide longer charging times suited for long stays at malls or hotels at the end of 2019. It is estimated that Tesla's chargers account for 30 to 40 percent of total US charging outlets documented by the US Department of Energy (Adam Jonas, Morgan Stanley).

Additionally, Tesla completes the charging ecosystem with its home-charging solution and the mobile app. Customers can install Tesla Wall Connector at home and recharge the vehicle overnight. The product has a modest cost of \$500, can be fully integrated into most home electrical systems, and is suitable for indoor and outdoor uses. The Tesla mobile app has built-in navigation and trip planning system that automatically re-routes drivers through nearby available superchargers and send out notifications when charging is completed. The integrated network and system can potentially alleviate concerns faced by gasoline-powered vehicle drivers and motivate them to make a transition, at the same time increase customer stickiness and prevent them from switching to other electric car manufacturers.

#### 4. Direct Sales Model

Unlike traditional car manufacturers who sell through franchised dealerships, Tesla adopted a direct-to-customer sales model to sell its vehicles in company-owned stores and through its online website. This gives the company an advantage in the speed of product development and enhances shopping experiences for customers – no price haggling, tedious paperwork, lengthy negotiation, or even the need to show up in person. It also allows the company to maximize capital efficiency and control costs of inventory. Customization is made easier by the "build your own car" function on the self-service website where customer can select features, appearances, and financing options. Although facing legal challenges in certain states, this model is expected to grow in popularity as the young-generation customers value efficiency and transparency.

Besides selling new vehicles, Tesla engages in used-vehicle sales (from customer trade-ins lease returns) and vehicle leasing in selected markets. The company also offers loan financing arrangements, insurance plans, and vehicle buyback guarantees under certain conditions by partnering with financial institutions.

## 5. Securing Key Alliances

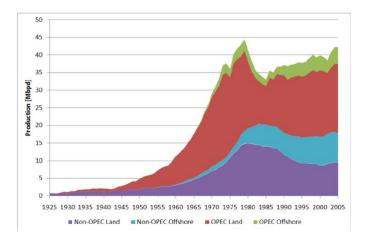
In recent years, Tesla has partnered with key players in different segments of its supply chain. Panasonic provides lithium-ion batteries and helps the construction of Gigafactories in Nevada and New York. Toyota joins the alliance to collaborate on the development of electric vehicles, parts, and production systems. Tesla has also partnered with Daimler in joint R&D efforts.

# **Competitive Weaknesses**

# 1. Volatility in the cost of oil and gasoline

Electricity prices have historically been more stable than gasoline prices. A decline in price for petroleum-based fuels will make gas-powered cars more economically attractive and discourage consumers from transitioning to electric cars, especially when Tesla is pushing into the lower-price market and the commercial market when buyers are more economically sensitive. The global production in oil has been increasing steadily since the oil glut in 1980s. New sources of crude oil are being found; the extraction of oil has become more effective due to new technologies such as hydraulic fracturing and horizontal drilling. Meanwhile, the average fuel efficiencies for internal combustion engines continue to improve (Bureau of Transportation Statistics).

Geopolitical relations remain a dominating factor in oil price. The price war launched by Saudi Arabia after unsuccessful negotiations with Russia in March 2020 caused excess global supply. The COVID19 pandemic forces billions of people worldwide to stay at home and transportation is dramatically reduced, reducing the global demand. The two factors couple and tanked the oil price to a historical low since 1999. If the low price of petroleum is sustained, Tesla will have a significant disadvantage comparing to its peers in the gas-powered car business.



Global Crude Oil Production

## 2. Lack of Experience in International Operations

As a relatively young company, Tesla is expanding its productions overseas but still have limited manufacturing experience outside of the US. The lack of experiences in various regulatory environment; increasingly localized procurement at Gigafactory Shanghai and future locations; increased complexity in global supply chain could all negatively affect the production efficiency/profit margin and lead to production disruptions. It is no denying that such expansion is necessary as the company seeks to expand its scale and reduce cost; however, it is worthwhile to observe to progress in key aspects such as the construction of new Gigafactories in Shanghai and Berlin.

# 3. Government Regulations and Economic Incentives

Electric vehicles/solar energy businesses and consumers receive economic incentives from governments at the federal and state level but it is unclear whether this will continue. As of May 2020, consumers in New Jersey receive up to a \$5,000 rebate for purchase or lease of a new EV plus sales tax exemption. Individuals and commercial buyers who purchase a solar electric system are offered a 26% federal tax credit. Tesla itself also receives various tradable regulatory credits under California's Zero Emission Vehicle (ZEV) Regulation and similar incentive schemes in other states. The company reported 2020 Q1 regulatory credit revenue of \$354 million (Credit Suisse). If these incentives were to be discontinued, Tesla will face client loss and economic loss.

On the other hand, autonomous driving is a relatively new field and subjects to intense regulations. Without de-regulation of the technology by the authorities, the R&D spent in self-driving cars may not pay off easily. Additionally, occasional reports of casualty caused by the auto-pilot system or the prototype driverless cars often have material impacts on not only the stock price but also the regulatory attitude. This remains a risk for Tesla as well as other competitors developing autonomous vehicles.

# 4. Potential Stock Manipulation by Elon Musk

Although CEO of the company Elon Mask has helped the company gain much attention from the media and the public, not everything is beneficial to the image of Tesla. The most concerning issue is his alleged tendency to manipulate stock prices. On August 7th, 2018, Musk tweeted "Am considering taking Tesla private at \$420. Funding secured" and caused the share price to surge by 13%. The matter was later settled with SEC with Elon Musk stepping down as Chairman and paying a \$40 million fine. Again in May 1st, 2020, Musk tweeted "Tesla stock price is too high imo" and led to a 10% price drop in minutes. Such incidences are hard to anticipate and it seems like Elon Musk has no intention to refrain from such activities. This creates huge uncertainty in Tesla stock price especially for market participants looking to invest short-term.

## 5. Over-reliance on Elon Musk

The company has an over-reliance on CEO Elon Musk, resulting in significant key-person risk. Musk takes on several other ventures and does not devote his full attention to the company. Furthermore, Tesla doesn't seem to have a clear plan in the case that Musk can no longer lead the company. As indicated in the company's 10-K report, "We are highly dependent on the services of Elon Musk, our Chief Executive Officer and largest stockholder.... Mr. Musk also currently serves as Chief Executive Officer and Chief Technical Officer of Space Exploration Technologies Corp., a developer and manufacturer of space launch vehicles, and is involved in other emerging technology ventures."

Additionally, as the largest shareholder, Elon Musk has pledged shares of Tesla's common stock to secure borrowings from financial institutions. In the event that the company's stock decline substantially, Musk may be forced to dump Tesla shares to satisfy his loan obligations, which will further drive down stock prices.

# **Competitive Landscape**

1. Competition from Traditional Car Manufacturers

As the largest electric car manufacturer, Tesla faces tremendous competitions from traditional car companies who sell gas-powered cars. Although electric vehicles have lower operating costs, its conventional counterparts are much more mature, offer a greater variety, and do not have the need to recharge or change batteries once in a while. Despite technology improvement, some people still have the stigma that electric cars are slower and less stable. On the other hand, traditional car manufacturers are increasing their offerings of hybrid gasoline-electric cars as well as electric ones at a more affordable price, including Kia Niro EV, Nissan Leaf, and Chevy Volt. One such company is Volkswagen, who started the production of ID.3 in November 2019 and aims to dedicate billions of euros to launch as many as 70 new electric models by 2028. At the meantime, traditional luxury automobile brands are consuming the high-end electric car market, including Porsche, from which Bill Gates just purchased his first electric car Taycan.

# 2. Competition from Autonomous Car Companies

Tesla's biggest rival in self-driving vehicles are Waymo, Uber, and General Motors. As a subsidiary of Alphabet, Waymo has experiences in machine learning, data processing, and is able to invest in more resources on R&D. The company is currently operating self-driving ride-hailing service in Phoenix and Silicon Valley and has accumulated 20 million miles of total real-world experience by January 2020. Aiming to drive down labor cost, the ride sharing company Uber established the Advanced Technologies Group (ATG) for developing driverless cars. Similarly, Lyft established Level 5 n 2017 and currently have 19 self-driving cars on the streets of California. As a traditional carmaker, General Motors acquires Cruise in March 2016 and its self-driving vehicles are used for food deliveries in the recent coronavirus crisis. As it is still in the early phase, it is hard to tell who will succeed in the race. Safety and stability remain the two determining factors.

#### **Short-term Focus**

- 1. Oil Price Trend Caused by the Saudi-Russia Price War
- 2. China-US Trade War and Rise in Protectionism
- 3. Potential Economic Recession due to COVID19

# Ratio Analysis

|                                   | Tesla   |         |         |         | GM        | Ford      |
|-----------------------------------|---------|---------|---------|---------|-----------|-----------|
|                                   | 2019    | 2018    | 2017    | 5yr avg | 5yr avg   | 5yr avg   |
| Profitability (%)                 |         |         |         | , ,     | , ,       |           |
| Gross Margin                      | 16.6    | 18.8    | 18.9    | 19.9    | 15.8      | 15.4      |
| SG&A to Sales                     | 16.2    | 20.0    | 32.8    | 28.6    | 10.7      | 12.8      |
| Operating Margin                  | 0.3     | -1.2    | -13.9   | -8.8    | 5.1       | 2.5       |
| Pretax Margin                     | -2.7    | -4.7    | -18.8   | -12.0   | 6.3       | 3.8       |
| Net Margin                        | -3.5    | -4.5    | -16.7   | -11.3   | 4.5       | 3.0       |
| Return on Assets (%)              | -2.7    | -3.3    | -7.6    | -6.2    | 3.3       | 2.0       |
| Return on Equity (%)              | -14.9   | -21.3   | -43.6   | -38.4   | 17.5      | 15.5      |
| Valuation (x)                     |         |         |         |         |           |           |
| Price/Sales                       | 3.0     | 2.6     | 4.4     | 4.4     | 0.4       | 0.3       |
| Price/Earnings                    | -85.9   | -58.1   | -26.3   | -50.1   | -1.9      | 165.6     |
| Price/Book Value                  | 11.4    | 11.7    | 12.4    | 14.3    | 1.3       | 1.4       |
| Per Share                         |         |         |         |         |           |           |
| Sales per Share                   | 138.86  | 125.85  | 70.94   | 83.15   | 99.28     | 38.72     |
| EBIT (Operating Income) per Share | 0.45    | -1.48   | -9.88   | -4.35   | 5.06      | 0.98      |
| EPS (diluted)                     | -4.87   | -5.72   | -11.83  | -6.81   | 4.18      | 1.16      |
| Asset Turnover Analysis (x)       |         |         |         |         |           |           |
| Cash & ST Investments             | 4.7     | 5.8     | 3.3     | 3.9     | 5.6       | 4.3       |
| Receivables                       | 21.6    | 29.3    | 23.2    | 23.1    | 5.1       | 2.2       |
| Inventories                       | 6.2     | 6.5     | 4.4     | 4.6     | 10.6      | 13.8      |
| Fixed Assets                      | 1.2     | 1.1     | 0.7     | 0.9     | 2.3       | 2.5       |
| Total Assets                      | 0.8     | 0.7     | 0.5     | 0.6     | 0.7       | 0.6       |
| Operating Efficiency (x)          |         |         |         |         |           |           |
| Revenue/Employee (actual)         | 511,871 | 439,627 | 313,208 | 361,540 | 788,745   | 781,827   |
| Net Income/Employee (actual)      | -17,952 | -19,995 | -52,244 |         | 35,333    | 23,255    |
| Assets/Employee (actual)          | 714,533 | 609,206 | 763,268 | 692,316 | 1,155,011 | 1,248,051 |
| Receivables Turnover (x)          | 21.6    | 29.3    | 23.2    | 23.1    | 5.1       | 2.2       |
| Inventory Turnover (x)            | 6.2     |         | 4.4     | 4.6     | 10.6      | 13.8      |
| Payables Turnover (x)             | 5.8     | 6.3     | 4.6     | 5.1     | 5.3       | 6.2       |
| Asset Turnover (x)                | 0.8     | 0.7     | 0.5     | 0.6     | 0.7       | 0.6       |
| Working Capital Turnover (x)      | 17.1    | -       | -       | 16.7    | 23.3      | 7.2       |
| Operating Cycle (Days)            |         |         |         |         |           |           |
| Days of Inventory on Hand         | 59.3    | 56.3    | 82.8    | 88.2    | 34.8      | 26.7      |
| + Days of Sales Outstanding       | 16.9    | 12.5    | 15.7    | 16.1    | 73.5      | 173.5     |
| = Operating Cycle                 | 76.2    | 68.8    | 98.6    | 104.3   | 108.3     | 200.2     |
| - Days of Payables Outstanding    | 62.5    | 57.9    | 79.7    | 74.2    | 69.6      | 59.2      |
| = Net Operating Cycle             | 13.7    | 10.9    | 18.9    | 30.1    | 38.8      | 141.0     |
| Liquidity (%)                     |         |         |         |         |           |           |
| Current Ratio                     | 1.1     | 0.8     | 0.9     | 1.0     | 0.9       | 1.3       |
| Quick Ratio                       | 0.8     |         | 0.6     |         | 0.8       | 1.2       |
| Cash Ratio                        | 0.6     | 0.4     | 0.5     | 0.5     | 0.3       | 0.4       |
| Leverage (%)                      |         |         |         |         |           |           |
| LT Debt/Total Equity              | 190.8   | 225.8   | 263.2   |         | 155.3     | 303.3     |
| Total Debt/Total Assets           | 42.8    | 46.5    | 42.3    | 41.1    | 41.4      | 59.9      |

1. Gross Margin: Tesla's gross margin averaged 19.9% over the past 5 years, higher than GM and Ford. This is because Tesla is operating in luxury car segment. The recent decrease in gross margin reflects their effort to enter the mass market.

- 2. SG&A to Sales: Tesla's SG&A/sales is 3X GM and 2X Ford. As a relatively new company, Tesla has not reached economy to scale and spends a significant percentage of revenue on R&D.
- 3. Operating & Net Margin: Tesla's operating margin has been negative until 2019 at 0.3%, while its net margin is still negative at -3.5%.
- 4. Price/BV & Price/Sales: Tesla's Price/BV is 14.3, 10X higher than that of GM or Ford, resembling to a tech company rather than a car manufacturer. The same trend is observed for Price/Sales ratio. Investors have high expectations for the company and the stock price is potentially overvalued.
- 5. Receivables Turnover: Tesla receives accounts receivables much faster than the other two companies. This is the result of its direct-to-customer sales model that allows it to receive cash flow directly from customer.
- 6. Inventory Turnover: Tesla is less efficient in inventory management than other traditional car manufacturers. This is surprising because one would expect Tesla to benefit from its sales model. This is potentially because of their inexperience in managing the supply chain.
- 7. Quick ratio & Leverage: Tesla's quick ratio is only 0.6 while it's LT Debt/Equity is 200%, raising potential concerns for liquidity drains especially during demand shocks.

#### Valuation

- 1. DCF Analysis: Referring to the pro forma income statement in the next page, the net income will remain negative for at least two years. The projected earnings per share from 2020 to 2022 are -1.68, -1.90, and -2.22. If the trend continues, the company will not be sustainable and the stock price should be 0.
- 2. EV/EBITDA Multiple: Tesla's operating income is -69 million in 2019. If we multiply the number by the EV/EBITDA multiple, plus cash (net of debt), the market value of equity should be negative and the stock price should be 0.
- 3. P/E ratio: Tesla EPS was 0.03 in 2019. The stock price at the end of 2019 is around \$420. This corresponds to a P/E ratio of 14,000, which is extremely high and signals that the stock may be overvalued.

The above metrics may not be as useful when analyzing Tesla due to it negative earnings until the last fiscal year. However, this shows that the company's profitability is a concern and will not be sustainable if the trend continues. It is important for the company to quickly become profitable by increasing the production / revenue without extensive Capital Expenditure and Operating Expenses.

**Final Recommendation: SELL** 

# **Pro forma Income Statement**

|  | 2016 20 |        | 2018    | 2019    |         |         | 2022E  |
|--|---------|--------|---------|---------|---------|---------|--------|
| Total revenues   | 7,000   | 11,759 | 21,461  | 24,578  | 27,773  | 32,495  | 38,99  |
| Total automotive revenue                                   | 6,351   | 9,641  | 18,515  | 20,821  | 23,052  | 26,483  | 31,19  |
| Automotive   | 5,589   | 8,535  | 17,632  | 19,952  |         |         |        |
| Automotive leasing   | 762     | 1,107  | 883     | 869     |         |         |        |
| Services and other   | 649     | 2,117  | 2,946   | 3,757   | 4,721   | 6,011   | 7,79   |
| Energy generation and storage                              | 181     | 1,116  | 1,555   | 1,531   |         |         |        |
| Services and other   | 468     | 1,001  | 1,391   | 2,226   |         |         |        |
| Total cost of revenues                                     | -5,401  | -9,536 | -17,419 | -20,509 | -23,607 | -27,945 | -33,92 |
| Total automotive cost of revenues                          | -4,750  | -7,433 | -14,174 | -16,398 | -18,608 | -21,771 | -26,12 |
| Automotive   | -4,268  | -6,724 | -13,686 | -15,939 |         |         |        |
| Automotive leasing   | -482    | -708   | -488    | -459    |         |         |        |
| Services and other   | -651    | -2,104 | -3,245  | -4,111  | -4,999  | -6,174  | -7,79  |
| Energy generation and storage                              | -178    | -875   | -1,365  | -1,341  |         |         |        |
| Services and other   | -472    | -1,229 | -1,880  | -2,770  |         |         | = 00   |
| Gross profit   | 1,599   | 2,222  | 4,042   | 4,069   | 4,166   | 4,549   | 5,06   |
| Total operating expenses                                   | -2,267  | -3,855 | -4,430  | -4,138  | -4,471  | -4,907  | -5,49  |
| Research and development                                   | -834    | -1,378 | -1,460  | -1,343  | -1,528  | -1,787  | -2,14  |
| Selling, general and administrative                        | -1,432  | -2,477 | -2,834  | -2,646  | -2,777  | -2,925  | -3,11  |
| Provision for income taxes                                 | -27     | -32    | -58     | -110    | -97     | -114    | -13    |
| Net loss / income  | -773    | -2,241 | -1,063  | -775    | -306    | -357    | -42    |
| Net income / loss attributable to noncontrolling interests | 98      | 279    | 86      | -87     | 0       | 0       | 40     |
| Net income / loss attributable to common stockholders      | -675    | -1,961 | -976    | -862    | -306    | -357    | -42    |
| Earning Per share  | -4.68   | -11.83 | -5.72   | -4.92   | -1.68   | -1.90   | -2.2   |
| Diluted Shares   | 144.2   | 165.8  | 170.5   | 177.0   | 182.3   | 187.8   | 193.   |
| GROWTH RATE  |         |        |         |         |         |         |        |
| Total revenues   | 73.0    | 68.0   | 82.5    | 14.5    | 13.0    | 17.0    | 20.    |
| Total automotive revenue                                   | 69.8    | 51.8   | 92.0    | 12.5    | 10.7    | 14.9    | 17.    |
| Automotive   |         | 52.7   | 106.6   | 13.2    |         |         |        |
| Automotive leasing   | -       | 45.3   | -20.2   | -1.6    |         |         |        |
| Services and other   | 112.9   | 226.1  | 39.1    | 27.5    | 25.7    | 27.3    | 29.    |
| Energy generation and storage                              |         | 515.4  | 39.3    | -1.6    |         |         |        |
| Services and other   |         | 113.9  | 38.9    | 60.0    |         |         |        |
| Total cost of revenues                                     | -73.0   | -76.6  | -82.7   | -17.7   | -15.1   | -18.4   | -21.   |
| Total automotive cost of revenues                          | -68.2   | -56.5  | -90.7   | -15.7   | -13.5   | -17.0   | -20.   |
| Automotive   |         | -57.6  | -103.5  | -16.5   |         |         |        |
| Automotive leasing   | I_      | -46.9  | 31.0    | 6.0     |         |         |        |
| Services and other   | -117.5  | -223.2 | -54.3   | -26.7   | -21.6   | -23.5   | -26.   |
| Energy generation and storage                              | -       | -390.4 | -56.1   | 1.8     |         |         |        |
| Services and other   |         | -160.1 | -53.0   | -47.3   |         |         |        |
| Gross profit   | 73.2    | 39.0   | 81.9    | 0.7     | 2.4     | 9.2     | 11.    |
| Total operating expenses                                   | -38.2   | -70.1  | -14.9   | 6.6     | 8.1     | 9.7     | 12.    |
| Research and development                                   | -16.2   | -65.2  | -6.0    | 8.0     | 13.7    | 17.0    | 20.    |
| Selling, general and administrative                        | -55.3   | -72.9  | -14.5   | 6.6     | 5.0     | 5.3     | 6.     |
| Restructuring and other                                    | -  -    |        |         | -10.2   |         |         |        |
| Provision for income taxes                                 | -104.8  | -18.2  | -83.3   | -90.2   |         |         |        |
| Net loss / income  | 13.0    | -189.8 | 52.6    | 27.1    |         |         |        |
| Net income / loss attributable to noncontrolling interests | -       | 184.5  | -69.0   | -200.6  |         |         |        |
| Net income / loss attributable to common stockholders      | 24.1    | -190.6 | 50.2    | 11.7    |         |         |        |
| Earning Per share  | 32.5    | -152.8 | 51.6    | 14.0    | -65.9   | 13.6    | 16.    |
| Diluted Shares   | 12.5    | 14.9   | 2.9     | 3.8     | 3.0     | 3.0     | 3.     |
|  | 1       |        |         |         |         |         |        |
| RATIOS   |         |        |         |         |         |         |        |
| Total revenues   | 100.0   | 100.0  | 100.0   | 100.0   | 100.0   | 100.0   | 100.   |
| Total automotive revenue                                   | 90.7    | 82.0   | 86.3    | 84.7    | 83.0    | 81.5    | 80.    |
| Automotive   | 79.8    | 72.6   | 82.2    |         |         |         |        |
| Automotive leasing   | 10.9    | 9.4    | 4.1     | 3.5     |         |         |        |
| Services and other   | 9.3     | 18.0   | 13.7    |         |         | 18.5    | 20.    |
| Energy generation and storage                              | 2.6     | 9.5    | 7.2     |         |         |         |        |
| Services and other   | 6.7     | 8.5    | 6.5     |         |         |         |        |
| Total cost of revenues                                     | -77.2   | -81.1  | -81.2   |         | -85.0   | -86.0   | -87.   |
| Total automotive cost of revenues                          | -67.9   | -63.2  | -66.0   |         | -67.0   | -67.0   | -67.   |
| Automotive   | -61     | -57.2  | -63.8   |         |         |         |        |
| Automotive leasing   | -6.9    | -6.0   | -2.3    |         |         |         |        |
| Services and other   | -9.3    | -17.9  | -15.1   |         |         | -19.0   | -20.   |
| Energy generation and storage                              | -2.5    | -7.4   | -6.4    |         |         |         |        |
| Services and other   | -6.7    | -10.5  | -8.8    |         |         |         |        |
| Gross profit   | 22.8    | 18.9   | 18.8    |         |         | 14.0    | 13.    |
| Total operating expenses                                   | -32.4   | -32.8  | -20.6   |         |         | -15.1   | -14.   |
| Research and development                                   | -11.9   | -11.7  | -6.8    |         |         | -5.5    | -5.    |
| Selling, general and administrative                        | -20.5   | -21.1  | -13.2   |         |         | -9.0    | -8.    |
| Restructuring and other                                    |         | 2      | -0.6    |         |         | -0.6    | -0.    |
| Loss / income before income taxes                          | -10.7   | -18.8  | -4.7    |         |         | ,,,,    |        |
| Provision for income taxes                                 | -0.4    | -0.3   | -0.3    |         | -0.4    | -0.4    | -0.    |
|  | -9.6    | 0.0    | -4.5    |         |         | 5.4     | 0.     |