

Tesla (NASDAQ: TSLA)

Revised in Part, 20210830; Revised 2021807; {Initial, 20210416 data in brackets as appropriate}

Company-Fund Basics

Company Name

Tesla

Trade Symbol

TSLA

Segment/Sector

Consumer Discretionary - Automobiles

Market Cap. And Style

\$692.1 B {\$709.2 B}; Large Cap Growth

Trades On

NASDAQ, S&P 500

Analysis Date(s)

08/07/2021 {4/14/2021}

Company Description

Tesla, Inc. designs, develops, manufactures and sells electric vehicles and designs, manufactures, installs and sells solar energy generation and energy storage products. The Company's segments include automotive, and energy generation and storage. The automotive segment includes the design, development, manufacturing, sales and leasing of electric vehicles as well as sales of automotive regulatory credits. The energy generation and storage segment include the design, manufacture, installation, sales and leasing of solar energy generation and energy storage products, services related to its products, and sales of solar energy system incentives. Its automotive products include Model 3, Model Y, Model S and Model X. Model 3 is a four-door sedan. Model Y is a sport utility vehicle (SUV) built on the Model 3 platform. Model S is a four-door sedan. Model X is an SUV. Its energy storage products include Powerwall and Powerpack.

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CFA Suitability Summary

SUITABILITY SUMMARY

At this time, Suitability Factors, provide little evidence to justify expectation of either a positive or negative performance for TSLA relative to other stocks or vs. stocks in the EV Initiative's database. TSLA's Positives : robust revenue growth, largely solid financial position, reasonable debt levels by most measures, impressive and long maintained earnings per share growth, projected sales increase, and management dedicated to maintaining its innovative approach and style. Negatives: TSLA's premium valuation and less than impressive profit margins. TSLA is one of those odd birds that are suitable in short-term high turnover strategies and/or long term growth applications - but may be "shaky" in mis-term scenarios. TSLA remains, in our estimation, the best long term play in the EV subsegment - provided you have reasonably high risk tolerance. It is not an investment option for the timid or risk-averse.

CFA Suitability Passements: Based On

Your Risk Tolerance Profile

TSLA is suited only for investors with high risk (volatility) tolerance. TSLA's volatility (Beta = 2) and extremely high P/E (366 on 20210807) make it a prime target for "market adjustment." The nature of that volatility may render it unsuitable for use in directional option strategies as well. That being said, TSLA is more stable than the majority of its peers in the EV segment.

The Stock's Liquidity and Ready Marketability

TSLA is immediately liquidatable due to high volume daily sales and ready market.

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Company Growth Expectations (Investment Style)

We anticipate TSLA securities' CAGR will flatten despite vast improvement that we anticipate in company fundamentals. Direct EV peers may provide greater gain potential, albeit at the cost of significantly greater risk. TSLA is highly correlated to both peer and S&P movements. As the market goes, so will TSLA. TSLA has experienced some friction in international markets, particularly China. TSLA remains the only US based EV manufacturer with a significant international presence. The ongoing transitions into EV options by traditional auto manufacturers (e.g. Ford (F), GM (GM), Toyota (TM), and Volkswagen) are already dampening TSLA's market penetration and share - and will probably continue to do so. Cambyses has yet to assess TSLA's proposed entry into the public utility arena (an intention announced within the last week a/o 20210830)

Portfolio Preservation or Wealth Transfer Scenarios

TSLA may have a role in both wealth creation and preservation in long run scenarios. Its volatility prevents it from being a good short term or short planning horizon or target date investment. (TSLA's valuations are too unpredictable to ascertain that funds will be adequate when needed in very-short planning horizon scenarios). Flattening of TSLA's share value growth curve may reduce uncertainty - at the cost of yield expectations.

Your Income Expectations

TSLA pays no dividend. Its volatility makes it problematic for use in short term income generation strategies (e.g. covered calls). As a high growth high volatility security, it has value in a margin scenario - but is not useful for short strategies. Long term income scenarios based on buy-sell strategy are more viable than similar short term scenarios.

The Purpose of Your Portfolio

TSLA is not suitable for inclusion in short term targeted investment programs (e.g. for inclusion in a near retirement portfolio). By contrast, TSLA is well suited for a long-term objective investment - provided you have the ability to monitor price movements and respond to inflections, and a dilated time frame in which to do it. TSLA has, historically, been quite suitable for Growth oriented strategies and/or long term preservation. Flattened CAGR expectations may reduce TSLA's suitability in Growth scenarios - at least in the near term (1-3 years).

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Your Diversification Objectives

TSLA is highly correlated to S&P and to its peers. Hence, it is of limited use as a source of diversification. Looked at another way - correlation implies somewhat better ability to forecast long term share price movements - provided you have a reasonable gauge for general market value growth.

Sector Target Allocation

Bluntly, we cannot imagine an auto sector portfolio or allocation that excludes TSLA. The primary difficulty you might encounter in a sector portfolio stems from TSLA's very high price per share and market capitalization. Both factors skew either an equal value or cap-weighted allocation strategy... We are not certain whether that is good or bad - but if TSLA's stock price behavior flattens or declines, these factors will exert an outsized (downward) influence on the total portfolio.

Trade Frequency

TSLA is most suitable for portfolios that either trade frequently or are closely monitored. Again, TSLA volatility implies it is most suitable in either a high turnover approach or a long term buy and monitor strategy. Intermediate term strategies are somewhat less predictable.

CFA Risk Assessment

Risk Summary

Overall Risk = Average or Somewhat Elevated: Tesla operates in a highly competitive industry. Cambyses' primary concern for this company at this time is execution risk. Our concerns are mitigated by dramatic volume growth we foresee for the company, greater-than expected cost efficiencies, and potential capital raises. Tesla faces risks from weak global economic conditions, marginal ESG efforts and changes in consumer preferences and spending patterns. Tesla is also at risk from higher costs for components and raw materials, as well as from manufacturing disruptions (e.g. due to semi-conductor shortages). Tesla exhibits robust revenue growth, largely solid financial position with reasonable debt levels by most measures and impressive record of earnings per share growth. However, counter to these strengths, we also cite weaknesses such as premium valuation (P/E) and poor profit margins.

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Identified Risks and Competitive Advantages

Market

Risk = Moderate to High: TSLA functions in an extremely competitive market that is prone to consumer whim and economic disturbance. TSLA is the largest, by market capitalization of any player in the Auto arena. Market competitors include some established companies/auto manufacturers - several of whom are launching EV initiatives that may compete with TSLA's offers. Significant traditional auto competitors include Volkswagen, Ford, and GM. Volkswagen has captured a significant market share of the European EV market. TSLA faces increased competition from Chinese EV manufacturers and has experienced some friction with the Beijing government. ¶¶ TSLA trades at an extremely elevated P/E that is probably not sustainable in the long run. Earnings are being maintained and improving, but the stock price and P/E have plateaued in the recent near past. ¶¶ Bottom line, TSLA's sustained stock price performance appears to be relatively independent of operating parameters at this time - though there is some evidence the market is becoming more aware of the sizable discrepancy between TSLA's fundamentals and technicals.

Volatility

Risk = High: TSLA is highly volatile when compared to the general market, even though its volatility is comparatively subdued compared to the subsegment. ¶¶ TSLA's high correlation to both S&P and its peers can be viewed as either a negative (TSLA provides very little, if any, diversification when introduced into an already diversified portfolio), or a positive (TSLA's LT pricing behavior may be predictable even though it is volatile).

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Product and Innovations

Risk = Low to Average: TSLA grabbed market share by being firstest-with-the-mostest. To continue that advantage, TSLA must maintain its tech superiority – particularly in the area of battery storage. An extension of TSLA's power generation capabilities may also be required. TSLA's vertical integration will be a source of competitive advantage for as long as it does not become a distraction from core activities. TSLA is taking steps to effectuate all of these strategies. ¶¶¶ TSLA's vertical integration also affords them a broader spectrum of sales funnels than many of their direct EV peers. e.g. TSLA and Apple collaboration on the "California Flats" energy generation and storage project and their recent entry into the Texas utilities sector. The entry of "deep pocket" traditional auto manufacturers with already well defined infrastructure and supply chains gives TSLA (and its own funnel structure) a distinct advantage over other subsegment participants - whose integration is minimal and who must rely on supply chains over which they exercise minimal control.

Operations

Risk = Average to Moderate: TSLA faces significant execution risk (TSLA envisions a multifold increase in output. That plan is a source of both optimism and anxiety.) Tesla projects a 50% CAGR in volume growth over a 'multi-year horizon' and targets greater than 50% volume growth in 2021. Attainment of that goal based on delivered units is probably close to certain. However, TSLA has endured several rounds of operational difficulty that may indicate that scalability of their operations is problematic. That internal exposure is compounded by several supply chain issues including a continuing (though remediable) semiconductor chip shortage and China's dominance of the Rare Earth element market (Addressable only in the long term - The Biden administration has taken preliminary steps in the Infrastructure bill currently making its way through Congress).

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Financial

Risk = Average: TSLA is no longer a startup. Operating results in 2020 and 2021 demonstrate TSLA's ability to scale and sustain production levels at a profitable rate. TSLA exhibits robust revenue growth, largely solid financial position with reasonable debt levels by most measures and impressive record of earnings per share growth.

Liquidity, Solvency, Debt Management and Leverage

Risk = Low to Average: TSLA exhibits relatively steady current and quick account reserves and is not highly leveraged (by comparison to either its peers or to other sector players). The company has begun to generate operating cash surpluses - something rare or unique within the EV subsegment. Hence, unlike its peers, TSLA is not overly dependent on equity market capital for its continued viability. Future security proceeds can be used to expand operations - not initiate or sustain them.

International - Currency, Stability, Growth

Risk = Average: TSLA is the only predominantly US EV company with significant operations or penetration in overseas (Chinese and German) markets (again, good and bad) and Texas (which is kinda like being in a foreign country, too). There is inherent supply chain risk involved in manufacturing operations in several of those jurisdictions. ¶¶ TSLA does not have significant currency exposures (except in terms of financial statement risk) in the markets it operates in because TSLA's production in those markets is predominantly geared to local consumption.

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Management and Governance

Risk = Average or Somewhat Elevated: To a very real extent, TSLA is Elon Musk. Musk is the quintessential crazy nerd genius - and occasionally a bit of a dilettante. But, at least he's fun to watch and, more importantly, he makes the right strategic decisions most (if not all) the time. TSLA has evolved as both a driven innovator and a practical exercise in successful execution at scale. Musk may stray outside the boundaries of SEC disclosure from time to time - but that is more a reflection of his enthusiasm (and perhaps naivete) than of active malice. ¶¶ Notwithstanding that, TSLA faces several readily identifiable (and to some extent related) governance issues. TSLA's board is heavily freighted with insiders (drawn from TSLA and related Musk ventures). Despite Musk's surrender of the chair, TSLA policy and governance reflects the founder's attitudes. In the past this has precipitated questionable forays such as the SolarCity acquisition and TSLA's recent incursion into BitCoin-Crypto markets. A bit more board independence may have mitigated these events.

Political

Risk = Average or Somewhat Elevated: Just as TSLA's management and governance exposures reflect Elon Musk's influence, so too does the company's political exposure. Put simply, Musk can be quite abrasive and some of his political views are inconsistent with current trends. This will all work itself out over time - provided there is no single rupture event that compromises the company. ¶¶ As could every company in the subsegment, TSLA could benefit from tax policies that offer more accessible and larger alternative energy credits or incentives. Fiscal policies that support infrastructure (particularly those that promote grid and charging projects) would benefit TSLA, both directly and indirectly.

Public and Investor Perception

Risk = Low to Average: TSLA's public perception is buttressed by its "first with the most" position in the subsegment. To maintain that perception, TSLA must continue to innovate at the leading edge of the industry - a proposition that seems likely to be fulfilled. On the down-side, public perception of ESG issues is on the rise (though we expect it to plateau at some point) and TSLA has not fared well in surveys of worker relations and union acceptance.

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Legal and fines

Risk = Low: Despite vertical integration of TSLA's operations, there does not appear to be any strong movement to curtail TSLA's "monopoly position." This is probably a short term phenomenon - bottom line TSLA does not control sufficient market share in the Auto sector to pose a threat to traditional competitors. TSLA's exposure to anti-trust arguments will increase as its position in the market expands and solidifies. ¶¶ TSLA faces ongoing risks, both legal and to public perception, stemming from the company's union-aversion and reports of a high incidence of workplace harrassment. With one exception, TSLA management has avoided the kind of transparent public misstatements that seem to plague many other EV subsegment companies.

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Summary of ESG Factors

Environmental	Broadly speaking, TSLA is a major player in climate change efforts. TSLA's short courting of Bitcoin (and retraction of same) indicates a degree of flexibility. CFA is not entirely happy with TSLA's "end of life" plan for its products - but there is still time for that to evolve.
Social	We note ongoing reports of hostile work environment and harrassment. Company position opposes Uniunization.
Governance	We note a high degree of insider participation at the board level, and possibly too much dependence on a single inspirational source (Elon Musk). Musk may need to develop and nurture his own Paul Allen manque.
Other-Remarks	

Performance Projections

3 Months	Source; Cambyses and SJRM, Projection = <1-3%>
1 Yr.	Source; Thomson Reuters Company Report; Projection = <1.5%>, Source; CFRA Company Report, Projection = <3.5%>, Source; Argus Company Report, Projection = +44%, Source; Cambyses and SJRM, Projection = Flat
3 Yrs.	Source; Cambyses and SJRM, Projection = +40%

Company Fundamentals (Historical)

Current Share Price and Trends	Price: \$699.10 ¶¶ 12 Month Range: \$900.40/\$273.00 ¶¶ 3 yr., +1044%, 1 yr. +141%, YTD -4.2% (All trends represent a slowing of TSLA's price growth.)
Dividend Rate (% of Current Share Price & Annual \$)	No Dividend

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Current P/E \\ P/Cash Flow \\ P/Sales

Current Data: P/E = 365 \\ P/Cashflow = 144 \\ P/Sales = 17 ¶¶ TSLA has maintained exceedingly high ratios for several years sparking consistent talk about "bubbles." So far, TSLA stock price has proved very resilient even at high PE ratios. ¶¶ The current ratios are a significant improvement attributable to (primarily) increased profitability.

EPS \\ RPS \\ Cash Flow/Share

Current Data: EPS = \$1.91 \\ R/Share = \$37.11 \\ Cash/Share = \$4.27 ¶¶ Diluted Normalized EPS improved dramatically in 2020 and improved further in Q1-Q2 2021. Company projects further improvement in 2021.

Gross \\ Operating \\ Profit Margins (%)

Current Data: Gross Margin = 22% \\ Operating Margin = 7.9% \\ Profit Margin = 5.5% ¶¶ 2020 represents the first year in which TSLA generated Net Income After Taxes. All prior years are net loss. ¶¶ Margins have been a persistent issue for TSLA. The current data reflects improvement due primarily to more efficient operations and greater sales volume.

Quick \\ Current Ratios

Current Data: Quick = 1.5 \\ Current = 1.2 ¶¶ TSLA maintained healthy solvency ratios were maintained in 2020 by issuance of stock and by earnings from sales. TSLA also derives significant tax credit income - which may be about at its zenith. TSLA's capital expenditure program, as expected, impairs current solvency since no (or insignificant) additional stock or debt is incurred.

LT Debt / Equity \\ Total Debt / Equity

Current Data: LT Debt / Equity = 0.3 \\ Total Debt / Equity = 0.4 ¶¶ Within reasonable norms - maintained to some extent (particularly in 2020) by issuance of equity interests. 2021 YTD shows Improvement in an already acceptable debt structure.

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ROE \\ ROA \\ ROI (%)	Current Data: ROE = 12.4% \\ ROA = 4.9% \\ ROI = 7.5% ¶¶¶ Considerable improvement in 2021. We characterized 2020 returns as "thin, but improving." - TSLA is the only pure EV operation that generates significant Return (regardless of measure).
Revenue Trend (CAGR)	Current Data: Consistent increasing revenue at ~45% CAGR ¶¶¶ Company projects continued growth at approximately same level through 2025 ¶¶¶ Analyst consensus is higher - and accelerating in 2021-2022.
EBITDA Trend (CAGR)	Current Data: Consistent increasing EBITDA and cash From Operations at ~209% CAGR ¶¶¶ CAGR momentum is probably not sustainable, but company projections indicate continued Growth.
Operating Income Trend	Current Data: Consistent increase with exception of 2017 which exhibits a significant COGS increase (start up of new model production?) ¶¶¶ 2020 is the first year in which TSLA generated Net Operating Income - All other years indicate NOL. ¶¶¶ Trend continues in 2021
Net After Tax Trend	Current Data: Improvement (generally) with exception of 2017 and 2018. Provision for income tax does not appear to be consistent with operations income - may reflect effects of tax credit subsidies. ¶¶¶ 2020 is the first year in which TSLA generated Net Taxable Income - All other years indicate NOL.

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EPS Trend Current Data: EPS = \$0.62 \\ R/Share = \$29.40 \\ Cash/Share = \$2.97 ¶¶ Diluted Normalized EPS improved dramatically in 2020. Company projects further improvement in 2021. ¶¶ 2020 is the first year in which TSLA generated positive EPS - All other years indicate NOL.¶¶ Trend continues and is expected to accelerate in 2021- 2022

Company Technical and Risk Characteristics (Historical)

Current P/E \\ P/Cash Flow \\ P/Sales Current Data: P/E = 365 \\ P/Cashflow = 144 \\ P/Sales = 17 ¶¶ TSLA has maintained exceedingly high ratios for several years sparking consistent talk about "bubbles." So far, TSLA stock price has proved very resilient even at high PE ratios. ¶¶ The current ratios are a significant improvement attributable to (primarily) increased profitability.

Price Trend (YTD \\ 6 mo. \\ 1 yr. \\ 3 yr. \\ 5 yr.) Price: \$699.10 ¶¶ 12 Month Range: \$900.40/\$273.00 ¶¶ 3 yr., +1044%, 1 yr. +141%, YTD -4.2% (All trends represent a slowing of TSLA's price growth.)

Beta Beta vs. S&P = 2.0, Beta vs. Peers = 0.82 ¶¶ TSLA is volatile when compared to general market volatility, but somewhat less so than its peers.

R Squared R Squared vs. S&P = 37% ST, 40% LT; R Squared vs. Peers = 41% ST, 45% LT ¶¶ TSLA has historically strong correlation with both general market and its peers. That pattern has faded recently (TSLA has moved counter to market for the last 6-8 months) TSLA provides little diversification advantage when included in an already diversified portfolio.

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Miscellaneous Information and Comparisons

Comparable Issues

Direct EV Segment: XPEV, NKLA, LI, NIO, FSR ¶¶ Other comparables PTR, REE, ELMS,

General Comparison to Comparable Issues

TSLA is the 800 pound gorilla in the EV segment. Its market cap exceeds virtually all other entrants in the auto segment. Sales are, as yet, a small fraction of overall market segment - but a significant share of the EV market.

Other Analysts Consulted

¶¶ Source = CFRA Company Report Recommendation = Hold, Risk = High, Projection = <3.5%> ¶¶ Source = Street Ratings Company Report Rating = C+, Recommendation = Hold, Projection N/A, Risk = N/A ¶¶ Source = Thomson Reuters Company Report, Rating = 7, Recommendation = Hold, Risk = 5 (Moderate and elevated relative to S&P) - some improvement from 04/2020, Projection = <1.5%>, marginal change, despite drastically improved fundamentals. ¶¶ Source = Argus Company Report Recommendation 1yr = Buy, 5 Yr. = Buy, Projection = +44%

CFA Consistency with Other Analysts

CFA's view of TSLA prospects and risk characteristics is generally consistent with that of other analysts - though perhaps a bit less optimistic. CFA assesses risk for this issue as moderate to high, and future share value growth as flat or moderate.