AZ STOCKS
Stocks from A to Z

Tesla

A carmaker, an energy company and a bet on physical AI, valued as if all three had already worked out

DEEP DIVE

November 2026

azstocks.net

COMPANY PROFILE

Tesla

THESIS

Tesla is three companies in one: cars, energy and a bet on autonomy and robotics. In this analysis I assess which of those stories will prevail and whether a valuation of more than USD 1.3 trillion is supported by cash flows.

THE COMPANY

Tesla designs and makes electric vehicles and energy storage systems (Megapack, Powerwall) and provides related services. In 2025 it had revenue of USD 94.8 billion: 73% automotive, 14% energy and 13% services.

It was its first year of declining revenue. At the same time, energy and long-term options are growing: autonomous driving (FSD), Robotaxi and the Optimus robot.

TARGET PRICE
USD 69

UPSIDE / DOWNSIDE
-80.8%

SECTOR
Automotive

EXCHANGE
NASDAQ

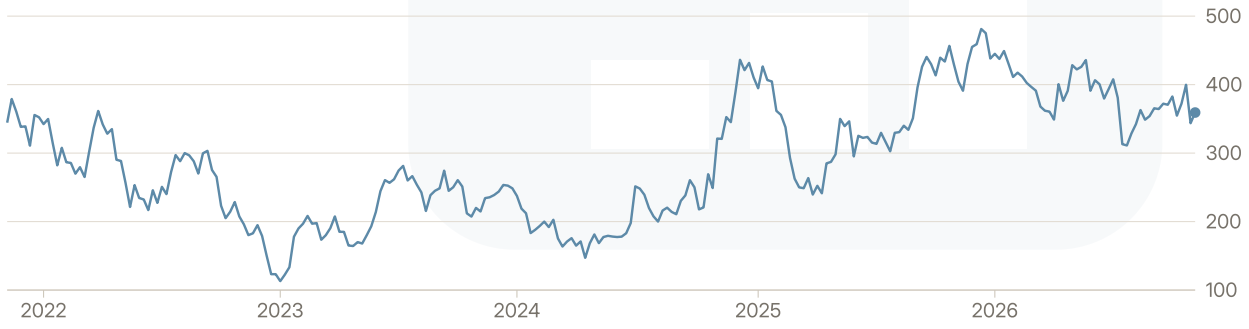
CURRENCY
USD

LAST UPDATED
November 2026

MARKET DATA AS OF 2026-11-06

PRICE	52-WEEK RANGE	5-YEAR CHANGE	BETA (5Y)
USD 359.19	297.38 – 498.83	+4%	1.81

WEEKLY SHARE PRICE, LAST 5 YEARS



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SECTION 01

Introduction

Tesla has long been one of the most debated companies in the market. For every analyst who sees an overvalued electric carmaker with collapsing margins, there is another who sees the most advanced autonomous AI platform in the world, valued at a fraction of what it could be worth if Robotaxi and Optimus scale.

It provokes love and hate; there is no middle ground.

This analysis presents Tesla as what it really is: **a three-layer company**, where the traditional **automotive** business coexists with a fast-growing **energy** division and an existential bet on **artificial intelligence and robotics**.

Tesla was founded in 2003 by Martin Eberhard and Marc Tarpenning, although its public identity is irrevocably tied to **Elon Musk**, who joined as chairman in 2004 and became CEO in 2008. It is headquartered in Austin, Texas, and trades on NASDAQ under the ticker TSLA. With about 134,000 employees at the end of 2025, it operates gigafactories in Fremont (California), Sparks (Nevada), Shanghai (China), Berlin (Germany) and Austin (Texas), and has a Megapack factory in Lathrop (California) and another in Shanghai dedicated exclusively to energy storage.

The company's stated mission is "to accelerate the world's transition to sustainable energy".

Almost everyone talks about robotaxis or cars, but in this analysis I explain why the energy segment is my favorite.

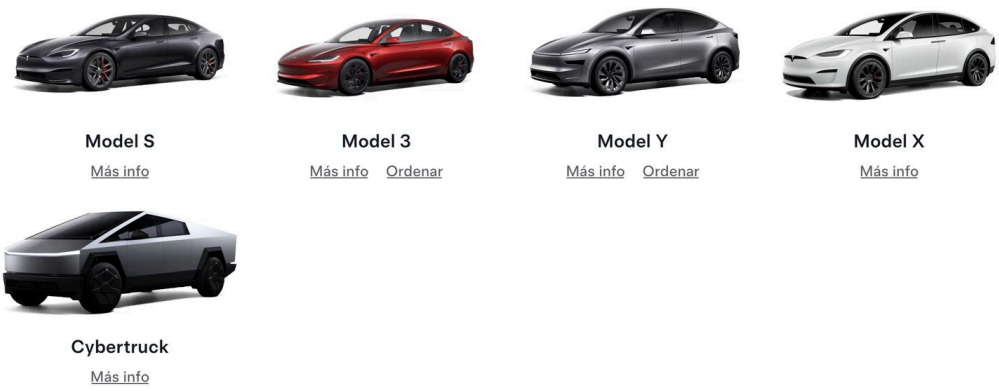
SECTION 02

Business model

Tesla operates in three segments:

Segment 1: Automotive

The automotive business generated $69.5 billion of revenue in 2025, 73% of the total. The product portfolio includes the Model 3 (mid-range sedan), Model Y (the world's best-selling SUV in 2024), Cybertruck (electric pickup) and the Tesla Semi (heavy trucking). In 2025 the company discontinued the Model S and Model X, recognizing that its portfolio had to be optimized toward its highest-volume models.



Tesla's automotive competitive advantage rests on several structural pillars. First, its software-over-hardware architecture: Tesla is the only carmaker that updates its fleet over the air (OTA), which allows it to improve features without the customer visiting a dealer. Second, its vertical integration: Tesla makes its own batteries (4680 cells), designs its own chips, operates its own plants and controls the supply chain more deeply than any rival. Third, the Supercharger network, which has become an industry standard (NACS) adopted by all major manufacturers, turning into a source of recurring revenue.

However, 2025 exposed critical weaknesses. Automotive gross margin contracted to its lowest level in years, around 14-15% (excluding regulatory credits), versus 25% in 2022. Competition from BYD (which sells competitive vehicles at a third of the price), the elimination of the $7,500 US tax credit and consumer boycotts in Europe and the Americas caused a 9% drop in deliveries. Sales in Europe fell 27% and market share in China fell to 2.6%, an all-time low.

Segment 2: Energy

The energy division is Tesla's least told story, and possibly the most important for the long-term investor. In 2025 it deployed 46.7 GWh of storage, up 48% from the previous year, with revenue of $12.8 billion (25% growth) and a 29.8% gross margin, almost double the automotive segment. The division already accounts for 24% of the company's total gross profit.

Megapack 3, launched in September 2025, has a capacity of 5 MWh per unit (versus 3.9 MWh for Megapack 2) and is produced at the Lathrop (California) and Shanghai plants. Demand exceeds supply: the company has made clear it cannot make Megapacks as fast as customers order them. Tesla expects to recognize $4.96 billion of deferred revenue from projects already contracted for 2026, more than double what it recognized in 2025. Customers such as data centers, grid operators and renewable parks see the **Megapack as critical infrastructure for the AI era.**

▶ Video: https://www.youtube.com/watch?v=aN0rctOAEFk

The residential Powerwall network passed one million installed units during 2025, participating in more than 89,000 Virtual Power Plant events. Virtual power plants (VPP) allow Tesla to aggregate distributed capacity from homes and sell it to the grid when demand is high, generating highly recurring service revenue.

Segment 3: AI, autonomy and robotics

This is where valuing Tesla becomes almost impossible without a view: the market is largely paying for scenarios that have not yet materialized. FSD (Full Self-Driving) has accumulated more than 6.9 billion miles driven under human supervision, a training dataset no company in the sector can match. Tesla uses a pure vision approach (no LiDAR or radar), which is technically harder but dramatically cheaper to scale. In January 2026 the company launched its robotaxi service without a human supervisor in Austin, with plans to expand to more cities during 2026.

As for the Optimus robot, Musk describes it as potentially 80% of Tesla's future value. The Gen 3 version was presented in the first quarter of 2026, with 50 actuators in the hands (22 degrees of freedom per hand), integration of xAI's Grok language model and the ability to operate in unstructured environments. Series production is planned before the end of 2026, with a target capacity of one million units per year. In Q4 2025, however, Musk acknowledged that the robots in the factories were not yet doing "useful work", but were in a learning and data collection phase.

Optimus (Gen 2):

▶ Video: https://www.youtube.com/watch?v=cpraXaw7dyc

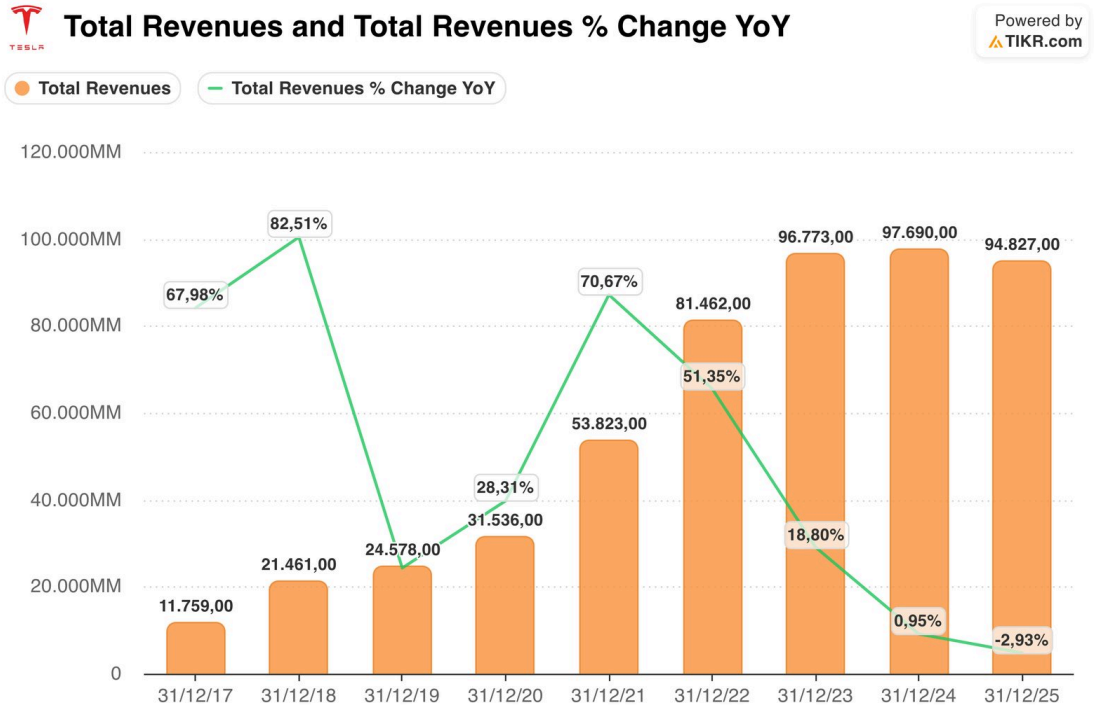
Cybercab:

▶ Video: https://www.youtube.com/watch?v=Qfj4urMF8CU

SECTION 03

Business quality

Revenue



Source: Tikr.

Tesla's revenue tells a story in two very different acts. The first, almost uninterrupted hypergrowth: starting from $11.8 billion in 2017 (+68% vs. 2016), **the company more than doubled that figure by the end of 2019**, driven by the mass launch of the Model 3 and the opening of its first gigafactory outside the United States.

Growth continued in 2020 (+28%), a year marked by the pandemic and temporary plant closures, although Tesla still passed $31.5 billion, a remarkable figure given the global context.

In 2021 revenue jumped 71% to $53.8 billion, driven by pent-up post-pandemic demand, a semiconductor shortage that hurt its competitors more than Tesla and the production ramp in Shanghai. Growth peaked in 2022 at $81.5 billion (+51%), the year Tesla delivered more vehicles than ever while the average price per unit was still at historically high levels.

The second act is the slowdown. In 2023 revenue reached $96.8 billion with 19% growth, but the first signs of what was coming were already visible: **the price war Tesla itself started to defend volume against Chinese competition was beginning to compress margins** without expanding revenue much. In 2024 revenue barely moved, reaching $97.7 billion with **growth of just 1%, the lowest in the company's history** up to that point. And 2025 marked a negative milestone: **for the first time in its history as a public company, Tesla reported a decline in sales, closing the year at $94.8 billion**.

What the total revenue chart does not show, but is just as important for understanding Tesla, is what happened beneath that orange line over the years. For most of its history, Tesla was essentially one thing: a company that sells electric cars. **In 2020 the automotive segment represented 86% of total revenue**, leaving only crumbs for energy and services. That level of concentration was both a strength and a vulnerability: when cars did well, everything did well; when cars faltered, there was nowhere to hide.

The change started to become visible only from 2022 and accelerated dramatically in the following years. **Energy went from $3.9 billion in 2022 to $12.8 billion in 2025, cumulative growth of 228% in just three years.** Over the same period, automotive fell from $82.4 billion to $69.5 billion. The result of those two opposite paths is a company transforming in real time: **in 2025 energy and services combined already represent 27% of total revenue**, versus 14% in 2022.

Services also grew strongly, although more quietly, **going from $6.1 billion in 2022 to $12.5 billion in 2025, more than doubling in three years.** The relevance of this segment lies not only in its size but in its nature: it is **recurring revenue, less dependent on vehicle production cycles and with margins that improve with scale.**

(Dollars in millions)	Year Ended December 31,			2025 vs. 2024 Change		2024 vs. 2023 Change	
	2025	2024	2023	$	%	$	%
Automotive sales	$ 65,821	$ 72,480	$ 78,509	$ (6,659)	(9)%	$ (6,029)	(8)%
Automotive regulatory credits	1,993	2,763	1,790	(770)	(28)%	973	54 %
Automotive leasing	1,712	1,827	2,120	(115)	(6)%	(293)	(14)%
Total automotive revenues	69,526	77,070	82,419	(7,544)	(10)%	(5,349)	(6)%
Services and other	12,530	10,534	8,319	1,996	19 %	2,215	27 %
Total automotive & services and other segment revenue	82,056	87,604	90,738	(5,548)	(6)%	(3,134)	(3)%
Energy generation and storage segment revenue	12,771	10,086	6,035	2,685	27 %	4,051	67 %
Total revenues	$ 94,827	$ 97,690	$ 96,773	$ (2,863)	(3)%	$ 917	1 %

Source: author's analysis based on Tikr data.

The conclusion from looking at the revenue mix over time is that **the Tesla of 2025 is a materially different company from the Tesla of 2020**, even if total sales do not reflect it as clearly. Energy is growing strongly and has higher margins than automotive. Services are becoming a source of predictable revenue. And automotive, despite its recent difficulties, is still the anchor that funds everything else.

Latest results: third quarter of 2026

On October 21 Tesla reported its third-quarter results. The numbers show a company that still cannot return to growth in its core business while investing more than ever in its next stage:

- **Revenue:** $28.05 billion, flat versus the same quarter of 2025. Deliveries were 486,532 cars, down 2.1%.
- **Segments:** energy had revenue of $2.88 billion (-16%) with 13.7 GWh deployed, more than a year earlier. Services and other grew 33% to $4.61 billion, with record gross profit. Automotive gross margin excluding regulatory credits was 18.1%.
- **Profitability:** total gross margin of 19.6%, above 18% a year earlier, but an operating margin of just 2.6%. GAAP net income fell 43% to $787 million and adjusted EPS was $0.48.
- **Cash and investment:** CapEx of $4.73 billion in the quarter and $13.01 billion over nine months. Free cash flow was $1.53 billion and cash reached $45.4 billion. For the full year 2026, management had guided to CapEx of more than $25 billion.
- **Autonomy:** 1.74 million active FSD subscriptions (+67%). The robotaxi accumulated almost 2 million unsupervised miles and the Cybercab is already part of the fleet in Austin.

The results are mixed: vehicle sales remain stagnant and the operating margin is near recent lows, but FSD and services are growing strongly and cash is still huge. The market keeps valuing Tesla for what it can become, not for what it earns today.

Vertical analysis

INCOME STATEMENT

Fiscal year Income Statement — % of revenue	FY2016A	FY2017A	FY2018A	FY2019A	FY2020A	FY2021A	FY2022A	FY2023A	FY2024A	FY2025A	3Y avg	5Y avg
Total Revenues	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**
Cost of Goods Sold	(77.2%)	(81.1%)	(81.2%)	(83.4%)	(79.0%)	(74.7%)	(74.4%)	(81.8%)	(82.1%)	(82.0%)	**(82.0%)**	**(79.0%)**
Gross Profit	**22.8%**	**18.9%**	**18.8%**	**16.6%**	**21.0%**	**25.3%**	**25.6%**	**18.2%**	**17.9%**	**18.0%**	**18.0%**	**21.0%**
Selling General & Admin Expenses	(20.1%)	(21.1%)	(13.2%)	(10.8%)	(10.1%)	(8.4%)	(4.8%)	(5.0%)	(5.3%)	(6.2%)	**(5.5%)**	**(5.9%)**
R&D Expenses	(11.9%)	(11.7%)	(6.8%)	(5.5%)	(4.7%)	(4.8%)	(3.8%)	(4.1%)	(4.6%)	(6.8%)	**(5.2%)**	**(4.8%)**
Total Operating Expenses	**(32.1%)**	**(32.8%)**	**(20.0%)**	**(16.2%)**	**(14.8%)**	**(13.2%)**	**(8.8%)**	**(9.1%)**	**(10.0%)**	**(13.4%)**	**(10.8%)**	**(10.9%)**
Operating Income	**(9.2%)**	**(13.9%)**	**(1.2%)**	**0.3%**	**6.2%**	**12.1%**	**16.8%**	**9.2%**	**7.8%**	**4.6%**	**7.2%**	**10.1%**
Interest Expense	(2.7%)	(4.1%)	(3.0%)	(2.9%)	(2.4%)	(0.7%)	(0.2%)	(0.2%)	(0.4%)	(0.4%)	**(0.3%)**	**(0.4%)**
EBT Incl. Unusual Items	**(10.7%)**	**(18.8%)**	**(4.7%)**	**(2.7%)**	**3.7%**	**11.8%**	**16.8%**	**10.3%**	**9.2%**	**5.6%**	**8.4%**	**10.7%**
Income Tax Expense	(0.4%)	(0.3%)	(0.3%)	(0.4%)	(0.9%)	(1.3%)	(1.4%)	5.2%	(1.9%)	(1.5%)	**0.6%**	**(0.2%)**
Net Income	**(9.6%)**	**(16.7%)**	**(4.5%)**	**(3.5%)**	**2.3%**	**10.3%**	**15.4%**	**15.5%**	**7.3%**	**4.0%**	**8.9%**	**10.5%**
EBITDA	4.3%	0.0%	7.6%	8.8%	13.5%	17.5%	21.2%	14.0%	13.3%	11.1%	**12.8%**	**15.4%**

Source: author's analysis based on Tikr data.

The vertical analysis of Tesla's income statement is, in many ways, the most honest X-ray of how the business evolved over a decade. By expressing each line as a percentage of total revenue, you can clearly see how efficiently Tesla turned each dollar of sales into profit, and how that equation changed year by year.

We start with gross margin, which measures what is left after paying the direct cost of production. In 2016 and 2017 Tesla operated with gross margins of 23% and 19% respectively, reasonable numbers for a carmaker but reflecting a company still scaling up, with high fixed costs and low volumes. The margin stayed in that range in the following years until something changed in 2021 and 2022: **gross margin jumped to 25% and 25.6%**, the company's best historical figures, driven by the combination of high prices, scale efficiencies in Shanghai and the absence of aggressive discounting. That was the peak of gross profitability.

What came next was a sustained contraction. **In 2023 gross margin fell to 18.25% and in 2025 it closed at 18.03%**, practically where it was a decade earlier. The main cause was the price war Tesla itself started to defend volume against BYD and the Chinese manufacturers, which ended up compressing the average value per vehicle without production costs falling in the same proportion.

Further down the income statement, **operating expenses tell the story of a Tesla betting on the future at the expense of the present.** R&D, which represented 3.77% of revenue in 2022, climbed to 6.76% in 2025, its highest level in years. That increase is not a problem but a deliberate decision: Tesla is pouring massive resources into developing FSD, Optimus and AI infrastructure, knowing that this depresses short-term profitability. Selling and administrative expenses also grew, from 4.84% in 2022 to 6.15% in 2025, partly because of the greater commercial effort needed in a more competitive market.

The combined effect of tighter gross margins and heavier operating expenses is clearly visible in the **operating margin, which went from 16.81% in 2022 to 4.59% in 2025**, a drop of more than 12 percentage points in just three years. To put that number in perspective: in 2022 Tesla was one of the most profitable carmakers in the world in operating terms; in 2025 it operates with margins comparable to a traditional manufacturer in a difficult year.

Net margin follows a similar path but with an important detail: the tax line distorts the reading in several years. In 2020 Tesla recorded a tax expense equivalent to 25.3% of pre-tax income and in 2023 a tax benefit of 50.15%, both anomalous figures driven by deferred tax assets and the net operating losses (NOLs) accumulated over years of losses. Adjusting for those effects, Tesla's normalized net margin in recent years was in the 7-10% range, falling to 4% in 2025.

The most revealing part of the vertical analysis over time is the full path: **Tesla went from negative net margins of 10-19% between 2016 and 2019, to its most profitable point in 2022 with a 15.4% net margin, and then back to 4% in 2025.** That mountain-shaped curve reflects a company that first solved its scale and execution problems, then briefly enjoyed its competitive advantage in a market without real competition, and now faces the challenge of sustaining profitability while investing massively in the next version of itself.

BALANCE SHEET

Fiscal year Balance Sheet — % of total assets	FY2016A	FY2017A	FY2018A	FY2019A	FY2020A	FY2021A	FY2022A	FY2023A	FY2024A	FY2025A	3Y avg	5Y avg
Total Cash And Short Term Investments	**15.0%**	**11.8%**	**12.4%**	**18.3%**	**37.2%**	**28.5%**	**26.9%**	**27.3%**	**30.0%**	**32.0%**	**29.7%**	**28.9%**
Total Receivables	**2.2%**	**1.8%**	**3.2%**	**3.9%**	**3.6%**	**3.2%**	**3.8%**	**3.5%**	**3.7%**	**3.4%**	**3.5%**	**3.5%**
Inventory	9.1%	7.9%	10.5%	10.4%	7.9%	9.3%	15.6%	12.8%	9.8%	9.0%	**10.5%**	**11.3%**
Total Current Assets	**27.6%**	**22.9%**	**27.9%**	**35.3%**	**51.2%**	**43.6%**	**49.7%**	**46.5%**	**47.8%**	**49.8%**	**48.1%**	**47.5%**
Net Property Plant And Equipment	66.3%	71.5%	66.2%	58.9%	44.8%	50.2%	44.5%	42.3%	42.2%	40.8%	**41.8%**	**44.0%**
Long-term Investments	–	0.0%	0.0%	0.0%	–	–	–	–	–	–	–	–
Goodwill	–	0.2%	0.2%	0.6%	0.4%	0.3%	0.2%	0.2%	–	–	**0.1%**	**0.2%**
Other Intangibles	1.7%	1.3%	0.9%	1.0%	0.6%	0.4%	0.3%	0.2%	–	–	**0.1%**	**0.2%**
Total Assets	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**
Total Current Liabilities	**25.8%**	**26.8%**	**33.6%**	**31.1%**	**27.3%**	**31.7%**	**32.4%**	**27.0%**	**23.6%**	**23.0%**	**24.5%**	**27.5%**
Long-Term Debt	26.7%	33.1%	28.4%	30.2%	16.4%	6.8%	1.2%	2.5%	4.5%	4.8%	**3.9%**	**4.0%**
Capital Leases	5.8%	5.8%	8.9%	6.4%	4.5%	4.3%	3.3%	3.6%	4.0%	4.0%	**3.9%**	**3.8%**
Total Liabilities	**73.9%**	**80.3%**	**78.8%**	**76.4%**	**54.6%**	**49.2%**	**44.3%**	**40.3%**	**39.6%**	**39.9%**	**39.9%**	**42.7%**
Total Equity	**26.1%**	**19.7%**	**21.2%**	**23.6%**	**45.4%**	**50.8%**	**55.7%**	**59.7%**	**60.4%**	**60.1%**	**60.1%**	**57.3%**
Total Debt	**37.9%**	**42.3%**	**46.5%**	**42.5%**	**25.6%**	**14.3%**	**7.0%**	**9.0%**	**11.2%**	**10.7%**	**10.3%**	**10.4%**
Net Debt	22.9%	30.6%	34.1%	24.2%	(11.6%)	(14.2%)	(20.0%)	(18.3%)	(18.8%)	(21.3%)	**(19.5%)**	**(18.5%)**

Source: author's analysis based on Tikr data.

The vertical analysis of the balance sheet reveals something the income statement does not show as clearly: the deep transformation of the company's financial structure over a decade, from a highly indebted company dependent on outside capital to one of the strongest cash positions in the market.

Assets: from factories to cash

In the early years of the period, Tesla's assets were dominated by fixed assets. In 2016 and 2017, net property, plant and equipment represented 66% and 71% of total assets respectively, a direct reflection of the capital-intensive nature of the car business and the rapid construction of gigafactories. That share fell steadily to 40.77% in 2025, not because Tesla stopped investing in infrastructure, but because the rest of the balance sheet, especially cash, grew faster.

The cash story is perhaps the most striking figure in the whole analysis. In 2016 cash and short-term investments represented just 14.97% of total assets. In 2025 that figure reached 31.97%, practically doubling in relative terms. In absolute numbers, Tesla went from just over $3 billion of cash to ending 2025 with more than $44 billion between cash and investments. That accumulation of liquidity is both the result of years of operating cash generation and a deliberate strategic decision: Tesla needs that cushion to fund the massive capex involved in expanding into AI, Optimus and new gigafactories without depending on the capital markets.

Inventory, which reached 15.59% of total assets in 2022 at one of the most stressful moments for the global supply chain, normalized to 8.99% in 2025, a sign of more efficient operations and of demand that, although challenging, no longer creates the bottlenecks of those years.

Liabilities: from debt to equity

The right side of the balance sheet tells a story of remarkable deleveraging. **In 2016 total liabilities represented 73.94% of assets, leaving just 26% of equity.** Put differently, almost three-quarters of each dollar of assets was financed with debt or other obligations. That structure was understandable for a loss-making company that needed outside capital to build its industrial base, but it was also a significant source of vulnerability.

Long-term debt, which reached 33% of total assets in 2017, fell to 4.78% in 2025. That collapse reflects a combination of deliberate repayments and the decision not to refinance with new debt once its own cash generation made it unnecessary. **Tesla went from a company that lived off the capital markets to a company that funds its growth with its own cash flows**, an enormous qualitative change few superficial analyses capture.

At the same time, equity rose steadily. Total equity went from 20.97% of assets in 2016 to 59.60% in 2025, driven mainly by the accumulation of retained earnings, which went from deeply negative (-13% of assets in 2016) to positive and growing, ending 2025 at 28.30%. That is perhaps the most telling indicator of Tesla's financial maturity: a company that for years consumed other people's capital to survive and now generates and retains its own capital consistently.

Payables and the operating cycle

One detail to watch is the evolution of accounts payable, which reached 18.53% of total assets in 2022 before falling to 9.70% in 2025. That fall does not necessarily mean Tesla pays its suppliers faster in days, but that the growth of total assets through cash accumulation diluted their relative weight. In any case, the current level is more sustainable and reflects more balanced commercial relationships with the supply chain.

The overall picture

Seen in perspective, Tesla's 2025 balance sheet is that of a financially healthy company, structurally very different from a decade ago. **Less debt, more cash, positive and growing equity, and inventory under control.** The risks that remain are not financial but strategic and competitive: the question is not whether Tesla can pay its obligations, but whether it can execute the transition to physical AI before Chinese competition finishes eroding its car business. The balance sheet gives it the time and oxygen to try. It does not guarantee the outcome.

CASH FLOW

Fiscal year Cash Flow — % of revenue	FY2016A	FY2017A	FY2018A	FY2019A	FY2020A	FY2021A	FY2022A	FY2023A	FY2024A	FY2025A	3Y avg	5Y avg
Net Income	**(9.6%)**	**(16.7%)**	**(4.5%)**	**(3.5%)**	**2.3%**	**10.3%**	**15.4%**	**15.5%**	**7.3%**	**4.0%**	**8.9%**	**10.5%**
Total Depreciation & Amortization	**13.5%**	**13.9%**	**8.8%**	**8.5%**	**7.4%**	**5.4%**	**4.3%**	**4.8%**	**5.5%**	**6.5%**	**5.6%**	**5.3%**
Stock-Based Compensation	4.8%	4.0%	3.5%	3.7%	5.5%	3.9%	1.9%	1.9%	2.0%	3.0%	**2.3%**	**2.6%**
Cash from Operations	**(1.8%)**	**(0.5%)**	**9.8%**	**9.8%**	**18.8%**	**21.4%**	**18.1%**	**13.7%**	**15.3%**	**15.6%**	**14.8%**	**16.8%**
Capital Expenditure	(20.6%)	(34.7%)	(10.8%)	(5.8%)	(10.2%)	(12.1%)	(8.8%)	(9.2%)	(11.6%)	(9.0%)	**(9.9%)**	**(10.1%)**
Cash Acquisitions	4.9%	(1.0%)	(0.1%)	(0.2%)	(0.0%)	–	–	(0.1%)	–	–	**(0.0%)**	**(0.0%)**
Cash from Investing	**(15.4%)**	**(35.7%)**	**(10.9%)**	**(5.8%)**	**(9.9%)**	**(14.6%)**	**(14.7%)**	**(16.1%)**	**(19.2%)**	**(16.3%)**	**(17.2%)**	**(16.2%)**
Total Debt Issued	**51.8%**	**65.0%**	**28.8%**	**43.4%**	**30.8%**	**16.5%**	**–**	**4.1%**	**5.9%**	**5.9%**	**5.3%**	**6.5%**
Total Debt Repaid	**(27.2%)**	**(36.3%)**	**(28.4%)**	**(40.2%)**	**(38.7%)**	**(27.2%)**	**(4.7%)**	**(1.9%)**	**(2.9%)**	**(6.0%)**	**(3.6%)**	**(8.5%)**
Cash from Financing	**53.5%**	**37.5%**	**2.7%**	**6.2%**	**31.6%**	**(9.7%)**	**(4.3%)**	**2.7%**	**3.9%**	**1.2%**	**2.6%**	**(1.2%)**
Free Cash Flow	(22.3%)	(35.2%)	(1.0%)	4.0%	8.6%	9.3%	9.3%	4.5%	3.7%	6.6%	**4.9%**	**6.7%**

Source: author's analysis based on Tikr data.

For many analysts the cash flow statement is the hardest document to manipulate and therefore the most revealing about a company's real health. In Tesla's case, reading it over time shows a transformation: **the company went from a cash-burning machine to a genuine generator of operating cash flow**, although with important nuances worth unpacking.

Operating cash flow: from negative to structurally positive

In 2016 and 2017 operating cash flow was negative, at -1.77% and -0.52% of revenue respectively. Those numbers reflected a company that had not yet solved its basic equation: production costs, operating expenses and working capital needs consumed more than sales generated. The situation changed radically from 2018, when operating cash flow jumped to 9.78% of revenue, driven mainly by the normalization of Model 3 production and the first real sign that the business model could generate cash sustainably.

The peak came in 2021 with operating cash flow of 21.36% of revenue, the company's best historical figure and one of the highest among global vehicle manufacturers that year. That number reflected the perfect combination of high prices, relatively controlled costs and demand that exceeded available supply. Since then operating cash flow has gradually compressed to 15.55% in 2025, still a solid level but showing the effect of the price war and higher operating expenses on cash generation.

A relevant technical detail is the weight of depreciation and amortization within operating cash flow. **In 2016 and 2017 D&A represented almost 14% of revenue**, an extraordinarily high percentage reflecting massive investments in fixed assets from previous years being depreciated over a still small revenue base. As revenue grew, that percentage fell to 6.48% in 2025, normalizing toward more reasonable levels for a manufacturer of its scale.

Investing cash flow: the price of growth

Investing cash flow has been consistently negative throughout the decade, which is entirely expected for a company that built gigafactories on four continents. **In 2016 and 2017 capex represented 20.58% and 34.71% of revenue respectively**, figures that were manageable in absolute terms given the company's size but that showed in relative terms how capital-intensive Tesla's expansion was in its early scaling years.

That ratio fell as the revenue base grew faster than investment needs, reaching 8.79% in 2022 and 8.99% in 2025. However, that relief is temporary: in 2026 capex will more than double, to more than $25 billion, driven by AI compute and new production lines for the Cybercab, Optimus and energy storage. If revenue does not grow at the projected pace, that capex will put significant pressure on free cash flow.

Investing cash flow also shows an item that has grown notably in recent years: **investments in marketable securities, which represented 7.33% of revenue in 2025**, a direct reflection of the cash accumulation Tesla actively manages in short-term instruments to maximize the return on its liquidity.

Financing cash flow: from outside capital to self-sufficiency

The evolution of financing cash flow is perhaps the most telling of the three sections. **In 2016, financing activities equaled 53.48% of revenue**, mainly debt issuance (51.75%) and equity raises (26.65%). In other words, Tesla raised more cash from investors and lenders than from selling cars. That dynamic continued until 2020, when share issuance equaled 40.23% of revenue, taking advantage of the stock's vertical rise to capitalize the company massively and at practically no cost.

The turn from 2021 was dramatic. **Financing activities turned negative that year**, a sign that Tesla had reached an inflection point: it no longer needed outside capital and began to repay net debt. Since then financing cash flow has remained modest and slightly positive, essentially reflecting debt repayments offset by small issuances, with no need to tap the capital markets to fund operations.

Free cash flow: the metric that matters most

Free cash flow, operating cash flow minus capex, tells the most concise story of all. **Tesla had negative free cash flow of -22.35% and -35.22% of revenue in 2016 and 2017**, numbers that in practice meant the company burned more cash than it generated in each combined operating and investment cycle. The turning point came in 2019, when free cash flow turned positive for the first time (3.96%), consolidating in 2021 and 2022 at 9.26% and 9.28% respectively.

In 2025 free cash flow closed at 6.56% of revenue, about $6.2 billion in absolute terms. It is a solid number, although below the 2022 peak, and it is under pressure in 2026 because of the jump in capex. **Tesla's ability to keep free cash flow positive while investing massively in the next phase of its business will probably be the indicator the market watches most closely over the next two years.** If free cash flow compresses too much without concrete signs that the robotaxi or Optimus generate real revenue, the physical AI story will start to lose credibility against the numbers.

Financial ratios

- **Growth**

Fiscal year	FY2016A	FY2017A	FY2018A	FY2019A	FY2020A	FY2021A	FY2022A	FY2023A	FY2024A	FY2025A	3Y avg	5Y avg
Growth												
Revenue growth		68.0%	82.5%	14.5%	28.3%	70.7%	51.4%	18.8%	0.9%	(2.9%)	**5.6%**	**27.8%**
EBIT growth	n.m.	n.m.	n.m.		2338.8%	234.3%	109.9%	(35.1%)	(13.9%)	(43.1%)	**(30.7%)**	**50.4%**
Diluted EPS growth	n.m.	n.m.	n.m.	n.m.		676.2%	122.1%	18.8%	(52.6%)	(47.1%)	**(26.9%)**	**143.5%**
Change in diluted shares (dilution / buybacks)		15.1%	2.8%	4.0%	22.1%	4.2%	2.6%	0.3%	0.4%	0.9%	**0.5%**	**1.7%**

Source: author's analysis based on Tikr data.

After growing more than 50% a year in 2021-2022, revenue grew just 0.9% in 2024 and fell 2.9% in 2025. EBIT fell 43% in 2025 and EPS 47%. In 2026 revenue remains practically flat.

- **Profitability**

Fiscal year	FY2016A	FY2017A	FY2018A	FY2019A	FY2020A	FY2021A	FY2022A	FY2023A	FY2024A	FY2025A	3Y avg	5Y avg
Profitability												
Gross margin	22.8%	18.9%	18.8%	16.6%	21.0%	25.3%	25.6%	18.2%	17.9%	18.0%	**18.0%**	**21.0%**
SG&A % revenue	20.1%	21.1%	13.2%	10.8%	10.1%	8.4%	4.8%	5.0%	5.3%	6.2%	**5.5%**	**5.9%**
R&D % revenue	11.9%	11.7%	6.8%	5.5%	4.7%	4.8%	3.8%	4.1%	4.6%	6.8%	**5.2%**	**4.8%**
EBIT margin	(9.2%)	(13.9%)	(1.2%)	0.3%	6.2%	12.1%	16.8%	9.2%	7.8%	4.6%	**7.2%**	**10.1%**
EBITDA margin (EBIT + D&A)	4.3%	0.0%	7.6%	8.8%	13.5%	17.5%	21.2%	14.0%	13.3%	11.1%	**12.8%**	**15.4%**
Net margin	(9.6%)	(16.7%)	(4.5%)	(3.5%)	2.3%	10.3%	15.4%	15.5%	7.3%	4.0%	**8.9%**	**10.5%**
Stock-based compensation % revenue	4.8%	4.0%	3.5%	3.7%	5.5%	3.9%	1.9%	1.9%	2.0%	3.0%	**2.3%**	**2.6%**
Effective tax rate	(3.6%)	(1.4%)	(5.8%)	(16.5%)	25.3%	11.0%	8.3%	(50.1%)	20.4%	27.0%	**(0.9%)**	**3.3%**

Source: author's analysis based on Tikr data.

Gross margin fell from 25.6% in 2022 to 18% in 2025, and EBIT margin from 16.8% to 4.6%. R&D rose to 6.8% of revenue because of investment in FSD, Optimus and AI infrastructure.

- **Cash flow and reinvestment**

Fiscal year	FY2016A	FY2017A	FY2018A	FY2019A	FY2020A	FY2021A	FY2022A	FY2023A	FY2024A	FY2025A	3Y avg	5Y avg
Cash flow & reinvestment												
Cash from operations % revenue	(1.8%)	(0.5%)	9.8%	9.8%	18.8%	21.4%	18.1%	13.7%	15.3%	15.6%	**14.8%**	**16.8%**
FCF margin (TIKR FCF / revenue)	(22.3%)	(35.2%)	(1.0%)	4.0%	8.6%	9.3%	9.3%	4.5%	3.7%	6.6%	**4.9%**	**6.7%**
FCF conversion (FCF / net income)	n.m.	n.m.	n.m.	n.m.	376.0%	90.3%	60.2%	29.1%	50.5%	163.9%	**81.2%**	**78.8%**
Capex % revenue	20.6%	34.7%	10.8%	5.8%	10.2%	12.1%	8.8%	9.2%	11.6%	9.0%	**9.9%**	**10.1%**
D&A % revenue	13.5%	13.9%	8.8%	8.5%	7.4%	5.4%	4.3%	4.8%	5.5%	6.5%	**5.6%**	**5.3%**
Capex / D&A	1.5x	2.5x	1.2x	0.7x	1.4x	2.2x	2.0x	1.9x	2.1x	1.4x	**1.8x**	**1.9x**
D&A % beginning net PP&E		10.9%	9.2%	10.6%	11.5%	12.5%	11.4%	12.7%	11.9%	11.9%	**12.2%**	**12.1%**
Acquisitions % revenue	(4.9%)	1.0%	0.1%	0.2%	0.0%	–	–	0.1%	–	–	**0.0%**	**0.0%**

Source: author's analysis based on Tikr data.

Free cash flow was 6.6% of revenue in 2025. CapEx fell to 9% that year, but in 2026 it will more than double, to more than 25% of revenue, because of investment in AI compute, Cybercab and Optimus.

- **Working capital**

Fiscal year	FY2016A	FY2017A	FY2018A	FY2019A	FY2020A	FY2021A	FY2022A	FY2023A	FY2024A	FY2025A	3Y avg	5Y avg
Working capital												
Receivables days (DSO)	26.0	16.0	16.1	19.7	22.0	13.5	14.0	13.9	17.1	18.1	**16.4**	**15.3**
Inventory days (DIO)	139.7	86.7	65.2	63.2	60.1	52.2	77.3	62.9	54.7	58.2	**58.6**	**61.1**
Payables days (DPO)	125.7	91.5	71.3	67.1	88.7	91.0	91.9	66.6	56.7	62.8	**62.0**	**73.8**
Cash conversion cycle (DSO + DIO − DPO)	40.0	11.2	10.0	15.8	(6.6)	(25.3)	(0.6)	10.2	15.0	13.5	**12.9**	**2.6**
Deferred revenue % revenue	23.1%	18.6%	7.6%	9.6%	8.7%	6.5%	5.6%	6.3%	6.6%	7.4%	**6.8%**	**6.5%**
Operating NWC % revenue	(36.6%)	(39.5%)	(16.3%)	(14.9%)	(16.6%)	(17.9%)	(9.6%)	(8.0%)	(6.4%)	(7.3%)	**(7.2%)**	**(9.9%)**

Source: author's analysis based on Tikr data.

Tesla collects in 18 days, holds 58 days of inventory and pays in 63 days. The direct sales model gives it a very short cash cycle for a carmaker.

- **Returns on capital**

Fiscal year	FY2016A	FY2017A	FY2018A	FY2019A	FY2020A	FY2021A	FY2022A	FY2023A	FY2024A	FY2025A	3Y avg	5Y avg
Returns on capital												
NOPAT = EBIT × (1 − normalized tax rate)	(514)	(1,299)	(201)	64	1,552	5,190	10,894	7,074	6,094	3,465	**5,544**	**6,544**
Invested capital = debt + equity − cash & ST inv.	11,100	14,395	16,455	16,418	17,632	22,749	29,461	44,088	50,740	53,525	**49,451**	**40,113**
ROIC = NOPAT / average invested capital		(10.2%)	(1.3%)	0.4%	9.1%	25.7%	41.7%	19.2%	12.9%	6.6%	**12.9%**	**21.2%**
ROIC incl. cash = NOPAT / average (debt + equity)		(8.1%)	(1.1%)	0.3%	5.2%	13.4%	23.7%	11.3%	7.6%	3.7%	**7.6%**	**11.9%**
Pre-tax ROIC = EBIT / average invested capital (reference)		(12.8%)	(1.6%)	0.5%	11.5%	32.3%	52.4%	24.2%	16.2%	8.4%	**16.2%**	**26.7%**
ROE = net income / average equity		(34.0%)	(16.3%)	(12.0%)	4.5%	20.0%	32.4%	27.4%	10.3%	4.8%	**14.2%**	**19.0%**
ROA = net income / average total assets		(7.6%)	(3.3%)	(2.7%)	1.7%	9.7%	17.4%	15.9%	6.2%	2.9%	**8.3%**	**10.4%**

Source: author's analysis based on Tikr data.

ROIC excluding cash fell from 41.7% in 2022 to 6.6% in 2025, probably below its cost of capital. ROE fell from 32% to 4.8%.

- **Leverage and liquidity**

Fiscal year	FY2016A	FY2017A	FY2018A	FY2019A	FY2020A	FY2021A	FY2022A	FY2023A	FY2024A	FY2025A	3Y avg	5Y avg
Leverage & liquidity												
Net debt (debt − cash & ST inv.)	5,195	8,763	10,142	8,308	(6,047)	(8,834)	(16,437)	(19,521)	(22,940)	(29,340)	**(23,934)**	**(19,414)**
Net debt / EBITDA	17.3x	2190.8x	6.2x	3.8x	(1.4x)	(0.9x)	(1.0x)	(1.4x)	(1.8x)	(2.8x)	**(2.0x)**	**(1.6x)**
Interest coverage (EBIT / interest expense)	(3.4x)	(3.4x)	(0.4x)	0.1x	2.6x	17.6x	71.7x	57.0x	21.9x	12.9x	**30.6x**	**36.2x**
Debt / (debt + equity), book	59.3%	68.3%	68.7%	64.3%	36.0%	21.9%	11.1%	13.1%	15.6%	15.1%	**14.6%**	**15.4%**
Current ratio	1.07	0.86	0.83	1.13	1.88	1.38	1.53	1.73	2.02	2.16	**1.97**	**1.76**

Source: author's analysis based on Tikr data.

Tesla ended 2025 with net cash of $29.34 billion and a current ratio of 2.2x. The balance sheet is very strong, and it is what allows it to fund 2026 capex without depending on the capital markets.

- **Shareholder returns and valuation**

Fiscal year	FY2016A	FY2017A	FY2018A	FY2019A	FY2020A	FY2021A	FY2022A	FY2023A	FY2024A	FY2025A	3Y avg	5Y avg
Shareholder returns & market valuation (TIKR, at fiscal year end)												
Dividends + buybacks % FCF	n.m.	n.m.	n.m.	–	–	–	–	–	–	–	**–**	**–**
EV / EBITDA	114.7x	15496.0x	42.3x	39.7x	157.0x	112.3x	21.8x	57.0x	98.0x	139.8x	**98.3x**	**85.8x**
EV / revenue	4.9x	5.3x	3.2x	3.5x	21.3x	19.7x	4.6x	8.0x	13.1x	15.5x	**12.2x**	**12.2x**
P/E	n.m.	n.m.	n.m.	n.m.	927.7x	192.7x	31.0x	52.7x	182.8x	394.2x	**209.9x**	**170.7x**
FCF yield (FCF / market cap)	(4.5%)	(7.9%)	(0.4%)	1.3%	0.4%	0.5%	1.9%	0.6%	0.3%	0.4%	**0.4%**	**0.7%**

Source: author's analysis based on Tikr data.

Tesla pays no dividends and does not buy back stock. At the end of 2025 it traded at 140x EBITDA and almost 400x earnings, with a 0.4% FCF yield.

SECTION 04

Management and capital allocation

Tesla's management team is unusually small for a company of its size, which is itself a reflection of the company's culture: concentration of power, little bureaucracy and an almost total dependence on Elon Musk's vision.

Elon Musk, CEO and largest individual shareholder



Musk co-founded Tesla in its current form in 2004 and became CEO in 2008, a role he has held without interruption since. He is the company's largest individual shareholder, with a 19.8% stake according to the September 2025 proxy statement, a position worth several hundred billion dollars at current prices. His formal compensation is practically symbolic in terms of base salary, since his pay is structured almost entirely in stock options tied to market capitalization targets. The 2025 compensation plan includes an option package conditional on Tesla reaching a market capitalization of $8.5 trillion, which if achieved would be one of the largest compensation packages in corporate history. What cannot be ignored in analyzing Tesla is that Musk is simultaneously CEO of xAI and a central figure in multiple ventures, which raises legitimate questions about focus and dedication that the market discounts differently depending on the investor.

Elon is such a special person that I think he deserves a short biography:

He was born on June 28, 1971 in Pretoria, South Africa. From an early age he showed an unusual inclination toward technology and programming: at 12 he created and sold his first video game, an early sign of what was to come. At 17 he moved to Canada to avoid compulsory South African military service and, from there, found his way to the United States, where he studied economics and physics at the University of Pennsylvania.

In 1995 he dropped out of an energy PhD at Stanford after just two days to found Zip2, a software company for media that he sold to Compaq in 1999 for $307 million. With that money he founded X.com, which later merged with Confinity to become PayPal, sold to eBay in 2002 for $1.5 billion.

Musk received $180 million from that transaction and reinvested almost all of it in his next bets.

What came next was one of the most extraordinary business stories in modern history. In 2002 he founded SpaceX with the stated goal of colonizing Mars, an idea most of the world considered crazy at the time. In 2004 he became the lead investor and chairman of Tesla, an electric car startup in its early stages, later becoming CEO in 2008 at one of the most critical moments for the company. That same year Tesla was days away from bankruptcy: Musk put in his last available personal resources to keep it alive, a bet that over time turned out to be one of the most profitable in history.

The following decade was one of consolidation. SpaceX broke the monopoly on reusable rockets and became a central NASA contractor. Tesla redefined the global auto industry and became the most valuable car company in the world by market capitalization. Musk acquired SolarCity, founded The Boring Company, launched Neuralink, and in 2022 bought Twitter for $44 billion, renaming it X and turning it into the center of his media and political influence.

He is a deeply polarizing figure. For his admirers he is the most visionary entrepreneur of his generation, a man capable of executing ideas others do not even dare to imagine. For his critics he is an impulsive CEO, erratic in his public statements and with a management style that produces both extraordinary results and significant collateral damage. His involvement in politics, particularly his support for Donald Trump in the 2024 presidential campaign and his role in the Department of Government Efficiency (DOGE), triggered a consumer boycott in Europe and the United States that was directly reflected in Tesla's 2025 sales.

What is undeniable, whatever one thinks of him, is that Musk has simultaneously built several of the most important and influential companies in the world, something without precedent in modern business history. Investing in Tesla is, to a large extent, betting that this extraordinary execution capacity ends up mattering more than all the risks around it.

Vaibhav Taneja, CFO

Taneja became CFO in August 2023, after serving as Chief Accounting Officer from March 2019 and Corporate Controller from May 2018. In practice, he has been Tesla's numbers man for almost a decade, with deep knowledge of the company's financial structure. His total compensation for 2024 exceeded $139 million, mainly stock options ($113 million) and stock awards ($26 million), with a base salary of just $303,846 a year, a structure that aligns his interests almost entirely with the stock price. As of September 2025 he held 133,317 Tesla shares, about 0.003% of the capital. One fact worth mentioning honestly: the CFO sold several million dollars of stock in the first months of 2025, including sales in February, March and April, which some analysts read as a sign of short-term caution, although insider sales usually respond to tax planning and personal needs more than to views on the company's future.

Tom Zhu (Xiaotong Zhu), SVP of Automotive

Zhu is Tesla's most important operating executive after Musk. He has been with the company since 2014 and became Senior Vice President of Automotive in April 2023, directly responsible for global manufacturing and sales operations, with special weight in the Chinese market, where he was the architect of Gigafactory Shanghai's success. His compensation is structured entirely in stock options, with no variable cash pay, which fully exposes him to the long-term performance of the stock. As of September 2025 he held 47,599 shares, 0.002% of the capital. Between 2023 and 2024 he sold more than 82% of his original position, going from more than 81,000 shares to fewer than 15,000, a move that raised questions about internal confidence in the stock's short-term performance, although in context it should be read together with the fact that his future option compensation keeps his incentives well aligned.

What emerges from the analysis of Tesla's management is a structure deliberately concentrated in Musk, with two trusted executives who know the business deeply but have relatively modest stakes as a percentage of capital. Compensation is almost entirely long-term through options, which is positive in terms of incentive alignment. The most obvious and discussed governance risk is the **critical dependence on a single person: if Musk reduces his commitment, leaves, or faces personal or legal problems affecting his role, Tesla has no publicly identified natural successor**, and that is a risk any serious investor must build into the analysis.

SECTION 05

Competitive position

Automotive

The global electric vehicle market is one of the sectors with the most growth momentum in recent economic history. In 2024 the market was valued at about $896 billion of revenue and is expected to reach between $2.8 and $6.5 trillion by 2030, depending on the source and methodology. The most conservative estimates project a CAGR of 15-17%, while the most aggressive point to 25-32% for 2025-2030. The disparity reflects regulatory uncertainty in key markets and the pace of decline in battery costs.

China is by far the most relevant market: it represents about 50% of all global EV sales, with more than 13 million units sold in the first eleven months of 2025 alone (29% growth year over year). Europe is the second most important market, with aggressive emission policies that force manufacturers to electrify their fleets or face multimillion fines. The United States, although Tesla's largest individual market, represents just 8-9% of the global EV market.

Parámetro de mercado	Valor / Proyección
Tamaño de mercado (2024)	$896 mil millones
Tamaño de mercado (2030, rango)	$2.8T a $6.5T
CAGR estimada 2025-2030	15% a 32% segun fuente
Ventas globales de BEV (2025)	~18-20 millones de unidades
Participación de China en el mercado	~50% del volumen global
Penetración de VE en ventas totales (mundo)	~17% en 2025
Penetración de VE en EEUU (2025)	~8-9% de ventas totales
Caída del costo de baterías (2010-2025)	De $1.200 a menos de $100/kWh

Falling battery costs are the underlying engine of the whole industry. In 2010 a lithium battery cost more than $1,200 per kWh; in 2025 that price fell below $100/kWh (with CATL LFP cells reaching $70/kWh in the Chinese spot market). That 92% decline in 15 years is what makes it possible to build an EV price-competitive with a combustion car, and it explains why adoption accelerates non-linearly.

Regulatory fragmentation is the sector's main structural risk. The European Union keeps its mandate to ban sales of new combustion vehicles by 2035. China sustains its leadership with direct subsidies, tax exemptions and EV quota mandates for manufacturers. By contrast, the United States went backward in 2025: the elimination of the $7,500 tax credit under the Trump administration hurt Tesla's US sales, and tariff policy complicates the supply chain for imported components.

The mass entry of Chinese manufacturers into international markets is the most disruptive trend of 2024-2025. BYD sold more than one million EVs outside China in 2025, with 200% growth in exports. In Europe, despite the tariffs imposed by the EU after its anti-subsidy investigation, models such as the BYD Dolphin compete directly with the Tesla Model 3 at prices 15-20% lower. In Australia, 79.5% of all EVs sold in 2025 were made in China. The era of Tesla's geographic dominance is over.

MARKET SEGMENTATION

The market splits into three broad bands with very different implications for Tesla. The **premium segment** (prices above $45,000) is where Tesla has historically operated and where it keeps brand and technology advantages. The **mid segment** ($20,000-$45,000) is the main battleground of the decade, where the refreshed Model Y, the VW ID.4, the Hyundai Ioniq 5 and dozens of Chinese models compete. The **affordable segment** (below $20,000) is almost exclusively Chinese: the BYD Seagull sells for $9,900, the Wuling Mini for $5,000, and Tesla has no competitive product in that range.

This distribution matters because future market growth will come mainly from the affordable and mid segments, especially in emerging markets (India, Southeast Asia, Latin America). Tesla, anchored in the mid-to-high segment, will capture a shrinking share of total growth if it does not democratize its portfolio.

MAIN COMPETITORS

BYD (Build Your Dreams)

BYD is the most important competitor and the one that best illustrates the structural change in the market. With 2.26 million pure EVs sold in 2025 (28% growth), it overtook Tesla for the first time as the world's largest EV maker. Its competitive advantage is multidimensional: it makes its own battery cells (Blade Battery, LFP technology that improves safety and reduces cost), covers everything from ultra-budget segments ($9,900) to premium ($50,000+), operates in 70 countries and has manufacturing capacity in Brazil, Thailand, Hungary and Indonesia, diversifying tariff risk.

In China, BYD holds 32% of the domestic EV market. Its God's Eye system (advanced driver assistance integrating LiDAR, radar and cameras) comes standard on models starting at $15,000, versus the $99/month Tesla charges for FSD. Technologically, BYD is the rival that most challenges Tesla's moat in both hardware and software.

Métricas financieras FY2025

Métrica	Valor	Nota
Ingresos totales	~$107B	+29% YoY superó a Tesla en facturación
Beneficio neto	~$5,6B	+34% YoY
Entregas 2025	4,6M unidades	+8% YoY logró su target anual
Cuota mercado BEV global	~18%	#1 mundial por volumen
Market Cap	~$122B	EV/EBITDA ~8x · P/E ~24x NTM
R&D 2025	~$7B	Supera el beneficio neto

BYD overtook Tesla in total deliveries in 2024 and consolidated that lead in 2025. However, the direct comparison has important nuances: BYD sells mainly in China and emerging markets, with average prices significantly lower than Tesla's. A BYD's average ticket is about $20,000-25,000, versus $45,000-50,000 for Tesla. They compete in the same market but not exactly in the same segment.

Where the threat is most concrete is BYD's international expansion. With its Hungarian gigafactory operating since 2026 for the European market and plans to enter markets such as Brazil, Mexico and Southeast Asia, BYD is building the infrastructure to compete globally. The 27.5% tariffs imposed by the EU and the effective block on the US market are the main brakes on that expansion, but they do not neutralize it.

- Cost advantage: estimated cost structure 30-40% below Tesla per unit
- Volume advantage: greater production scale and more model diversity
- Software disadvantage: Tesla's FSD is still superior to BYD's God's Eye
- Premium brand disadvantage: BYD has no presence in the luxury segment

- Geopolitical disadvantage: blocked from the two largest premium markets in the world

Volkswagen Group

The VW group (including VW, Audi, Porsche, SEAT and Skoda) is the world's largest carmaker by volume, with revenue above $300 billion a year. Its electric transformation was plagued by stumbles: delays on the ID.3, problems with the VW.OS operating system, model cancellations and operating losses in the electric segment. However, its scale is undeniable: in 2025 the group sold more than 700,000 EVs, a 5.2% global share, behind BYD and Tesla. The ID.4 and ID.7 are direct competitors to the Model Y in Europe.

Hyundai / Kia

The Hyundai-Kia group is possibly the most successful EV maker outside China in perceived quality and growth. The Ioniq 5 and Ioniq 6 have won numerous design awards and are considered technologically comparable to Tesla in battery range. The E-GMP platform (Electric Global Modular Platform) allows charging from 10% to 80% in 18 minutes (800V fast charging), better than Tesla's average charging except at V3 Superchargers. In the first six months of 2025, Hyundai-Kia gained US market share while Tesla lost it.

General Motors / Ford

The two big American manufacturers are in a complicated transition. GM launched the Chevy Equinox EV at $35,000, the first American model to compete directly on price in the mid segment of the electric market. Ford, by contrast, is retreating: in 2026 it significantly cut its EV investment plan after the losses of its Ford Electric segment, which lost more than $4 billion in 2024. In the US market, GM has consolidated second place behind Tesla, while Ford is losing ground.

Rivian

Rivian is Tesla's most serious American competitor in electric trucks and SUVs, although its scale remains incomparably smaller. Founded in 2009, it went public in 2021 in one of the largest IPOs in history at an $80 billion valuation it could never sustain. As of March 2026 its market capitalization was around $14 billion, a more faithful reflection of the challenges it faces.

Rivian operates in two complementary segments: consumer vehicles (R1T pickup and R1S SUV) and last-mile commercial vehicles (EDV van for Amazon, its largest customer and shareholder). Amazon has a commitment to buy 100,000 vans, which provides unusual demand visibility for an automotive startup. The R2, a more affordable SUV (about $45,000) announced for 2026, is its bet to scale volume.

Métricas financieras FY2025

Métrica	Valor	Nota
Ingresos 2025	~$5,5B	Crecimiento moderado vs. 2024
EBITDA ajustado	Positivo por primera vez	Hito significativo en H2 2025
Entregas 2025	~60.000 unidades	Limitado por capacidad productiva
Caja	~$6B	Post-financiamiento con Volkswagen
Market Cap	~$14B	EV/EBITDA n/m · P/E n/m
Inversión VW	$5B comprometidos	Alianza para plataforma eléctrica compartida

Rivian is Tesla's most direct competitor in premium trucks and SUVs in the US, where the Cybertruck and the R1T compete for the same buyer. But the scale is radically different: Tesla produced more than 1.6 million vehicles in 2025 while Rivian delivered about 60,000. The alliance with Volkswagen, which includes

$5 billion of investment and access to its software platform, may be the factor that determines whether Rivian survives as an independent player or ends up being absorbed.

- Product advantage: the R1T and R1S are very well received by critics
- Anchor customer advantage: Amazon as a captive buyer of 100,000 vans
- Critical scale disadvantage: unit costs unviable without higher volume
- Liquidity disadvantage: dependence on outside financing to survive

Empresa	Volumen 2025 (BEV)	Cuota global BEV	Precio promedio / posicion
BYD	**2.26 millones**	12.1%	Economico a premium ($10k-$50k)
Tesla	**1.64 millones**	8.8%	Medio a premium ($35k-$100k)
VW Group	~700,000	5.2%	Medio a premium ($30k-$80k)
Hyundai/Kia	~550,000	~4%	Medio a premium ($35k-$60k)
GM (EEUU)	~200,000	~1.5%	Medio ($30k-$60k, EEUU)
Geely Group	~700,000	5.6%	Economico a medio ($10k-$40k)
Stellantis	~320,000	~2.5%	Medio a premium ($30k-$70k)

TESLA'S POSITION IN THE AUTO MARKET

Tesla's automotive competitive advantage is real but narrowing. The Model Y is still the world's best-selling individual BEV (8.3% of all global EV sales in the first nine months of 2025), but the gap with the Chinese chasers shrinks month after month. The Geely Geome Xingyuan sold 343,000 units over the same period at an average price of $9,260, showing that the market's future volume will come from segments where Tesla does not compete.

Tesla's automotive strategy has two clear axes. First, portfolio optimization: eliminating the Model S and Model X simplifies operations and focuses resources on the Model Y (the volume workhorse), the Model 3 and the Cybertruck. The refreshed Model Y (Juniper) brings aesthetic and equipment changes aimed at regaining appeal against updated rivals. Second, expansion into lower-cost segments: an entry model below $30,000 is expected for 2026-2027, targeting the band where BYD and the Chinese currently dominate.

The Supercharger network is a competitive asset becoming industry infrastructure. With more than 60,000 connectors worldwide and the adoption of the NACS standard by all major American manufacturers (Ford, GM, Rivian, Honda and 12 other brands), Tesla operates a network that charges any EV that uses it, regardless of brand. This turns Superchargers from a competitive cost into a source of recurring revenue that grows with the expansion of the global EV fleet, even if Tesla's own sales stall.

In terms of geography, there are clear strengths and vulnerabilities:

- **US:** consolidated dominance with a 44% share in H1 2025, although down from 75% in 2022. The elimination of the tax credit is the biggest short-term risk.
- **China:** a critical fall to a 2.6% share, an all-time low. The Shanghai plant produces about 600,000 vehicles a year, but faces brutal competition and the image damage associated with Musk and DOGE.
- **Europe:** a 27.8% fall in sales in 2025. The boycott over Musk's political activities had a real impact: in Germany, sales fell 76% in some months while the total EV market grew.

- **Rest of the world:** a growing presence but limited by the lack of price-competitive models for emerging markets.

Energy

The energy storage market is one of the infrastructure sectors with the strongest structural growth of the 21st century. The global energy transition toward renewables (solar and wind) has an intrinsic Achilles' heel: intermittency. The sun does not shine at night and the wind does not always blow, but electricity demand is constant. Energy storage, especially battery systems (BESS), solves that equation and becomes the missing piece of the decarbonization puzzle.

The global BESS market was valued at about $50-58 billion in 2025 and is projected to reach $106-114 billion by 2030, a CAGR of 14-22% depending on the source. Demand for grid-scale installations (utilities and data centers) grows fastest: it represented 70% of the market in 2025 and is accelerating with the explosion in demand from AI data centers, which require industrial-grade power quality (tolerance of less than 10 milliseconds of voltage drop).

Parámetro de mercado	Valor / Proyección
Tamaño del mercado BESS (2025)	$50-58 mil millones
Tamaño del mercado BESS (2030)	$106-114 mil millones
CAGR estimada 2025-2030	14% a 22%
Instalaciones acumuladas al 2031	1.52 TW
Segmento de mayor crecimiento	Grid-scale utility y data centers
Precio de células LFP (2025)	~$70/kWh (caida del 39% vs 2024)
Meta de COP29 para 2030	1,500 GW de capacidad global
Participación de Asia-Pacífico	45-48% del mercado en 2025

MACRO TAILWINDS ACCELERATING DEMAND

Four macro trends converge to create structural demand for energy storage that is probably the most solid of all the markets Tesla operates in. First: the expansion of renewables is inevitable. Global solar and wind capacity grows 20-30% a year and every additional GW of renewables needs gigawatt-hours of storage to be operationally useful. Second: AI devours electricity. Data centers for language models and machine learning consume enormous amounts of energy, and operators (Microsoft, Google, Amazon, Meta) demand power stability that only battery storage can provide with the required response speed (milliseconds versus the seconds of backup generators).

Third: grid modernization is mandatory. Distribution grids in developed countries are decades old and were designed for one-way flows (from the power plant to the consumer). Massive penetration of renewables and EVs reverses those flows and creates instabilities that require storage as a buffer. Fourth: the COP29 commitments. The energy storage pledges signed at the 2024 climate conference imply multiplying global installed capacity sixfold between 2022 and 2030, to 1,500 GW. That target requires investment estimated at hundreds of billions of dollars.

MARKET STRUCTURE AND VALUE CHAIN

The energy storage market splits into three segments by scale. The residential segment (Powerwall and equivalents, 10-20 kWh per unit) serves homes and small businesses for solar self-consumption and backup. The commercial and industrial segment (Powerpack and equivalents, 100 kWh to 10 MWh) serves businesses with high consumption seeking to reduce peak demand charges. The utility-scale segment (Megapack and equivalents, 10 MWh to several GWh per project) serves utilities, grid operators and data centers, and is the most dynamic and profitable.

The value chain includes cell makers (CATL, Samsung SDI, LG Energy), system integrators (Tesla, Fluence, BYD, Wärtsilä) and energy management software operators (Tesla's Autobidder, Fluence's products, CATL's platforms). Competitive advantage is built on integration: whoever controls both the hardware and the management software can offer performance guarantees and participate in ancillary service markets (frequency regulation, peak shaving, virtual power plants), the highest-margin layer of the business.

MAIN COMPETITORS

CATL (Contemporary Amperex Technology)

CATL is the most important battery company in the world and Tesla's most relevant competitor in energy storage. Based in Ningde, China, it became the dominant supplier of electric vehicle cells and in recent years aggressively expanded its Battery Energy Storage Systems (BESS) business, competing directly with Tesla's Megapack in power infrastructure projects.

CATL operates in four main segments: electric vehicle batteries (74.7% of revenue), energy storage systems (14.7%), battery materials and recycling (5.2%) and others. Its business model is based on scale and control of the supply chain of critical raw materials (lithium, cobalt, nickel) through investments in mining and refining. In 2025 it completed its dual listing in Hong Kong in addition to its original listing in Shenzhen, gaining access to international capital.

Its TENER Stack system, launched in 2024 with 9MWh per unit, competes directly with Tesla's Megapack 3. CATL has an estimated cost advantage of 20-30% over Tesla in storage thanks to the vertical integration of its battery production chain.

Métricas financieras FY2025

Métrica	Valor	Nota
Ingresos totales	~$61B (423,7B CNY)	+17% YoY
Beneficio neto	~$10B (72,2B CNY)	+42% YoY
Ventas de baterías	661 GWh	+39% YoY
Cuota mercado batería EV	39,2% global	Líder mundial 9 años consecutivos
Cuota mercado BESS	30,4% global	Líder mundial 5 años consecutivos
R&D 2025	~$3,2B (22,1B CNY)	Inversión récord

CATL is, paradoxically, both a competitor and a supplier in Tesla's ecosystem. It has historically supplied cells for the Model 3 and Model Y produced in Shanghai, although Tesla has reduced that dependence. In storage, the competition is more direct: both companies go after the same utility, grid and data center projects. The difference is that CATL sells the battery system and Tesla sells an integrated product (hardware plus management software), which gives Tesla a margin advantage when the customer values integration.

- Production cost advantage: vertical integration of cells that cannot be replicated quickly
- Scale advantage: 772 GWh of installed capacity at the end of 2025
- Software disadvantage: Tesla's energy management systems are superior

- Geopolitical disadvantage: regulatory pressure in the US and Europe because of its Chinese origin

Fluence Energy

Fluence Energy (a joint venture of Siemens and AES) is Tesla's most direct competitor in utility-scale storage in Western markets. It operates in more than 40 countries, has deployed more than 15 GWh of projects, and its Smartstack platform is recognized as one of the best in management software. Unlike Tesla, Fluence is agnostic about the cells it uses, which allows it to arbitrate between suppliers (Samsung SDI, LG, CATL) and offer design flexibility. It has a strong presence in Europe, where it wins tenders from utilities that prefer not to depend only on American or Chinese suppliers.

BYD Energy Storage

BYD has an independent energy division that makes and sells storage systems under its brand. With access to its own Blade LFP cells, BYD can integrate vertically and offer competitive prices. In China it dominates residential and commercial storage. Its exports of storage systems are growing fast, especially to Europe and Australia. Its main limitation is the perception of Chinese brands in some markets and tariff restrictions in the US.

Other notable competitors

Enphase Energy dominates residential storage in the US alongside Tesla Powerwall, with its IQ Battery system highly integrated with its solar microinverters. LG Energy Solution and Samsung SDI are mainly cell makers that occasionally integrate systems. Wärtsilä (Finland) is a strong competitor in long-duration systems for utilities. NextEra Energy Resources, as an operator of storage parks, competes in the service but not in the hardware.

Empresa	Segmento principal	Ventaja competitiva	Presencia geográfica
Tesla (Megapack/Powerwall)	Utility + Residencial	Software Autobidder, integración vertical, marca premium	Global (líder en EEUU, creciendo en todo el mundo)
CATL (TENER Stack)	Utility-scale	Precio más bajo, mayor densidad	Asia, Europa (limitado en EEUU)
Fluence Energy	Utility-scale	Software multiproveedor, 40+ países	EEUU + Europa (fuerte)
BYD Energy	Utility + Residencial	Integración con celdas propias, precio	China, Asia, Europa
Enphase Energy	Residencial	Ecosistema solar completo, EEUU fuerte	EEUU, Europa
LG / Samsung SDI	Celdas + C&I	Calidad de celda premium	Global (componentes)

TESLA'S POSITION IN ENERGY STORAGE

Tesla's position in energy is paradoxically the strongest of its three segments, and the least covered by the media. The Megapack has differentiating features that go beyond the hardware: its Autobidder platform allows operators to participate automatically in energy markets (frequency regulation tenders, hourly price arbitrage, peak shaving), generating recurring software revenue on top of the installed hardware. That double layer of value (hardware plus software-as-a-service) is comparable to the business model of a tech infrastructure company.

The demand pipeline for 2026 and 2027 is the most visible in the company: Tesla reported $4.96 billion of deferred revenue from storage projects already contracted but not yet recognized, more than double what it recognized in all of 2025. That means the company already has signed purchase orders for more than a year of revenue in this segment. Demand comes mainly from three sources: utilities integrating renewables, AI data centers (Microsoft, Google, Amazon) and grid operators modernizing infrastructure.

Expanding manufacturing capacity is the current bottleneck. The Megapack plants (Lathrop in California, Nevada and Shanghai, which started operating in Q1 2025) have an estimated combined capacity of 83 GWh a year, with facilities still ramping to full capacity. Tesla does not limit sales for lack of demand but for lack of production, an enviable position that turns every capacity expansion directly into additional revenue.

The main medium-term competitive threat is price compression: the average Megapack price fell in 2025 despite volume growth, which suggests competitive pressure (especially from CATL outside the US) is already being felt. In the third quarter of 2026, energy revenue fell 16% even though deployments grew. If tariffs are reduced or CATL manages to push harder into the US market, Tesla's pricing power in this segment could erode as it did in automotive.

The residential Powerwall passed one million installed units in 2025 and its VPP (Virtual Power Plant) networks in California, Australia and Germany generate highly recurring service revenue. The more than 89,000 VPP events in 2025 represent an intangible asset Tesla is quietly building: millions of connected homes that can be managed as a distributed power plant, participating in grid balancing markets and generating service revenue at near-zero marginal cost.

AI, autonomy and robotics

Tesla's third segment is not a single market but the intersection of three emerging markets that share the same underlying technology layer: artificial intelligence applied to the physical world. The robotaxi market, the autonomous driving software market and the humanoid robot market are distinct entities with their own dynamics, but Tesla operates in all of them from a common platform: its pure-vision architecture with end-to-end neural networks, trained on billions of real-world miles of data.

Robotaxis and autonomous driving

The global robotaxi market was valued at between $0.6 and $2.8 billion in 2025 (estimates differ by methodology) and is projected to grow at a 52-99% CAGR through 2030-2033, reaching $45-147 billion by the end of the decade. That volatility in projections reflects the sector's fundamental uncertainty: the pace of regulatory approvals is unpredictable and growth will depend on whether two or three operators (Waymo, Tesla, possibly Baidu in Asia) manage to scale without high-profile incidents that freeze the market.

The autonomous driving software market (FSD and equivalents) has a different logic: it is a subscription service on hardware already sold, with low marginal costs and potential gross margins close to 90%. Tesla's US installed base (about 6 million active vehicles) represents a massive penetration opportunity if the product improves and prices are accessible. In the third quarter of 2026 Tesla already had 1.74 million active FSD subscriptions, 67% more than a year earlier.

Humanoid robotics

The humanoid robot market is the longest-term, but possibly the largest TAM. Some estimates say the market will go from $2.92 billion in 2025 to $15.26 billion in 2030 (39.2% CAGR). Other more aggressive projections point to $27 billion by 2030 and $70 billion by 2033 in a successful commercialization scenario. Musk talks about markets worth trillions of dollars eventually, comparable to the GDP of entire nations, a horizon that requires decades of execution to materialize.

The most critical variable in this market is not technological but regulatory. The United States has no unified federal framework for autonomous vehicles: each state legislates independently. California allows commercial testing (Waymo has operated there since 2023) and Texas also allows limited operations (where Tesla launched its robotaxi in Austin). But approval for nationwide operation requires safety demonstrations over millions of miles and NHTSA reviews that can take years.

The sector's central technology debate is pure vision (Tesla, Mobileye, Comma.ai) versus sensor fusion (Waymo, Cruise, Mobileye in some products). Tesla bets exclusively on cameras and neural networks: cheaper, more scalable, but technically harder to solve in some cases (extreme weather, situations not seen in training). Waymo uses LiDAR + radar + cameras: more expensive (Waymo's sensor suite costs more than $100,000 per vehicle versus $2,000-3,000 for Tesla), but more solid in exceptional situations.

The underlying AI in both cases (computer vision, reinforcement learning, neural networks) is converging toward similar architectures, but the amount of training data is the differentiator Tesla argues is unrepeatable: 6.9 billion miles of supervised FSD accumulated through 2026 is a dataset no company in the sector can replicate in the medium term.

MAIN COMPETITORS

Waymo (Alphabet / Google)

Waymo is the most advanced competitor in real robotaxi operations and the industry benchmark for demonstrated safety. It operates in San Francisco, Phoenix, Los Angeles and Austin (among other cities) with a commercial fully driverless service since 2023. It has accumulated more than 20 million real autonomous miles without a driver, with a reported accident rate significantly below the human average. Its business model is similar to Uber's but fully automated.

Waymo's limitation is its expansion model: each new city requires high-definition mapping, sensor calibration and local regulatory approval, which makes scaling slow and costly. Its sensor suite (LiDAR + radar + cameras) makes each vehicle more expensive. Tesla argues its pure-vision approach allows it to scale to any city with an active Tesla, without that overhead. Waymo, however, is the only company that has shown robotaxis work at commercial scale without human backup.

Métricas operativas y financieras (2025-2026)

Métrica	Valor	Nota
Viajes semanales	~450.000 (dic. 2025)	3x más que a inicios de 2025
Viajes totales 2025	15 millones	3x vs. 2024
ARR estimado	>$350M	A dic. 2025
Ciudades activas	6 en EEUU	SF, LA, Phoenix, Austin, Atlanta, Miami
Flota	~2.500 vehículos	Mayormente Jaguar I-PACE
Valoración (feb. 2026)	$126B	Tras ronda de $16B liderada por Alphabet
Millas autónomas acumuladas	>127M	Todas sin conductor humano

Baidu Apollo (China)

In China, Baidu Apollo is the local Waymo. It operates its Apollo Go service in more than 10 Chinese cities with vehicles without a backup driver, accumulating millions of autonomous rides. Its pricing (about $0.80-1.50 per mile) aims for mass adoption. The most relevant point for Tesla: if Baidu or any Chinese company achieves a flexible regulatory framework for autonomy and scales quickly before Tesla obtains approval in the US, the first-mover advantage in robotaxis could change hands in the world's largest mobility services market.

Uber and Lyft (platforms, not manufacturers)

Uber and Lyft do not make vehicles but are the operators of the network on which third-party robotaxis would run. Uber already has agreements with Waymo (launched in 2023), Cruise and other autonomy developers to integrate their vehicles into the Uber platform. If Tesla launches its own robotaxi app (as it already has in Austin), it will compete directly with Uber and Lyft for the relationship with the passenger. The question is whether the value of having its own platform (and capturing 100% of the revenue) justifies the cost of building that network from scratch against incumbents with tens of millions of active users.

There is one point about the robotaxi business that deserves more honest reflection than usually appears in optimistic analyses of Tesla. The dominant story presents Uber and Lyft as direct competitors Tesla will displace with its own robotaxi network. My reading is different: **I do not think it makes sense for Tesla to compete in that market, at least not the way Musk presents it.**

Ride-hailing has a very specific logic that does not depend on who makes the cars but on who controls passenger liquidity. Uber and Lyft are not transport companies; they are platforms that match supply and demand in real time. Their competitive advantage is not in the vehicles but in having millions of active users, dynamic pricing algorithms refined over years and a driver network dense enough to guarantee a car is available in under three minutes in any city where they operate. **Replicating that liquidity from scratch is extraordinarily hard and expensive, whether or not the vehicles drive themselves.**

The argument most repeated by Tesla bulls is that vehicle owners themselves will put their cars to work while they sleep or are at the office, generating passive income and feeding the robotaxi network without Tesla having to own the fleet. It is an elegant argument on paper. In practice, it raises serious doubts for me. **Would you really be willing to put your own car to work as a robotaxi?** Let's think about it honestly: accelerated wear on the vehicle, passengers who get it dirty, possible damage, and the uncertainty of not knowing what condition you will find your car in when you need it. My personal answer is that I would not do it in a million years, and I suspect most Tesla owners would not either.

There is also a structural problem with that thesis related to demand cycles. **Ride-hailing has very pronounced peaks** (weekend nights out, office rush hours, large events) and deep valleys the rest of the time. The owner of a Tesla who works Monday to Friday during office hours probably uses their car at many of those peak moments, and does not need it exactly when robotaxi demand is lowest. The overlap between the availability of the private vehicle and moments of high demand on the network is not guaranteed at all, which makes the decentralized fleet model much less efficient than it looks at first glance.

For all these reasons, **the strategy that seems smartest to me for Tesla is not to compete against Uber and Lyft but to integrate into their networks.** Uber already has agreements with Waymo to bring robotaxis onto its platform. Tesla could do exactly the same: provide the autonomous vehicles and driving technology, and let Uber or Lyft handle what they really know how to do, which is manage demand, pricing and the passenger experience. That model would let Tesla capture revenue from autonomy without having to build a ride-hailing network from scratch against incumbents with years of advantage and hundreds of millions of active users. **Being the technology provider that moves the network is, in many cases, a better business than being the network operator.**

Competitors in humanoid robotics

The humanoid robot market has growing, well-capitalized competition. Figure AI raised more than $675 million from Microsoft and other investors and has its Figure 02 robot with NVIDIA GPUs. Boston Dynamics (owned by Hyundai) has the Atlas robot, the most advanced platform in mobility, but aimed at niche industrial applications. Agility Robotics (Amazon) has Digit, designed for warehouse logistics. Unitree (China) offers lower-priced humanoids with an open SDK for researchers. Tesla's difference: none of these competitors has the FSD dataset or integration with a fleet of millions of vehicles as a common training platform.

Empresa	Producto / Servicio	Ventaja diferencial	Estado actual (2026)
Waymo (Alphabet)	Robotaxi (driverless)	Seguridad demostrada, 20M+ millas reales, LiDAR robusto	Comercial en 6+ ciudades EEUU
Tesla	FSD / Robotaxi / Optimus	Dataset incomparable, visión pura escalable, flota de 6M+ vehículos	Robotaxi piloto en 2 ciudades, FSD supervisado
Baidu Apollo	Robotaxi (China)	Liderazgo regulatorio en China, >10 ciudades	Comercial en China, >10 ciudades
Uber / Lyft	Plataforma de ride-hailing	100M+ usuarios, brand recognition, partnerships multi-AV	Integran AVs de terceros
Figure AI	Robot humanoide	Capital de Microsoft, GPU NVIDIA en plataforma	Pruebas en fábricas BMW
Boston Dynamics (Hyundai)	Robot industrial (Atlas)	Movilidad más avanzada de la industria	Aplicaciones industriales de nicho
CATL / BYD (AV)	Software de conduccion	Escala en China, integracion en modelos propios	ADAS avanzado en modelos low-cost

TESLA'S POSITION IN AI, AUTONOMY AND ROBOTICS

Tesla's physical AI thesis rests on a scale argument that is hard to refute in its logic but impossible to guarantee in its execution. The central argument: to train an autonomous driving system or a robot that operates in the real world, you need real data at massive scale. Tesla has more data than any competitor because it has more than 6 million active vehicles recording video and behavior every day. No company in the sector can match that data flow without operating an equivalent fleet for years.

The data advantage translates into a training advantage. Every supervised FSD mile improves the model. Every time a driver disengages autopilot in a complex situation, that intervention is a valuable training data point. The system learns continuously from the whole fleet, creating a virtuous cycle: a better model attracts more FSD users, more users generate more data, more data improves the model. In theory, that cycle is self-reinforcing.

However, there are three critical objections the investor must keep in mind. First: supervised FSD data is not equivalent to fully autonomous driving data. Having a human ready to intervene changes the system's behavior and limits the edge cases captured. Waymo, operating without a driver in real conditions, generates a different and possibly more valuable dataset for the commercial deployment stage. Second: regulation does not distinguish between the best dataset and the best demonstrated behavior. NHTSA wants to see real miles without incidents, not training statistics. Third: a high-visibility accident can freeze the program for months or years, regardless of the underlying technological progress.

On Optimus, the situation is even more embryonic. The Gen 3 robot was presented in Q1 2026 with substantial improvements (50 actuators in the hands, Grok integration). Series production is planned before the end of 2026 with a target capacity of one million units a year (a claim many analysts consider extremely aggressive for an actuator supply chain that does not exist at scale). In January 2026 Musk himself acknowledged to investors that the Optimus robots in Tesla's factories were not yet doing useful work, but learning and collecting data.

The Optimus bet is structurally correct: if Tesla manages to produce a functional humanoid for $20,000 or less, the potential market is effectively worth trillions of dollars. Automating any task a human performs today in an unstructured environment (factories, warehouses, hospitals, homes) with a $20,000 robot would fundamentally change the economics of production. But the distance between promise and reality, measured in years of R&D, capital and execution risk, is the variable the market must value precisely.

Comparison of the three markets

DIMENSIÓN	I. AUTOMOTRIZ	II. ENERGÍA	III. IA + ROBOTICA
TAM 2030	$2.8T - $6.5T	$106 - 114B (BESS)	$600 - 800B combinado
CAGR mercado	15% - 32%	14% - 22%	39% - 99% (sub-segmentos)
Ingresos Tesla 2025	$69.5B (73% total)	$12.8B (13% total)	Sin revenue material
Margen bruto Tesla	~14-15%	~29.8%	N/A (inversión neta)
Cuota de mercado global	8.8% (BEV global)	Líder en EEUU utility	Piloto en 2 ciudades
Crecimiento YoY 2025	-6% (entregas)	+25% (ingresos)	N/A
Principal rival	BYD (12.1% global)	CATL / Fluence	Waymo / Figure AI
Horizonte temporal	Presente	Presente + 2 años	2027 - 2032+
Riesgo principal	Competencia china, precios	Compresión de márgenes	Regulación + ejecución
Ventaja de Tesla	NACS, FSD, software OTA	Autobidder, backlog, márgenes	Dataset 6,900M millas
Peso en valuación de mercado	Bajo (múltiplo automotriz)	Moderado (infra. tecnológica)	Alto (opcionalidad)

Tesla is, in essence, a company operating at three different speeds. In automotive, the business that generated its fame and capital, it is in defensive mode: the moat is narrowing, Chinese competition is fierce and growth has stopped. The right strategy in this segment is to consolidate share in the US, keep the Supercharger network as industry infrastructure and launch lower-priced models so as not to be shut out of market growth in affordable segments.

In energy, it is in expansion mode: demand above supply, record margins, a visible backlog and macro tailwinds that will reinforce each other for decades. The question is not whether this business grows but whether Tesla can make enough Megapacks to capture demand before CATL and the Chinese competitors erode its price advantage in markets not protected by tariffs.

In AI, autonomy and robotics, it is in betting mode: capital spending is massive (more than $25 billion in 2026), revenue is minimal, promises are enormous and the record of meeting timelines is mixed. Much of the market's valuation lies in this segment. If it executes, the return can be extraordinary. If timelines slip again, multiple compression can be violent.

The investor buying Tesla today is buying all three layers at once, without the possibility of separating the good from the bad. There is no price tag per segment. That is both the risk and the opportunity of the thesis.

Porter's five forces

FUERZA	ANÁLISIS
Rivalidad competitiva	**ALTA**. BYD superó a Tesla en volumen en 2025. Los fabricantes tradicionales (VW, Hyundai, GM) lanzaron modelos eléctricos competitivos. En China, más de 200 marcas locales compiten. El FSD es un diferenciador por ahora, pero competidores como Waymo, BYD God's Eye y Mobileye avanzan rápido.
Amenaza de nuevos entrantes	**MODERADA**. Las barreras de capital son enormes (una gigafactoría cuesta varios miles de millones). Pero en China, startups de VE como NIO, Xpeng y Li Auto escalaron rápidamente con capital de riesgo. En robotaxis, entrantes tecnológicos como Amazon (Zoox) demuestran que el riesgo existe.
Poder de proveedores	**MODERADA-BAJA** para Tesla específicamente. Su integración vertical (celdas propias, chips propios, fabricación interna) reduce la dependencia. Sin embargo, la cadena de minerales críticos (litio, cobalto, níquel) sigue siendo un riesgo y los aranceles de la era Trump encarecieron las celdas de batería importadas.
Poder de compradores	**ALTA** y creciente. La eliminación del crédito fiscal en EEUU devolvió el poder de negociación al consumidor, que ahora compara directamente precios. En Europa, el boycott por las actividades políticas de Musk demuestra que la marca puede ser tanto activo como pasivo.
Amenaza de sustitutos	**MODERADA**. Los híbridos (Toyota, BYD) ofrecen una alternativa de transición que muchos consumidores prefieren. El transporte público y la movilidad compartida (Uber) son sustitutos estructurales del auto propio. Para el Megapack, los sustitutos incluyen CATL, Fluence y generación distribuida con gas natural.

SWOT analysis

FORTALEZAS	DEBILIDADES
Marca global de alta aspiracionalidad	VE automotriz con márgenes en caída sostenida
Red de Superchargers como estándar NACS (15+ marcas)	Dependencia excesiva de la figura de Elon Musk
6.900 millones de millas de datos de FSD	Portafolio de vehículos estrecho y envejecido
Integración vertical profunda (baterías, chips, software)	Robotaxi y Optimus en etapa de promesa, no rentabilidad
División de Energía con 30% de margen bruto	P/E de 370x sin margen de seguridad convencional
Cash position de $41 mil millones	Relaciones con China: riesgo geopolítico latente
Liderazgo tecnológico en autonomía end-to-end	Promesas de Musk con historial de cumplimiento tardío
Optimus con ventajas de FSD aplicadas a robótica	Model S/X discontinuados: abandono de segmento premium

OPORTUNIDADES	AMENAZAS
Explosión de demanda de Megapack por AI data centers	BYD y China dominando precio y volumen global
Robotaxi puede generar ingresos de altísima recurrencia	Regulación de autonomía incierta y muy variable
Optimus: TAM de robótica humanoide billonario	Boicot de consumidores en Europa y EEUU por Musk-DOGE
FSD como servicio de suscripción escalable	Eliminación de créditos fiscales de VE en EEUU
Expansión de Supercharger a flota global no-Tesla	Competidores de robotaxi (Waymo) ya operando
Nuevos modelos de bajo costo para democratizar VE	Aranceles que encarecen componentes importados
VPP (Virtual Power Plants) como negocio de energía	Riesgo de conflicto de interés Musk (Tesla + xAI + SpaceX)
Mercados emergentes con baja penetración de VE	Caída de precio del litio que favorece competidores

SECTION 06

The bulls vs. the bears

What do the bulls say?

For the bullish investor, the current share price is not an irrational anomaly but the reflection of a company in transition among three markets that together could be worth tens of trillions of dollars. The central argument is that Tesla is not a carmaker with a tech company valuation, but a tech company that temporarily makes and sells cars to fund its expansion into businesses with radically higher margins.

The central bet of the bull case

If FSD becomes the first autonomous driving system approved to operate without supervision at massive scale in the US, Tesla will have access to a fleet of more than 6 million vehicles in the country that could become robotaxi revenue generators. Ark Invest estimates that 88% of Tesla's enterprise value in 2029 would come from the robotaxi business.

What do the bears say?

For the bearish investor, Tesla trades at a multiple impossible to justify with financial rigor. At $359, the stock trades at hundreds of times its earnings. The market is pricing in decades of perfect growth with no margin for error.

The central risk of the bear case

Tesla is valued as if all its projects were going to be executed perfectly and on time: the robotaxi approved at massive scale, Optimus doing useful work, FSD massively adopted and Megapack dominating the global market. Historically, Musk has made promises that arrived years late (Cybertruck, FSD, Semi). Every year of delay is a year of cost of capital applied to a valuation of more than $1.3 trillion.

SECTION 07

Valuation

I built a ten-year **discounted cash flow (DCF)** model with two methods for the terminal value: **perpetuity growth** and an **exit multiple on EBITDA**. The target price is the average of both in the base case.

Before the numbers, a clarification I think is honest: Tesla is a stock that, viewed through a DCF, will always look expensive. A very large part of its value depends on businesses that generate almost no revenue today (robotaxi, Optimus). That is why, to decide at what price I would be willing to start a position, I do not look only at the Base Case: I also look at the Best Case. If the price is between the two scenarios and there is reasonable upside to the Best Case, the risk-reward can justify a limited position.

Model inputs and assumptions

2. Operating drivers by scenario (explicit forecast)

Driver	Δ vs Base	FY2023A	FY2024A	FY2025A	3Y avg	FY2026E	FY2027E	FY2028E	FY2029E	FY2030E	FY2031E	FY2032E	FY2033E	FY2034E	FY2035E
Forecast year #						*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*
Revenue growth ▸ selected scenario		18.8%	0.9%	(2.9%)	**5.2%**	**13.7%**	**13.5%**	**19.5%**	**12.0%**	**11.0%**	**10.0%**	**9.0%**	**8.0%**	**6.5%**	**5.0%**
Best case	8.0%					16.0%	21.5%	27.5%	20.0%	19.0%	18.0%	17.0%	16.0%	14.5%	13.0%
Base case						13.7%	13.5%	19.5%	12.0%	11.0%	10.0%	9.0%	8.0%	6.5%	5.0%
Worst case	(7.0%)					10.0%	6.5%	12.5%	5.0%	4.0%	3.0%	2.0%	1.0%	(0.5%)	(2.0%)
Gross margin ▸ selected scenario		18.2%	17.9%	18.0%	**18.0%**	**19.0%**	**20.0%**	**21.0%**	**22.0%**	**23.0%**	**24.0%**	**25.0%**	**25.0%**	**25.0%**	**25.0%**
Best case	6.0%					21.0%	26.0%	27.0%	28.0%	29.0%	30.0%	31.0%	31.0%	31.0%	31.0%
Base case						19.0%	20.0%	21.0%	22.0%	23.0%	24.0%	25.0%	25.0%	25.0%	25.0%
Worst case	(7.0%)					17.0%	15.0%	15.0%	15.5%	16.0%	17.0%	18.0%	18.0%	18.0%	18.0%
EBIT margin ▸ selected scenario		9.2%	7.8%	4.6%	**7.2%**	**4.0%**	**6.0%**	**8.0%**	**10.0%**	**11.0%**	**12.0%**	**13.0%**	**14.0%**	**15.0%**	**15.0%**
Best case	7.0%					6.0%	9.0%	11.0%	15.0%	17.0%	19.0%	20.0%	21.0%	22.0%	22.0%
Base case						4.0%	6.0%	8.0%	10.0%	11.0%	12.0%	13.0%	14.0%	15.0%	15.0%
Worst case	(8.0%)					2.0%	2.2%	2.5%	3.0%	3.0%	4.0%	5.0%	6.0%	7.0%	7.0%
Capex % of revenue ▸ selected scenario		9.2%	11.6%	9.0%	**9.9%**	**26.0%**	**18.0%**	**13.0%**	**10.0%**	**9.0%**	**8.0%**	**7.0%**	**6.5%**	**6.0%**	**6.0%**
Best case	(1.0%)					25.0%	17.0%	12.0%	9.0%	8.0%	7.0%	6.0%	5.5%	5.0%	5.0%
Base case						26.0%	18.0%	13.0%	10.0%	9.0%	8.0%	7.0%	6.5%	6.0%	6.0%
Worst case	1.0%					27.0%	19.0%	14.0%	11.0%	10.0%	9.0%	8.0%	7.5%	7.0%	7.0%

Source: author's analysis.

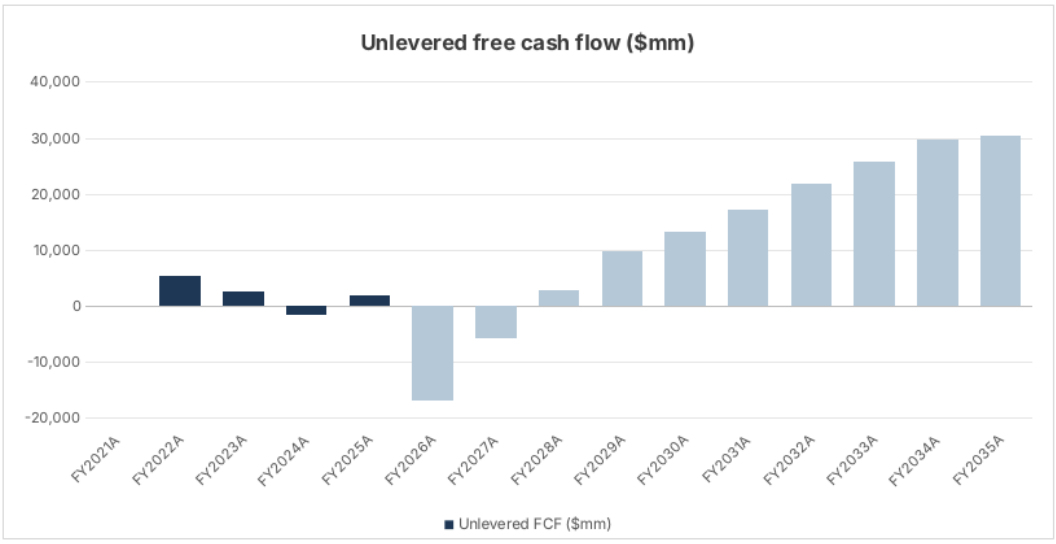
Revenue growth: in the Base Case I project 13.7% in 2026, 13.5% in 2027, 19.5% in 2028 and 12% in 2029, driven by energy, services, FSD and the first robotaxi revenue. Growth then gradually slows to 5% in 2035.

Margins: gross margin goes from 19% in 2026 to 25% in 2032, because of the greater weight of energy, services and software. EBIT margin goes from 4% to 15% at maturity, close to the 2022 peak.

CapEx: this is the most important assumption in the first years. I use 26% of revenue in 2026 (the more than $25 billion management guided to), 18% in 2027 and 13% in 2028, and then a gradual decline to 6%.

What does each scenario mean?

- **Base Case:** the car business recovers moderately, energy grows strongly and FSD and robotaxi start to contribute relevant revenue, but without completely transforming the company.
- **Best Case:** Tesla successfully executes its transition into a technology and energy company: the Cybercab scales, FSD is massively adopted and Optimus starts doing useful work. It adds 8 points of growth per year, 6 of gross margin and 7 of EBIT margin.
- **Worst Case:** Chinese competition keeps eroding the car business and the physical AI projects do not materialize within the model horizon. It subtracts 7 points of growth, 7 of gross margin and 8 of EBIT margin.



Source: author's analysis.

Discount rate (WACC)

5. Discount rate (WACC)

		Value
Risk-free rate		4.9%
Equity beta (levered)	x	1.40
Equity risk premium		4.2%
Country risk premium		-
Cost of equity		10.8%
Pre-tax cost of debt		5.5%
Tax rate (debt tax shield)		20.4%
After-tax cost of debt		4.4%
Market value of equity	$ mm	1,347,681
Total debt	$ mm	14,719
Debt / (Debt + Equity)		1.1%
Equity / (Debt + Equity)		98.9%
WACC		10.7%

Source: author's analysis.

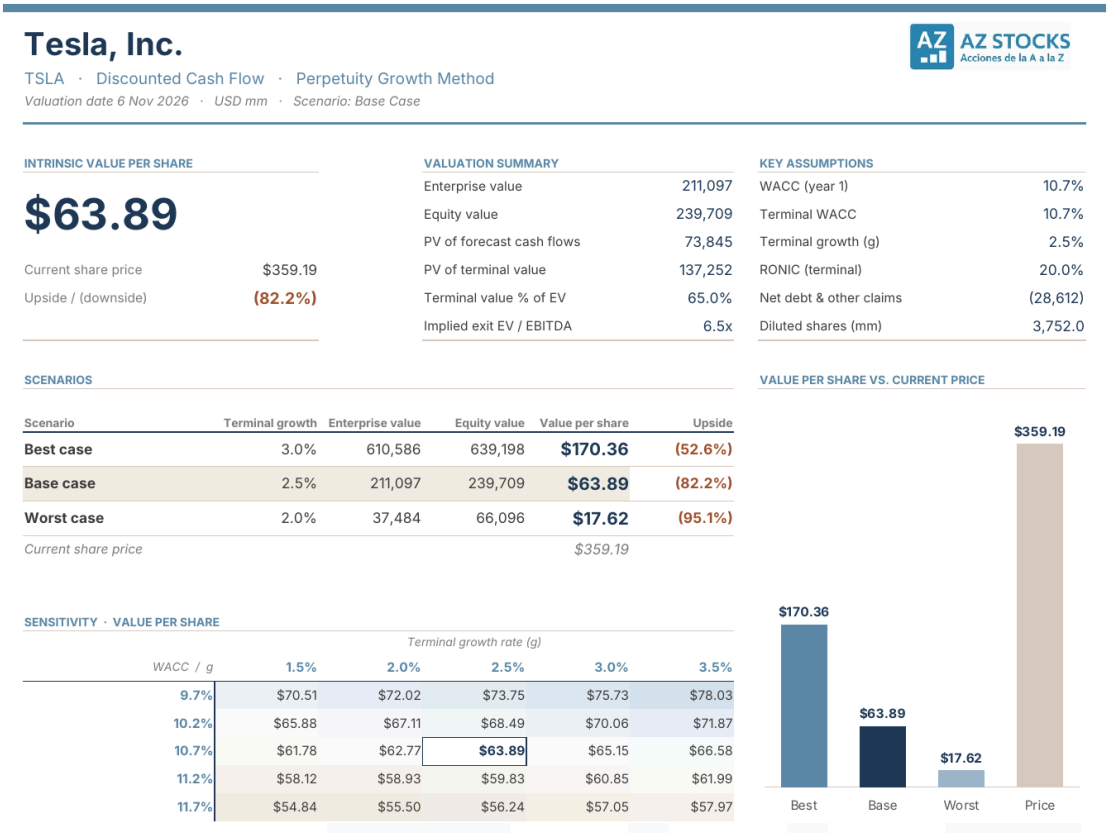
I use a 4.9% risk-free rate, a 4.2% equity risk premium and a beta of 1.4 (the five-year historical beta is 1.81). The result is a **cost of equity of 10.8%**. Since Tesla has very little debt relative to its market value, the **resulting WACC is 10.7%**.

To go from Enterprise Value to Equity Value I added net cash of $28,612 million. I use 3,752 million diluted shares, including options and restricted stock.

Model results

PERPETUITY METHOD

With 2.5% perpetual growth and a 20% return on new invested capital, the model gives an Enterprise Value of $211,097 million and an Equity Value of $239,709 million, equivalent to **$63.89 per share**.



Tesla, Inc.

TSLA · Discounted Cash Flow · Perpetuity Growth Method

Valuation date 6 Nov 2026 · USD mm · Scenario: Base Case

AZ STOCKS Acciones de la A a la Z

INTRINSIC VALUE PER SHARE

$63.89

Current share price	$359.19
Upside / (downside)	(82.2%)

VALUATION SUMMARY

Enterprise value	211,097
Equity value	239,709
PV of forecast cash flows	73,845
PV of terminal value	137,252
Terminal value % of EV	65.0%
Implied exit EV / EBITDA	6.5x

KEY ASSUMPTIONS

WACC (year 1)	10.7%
Terminal WACC	10.7%
Terminal growth (g)	2.5%
RONIC (terminal)	20.0%
Net debt & other claims	(28,612)
Diluted shares (mm)	3,752.0

SCENARIOS

Scenario	Terminal growth	Enterprise value	Equity value	Value per share	Upside
Best case	3.0%	610,586	639,198	**$170.36**	(52.6%)
Base case	2.5%	211,097	239,709	**$63.89**	(82.2%)
Worst case	2.0%	37,484	66,096	**$17.62**	(95.1%)
Current share price				*$359.19*	

VALUE PER SHARE VS. CURRENT PRICE

SENSITIVITY · VALUE PER SHARE

	Terminal growth rate (g)				
WACC / g	1.5%	2.0%	2.5%	3.0%	3.5%
9.7%	$70.51	$72.02	$73.75	$75.73	$78.03
10.2%	$65.88	$67.11	$68.49	$70.06	$71.87
10.7%	$61.78	$62.77	**$63.89**	$65.15	$66.58
11.2%	$58.12	$58.93	$59.83	$60.85	$61.99
11.7%	$54.84	$55.50	$56.24	$57.05	$57.97

Source: author's analysis.

In the Best Case the value is **$170.36** and in the Worst Case **$17.62**.

With a WACC half a point lower, the value rises to $68; with one half a point higher, it falls to $60.

EBITDA MULTIPLE METHOD

Applying an **8.5x** multiple to EBITDA in the last projected year of the Base Case (11x in the Best Case and 6x in the Worst Case), the model gives an Enterprise Value of $252,819 million and a value of **$75.01 per share**.

Tesla, Inc.

TSLA · Discounted Cash Flow · Exit Multiple Method

Valuation date 6 Nov 2026 · USD mm · Scenario: Base Case

AZ STOCKS Acciones de la A a la Z

INTRINSIC VALUE PER SHARE

$75.01

Current share price	$359.19
Upside / (downside)	(79.1%)

VALUATION SUMMARY

Enterprise value	252,819
Equity value	281,431
PV of forecast cash flows	73,845
PV of terminal value	178,975
Terminal value % of EV	70.8%
Implied perpetual growth	3.8%

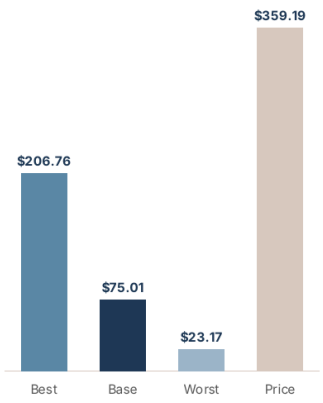
KEY ASSUMPTIONS

WACC (year 1)	10.7%
Terminal WACC	10.7%
Exit EV / EBITDA	8.5x
EBITDA, final forecast year	53,420
Net debt & other claims	(28,612)
Diluted shares (mm)	3,752.0

SCENARIOS

Scenario	Exit multiple	Enterprise value	Equity value	Value per share	Upside
Best case	11.0x	747,144	775,756	**$206.76**	(42.4%)
Base case	8.5x	252,819	281,431	**$75.01**	(79.1%)
Worst case	6.0x	58,311	86,923	**$23.17**	(93.6%)
Current share price				*$359.19*	

VALUE PER SHARE VS. CURRENT PRICE



SENSITIVITY · VALUE PER SHARE

Exit EV / EBITDA multiple

WACC / multiple	6.5x	7.5x	8.5x	9.5x	10.5x
9.7%	$68.13	$74.22	$80.32	$86.42	$92.52
10.2%	$65.91	$71.76	$77.61	$83.46	$89.31
10.7%	$63.78	$69.40	**$75.01**	$80.62	$86.23
11.2%	$61.75	$67.13	$72.52	$77.91	$83.29
11.7%	$59.80	$64.97	$70.14	$75.31	$80.47

Source: author's analysis.

The multiple may look low for a company that trades at more than 100x EBITDA today. But it is applied to 2035 EBITDA, when Tesla would already be a large, mature company that still needs to invest 6% of its revenue in CapEx. With a 10.7% WACC, 8.5x already implies 3.8% perpetual growth. A multiple like NextEra's (18x) would imply Tesla grows faster than the economy forever.

In the Best Case the value is **$206.76** and in the Worst Case **$23.17**.

Reading both methods together

Averaging both methods in the base case, I arrive at a **target price of $69 per share**, compared with a market price of $359.19. That is a downside of about 81%.

Even the Best Case (between $170 and $207) is far below the current price. To justify $359, Tesla would have to beat my most optimistic scenario: a robotaxi that scales globally, Optimus turned into a relevant business and software-company margins on a much larger revenue base.

SECTION 08

Conclusion

Tesla must be one of the hardest companies to value in the global market. Not because its numbers hide anything, but because its valuation depends almost entirely on scenarios that have not yet happened.

The 2025 and 2026 numbers are worrying: two years of flat or falling revenue, operating margin at historic lows and CapEx that will exceed $25 billion in 2026. If it were another company, with another CEO and other projects, the market would have punished it hard. But Tesla is not another company.

The energy business is real, large and profitable. Progress in FSD is documentable: 1.74 million active subscriptions and a robotaxi that already operates without supervision in Austin, with the Cybercab added to the fleet. And Musk, with all his flaws, has a proven record of executing what seems impossible.

However, at $359 per share you already need all of that to go right, and to go right quickly. My model gives a **target price of $69 per share**, and not even the Best Case (between $170 and $207) comes close to the current price. The condition I set for starting a position, that the price be between the Base Case and the Best Case, is not met today.

So at these prices I would not buy. I still think Elon Musk is one of the most extraordinary minds of our time and that investing in Tesla is a way of being part of that project, but I would only do it with a small position (between 3% and 5% of the portfolio at most) and at a price much closer to my Best Case. In the meantime, I see clearer opportunities elsewhere.

Alan



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