

# Tesla Inc.

---

NASDAQ: TSLA

Closing Price as of  
5/31/2024 is \$178.08

6/6/2024



FNCE 170: Lola Lewis, Skye Walker,  
Collin Li



---

*Table of Contents*

Summary of Findings (Skye)	1
SWOT Analysis (Collin)	2
Value Drivers (Skye)	3
Valuation (Lola and Collin)	4
Risks (Lola)	5
Conclusion (Skye)	6



---

## *Summary of Findings*

Summary of Findings (Skye)	1
SWOT Analysis (Collin)	2
Value Drivers (Skye)	3
Valuation (Lola and Collin)	4
Risks (Lola)	5
Conclusion (Skye)	6

# Summary of Findings

---



## Overview of Findings

### Tesla Findings Summary

---

- **Key Factors Differentiate Tesla From Many Competitors:**
  - Rapidly expanding growth
  - Often viewed & valued like a tech company rather than a traditional auto OEM
  - No dividends
- **Historic and Future Performance:**
  - Incredibly strong historic growth
  - Recently became profitable
  - Challenges in maintaining market dominance as competitors close the gap to tesla
- **Valuation:**
  - DDM and Relative valuation are not optimal methods
  - DCF is most comprehensive & appropriate when examining Tesla



---

## *Summary of Findings*

Summary of Findings (Skye)	1
----------------------------	---

<b>SWOT Analysis (Collin)</b>	<b>2</b>
-------------------------------	----------

Value Drivers (Skye)	3
----------------------	---

Valuation (Lola and Collin)	4
-----------------------------	---

Risks (Lola)	5
--------------	---

Conclusion (Skye)	6
-------------------	---

# SWOT Analysis



*Tesla has phenomenal strengths and growth potential that is still untapped, but also has just as many prominent weaknesses.*

Strengths	Weaknesses	Opportunities	Threats
<ul style="list-style-type: none"><li>• Impressive Hiring Strategy</li><li>• Strong Innovative Capacity<ul style="list-style-type: none"><li>• Telsa Solar Roof</li><li>• Tesla Powerwall</li><li>• Advanced Driver-Assistance System (ADAS)</li></ul></li><li>• Market Dominance</li></ul>	<ul style="list-style-type: none"><li>• Manufacturing Delays<ul style="list-style-type: none"><li>• Inability to meet demand</li></ul></li><li>• Cost of products</li><li>• Continuously Setting Overly Optimistic Targets</li><li>• Controversial CEO</li></ul>	<ul style="list-style-type: none"><li>• Introduction of its Products to New Markets</li><li>• Increasing Affordability of its Vehicles</li><li>• Improvement of Tesla's Autonomous Driving Technology</li><li>• Shift to Vertical Integration of Batteries</li></ul>	<ul style="list-style-type: none"><li>• Increased Competition</li><li>• Uncertainty of Commodities Used in Production</li><li>• Legal Intricacies of Self-driving EVs</li><li>• Changing Government Policy and Public Opinion on Green Energy</li></ul>



---

## *Summary of Findings*

Summary of Findings (Skye)	1
----------------------------	---

SWOT Analysis (Collin)	2
------------------------	---

<b>Value Drivers (Skye)</b>	<b>3</b>
-----------------------------	----------

Valuation (Lola and Collin)	4
-----------------------------	---

Risks (Lola)	5
--------------	---

Conclusion (Skye)	6
-------------------	---



## Leadership in EV Innovation & Global Expansion

---

- **Technological Leadership:** Advanced battery technology and autonomous driving capabilities. Continuous R&D maintains competitive advantage.
- **Brand & Market Expansion:** Strong brand recognition, expansion into China, India, and Latin America. Direct-sales model enhances customer experience.
- **Manufacturing Scalability:** Gigafactories enable efficient scaling and cost control. Vertical integration strengthens supply chain security.
- **Porter's Five Forces Analysis:**
  - Low supplier and consumer bargaining power due to vertical integration and brand loyalty.
  - High entry barriers for new entrants and low threat from substitutes.
  - Managed competitive rivalry through innovation and market expansion.



# Value Drivers

---



## Integration of Energy Solutions & Software Advancements

---

- **Energy Ecosystem:** Integration with Solar Roof and Powerwall. Meets increasing demand for clean energy, enhancing product diversification.
- **Software & Services Revenue:** High-margin, recurring revenue from Full Self-Driving software. Over-the-air updates enhance customer retention.
- **Strategic Alliances:** Partnerships with tech and energy firms boost technological capabilities and facilitate market entry.



---

## *Summary of Findings*

Summary of Findings (Skye)	1
SWOT Analysis (Collin)	2
Value Drivers (Skye)	3
<b>Valuation (Lola and Collin)</b>	<b>4</b>
Risks (Lola)	5
Conclusion (Skye)	6

# Valuation



## Relative Valuation / Comparable Analysis

Company Name	Market Data			Financial Data (TTM)				Valuation			
	Price \$ / share	Market Cap (\$B)	TEV (\$B)	Revenue (\$B)	EBITDA (\$B)	EBIT (\$B)	Earnings (\$B)	TEV/Rev	TEV/EBITDA	TEV/EBIT	P/E
Tesla Inc.	\$178.08	\$ 567.93	\$ 546.75	\$ 94.75	\$ 13.80	\$ 8.93	\$ 13.65	5.8x	39.6x	61.2x	13.0x
General Motors Company	\$ 44.99	\$ 51.31	\$ 152.07	\$ 174.87	\$ 24.11	\$ 12.24	\$ 10.62	0.9x	6.3x	12.4x	4.2x
Ford Motor Company	\$ 12.13	\$ 48.20	\$ 163.41	\$ 177.49	\$ 11.12	\$ 4.72	\$ 3.92	0.9x	14.7x	34.6x	3.1x
Toyota Motor Corporation	\$217.51	\$ 292.96	\$ 448.00	\$ 45,095.33	\$9,155.86	\$ 7,068.79	\$ 4,944.93	0.0x	0.0x	0.1x	0.0x
BYD Company Limited	\$ 56.11	\$ 89.23	\$ 74.87	\$ 607.09	\$ 39.87	\$ 39.87	\$ 30.48	0.1x	1.9x	1.9x	1.8x
Mean								1.5x	12.5x	22.0x	4.5x
Median								.9x	6.3x	12.4x	3.1x

### Target Company - Implied EV Valuation

	EV		Eq. Val	
Average	\$ 145.80	\$ 172.61	\$ 196.86	\$ 60.77
- Debt	\$ 9.57	\$ 9.57	\$ 9.57	
+ Cash & Cash Equivalents	\$ 16.40	\$ 16.40	\$ 16.40	
/Shares Outstanding	3.19	3.19	3.19	3.19
Implied Share Price	\$ 47.92	\$ 56.34	\$ 63.95	\$ 19.08

# Valuation



## Dividend Discount Model Valuation

### Why DDM Is Not Ideal:

- **Tesla does not issue dividends**
  - Reinvests earnings into expansion, R&D, and capital projects
  - DDM is specifically designed for to value companies based on their dividend payments
- **FCFE vs. Dividends**
  - Dividends are often stable, predictable
  - FCFE is volatile, difficult to project future values
  - Tesla's FCFE fluctuates significantly from 2019 – 2023, reflecting high reinvestment and varied cash flows
- **Inflated Dividend Growth Rate From Tesla's Growth Swings**
  - High-growth, DDM is better suited for mature companies with predictable dividend patterns
  - Growth rate is not realistic for long-term forecasting
  - Could result in overly-optimistic valuation in short-term

	2019	2020	2021	2022	2023
FCFE	1,358	282	(726)	3,691	6,445
Shares Outstanding	2,720	2,879	3,100	3,164	3,184
<b>FCFE per share</b>	<b>0.50</b>	<b>1.46</b>	<b>(0.23)</b>	<b>1.17</b>	<b>2.02</b>
Growth Rate		192.4%	-116.0%	598.1%	73.5%

	Stage 1	Average Growth Rate
Dividend Growth Rate (g)	187.0%	
Cost of Equity (Ke)	16.31%	

	2023	2024	2025	2026
Dividends per share	2.02	4.89	7.76	10.63
Cost of equity	16.31%	16.31%	16.31%	16.31%
<b>Present Value (PV) of Dividend</b>	<b>\$2.02</b>	<b>\$4.21</b>	<b>\$5.74</b>	<b>\$6.76</b>

# Valuation

---



*Dividend Discount Model Valuation*

## Why DCF Is Best For Valuing Tesla

---

- **Future Growth Potential:** High-growth industry with substantial future cash flow potential, DCF values company based its ability to generate free cash flows
- **Business Model:** DCF explicitly accounts for the reinvestment of earnings into capital expenditures, research and development, and working capital, which are critical for Tesla's growth
- **Long-Term Outlook:** A DCF provides a long-term perspective on valuation, aligning with Tesla's long-term strategic goal for investments in technology, infrastructure, and market expansion

# Valuation



## Discounted Cash Flow Valuation

- **WACC:**
  - Estimates ranging from 8% - 13%
  - Our estimated WACC: 16.1%
  - We decide to go with our WACC value we derived it based on numbers from Tesla's 10k, Capital IQ, and recommendations from class
- **Stage 1: Major Slowdown in Growth Rate to 11%**
  - Slowdown in global EV demand
  - Increasing competition in EV space from established companies such as Ford, Volkswagen, and more
  - We expect Tesla to continue to lose market share to up-and-coming EV companies such as BYD, Rivian, and Lucid Motors
- **Stage 2: Growth Rate Increases to 29%**
  - We believe Tesla will expand its operations to become an auto-tech company (FSD, Robotics)
  - Remain leader in EV market
  - Developments in energy generation/storage

Assumptions	Stage 1	Stage 2
Revenue Growth	0.11	0.29
Operating Margin	-0.01	0.00
Tax Rate	0.00	0.00
WC/Revenue	0.02	0.00
CapEx/Revenue	-0.02	0.00
Depreciation/CapEx	0.34	0.00
Long-run GDP Growth Rate	0.023	
WACC	0.161	

# Valuation



## Discounted Cash Flow Valuation

	2021A	2022A	2023A	STAGE 1			STAGE 2			Terminal Year
	2021A	2022A	2023A	2024E	2025E	2026E	2027E	2028E	2029E	2030E
Revenue Growth	0.71	0.51	0.19	0.30	0.41	0.52	0.81	1.10	1.39	
Operating Margin	0.12	0.11	0.10	0.09	0.09	0.08	0.08	0.08	0.08	
Tax Rate	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	
Working Capital/Revenue	0.14	0.16	0.18	0.21	0.23	0.25	0.25	0.25	0.25	
CapEx/Revenue	0.12	0.10	0.07	0.05	0.03	0.00	0.00	0.00	0.00	
Depreciation/CapEx	0.45	0.78	1.12	1.46	1.79	2.13	2.13	2.13	2.13	
(\$ in millions)										
Revenue	53.82	81.46	96.78	125.61	176.87	268.48	485.42	1,018.40	2,431.95	
Operating Profit		9.15	10.02	11.89	15.17	20.66	37.35	78.36	187.12	
Taxes		1.37	1.50	1.78	2.28	3.10	5.60	11.75	28.07	
<b>NOPAT</b>		<b>7.78</b>	<b>8.51</b>	<b>10.11</b>	<b>12.90</b>	<b>17.56</b>	<b>31.75</b>	<b>66.60</b>	<b>159.05</b>	
-Change in NWC		0.06	0.05	0.08	0.15	0.27	0.54	1.34	3.54	
-Net CapEx		0.08	0.07	0.06	0.05	0.01	0.02	0.04	0.09	
<b>FCF</b>		<b>7.64</b>	<b>8.40</b>	<b>9.96</b>	<b>12.71</b>	<b>17.28</b>	<b>31.19</b>	<b>65.23</b>	<b>155.42</b>	<b>159.00</b>
<b>PV of FCF</b>				<b>8.58</b>	<b>9.43</b>	<b>11.04</b>	<b>17.16</b>	<b>30.92</b>	<b>63.46</b>	
<b>Terminal Value</b>									<b>1,152.16</b>	
<b>PV of Terminal Value</b>									<b>470.46</b>	
<b>Enterprise Value</b>	<b>611.06</b>									
<b>Shares Outstanding</b>	3.19									
<b>Stock Price</b>	<b>191.79</b>									



---

## Summary of Findings

Summary of Findings (Skye)	1
SWOT Analysis (Collin)	2
Value Drivers (Skye)	3
Valuation (Lola and Collin)	4
<b>Risks (Lola)</b>	<b>5</b>
Conclusion (Skye)	6



# Risks



*What are some risks to our valuation?*

## Risks

Slower  
AI Growth,  
Energy

### **Slower-than-expected development in energy and robotics**

- Humanoid robotics are still in early development stages, low visibility on commercial trajectory
- If Tesla's energy products face fierce competition or fail to develop, this segment may not expand as quickly as projected

Better  
Margins

### **Margin Improvement**

- Tesla adopted many price cuts in 2023, hurting its gross margin
- If Tesla raises its selling price in 2024 or reduces costs through technological innovation, margins could improve

Stronger  
EV Sales

### **EV demand is still new and unpredictable**

- EV penetration is still slower in Europe and U.S. than China
- If penetration increases in these countries or China's EV sales exceed expectations, then Tesla's sales could exceed forecasts



---

## *Summary of Findings*

Summary of Findings (Skye)	1
SWOT Analysis (Collin)	2
Value Drivers (Skye)	3
Valuation (Lola and Collin)	4
Risks (Lola)	5
Conclusion (Skye)	6

# Conclusion

---



## *Our view On Tesla*

- Tesla has quickly grown into a leader in the electric vehicle market and is still expanding its technology
- Facing competition from other big names and newer companies in the electric vehicle market, losing market share in locations such as China
- We still expect the company to grow at a positive rate and eventually valued as an auto-tech company
- When it comes to valuing Tesla, we believe Discounted Cash Flow valuation is the best method to use
  - Relative Valuation is not as effective because Tesla is valued as a technology company, not just an auto company
  - Dividend Discount Model is not effective because Tesla does not pay out dividends, estimate using FCFE produced skewed growth rate

## Our Recommendation

---



**Hold**

Price Target: \$191.79

Upside: +7.7%