

CASE  STUDY

VALUATION MASTER CLASS

by
A. Stoltz INVESTMENT
RESEARCH

Would you buy Tesla on 19x 2025 earnings?



Valuation Master Class

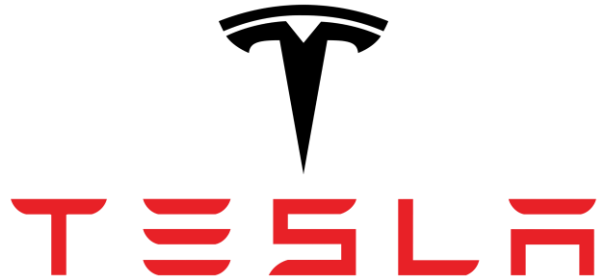
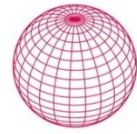


This video is for
learning purposes only.

***This is not
investment advice or a
recommendation.***



Ask
Ajarn
Andrew



Our estimate:

US\$1,142

(Upside 11%)

BUY



3 things to know about this company

- ★ Near-term strength, but market dominance declines
- ★ Many American companies fail in China, but not Tesla
- ★ Rapid production ramp up to ride EV wave

Key statistics

Analyst consensus (41)

US\$911

(Downside 14%)

SELL

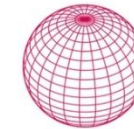
PB ratio

41x

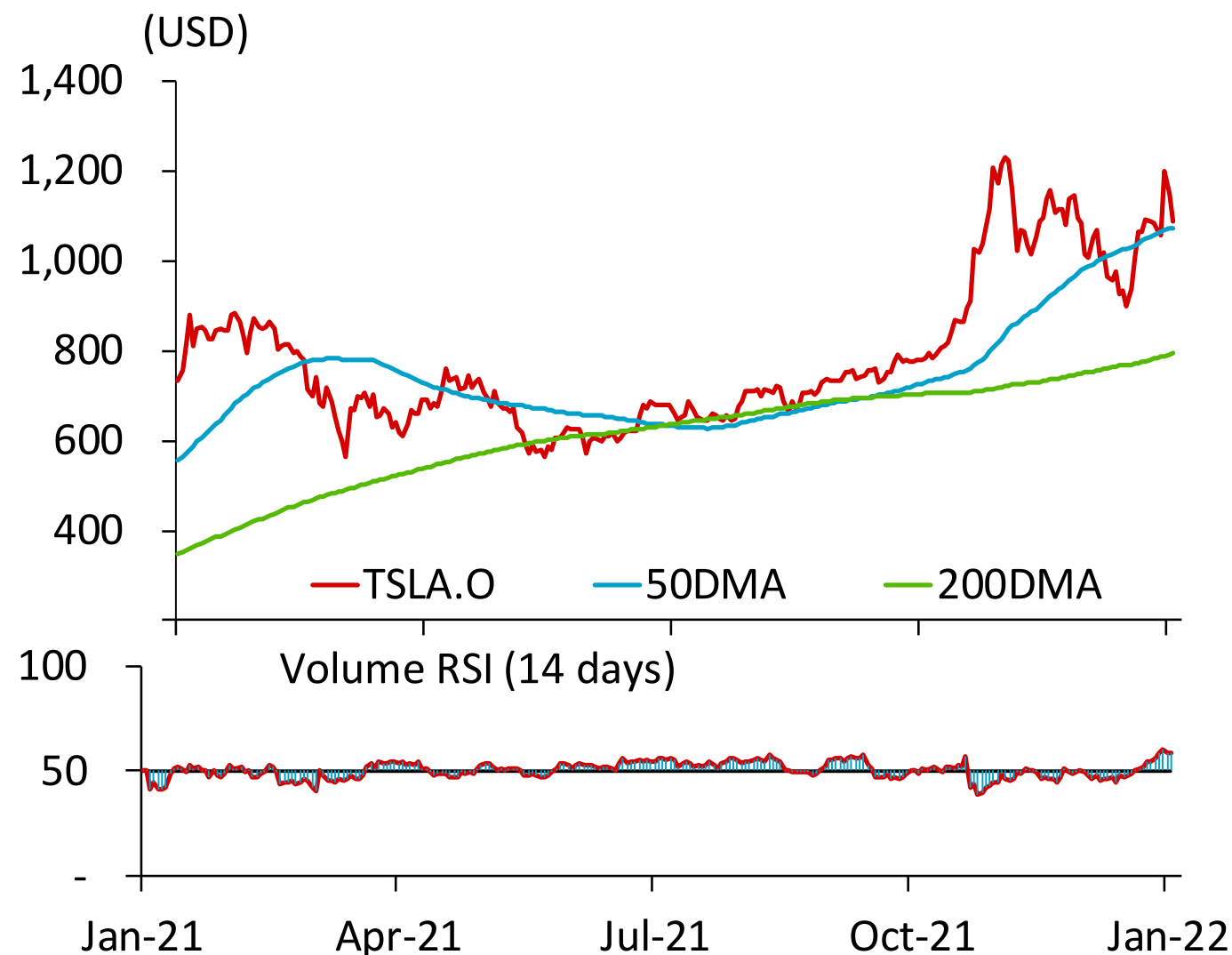
Dividend yield

0%

Technical signals still support bullish rally



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- ★ 50 DMA is well above 200 DMA suggesting a bullish signal
- ★ RSI-Volume also indicates a bullish signal as has recently stayed well above the 50% line
- ★ Considering both volume and price, Tesla's share price could ride the momentum further



Sales

Story

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Value

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Risks

Automotive sales and leasing 78%

Model 3 – Best seller



Commercial vehicles are still under development



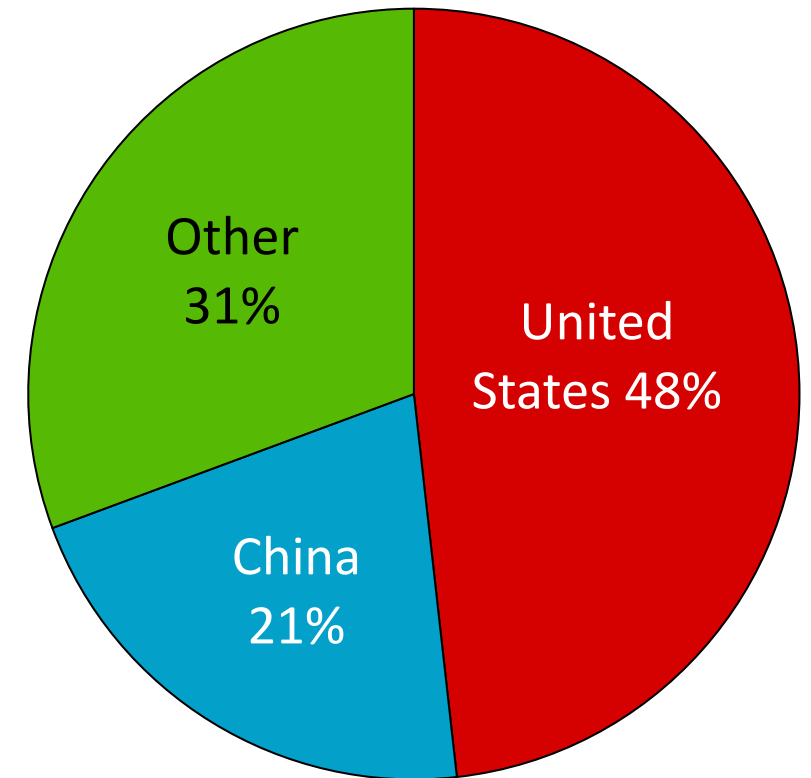
Vehicles services and merchandise 16%



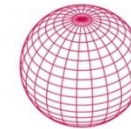
Energy generation and storage 6%



Breakdown by region



1 Near-term strength, but market dominance declines



Sales

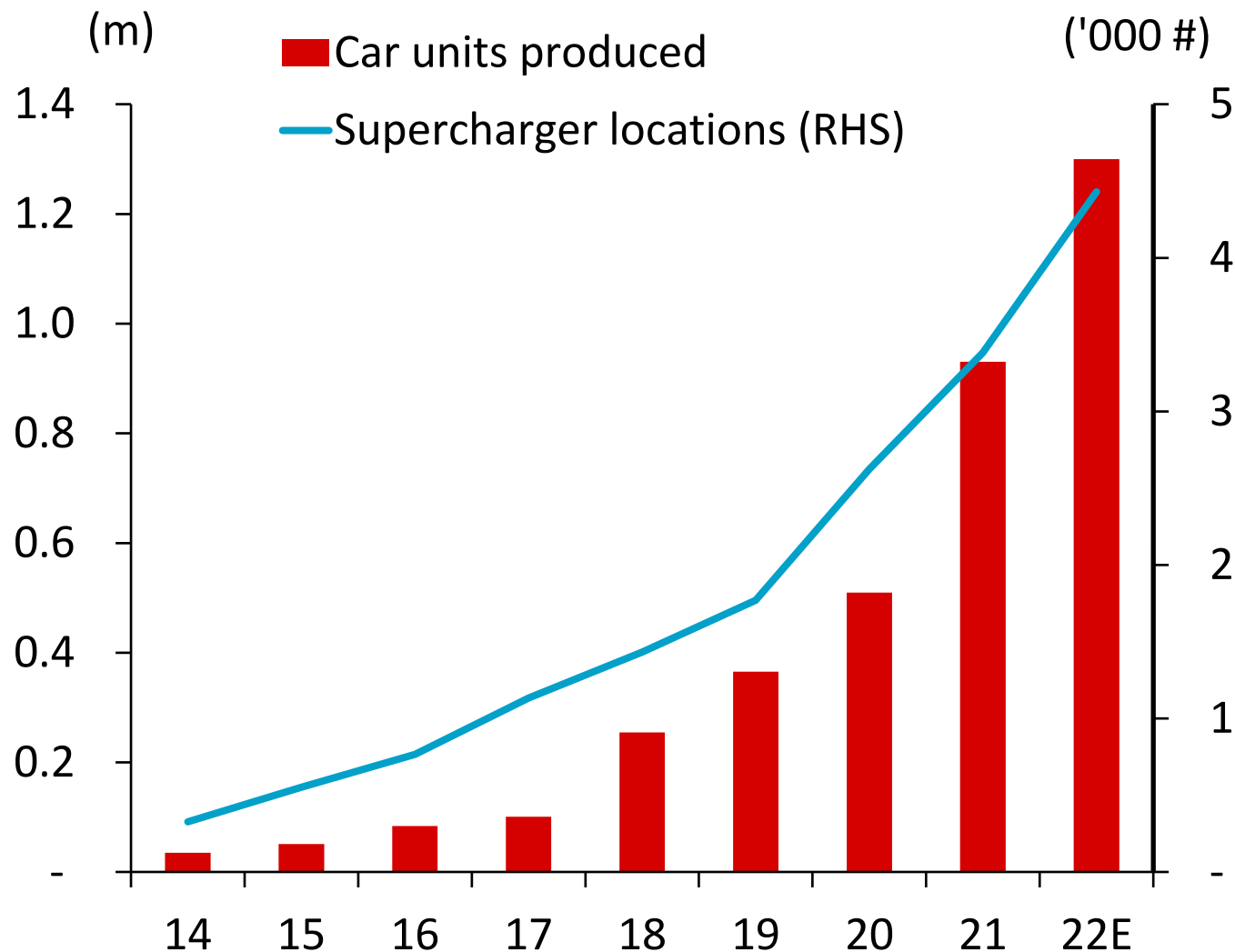
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- ★ In 2021, Tesla's car production beat analyst consensus forecast by 7.5%
 - It has been one of the few carmakers that successfully mitigated the chip shortage
 - The company has rewritten its software to support alternative chips
- ★ Tesla's competitive advantage also lies in the dedicated charging network that currently covers more than 3,300 US locations

But competitors are scaling up fast as well



Sales

Story

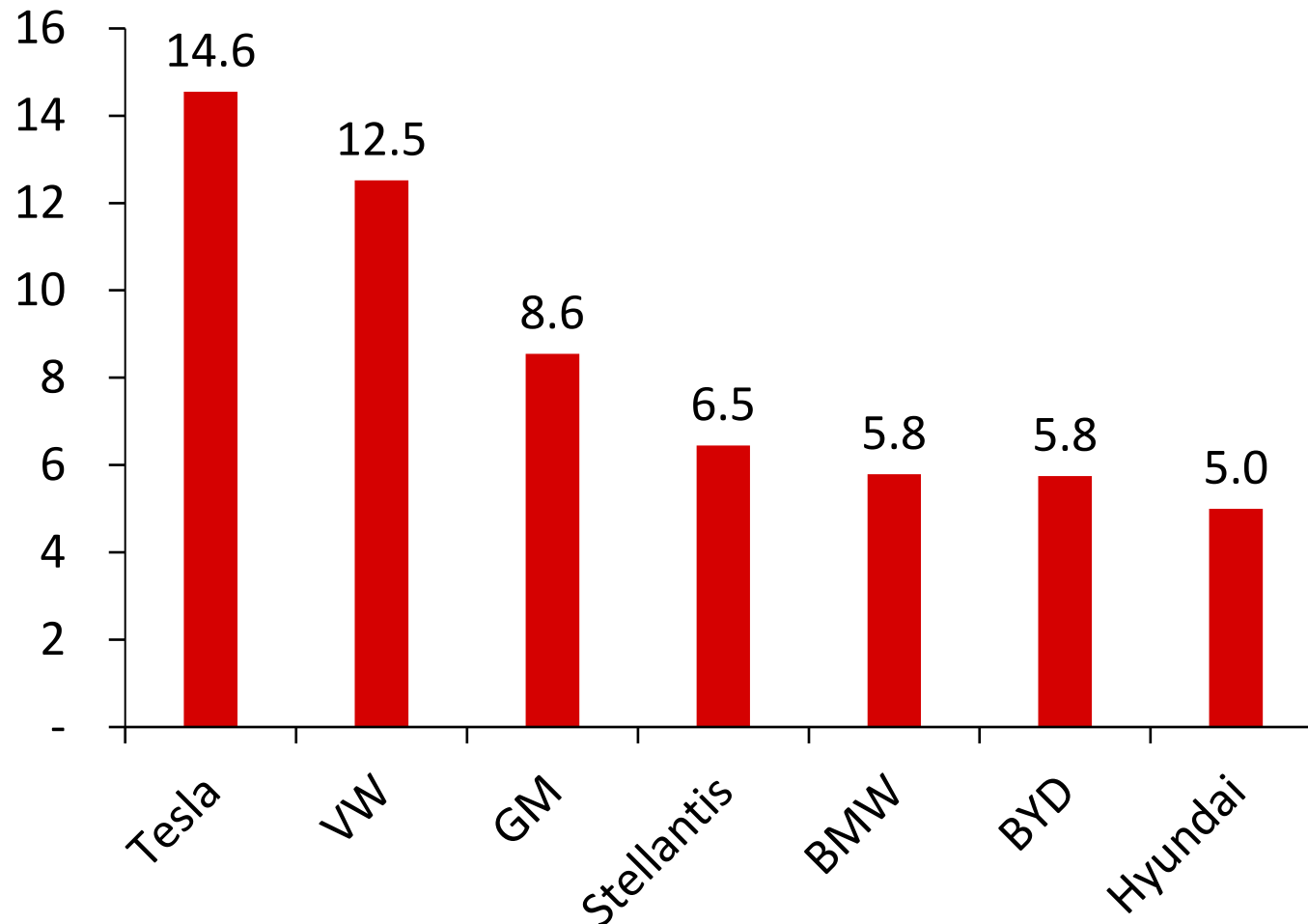
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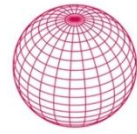
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Risks

Market share of sold EV (%)



- ★ The first mover advantage of Tesla is increasingly diminishing as competitors invest aggressively
- ★ Volkswagen is allocating more than \$100bn CAPEX to push forward electrification in the next 5 years, equaling 50% of its total budget
 - As a comparison, Tesla aims to spend \$50bn over the same horizon
 - General Motors and Stellantis follow with a \$35bn allocation each



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Risks

- ★ China is the dominant market for EV and battery development
 - In 2021, Chinese EV sales was 3.3m vehicles, 8x the US
- ★ Tesla recognized early the potential and expanded its Chinese factory to an annual production volume of 600,000
 - China already makes up 29% of Tesla's sales in 2021 and that contribution could go up much further



Why do most big US companies fail in China?



Uber



Google

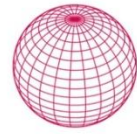
ebay

Walmart+

- **Some reason why they failed**
 - Lack of localization strategy
 - Government and regulatory hurdles
 - Underestimating domestic competitors
 - Rapidly changing market
 - Lack of understanding cultural sensitivity



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Risks

- ★ Despite the US-China trade war, China has supported Tesla in building its Giga Factory
 - It granted Tesla cheap access to land, tax incentives, and low interest rate loans
- ★ In return, Tesla is supposed to advance the Chinese EV industry and stimulate competition for technological progress
 - This is also called the “catfish effect”
 - The interdependency allows Tesla to succeed in China while other US companies fail

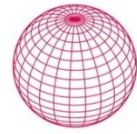


Catfish effect

The catfish effect is the effect that a strong competitor has in causing the weak to better themselves. Actions done to actively apply this effect in an organization, are termed catfish management.

[W More at Wikipedia](#)

3 Rapid production ramp up to ride EV wave



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Risks

- ★ Tesla's builds its factories at an enormous speed through ready-made construction elements
 - **Chinese factory took just 168 days to build**
- ★ Two further factories in Berlin and Austin are on the edge of opening, adding more than 1m cars additional capacity by 2022
 - **We expect the company to reach an annual production of 2m cars by 2023**





What Is Going to Happen with Inflation?



What Is Going to Happen with Inflation?

By Valuation Master Class Student

Many forces at work impact inflation. There are current trends that cause both inflationary and deflationary measures. Whether we'll see inflation or deflation in the future depends on which of these forces dominate.

[Read More](#)

HOW TO VALUE A STARTUP

ANDREW STOTZ



How to Value a Startup

By Andrew Stotz

This story started when Dan, a podcast listener, replied to my recent weekly email with this question, "How do you value a startup, especially if there is no revenue?"

[Read More](#)



How to Fight Back When Your Dreams Are Crushed

By Andrew Stotz

The trouble you face is not your fault, and I'm gonna show you how you can fight back. I challenge you to recommit to your dreams today!

[Read More](#)

ValuationMasterClass.com

What Does It Mean to Be Financially World Class?



What Does It Mean to Be Financially World Class?

Liabilities To Assets Ratio



What Is Liabilities To Assets Ratio?

Growth Year Over Year



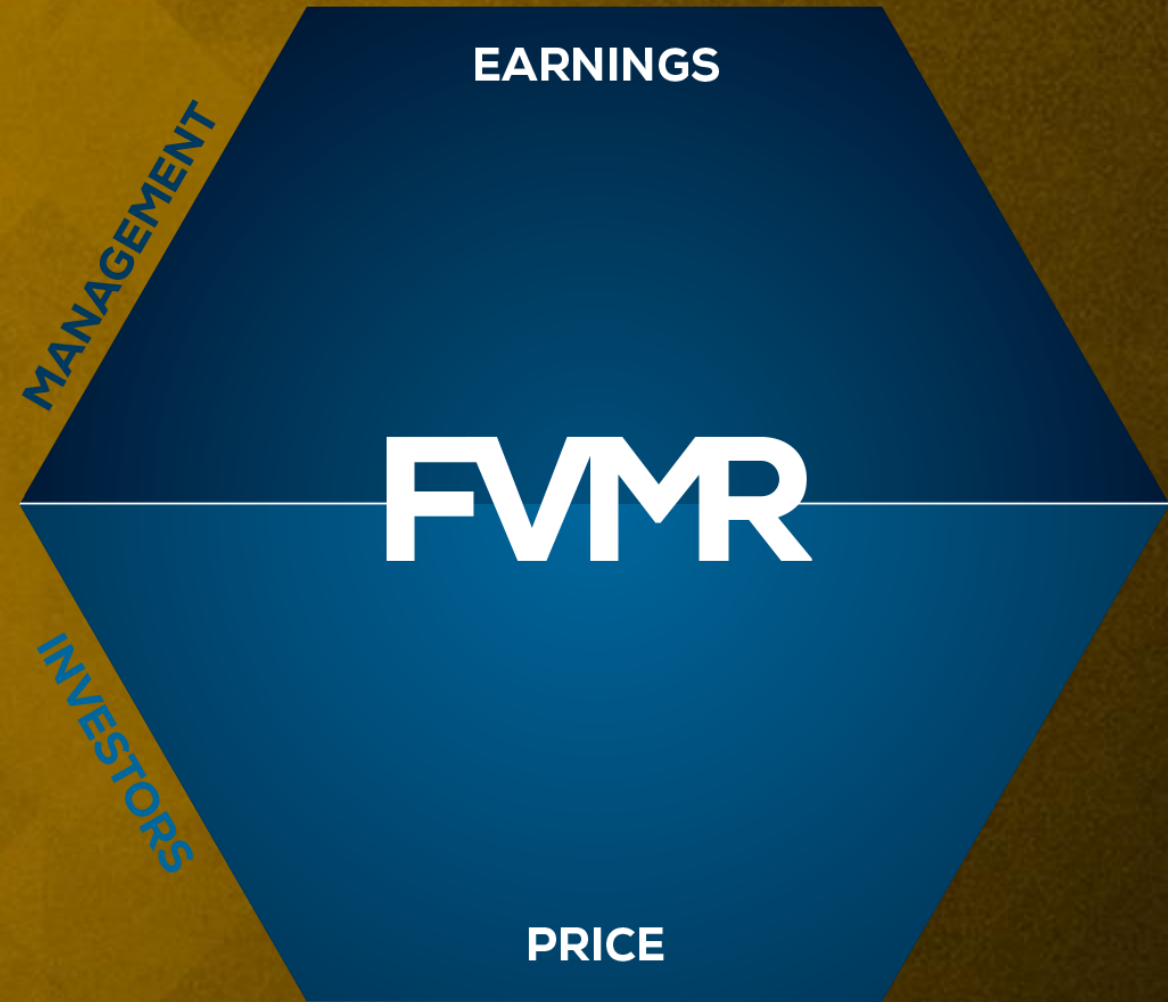
What Is Growth Year Over Year?

We will upload the slides on our blog afterward

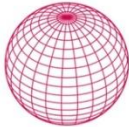


FVMR Scorecard

- ★ Measures a stock's attractiveness relative to all other companies
- ★ Attractiveness is based on four elements
 - Fundamentals, Valuation, Momentum, and Risk
- ★ Scale from 1 (Best) to 10 (Worst)



Strong fundamental improvement for a good price



Sales

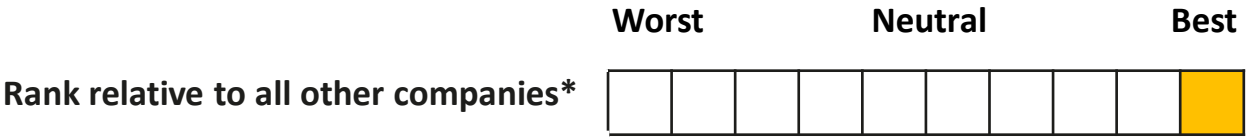
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Risks



(%)	Dec-17	Dec-18	Dec-19	Dec-20	PTM**
Operating profit margin	(14.5)	(0.8)	0.0	6.2	10.2
Recurring net margin	(11.0)	(3.4)	(3.1)	2.2	8.0
Asset turnover	45.8	73.5	76.7	73.0	90.5
Return on assets	(5.0)	(2.5)	(2.4)	1.6	7.2
Recurring return on equity	(28.7)	(15.9)	(13.3)	4.8	17.4

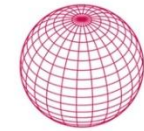
(x)	Dec-17	Dec-18	Dec-19	Dec-20	PTM**
Price-to-sales	3.8	2.2	3.8	22.9	24.3
Price-to-earnings	nm	nm	nm	1,050.1	304.3
Price-to-book	10.6	9.8	14.3	28.9	37.7
PE-to-EPS growth (PEG)	nm	nm	nm	nm	0.4
EV/EBIT	nm	nm	nm	322.7	212.0



(%)	Dec-17	Dec-18	Dec-19	Dec-20	PTM**
Revenue growth	68.0	82.5	14.5	28.3	56.3
Recurring EPS growth	68.0	45.3	(1.7)	173.4	19.2
Operating profit margin chg. (bps)	(446)	1,371	74	629	
	6mth	3mth	1mth	3wk	1wk
Price change	69.4	38.4	(17.5)	(1.8)	(6.2)

(x)	Dec-17	Dec-18	Dec-19	Dec-20	PTM**
Current ratio	0.9	0.8	1.1	1.9	1.4
Net debt-to-equity (%)	196.9	196.5	130.6	(27.9)	(33.0)
Times-interest-earned	(2.9)	(0.2)	0.0	2.5	7.8
	5yr	3yr	1yr	6mth	3mth
	1.8	1.9	2.5	1.7	1.2

Note: Benchmarking against 2,170 non-financial companies in USA.



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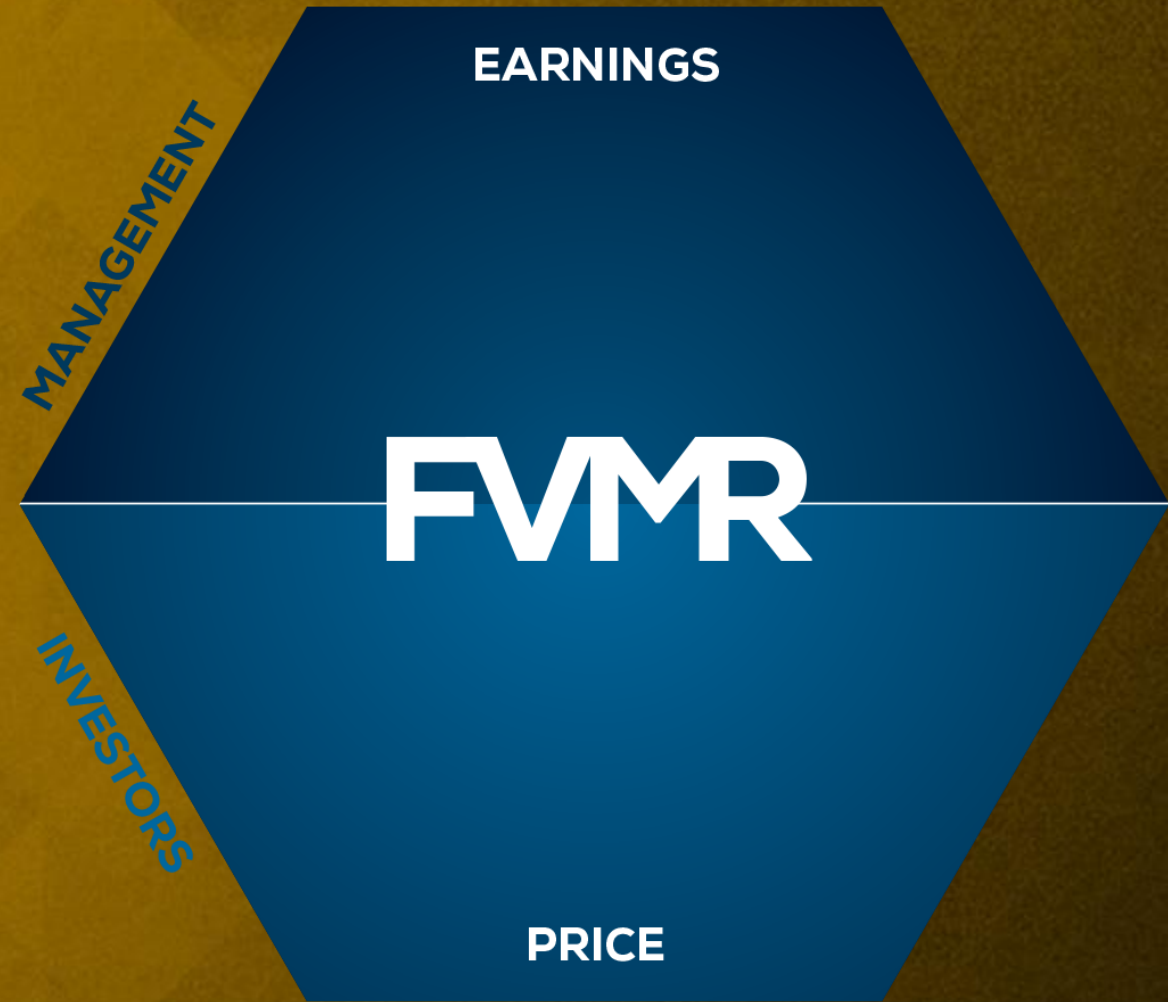
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Risks

Momentum					
	W				B
(%)	Dec-17	Dec-18	Dec-19	Dec-20	PTM**
Revenue growth	68.0	82.5	14.5	28.3	66.3
Recurring EPS growth	68.0	45.3	(1.7)	173.4	719.2
Operating profit margin chg. (bps)	(446)	1,371	74	629	434
	6mth	3mth	1mth	3wk	1wk
Price change	69.4	38.4	(17.5)	(1.8)	(6.2)

Recently, I created a short
online course explaining my
FVMR investing approach

Get \$97 value
for FREE
(limited offer)



Consensus remains optimistic regarding profitability turnaround



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Analyst consensus valuation

Recommendation	Oct-21	Nov-21	Dec-21	Current
Strong buy	11	11	11	11
Buy	6	7	6	7
Hold	13	12	13	13
Sell	6	6	6	6
Strong sell	4	4	4	4
Average score	2.7	2.6	2.7	2.6

Price target	Aug-21	Sep-21	Oct-21	Current
Median	755.0	860.0	950.0	950.0
Mean	692.8	809.3	855.6	911.2

#41
analysts

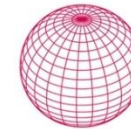


Downside: 14.4%

Analyst consensus 3-year forecast

(%)	18	19	20	21E	22E	23E
Revenue growth	2.5	14.5	28.3	65.0	41.6	22.2
Gross margin	18.8	16.6	21.0	24.7	25.5	25.3
EPS growth	51.6	14.3	175.4	522.2	56.4	36.6

- ★ Analysts are mixed about Tesla's outlook
 - High dispersion among analysts is usually really rare
 - There are 10 sell or strong sell recommendations
- ★ Consensus expects revenue to continue growing at a very fast pace



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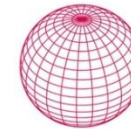
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Risks

(YE Dec, US\$ m)	2019A	2020A	2021E	2022E
Revenue	24,578	31,536	50,773	72,859
Cost of goods & services	(20,509)	(24,906)	(38,080)	(54,280)
Gross profit	4,069	6,630	12,693	18,579
SG&A	(3,989)	(4,636)	(6,804)	(9,472)
Other operating (exp)/inc	-	-	-	-
EBIT	80	1,994	5,890	9,107
Interest expense (net)	(641)	(818)	(483)	(511)
Other non-operating inc/(exp)	(3)	92	138	145
Earnings before taxes (EBT)	(564)	1,268	5,544	8,742
Income tax	(110)	(292)	(693)	(1,005)
Earnings after taxes (EAT)	(674)	976	4,851	7,736
Equity income/Minority interest	(95)	(172)	(146)	(155)
Earnings from cont. operations	(769)	804	4,706	7,582
Forex/Exceptionals before tax	(101)	(114)	-	-
Net profit	(870)	690	4,706	7,582

- ★ We expect the company to fulfill its massive growth expectations reflected in high double-digit revenue growth
- ★ Tesla started to write black ink on its bottom-line in 2020
 - **With the production ramp up, it generates growing profits from 2021E onward**

Balance sheet - assets



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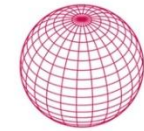
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Risks

(YE Dec, US\$ m)	2019A	2020A	2021E	2022E
Cash & short-term investments	6,268	19,384	19,278	28,094
Accounts receivable	1,324	1,886	2,116	3,036
Inventories	3,552	4,101	4,760	6,785
Other current assets	959	1,346	1,625	2,331
Total current assets	12,103	26,717	27,779	40,246
Long-term investments	-	-	-	-
Net fixed assets	20,199	23,375	30,312	32,501
Intangible assets	339	313	313	313
Goodwill	198	207	207	207
Other long-term assets	1,470	1,536	1,551	1,567
Total assets	34,309	52,148	60,162	74,834

- ★ The company has a massive cash position, holding around 37% of its assets in cash as of 2020
- ★ Heavy fixed assets investments necessary to maintain leading role in climate neutral car development

Balance sheet - liabilities



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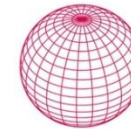
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Risks

(YE Dec, US\$ m)	2019A	2020A	2021E	2022E
Overdrafts & short-term loans	1,785	2,132	1,479	1,553
Accounts payable	5,548	8,502	10,578	15,078
Other current liabilities	3,334	3,614	4,062	5,829
Total current liabilities	10,667	14,248	16,119	22,460
Long-term debt	11,634	9,607	10,847	11,389
Other long-term liabilities	4,541	5,218	5,270	5,323
Total liabilities	26,842	29,073	32,236	39,172
Minority interest	849	850	996	1,150
Paid-up capital - Common shares	12,737	27,261	27,261	27,261
Paid-up capital - Preferred shares	-	-	-	-
Retained earnings	(6,083)	(5,399)	(693)	6,888
Revaluation/Forex/Others	(36)	363	363	363
Total equity	6,618	22,225	26,931	34,512
Total liab & shareholders' equity	34,309	52,148	60,162	74,834

- ★ Tesla has moderately low leverage
 - Liabilities-to-assets ratio stood at 56% in 2020
- ★ Retained earnings should turn positive in 2022E

Cash flow statement



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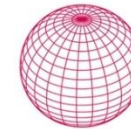
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Risks

(YE Dec, US\$ m)	2019A	2020A	2021E	2022E
Net income	(870)	690	4,706	7,582
Depreciation & amortization	1,213	1,407	1,626	1,939
Calculated chg in net working capital	243	1,736	1,356	2,615
Other non-cash & balancing items	1,819	2,110	146	155
Operating cash flow	2,405	5,943	7,833	12,290
Capital expenditures	(1,437)	(3,242)	(8,563)	(4,128)
(Inc)/dec in other investments	1	110	(15)	(16)
Investing cash flow	(1,436)	(3,132)	(8,578)	(4,144)
Increase/(dec) in debt	798	(2,488)	587	616
Dividend paid	-	-	-	-
Change in equity	1,285	12,686	-	-
Others	(554)	(225)	52	53
Financing cash flow	1,529	9,973	639	669
Net inc/(dec) in cash & cash equi	2,498	12,784	(106)	8,815
Beginning cash	3,686	6,268	19,384	19,278
Adjustment for historic data	84	332	-	-
Ending cash	6,268	19,384	19,278	28,094

- ★ Operating cash flow could turn massively positive in 2022
- ★ Heavy CAPEX in 2021E due to the development of two further Giga factories
 - We expect Tesla to continue massive spending on its technology e.g., batteries



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Risks

(YE Dec)	2019A	2020A	2021E	2022E
General growth (YoY, %)				
Revenue	14.5	28.3	61.0	43.5
Assets	15.4	52.0	15.4	24.4
Gross profit	0.7	62.9	91.5	46.4
Operating profit	131.6	nm	195.4	54.6
Attributable profit	10.9	179.3	582.0	61.1
EPS	13.9	175.2	562.5	61.1
Recurring EPS	12.2	182.6	489.7	61.1
Du Pont analysis (%)				
Net profit margin	(3.5)	2.2	9.3	10.4
Revenue per US\$100 of assets	76.7	73.0	90.4	107.9
Assets/equity (x)	5.5	3.0	2.3	2.2
Return on equity	(15.1)	4.8	19.1	24.7

- ★ Tesla laid the foundation for high growth by expanding its production capacity fast
- ★ As Tesla moves closer to full capacity of its existing plans, we expect a higher efficiency



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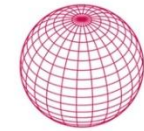
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Risks

(YE Dec)	2019A	2020A	2021E	2022E
Internal liquidity (x)				
Current ratio	1.1	1.9	1.7	1.8
Quick, or acid test ratio	0.8	1.6	1.4	1.5
Working cap. mgmt (Days)				
Inventory conversion period	59	55	42	38
Receivables collection period	17	18	14	13
Days from raw mat to coll	75	74	56	51
Payables deferral period	90	102	90	85
Cash conversion cycle	(15)	(28)	(34)	(34)
Profitability ratios (%)				
Gross profit margin	16.6	21.0	25.0	25.5
EBIT margin	0.3	6.3	11.6	12.5
EBIT return on avg assets	0.2	4.6	10.5	13.5
Return on average assets	(2.7)	1.6	8.4	11.2
Financial risk (x)				
Liabilities-to-assets (%)	78.2	55.8	53.6	52.3
Debt-to-equity	2.0	0.5	0.5	0.4
Net debt-to-equity	1.1	(0.3)	(0.3)	(0.4)
Times-interest-earned	na	na	13.9	19.4
Effective interest rate (%)	5.4	6.7	4.5	4.5

- ★ Tesla has the ability to achieve an above-industry margin
- ★ Tesla became a net cash company in 2020



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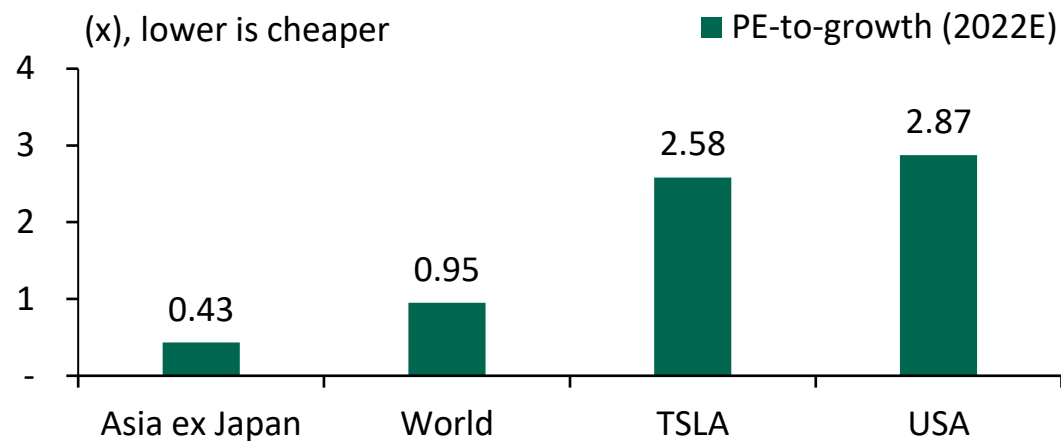
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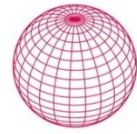
Risks

Forecast assumptions (compared against US Cons. Disc.)				
PE ratio (x)	2019A	2020A	2021E	2022E
TSLA	(161)	1,050	254	158
USA	40	73	43	36
Asia ex Japan	38	33	29	20
World	21	50	30	24
EPS growth (%)				
TSLA	12	183	490	61
USA	(2)	11	(12)	13
Asia ex Japan	36	(20)	14	45
World	(10)	(35)	68	25

My valuation method (compared against US Cons. Disc.)



- ★ While Tesla trades on a massive PE-multiple, we should not neglect its vast growth potential
- ★ Looking at the 2022E PEG multiple, Tesla trades slightly below the average US Consumer Discretionary company
- ★ In this valuation let's say that Tesla re-rates to its industry average



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Risks

- If volume goes from 1m units in 2021 to 6m in 2025
- And the price of cars rises by about 10% per year
- This would mean revenue grows from US\$51bn in 2021 to US\$446bn in 2025
- Assume that net profit margin rises from 2021's 9% to 12% by 2025
- Then Tesla would produce profit in 2025 of US\$54bn
- The company currently trades on 213x 2021 PE
- But that would fall to 90x 2022, 37x 2023, 25x 2024, and 19x 2025



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Ratios

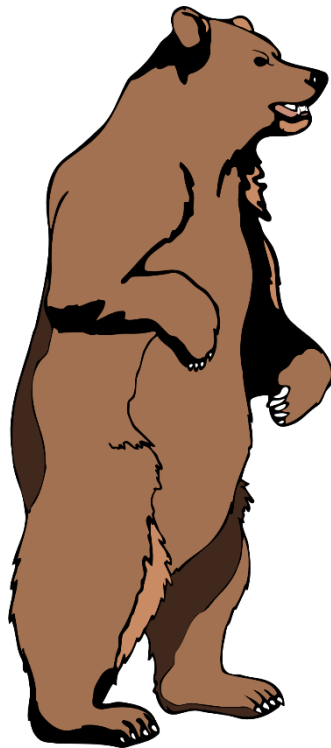
Value

Risks

Bear

US\$1,023

(Downside 0.3%)



Base

US\$1,142

(Upside 11.2%)



Bull

US\$1,268

(Upside 23.5%)



World Class Benchmarking Scorecard

- ★ Identifies a company's competitive position relative to global peers
- ★ Combined, composite rank of profitability and growth, called "Profitable Growth"
- ★ Scale from 1 (Best) to 10 (Worst)





Sales

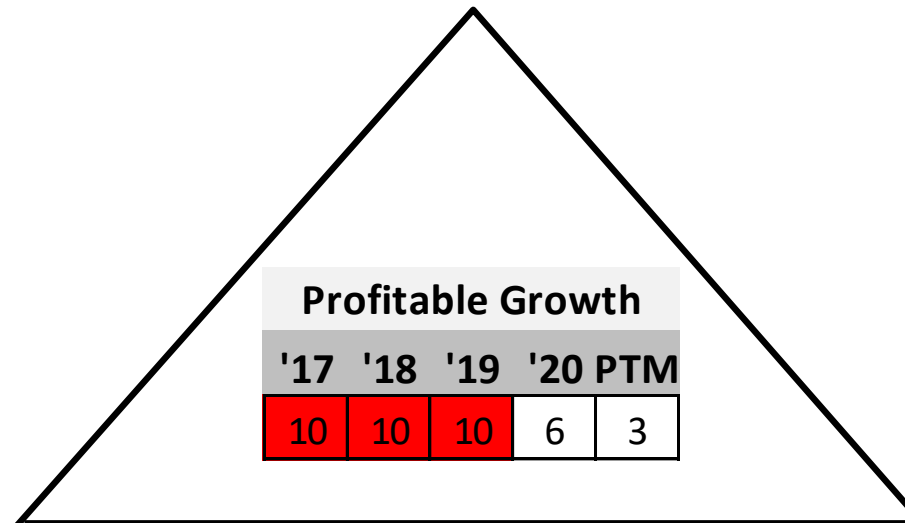
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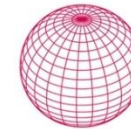
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Risks



Benchmarked against 1,040 large Cons. Disc. companies worldwide.

World-Class Growth gives it a strong #3 rank



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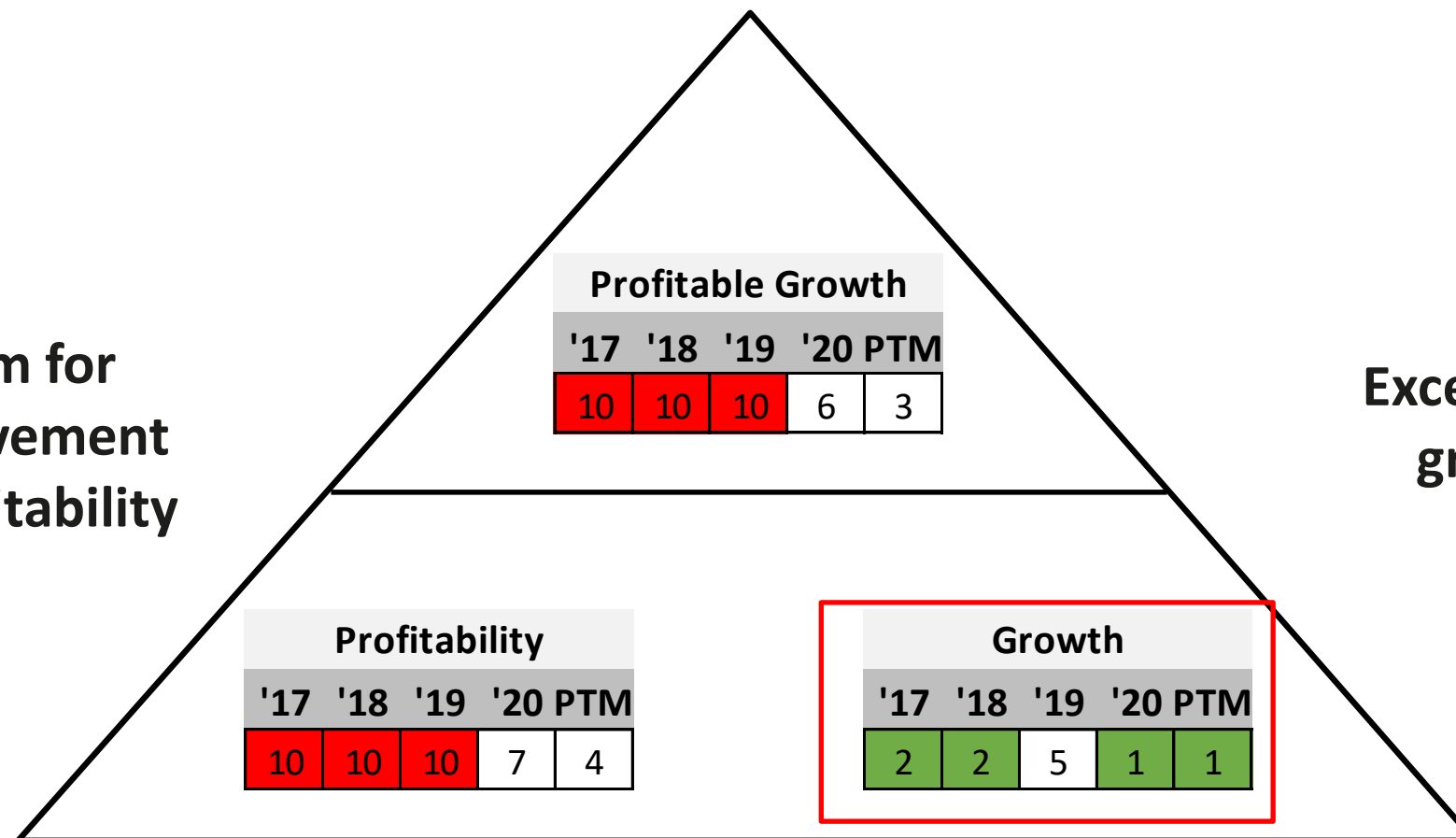
Value

WCB

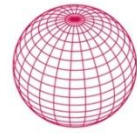
Risks

Room for improvement in profitability

Exceptional growth



Benchmarked against 1,040 large Cons. Disc. companies worldwide.



Sales

Story

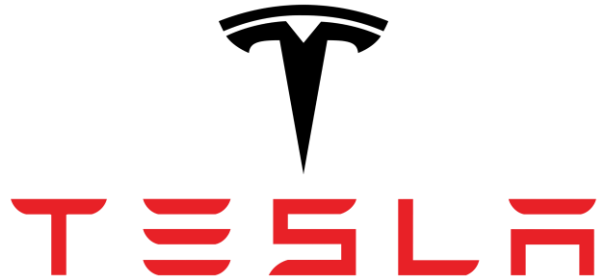
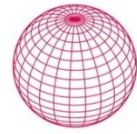
FVMR

Value

WCB

Risks

- ★ Competitors could close the tech gap faster than expected as they invest heavily
- ★ Adverse regulatory changes in China could hamper the business
- ★ Sentiment can lead to volatile stock price movement



Our estimate:

US\$1,142

(Upside 11%)

BUY



3 things to know about this company

- ★ Near-term strength, but market dominance declines
- ★ Many American companies fail in China, but not Tesla
- ★ Rapid production ramp up to ride EV wave

Key statistics

Analyst consensus (41)

US\$911

(Downside 14%)

SELL

PB ratio

41x

Dividend yield

0%

CONCLUSION

- Tesla's success lies in the EV-dominant country China
- Delivering high profitability could convince skeptics
- Tesla's high PE sounds more reasonable when relating it to its massive growth prospects

