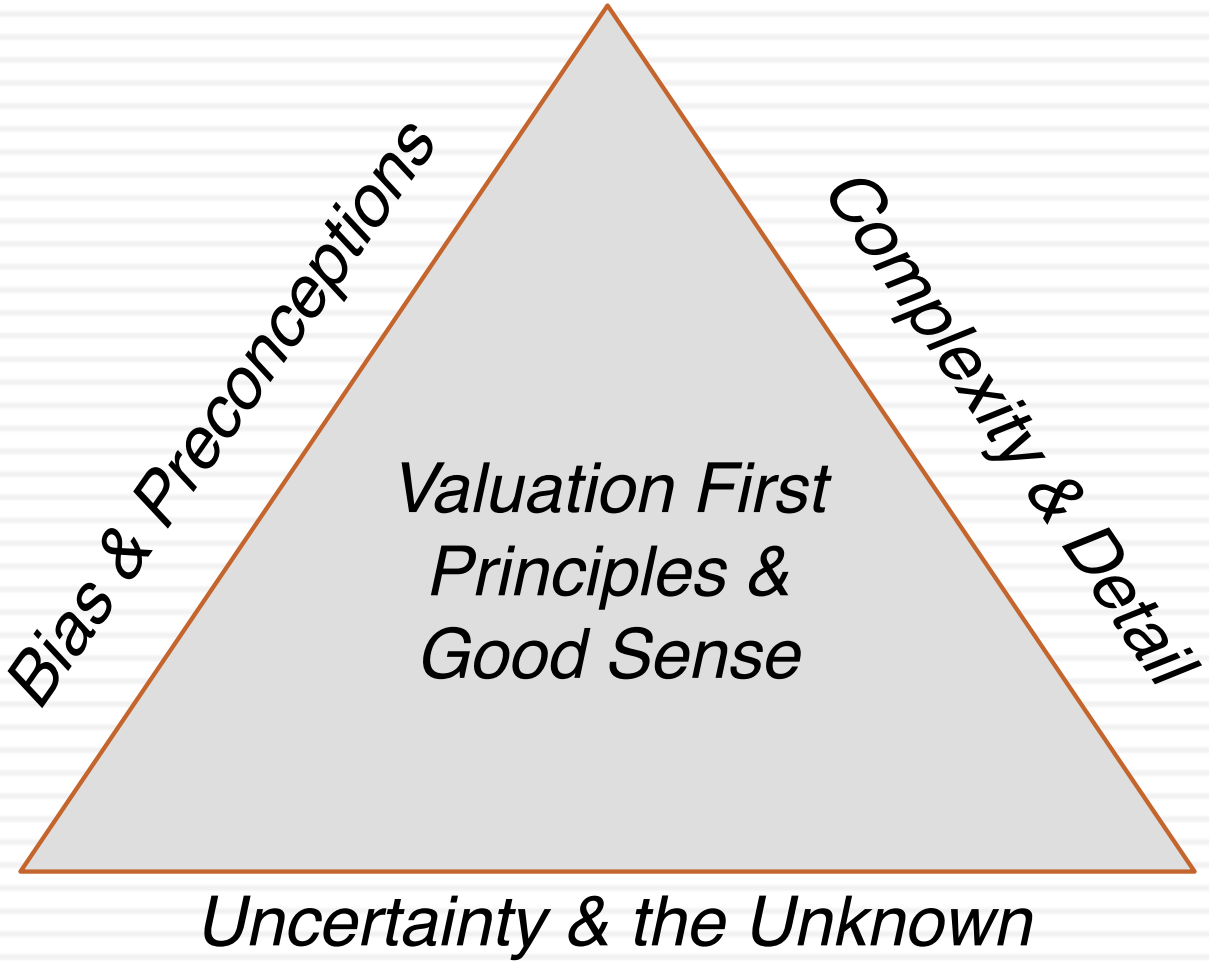
# NARRATIVE AND NUMBERS: LIGHT IN THE DARKNESS!

When in trouble, go back to basics!

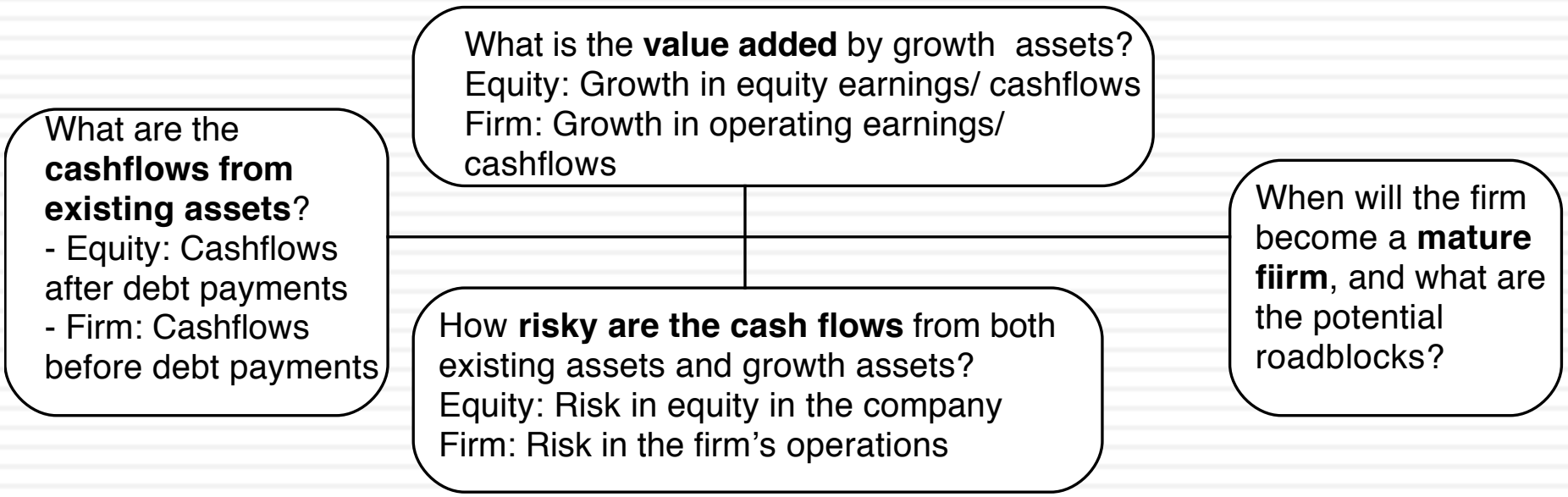
# The Bermuda Triangle of Valuation



# Tesla: What are your priors?

- With Tesla, there are no neutral observers. There are people who love the company or hate it. Almost no one has no opinion on the company. What is your prior?
  a. I love the company. It will be a trillion dollar company.
  b. I hate the company. I think it is a scam
- Tesla also happens to be a personality-driven company. What you think about Elon Musk will mirror what you think about Tesla. What are the potential concerns you should have about that interleaving of the personal and the corporate?

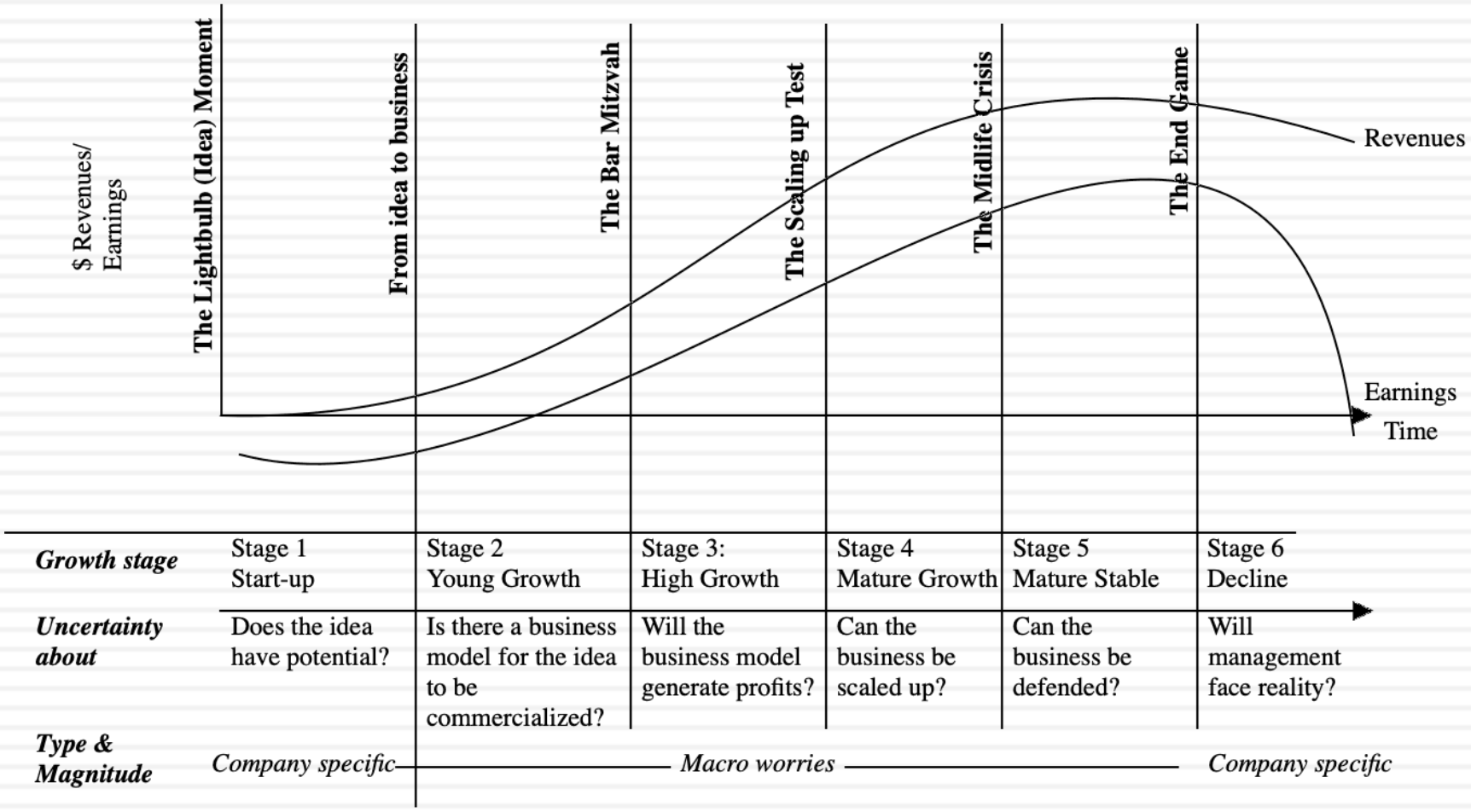
# Valuation Uncertainty



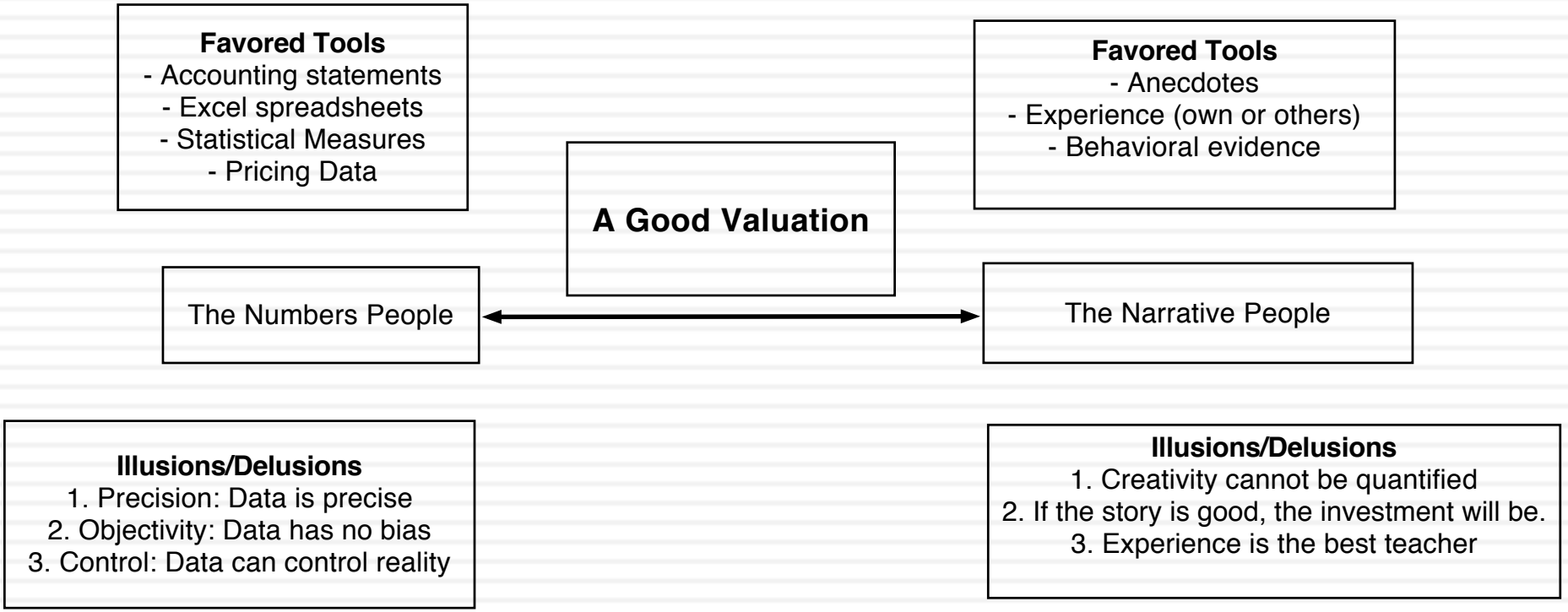
# The sources of uncertainty

- Estimation versus Economic uncertainty
  - Estimation uncertainty reflects the possibility that you could have the "wrong model" or estimated inputs incorrectly within this model.
  - Economic uncertainty comes the fact that markets and economies can change over time and that even the best medals will fail to capture these unexpected changes.
- Micro uncertainty versus Macro uncertainty
  - Micro uncertainty refers to uncertainty about the potential market for a firm's products, the competition it will face and the quality of its management team.
  - Macro uncertainty reflects the reality that your firm's fortunes can be affected by changes in the macro economic environment.
- Discrete versus continuous uncertainty
  - Discrete risk: Risks that lie dormant for periods but show up at points in time. (Examples: A drug working its way through the FDA pipeline may fail at some stage of the approval process or a company in Venezuela may be nationalized)
  - Continuous risk: Risks changes in interest rates or economic growth occur continuously and affect value as they happen.

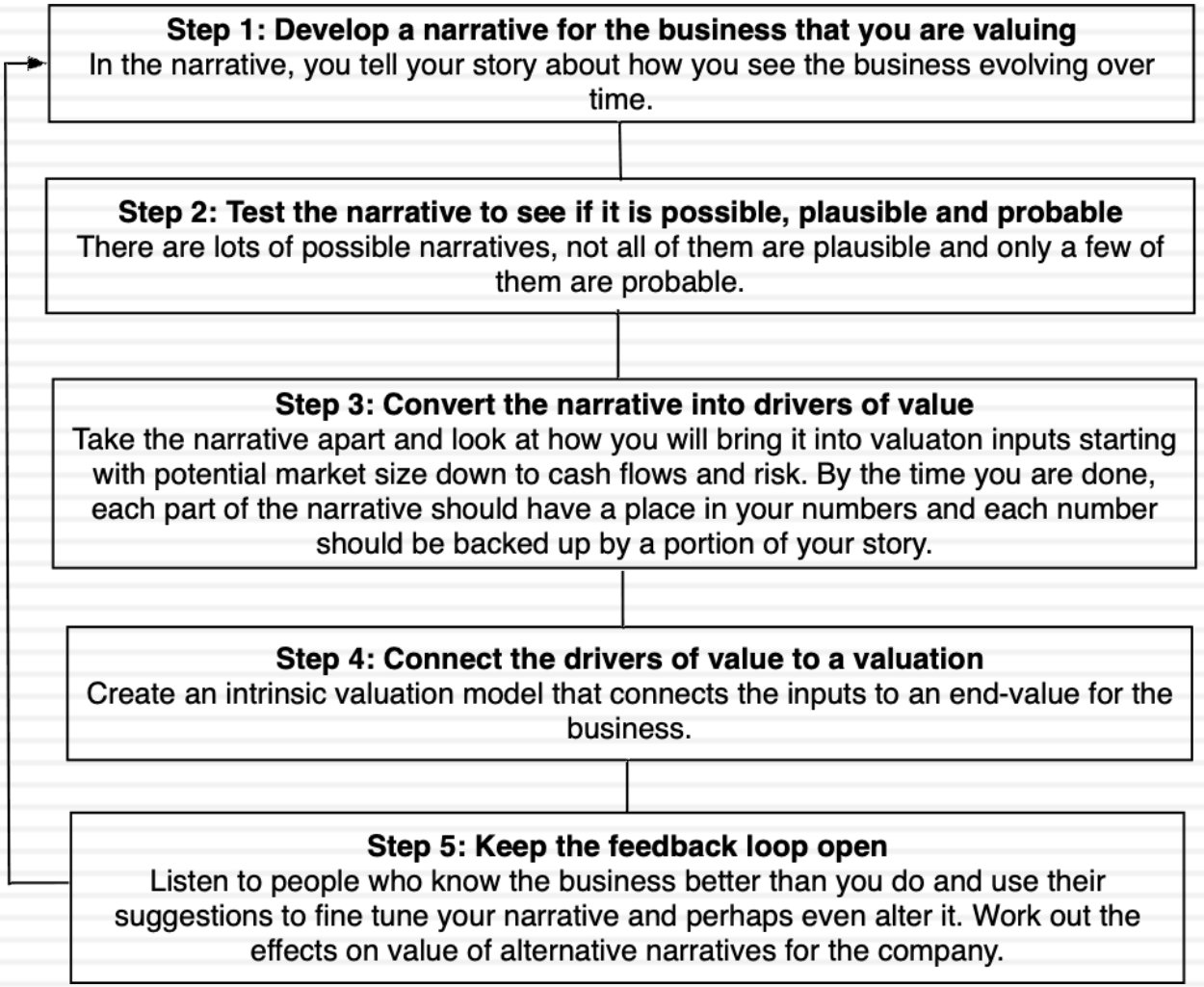
# A Life Cycle View



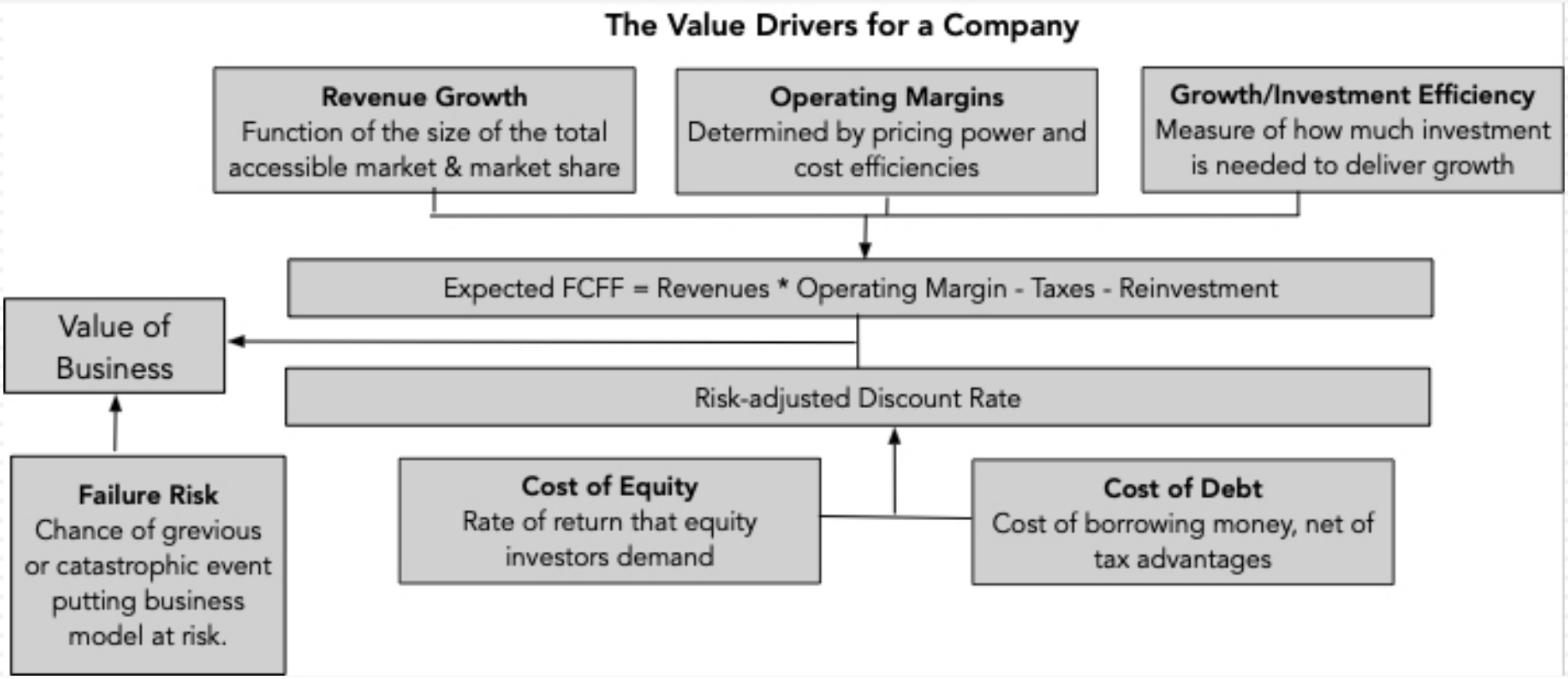
# Healthy Valuation



# The steps in valuation



# The Drivers of Value



| Tesla | | | | | | Jun-19 |
|---|---|---|---|---|---|---|
| ***A Teenage Phenom faces growing (up) pains!*** | | | | | | |
| Tesla will grow as a high-end auto company, delivering $100 billion in revenues in year 10. In the face of stronger competition, Tesla's brand name and battery technology will allow it to deliver on profitability (with margins in the 75th percentile of auto firms) and raise enough capital to cover its large reinvestment needs for much of the next decade. While Tesla's operating risk will move towards average over time, its debt burden puts it at risk of default, and that risk has risen to 20%. There is a floor to operating value at $35-$40 billion, at which the firm will be attractive as an acqusition target to an auto or (more likely) a large tech firm. Overlying all of this is the danger that Elon Musk will put the company's potential at risk, by either over reaching on product offerings or committing financial malpractice. | | | | | | |
| ***The Assumptions*** | | | | | | |
| | *Base year* | *Years 1-5* | *Years 6-10* | | *After year 10* | *Link to story* |
| Revenues (a) | $ 22,594 | 30.00% → | 2.26% | | 2.26% | |
| Operating margin (b) | 1.98% | 1.98% → | 10.00% | | 10.00% | |
| Tax rate | 25.00% | 25.00% → | 25.00% | | 25.00% | |
| Reinvestment (c ) | | Sales to capital ratio | 2.00 | RIR = | 22.60% | |
| Return on capital | 1.67% | Marginal ROIC = | 24.53% | | 10.00% | |
| Cost of capital (d) | | 7.87% → | 8.00% | | 8.00% | |
| ***The Cash Flows*** | | | | | | |
| | *Revenues* | *Operating Margin* | *EBIT* | *EBIT (1-t)* | *Reinvestment* | *FCFF* |
| 1 | $ 29,372 | 3.58% | $ 1,053 | $ 1,053 | $ 3,389 | $ (2,337) |
| 2 | $ 38,184 | 5.19% | $ 1,981 | $ 1,981 | $ 4,406 | $ (2,425) |
| 3 | $ 45,821 | 6.79% | $ 3,112 | $ 3,112 | $ 3,818 | $ (706) |
| 4 | $ 54,985 | 8.40% | $ 4,616 | $ 3,751 | $ 4,582 | $ (831) |
| 5 | $ 65,982 | 10.00% | $ 6,598 | $ 4,949 | $ 5,498 | $ (550) |
| 6 | $ 76,837 | 10.00% | $ 7,684 | $ 5,763 | $ 5,428 | $ 335 |
| 7 | $ 86,752 | 10.00% | $ 8,675 | $ 6,506 | $ 4,958 | $ 1,549 |
| 8 | $ 94,869 | 10.00% | $ 9,487 | $ 7,115 | $ 4,058 | $ 3,057 |
| 9 | $ 100,379 | 10.00% | $ 10,038 | $ 7,528 | $ 2,755 | $ 4,773 |
| 10 | $ 102,647 | 10.00% | $ 10,265 | $ 7,699 | $ 1,134 | $ 6,564 |
| Terminal year | $ 104,967 | 10.00% | $ 10,497 | $ 7,873 | $ 1,779 | $ 6,093 |
| ***The Value*** | | | | | | |
| Terminal value | | | $ 106,156 | | | |
| PV(Terminal value) | | | $ 49,594 | | | |
| PV (CF over next 10 years) | | | $ 2,461 | | | |
| Value of operating assets = | | | $ 52,055 | | | |
| Adjustment for distress | | | $ 5,206 | Default probability (based on rating) = | | 20.00% |
| - Debt & Minority Interests | | | $ 14,658 | | | |
| + Cash & Other Non-operating assets | | | $ 2,198 | | | |
| Value of equity | | | $ 34,389 | | | |
| - Value of equity options | | | $ 805 | 32 million options (CEO package & convertibles), deep out of the money right now. | | |
| Number of shares | | | 176.42 | | | |
| Value per share | | | $ 190.36 | Stock was trading at = | | $185.50 |

# Tesla

***Silence is golden!***

With the wind behind its back, Tesla has consolidated its hold on the electric car market and will continue to grow that market, at the expense of conventional car makers. Pushing its production towards 2 million cars by 2030, it will also be able to deliver higher margins than conventional auto companies in steady state. The rise in its market capitalization has reduced its cost of capital and the chance of failure. While Tesla will be able to invest less than other auto companies to add to capacity, its need to ramp up production will require more capital, creating negative cash flows in the near years. While other revenue sources (green energy, driverless cars in ride sharing) will supplement revenues, it will remain at its core an electric car company.

***The Assumptions***

| | *Base year* | *Years 1-5* | *Years 6-10* | | *After year 10* | *Link to story* |
|---|---|---|---|---|---|---|
| Revenues (a) | $ 24,578 | 25.00% | → 1.75% | | 1.75% | Growth in EV market & Tesla's early mover advantage work in its favor. |
| Operating margin (b) | 1.60% | 1.60% | → 12.00% | | 12.00% | Continued economies of scale & brand |
| Tax rate | 25.00% | 25.00% | → 25.00% | | 25.00% | Global tax rate |
| Reinvestment (c ) | | Sales to capital ratio | 3.00 | RIR = | 17.50% | Capacity build up allows for less reinvestment in the near years. |
| Return on capital | 1.59% | Marginal ROIC = | 34.86% | | 10.00% | Cost of entry will limit competition. |
| Cost of capital (d) | | 7.00% | → 7.40% | | 7.40% | Moves to median company cost of capital |

***The Cash Flows***

| | *Revenues* | *Operating Margin* | *EBIT* | *EBIT (1-t)* | *Reinvestment* | *FCFF* |
|---|---|---|---|---|---|---|
| 1 | $ 30,723 | 3.68% | $ 1,132 | $ 849 | $ 2,048 | $ (1,199) |
| 2 | $ 38,403 | 5.76% | $ 2,213 | $ 1,660 | $ 2,560 | $ (900) |
| 3 | $ 48,004 | 7.84% | $ 3,764 | $ 2,823 | $ 3,200 | $ (377) |
| 4 | $ 60,005 | 9.92% | $ 5,953 | $ 4,465 | $ 4,000 | $ 464 |
| 5 | $ 75,006 | 12.00% | $ 9,001 | $ 6,751 | $ 5,000 | $ 1,750 |
| 6 | $ 90,270 | 12.00% | $ 10,832 | $ 8,124 | $ 7,632 | $ 492 |
| 7 | $ 104,442 | 12.00% | $ 12,533 | $ 9,400 | $ 7,086 | $ 2,314 |
| 8 | $ 115,983 | 12.00% | $ 13,918 | $ 10,438 | $ 5,770 | $ 4,668 |
| 9 | $ 123,406 | 12.00% | $ 14,809 | $ 11,107 | $ 3,711 | $ 7,395 |
| 10 | $ 125,566 | 12.00% | $ 15,068 | $ 11,301 | $ 1,080 | $ 10,221 |
| Terminal year | $ 127,763 | 12.00% | $ 15,332 | $ 11,499 | $ 2,012 | $ 9,486 |

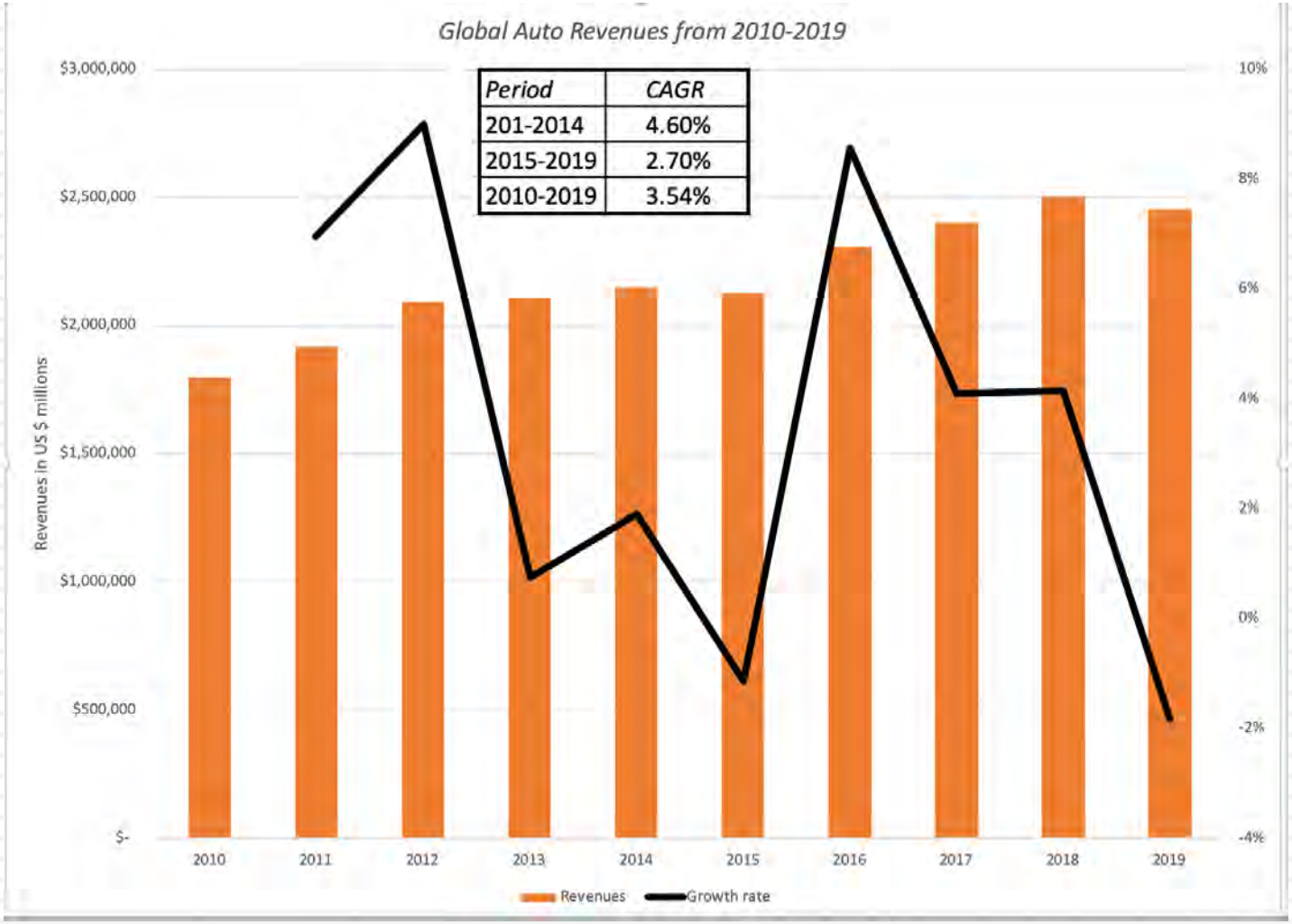
***The Value***

| | | | |
|---|---|---|---|
| Terminal value | $ 167,901 | | |
| PV(Terminal value) | $ 84,402 | | |
| PV (CF over next 10 years) | $ 12,988 | | |
| Value of operating assets = | $ 97,390 | | |
| Adjustment for distress | $ 4,869 | Probability of failure = | 10.00% |
| - Debt & Minority Interests | $ 14,708 | | |
| + Cash & Other Non-operating assets | $ 6,514 | | |
| Value of equity | $ 84,326 | | |
| - Value of equity options | $ 8,822 | | |
| Number of shares | 177.00 | | |
| Value per share | $ 426.58 | Stock was trading at = | $581.00 |

# The drivers of value

- The Growth Lever: The **revenue growth rate** controls how much and how quickly the firm will be able to grow its revenues from autos, software, solar panels and anything else that you believe the company. *In my Tesla story (valuation), I have estimated revenues of $125 billion in 2030, a five-fold increase over the 2019 revenues.*
- The Profitability Lever: The **target (pre-tax) operating margin** determines how profitable you think the company will be, once its growth days start to scale down. *In keeping with my view that R&D is really a capital expense, I capitalize R&D, which improves Tesla's profitability and target an operating margin of 12% by 2025.*
- The Investment Efficiency Lever: To grow, companies have to invest in capacity and the **sales to invested capital** drives how efficiently investment is done, with higher sales to capital ratios reflecting more efficiency. *With Tesla, I assume that every dollar of investment (in new factories, technology and new R&D) in the first 5 years generates $3 in revenue.*
- The Risk lever: The first is the **cost of capital** that I start the valuation with, a reflection of risk as seen through the eyes of a diversified investor in the company. The second is the **likelihood of failure** (or distress). *With Tesla, I set this cost of capital at 7% and assume that given its marginal profitability and significant debt load, the chance of failure is 10%.*

# The Growth Lever



# The Biggest Auto Companies

| Company Name | Revenues in 2019 (LTM) | CAGR: 2010-19 | Operating Income in 2019 (LTM) | Operating Margin |
|---|---|---|---|---|
| Toyota Motor Corporation (TSE:7203) | $285,284.60 | 1.83% | $24,146.20 | 8.46% |
| Volkswagen AG (XTRA:VOW3) | $270,296.60 | 5.72% | $22,447.90 | 8.30% |
| Daimler AG (XTRA:DAI) | $187,796.30 | 4.54% | $5,167.40 | 2.75% |
| Ford Motor Company (NYSE:F) | $155,900.00 | 2.13% | $574.00 | 0.37% |
| Honda Motor Co., Ltd. (TSE:7267) | $145,690.50 | 3.24% | $6,968.20 | 4.78% |
| General Motors Company (NYSE:GM) | $137,237.00 | 0.13% | $5,481.00 | 3.99% |
| Fiat Chrysler Automobiles N.V. (BIT:FCA) | $117,565.20 | 16.08% | $6,174.90 | 5.25% |
| SAIC Motor Corporation (SHSE:600104) | $111,839.00 | 12.03% | $2,303.10 | 2.06% |
| BMW (XTRA:BMW) | $108,985.90 | 3.63% | $7,459.40 | 6.84% |
| Nissan Motor Co., Ltd. (TSE:7201) | $102,176.80 | 0.11% | $1,290.50 | 1.26% |
| Hyundai Motor (KOSE:A005380) | $86,053.20 | 1.03% | $2,454.50 | 2.85% |
| Peugeot S.A. (ENXTPA:UG) | $83,946.30 | 2.24% | $6,841.10 | 8.15% |
| AUDI AG (XTRA:NSU) | $64,663.20 | 5.37% | $5,034.10 | 7.79% |
| Renault SA (ENXTPA:RNO) | $63,168.00 | 3.61% | $3,801.80 | 6.02% |
| Kia Motors Corporation (KOSE:A000270) | $46,311.20 | 6.97% | $1,502.70 | 3.24% |
| Tata Motors Limited (BSE:500570) | $40,131.40 | 4.91% | $914.60 | 2.28% |
| Suzuki Motor Corporation (TSE:7269) | $34,206.70 | 1.03% | $2,259.30 | 6.60% |
| Mazda Motor Corporation (TSE:7261) | $32,769.80 | 1.80% | $721.20 | 2.20% |
| Subaru Corporation (TSE:7270) | $30,338.50 | 5.27% | $2,165.10 | 7.14% |
| Tesla, Inc. (NasdaqGS:TSLA) | $24,578.00 | 81.20% | $80.00 | 0.33% |

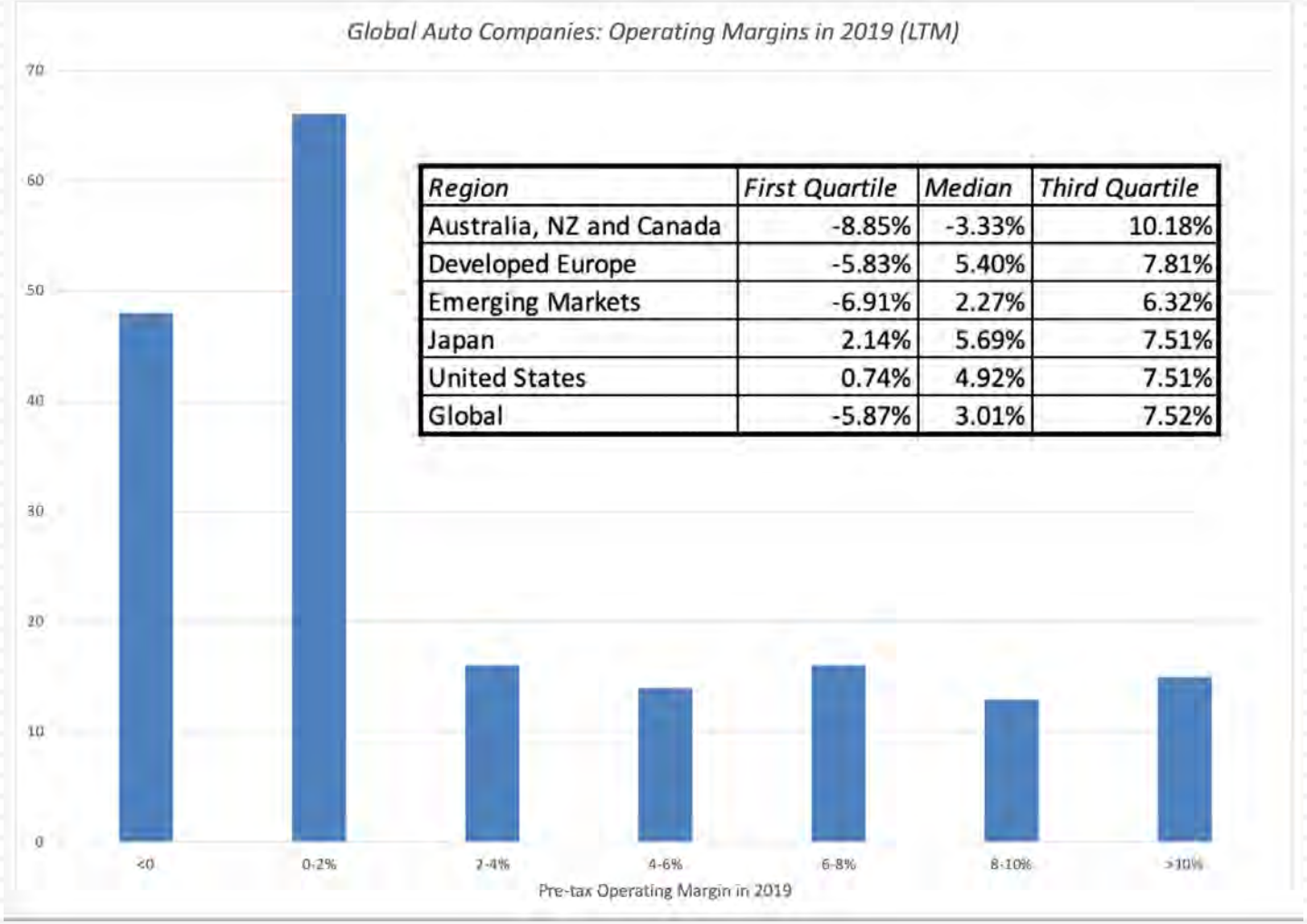
# A tech company twist?

| *Company* | *Revenues in 2019* | *Operating Income in 2019* | *Operating Margin* |
|---|---|---|---|
| Apple | $ 260,174.00 | $ 63,333 | 24.34% |
| Microsoft | $ 129,814.00 | $ 45,799 | 35.28% |
| Alphabet Inc. | $ 155,058.00 | $ 32,650 | 21.06% |
| Amazon.com | $ 265,469.00 | $ 12,795 | 4.82% |
| Facebook | $ 66,529.00 | $ 21,167 | 31.82% |
| Netflix | $ 18,875.90 | $ 2,269 | 12.02% |
| FAANG+M | $ 895,919.90 | $ 178,012.16 | 19.87% |

# Your growth choice

| *Expected Revenues in 2030 (in $ millions)* | *CAGR (next 5 years)* |
|---|---|
| A1: $65 billion (Renault-lie) | 15.00% |
| A2: $100 billion (BMW-like) | 21.00% |
| A3: $150 billion (Ford & Honda-like) | 28.00% |
| A4: $200 billion (Daimler-like) | 33.00% |
| A5: $300 billion (Toyota & VW-like) | 40.00% |
| A6: Direct Input (Enter % growth rate) | 25.00% |

# The Profitability Lever




| Region | First Quartile | Median | Third Quartile |
|---|---|---|---|
| Australia, NZ and Canada | -8.85% | -3.33% | 10.18% |
| Developed Europe | -5.83% | 5.40% | 7.81% |
| Emerging Markets | -6.91% | 2.27% | 6.32% |
| Japan | 2.14% | 5.69% | 7.51% |
| United States | 0.74% | 4.92% | 7.51% |
| Global | -5.87% | 3.01% | 7.52% |

# A tech twist?

- The median operating margin for tech companies (including both software & hardware is 10.25%).
- The picture is brighter for the FAANG stocks, where the aggregate operating margin across all five stocks is 19.87%, well above auto industry averages. That margin, though, is delivered on smaller revenues and with business models where production costs are a small fraction of selling prices.
- The operating margin for just software companies is even higher at 21.24%, because the marginal unit of software is close to costless to produce.

# Your choice on profitability

| *Operating Margin in 2025* | *Target Operating Margin* |
|---|---|
| B1: Auto Industry First Quartile | -5.87% |
| B2: Auto Industry Median | 3.01% |
| B3: Auto Industry Third Quartile | 7.52% |
| B4: Technology Median | 10.25% |
| B5: Software | 21.24% |
| B6: FAANG Aggregate | 19.87% |
| B7: Direct Input | 12.00% |

# 3. The Investment Efficiency Lever


| *Region* | *First Quartile* | *Median* | *Third Quartile* |
|---|---|---|---|
| Australia, NZ and Canada | 0.06 | 0.75 | 2.33 |
| Developed Europe | 0.81 | 1.58 | 2.93 |
| Emerging Markets | 0.70 | 1.29 | 2.41 |
| Japan | 1.17 | 2.13 | 3.00 |
| United States | 0.62 | 0.95 | 2.39 |
| Global | 0.75 | 1.37 | 2.42 |

# More on investment efficiency

- Looking across global auto companies, the median company generates $1.37 in sales for every dollar of capital invested, and at the 75th percentile, the more capital-efficient auto companies generate $2.42 in revenues for every dollar of capital invested.
- My estimate of $3 in revenues for every dollar of capital invested reflects an optimistic view of Tesla's capacity to bring technological innovation to its production processes, and reduce the capital needed to fund those processes.
- Since Tesla, in 2019, generates $1.32 in revenue for every dollar of capital invested, my estimate is more aspirational than based on observable efficiencies, right now.

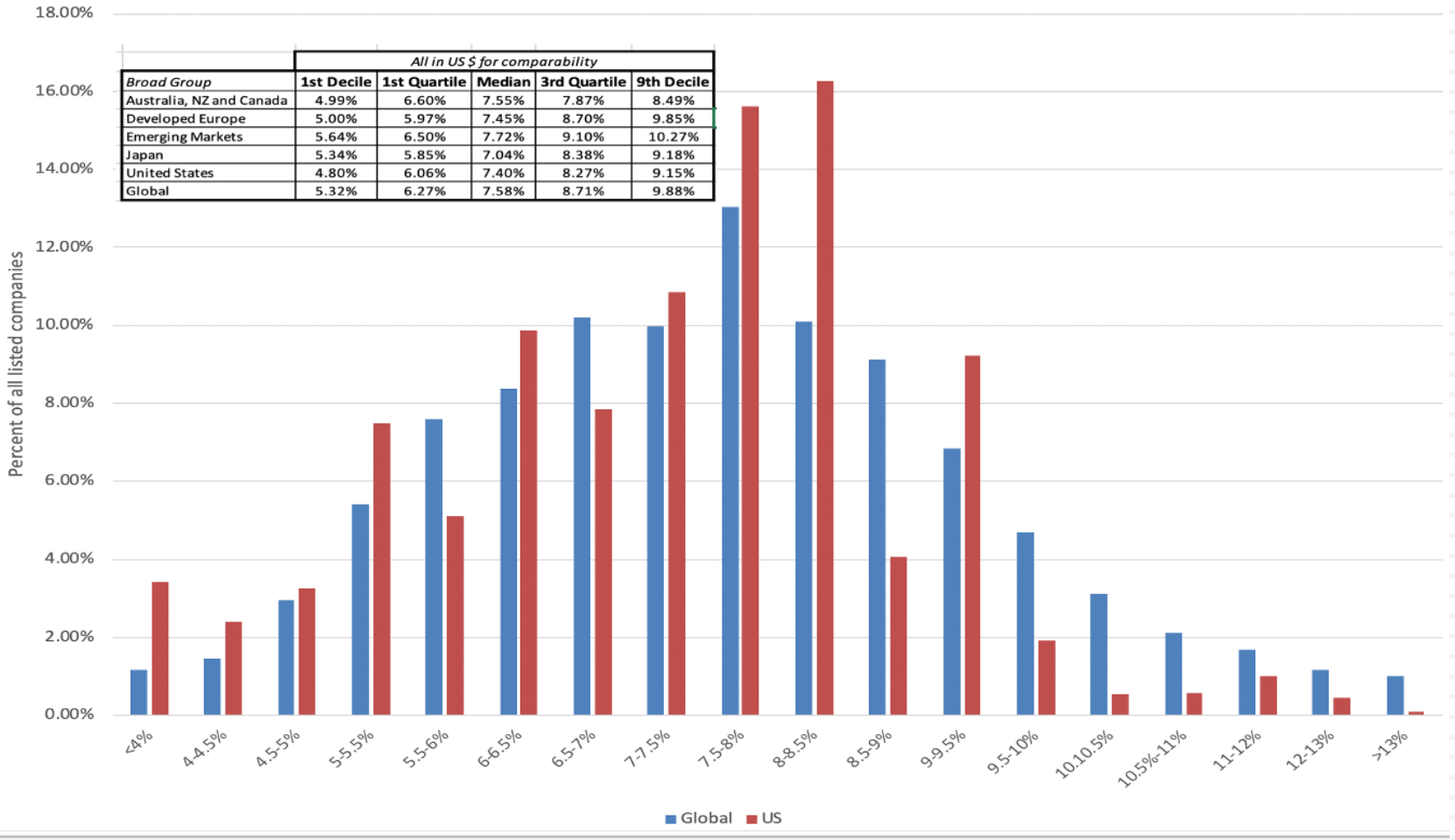
# Your choice on investment efficiency

| *Sales to Invested Capital* | *Sales to Capital (1st 5 years)* |
|---|---|
| C1: Auto Industry First Quartile | 0.75 |
| C2: Auto Industry Median | 1.37 |
| C3: Auto Industry Third Quartile | 2.42 |
| C4: Technology Median | 1.51 |
| C5: Software | 2.30 |
| C6: FAANG Aggregate | 1.27 |
| C7: Direct Input | 3.00 |

# 4. Risk: The Cost of Capital - Global

*Cost of Capital in January 2020: All Listed Non-financial Service Companies*

| | *All in US $ for comparability* | | | | |
|---|---|---|---|---|---|
| *Broad Group* | **1st Decile** | **1st Quartile** | **Median** | **3rd Quartile** | **9th Decile** |
| Australia, NZ and Canada | 4.99% | 6.60% | 7.55% | 7.87% | 8.49% |
| Developed Europe | 5.00% | 5.97% | 7.45% | 8.70% | 9.85% |
| Emerging Markets | 5.64% | 6.50% | 7.72% | 9.10% | 10.27% |
| Japan | 5.34% | 5.85% | 7.04% | 8.38% | 9.18% |
| United States | 4.80% | 6.06% | 7.40% | 8.27% | 9.15% |
| Global | 5.32% | 6.27% | 7.58% | 8.71% | 9.88% |



# Your choice on cost of capital & the failure rate

| *Cost of Capital* | *Initial cost of capital* |
|---|---|
| D1: Automobile Median | 6.94% |
| D2: Technology Median | 8.86% |
| D3: All companies - First Quartile | 6.27% |
| D4: All companies - Median | 7.58% |
| D5: All companies - Third Quartile | 8.71% |
| D6: Direct Input | 7.00% |

| *Failure Likelihood* | *Probability of failure* |
|---|---|
| E1: No chance | 0% |
| E2: 10% (Marginal profitability, High Debt) | 10% |
| E3: 20% (Money loser, High Debt) | 20% |
| E4: 50% (Low Growth, Money loser, High De | 50% |

# Valuation Stories

| Story | Revenues | Operating Margins | Reinvestment Efficiency | Risk | Value/Share | Equity Value |
|---|---|---|---|---|---|---|
| The Big Auto | BMW-like ($100 billion) | Auto 75th percentile | Auto 75th percentile | Auto median | $ 105.79 | $ 27,547 |
| | Daimler-like ($200 billion) | Auto 75th percentile | Auto 75th percentile | Auto median | $ 227.42 | $ 49,076 |
| | VW/Toyota-like ($300 billion) | Auto 75th percentile | Auto 75th percentile | Auto median | $ 332.82 | $ 67,731 |
| Auto+ Tech | BMW-like ($100 billion) | Tech median | Tech median | Tech median | $ 110.96 | $ 28,461 |
| | Daimler-like ($200 billion) | Tech median | Tech median | Tech median | $ 211.84 | $ 46,317 |
| | VW/Toyota-like ($300 billion) | Tech median | Tech median | Tech median | $ 297.86 | $ 61,544 |
| An Auto FAANG | BMW-like ($100 billion) | FAANG aggregate | FAANG aggregate | Tech median | $ 458.37 | $ 89,953 |
| | Daimler-like ($200 billion) | FAANG aggregate | FAANG aggregate | Tech median | $ 854.64 | $ 160,094 |
| | VW/Toyota-like ($300 billion) | FAANG aggregate | FAANG aggregate | Tech median | $ 1,204.62 | $ 222,040 |
| FAANG | VW/Toyota-like ($300 billion) | Software median | Revolutionary Manufacturing | Auto median | $ 2,105.55 | $ 381,504 |

# The Stories

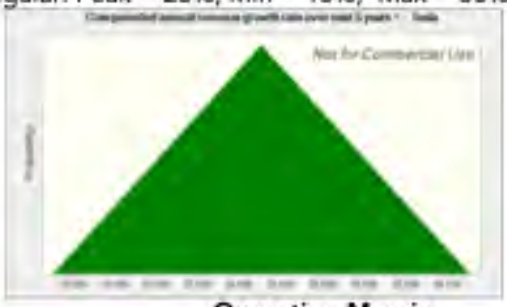
- The Big Auto Story: If your story is that Tesla will emerge from its growth period as one of the largest auto companies in the world (revenues of $100- $300 billion in year 10), with top-tier auto company margins (7.42%), investment efficiency (2.42) and cost of capital (6.94%), the value per share ranges from $106/share (with BMW like revenues) to $227/share (with Daimler-like revenues) to $333/share (with VW/Toyota like revenues).
- The Techy Auto Company Story: Tesla is an auto/software/services company with tech company characteristics, giving it higher margins (10.25%) and a higher cost of capital (8.86%). With this story, the value per share ranges from $111/share (with BMW like revenues) to $212/share (with Daimler-like revenues) to $298/share (with VW/Toyota like revenues). Put simply, the higher risk nullifies the benefits of higher profitability.
- The FAANGy Auto Company: Tesla not only develops a tech twist, but becomes as successful as the most successful tech companies (I use the FAANG stocks + Microsoft). In this story, the margins approach 18.97% and with a tech cost of capital, the value per share ranges from $459/share (with BMW like revenues) to $855/share (with Daimler-like revenues) to $2,106/share (with VW/Toyota like revenues).
- The Make-your-best Company: I give Tesla the best possible outcomes on each variable, revenues like VW/Toyota, margins like pure software companies (21.24%), a sales to capital ratio that is higher than any of the sector averages (4.00) and a cost of capital of an auto company (6.94%), and arrive at a value per share of $2106.

# Possible? Plausible? Probable?

- With the big auto stories, the key question will be whether Tesla can climb to the very top of the heap in terms of revenues, generally reserved for mass market companies, while earning operating margins that are usually reserved for smaller luxury auto companies?
- With the techy auto stories, the key question becomes whether a company that derives the bulk of its revenues from selling cars be profitable and reinvest like a tech company?
- With the FAANGy stories, the investment question becomes whether you should up front for a company on the expectation that it will be an exceptional company. It very well might make it to the top of the heap, but if it does not, you are set up for disappointment.
- With the MYB story, you are approaching the most dangerous place in valuation, where you pick and choose each assumption, without considering the ones you have already made. Put simply, is it even possible to build a company that generates revenues like Toyota, earns margins like Microsoft and invests more efficiently than any manufacturing company in history has ever done, while still preserving the low cost of capital of an auto company?

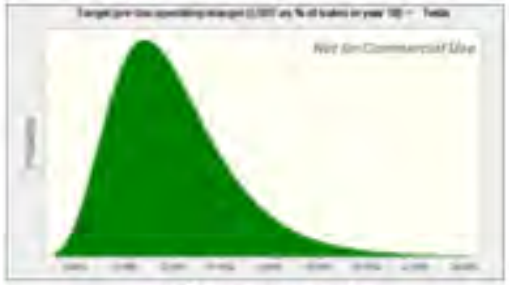
**Revenue Growth**

Triangular: Peak = 25%, Min = 15%; Max = 35%




**Operating Margin**

Log Normal: Mean = 12%

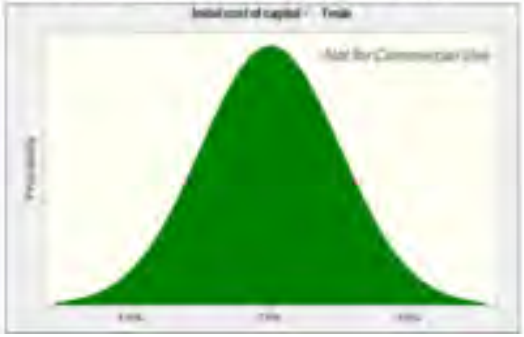



**Sales to Capital**

Unirform: Min =1.00 Max = 3.00

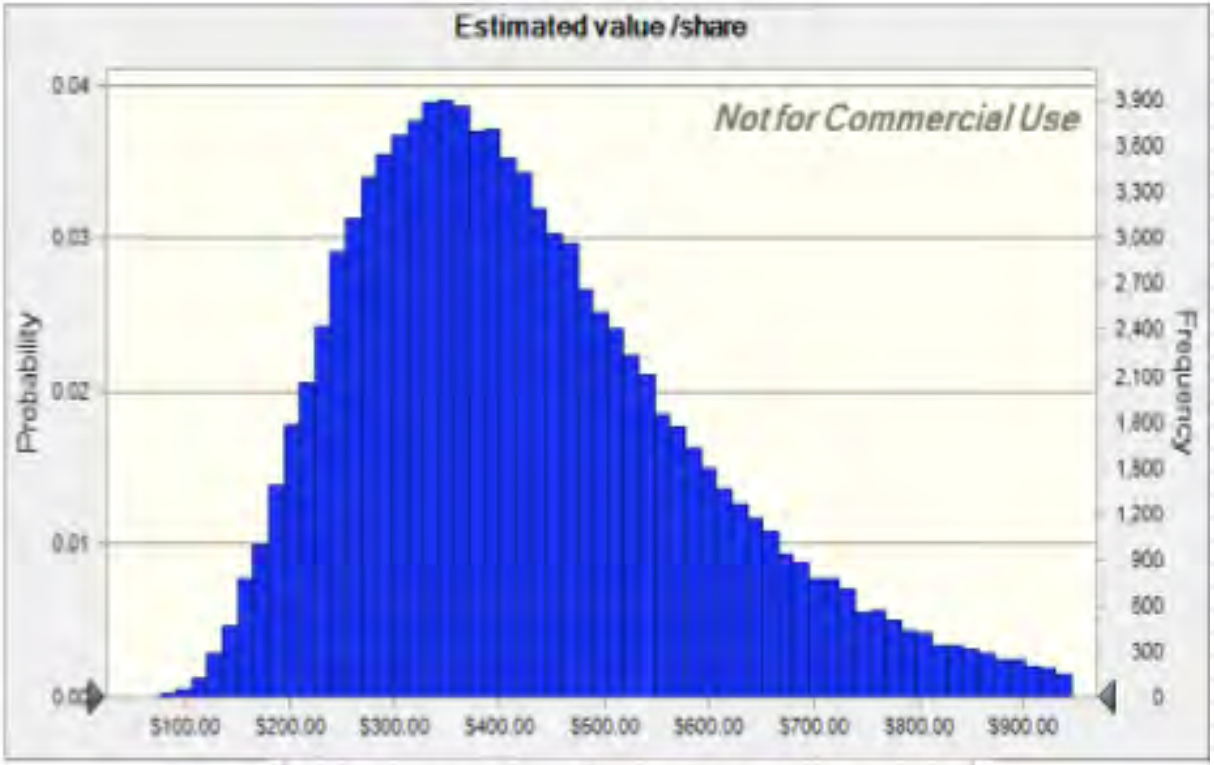
**Cost of Capital**

Normal: Mean = 7% Std dev = 0.5%




**Tesla Value/Share in January 2020**

Across 100,000 Simulations

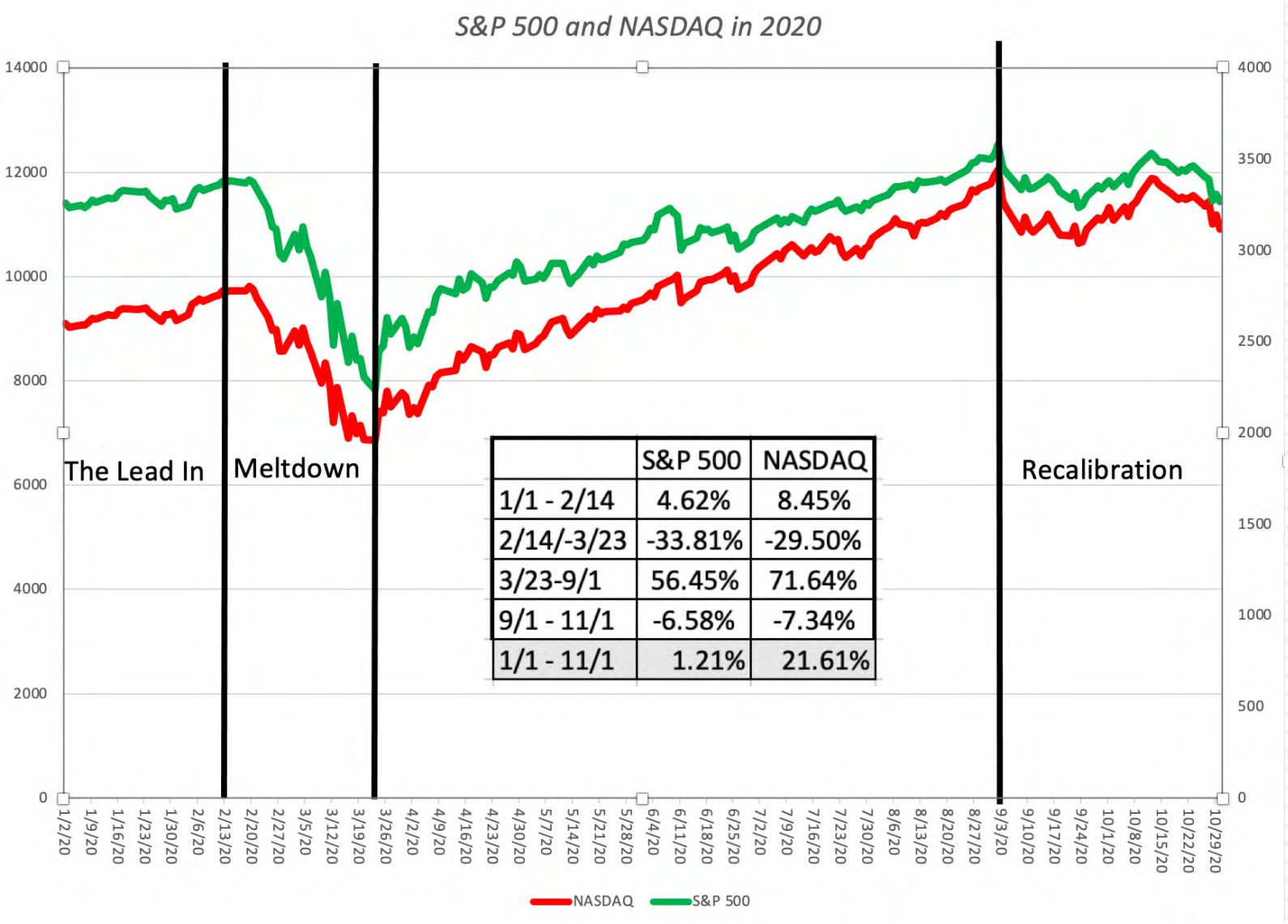



| Percentile | Value/Share |
|---|---|
| 0% | $47.04 |
| 10% | $236.52 |
| 20% | $283.69 |
| 30% | $324.12 |
| 40% | $361.82 |
| 50% | $401.33 |
| 60% | $444.87 |
| 70% | $496.96 |
| 80% | $564.30 |
| 90% | $673.09 |
| 100% | $2,210.68 |

# When a crisis hits, the dark side beckons…

- During a crisis, you will be told that you can no longer value companies with fundamentals, and that you have to play the trading game.
  - If your concept of valuation is downloading last year's financials for a company into a spread sheet and then using historical growth rates, with some mean reversion thrown in, to forecast future numbers, they are right.
  - If your notion of valuation is more dynamic and forward-looking, it is precisely at times like these that you need to go back to basics.
- More importantly, your story for the company matters more than ever before, since the numbers can no longer be used as a crutch.

# The COVID Crisis: US Equities, from February 14 to November 1, 2020




| | S&P 500 | NASDAQ |
|---|---|---|
| 1/1 - 2/14 | 4.62% | 8.45% |
| 2/14/-3/23 | -33.81% | -29.50% |
| 3/23-9/1 | 56.45% | 71.64% |
| 9/1 - 11/1 | -6.58% | -7.34% |
| 1/1 - 11/1 | 1.21% | 21.61% |

# Global Equities: By Region (in US $)

| | | Market Cap ($ Millions) | | | | $ Change in Market Cap | | | | % Change in Market Cap | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sub Region | Number of firms | 2/14/20 | 3/20/20 | 8/28/20 | 11/1/20 | 2/14 - 3/20 | 3/20- 9/1 | 9/1-11/1 | 2/14 - 11/1 | 2/14 - 3/20 | 3/20- 9/1 | 9/1-11/1 | 2/14 - 11/1 |
| Africa | 775 | $ 551,313 | $ 347,724 | $ 453,676 | $ 450,891 | $ (203,590) | $ 105,953 | $ (2,785) | $ (100,422) | -36.93% | 30.47% | -0.61% | -18.22% |
| Australia & NZ | 1,544 | $ 1,460,485 | $ 867,789 | $ 1,457,249 | $ 1,377,797 | $ (592,696) | $ 589,460 | $ (79,452) | $ (82,688) | -40.58% | 67.93% | -5.45% | -5.66% |
| Canada | 2,396 | $ 2,069,846 | $ 1,263,949 | $ 2,025,929 | $ 1,874,426 | $ (805,897) | $ 761,980 | $ (151,503) | $ (195,420) | -38.94% | 60.29% | -7.48% | -9.44% |
| China | 6,293 | $ 13,955,224 | $ 12,367,237 | $ 16,742,877 | $ 16,405,890 | $ (1,587,987) | $ 4,375,641 | $ (336,988) | $ 2,450,666 | -11.38% | 35.38% | -2.01% | 17.56% |
| EU & Environs | 5,190 | $ 13,195,783 | $ 8,955,805 | $ 12,849,117 | $ 12,356,947 | $ (4,239,979) | $ 3,893,312 | $ (492,170) | $ (838,836) | -32.13% | 43.47% | -3.83% | -6.36% |
| Eastern Europe & Russia | 494 | $ 820,322 | $ 495,278 | $ 630,915 | $ 543,773 | $ (325,044) | $ 135,637 | $ (87,142) | $ (276,549) | -39.62% | 27.39% | -13.81% | -33.71% |
| India | 3,314 | $ 2,189,647 | $ 1,510,005 | $ 2,137,221 | $ 2,074,926 | $ (679,642) | $ 627,215 | $ (62,295) | $ (114,721) | -31.04% | 41.54% | -2.91% | -5.24% |
| Japan | 3,732 | $ 5,857,677 | $ 4,367,763 | $ 5,806,406 | $ 5,793,928 | $ (1,489,914) | $ 1,438,644 | $ (12,479) | $ (63,749) | -25.44% | 32.94% | -0.21% | -1.09% |
| Latin America & Caribbear | 1,164 | $ 2,420,178 | $ 1,418,615 | $ 1,889,419 | $ 1,764,617 | $ (1,001,563) | $ 470,804 | $ (124,802) | $ (655,561) | -41.38% | 33.19% | -6.61% | -27.09% |
| Middle East | 1,430 | $ 3,072,356 | $ 2,555,641 | $ 3,130,835 | $ 3,056,482 | $ (516,716) | $ 575,194 | $ (74,353) | $ (15,875) | -16.82% | 22.51% | -2.37% | -0.52% |
| Small Asia | 8,625 | $ 4,993,589 | $ 3,496,975 | $ 5,048,960 | $ 4,995,842 | $ (1,496,614) | $ 1,551,985 | $ (53,118) | $ 2,253 | -29.97% | 44.38% | -1.05% | 0.05% |
| UK | 1,130 | $ 2,899,163 | $ 1,826,761 | $ 2,506,942 | $ 2,306,805 | $ (1,072,402) | $ 680,181 | $ (200,137) | $ (592,358) | -36.99% | 37.23% | -7.98% | -20.43% |
| United States | 6,357 | $ 33,844,978 | $ 22,773,956 | $ 35,589,058 | $ 33,525,453 | $ (11,071,022) | $ 12,815,102 | $ (2,063,605) | $ (319,524) | -32.71% | 56.27% | -5.80% | -0.94% |
| Global | 42,445 | $ 87,330,562 | $ 62,247,496 | $ 74,920,290 | $ 87,744,240 | $ (25,083,065) | $ 12,672,794 | $ 12,823,950 | $ 413,679 | -28.72% | 20.36% | 17.12% | 0.47% |

# Global Equities: By Sector

| | | Market Cap ($ Millions) | | | | $ Change in Market Cap | | | | % Change in Market Cap | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Primary Sector | Number of firms | 2/14/20 | 3/20/20 | 8/28/20 | 11/1/20 | 2/14 - 3/20 | 3/20- 9/1 | 9/1-11/1 | 2/14 - 11/1 | 2/14 - 3/20 | 3/20- 9/1 | 9/1-11/1 | 2/14 - 11/1 |
| Communication Services | 2,079 | $ 7,291,713 | $ 5,460,948 | $ 7,920,931 | $ 7,605,693 | $ (1,830,765) | $ 2,459,983 | $ (315,238) | $ 313,980 | -25.11% | 45.05% | -3.98% | 4.31% |
| Consumer Discretionary | 5,945 | $10,153,097 | $ 7,068,864 | $11,850,184 | $12,063,642 | $ (3,084,232) | $ 4,781,319 | $ 213,459 | $ 1,910,546 | -30.38% | 67.64% | 1.80% | 18.82% |
| Consumer Staples | 2,847 | $ 7,168,482 | $ 5,729,650 | $ 7,641,382 | $ 7,237,898 | $ (1,438,832) | $ 1,911,731 | $ (403,484) | $ 69,416 | -20.07% | 33.37% | -5.28% | 0.97% |
| Energy | 1,654 | $ 5,922,675 | $ 3,847,829 | $ 4,991,620 | $ 4,444,401 | $ (2,074,846) | $ 1,143,792 | $ (547,220) | $ (1,478,274) | -35.03% | 29.73% | -10.96% | -24.96% |
| Financials | 4,356 | $14,234,754 | $ 9,514,353 | $12,061,179 | $11,412,865 | $ (4,720,402) | $ 2,546,827 | $ (648,315) | $ (2,821,889) | -33.16% | 26.77% | -5.38% | -19.82% |
| Health Care | 3,955 | $ 8,905,753 | $ 6,857,601 | $ 9,949,643 | $ 9,527,764 | $ (2,048,152) | $ 3,092,042 | $ (421,879) | $ 622,012 | -23.00% | 45.09% | -4.24% | 6.98% |
| Industrials | 7,560 | $10,081,864 | $ 6,865,944 | $ 9,922,741 | $ 9,576,177 | $ (3,215,919) | $ 3,056,797 | $ (346,564) | $ (505,687) | -31.90% | 44.52% | -3.49% | -5.02% |
| Information Technology | 5,577 | $13,560,982 | $ 9,707,739 | $15,984,270 | $14,992,176 | $ (3,853,242) | $ 6,276,531 | $ (992,094) | $ 1,431,194 | -28.41% | 64.65% | -6.21% | 10.55% |
| Materials | 5,705 | $ 4,976,622 | $ 3,514,149 | $ 5,380,546 | $ 5,200,887 | $ (1,462,473) | $ 1,866,397 | $ (179,658) | $ 224,265 | -29.39% | 53.11% | -3.34% | 4.51% |
| Real Estate | 1,842 | $ 1,836,062 | $ 1,353,453 | $ 1,679,779 | $ 1,585,009 | $ (482,609) | $ 326,326 | $ (94,769) | $ (251,053) | -26.29% | 24.11% | -5.64% | -13.67% |
| Utilities | 917 | $ 3,196,558 | $ 2,325,395 | $ 2,884,510 | $ 2,879,452 | $ (871,163) | $ 559,115 | $ (5,058) | $ (317,106) | -27.25% | 24.04% | -0.18% | -9.92% |
| Global | 42,445 | $87,330,562 | $62,247,496 | $74,920,290 | $87,744,240 | $(25,083,065) | $12,672,794 | $12,823,950 | $ 413,679 | -28.72% | 20.36% | 17.12% | 0.47% |

# Value Transfers

| | | Returns (2/14/20 - 11/1/20) | | | Returns (2/14/20 - 11/1/20) | |
|---|---|---|---|---|---|---|
| *Grouping* | *Risk On* | *% Change* | *$ Change (billions)* | *Risk Off* | *% Change* | *$ Change (billions)* |
| PE | High PE | 6.07% | $313.00 | Low PE | -3.23% | -$57.00 |
| PBV | High PBV | 13.96% | $3,387.00 | Low PBV | -16.21% | -$204.00 |
| Dividend Yield | No or low Dividends | 5.20% | $1,546.00 | High Dividend Yields | -16.06% | -$1,448.00 |
| Corporate Age | Young companies | 19.26% | $466.00 | Old companies | -13.96% | -$3,807.00 |
| Growth | High growth | 64.12% | $2,049.00 | Low growth | -27.62% | -$2,218.00 |
| Size | Small Market Cap | 100.40% | $4,119.00 | Large Market Cap | -1.50% | -$1,150.00 |
| Debt | High debt | -18.62% | -$459.00 | Low debt | 20.81% | $526.00 |
| Returns reported for firms in the highest and lowest deciles of each grouping, except for dividends, reported in quintiles. | | | | | | |

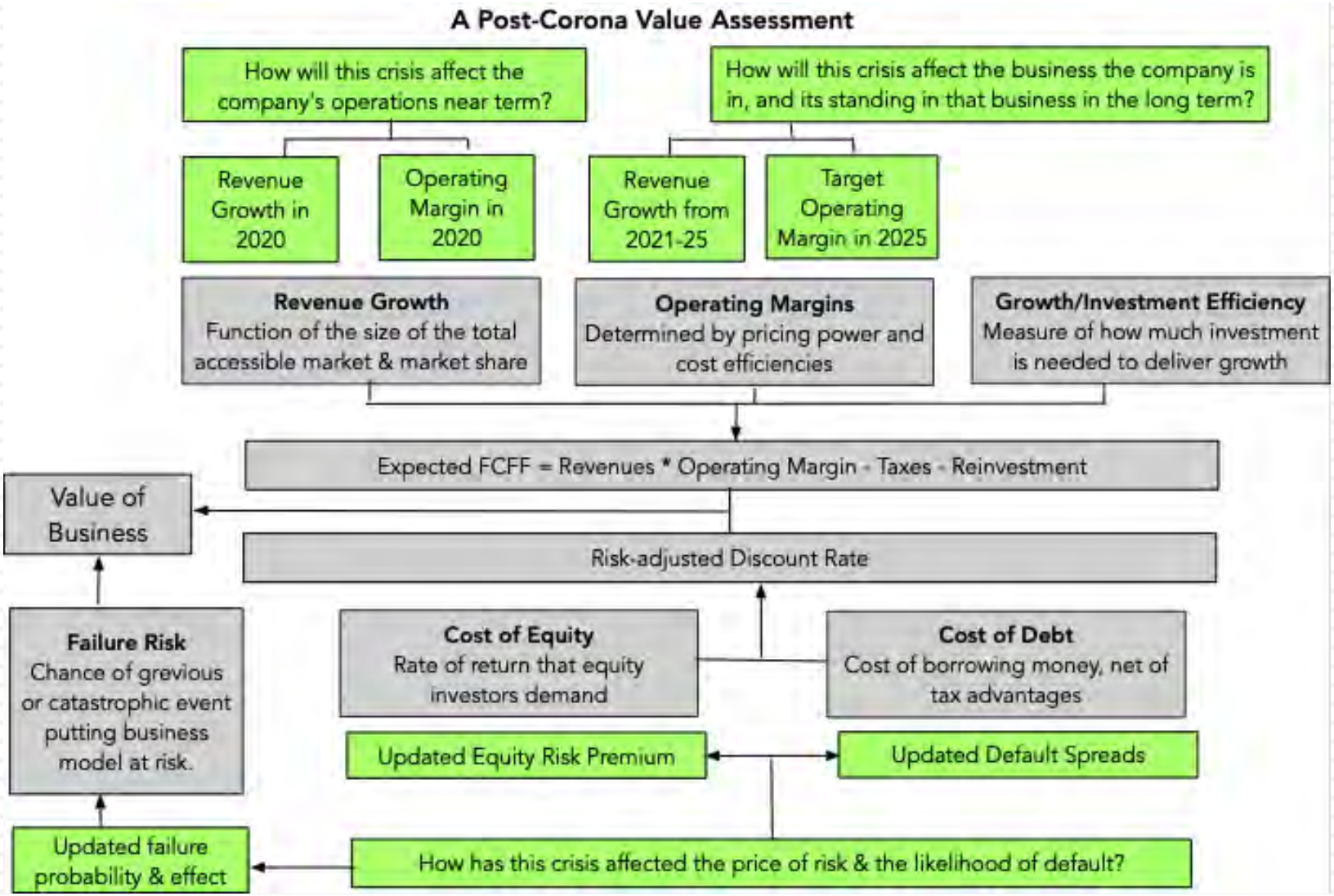
# How crises affect stories…

- Stories can expand: For some companies, a crisis can expand stories
  - By allowing them to reach new customers and devise new business models that have staying power (Zoom, Peloton)
  - By being in the right place at the right time (Moderna)
  - By handicapping or damaging the competition (Tesla, Airbnb)
- Stories can contract: For other companies, a crisis can shrink stories
  - By making their markets smaller (cruise lines definitely, airlines maybe)..
  - By being in the wrong place at the wrong time (commodity companies)
- And the risk of failure becomes real and ignorable: And for all companies, a crisis can increase the likelihood of failure (story break).

# A Roadmap to Story Telling & Valuation in a crisis

1. Separate the near term from the long term: During a crisis, the near-term effects are likely to be both large and unpredictable (negative for most companies, but positive for a few). Estimate the near term effects on earnings and cash flows, using all of the information you have and bringing in views on how the macro economy will evolve.
2. Revisit your story for the company: Evaluate how your story for the company has changed as a result of the crisis, and play out its effect on your long term value inputs (revenue growth, margins and reinvestment)
3. Bring in failure risk: For your story to play out, the company has to survive. Incorporate, as best as you can, the likelihood that your company will not make it through.

# A Post-Corona Version



# Tesla

## The Payoff to Flexibility — Jul-20

With the wind behind its back, Tesla has consolidated its hold on the electric car market and will continue to grow that market, at the expense of conventional car makers. As the crisis handicaps its more indebted, slower moving competitors, Tesla will consolidate its hold on the electric car market and push its production towards 2.5 million cars by 2030, it will also be able to deliver higher margins than conventional auto companies in steady state, using software sales to compliment auto sales. The drop in risk free rates has reduced its cost of capital and the chance of failure. Tesla's more flexibile investment policies will allow it to be more efficient in generating growth. While other revenue sources (green energy, driverless cars in ride sharing) will supplement revenues, it will remain at its core an electric car

## The Assumptions

| | Base year | Years 1-5 | Years 6-10 | | After year 10 | Link to story |
|---|---|---|---|---|---|---|
| Revenues (a) | $ 26,022 | 33.00% | → 0.67% | | 0.67% | Growth in EV market & Tesla's early mover advantage work in its favor. |
| Operating margin (b) | 4.07% | 4.07% | → 10.25% | | 10.25% | Continued economies of scale & brand |
| Tax rate | 25.00% | 25.00% | → 25.00% | | 25.00% | Global tax rate |
| Reinvestment (c ) | | Sales to capital ratio | 3.00 | RIR = | 6.70% | Capacity build up allows for less reinvestment in the near years. |
| Return on capital | 3.90% | Marginal ROIC = | 26.47% | | 10.00% | Cost of entry will limit competition. |
| Cost of capital (d) | | 6.04% | → 6.00% | | 6.00% | Moves to median company cost of capital |

## The Cash Flows

| | Revenues | Operating Margin | EBIT | EBIT (1-t) | Reinvestment | FCFF |
|---|---|---|---|---|---|---|
| 1 | $ 34,609 | 5.31% | $ 1,836 | $ 1,377 | $ 2,862 | $ (1,485) |
| 2 | $ 46,030 | 6.54% | $ 3,011 | $ 2,258 | $ 3,807 | $ (1,549) |
| 3 | $ 61,220 | 7.78% | $ 4,762 | $ 3,571 | $ 5,063 | $ (1,492) |
| 4 | $ 81,423 | 9.01% | $ 7,339 | $ 5,505 | $ 6,734 | $ (1,230) |
| 5 | $ 108,293 | 10.25% | $ 11,100 | $ 8,325 | $ 8,957 | $ (632) |
| 6 | $ 137,027 | 10.25% | $ 14,045 | $ 10,534 | $ 14,367 | $ (3,833) |
| 7 | $ 164,526 | 10.25% | $ 16,864 | $ 12,648 | $ 13,749 | $ (1,101) |
| 8 | $ 186,904 | 10.25% | $ 19,158 | $ 14,368 | $ 11,189 | $ 3,179 |
| 9 | $ 200,242 | 10.25% | $ 20,525 | $ 15,394 | $ 6,669 | $ 8,725 |
| 10 | $ 201,583 | 10.25% | $ 20,662 | $ 15,497 | $ 671 | $ 14,826 |
| Terminal year | $ 202,934 | 10.25% | $ 20,801 | $ 15,601 | $ 1,045 | $ 14,555 |

## The Value

| | | | |
|---|---|---|---|
| Terminal value | $ 273,083 | | |
| PV(Terminal value) | $ 152,086 | | |
| PV (CF over next 10 years) | $ 6,497 | | |
| Value of operating assets = | $ 158,583 | | |
| Adjustment for distress | $ 7,929 | Probability of failure = | 10.00% |
| - Debt & Mnority Interests | $ 15,200 | | |
| + Cash & Other Non-operating assets | $ 8,080 | | |
| Value of equity | $ 143,534 | | |
| - Value of equity options | $ 31,546 | | |
| Number of shares | 179.50 | | |
| Value per share | $ 623.89 | Stock was trading at = | $1,366.00 |

| Zoom | | | | | | Mar-20 |
|---|---|---|---|---|---|---|
| ***The Streaming Story*** | | | | | | |
| With its technology and ease of use, Zoom is uniquely positioned to take advantage of a boom in online business/other meetings, driven partly by increased comfort on the part of managers with the technology and partly by costs. The Corona Virius will accelerate this shift to online meetings, increasing the overall market size, and while competitors will emerge, the networking benefits that Zoom builds up will allow it to keep a significant market share. Along the way, Zoom's margins will converge on the lofty margins earned by business and applidation software companies and the cost of capital will decline to reflect the fact that once mature it will be a diversified business services company, giving it the cost of capital of a mature company (at today's riskfree rate of 0.67%). | | | | | | |
| ***The Assumptions*** | | | | | | |
| | *Base year* | *Years 1-5* | *Years 6-10* | | *After year 10* | *Link to story* |
| Revenues (a) | $ 623 | 50.00% | → 0.67% | | 0.67% | |
| Operating margin (b) | 9.70% | 9.70% | → 22.25% | | 22.25% | |
| Tax rate | 25.00% | 25.00% | → 25.00% | | 25.00% | |
| Reinvestment (c ) | | Sales to capital ratio | 3.25 | RIR = | 6.70% | |
| Return on capital | 23.66% | Marginal ROIC = | 74.66% | | 10.00% | |
| Cost of capital (d) | | 7.39% | → 6.00% | | 6.00% | |
| ***The Cash Flows*** | | | | | | |
| | *Revenues* | *Operating Margin* | *EBIT* | *EBIT (1-t)* | *Reinvestment* | *FCFF* |
| 1 | $ 934 | 12.21% | $ 114 | $ 86 | $ 96 | $ (10) |
| 2 | $ 1,401 | 14.72% | $ 206 | $ 155 | $ 144 | $ 11 |
| 3 | $ 2,102 | 17.23% | $ 362 | $ 272 | $ 215 | $ 56 |
| 4 | $ 3,152 | 19.74% | $ 622 | $ 467 | $ 323 | $ 144 |
| 5 | $ 4,729 | 22.25% | $ 1,052 | $ 789 | $ 485 | $ 304 |
| 6 | $ 6,626 | 22.25% | $ 1,474 | $ 1,106 | $ 584 | $ 522 |
| 7 | $ 8,632 | 22.25% | $ 1,921 | $ 1,441 | $ 617 | $ 824 |
| 8 | $ 10,393 | 22.25% | $ 2,313 | $ 1,734 | $ 542 | $ 1,193 |
| 9 | $ 11,488 | 22.25% | $ 2,556 | $ 1,917 | $ 337 | $ 1,580 |
| 10 | $ 11,565 | 22.25% | $ 2,573 | $ 1,930 | $ 24 | $ 1,906 |
| Terminal year | $ 11,643 | 22.25% | $ 2,591 | $ 1,943 | $ 130 | $ 1,813 |
| ***The Value*** | | | | | | |
| Terminal value | | | $ 34,011 | | | |
| PV(Terminal value) | | | $ 17,331 | | | |
| PV (CF over next 10 years) | | | $ 3,721 | | | |
| Value of operating assets = | | | $ 21,052 | | | |
| Adjustment for distress | | | $ - | | Probability of failure = | 0.00% |
| - Debt & Minority Interests | | | $ 119 | | | |
| + Cash & Other Non-operating assets | | | $ 855 | | | |
| Value of equity | | | $ 21,789 | | | |
| - Value of equity options | | | $ 868 | | | |
| Number of shares | | | 276.40 | | | |
| Value per share | | | $ 75.69 | | Stock was trading at = | $113.75 |

| Boeing | | | | | | Mar-20 |
|---|---|---|---|---|---|---|

***The Story***

Boeing is in deep trouble. Already exposed to significant pain because of its mishandling of the Boeing 737 Max, which caused revenues to plummet in 2019, the company is facing a mountain of pain with the Corona Virus decimating the airline business (Boeing's customers). I assume more pain the year to come, with revenues dropping even with the 737 Max returning to the fold and increased losses. After that, i assume that there will be higher growth, as airlines start playing catch up and buy more aircraft from a duopoly. I assume that margins will revert back to pre-2018 levels over the next 5 years and that during the next year, Boeing is exposed to a risk of failure, not so much because it will go out of business (it is too big to fail) but from needing a bailout from the government that is large enough to wipe out equity (as was the case with GM in 2009).

***The Assumptions***

| | *Base year* | *Years 1-5* | *Years 6-10* | | *After year 10* | *Link to story* |
|---|---|---|---|---|---|---|
| Revenues (a) | $ 76,559 | 15.00% | → 2.00% | | 2.00% | |
| Operating margin (b) | -2.75% | -2.75% | → 9.60% | | 9.60% | |
| Tax rate | 25.00% | 25.00% | → 25.00% | | 25.00% | |
| Reinvestment (c ) | | Sales to capital ratio | 3.79 | RIR = | 20.00% | |
| Return on capital | -10.42% | Marginal ROIC = | 74.72% | | 10.00% | |
| Cost of capital (d) | | 9.25% | → 7.50% | | 7.50% | |

***The Cash Flows***

| | *Revenues* | *Operating Margin* | *EBIT* | *EBIT (1-t)* | *Reinvestment* | *FCFF* |
|---|---|---|---|---|---|---|
| 1 | $ 68,903 | -5.00% | $ (3,445) | $ (3,445) | $ (2,019) | $ (1,426) |
| 2 | $ 79,239 | 4.73% | $ 3,751 | $ 3,675 | $ 2,726 | $ 949 |
| 3 | $ 91,124 | 9.60% | $ 8,749 | $ 6,562 | $ 3,135 | $ 3,427 |
| 4 | $ 104,793 | 9.60% | $ 10,061 | $ 7,546 | $ 3,605 | $ 3,941 |
| 5 | $ 120,512 | 9.60% | $ 11,571 | $ 8,678 | $ 4,146 | $ 4,532 |
| 6 | $ 135,455 | 9.60% | $ 13,005 | $ 9,754 | $ 3,941 | $ 5,813 |
| 7 | $ 148,730 | 9.60% | $ 14,280 | $ 10,710 | $ 3,501 | $ 7,209 |
| 8 | $ 159,439 | 9.60% | $ 15,308 | $ 11,481 | $ 2,824 | $ 8,657 |
| 9 | $ 166,773 | 9.60% | $ 16,012 | $ 12,009 | $ 1,934 | $ 10,075 |
| 10 | $ 170,108 | 9.60% | $ 16,333 | $ 12,249 | $ 880 | $ 11,370 |
| Terminal year | $ 173,510 | 9.60% | $ 16,659 | $ 12,494 | $ 2,499 | $ 9,996 |

***The Value***

| | | | |
|---|---|---|---|
| Terminal value | $ 181,737 | | |
| PV(Terminal value) | $ 78,764 | | |
| PV (CF over next 10 years) | $ 29,119 | | |
| Value of operating assets = | $ 107,883 | | |
| Adjustment for distress | $ 10,788 | Probability of failure = | 20.00% |
| - Debt & Minority Interests | $ 28,580 | | |
| + Cash & Other Non-operating assets | $ 10,030 | | |
| Value of equity | $ 78,545 | | |
| - Value of equity options | $ - | | |
| Number of shares | 566.00 | | |
| Value per share | $ 138.77 | Stock was trading at = | $127.68 |

| Company | Base Year Numbers | Valuation Story | Valuation Inputs | Value per Share (Simulation) | | | Pricing per share | |
|---|---|---|---|---|---|---|---|---|
| *Facebook* | Revenues = $75 B | **User Base pays off**: Immense & Intense user base allows for continued ad growth & new business potential. | Rev Growth = 10% | 10th: | $ | 267.77 | | |
| | EBIT = $27.9 B | | Target Margin = 40% | 25th: | $ | 293.89 | Price = | $262.59 |
| | Oper. margin =44.3% | | Sales to capital = 2.64 | Median: | $ | 327.68 | Under/Over = | Under valued |
| | Rev Growth (LTM) = 13.02% | | Cost of capital = 6.08% | 75th: | $ | 364.79 | % under/over | -19.86% |
| | | | | 90th: | $ | 398.85 | IRR | 7.16% |
| *Amazon* | Revenues = $ 322 B | **Disruption Platform rolls on**: Continue to expand into new businesses, delaying profitability to deliver higher growth. | Rev Growth = 20% | 10th: | | $1,479.65 | | |
| | EBIT = $16.7 B | | Target Margin = 12% | 25th: | $ | 1,969.46 | Price = | $3,260.48 |
| | Oper. margin = 7.99% | | Sales to capital = 1.94 | Median: | $ | 2,778.22 | Under/Over = | Over valued |
| | Rev Growth (LTM) = 31.58% | | Cost of capital = 6.11% | 75th: | $ | 3,617.74 | % under/over | 17.36% |
| | | | | 90th: | $ | 4,295.58 | IRR | 5.77% |
| *Netflix* | Revenues = $ 22.6 B | **Streaming Player**: Wiith new competitors, will continue to add subscribers, but struggle to control content costs. | Value/Existing Subscriber = $446. | 10th: | $ | 312.79 | | |
| | # Subscribers = 192.3 mil | | Growth in Subscribers = 12% | 25th: | $ | 372.49 | Price = | $484.53 |
| | Growth in LTM = 27.3% | | Growth in Content Costs = 5% | Median: | $ | 445.53 | Under/Over = | Over valued |
| | Cost/New Subscriber = $103 | | Cost of capital (Existing)= 6.5% | 75th: | $ | 519.34 | % under/over | 8.75% |
| | Content Cost = $9.95 B | | Cost of capital (New) = 7.5% | 90th: | $ | 585.58 | IRR | 6.16% |
| *Google/ Alphabet* | Revenues = $166 B | **More than a Search Engine:** While the search box will continue to be the money-maker, other bets will start to pay off in growth. | Rev Growth = 8% | 10th: | $ | 1,165.57 | | |
| | EBIT = $33.4 B | | Target Margin = 24% | 25th: | $ | 1,267.31 | Price = | $1,544.61 |
| | Oper. margin = 23.8% | | Sales to capital = 2.64 | Median: | $ | 1,406.96 | Under/Over = | Over valued |
| | Rev Growth (LTM) = 5.22% | | Cost of capital = 6.25% | 75th: | $ | 1,551.26 | % under/over | 9.78% |
| | | | | 90th: | $ | 1,676.02 | IRR | 5.87% |
| *Apple* | Revenues = $274 B | **Cash Machine revs up**: The iPhone will keep the cash machine going up, but services business will be growth driver. | Rev Growth = 8% | 10th: | $ | 285.67 | | |
| | EBIT = $52.6 B | | Target Margin = 26% | 25th: | $ | 312.28 | Price = | $462.83 |
| | Oper. margin = 25.9% | | Sales to capital =4.00 | Median: | $ | 350.22 | Under/Over = | Over valued |
| | Rev Growth (LTM) = 7.07% | | Cost of capital = 6.58% | 75th: | $ | 390.66 | % under/over | 32.15% |
| | | | | 90th: | $ | 425.04 | IRR | 5.30% |
| *Microsoft* | Revenues = $143 B | **Old company Reborn:** Cloud/software business mix will continue to deliver growth with high margins. | Rev Growth = 12% | 10th: | $ | 143.98 | | |
| | EBIT = $52.6 B | | Target Margin = 40% | 25th: | $ | 157.81 | Price = | $209.70 |
| | Oper. margin =40.1% | | Sales to capital = 1.44 | Median: | $ | 176.66 | Under/Over = | Over valued |
| | Rev Growth (LTM) = 13.65% | | Cost of capital = 7.11% | 75th: | $ | 196.77 | % under/over | 18.70% |
| | | | | 90th: | $ | 214.83 | IRR | 6.32% |

# It's only an investment!

- Money on the table, but no regrets: In the week since I sold Tesla at $640, the stock has gone on a wild ride, rising above $900 in two trading days. I. I made my decision to buy, based on my story and valuation for Tesla, and my decision to sell, for the same reason. If I abandon that philosophy to play the momentum game, a game that I am not good at and don't really play well, I may make a bit more money, but at what cost?
- Why the vitriol? In a world where we face unbridgeable divides on politics, religion and culture, do we need to add investing to the mix? If you stayed with your Tesla investment, I wish you the best, and I hope that you are holding on for the right reasons. If you sold short and lost money, I get no joy out of your losses and no inclination to do a celebratory dance.
- Not worth losing sleep over: As far as I am concerned, Tesla is a fascinating company, but it is just an investment, not a matter of life or death, and definitely not worth losing sleep and friends over.