

TO TRILLION(S) AND BEYOND: A SPACEX IPO ODYSSEY!

I'm sorry, Dave. I'm afraid I can't do that!

Hal in 2001: A Space Odyssey

AN IPO FOR THE AGES!

- The SpaceX IPO is drawing attention for three reasons:
 - The first is that in a market where there are many young companies all trying to claim to be futuristic in their offerings, **SpaceX clearly stands out as the real thing, with rockets, satellites and AI all residing under its corporate umbrella.**
 - The second is **its founder (Elon Musk) is the richest person in the world**, and has upended one legacy business (autos), bought a social media company as a soapbox and made his presence felt on the the political stage.
 - Third, if the private market pricing feeds into the public offering, SpaceX **could very well become the most valuable IPO of all time**, joining the rarefied list of trillion-dollar companies, on listing.
- That said, **I may be getting a little ahead of the game here, because SpaceX has not filed a public prospectus yet**, and little is known about its financials other than drabs of information that have been leaked to the press.

THE HISTORY OF SPACEX – THE SPACE LAUNCH BUSINESS!

- At its founding in 2002, Musk stated the goals for SpaceX as **reducing the costs of space transportation and travel to Mars**, but was viewed as having little chance of success by the space establishment, composed then of government agencies (NASA) and a few defense firms (Boeing and Northrop Grumman).
- SpaceX applied the **lessons of modular engineering** from the software business and over the next few years, it launched Falcon 1, its first space launch vehicle in September 2008. That successful launch led to a NASA contract for \$1.6 billion and rescued the company from near bankruptcy. In subsequent years, SpaceX developed Falcon 9, a reusable and heavier vehicle, and became the first commercial entity to deliver cargo to the International Space Station.
- In 2013, SpaceX **launched its first mission for a private customer** and quickly secured a dominant market share of commercial launch contract market.

WITH OFFSHOOTS!

- Along the way, the company added to its business mix, first with **The Boring Company**, a company that specialized in building tunnels that could be used to transport people, in 2017, before spinning it off as a separate entity.
- More significantly, in 2019, the company also launched sixty **Starlink satellites**, with the end game of offering internet services to customers, especially in areas where conventional internet service was limited. That endeavor has now grown to include thousands of satellites and had more than **ten million active subscribers spread across the world, at the end of 2025.**
- In February 2026, the company developed its third business arm, **with its acquisition of xAI**, the parent to Grok, the Musk-developed competitor in the LLM space.

FINANCIAL HISTORY..

- **SpaceX had a slow start financially**, as its initial years were spent developing the Falcon 1 rocket, and even after that development, the dependence on the US government and commercial satellite launchers resulted in revenues growing much more slowly than they did at Tesla, Musk's other high-profile creation.
- **Even as late as 2021, the company reported revenues of just over \$2 billion**, almost entirely from its launch business, but **Starlink's subscriber based model has allowed revenues to increase more than five-fold since, reaching an estimated \$15.5 billion in 2025**, with just under 30% coming from the launch business (\$4.1 billion) about the rest from Starlink subscriptions (\$11.4 billion); **xAI, which was acquired in 2026, had subscription revenues of roughly \$100 million in 2025.**
- Without full financials to back up the statement, it is estimated that **SpaceX generated an EBITDA of \$8 billion in 2025**, though with depreciation and other expenses incorporated, it is not clear how much profits the company delivered (as operating or net profit).

AND FUNDING HISTORY

- Elon Musk **used a portion of his winnings (\$180 million) from his PayPal exit as seed money (\$100 million)** for founding SpaceX, but the company required multiple rounds of venture capital to fund its infrastructure needs.
- The first venture capital round of about \$12 million was in 2002, but **there have at least thirty additional infusions amounting to more than \$12 billion.**
- While SpaceX **counts big name VCs in its investing roster** (Founders Fund, Andreessen Horowitz and Sequoia), it has also seen increasing investments from **public equity investors** such as Fidelity and **public tech companies** such as Google.
- While these venture capital investments have diluted Musk's ownership over the years, **he continues to own about 42% of the equity in the company, and with differential voting rights, close to 80% of the total voting rights in the company.**

VALUING SPACEX

- It is true **that intrinsic valuation, at least in its discounted cash flow avatar, is much easier at companies that have many years of historical data and peer groups of companies in the same business.**
- If you use that framework, it is easy to see why **so many view SpaceX as a company that cannot be valued, given that you don't even have a single year of financial statements (let alone a long history) and there are no truly comparable companies.**
- That said, if you define intrinsic value as the value of a business based upon its capacity to generate cash flows in the future, there is **nothing in that definition that requires either historical data or peer group information.**
- I have long argued that **you can estimate the value of young companies with minimal data, as long as you build a valuation around a business narrative, and accept that this valuation will change,** as circumstances do. With SpaceX, I will get a chance to put this argument into practice.

THE LAUNCH BUSINESS: BACKGROUND

- The **launch business**, which is where SpaceX was born, is still its most identifiable business, and frames the company's story not just as a futuristic company, but one that was able to overcome some of the most significant technological challenges of any start up and not just survive but thrive.
- SpaceX has established such a robust and long-standing cost advantage over its competitors in the business, stemming from its existing infrastructure investments and **reusable rocket technology**, and had a market share in excess of 80% of the market in 2025.
- Its **competition will come from some private and government-funded players**, who may be able to capture market share, notwithstanding their higher costs, due to security and nationalistic concerns.

THE LAUNCH BUSINESS: STORY

- The space launch market is estimated to be about \$30 billion in 2026 and is **expected to grow to \$100 billion in 2036**, as governments and private business demand increases.
- SpaceX will **continue to dominate the business**, albeit with a slightly less dominant market share (70%, down from >80% in 2025) of the total market and as costs decrease with scale, operating margins will increase over time to 40%.
- I am **being conservative in my estimates**, insofar as I am ignoring space travel and expanded business opportunities in space, but I don't think, at the moment, that either offers a viable path to augmenting revenues).

THE INTERNET SERVICE BUSINESS: BACKGROUND

- At the end of 2025, Starlink had close to 10,000 satellites in space, about two thirds of the entire global count, and is adding to that number every month. **That has allowed it to double its subscriber numbers to just over 10 million**, and while Amazon's acquisition of GlobalStar has brought a potential competitor into the mix, GlobalStar has a fraction of the satellites that Starlink does.
- The challenge for any satellite-based internet service provider is that notwithstanding the use of low-earth orbit (LEO) satellites to improve service, **it lags more conventional internet technology (fiber optic and cable) in much of the world**, leaving it (at least for the moment) with a niche market of rural areas, countries with damaged or no infrastructure and airplane/train travelers.
- Thus, while the total internet service market is estimated to be close to a trillion and a half dollars globally, in 2025, **satellite-based service accounted for about 1% in 2025, accounting for just over \$12 billion** in revenues, with StarLink having a dominant market share.

THE INTERNET SERVICE BUSINESS: STORY

- **The satellite internet services market will continue to grow, as technology improves service quality and the airline/public transit demand for better wifi grows, from \$15 billion to \$160 billion (from less than 1% to 10% of the internet service market) over time.**
- **Starlink will see more competitors, but its lead in satellites and capacity to use its launch business to get more into space, will give it a substantial advantage and a market share of 75% of the overall market).**
- **The cost of customer acquisition will ease over time, as business customers become a larger portion of the business, and operating margins will approach 60% in steady state, as the market consolidates.**

THE LLM BUSINESS: BACKGROUND

- **Grok lags the other LLMs in terms of revenues and reach. In terms of usage**, Anthropic (with Claude), OpenAI (with ChatGPT) and Google (with Gemini) are not only more widely used than Grok, but are further along in converting them into businesses, with subscription models.
- While **Grok has been bundled into the X Premium subscriptions, and earned \$80 million in revenues in 2025**, it seems to be focusing more on individual consumers than businesses.
- This is the **most diffuse and volatile of the three markets, in terms of potential market**, since the potential market can run from the tens of billions (if they remain subscription-based) to hundreds of billions or even trillions (if they become replacements for human labor or massive productivity boosters).
- It is **entirely possible that Grok may concede the larger and more competitive business space to Claude and ChatGPT** and focus instead on consumer subscriptions, giving it a smaller market, but one with less competition.
- The **recent acquisition of Cursor, an AI company** focused on coding applications suggests that Grok has not thrown in the towel on business application.

THE LLM BUSINESS: STORY

- The **LLM market will continue to grow**, but more in business applications than in consumer apps.
- In my storyline, xAI will **target primarily consumer subscription revenues** and use in niche business applications, such as coding, leaving the more messy white-collar applications to its competitors.
- That will **give it a smaller market (\$80 billion in 2036)**, but one with less competition and higher margins (50% operating margin), and less reinvestment as it avoids going head-to-head with Anthropic, OpenAI and Google for business use.

THE EXPANSION OPTIONS: BACKGROUND

- It is undeniable that SpaceX, as a lead player in three fast-growing and volatile businesses, may be able to use its infrastructure to **expand each of these businesses** along the way.
 - The space launch business, which has generally focused on delivering commercial or government loads and satellites into outer space may very well become a **springboard for space travel, for leisure, research or business**.
 - With its satellite broadband offerings, the possibility exists that **the technology and the reach will improve to a point where they can compete with fiber-optic and cable broadband offerings**, perhaps at much lower cost.
 - With xAI, the possibility that Grok **finds a way to outflank its LLM rivals, including Claude, Gemini and ChatGPT**, in terms of business offerings may be low, but it does exist. In truth, these are all options that may not be viable at the moment, but if they become viable, could add immense value.

STORIES TO NUMBERS

<i>Business</i>	<i>Storyline</i>	<i>Revenues in 2036 (\$ millions)</i>	<i>Operatng Margin in 2036</i>	<i>Sales to Capital: 2026-30</i>	<i>Sales to Capital: 2031-2035</i>
Launch	Dominant player in a growing launch market; 70% market share of \$100 billion market.	\$70,000	40%	4.00	2.00
Starlink	Market leader (75%) in satellite broadband, a niche (10%) of very large broadband service market (\$1.6 trillion)	\$120,000	60%	10.00	5.00
xAI	LLM with focus primarily on consumer subscriptions, rather than business-use	\$80,000	45%	2.50	1.50
Expansion Options	Expansion options in space (travel), internet services and AI-related businesses.	\$50,000	30%	3.00	3.00

SpaceX

To Two Trillion and beyond?

Apr-26

SpaceX has three business (for the moment), the space launch, satellite internet and LLM businesses (with xAI). In the first two, it has significant cost advantages and moats that will allow it to maintain dominant market shares, as the businesses grow, in conjunction with high operating margins, driven by favorable unit economics. In the LLM race, Grok (xAI's offering) is more consumer-focused than its competitors (Gemini, Claude and ChatGPT) and is expected to settle into a subscription-based business which is large and profitable.

The Assumptions

	Base year	Year 1	Year 10		After year 10	Link to story
Revenues (a)	\$ 15,600		4.20%		4.20%	Market leadership and competitive advantages allow for dominant market share.
Operating margin (b)	-2.03%		29.27%		48.44%	Solid & improving unit economics in the space launch and satellite internet businesses increase margins.
Tax rate	10.00%		25.00%		25.00%	Global tax rate
Reinvestment (c)		Sales to capital	2.66	RIR =	28.00%	Existing investments in infrastructure allow for efficient growth in businesses.
Return on capital	-1.11%	Marginal ROIC =	129.77%		15.00%	Cost of entry will limit competition.
Cost of capital (d)		8.02%		8.00%	8.00%	Weighted business risk.

The Cash Flows

	Revenues	Operating Margin	EBIT	EBIT (1-t)	Reinvestment	FCFF
1	\$38,377	11.89%	\$4,563	\$4,107	\$4,864	-\$757
2	\$57,916	15.99%	\$9,259	\$8,333	\$7,458	\$875
3	\$74,865	20.28%	\$15,182	\$13,664	\$6,296	\$7,368
4	\$89,743	24.59%	\$22,063	\$19,857	\$5,366	\$14,491
5	\$129,483	29.27%	\$37,902	\$34,112	\$16,523	\$17,589
6	\$167,587	32.68%	\$54,762	\$47,643	\$31,659	\$15,984
7	\$205,690	36.42%	\$74,902	\$62,918	\$31,659	\$31,259
8	\$243,793	40.33%	\$98,322	\$79,641	\$31,659	\$47,982
9	\$281,897	44.35%	\$125,021	\$97,516	\$31,659	\$65,857
10	\$320,000	48.44%	\$155,000	\$116,250	\$31,659	\$84,591
Terminal year	\$333,440	48.44%	\$161,510	\$121,133	\$33,917	\$87,215

The Value

Terminal value	\$ 2,295,142		
PV(Terminal value)	\$ 1,061,402		
PV (CF over next 10 years)	\$ 154,659		
Value of operating assets =	\$ 1,216,061		
Adjustment for distress	\$ -	Probability of failure =	0.00%
- Debt & Minority Interests	\$ -	Not available, since financials for the company are not public. Set to zero in this iteration for cash and debt.	
+ Cash & Other Non-operating assets	\$ -		
Value of equity	\$ 1,216,061		
- Value of equity options	\$ -		
Number of shares	2,416.67	Based upon private company pricing, but may change.	

HOLES IN THE STORYLINE!

- With my story and inputs, the value that I derive is \$1.2 trillion, about 10% below the private market pricing and about a third below the expected IPO pricing, but still astonishingly high for a company with \$15.5 billion in revenues in the most recent year, and a host of question marks about corporate governance.
- Note that in this iteration, I have ignored cash and debt, since I do not have the company's financial statements, but it is unlikely that either will have much of an impact on the value of equity for a company with this high a value for its operating assets.
- As you can see, the SpaceX story not only has many moving parts, but is fraught with uncertainty, and without full financials, it does not have a good starting point.
- As the initial public offering is fleshed out, we will have access to the full financial statements of the company, including its cash holdings and indebtedness, as well as the capital invested in the firm by venture capitalists over its lifetime.

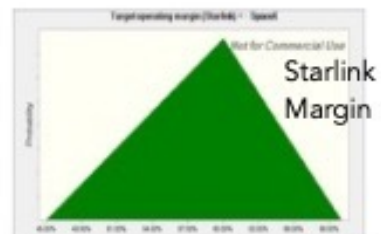
DEALING WITH UNCERTAINTY!

- **Uncertainty is a feature, not a bug**, and valuing SpaceX requires becoming comfortable with its presence.
- I am uncertain about every input in the SpaceX valuation, but
 - I am less uncertain about some estimates (revenues and margins from the launch and internet service businesses) than I am about others (revenues and margins in the LLM and expansion businesses)
 - If you are wondering why this uncertainty is not showing up in a higher cost of capital, it is because the risk is specific to the company and cuts in both directions (upside and downside)
 - If there are outliers, they are far more likely to be on the upside than the downside
- Rather than hide from the uncertainty, I will embrace it, and make my best judgments on how uncertain I feel in a simulation.

Revenues in 2036

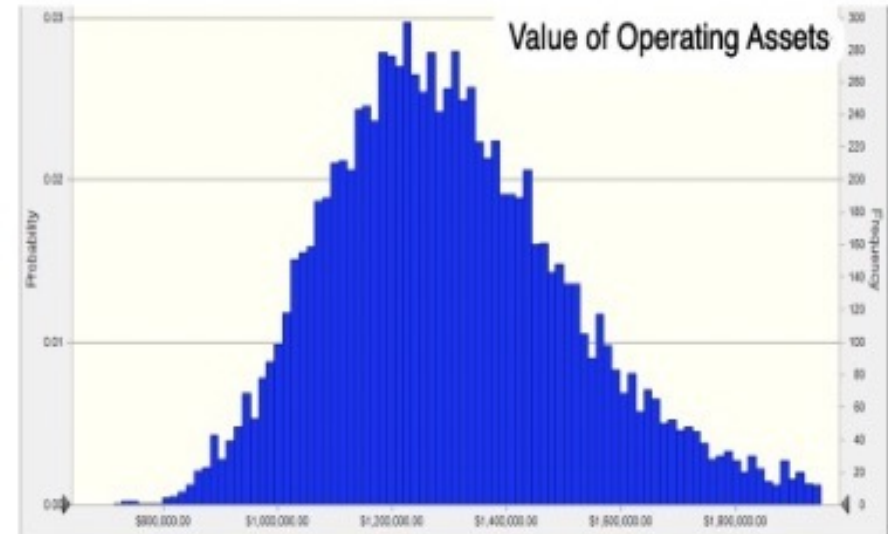


Operating Margin in 2036



Revenues & Margins correlated:
0.25- 0.30

SpaceX IPO: Valuation in April 2026

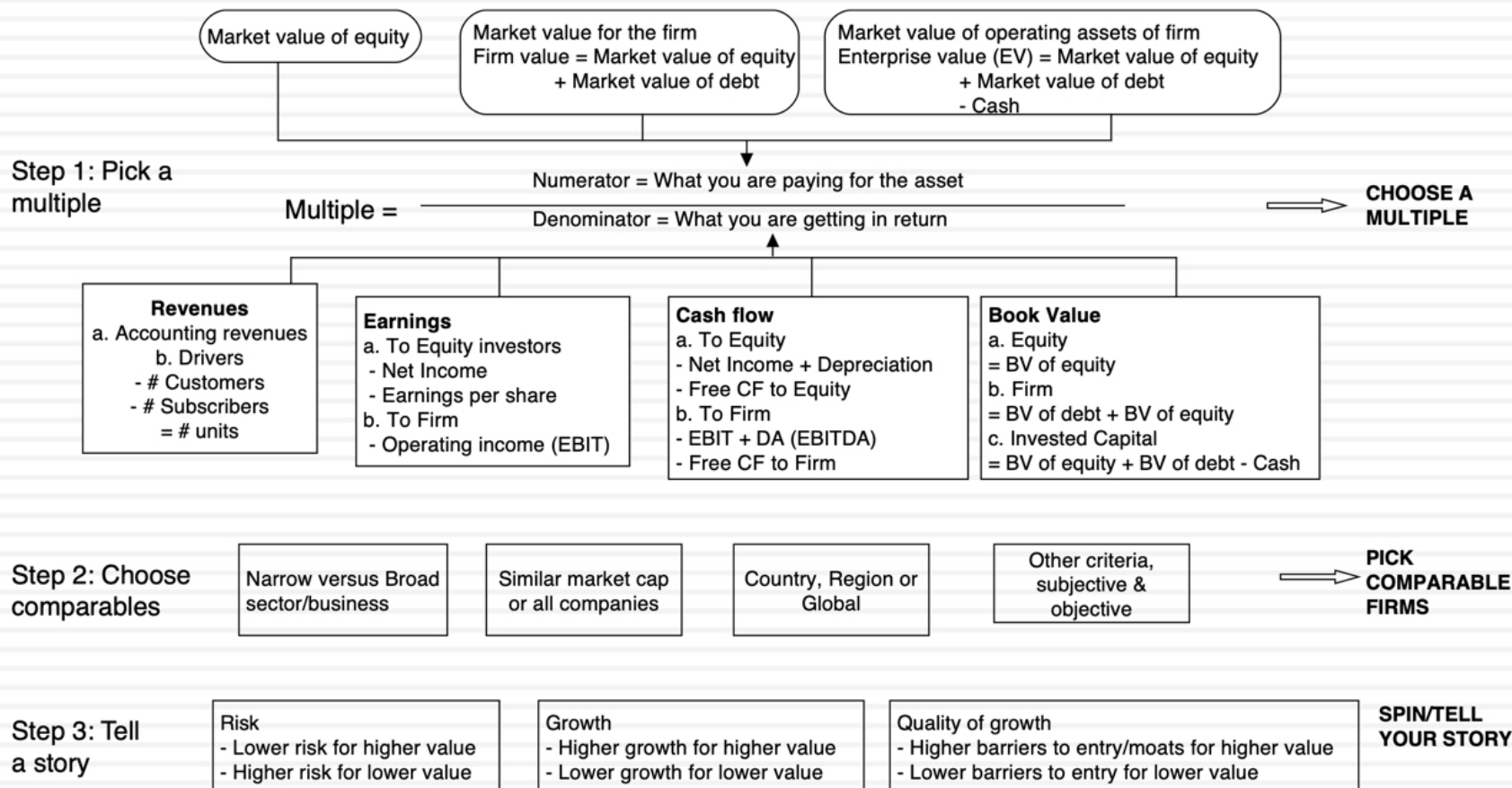


Percentile	Value of Operating Assets (\$ mil)
0%	\$657,459
10%	\$1,045,330
20%	\$1,119,670
30%	\$1,179,281
40%	\$1,228,935
50%	\$1,282,521
60%	\$1,337,119
70%	\$1,401,634
80%	\$1,480,977
90%	\$1,605,184
100%	\$2,777,856

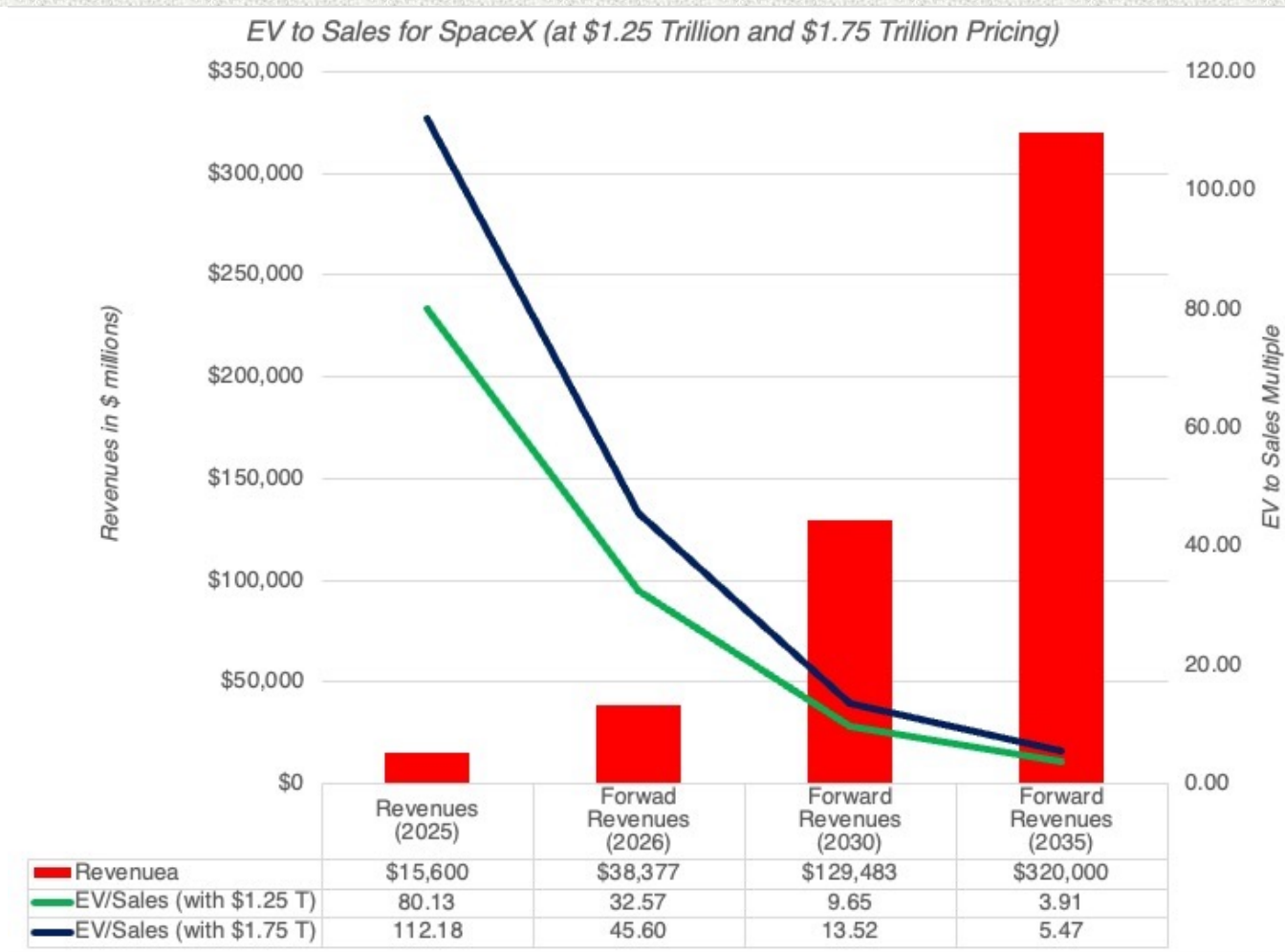
PRICING SPACEX

- In an initial public offering, companies are priced, not valued, by bankers (for the offering price), by investors (as the stock starts trading) and by observers to make judgments (on whether it over or underpriced).
- Thus, you can make the argument that the valuation, with all of its moving parts, is irrelevant, and that you should price SpaceX, not value it, if your intent is to trade on the IPO.
- That is a legitimate critique, but the argument that pricing somehow dispenses with the need to make assumptions about market size and profitability or does not have the same uncertainties is not.

THE PRICING PROCESS



1. PRICING METRIC



2. PEER GROUP (OF COMPARABLE FIRMS)

- The bigger challenge in pricing SpaceX will be in the second step, **where you have to find comparable firms (or a peer group) to base your pricing on.**
 - On the space launch business, using publicly traded aerospace and defense companies like Boeing and Northrop Grumman is a non-starter, because they are in low growth, lower-margin businesses than SpaceX. **Palantir may seem like a logical fallback, and while it may have similar growth potential, it is a data/software company that does not have the infrastructure.**
 - On the internet service business again, there are conventional telecom firms like Verizon and T-Mobile, but **the economics of their offerings are different, and they are not growth companies.**
 - Finally, on xAI, there are other LLMs, **almost all of which are private companies now, and while you can use the pricing from most recent VC rounds,** you are on shaky grounds.
- Even if you forged ahead with a peer group of high-growth, tech companies, **your pricing will almost certainly have to revolved around revenues, rather than profits, and based upon very small samples.**

PRICING STATISTICS...

	EV to Sales		EV to EBITDA	
	<i>Aerospace & Defense</i>	<i>Internet Services</i>	<i>Aerospace & Defense</i>	<i>Internet Services</i>
First Decile	1.33	0.42	11.08	5.38
First Quartile	2.37	0.93	17.03	8.02
Median	5.67	2.10	28.58	21.22
Third Quartile	12.95	8.40	54.45	36.22
Ninth Decile	33.74	22.52	117.40	129.15

3. STORY TELLING

- The one part of pricing that you will almost certainly see is the story telling, especially with analysts who are locked into finding SpaceX to be a buy, with the pricing more of an ex-post rationalization than a analytical tool.
- No matter what peer group you pick, SpaceX will be priced higher than comparable firms, and to back the argument that it is still a good investment, you will hear stories of its large potential market, significant competitive advantages and profitability.
- All of these stories have a kernel of truth to them, but they are empty if they remain stories. To truly control for differences in growth and margins, you have to estimate how much the market is paying for each.

ANOTHER CORPORATE TEENAGER?

- SpaceX is Musk's most impressive contribution, **an engineering marvel that has shown its naysayers, which included almost every luminary in the space community, to be wrong.**
- As with all of Musk's creations, **SpaceX will be a shape shifting entity**, frustrating investors who expect companies to follow linear paths in the corporate life cycle, going from young growth to maturity, instead shifting from one narrative to another, often with no advance warning.
- When I bought Tesla in 2019, after its stock had taken a beating, I described the company as a corporate teenager, and with Musk in full control, SpaceX is likely to follow the same meandering path.
 - **That makes it a difficult company to buy, but it makes it an even more dangerous company to sell short**, as Tesla short sellers have discovered in the last two decades.
 - In a business world, where **so many companies to be unique and one-of-a-kind, SpaceX qualifies**, and while I would not be interested in buying at the rumored IPO pricing of \$1.75 trillion, it is perhaps one big correction away from being fairly priced or even cheap. If that happens, I will be a buyer, but will do so with the recognition that this company comes packaged with a founder who is both uniquely gifted and flawed, and complaining about the parts of Musk you do not like, while enjoying the fruits of the aspects that you do, is unfair.