Valuing SpaceX

A real, current, public ESG sum-of-the-parts

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Summer ESG Module | Valuation | Practice

The biggest IPO in history — last month

On 12 June 2026, SpaceX went public (Nasdaq: **SPCX**) at $135 a share. It raised about $75 bn — the largest IPO ever — popped 19% on day one, and now trades around **$153**.

That price tag

≈ **$2.0 trillion** of equity. On $18.7 bn of 2025 revenue (**107× sales**) and a $4.9 bn *net loss*.

For the first time we can value SpaceX with its real S-1 in hand — and a live price to test against.

You are an analyst the morning after the IPO. The S-1 is on your desk; the tape says $153.

Commit before we build

Is SpaceX at **$153** cheap, about right, or expensive on the fundamentals? And — if it's expensive — *what would you have to believe* to justify it?

We will build the valuation from the filing, segment by segment, and test your answer.

One filing, three businesses

The S-1 hands us a sum-of-the-parts

After xAI merged in (Feb 2026), SPCX reports three segments — exactly the cut a valuation wants.

Connectivity

Starlink. $11.4 bn rev, **+$4.4 bn** operating income, 63% EBITDA margin. *The cash engine.*

Space

Launch + Dragon. $4.1 bn rev, near break-even. Starship is the option. *The franchise.*

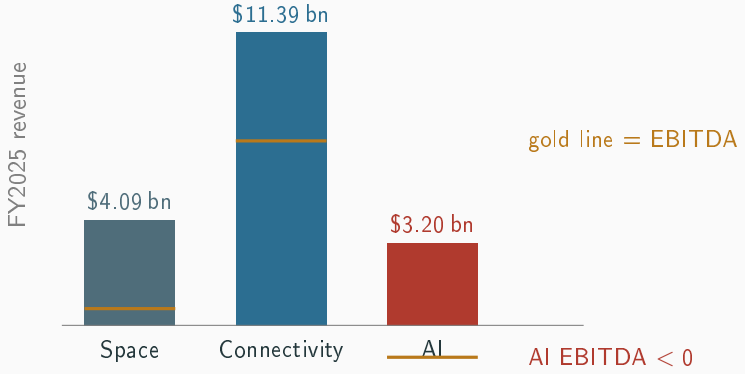
AI

xAI / Grok. $3.2 bn rev, **−$6.4 bn** op. loss, $12.7 bn capex. *The swing factor.*

Three businesses, three risk profiles, three discount rates. We value each, then add them up.

Source: SEC Form S-1/A #2, CIK 0001181412 (FY2025). EBITDA = Adjusted EBITDA.

The shape of the firm (FY2025)



Starlink is most of the revenue *and almost all of the profit*. AI earns less and burns more.

Source: S-1/A #2. Adjusted EBITDA: Space $0.65 bn, Connectivity $7.17 bn, AI −$1.24 bn.

The cash story is the whole story

Starlink prints cash

2025 operating income +**$4.4 bn**; subscribers **10.3 million** (Mar 2026), up 105% YoY.

AI consumes it

2025 capex **$12.7 bn** on $3.2 bn of revenue. The IPO's first stated use of proceeds is "*AI compute infrastructure*."

Consolidated (2025)

Operating cash flow +**$6.8 bn**

Capex −**$20.7 bn**

⇒ Free cash flow −**$14.0 bn**

Starlink funds the burn. The IPO refills the tank ($74.4 bn net).

The method: sum-of-the-parts DCF

How we value it

1. **Each segment** — a 10-year unlevered free-cash-flow DCF + a terminal value, at its own discount rate (WACC).
2. **Starship** — a real option, valued separately by scenario (it isn't in today's cash flows).
3. **AI** — scenario-driven (Bear / Base / Bull). It is the swing factor, so we make it explicit.
4. **Add up** the parts → enterprise value; bridge to equity; divide by 13.08 bn shares; compare to $153.

$$\text{FCF} = \underbrace{\text{EBIT}(1-\tau)}_{\text{NOPAT, with NOL shield}} + \text{D\&A} - \text{capex} - \Delta\text{NWC} \qquad \text{EV} = \sum_t \frac{\text{FCF}_t}{(1+r)^t} + \frac{\text{TV}}{(1+r)^{10}}$$

ESG enters through r (the discount rate) and the cash-flow scenarios. Governance enters through the share count.

Three businesses, three discount rates

WACC

built up from the CAPM: $r_e = r_f + \beta\,(\text{ERP})$, then levered lightly (SpaceX is $\approx$1.4% debt).

Segment	β	ESG nudge	**WACC**	why
Connectivity	1.00	-20 bp	**8.98%**	stable subs; *digital-access* (S) discount
Space	1.30	$+30$ bp	**10.99%**	lumpy; launch emissions, debris (E) premium
AI	1.55	$+20$ bp	**12.18%**	speculative; governance (G) premium

The theory's two channels, in one table: Starlink's -20 bp is a taste discount (Pástor–Stambaugh–Taylor, JFE 2021 — a social good earns a lower cost of capital); Space's $+30$ bp and AI's $+20$ bp are risk premia — carbon/externality (à la Bolton–Kacperczyk, JFE 2021) and governance. Small by design — hold that thought.

Source: $r_f = 4.3\%$, ERP $= 5\%$. Illustrative teaching marks.

Valuing the parts

Subscribers grow (10.3 m $\rightarrow$ tens of millions); ARPU keeps *falling* (\$99 $\rightarrow$ \$66 $\rightarrow$ ...); margins expand toward a utility-like 70%. Discount at 8.98%, terminal growth 3%.

Enterprise value of Connectivity

worked live — the cash engine carries the firm

The crown jewel — a global broadband utility. We size it live.

A disciplined number, not a heroic one:

- revenue growth decays 45% $\rightarrow$ 6%
- EBITDA margin 63% $\rightarrow$ 70%
- capex/sales 30% $\rightarrow$ 10%

Space — a near-break-even franchise, plus an option

The Falcon/Dragon business is the world's dominant launch provider — but most launches are *internal* (Starlink), at cost, so reported margins are thin.

Base launch business (DCF)

small on today's economics

Below its $28 bn backlog, or above? Thin margins — the upside isn't in today's Falcon.

Starship — a real option

Point-to-point, heavy lift, lunar/Mars cargo.
Valued by scenario: **$0 / $80 bn / $250 bn**

Not in the cash flows yet — so we price it as optionality, separately.

AI — the swing factor

$3.2 bn revenue, *losing* $6.4 bn at the operating line, $12.7 bn of capex, against an issuer-claimed $26.5 trillion TAM. Tiny today; enormous if it works.

So we don't pretend to a point estimate — we run three scenarios:

Scenario	what you believe	**AI segment EV**
Bear	never earns its capital; burn continues	*?*
Base	scales to solid profit by ~2031	*?*
Bull	captures real TAM share	*?*

Hold your three

numbers against the $26.5 tn TAM story.

Adding it up

The bridge to value per share (Base case)

Build the sum-of-the-parts yourself.

Add the four segment values, bridge by net cash, divide by 13.08 bn shares.

Bring your value per share. We assemble the bridge live.

Write down your three numbers first.

Bear / Base / Bull — value per share. Commit before class.

We reveal the football field, and the gap to $153, live.

What must you believe?

We can't get to $153 from the cash flows. So invert the question:

Reverse DCF

Hold Starlink, Space and Starship at our (disciplined) marks. What value must the market be assigning to the AI / moonshot bucket to justify $153?

Guess the number before the reveal. *Recall what our DCF put the AI segment at.*

Guess the implied number first.

Hold Starlink, Space and Starship at our marks. What must the AI / moonshot bucket be worth to justify $153?

Write a number. We reveal it live — it is larger than you think.

Read the residual honestly

What it *is*

The value the price implies for everything our DCF *can't* capture: Starship at scale, Mars, 100 TW of orbital compute, AI TAM capture.

What it is *not*

A precise AI valuation. It is a residual — it absorbs every conservative choice we made elsewhere. Move Starlink's terminal growth and it moves too.

This is the Tesla / Damodaran lesson, live: **a narrative stock is priced on the option, not the cash flows.**

Where ESG actually bites

PREDICT · How much does ESG move the value?

We put real ESG factors into the discount rate:

- **S** *(taste channel — PST)* — Starlink connects 3 bn unconnected ⇒ *lower* cost of capital (-20 bp).
- **E** *(risk premium — à la Bolton–Kacperczyk)* — launch emissions, NEPA, orbital debris / Kessler risk ⇒ *premium* ($+30$ bp).
- **G** *(governance-risk premium)* — dual-class control, key-person, related parties ⇒ *premium* ($+20$ bp).

PREDICT · Before the next slide: do these ESG adjustments move the answer by dollars, or by cents?

The governance overlay

One man, 82.4% of the vote

Class	shares	votes/share	voting power
A (public)	7.38 bn	1	11.5%
B (Musk & insiders)	5.70 bn	10	88.5%
Elon Musk — total voting power			**82.4%**

A Nasdaq "controlled company": exempt from the independent-board-majority rule. Musk is CEO, CTO and Chairman, with ≈46% of the economics but **82.4%** of the vote.

The pay award: vest on Mars

Musk's 2026 performance award (Class B)

1,000 m shares — vest on 15 market-cap milestones *and* a permanent **Mars colony of ≥1,000,000** people.

302 m shares — vest on 12 milestones *and* non-Earth data centres at **100 TW/yr**.

≈1.30 bn shares (≈9% dilution) — but only in states of the world where SpaceX is worth *multiple trillions*. **PREDICT** · Is that good governance — or its opposite? *The dilution is contingent on the very upside that triggers it.*

Governance is a valuation input, not a footnote

Concentration

82.4% voting control means minority holders cannot discipline strategy, capital allocation, or the $20.2 bn of related-party xAI↔Valor compute leases.

...vs. conviction

The same control let SpaceX make decade-long, capital-destroying bets (reusable rockets, Starlink) that a quarterly market would have killed.

The **G** in ESG is not a checklist here — it is the question of whether you trust the one person who controls the moonshot.

Synthesis

What SpaceX teaches about valuation

1. **Sum-of-the-parts disciplines a story.** Three segments, three discount rates — the cash engine, the franchise, the swing factor — beats one blended guess.
2. **When DCF and price diverge by 3×, invert it.** The reverse DCF turns "it's expensive" into a falsifiable claim: *what must you believe?*.
3. **ESG lives somewhere specific.** Basis points in the discount rate; first-order in the *scenarios* and in *governance*.
4. **Governance is priced.** 82.4% control is both the risk and the reason the bets got made.

Discussion

1. Our Bull case is *far below the tape*; the market is $153. Are you the analyst or the market — and what is the *one* assumption that would close the gap?
2. Should the AI segment be valued by DCF at all, or only as a real option? What changes?
3. Does Musk's 82.4% control deserve a governance *discount* — or, given the track record, a *premium*?
4. If Starlink alone is worth *most of the firm*, is the rest of SpaceX a *vast* call option on Mars? Would you write that option?

Bring your number. We will rebuild the model live and see whose assumptions survive.

A disciplined DCF says *far less than the tape*.
The market says $153.

The difference is everything you believe about Mars.