

Valuing SpaceX

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

Jae Yung Kim

2026

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.*

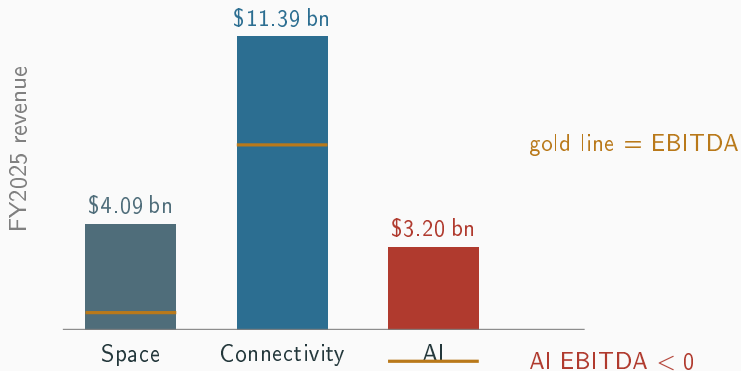
AI

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.

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

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: $r_e = r_f + \beta$ (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; <i>digital-access</i> (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.

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

$\approx$ **\$408 bn**

$\approx 7\times$ a much larger FY2035 EBITDA. Rich, but it is the crown jewel: a global broadband utility.

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)

≈ \$8 bn

Yes — below its \$28 bn order backlog. 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	−\$24 bn	<i>Even the Bull</i>
Base	scales to solid profit by ~2031	−\$2 bn	
Bull	captures real TAM share	+\$83 bn	

10-year DCF is under \$100 bn. Hold that against the TAM story.

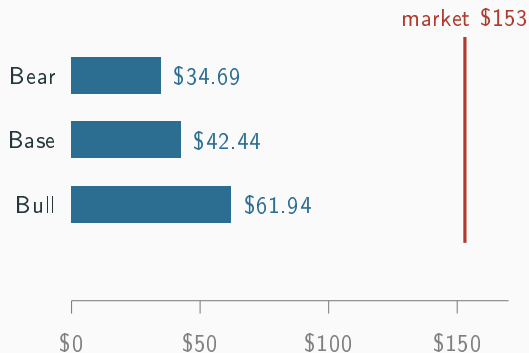
Adding it up

The bridge to value per share (Base case)

Connectivity / Starlink	\$408 bn
Space (base launch)	\$8 bn
Starship real option	\$80 bn
AI / xAI	-\$2 bn
Σ Enterprise value	\$494 bn
+ cash & IPO proceeds — debt	+\$61 bn
= Equity value	\$555 bn
$\div$ 13.08 bn shares	
Value per share	\$42
Market price	\$153

Pre-money cross-check lands ~\$4 lower — same story.

EVIDENCE · The football field



VERDICT · Every scenario — even the Bull — sits **far below** the market price. The disciplined DCF says \$35–62; the tape says \$153.

What must you believe?

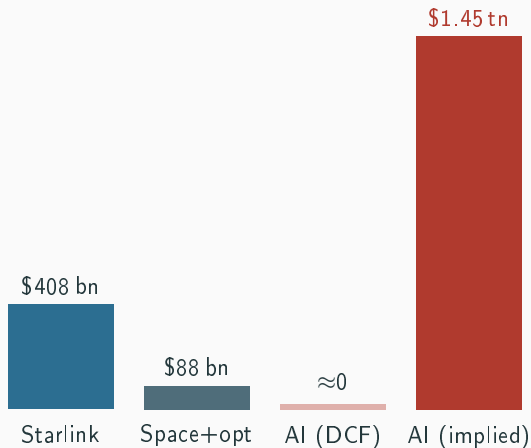
We can't get to \$153 from the cash flows. So invert the question:

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. *Our DCF put AI at roughly zero.*

EVIDENCE · The market is pricing a \$1.4-trillion moonshot



VERDICT · To pay \$153, you must believe the AI/moonshot bucket is worth **≈ \$1.45 trillion** — versus **≈ \$0** on a disciplined DCF, and **~\$200 bn** at xAI's last private mark. ^{14/22}

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 $\Rightarrow$ *lower* cost of capital (-20 bp).
- **E** (*risk premium — à la Bolton-Kacperczyk*) — launch emissions, NEPA, orbital debris / Kessler risk $\Rightarrow$ *premium* ($+30$ bp).
- **G** (*governance-risk premium*) — dual-class control, key-person, related parties $\Rightarrow$ *premium* ($+20$ bp).

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

VERDICT · ESG moves cents; the moonshot moves everything

The honest result

The ESG nudges ($\pm 20\text{--}30$ bp) move value by a **few dollars** a share. The gap to the market price is **~\$110**.

So is ESG irrelevant? No — the lesson is sharper, and it is the morning's two inputs in one stock:

- ESG entered through the **discount rate r** — the *taste* and *risk* channels of the theory — but for a *narrative* stock a basis-point repricing is second-order.
- The moonshot lives in the *other* input, the **cash-flow scenarios**: the market's Mars / AI beliefs carry the ~\$110 gap. ESG bites here too — debris rules, Starshield geopolitics — and, above all, in **governance**.

Know where each force lives: ESG in the discount rate (cents), the moonshot in the cash flows (everything).

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 $\approx 46\%$ 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 $\geq 1,000,000$ people.

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

≈ 1.30 **bn** shares ($\approx 9\%$ 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 $3\times$, invert it.** The reverse DCF turns “it’s expensive” into a falsifiable claim: *the market is pricing a \$1.4 tn moonshot.*
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 \$62; 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 \$400 bn, is the rest of SpaceX a \$1.6 tn 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 \$35–62.

The market says \$153.

The difference is everything you believe about Mars.