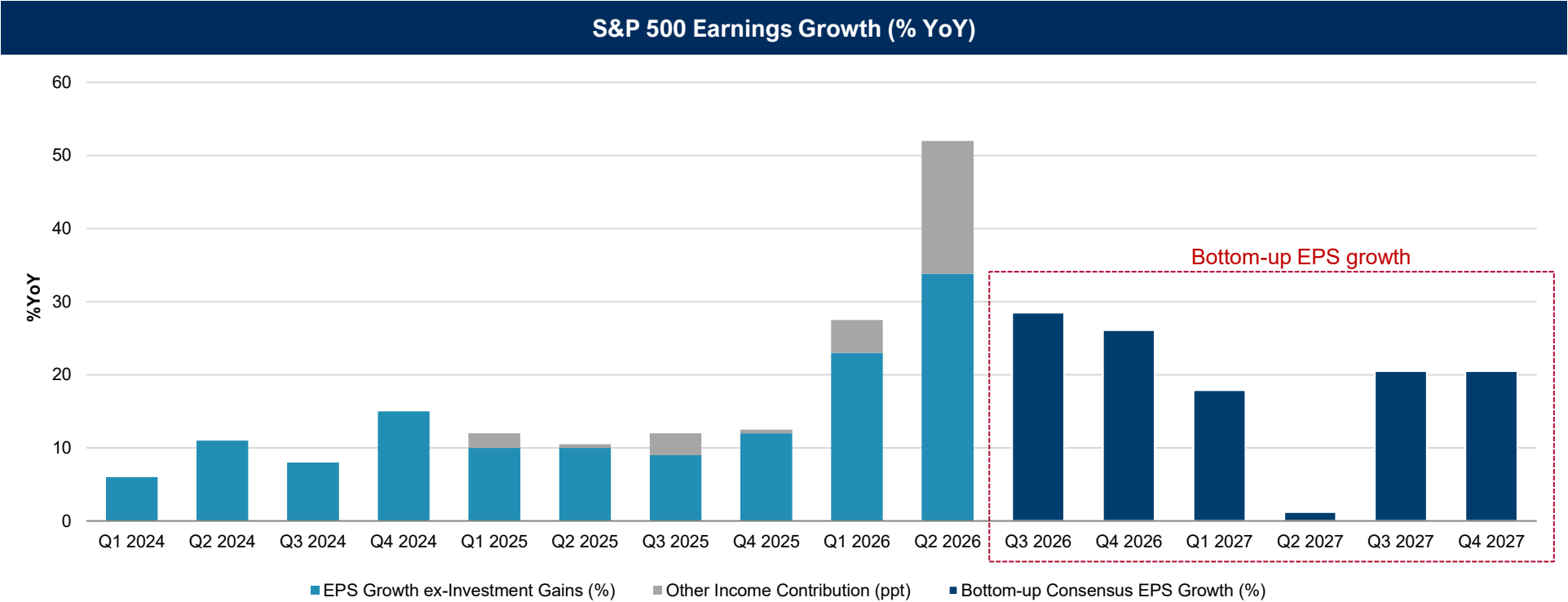


Hyper-Scaling AI Capex: S&P 500 Earnings Growth & Valuations – Reality or Hallucination?



S&P 500 Earnings: Record Growth, But Consensus Expects A Sharp Normalization

- **Headline earnings growth has been robust, but a significant part of the increase reflects unusually large investment-related gains**
 - Q2 2026 S&P 500 EPS growth was 52.2%, vs. expectation of 23.1%, with investment-related gains materially boosting reported earnings. Even excluding these gains, underlying EPS growth remained exceptionally strong at ~33% YoY.
- **Consensus expects a sharp normalization**
 - Consensus expects EPS growth to slow to ~18% in Q1 2027 and to be near flat in Q2 2027, before recovering to ~20% in H2 2027. *The key question is whether that subsequent rebound can be sustained as one-off gains fade and underlying growth normalizes.*

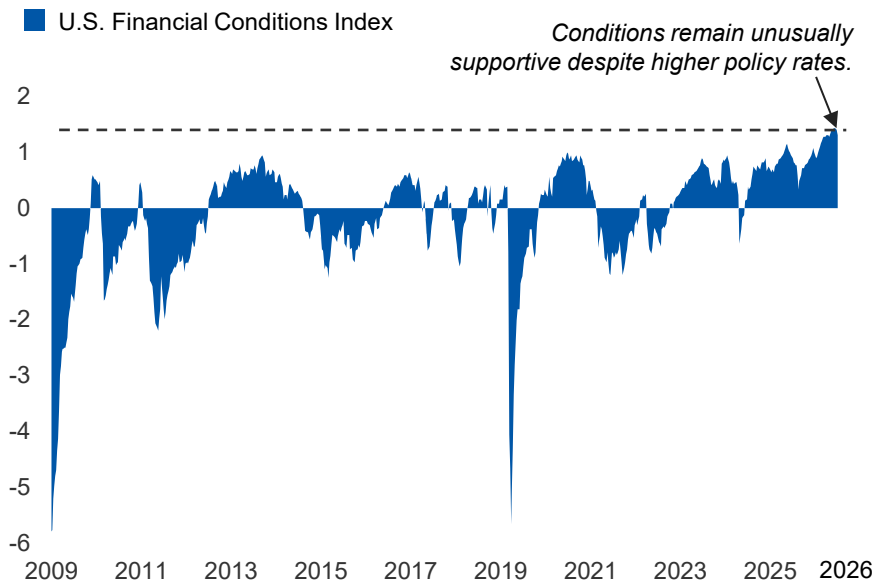


Source: Aranca Research, FactSet

Accommodative Financial Conditions Buoy Markets But Leave Little Room For Error

- **Equity valuations remain supported by unusually easy financial conditions, but equities now offer almost no yield cushion relative to bonds.....**
 - The Bloomberg US Financial Conditions Index remains near the most accommodative levels of the post-2021 period, helping equities absorb a high-rate backdrop. At the same time, the spread between the S&P 500 forward earnings yield and the 10-year Treasury yield has compressed to near zero, leaving little value cushion if earnings or rates move against the market.
-**That leaves limited margin of error**
 - If earnings continue to hold up, accommodative financial conditions can help sustain a still-elevated multiple. But if earnings disappoint or yields rise further, downside could come from both lower earnings expectations and multiple compression.

Supportive Financial Conditions Help Explain Resilient Multiples



There Is Little Cushion Versus Bonds



Source: Aranca Research, Bloomberg, BMO Economics, FactSet

Strong Earnings Are Priced In; The Risk Is A Double Normalization

- **Market is already discounting a strong 2027 earnings outcome:** Consensus estimates point to ~15.2% growth in 2027E S&P 500 EPS. Current 2027 EPS expectations are ~\$420, implying that the index at ~7,740 is trading at ~18.5x 2027E earnings.
- **Limited room for disappointment:** At ~19.1x of NTM earnings, the S&P 500 trades near its 10-year average of 19.0x and modestly below its 5-year average of 19.8x. But current pricing still depends on strong earnings delivery. Two risks could work together:
 - **Earnings disappointment:** A modest shortfall in 2027 EPS versus consensus would reduce the earnings base.
 - **Valuation compression:** Elevated bond yields or weaker risk appetite reduce the P/E investors are willing to pay.

A modest miss on both earnings and valuation could therefore create disproportionately larger downside.

S&P 500 Valuation Sensitivity

Implied Index Level = 2027 EPS × P/E

2027 EPS (US\$)	16x	17x	18x	18.5x	19x	20x
\$360	5,760	6,120	6,480	6,660	6,840	7,200
\$380	6,080	6,460	6,840	7,030	7,220	7,600
\$400	6,400	6,800	7,200	7,400	7,600	8,000
\$420	6,720	7,140	7,560	7,770	7,980	8,400
\$440	7,040	7,480	7,920	8,140	8,360	8,800

Current reference: S&P 500 ~7,743 | 2027 EPS consensus ~\$420 | Implied CY2027 P/E ~18.5x

Illustrative Paths From Here

A

Consensus delivery

$\$420 \times 18.5x = \sim 7,770$
Broadly consistent with current pricing

B

Soft normalization

$\$400 \times 18x = 7,200$
~7% downside

C

Moderate miss + de-rating

$\$380 \times 17x = 6,460$
~17% downside

D

Severe normalization

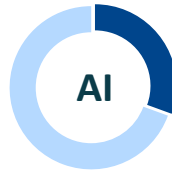
$\$360 \times 16x = 5,760$
~26% downside

Stronger delivery: $\$440 \times 19x = 8,360$ (~8% upside)

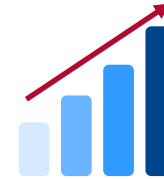
Source: Aranca Research, Bloomberg, FactSet



S&P 500 valuations
depend on earnings
delivery



AI capex is becoming
a key earnings driver

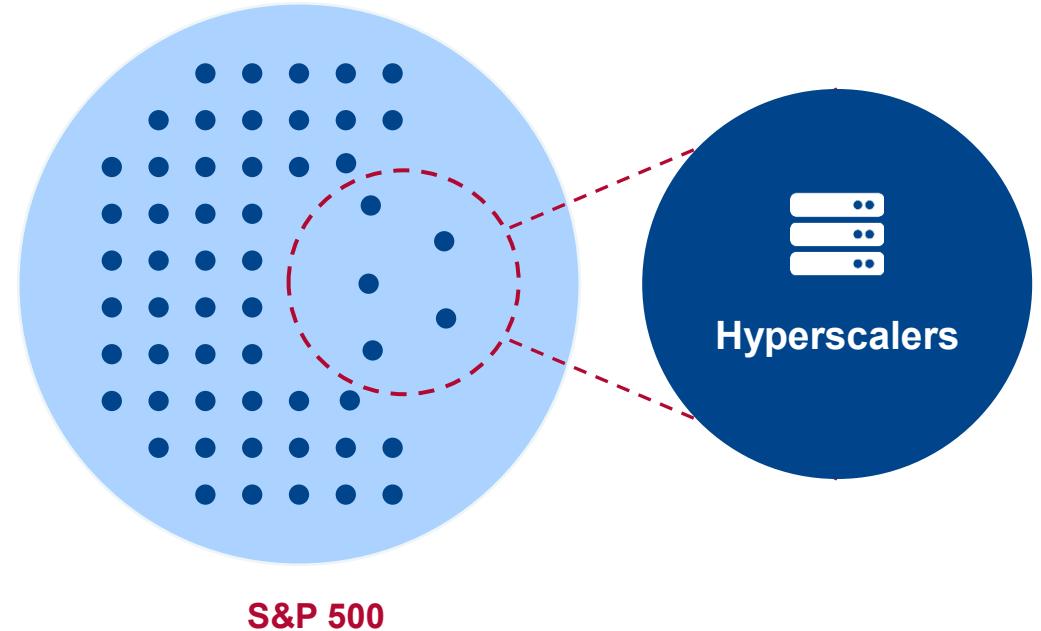


Can the returns justify
the investment?

WHAT MATTERS NEXT?

From the index to the AI builders

If sustaining valuations now depends on continued earnings delivery, the next question is what is driving that earnings growth and how durable that driver is. **AI capex is increasingly central to the answer.**



S&P 500

KEY FOCUS AREAS



Scale of Hyperscaler
Capex



Where the Capex Is
Going



Margins, Cash Flow &
Returns

AI Capex Is Becoming a Major Driver of S&P 500 Earnings Growth

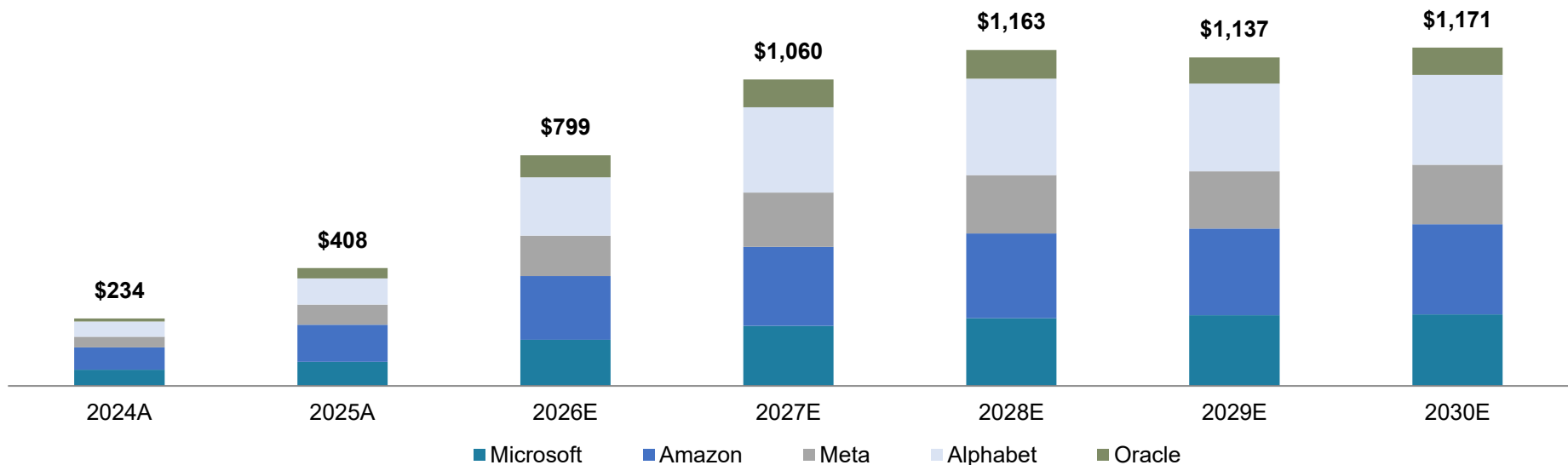
- **AI infrastructure beneficiaries are capturing a growing share of index earnings growth**

- Street expects the AI-related beneficiaries to contribute ~half of S&P 500 earnings growth in 2026–27, while aggregate hyperscalers' capex rises from ~\$408bn in 2025 to ~\$799bn in 2026 and more than \$1tn in 2027.

- **Earnings impact extends well beyond the hyperscalers**

- Semiconductor, hardware, industrial, utility and data-center companies benefit directly as spending on servers, chips, power and infrastructure flows into their revenues and earnings. As a result, the current capex cycle is supporting earnings growth across multiple sectors, rather than remaining concentrated within the largest technology companies.

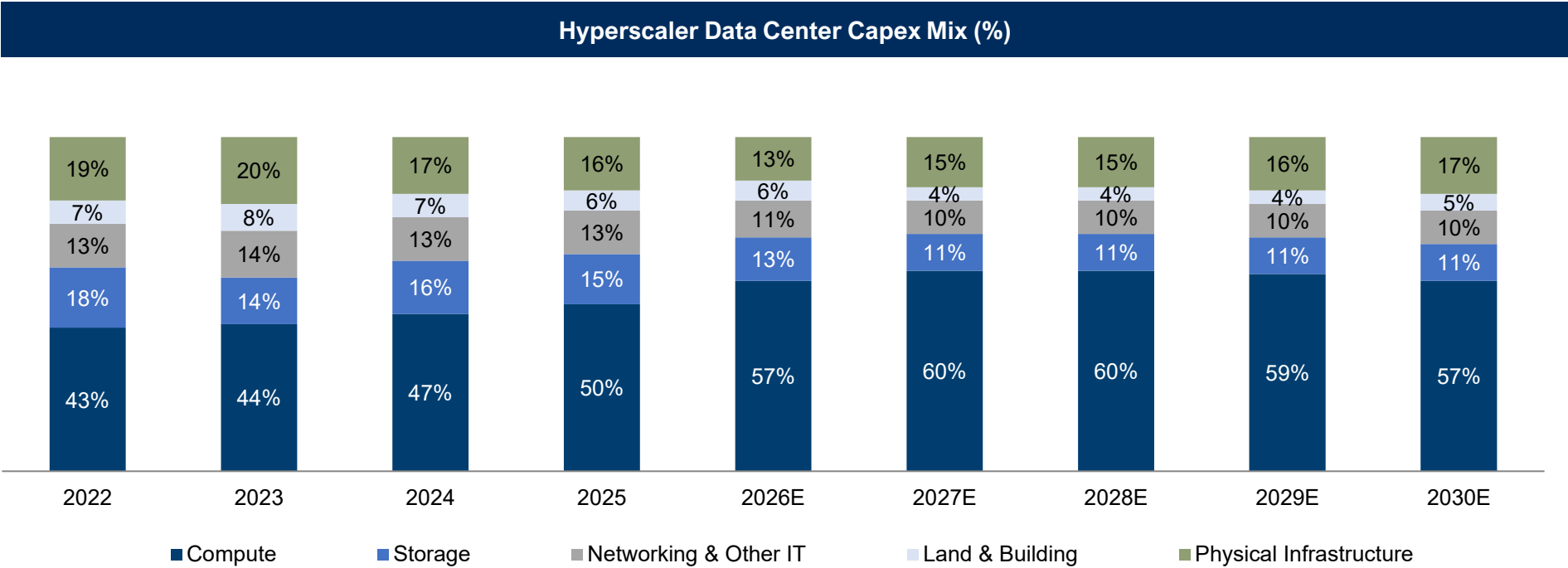
Top 5 Hyperscalers Capex (\$ bn)



Source: Aranca Research, Goldman Sachs Global Investment Research, S&P Capital IQ

The AI Capex Shift: Shorter-Lived Assets, Higher Reinvestment

- **Compute is becoming the dominant component of hyperscaler capex, shifting the investment mix toward shorter-lived assets**
 - Share of computing has increased from ~43% in 2022 to ~57% in 2026E and expected to reach ~60% in 2027E–2028E, making processors, GPUs and servers the largest destination for AI spending. This increases the sensitivity of future depreciation and returns on capital to asset utilization, useful lives and replacement cycles.
- **As the installed compute base expands, more of this spending could become recurring**
 - A larger deployed base of GPUs and servers will eventually require upgrades and replacement, increasing the importance of AI monetization and cash returns keeping pace with ongoing reinvestment needs.



Source: Aranca Research, FactSet
Note: Data represents aggregate data center capex of Alphabet, Microsoft, Amazon, Meta and Oracle. IT infrastructure consists of compute (CPUs/GPUs), storage (HDDs, SSDs) and other networking and security equipment (switches, routers, etc.). Physical infrastructure mainly includes power-related equipment (power distribution infrastructure, backup power) and thermal management.

Hyperscaler Earnings Hold Up, But Cash Flow Takes The Strain

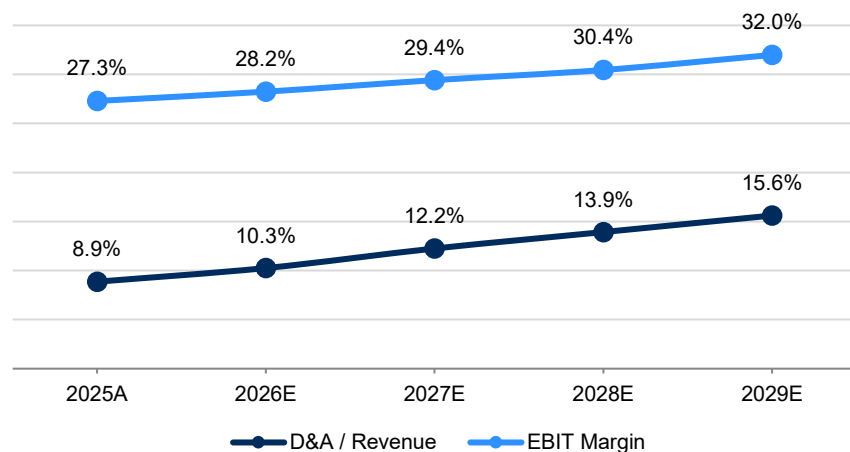
▪ Rising capital intensity is not yet translating into weaker earnings

- Despite D&A expected to rise from 8.9% of revenue in 2025 to 15.6% by 2029E, aggregate operating margins across the five hyperscalers are still expected to expand from ~27% to ~32%. Consensus therefore implicitly assumes AI-related revenue growth and operating leverage will more than offset the rising depreciation burden.

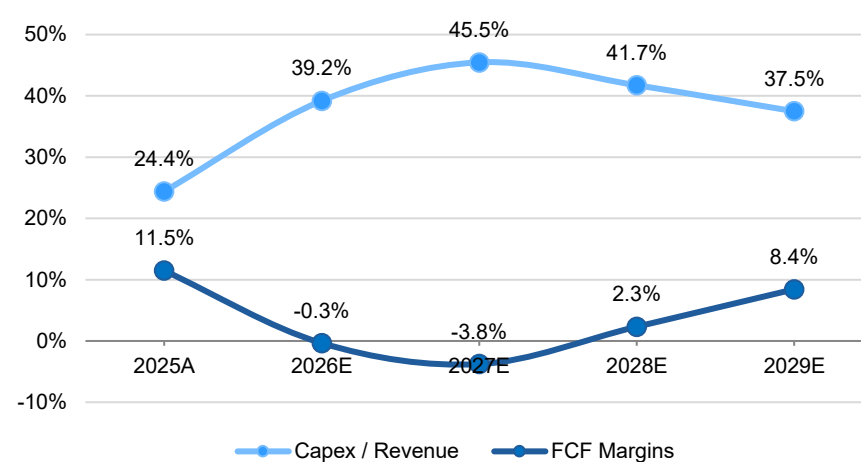
▪ The pressure shows up clearly in cash flow, making returns on incremental capital the key sustainability test

- Aggregate capex is expected to rise from ~24% of revenue in 2025 to ~45% in 2027E, pushing aggregate free cash flow margin from ~12% to ~-4%, before recovering as investment intensity moderates.
- If AI monetization delivers, FCF should recover while margins remain resilient; if not, the larger installed capital base could translate *into weaker returns, poorer cash conversion and lower justified valuation multiples*.

Higher D&A Does Not Prevent Margin Expansion



Free Cash Flow Turns Negative Before Recovering



Source: Aranca Research, Bloomberg

Note: Aggregate of Microsoft, Amazon, Alphabet, Meta and Oracle; CY-aligned. FCF calculated as operating cash flow less capital expenditure

Strong Earnings Growth Requires Both Operating Leverage And Attractive Asset Economics

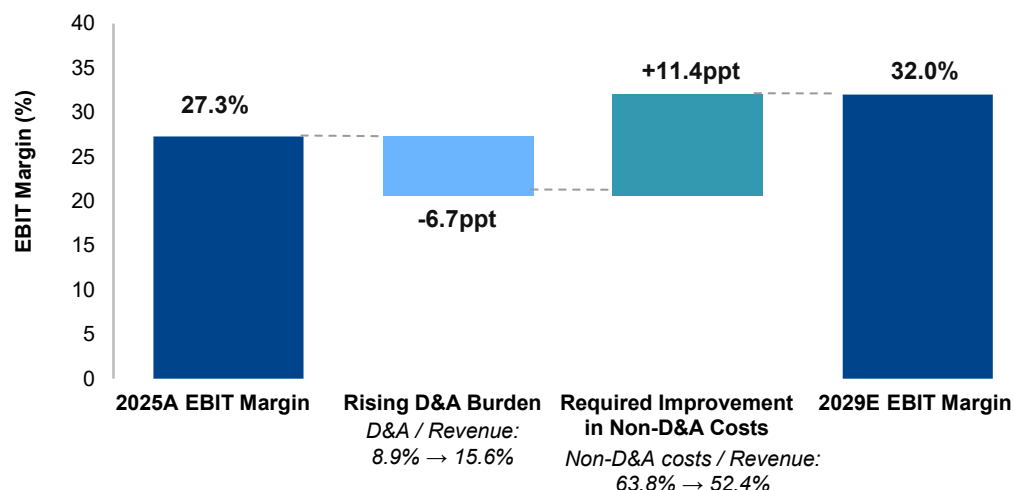
Consensus requires substantial non-D&A operating leverage

- Between 2025 and 2029, D&A is expected to rise by 6.7ppt of revenue while EBIT margin expands by 4.7ppt, requiring non-D&A operating costs to decline by ~11.4ppt of revenue. Consensus expects Sales & Marketing costs to fall from 7.2% to 5.7% and G&A from 3.2% to 2.4%, while R&D remains broadly flat.
- S&M and G&A explain only ~2.3ppt of the required 11.4ppt improvement, implying that most of the operating leverage must come from cost of revenue and other operating costs.

AI must deliver on both sides of the P&L

- Monetization must remain strong enough to support high revenue growth, while automation, scale and operating leverage absorb the rising infrastructure expense. If either side disappoints, the consensus margin trajectory becomes harder to achieve. At the same time, high utilization, sufficiently long GPU/server lives, and manageable replacement cycles are required to earn adequate returns on the expanding asset base.

Hidden Productivity Assumption Behind Consensus Margins



~1,140bp of non-D&A operating leverage is required to offset rising depreciation and still expand margins

Three Conditions for the Consensus Case



Monetization

- AI revenue scales rapidly
- Demand and pricing remain robust
- AI revenues grow faster than infrastructure costs



Productivity

- Automation reduces cost intensity
- Fixed-cost leverage improves
- Non-D&A operating costs falls as % of revenue



Asset Economics

- High asset utilization
- Useful lives broadly hold
- Replacement cycles remain manageable

Source: Aranca Research, Bloomberg



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