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Global Markets Research
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Global Memory

EQUITY: MEMORY

Big tech tells: "Where is the shelter? Memory."

Very profitable, but multi-year negative FCF for big techs; memory is the shelter

3Q26 results from five big techs (Meta [META US, Not rated], Alphabet [GOOGL US, Not rated], Microsoft [MSFT US, Not rated], Amazon [AMZN US, Not rated], and SpaceX [SPCX US, Not rated]) are now in. They reaffirmed or view that AI investment cannot stop. Cash stamina has started to diverge across companies, but given improving project IRRs and the risk of cannibalisation of existing businesses, we expect big techs to continue the capex race (refer to our view in *The unstoppable race* published on 23 October) for the next several years, drawing on operating cash flow, debt and equity alike. On the other side of this trade, cash is piling up at the memory makers. Yet, memory valuations already assume peak earnings, on which we disagree, leaving the sector at an excessively low valuation of 2-3x P/E. So, where is the portfolio shelter? We think it's memory.

The will to invest is confirmed; financial stamina is diverging

Enterprise-wide AI investment is a matter of survival, and the companies have shown that they will mobilise operating cash, debt and equity to fund it. In 3Q26, however, quarterly FCF turned negative at Meta (−USD2.1bn, the first time since its IPO), Alphabet (−USD9.1bn, a second straight quarter) and Amazon (TTM: −USD42.4bn); only Microsoft stayed positive at +USD18.6bn. Meta, Alphabet and Amazon have halted buybacks and are widening their funding base through equity and debt. The market rewarded only positive FCF (MSFT) and investment backed by revenue visibility (SpaceX).

Fig. 1: Big tech's 3Q26 FCF, funding, and share price reaction

Company	FCF (USDbn)		Funding method	Share price on results
	Quarterly	YTD / TTM		
Microsoft	+18.6	-	Operating cash; expects positive FCF through FY27E	-0.2%
Alphabet	-9.1	TTM +19.7	USD80bn equity raise announced in June; zero buyback	-10-13%
Meta	-2.1	9M +11.0	New non-voting class C shares; zero buyback	-7%
Amazon	c. -33.5	TTM -42.4	Long-term debt up to c.USD107.5bn YTD; zero buyback	-5-7% (after hours)
SpaceX	c. -10.0	-	IPO proceeds (net cash c.USD51bn); debt financing in talks	c. +10%

Source: Company data, Nomura research

In 2027E, funding capacity will set the pace of investment

None of the five companies mentioned above provided a 2027E capex figure; and all of them only signalled an increase. Applying the +60% growth in 2027E global CSP capex as cited by SK Hynix (000660 KS, Buy) to the four hyperscalers implies ~USD1.2tn, versus market expectations of +30-35%. More than 60% capex growth by big tech customers has been well known to Asian supply chain companies, which is different from the current Bloomberg consensus estimate. On our operating cash flow estimates (based on company guidance and consensus estimates), the four companies' combined FCF falls from about +USD289bn in 2025 to +USD135 in 2026F; in 2027E, their combined capex will fall again to USD67bn even based on consensus capex estimates, and turn negative at -USD144bn under "+60% capex" scenario. Because the gap must be filled with debt and equity, we believe resources will flow to the winners with the capacity to raise funds.

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See Appendix A-1 for analyst certification, important disclosures and the status of non-US analysts.

Fig. 2: Four hyperscalers' capex, operating cashflow, and FCF

(USDbn)	2025	2026E	2027E (+30-35% scenario)	2027E (+60% scenario)
Combined capex	**413**	**766**	**1,015**	**1,226**
y-y (%)	*65%*	*85%*	*+30-35%*	*+60%*
MSFT (incl financial lease)	118	127	-	-
GOOGL (cash)	91	202	-	-
AMZN (cash)	132	222	-	-
META (incl financial lease principal)	72	215	-	-
*** Capex including SpaceX:**	**-**	**c.850**	**-**	**1,724-1,795**
Operating cashflow	**702**	**902**	**1,082**	**1,082**
y-y (%)	*53%*	*28%*	*+20% (assumed)*	*+20% (assumed)*
MSFT	161	205	-	-
GOOGL	205	279	-	-
AMZN	202	247	-	-
META	135	171	-	-
FCF (OCF - capex)	**289**	**135**	**67**	**(144)**
MSFT	43	77	-	-
GOOGL	114	76	-	-
AMZN	70	25	-	-
META	63	(44)	-	-
Sensitivity: OCF +10%	-	-	(23)	(234)
Sensitivity: OCF +30%	-	-	157	(54)

Note: Forward-looking figures are based on company guidance and consensus estimates.
Source: Company data, Bloomberg Finance L.P., Nomura research

Cloud is a high-growth business; profitability is improving due to strong computing power demand

3Q revenue at the three cloud providers [Azure (owned by Microsoft), Google Cloud, AWS (owned by Amazon)] rose 56% to USD109.9bn, with a backlog of USD1.82tn. Operating margins at AWS and Google Cloud are high at 38.7% and 36.2%, respectively. Assuming capex of USD50bn per GW and annual revenue of USD19bn per GW, the IRR is about 6-15% depending on the margin of the AI business, rising to 13-31% if today's spot rental rate (USD40bn per GW per year) holds. Using the highest margin among cloud providers (MSFT Agents & Infra, 52.8%), the IRR comes to 21-41%. Hence, we believe profitability is ultimately determined by rental pricing.

Fig. 3: Cloud IRR/EBITDA margins by revenue per GW (our estimates)

Annual revenue (USDbn per GW)	IRR / EBITDA margin assuming OPM of: 52.8% (MSFT A&I)	38%	25%	15%
19 (2026 assumption)	20.8% / 85%	15.3% / 70%	10.3% / 57%	6.3% / 47%
34 (2030 assumption)	35.6% / 71%	26.3% / 56%	17.9% / 43%	11.0% / 33%
40 (current spot rate)	41.2% / 68%	30.6% / 53%	20.8% / 40%	12.9% / 30%

* 3Q actual OPM by player:	MSFT A&I	AWS	Google Cloud	SpaceX SI
	52.8%	38.7%	36.2%	5.7%

Note: MSFT A&I's margin includes server software licensing, and AWS' margin is from pure-cloud business. We assumed 65% margin for server/networking (6-year depreciation), 35% margin for data centers (25-year depreciation), 21% tax rate, and 6-year operation. USD40bn/GW per year scenario is a bull case where current annual spot price is maintained for next 6 years.
Source: Company data, Nomura estimates

AI cannibalization shows that AI investment is not an option, but a must

Google Search revenue growth slowed to 12% in 3Q from 17% in 2Q. Query growth was the fastest in five years, but Google's own AI Mode is lowering monetisation per query. Even Google — the heaviest investor — could not avoid the slowdown shows that investment is becoming a defensive tool to protect existing businesses before it is a tool to grow profits.

Fig. 4: Big tech's AI gains and losses

Company	Gained from AI	Lost/pressured by AI	Net effect
Google	Cloud USD30.7bn (+103%), backlog USD561bn	Search +12% (2Q +17%), AI Mode diluting pricing	Gain > Loss
Microsoft	Azure USD33.2bn (+48%); usage-based pricing monetizes agents	M365 seat growth 7% - 5% (ceiling on seat-based revenue)	Gain >> Loss
Meta	Ads USD63.1bn (+26%), ad price +14%	Expenses +68%; quarterly FCF -USD2.1bn	Revenue gain / Cash loss
Amazon	AWS USD46.0bn (+39%), backlog USD578bn	Agentic shopping may potentially reduce ad impression	Gain >> Loss
SpaceX	SI (ex-xAI) USD7.56bn (+830%)	-	Gain

Source: Company data, Nomura research

Capex shortfalls reflect supply, not intent

3Q capex came in below market expectations at MSFT, GOOGL and META. MSFT cited delays in third-party data center capacity deliveries, and its change in building useful lives has moved new leases into operating-lease classification, reducing reported capex (spending plans unchanged). In 2027F, when shortages are more severe, the lag between intention and execution could widen and would be a new normal, in our view.

Fig. 5: 3Q big tech capex: actuals vs consensus

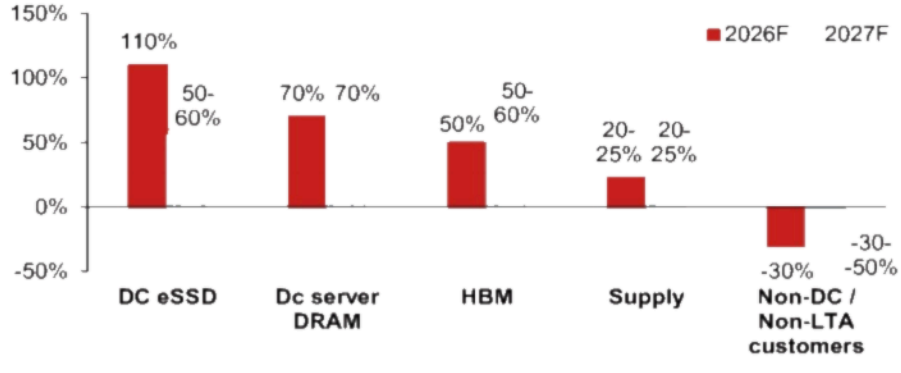
Company	3Q actual (USDbn)	Expectation (USDbn)	Reason for gap	Leases not yet commenced (USDbn)
Microsoft	45.2	Guidance 50+	Third party capacity delays - deferred to 1H27	365
Google	51.4	Consensus c 55.8	No explanation; implies 4Q of USD63-73bn	152
Meta	34.9	Consensus c 41-42	No explanation; implies 4Q of USD49-59bn	356
Amazon	75.9		Cited that chip (foundry) supply as the bottleneck	137

Source: Company data, Bloomberg Finance L.P. consensus, Nomura research

Intel: PC weakness is not new, but well expected due to component shortage and higher prices, in addition to Intel-specific issues

Intel's (INTC US, Not rated) 4Q revenue guidance (USD15-16bn) fell short of market expectations (c.USD17bn), and the shares dropped 21% during after-hours trading upon earnings release on 29 October (vs NASDAQ 100 Futures' -2%). The PC slowdown is a market-wide problem: higher memory prices and supply shortages cut global PC shipments by about 20% in 3Q. We expected this, but market expectations (4Q revenue consensus of USD17bn) did not fully reflect the scale of the PC downturn. Intel's company-specific problem is that it could not keep up with server demand (Intel 3 and substrate shortages, the Israel fab accident), and differing process technologies make it hard to shift PC capacity to servers quickly despite demand change. PC and server use same DRAM, which make it easy to convert application, but they use different CPUs. AMD (AMD US, Not rated) is also taking share in both servers and PCs, and the Arm (ARM US, Not rated) camp (NVIDIA [Nvidia US, Not rated] Grace/Vera, AWS Graviton, Google Axion and others) is eroding part of the Intel's server CPU market although agentic AI induces strong CPU demand.

Fig. 6: Memory supply outlook



Source: Nomura estimates

Fig. 7: Intel's 3Q26 results breakdown

Item	(USDbn)	Nature
Data center / AI revenue	7.3 (+78% y-y)	Strong demand
Client (PC) revenue	8.1 (-5% y-y)	Market factor
3Q global PC shipments (IDC / Counterpoint)	-20.1% / -21%	Market factor
Server CPU shipments (industry, Intel outlook)	> +30% in each of 2026E/2027E	Strong demand
Israel fab accident	Server shipments c.-0.3 in each of 4Q/1Q	
AMD server CPU share (2Q26)	34.5% (+7.3pp y-y)	
Arm server CPU share (1Q26 → 2027E)	13.2% (Mercury) → c.30% (TrendForce forecast)	

Source: Company data, IDC, Counterpoint, TrendForce, Nomura research

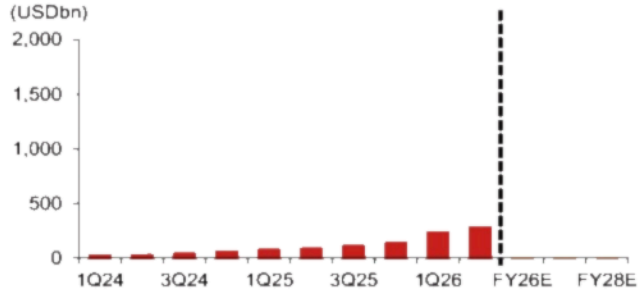
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FCF polarization and the memory irony; we believe memory is the shelter

Big tech's free cash flow should, of course, follow a J-curve: once the heavy upfront investment turns into revenue, large operating cash flows will follow. But big tech's negative FCF is only beginning, and the deficit is likely to widen over the next one to two years as investment rises.

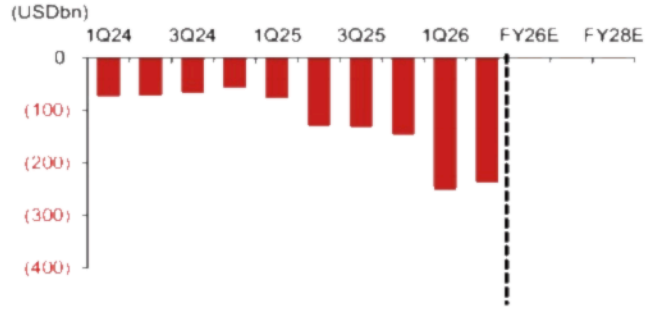
By contrast, large-scale shareholder returns by the memory makers are also only beginning: over the next several years, we expect shareholder returns to multiply and cash holdings to grow several-fold even after meaningful shareholder return. Ironically, memory makers trade at 2-3x 2027E P/E, an 85-90% discount to big techs, which faces borrowing and dilution risk. Current valuations treat today's memory earnings as the peak, but with shortages lasting through 2028F and long-term supply agreements increasing, we believe the market's assumption about how long these earnings will last is too weak.

Fig. 8: Nine semiconductor companies' combined net cash trend



Note: Combined net cash of Samsung Electronics, SK Hynix, Micron, Sandisk, Kioxia, TSMC, Nvidia, AMD, and Broadcom; figures for Samsung Electronics, Hynix, Kioxia, and TSMC are based on our estimates; figures for other companies are based on Bloomberg consensus estimates.
Source: Bloomberg Finance L.P., Nomura estimates

Fig. 9: Seven data center companies' combined net cash trend



Note: Combined net cash of Microsoft, Google, Amazon, Oracle, Meta, Coreweave, and Nebius. Based on Bloomberg consensus estimates.
Source: Bloomberg Finance L.P., Nomura research

Fig. 10: Big tech vs Korea memory – 2027E P/E comparison

Company	2027E P/E	Basis
4 big techs	**c.20.9x (average)**	MSFT 24.3x / AMZN 21.7-23.3x / GOOGL 18.5x / META 18.1x
Korean memory "big 2"	**c.2-3x**	Samsung Electronics c.3.2x / SK Hynix c.2.8x
Memory discount	**c.85-90%**	

Note: Applied FnGuide consensus for Samsung Electronics and SK Hynix to compare based on Street estimates.
Source: Bloomberg Finance L.P. consensus, FnGuide consensus, Nomura research