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Flows & Liquidity

The need for AI rotation

- **The strong and almost steady outperformance since last September of semiconductor stocks (i.e. AI chip and memory makers) vs. hyperscalers (i.e. AI cloud providers) appears somewhat unsustainable in the long run.**
- **One way this gap in performance could close is that as hyperscalers and AI model providers as well as users see improvements in monetization, revenues and earnings and they start to catch up, capturing a bigger share of the overall AI value added pie (the positive scenario).**
- **Another way it could close is that if semiconductor outperformance comes at the expense of customers like hyperscalers, AI model providers or end-users, this could start to depress capex intentions of hyperscalers and model providers and eventually act as a headwind to demand for the semiconductor companies' products (the negative scenario).**
- **Our house view is for a more positive scenario, while the consensus of bottom-up analysts points to a sharp deceleration in hyperscalers' capex growth from next year onwards which taken at face value would tilt towards the negative scenario.**
- **US money creation on track to step up from $1.6tr in 2025 to $1.8tr in 2026.**
- **MicroStrategy introduced avoidable two-way risk into crypto markets inducing more uncertainty and volatility.**

Global Markets Strategy

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Cross Asset Fund Flow Monitor

Current level shows the latest percentile of weekly flows; Min is denoted by 0 and Max by 1. As of 24th June 26.

MF & ETF Flows	Min	Max	4 wk avg ($bn)	2025 avg ($bn)
All Equities			34.0	8.1
All Bonds			14.9	11.3
US Equities			29.4	3.5
US Bonds			8.2	4.3
Non-US Equities			4.6	4.6
Non-US Bonds			6.7	7.0
US HG Bonds			2.5	3.4
US HY Bonds			0.8	0.4
US Lev. Loans *			0.6	0.0
US MMFs			0.1	4.0
EM Equities			-1.9	0.9
EM Bonds			0.60	0.50
Japan Equities			-0.1	-0.1
China Equities			-1.08	-0.15
Europe				
Europe Equities			-1.7	0.9
Europe Bonds			4.6	4.3
Europe HG Bonds			0.3	0.9
Europe HY Bonds			0.28	0.17
Europe MMFs			5.0	3.8
Other Equities			8.55	3.00

Source: Lipper, ICI, Bloomberg Finance L.P. and J.P. Morgan Flows & Liquidity.
* US LL historical flows are monthly averages converted to weekly for comparison. China onshore A-share ETFs have been excluded.

Cross Asset Positioning Monitor

Current level shows the latest percentile, Min is denoted by 0 and Max by 1.

As of 30-Jun-26	MIN	MAX	Current percentile
Equities			0.72
Govt Bonds			0.73
Credit			0.29
Dollar			0.81
Commodities ex Gold			0.32
Gold			0.40
Bitcoin			0.51
EM Equities			0.66
EM Bonds/FX			0.20
Japan Equities			0.81
Europe Equities			0.90
US Equity Sectors:			
Energy			0.61
Materials			0.54
Industrials			0.65
Discretionary			0.54
Staples			0.15
Health Care			0.51
Financials			0.15
Technology			0.69
Communication Services			0.28
Utilities			0.44

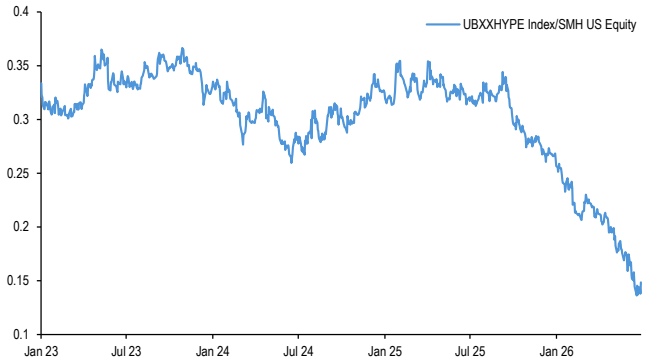
Source: J.P. Morgan Flows & Liquidity.
Cross Asset Positioning Monitor aggregates across the various position indicators of Appendix ranging from positioning proxies across various futures contracts, momentum signals as proxies of how trend-following funds/ CTAs are positioned, mutual fund betas as proxies of how mutual fund managers are positioned, risk parity fund positioning and leverage proxies, hedge fund betas as proxies of how hedge fund managers are positioned, client surveys, asset allocation estimates of private non-bank investors at global level, short interest indicators, etc.

See page 27 for analyst certification and important disclosures.

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- The strong and almost steady outperformance since last September of semiconductor stocks (AI chip and memory makers) vs. hyperscalers (i.e. AI cloud providers) has been striking, raising concerns about the sustainability of this performance gap. A major trigger for this outperformance has been the spectacular revision in the 2026 capex plans by hyperscalers which as shown in Figure 2 and Figure 3 are tracking a record 100% yoy pace this year. Given the semiconductor trade is effectively part of the broader AI trade, this divergence appears somewhat unsustainable in the long run.

Figure 1: US listed Hyperscalers vs Semiconductors relative performance



Source: Bloomberg Finance L.P., J.P. Morgan Flows & Liquidity.

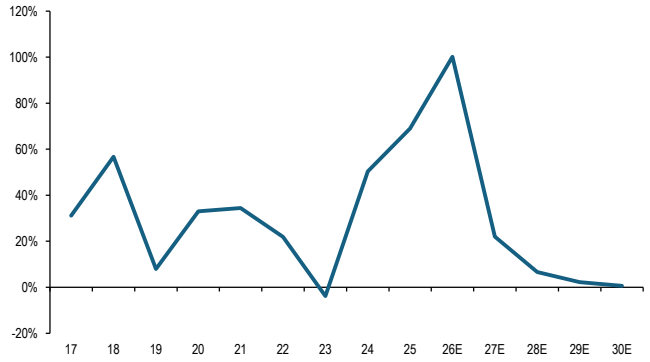
Figure 2: US hyperscalers capex projections by the consensus of bottom-up analysts as reported by Bloomberg

In $bn	23	24	25	26E	27E	28E	29E	30E
Google	32.3	52.5	91.4	186.5	242.4	256.6	260.5	264.5
Amazon	52.7	83.0	131.8	199.3	230.0	235.1	233.0	236.1
Meta	27.3	37.3	69.7	134.5	161.7	177.9	180.9	188.2
Microsoft	28.1	44.5	64.6	159.5	190.7	215.5	246.0	253.8
Oracle	8.7	6.9	21.2	78.3	100.3	101.1	88.2	72.6
Total	149.0	224.1	378.7	758.1	925.0	986.3	1,008.6	1,015.3
Y/Y growth	-4%	50%	69%	100%	22%	7%	2%	1%

Source: Bloomberg Finance L.P., J.P. Morgan Flows & Liquidity.

Figure 3: US hyperscalers capex yoy growth implied by consensus forecasts

Based on projections by the consensus of bottom-up analysts, as reported by Bloomberg.



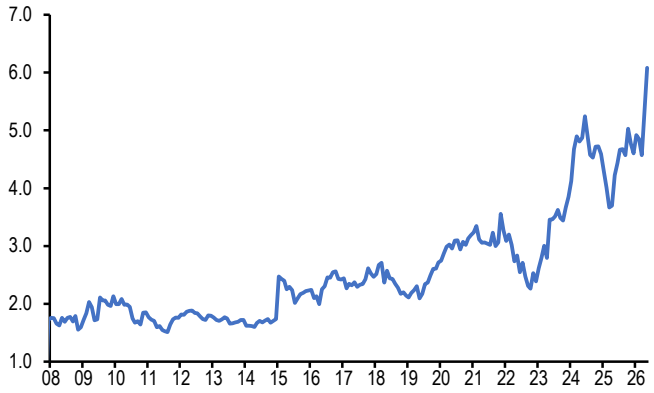
Source: Bloomberg Finance L.P., J.P. Morgan Flows & Liquidity.

- One way this gap in performance could close is that as hyperscalers and AI model providers as well as users see improvements in monetization, revenues and earnings and they start to catch up, capturing a bigger share of the overall AI value added pie (the positive scenario).
- Another way it could close is that if semiconductor outperformance comes at the expense of customers like hyperscalers, AI model providers or end-users, this could start to depress capex intentions of hyperscalers and model providers and eventually act as a headwind to demand for the semiconductor companies' products (the negative scenario).
- In our mid-year outlook (Global Equity Strategy 2026 Mid-Year Outlook, Jun 24th), we have outlined our house view, which is tilted towards the more positive scenario. At the same time, in our recent client conversations concerns over the negative scenario have been featuring prominently given that the rally has given investors overall higher exposure to the semiconductor trade (Figure 4). The concern is that the market pressure that hyperscalers are currently facing on both their equity and debt, could induce them to trim their capex plans from 2027 onwards. Indeed, despite strong earnings growth hyperscalers stock prices have been flattish over the past year, implying derating and an increase in their cost of equity (Figure 5). And their credit spreads have opened a gap vs those of semiconductor companies, again implying a higher cost of debt (Figure 6). Moreover, clients are noticing the sharp deceleration in hyperscalers capex trajectory from 2027 onwards as implied by the consensus of analysts' projections (Figure 2 and Figure 3). Although JP Morgan analysts are projecting stronger capex growth for 2027 ($1,150bn, see "AI Capex 2.0, Jun 17th") than the consensus ($925bn) , the fear is that if the sharp deceleration

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in hyperscalers' capex trajectory from 2027 onwards implied by the consensus of analysts' projections proves right, the semiconductor trade could come under severe pressure inducing a more significant and sustained correction in the AI trade in both equity and debt markets.

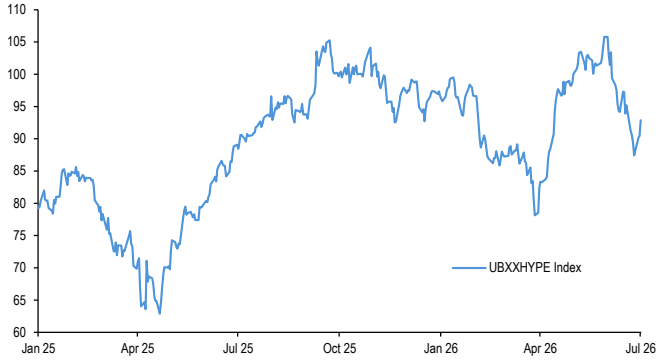
Figure 4: Ratio of market capitalization to sales shares of the MSCI ACWI Semiconductor sector in the MSCI ACWI



Source: Bloomberg Finance L.P., J.P. Morgan Flows & Liquidity.

Figure 5: Hyperscalers stock price

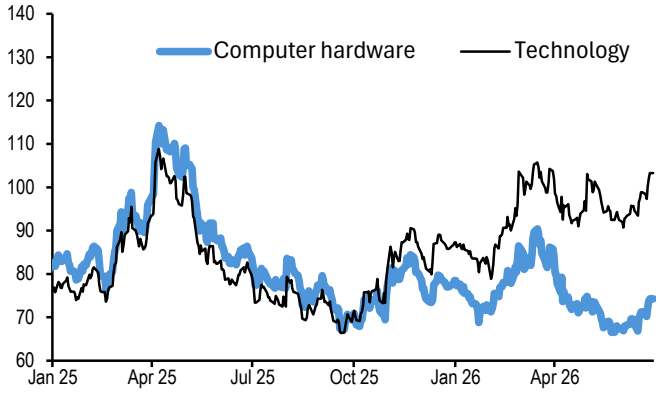
UBS equally weighted US listed Hyperscalers stock index.



Source: Bloomberg Finance L.P., J.P. Morgan Flows & Liquidity.

Figure 6: US JULI HG index, overall tech sector vs. computer hardware subsector

Credit spreads in bps over USTs.



Source: Bloomberg Finance L.P., J.P. Morgan Flows & Liquidity.

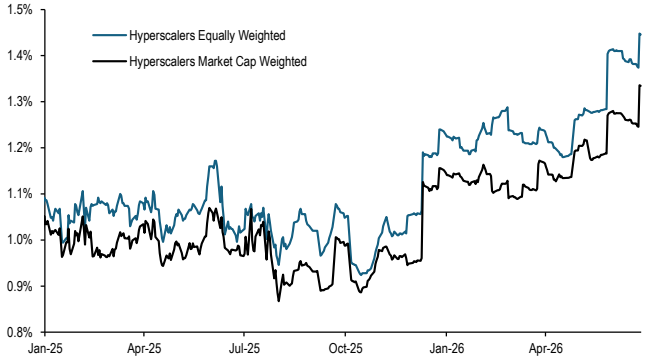
- What evidence can we find from market metrics such as short interest ratios of hyperscalers, tech ex semiconductors, AI adoption beneficiaries or AI vulnerable companies?
- The short interest ratios for these groups are shown in Figure 7 to Figure 10 below. For hyperscalers (Figure 7), there has been a rising trend since last October with a further steep increase in May/June, consistent with rising investor concern. For semiconductors ex. memory (Figure 8), short interest ratios have been rising more recently during May/June, but they are not higher to levels a year ago. For AI adoption beneficiaries, Figure 9 shows the short interest ratio of the JPM AI adoption beneficiaries basket (JPAIADPT Index), which remains rather contained since early April and stands at below its level at the start of the year. And Figure 10 shows the short interest ratios of companies in the JPM AI vulnerable basket (JPAIVUL Index), which has been rising steadily since the start of 2025 and in terms of levels stands significantly above the levels of the other three groups. In other words, while there are some signs that the semiconductor trade, in particular among memory makers, has resulted in added concerns among hyperscalers and other semiconductor stocks expressed via the rise in their short interest ratios over the past two months, AI adoption beneficiaries show little evidence of a similar rise while markets have continued to express concerns over AI vulnerable companies.

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Figure 7: Hyperscalers short interest

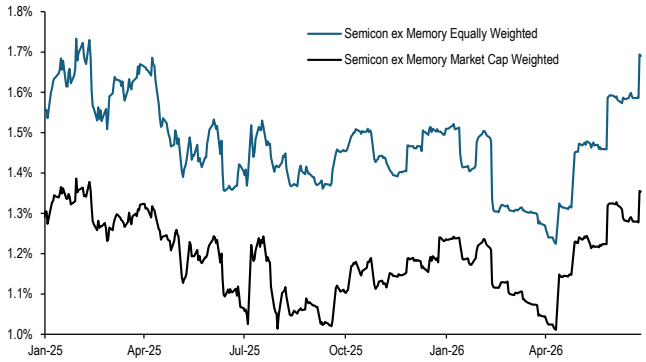
Short Interest as a % share of shares outstanding.



Source: S3, J.P. Morgan Flows & Liquidity.

Figure 8: Semiconductors ex Memory short interest

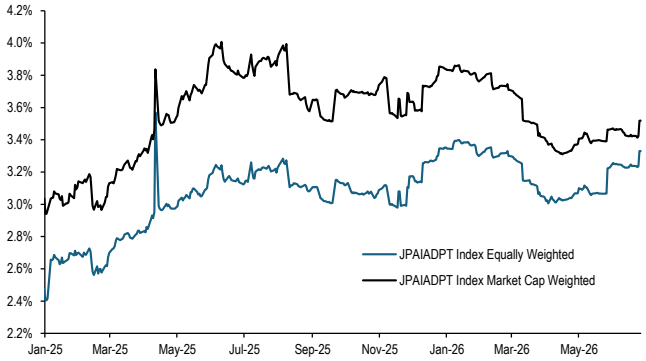
Short Interest as a % share of shares outstanding.



Source: S3, J.P. Morgan Flows & Liquidity.

Figure 9: JPM AI beneficiaries basket (JPAIADPT Index) short interest

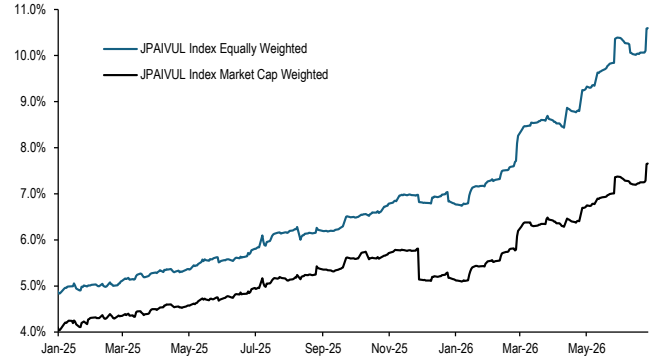
Short Interest as a % share of shares outstanding.



Source: S3, J.P. Morgan Flows & Liquidity.

Figure 10: JPM AI vulnerable basket (JPAIVUL Index) short interest

Short Interest as a % share of shares outstanding.

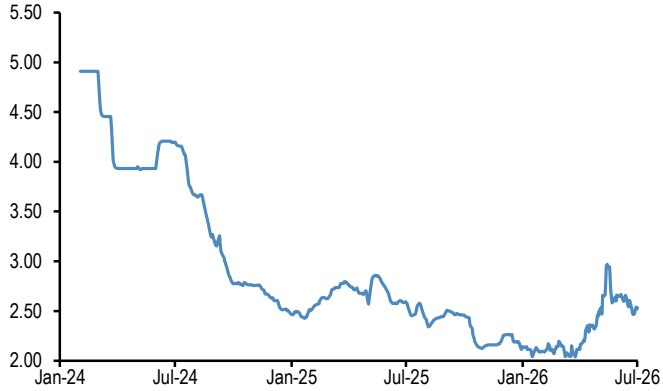


Source: S3, J.P. Morgan Flows & Liquidity.

- Going forward, the price for AI compute would be key for the ability of hyperscalers to monetize their AI capital spending. The higher the price for compute, the higher the ability of the hyperscalers to maintain or increase their profit margins. After some persistent downward pressure on compute pricing into end-2025, there have been some signs of improvement in April/May which was encouraging (Figure 11), though it appears to have subsided somewhat in June. And for AI model providers, LLM token prices had been rising from late Feb to end-May before subsiding somewhat in June (Figure 12). Monitoring these AI compute prices would be key going forward.
- Finally, our colleague Jason Hunter also noted this growing divergence between hyperscalers and semiconductors, and that if the wedge does not start to close it could create a sentiment issue for the market from a technical perspective (Equity Technical Update, July 1st).

Figure 11: Compute Desk's Hopper US Index

Aggregates listed on-demand and reserved prices for renting NVIDIA Hopper (H100 and H200) GPUs from US neocloud providers. The Index is priced in US dollars per GPU per hour.

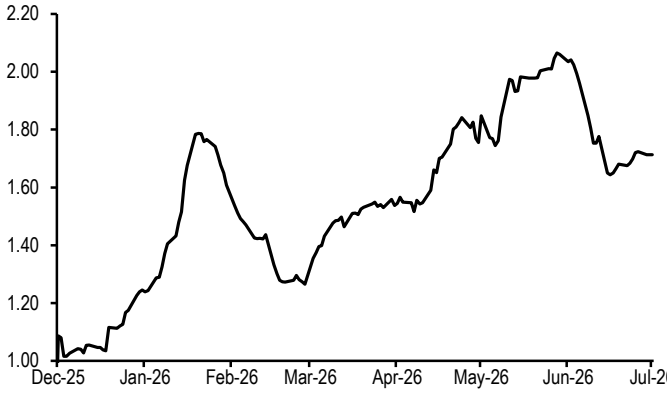


Source: Bloomberg Finance L.P., Compute Desk.

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Figure 12: LLM Token Expenditure index

$ per million tokens.



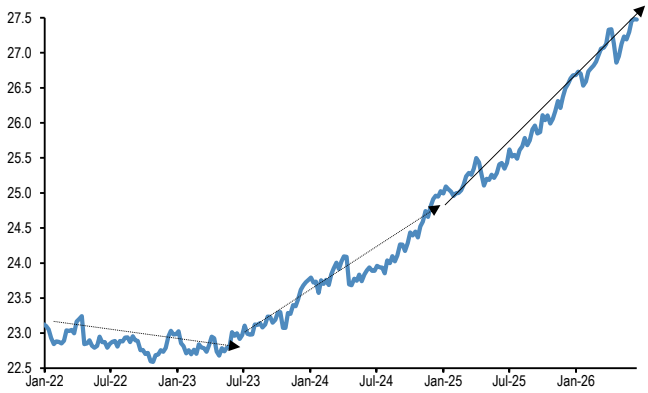
Source: Bloomberg Finance L.P., Silicon Data.

US money creation on track to step up from $1.6tr in 2025 to $1.8tr in 2026

- We mentioned previously that US liquidity or the stock of US M2 money supply, which we proxy by the sum of US commercial bank deposits and the AUM of US Money Market Funds, increased at a strong pace of $1.2tr in 2024 after expanding by $1tr from May 2023 to end-2023. This had brought the cumulative increase in US money supply from May 2023 to end-2024 to $2.2tr or 9.6%.
- This pace of US money creation has increased further since 2025 with $1.6tr expansion during 2025 and an even stronger $1.8tr annualized pace YTD (Figure 13 and Figure 14). The stronger pace of US money creation since 2025 has been mostly a reflection of US banks willingness to expand their balance sheets (by making more loans and by accumulating more bonds) at a faster pace than in previous years, perhaps due to deregulation (Figure 15). US money creation has been further supported this year by the Fed's decision to stop contracting and instead to modestly expand its balance sheet (Figure 16).

Figure 13: Stock of US M2 money supply proxied by the sum of the stock of US commercial bank deposits and the AUM of US MMFs

In $tr.



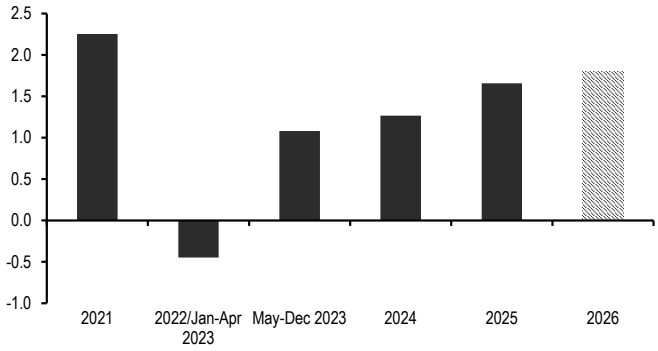
Source: Crane Data, Bloomberg Finance L.P., J.P. Morgan Flows & Liquidity.

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Figure 14: US money creation by year annual change in the stock of US M2 money supply proxied by the sum of the stock of US commercial bank deposits and the AUM of US MMFs

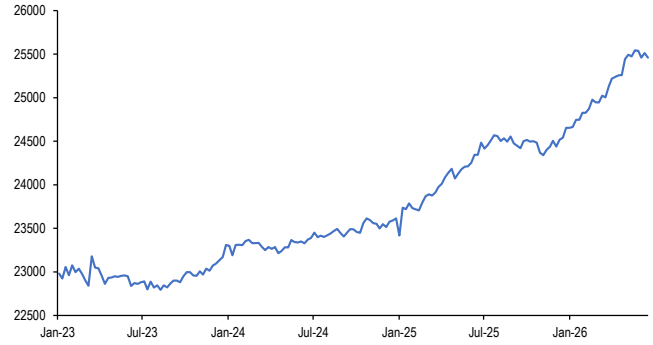
In $tr.



Source: Crane Data, Bloomberg Finance L.P., J.P. Morgan Flows & Liquidity.

Figure 15: US commercial banks total assets

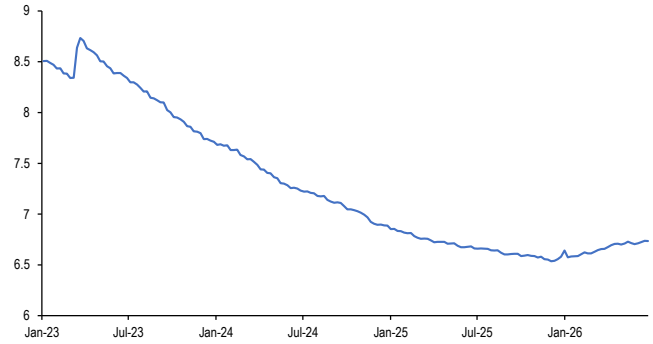
In $bn.



Source: Federal Reserve, J.P. Morgan Flows & Liquidity.

Figure 16: Federal Reserve total assets

In $tn.

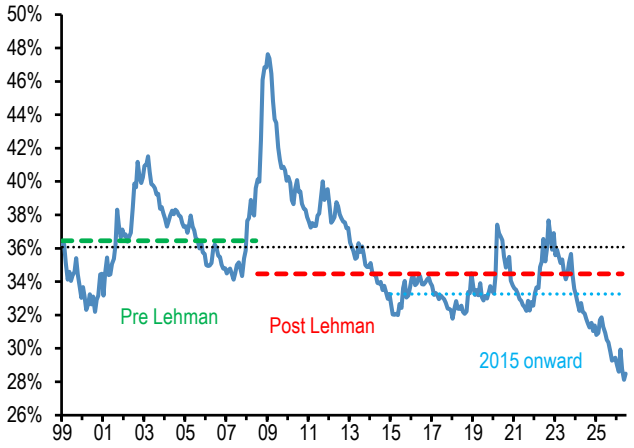


Source: Federal Reserve, J.P. Morgan Flows & Liquidity.

- And similar to previous years, this stronger than nominal GDP money creation should provide a source of support to US financial assets, especially US equities, even as cash allocations overall look rather low (Figure 17), As we explained previously in our publication, these low cash allocations would not necessarily prevent US liquidity creation from propagating US financial assets further from here, but they rather pose a vulnerability for financial assets if a significant negative shock in the future induces economic agents to start rebuilding their low cash allocations as they did in March 2020 with the pandemic or in 2022 with the Ukraine war/ global inflation shock or in March 2025 with tariffs/Liberation Day or in March 2026 with the Iran conflict.

Figure 17: Implied cash allocation by non-bank investors globally

Global cash held by non-bank investors as % total holdings of equities/bonds/M2 by non-bank investors/Commodities including gold held by private investors. Dotted lines are averages.



Source: Bloomberg Finance L.P., LSEG DataStream, J.P. Morgan Flows & Liquidity.

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MicroStrategy introduced avoidable two-way risk into crypto markets inducing more uncertainty and volatility

- This week, MicroStrategy formalized its new policy of making selective bitcoin sales to support dividends when appropriate, alongside an authorization to conduct preferred stock repurchases and share buybacks for active capital structure optimization. At the same time the company announced a minimum dollar reserve target of 12 months of preferred dividends and interest expense, with the current dollar reserve of $2.55bn covering around 17 months of dividends.
- Bitcoin prices have come under significant pressure in late May and early June amid the disclosure by MicroStrategy via its 8-K filing on Jun 1st that it had sold 32 BTC between May 26th and May 31st to fund dividend distributions to preferred stock holders. This comes in addition to pressure on the broader 'debasement trade' on both bitcoin and gold that we have previously noted amid a repricing of Fed policy expectations. This new policy is perceived to be introducing a two-way flow risk to bitcoin introducing more uncertainty in crypto markets.
- Although the decision to target minimum dollar reserves of 12 months of preferred dividends and interest expense provides some relief, we believe a higher coverage of 24-36 months would be needed (by issuing common equity to further increase dollar reserves even if this leads to the common equity trading at a discount to NAV) to make investors more comfortable with the idea that MicroStrategy would not need to sell bitcoins in the foreseeable future.
- In principle, the flexibility to sell bitcoins to cover dividend payments and to conduct balance sheet optimization, would be considered constructive policies for a typical company. However, MicroStrategy is a very significant bitcoin buyer (its $13.7bn of bitcoin purchases YTD accounted for around 70% of our estimated overall digital asset flow) and as a giant bitcoin holder (it holds 4% of overall bitcoin supply), the possibility that MicroStrategy would be selling bitcoins introduces two-way risk into crypto markets inducing more uncertainty and volatility for bitcoin prices that could have been avoided if it instead issued equity to rebuild reserves for future dividend payments. With the company's valuation inextricably linked to the price of bitcoin, more uncertainty and volatility in crypto markets could have a negative impact on the company's valuation, thus raising the cost of issuing equity and debt to fund additional bitcoin purchases.
- Crypto markets are currently in the process of incorporating the two-way flow risk emanating from MicroStrategy's new policy. As we argued previously in our publication "Alternative Investments Outlook and Strategy" June 5th 2026, weak sentiment currently might be indicative of bearishness among investors and might thus prove a bullish contrarian signal going forward. However, a positive second half of the year would be conditional on MicroStrategy rebuilding its dollar reserves to cover 24-36 months of dividends and on the approval of the US market structure legislation which is currently stuck in the US Congress.

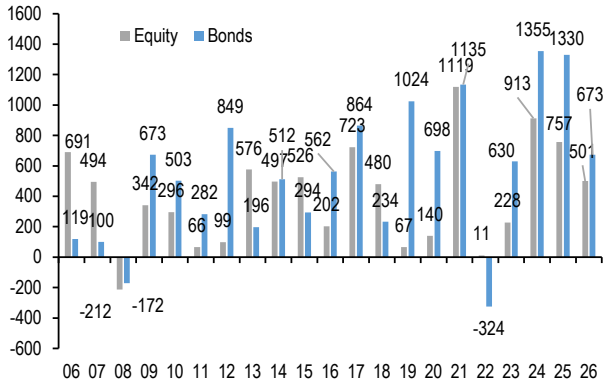
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Appendix

Chart A1a: Global equity & bond fund flows

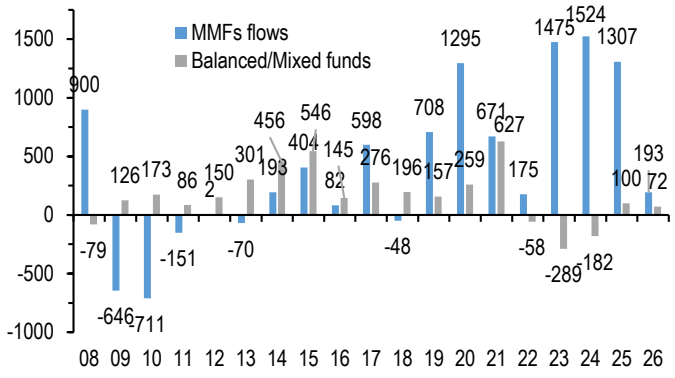
$bn per year of Net Sales, i.e. includes net new sales + reinvested dividends for Mutual Funds and ETFs globally, i.e. for funds domiciled both inside and outside the US. Flows come from ICI (worldwide data up to Q1'26). Data since then are a combination of monthly and weekly data from Lipper and Bloomberg.



Source: ICI, LSEG Lipper, Bloomberg Finance L.P., J.P. Morgan Flows & Liquidity.

Chart A1b: Quarterly Balanced/Mixed funds & MMFs flows worldwide

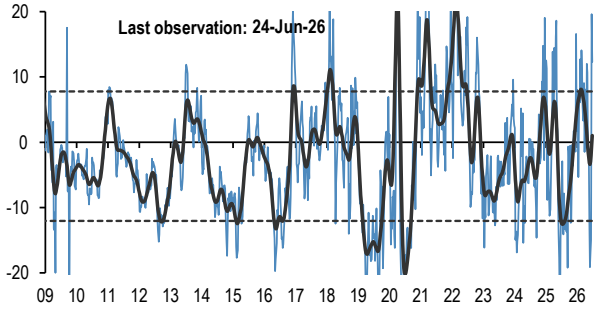
$bn per quarter of Net Sales, i.e. includes net new sales + reinvested dividends for Mutual Funds and ETFs globally, i.e. for funds domiciled both inside and outside the US. Data come from ICI (worldwide data) and are till Q1'26.



Source: ICI, J.P. Morgan Flows & Liquidity.

Chart A2: Fund flow indicator

Difference between flows into Equity and Bond funds: $bn per week. Difference between flows into Equity vs. Bond funds in $bn per week. Flows include Mutual Fund and ETF flows globally, i.e. funds domiciled both inside and outside the US (source: Lipper). The thin blue line shows the 4-week average of difference between Equity and Bond fund flows. Dotted lines depict ±1 StDev of the blue line since 2009. The thick black line shows a smoothed version of the same series. The smoothing is done using a Hodrick-Prescott filter with a Lambda parameter of 100. China onshore A-share ETFs have been excluded.



Source: LSEG Lipper, J.P. Morgan Flows & Liquidity.

Table A2: Trading turnover monitor

Volumes are monthly and Turnover ratio is annualised (monthly trading volume annualised divided by the amount outstanding). UST Cash is primary dealer transactions in all US government securities. UST futures are from Bloomberg Finance L.P. JGBs are OTC volumes in all Japanese government securities. Bunds, Gold, Oil and Copper are futures. Gold includes Gold ETFs. Min-Max chart is based on Turnover ratio. For Bunds and Commodities, futures trading volumes are used while the outstanding amount is proxied by open interest. The diamond reflects the latest turnover observation. The thin blue line marks the distance between the min and max for the complete time series since Jan-2005 onwards. Y/Y change is change in YTD notional volumes over the same period last year.

As of Apr-26	MIN	MAX	Turnover ratio	Vol (tr)	y/y chng
Equities					
EM Equity			1.1	$1.7	118%
DM Equity			1.4	$11.4	38%
Govt Bonds					
UST cash			12.9	$20.3	1%
UST futures			0.9	$13.8	3%
JGBs			47.2	¥4,982	8%
Bund futures			1.7	€7.5	12%
Credit					
US HG			1.2	$0.8	11%
US HY			0.6	$0.1	2%
US Convertibles			3.4	$0.04	13%
Commodities					
Gold			65.4	$1.5	67%
Oil			95.4	$3.4	-5%
Copper			2.4	$0.7	80%
Digital Assets					
CME Bitcoin			116.0	$0.075	-34%
CME Ethereum			122.4	$0.036	61%

* Data with one month lag

Source: Bloomberg Finance L.P., Federal Reserve, Trace, Japan Securities Dealer Association, WFE, J.P. Morgan Flows & Liquidity.

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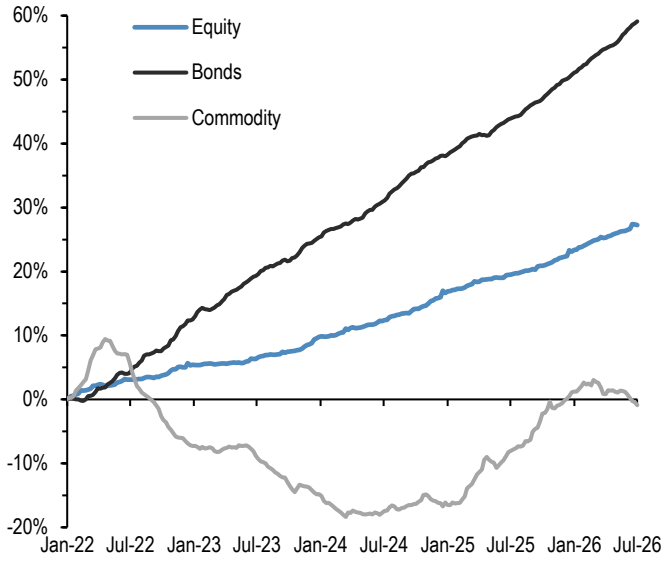
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ETF Flow Monitor (as of 1st July)

Chart A3: Global Cross Asset ETF Flows

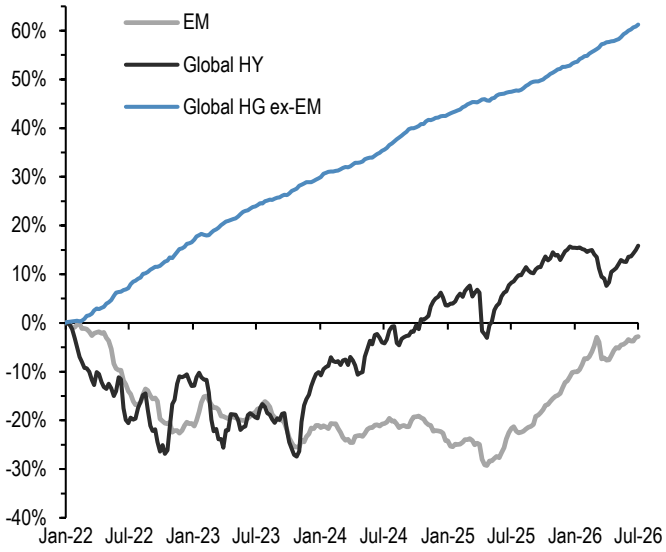
Cumulative flows into ETFs as a % of AUM



Source: Bloomberg Finance L.P., J.P. Morgan Flows & Liquidity. China onshore A-share ETFs have been excluded.

Chart A4: Bond ETF Flows

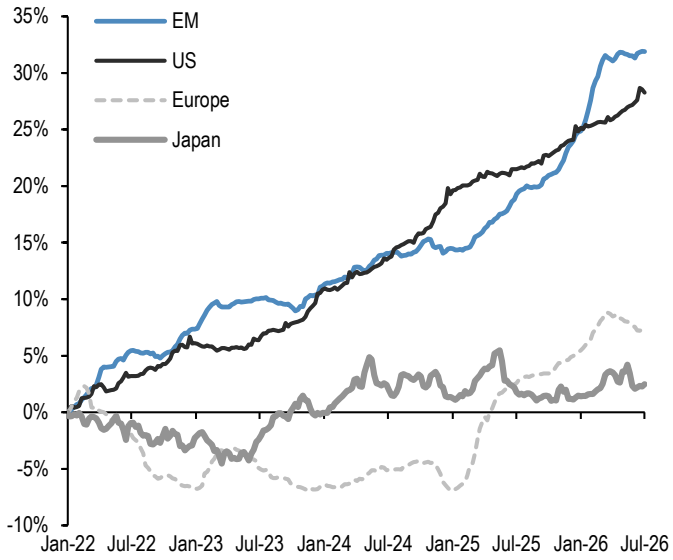
Cumulative flows into bond ETFs as a % of AUM



Source: Bloomberg Finance L.P., J.P. Morgan Flows & Liquidity.

Chart A5: Global Equity ETF Flows

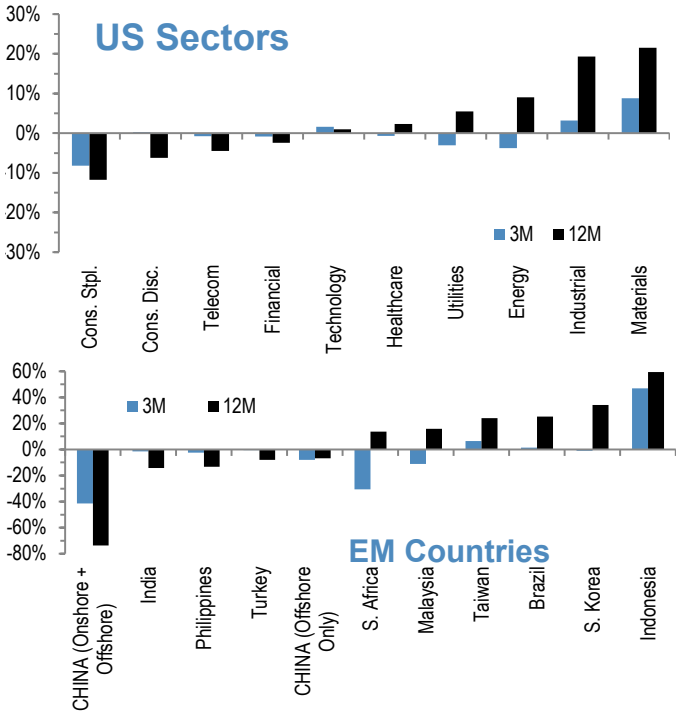
Cumulative flows into global equity ETFs as a % of AUM



Source: Bloomberg Finance L.P., J.P. Morgan Flows & Liquidity.
Note: We include ETFs with AUM > $200mn in all the flow monitor charts. In Chart A5 for Japan, we subtract the BoJ buying of ETFs. China onshore A-share ETFs have been excluded.

Chart A6a: Equity Sectoral and Regional ETF Flows

Rolling 3-month and 12-month change in cumulative flows as a % of AUM. Both sorted by 12-month change



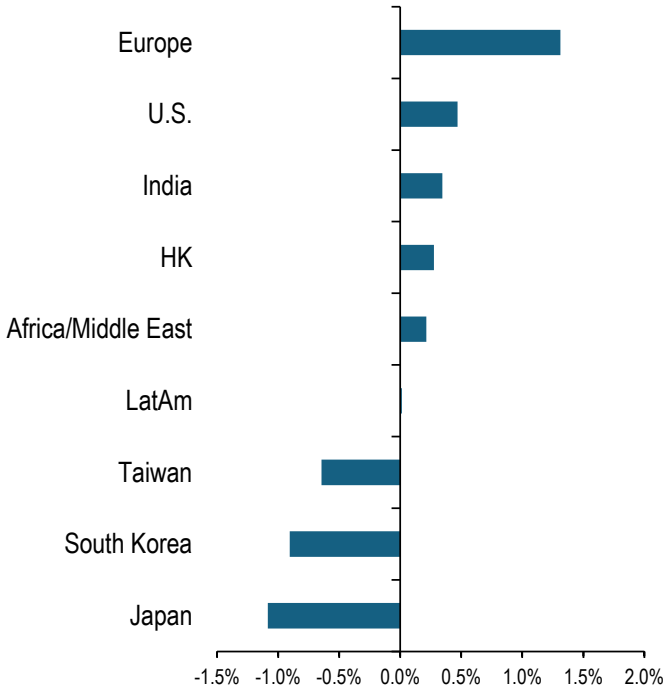
Source: Bloomberg Finance L.P., J.P. Morgan Flows & Liquidity.

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Chart A6b: Regional Equity Allocation Monitor Implied by ETFs

In %.



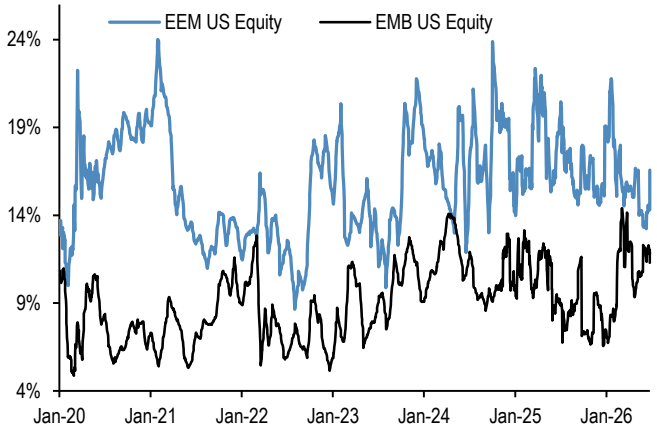
Source: Bloomberg Finance L.P., MSCI and J.P. Morgan Flows & Liquidity.
Note: Our regional equity allocation monitor implied by ETFs is based on a comparison of the share of each region in the equity ETF space relative to their corresponding shares in global equity indices.

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Short Interest Monitor

Chart A7: Short interest on the EEM and EMB US ETF

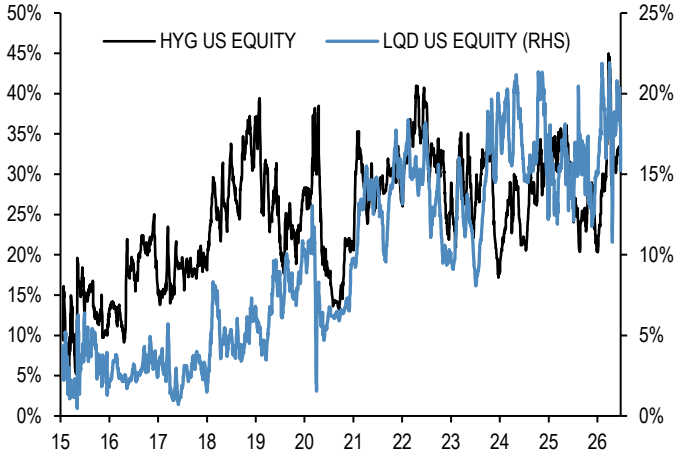
Short Interest as a % share of shares outstanding.



Source: S3, J.P. Morgan Flows & Liquidity.

Chart A8: Short interest on the LQD and HYG US ETF

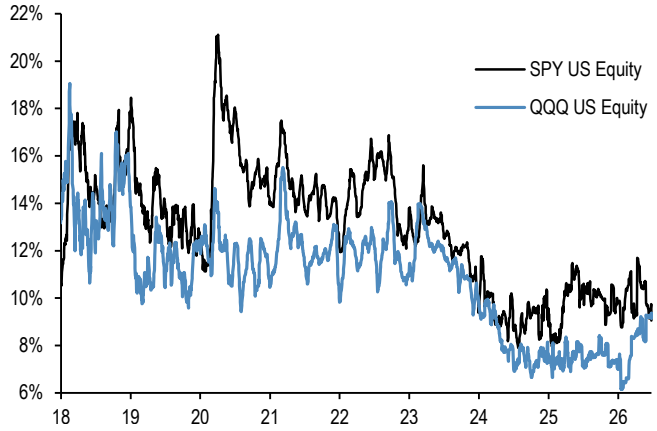
Short Interest as a % share of shares outstanding.



Source: S3, J.P. Morgan Flows & Liquidity.

Chart A9: Short interest on the SPY and QQQ US ETF

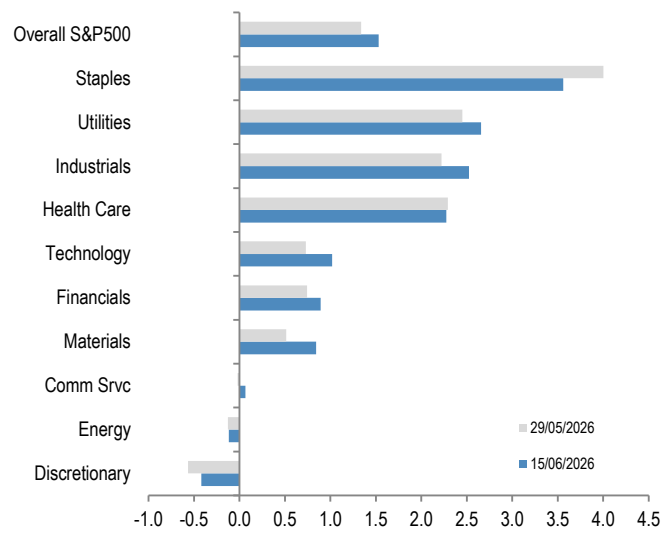
Short Interest as a % share of shares outstanding. Last obs is for 18th June 2026.



Source: S3, J.P. Morgan Flows & Liquidity.

Chart A10: S&P500 sector short interest

Short interest as a % of shares outstanding based on z-scores. A strategy which overweights the S&P500 sectors with the highest short interest z-score (as % of shares o/s) vs. those with the lowest, produced an information ratio of 0.7 with a success rate of 56% (see F&L, Jun 28,2013 for more details).



Source: NYSE, Bloomberg Finance L.P., J.P. Morgan Flows & Liquidity.

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Chart A11a: Cross Asset Volatility Monitor 3m ATM Implied Volatility (1y history), as of 29th June-2026

This table shows the richness/cheapness of current three-month implied volatility levels (red dot) against their one-year historical range (thin blue bar) and the ratio to current realised volatility. Assets with implied volatility outside their 25th/75th percentile range (thick blue bar) are highlighted. The implied-to-realised volatility ratio uses 3-month implied volatilities and 1-month (around 21 trading days) realised volatilities for each asset.

Asset	Current	Low	Low date	High	High date		Upside	Downside	Implied/realized volatility
S&P 500	15%	13%	28-Aug-25	24%	27-Mar-26		9%	2%	0.84x
EuroSTOXX	16%	13%	18-Sep-25	26%	27-Mar-26		11%	2%	1.19x
Nikkei 225	33%	18%	22-Jul-25	33%	31-Mar-26		1%	15%	0.80x
Hang Seng	21%	17%	23-Dec-25	24%	26-Mar-26		3%	3%	1.00x
MSCI EM	33%	12%	15-Aug-25	37%	10-Jun-26		5%	20%	0.75x
Gold	23%	14%	19-Aug-25	33%	26-Mar-26		10%	9%	0.74x
Oil (brent)	38%	27%	19-Sep-25	89%	30-Mar-26		51%	11%	0.90x
Copper	22%	14%	18-Aug-25	37%	03-Feb-26		14%	8%	0.73x
BB commodity index	17%	13%	10-Dec-25	25%	30-Mar-26		8%	4%	1.21x
EUR/USD	9%	9%	29-May-26	13%	27-Mar-26		3%	1%	1.64x
USD/NOK	9%	8%	17-Dec-25	11%	30-Mar-26		2%	1%	0.98x
USD/JPY	8%	7%	29-May-26	11%	01-Jul-25		3%	1%	3.80x
GBP/USD	7%	6%	12-Dec-25	8%	02-Jul-25		2%	1%	1.07x
USD/CHF	7%	6%	29-May-26	9%	01-Jul-25		2%	1%	1.02x
10y US swaps	7%	6%	29-May-26	10%	27-Mar-26		3%	1%	1.05x
10y Eur swaps	53%	43%	26-Feb-26	97%	27-Mar-26		44%	10%	0.97x
CDX IG	41%	38%	29-Jul-25	66%	27-Mar-26		25%	3%	1.37x
CDX HY	39%	31%	09-Jan-26	57%	30-Mar-26		18%	8%	1.29x
iTraxx	41%	37%	09-Jan-26	70%	27-Mar-26		29%	4%	1.09x
iTraxx X/O	22%	19%	23-Dec-25	26%	17-Oct-25		4%	3%	0.59x

Source: Bloomberg Finance L.P., J.P. Morgan Flows & Liquidity.

Note: Swaps volatility is 3m 10y payer ATMF implied annualized BP vol and credit volatility is 3m 5y on-the-run ATM spread volatility. MSCI EM, Gold, Oil, Copper, BB Commodity Index and Treasury futures are 3m implied vol from Bloomberg.

Definitions:

Current:	Latest available closing level (29-Jun-26)
Low:	Lowest closing level in the last 1y
Low date:	Date the lowest closing level was reached (or the first time it was reached in the case of several identical low closing levels)
High:	Highest closing level in the last 1y
High date:	Date the highest closing level was reached (or the first time it was reached in the case of several identical high closing levels)
Graph:	Shows the current level and the 25th/75th percentile relative to the 1y high/low
Upside:	Implied return/volatility percentage points from current level up to the High (note: return is calculated as simple difference for spread products)
Upside (σ):	Upside in terms of standard deviations (Upside / Current 1y realized volatility)
Downside:	Implied return/volatility percentage points from current level down to the Low (note: return calculated as simple difference for spread products)
Downside (σ):	Downside in terms of standard deviations (Downside / Current 1y realized volatility)
Implied/realized volatility:	Current 3m implied volatility / current realized 3m volatility

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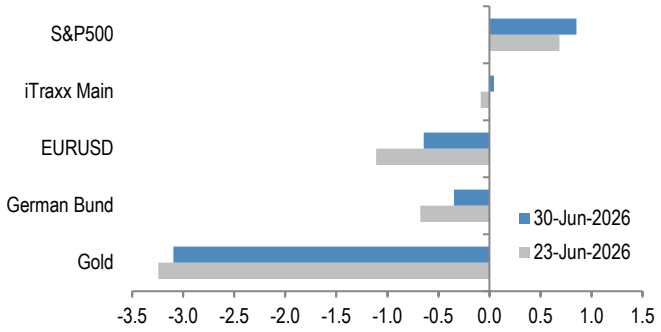
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Chart A11b: Option skew monitor

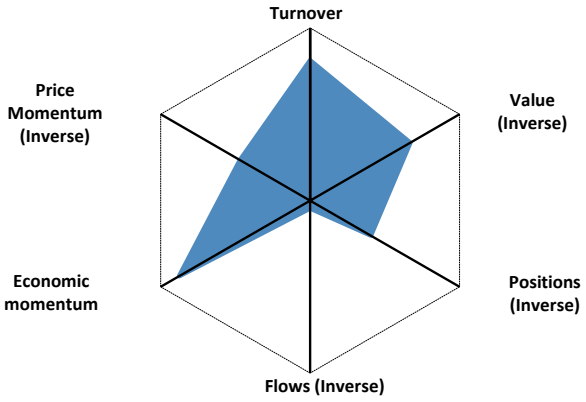
Skew is the difference between the implied volatility of out-of-the-money (OTM) call options and put options. A positive skew implies more demand for calls than puts and a negative skew, higher demand for puts than calls. It can therefore be seen as an indicator of risk perception in that a highly negative skew in equities is indicative of a bearish view. The chart shows z-score of the skew, i.e. the skew minus a rolling 2-year avg skew divided by a rolling two-year standard deviation of the skew. A negative skew on iTraxx Main means investors favour buying protection, i.e. a short risk position. A positive skew for the Bund reflects a long duration view, also a short risk position.



Source: J.P. Morgan Flows & Liquidity.

Chart A11c: Equity market health map

Each of the six axes corresponds to a key indicator for markets. The position of the blue line on each axis shows how far the current observation is from the extremes at either end of the scale. Overall, the larger the blue area within the hexagon, the better the outlook for the S&P500. All variables are expressed as the percentile of the distribution that the observation falls into. I.e. a reading in the middle of the axis means that the observation falls exactly at the median of all historical observations. **Turnover**: Percentile rank of the 21-day rolling S&P500 turnover since 2007. **Value**: Inverse of percentile rank of our quarterly S&P 500 Equity Risk Premium (ERP) estimate since 1957 as described in "A fair value model for US Bonds, Credit and Equities", Panigirtzoglou and Loeys, Jun 2005. **Positions**: Percentile rank of the difference between government bonds and equity positioning from the cross-asset positioning monitor on the front page of our publication since 2016. **Flows**: Inverse of percentile rank of the difference between equity and bond fund flows from the cross-asset fund flow monitor on the front page of our publication since 2007. **Economic momentum**: Percentile rank of the 2-month change in the global manufacturing PMI since 1998, see "REVISITING: Using the Global PMI as trading signal", Nikolaos Panigirtzoglou, Jan 2012). **Price momentum**: Inverse of the percentile rank of the z-score of the difference in the momentum signal of S&P500 vs. 10y USTs since 2016 (based on the average z-score of Short- and Long-term momentum signal in our Trend Following Strategy framework shown in Tables A3 and A4 in the Appendix). China onshore A-share ETFs have been excluded. Last obs. as of 26th June.



Source: Bloomberg Finance L.P., J.P. Morgan Flows & Liquidity.

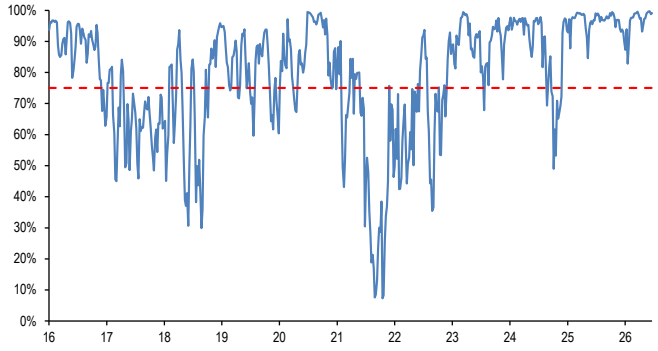
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Chart A11d: Implied probability of the S&P500 rising over the next six months with a cutoff set at 75%



Source: J.P. Morgan Flows & Liquidity.

Chart A11e: Logistic regression model for direction of the S&P 500 over a 6 month horizon & Ex-ante probability of an up-move from the logistic regression algorithm vs. the ex-post realised 6-month return in the S&P 500

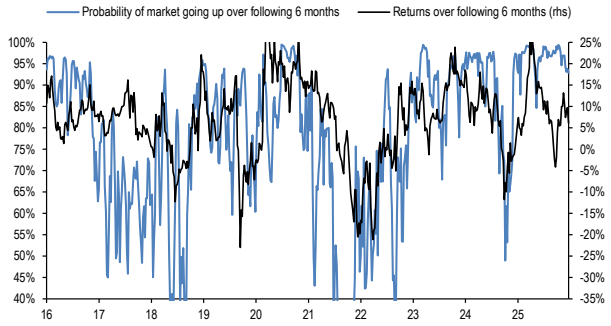
In %.

Dependent Variable: S&500 UP (1) or DOWN (0) over the next six months
Method: ML - Binary Logit (Newton-Raphson / Marquardt steps)

Sample (adjusted): 1/08/2016 12/20/2024
Included observations: 468 after adjustments

Coefficient covariance computed using observed Hessian

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	3.42	0.84	4.08	0.00
TURNOVER	2.97	0.72	4.15	0.00
VALUE	-3.47	0.90	-3.88	0.00
POSITIONS	-0.77	0.55	-1.39	0.16
FLOWS	-1.79	0.53	-3.38	0.00
ECON_MOMENTUM	3.35	0.62	5.42	0.00
MOMENTUM	-1.36	0.62	-2.19	0.03



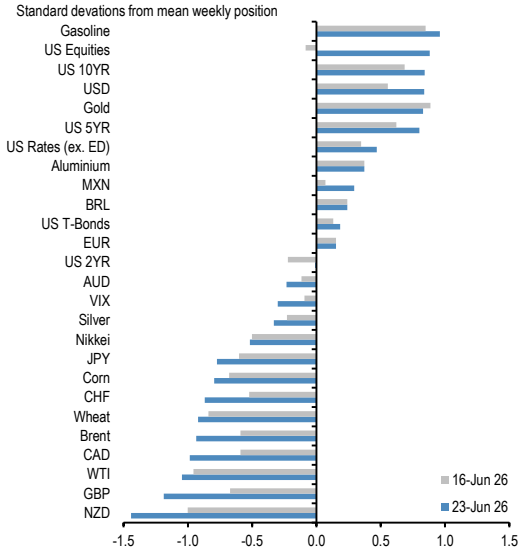
Source: J.P. Morgan Flows & Liquidity.

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Spec position monitor

Chart A12: Weekly Spec Position Monitor

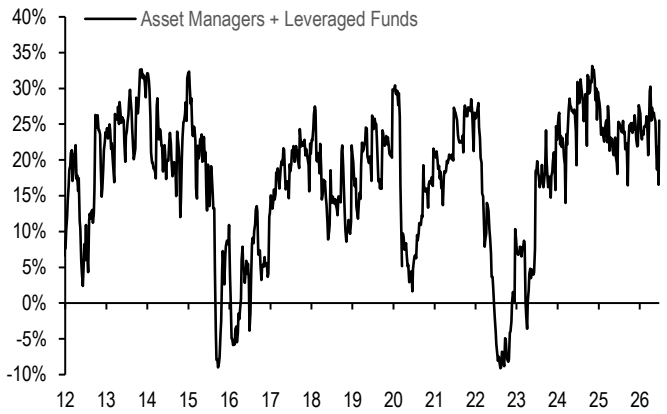
Net spec positions are proxied by the number of long contracts minus the number of short contracts using the speculative category of the Commitments of Traders reports (as reported by CFTC). To proxy for speculative investors for equity and US Treasury bond futures positions we use Asset managers and leveraged funds (see Chart A13), whereas for other assets we use the legacy Non-Commercial category. This net position is then converted to a dollar amount by multiplying by the contract size and then the corresponding futures price. We then scale the net positions by open interest. The chart shows the z-score of these net positions. US rates is a duration-weighted composite of the individual UST futures contracts excluding the Eurodollar contract.



Source: Bloomberg Finance L.P., CFTC, J.P. Morgan Flows & Liquidity.

Chart A13: Positions in US equity futures by Asset managers and Leveraged funds

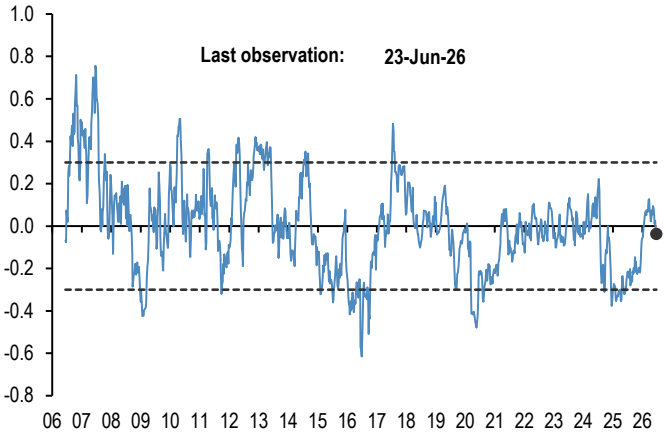
CFTC positions in US equity futures by Leveraged funds and Asset managers (as a % of open interest). It is an aggregate of the S&P500, DowJones, NASDAQ and their Mini futures contracts.



Source: CFTC, Bloomberg Finance L.P. and J.P. Morgan Flows & Liquidity.

Chart A14: Spec position indicator on Risky vs. Safe currencies

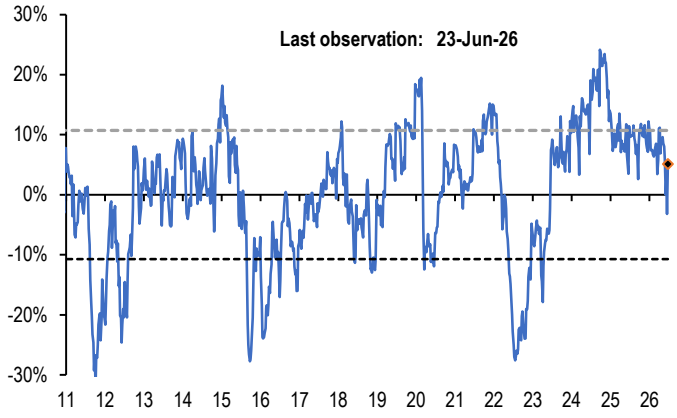
Difference between net spec positions on risky & safe currencies. Net spec position is calculated in USD across 5 'risky' and 3 'safe' currencies (safe currencies also include Gold). These positions are then scaled by open interest and we take an average of 'risky' and 'safe' assets to create two series. The chart is then simply the difference between the"risky" and "safe" series. The final series shown in the chart below is demeaned using data since 2006. The risky currencies are: AUD, NZD,CAD, MXN and BRL. The safe currencies are: JPY, CHF and Gold.



Source: Bloomberg Finance L.P., CFTC, J.P. Morgan Flows & Liquidity.

Chart A15: Spec position indicator on US equity futures vs. intermediate sector UST futures

Difference between net spec positions on US equity futures vs. intermediate sector UST futures. This indicator is derived by the difference between total CFTC positions in US equity futures by Asset managers + Leveraged Funds scaled by open interest minus the Asset managers + Leveraged Funds spec position on intermediate sector UST futures (i.e. all UST futures duration weighted ex ED and ex 2Y UST futures) also scaled by open interest.



Source: CFTC, Bloomberg Finance L.P. and J.P. Morgan Flows & Liquidity.

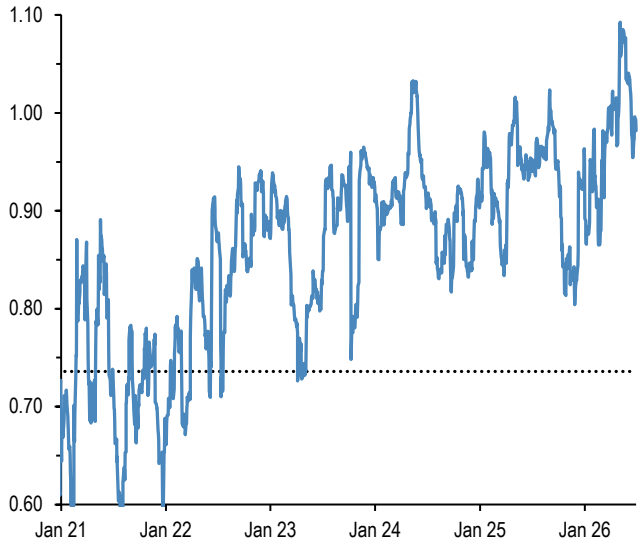
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Mutual fund and hedge fund betas

Chart A16: 21-day rolling beta of 20 biggest active US bond mutual fund managers with respect to the US Agg Bond Index

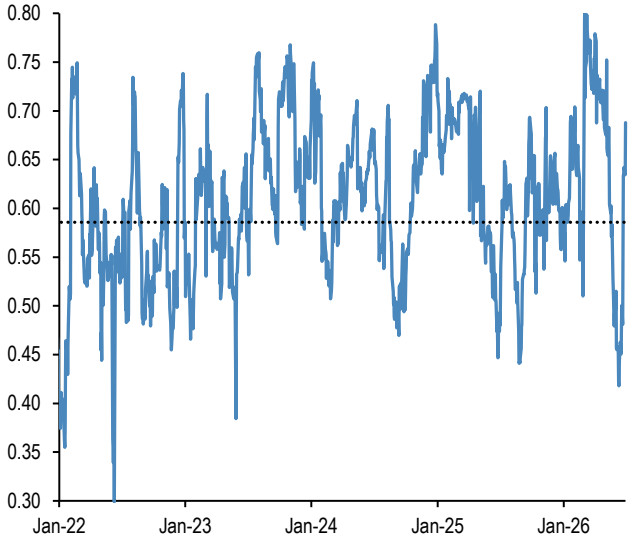
The dotted line shows the average beta since 2013.



Source: Bloomberg Finance L.P., J.P. Morgan Flows & Liquidity.

Chart A17: 21-day rolling beta of 20 biggest active Euro bond mutual fund managers with respect to the Euro Agg Bond Index

The dotted line shows the average beta since 2013.



Source: Bloomberg Finance L.P., J.P. Morgan Flows & Liquidity.

Chart A18: Performance of various types of investors

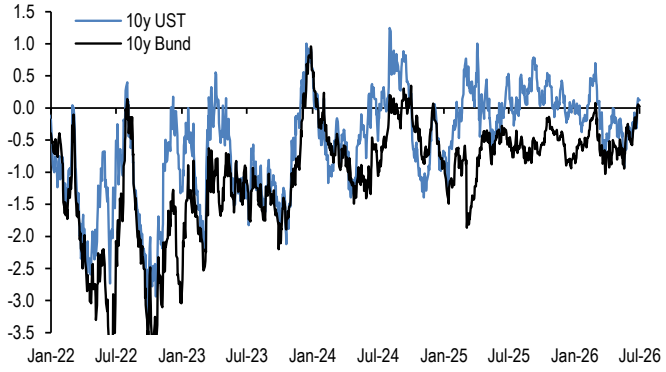
The table depicts the performance of various types of investors in % as of 29th June 2025.

Date	2020	2021	2022	2023	2024	2025	2026
Investors							
Equity L/S	13.4%	9.3%	-7.0%	11.3%	13.0%	15.5%	8.3%
Macro ex-CTAs	4.9%	4.3%	11.5%	1.3%	6.0%	10.2%	4.7%
CTAs	1.2%	8.8%	14.7%	-2.5%	2.9%	-1.1%	8.2%
Risk Parity Funds	3.5%	4.7%	-18.6%	6.0%	5.0%	17.3%	5.7%
US Balanced MFs	13.2%	14.4%	-13.0%	13.8%	11.4%	14.4%	6.4%
Benchmark							
MSCI AC World	16.3%	16.4%	-18.4%	22.2%	17.5%	22.3%	10.4%
Barclays Global Agg	5.6%	-2.5%	-11.2%	7.1%	3.4%	4.9%	1.4%
S&P Riskparity Vol 10	11.5%	12.8%	-16.2%	15.0%	5.4%	15.9%	13.2%
60 US Equity : 40 US Bonds	13.3%	14.8%	-15.4%	18.6%	16.4%	12.7%	6.3%

Source: Bloomberg Finance L.P., HFR, Pivotal Path, J.P. Morgan Flows & Liquidity.

Chart A19: Momentum signals for 10Y UST and 10Y Bunds

Average z-score of Short- and Long-term momentum signal in our Trend Following Strategy framework shown in Tables A3 and A4 below in the Appendix.

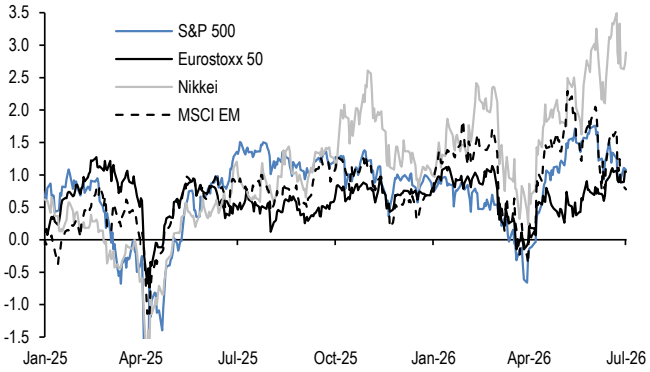


Source: Bloomberg Finance L.P., J.P. Morgan Flows & Liquidity.

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Chart A20: Momentum signals for S&P500

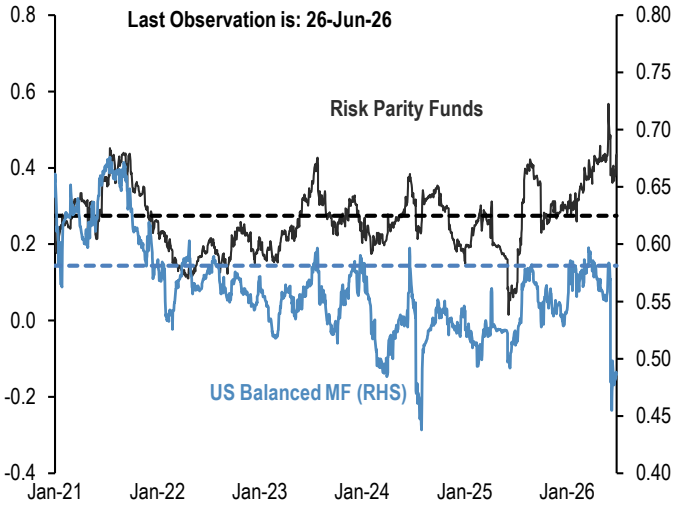
Average z-score of Short- and Long-term momentum signal in our Trend Following Strategy framework shown in Tables A3 and A4 below in the Appendix.



Source: Bloomberg Finance L.P., J.P. Morgan Flows & Liquidity.

Chart A21: Equity beta of US Balanced Mutual funds and Risk Parity funds

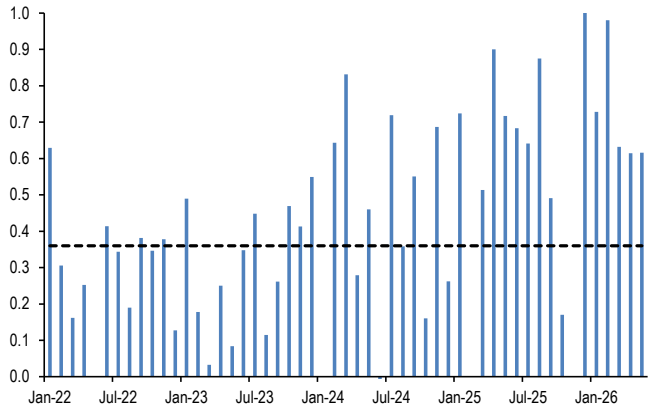
Rolling 42-day equity beta based on a bivariate regression of the daily returns of our Balanced Mutual fund and Risk Parity fund return indices to the daily returns of the S&P 500 and BarCap US Agg indices. Given that these funds invest in both equities and bonds we believe that the bivariate regression will be more suitable for these funds. Our risk parity index consists of 40 daily reporting Risk Parity funds. Our Balanced Mutual fund index includes the top 20 US-based active funds by assets and that have existed since 2006. Our Balanced Mutual fund index has a total AUM of $700bn, which is around half of the total AUM of $1.5tr of US based Balanced funds which we believe to be a good proxy of the overall industry It excludes tracker funds and funds with a low tracking error. Dotted lines are average since 2015.



Source: Bloomberg Finance L.P., J.P. Morgan Flows & Liquidity.

Chart A22: Equity beta of monthly reporting Equity Long/Short hedge funds

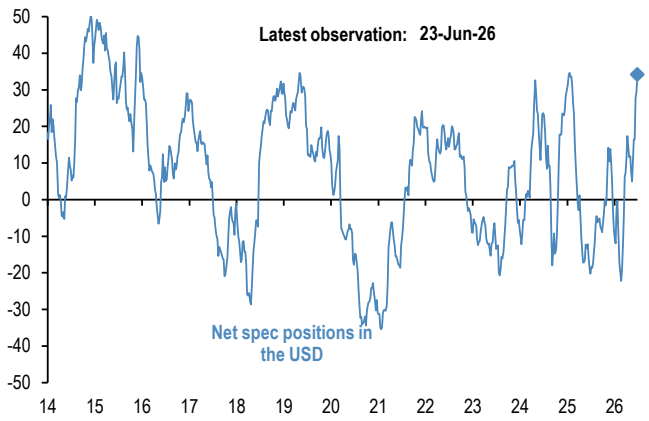
Proxied by the ratio of the monthly performance of Pivotal Path Asset-Weighted Equity Diversified hedge fund index divided by the monthly performance of MSCI AC World Index. Latest obs. is May 26 based on provisional data.



Source: Bloomberg Finance L.P., Pivotal Path, J.P. Morgan Flows & Liquidity.

Chart A23: USD exposure of currency hedge funds

The net spec position in the USD as reported by the CFTC. Spec is the non-commercial category from the CFTC.



Source: CFTC, Barclays, Datastream, Bloomberg Finance L.P., J.P. Morgan Flows & Liquidity.

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CTAs – Trend following investors' momentum indicators

Table A3: Simple return momentum trading rules across various commodities

Optimal look-back period of each momentum strategy combined with a mean reversion indicator that turns signal neutral when momentum z-score more than 1.5 standard deviations above or below mean, and a filter that turns neutral when the z-score is low (below 0.05 and above -0.05) to avoid excessive trading. Look-backs, current signals and z-scores are shown for shorter-term and longer-term momentum separately, along with performance of a combined signal. Annualised return, volatility and information ratio of the signal; current signal; and z-score of the current return over the relevant look-back period; data from 1999 onward.

		Lookback (moving avg, days)	Annualized return (%)	Vol (%)	IR	Current signal	Time since last change (days)	Z-score	% Change of return index from its moving average
WTI	short	21	5.9	22.7	0.26	0	11	-2.2	-13.7%
	long	462				1	12	0.6	17.3%
Brent	short	84	4.4	21.5	0.21	0	0	-1.6	-19.1%
	long	504				1	12	0.7	19.2%
Unleaded gas	short	105	2.9	23.2	0.13	1	24	0.3	3.6%
	long	483				0	1	1.6	42.1%
Heat Oil	short	63	4.5	21.9	0.21	-1	17	-0.9	-9.1%
	long	483				0	85	1.9	58.8%
Gasoil	short	63	8.4	21.2	0.40	-1	1	-1.1	-11.8%
	long	378				0	85	1.8	52.4%
Nat gas	short	105	13.2	35.9	0.37	0	0	0.0	-0.6%
	long	315				-1	106	-0.4	-13.0%
EU emission allowances	short	42	10.1	28.8	0.35	1	14	0.3	3.2%
	long	483				1	14	0.1	6.0%
1m fwd TTF Nat gas	short	21	35.6	31.4	1.14	-1	12	-0.4	-3.4%
	long	294				1	71	0.4	21.1%
Gold	short	21	3.2	10.6	0.30	0	6	-1.9	-5.1%
	long	483				1	17	0.5	6.9%
Silver	short	10	6.4	19.7	0.32	0	5	-1.7	-5.8%
	long	462				1	8	0.7	16.5%
Palladium	short	42	12.3	23.1	0.53	-1	2	-1.4	-11.7%
	long	273				-1	30	-0.8	-18.7%
Platinum	short	105	4.4	18.6	0.23	0	8	-2.4	-22.5%
	long	273				-1	8	-0.9	-14.7%
Aluminium	short	105	5.8	15.2	0.38	-1	6	-1.2	-9.2%
	long	357				1	11	0.5	6.8%
Copper	short	147	7.2	17.3	0.42	1	98	0.2	2.9%
	long	399				1	104	1.0	21.2%
Lead	short	126	0.9	19.2	0.05	-1	16	-0.6	-6.6%
	long	357				-1	117	-0.5	-10.5%
Nickel	short	42	12.1	23.0	0.53	-1	18	-1.4	-11.9%
	long	336				-1	1	-0.1	-3.1%
Zinc	short	126	7.9	19.6	0.40	1	66	0.5	5.7%
	long	399				1	196	0.8	18.2%
Wheat	short	168	4.0	23.2	0.17	-1	2	-0.1	-0.7%
	long	294				0	0	0.0	-0.6%
Kansas wheat	short	147	7.9	20.8	0.38	1	0	0.1	1.0%
	long	483				-1	2	-0.1	-1.7%
Corn	short	63	8.0	16.6	0.48	-1	28	-1.2	-9.0%
	long	399				-1	40	-0.8	-14.9%
Soybeans	short	42	4.7	14.5	0.33	-1	22	-0.6	-3.3%
	long	231				-1	1	-0.1	-1.0%
Cotton	short	168	5.4	18.5	0.29	1	13	0.1	1.5%
	long	483				-1	4	-0.1	-3.3%
Sugar	short	63	6.3	21.6	0.29	0	1	0.0	0.1%
	long	252				-1	33	-0.3	-5.0%
Coffee	short	63	7.8	23.9	0.33	1	1	1.0	8.6%
	long	273				-1	107	-0.2	-3.2%
Cocoa*		10	5.3	31.2	0.17	1	1	2.2	8.3%

* For cocoa, uses only short-term momentum and a z-score threshold of 3 rather than 1.5 as for other contracts.

Source: Bloomberg Finance L.P., J.P. Morgan Flows & Liquidity.

Table A4: Simple return momentum trading rules across international equity indices, bond futures and FX

Optimal look-back period of each momentum strategy combined with a mean reversion indicator that turns signal neutral when momentum z-score more than 1.5 standard deviations above or below mean, and a filter that turns neutral when the z-score is low (below 0.05 and above -0.05) to avoid excessive trading. Look-backs, current signals and z-scores are shown for shorter-term and longer-term momentum separately, along with performance of a combined signal. Annualised return, volatility and information ratio of the signal; current signal; and z-score of the current return over the relevant look-back period; data from 1999 onward.

		Lookback (moving avg, days)	Annualized return (%)	Vol (%)	IR	Current signal	Time since last change (days)	Z-score	% Change of return index from its moving average
S&P 500	short	84	7.7	12.3	0.62	1	0	1.1	5.6%
	long	315				1	0	1.3	13.7%
Nasdaq 100	short	84	10.2	16.2	0.63	1	0	1.4	10.9%
	long	462				0	0	1.5	30.2%
Nikkei	short	63	4.1	13.3	0.31	0	0	2.0	11.6%
	long	420				0	0	3.4	51.9%
FTSE 100	short	168	5.3	12.1	0.43	1	0	0.6	4.0%
	long	504				0	0	1.6	18.1%
Eurostoxx 50	short	168	4.9	16.6	0.30	1	0	1.0	8.8%
	long	294				1	0	1.1	13.0%
MSCI EM	short	42	12.8	11.5	1.11	1	0	0.1	0.6%
	long	357				0	0	1.7	27.6%
HYG credit	short	168	0.4	3.4	0.13	1	0	0.2	0.5%
	long	273				1	0	0.2	0.6%
LQD credit	short	10	2.6	6.5	0.40	0	0	0.0	0.0%
	long	189				-1	0	-0.1	-0.5%
2Y USTs	short	252	0.9	1.1	0.79	-1	0	-0.9	-1.0%
	long	462				-1	0	-0.6	-1.1%
5Y USTs	short	252	1.5	2.8	0.54	-1	0	-0.6	-1.5%
	long	420				-1	0	-0.3	-1.2%
10Y USTs	short	42	2.0	3.6	0.55	1	0	0.2	0.2%
	long	441				-1	0	-0.2	-0.9%
2Y Schatz	short	189	0.6	0.8	0.80	-1	0	-0.5	-0.4%
	long	504				-1	0	-1.2	-2.0%
5y Bobl	short	63	1.3	1.9	0.71	1	0	0.7	0.6%
	long	483				-1	0	-0.6	-2.0%
10y Bund	short	105	2.1	3.4	0.62	1	0	0.4	0.8%
	long	462				-1	0	-0.4	-1.8%
10Y JGB	short	126	0.9	2.3	0.37	-1	0	-1.0	-1.0%
	long	273				0	0	-2.0	-2.9%
10Y Gilts	short	42	2.3	4.0	0.56	1	0	1.0	1.6%
	long	399				-1	0	-0.4	-2.3%
10y OAT vs Bund	short	189	0.4	1.5	0.26	0	0	0.0	0.0%
	long	294				1	0	0.3	0.3%
10y BTP vs. Bund	short	84	2.2	6.3	0.36	1	0	0.2	0.4%
	long	273				1	0	0.1	0.6%
Euro	short	42	3.4	6.4	0.52	-1	0	-0.9	-1.9%
	long	273				-1	0	-0.9	-4.9%
Yen	short	21	3.6	6.3	0.58	-1	0	-0.9	-1.3%
	long	462				0	0	-1.5	-12.7%
Sterling	short	168	1.4	7.1	0.20	-1	0	-0.6	-2.3%
	long	294				-1	0	-0.6	-3.4%
AUD	short	42	3.8	7.8	0.49	-1	0	-1.0	-2.8%
	long	420				1	0	0.1	1.3%
CAD	short	168	1.5	5.9	0.25	-1	0	-1.2	-4.5%
	long	504				-1	0	-1.2	-7.7%
G10 FX	short	42	2.2	5.2	0.42	1	0	1.1	1.9%
	long	189				1	0	0.7	2.6%
EMCI	short	42	2.6	5.0	0.52	-1	0	-0.5	-1.0%
	long	189				1	0	0.4	1.7%

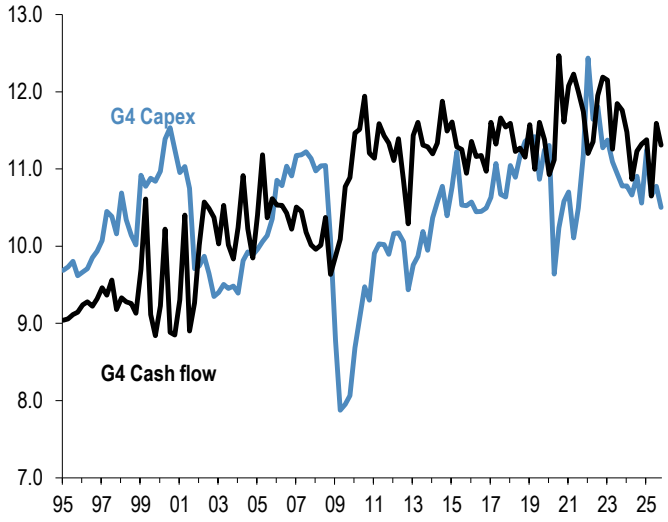
Source: Bloomberg Finance L.P., J.P. Morgan Flows & Liquidity.

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Corporate Activity

Chart A24: G4 non-financial corporate capex and cash flow as % of GDP

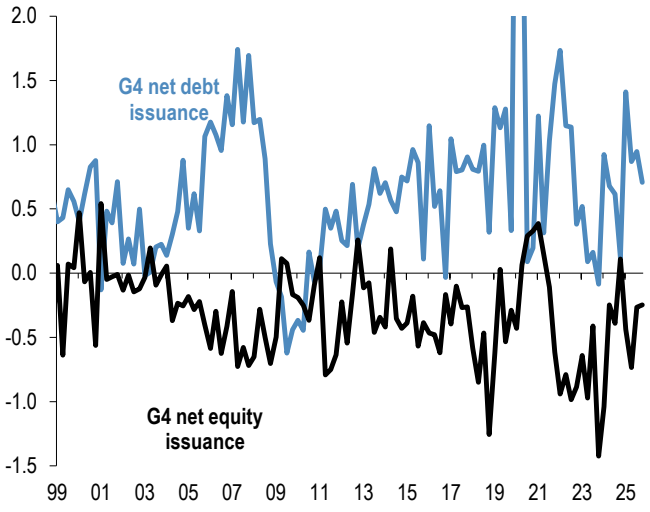
% of GDP, G4 includes the US, the UK, the Euro area and Japan. Last observation as of Q4 2025.



Source: ECB, BOJ, BOE, Federal Reserve flow of funds, J.P. Morgan Flows & Liquidity.

Chart A25: G4 non-financial corporate sector net debt and equity issuance

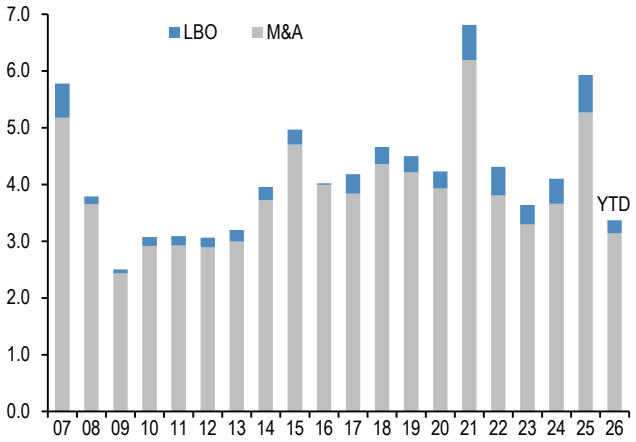
$tr per quarter, G4 includes the US, the UK, the Euro area and Japan. Last observation as of Q4 2025.



Source: ECB, BOJ, BOE, Federal Reserve flow of funds, J.P. Morgan Flows & Liquidity.

Chart A26: Global M&A and LBO

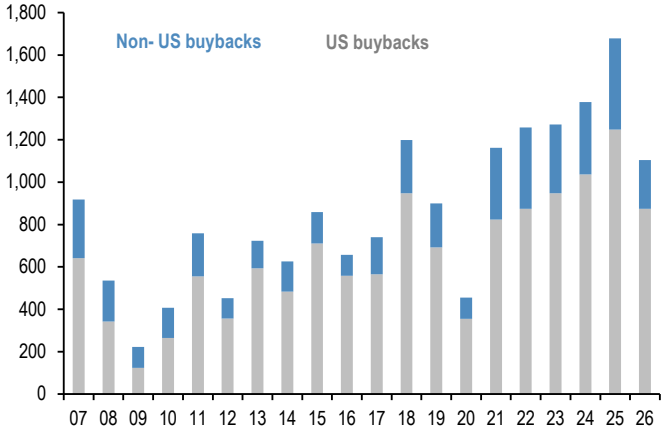
$tr. M&A and LBOs are announced.



Source: Dealogic, J.P. Morgan Flows & Liquidity.

Chart A27: US and non-US share buyback

$bn, are as of June 26. Buybacks are as announced.



Source: Bloomberg Finance L.P., LSEG, J.P. Morgan Flows & Liquidity.

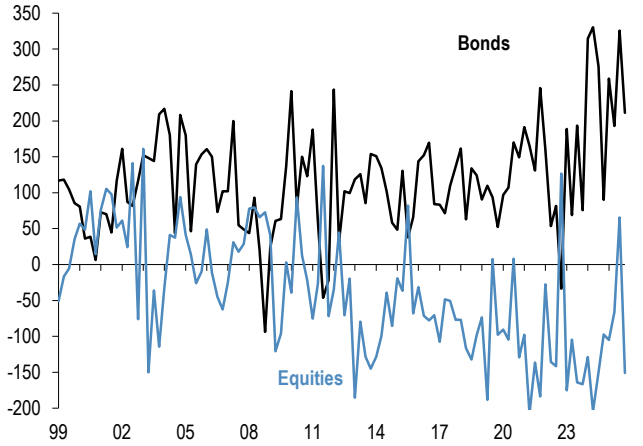
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Pension fund and insurance company flows

Chart A28: G4 pension funds and insurance companies equity and bond flows

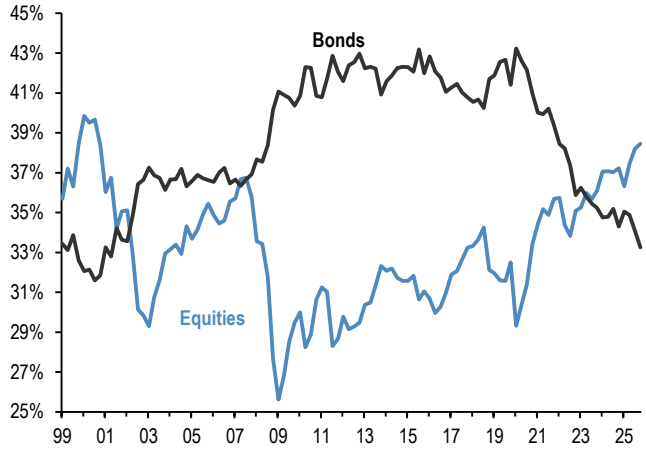
Equity and bond buying in $bn per quarter. G4 includes the US, the UK, Euro area and Japan. Last observation is Q4 2025.



Source: ECB, BOJ, BOE, Federal Reserve flow of funds, J.P. Morgan Flows & Liquidity.

Chart A29: G4 pension funds and insurance companies equity and bond levels

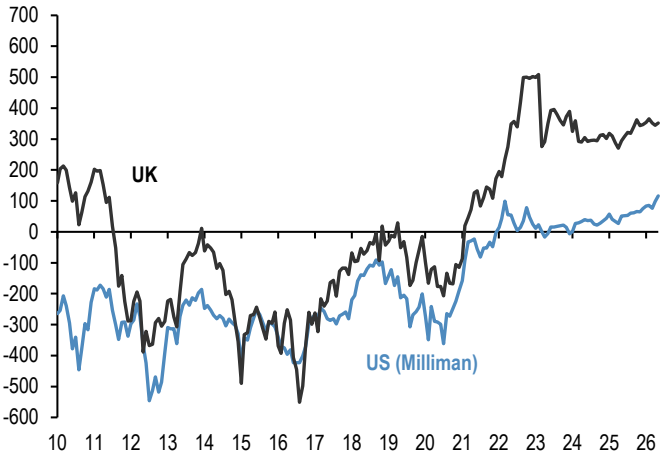
Equity and bond as % of total assets per quarter. G4 includes the US, the UK, Euro area and Japan. Last observation is Q4 2025.



Source: ECB, BOJ, BOE, Federal Reserve flow of funds, J.P. Morgan Flows & Liquidity.

Chart A30: Pension fund deficits

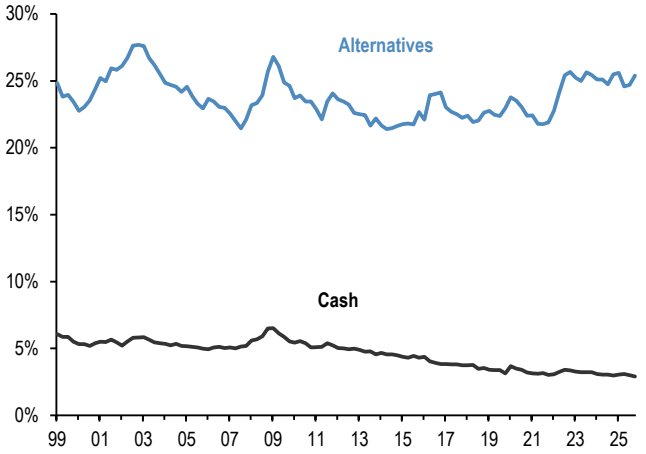
US$bn. For US, funded status of the 100 largest corporate defined benefit pension plans, from Milliman. For UK, funded status of the defined benefit schemes eligible for entry to the Pension Protection Fund, converted to US$ at today's exchange rates. Last obs. is May'26 for US & UK.



Source: Milliman, UK Pension Protection Fund, J.P. Morgan Flows & Liquidity.

Chart A31: G4 pension funds and insurance companies cash and alternatives levels

Cash and alternative investments as % of total assets per quarter. G4 includes the US, the UK, Euro area and Japan. Last observation is Q4 2025.



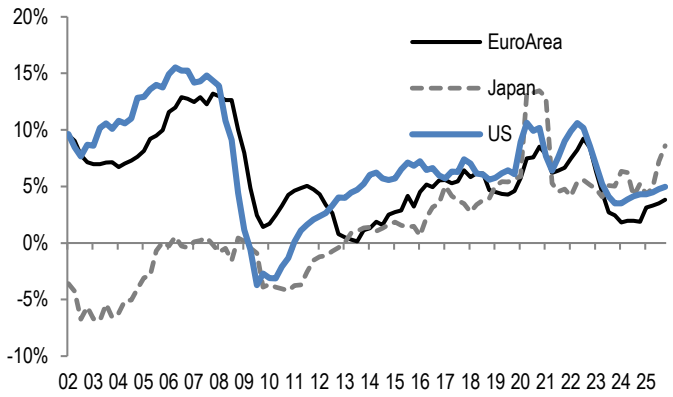
Source: ECB, BOJ, BOE, Federal Reserve flow of funds, J.P. Morgan Flows & Liquidity.

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J.P. Morgan India Private Limited

Credit Creation

Chart A32: Credit creation in the US, Japan and Euro area

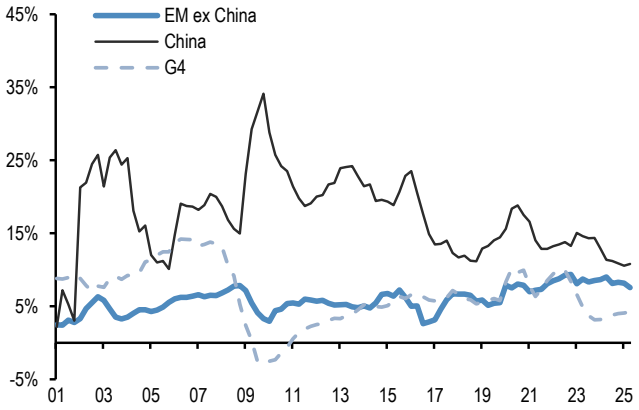
Rolling sum of 4-quarter credit creation as % of GDP. Credit creation includes both bank loans as well as net debt issuance by non-financial corporations and households. Last obs. is Q4'25 for Japan, Euro Area and US.



Source: Fed, ECB, BoJ, Bloomberg Finance L.P., and J.P. Morgan Flows & Liquidity.

Chart A33: Credit creation in EM

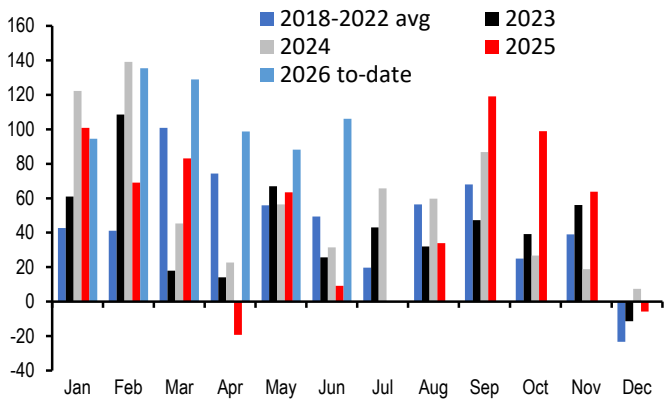
Rolling sum of 4-quarter credit creation as % of GDP. Credit creation includes both bank loans as well as net debt issuance by non-financial corporations and households. The chart uses the FX rates as of the latest observation to calculate the credit creation at constant exchange rates. Last obs. is for Q2'25.



Source: G4 Central banks FoF, BIS, ICI, Barcap, Bloomberg Finance L.P., IMF, and J.P. Morgan Flows & Liquidity.

Chart A34: Monthly net issuance of US HG bonds

$bn. Up to June 25th.



Source: Dealogic, J.P. Morgan Flows & Liquidity.

Table A5: Equity and Bond issuance

$bn, Equity supply and corporate announcements are based on announced deals, not completed. M&A is announced deal value and buybacks are announced transactions. Y/Y change is change in YTD announcements over the same period last year.

Equity Supply	19-Jun	4 wk avg	13 wk avg	y/y chng
Global IPOs	5.1	26.9	11.7	162%
Secondary Offerings	10.2	16.3	11.6	28%
Corporate announcements				
M&A - Global	243.5	153.0	140.3	41%
- US Target	186.3	99.8	73.2	66%
- Non-US Target	57.2	53.2	67.1	22%
Net bond issuance	**Feb-26**	**3 mth avg**	**YTD avg**	**y/y chng**
USD	8	144	179	-50%
Non-USD	162	129	277	-4%

Source: Bloomberg Finance L.P., Dealogic, Thomson Reuters, J.P. Morgan Flows & Liquidity.

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Bitcoin monitor

Chart A35: Our Bitcoin position proxy, based on open interest in CME Bitcoin futures contracts

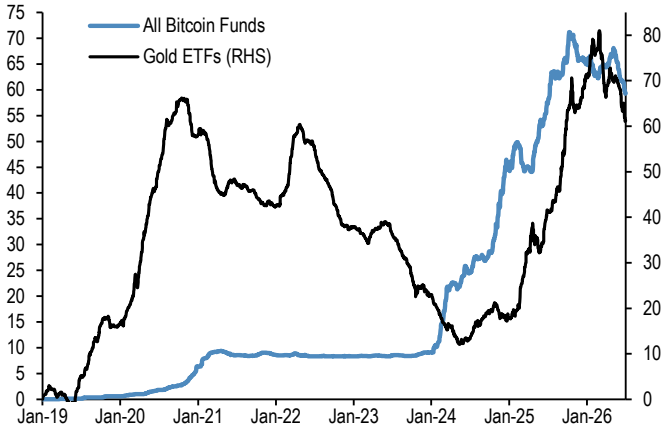
In number of contracts. Last obs. for 30th June 2026.



Source: Bloomberg Finance L.P., J.P. Morgan Flows & Liquidity.

Chart A36: Cumulative Flows in all Bitcoin funds and Gold ETF holdings

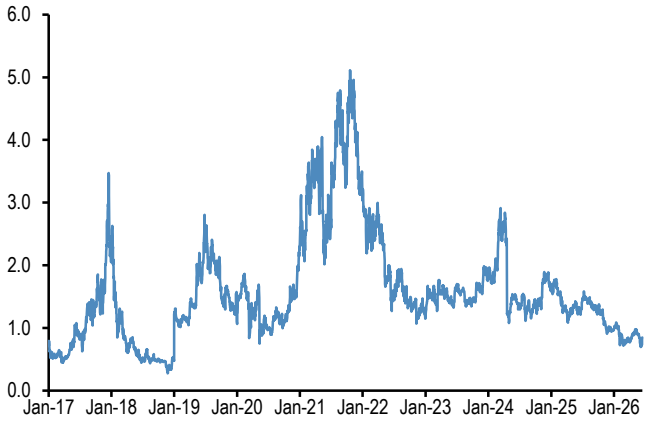
Both the y-axis in $bn.



Source: Bloomberg Finance L.P., J.P. Morgan Flows & Liquidity.

Chart A37: Ratio of bitcoin market price to production cost

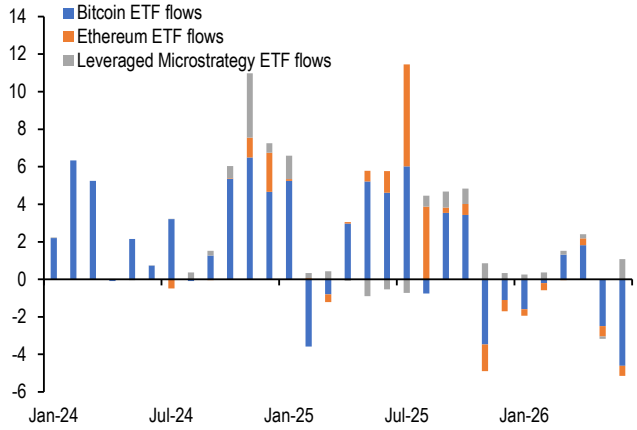
Based on the cost of production approach following Hayes (2018).



Source: Bloomberg Finance L.P., J.P. Morgan Flows & Liquidity.

Chart A38: Monthly flows into spot bitcoin ETFs, spot ethereum ETFs and leveraged MicroStrategy ETF

$bn.



Source: Bloomberg Finance L.P., J.P. Morgan Flows & Liquidity.

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Japanese flows and positions

Chart A39: Tokyo Stock Exchange margin trading: total buys minus total sells

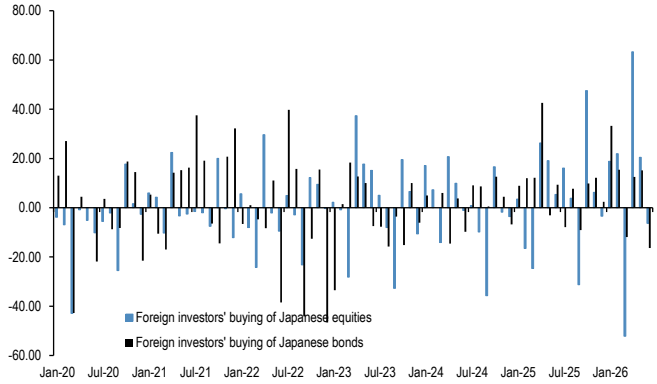
In bn of shares. Topix on right axis.



Source: Tokyo Stock Exchange, Bloomberg Finance L.P., J.P. Morgan Flows & Liquidity.

Chart A40: Monthly net purchases of Japanese bonds and Japanese equities by foreign residents

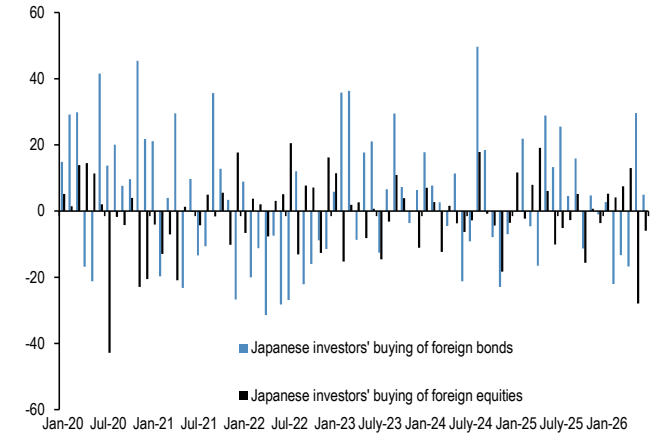
$bn, Last weekly obs. is for 19th June' 26.



Source: Japan MoF, Bloomberg Finance L.P., and J.P. Morgan Flows & Liquidity.

Chart A41: Monthly net purchases of foreign bonds and foreign equities by Japanese residents

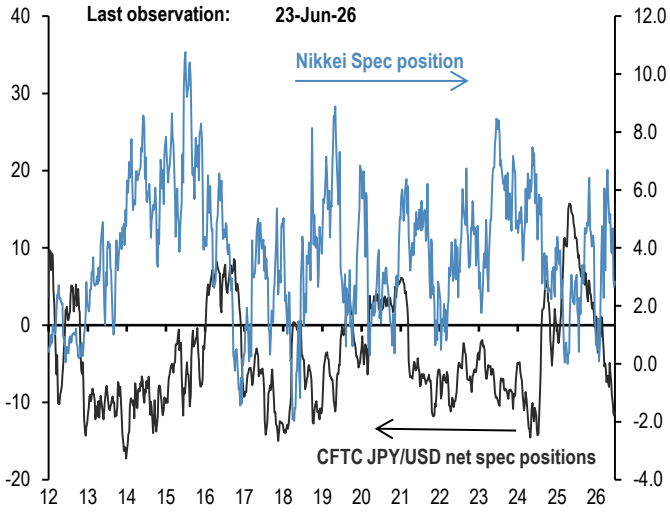
$bn, Last weekly obs. is for 19thJune' 26.



Source: Japan MoF, Bloomberg Finance L.P., and J.P. Morgan Flows & Liquidity.

Chart A42: Overseas CFTC spec positions

CFTC spec positions are in $bn. For Nikkei we use CFTC positions in Nikkei futures (USD & JPY) by Leveraged funds and Asset managers.



Source: Bloomberg Finance L.P., CFTC, J.P. Morgan Flows & Liquidity.

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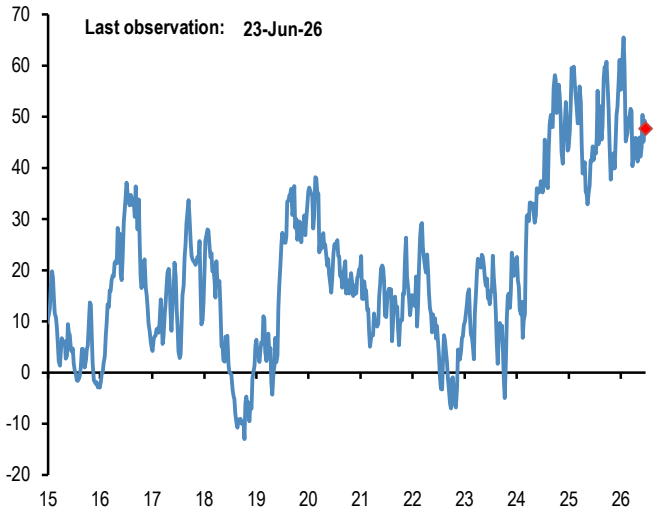
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Commodity flows and positions

Chart A43: Gold spec positions

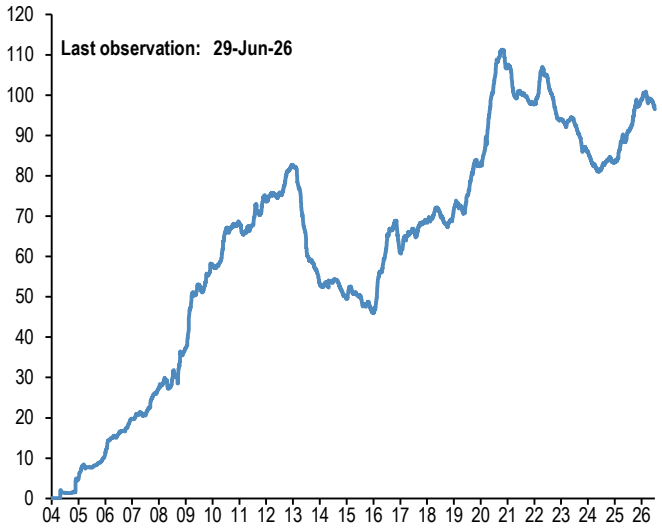
$bn. CFTC net long minus short position in futures for the Managed Money category.



Source: CFTC, Bloomberg Finance L.P., J.P. Morgan Flows & Liquidity.

Chart A44: Gold ETFs

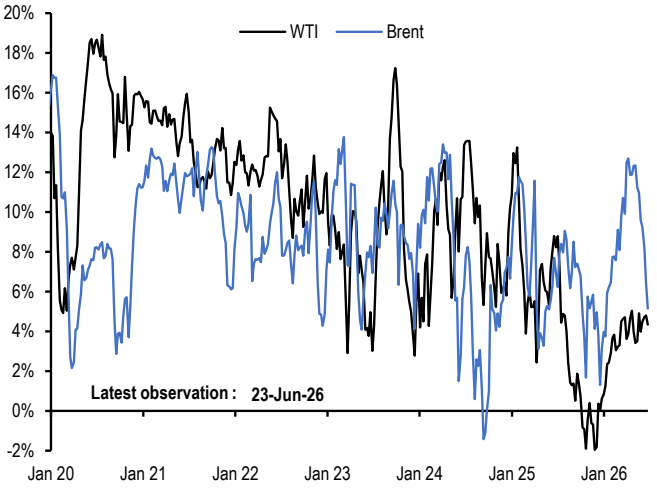
Mn troy oz. Physical gold held by all gold ETFs globally.



Source: Bloomberg Finance L.P., J.P. Morgan Flows & Liquidity.

Chart A45: Oil spec positions

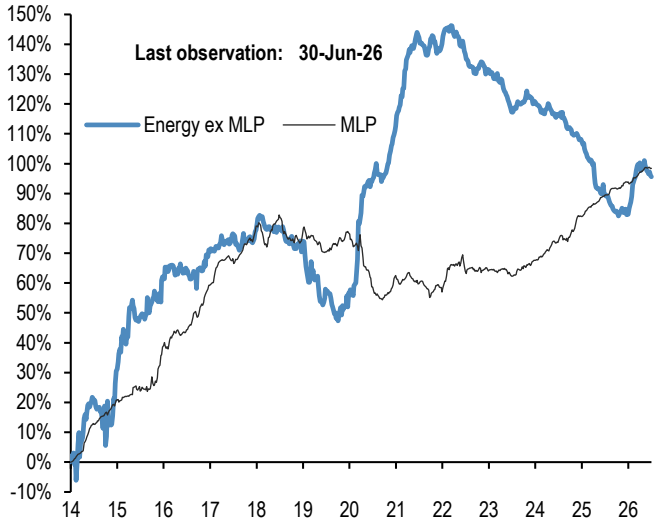
Net spec positions divided by open interest. CFTC futures positions for WTI and Brent are net long minus short for the Managed Money category.



Source: CFTC, Bloomberg Finance L.P., J.P. Morgan Flows & Liquidity.

Chart A46: Energy ETF flows

Cumulative energy ETFs flows as a % of AUM. MLP refers to the Alerian MLP ETF.



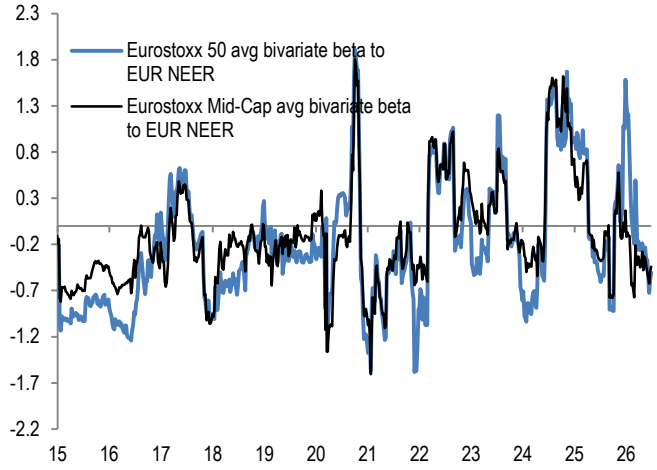
Source: CFTC, Bloomberg Finance L.P., J.P. Morgan Flows & Liquidity.

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Corporate FX hedging proxies

Chart A47: Average beta of Eurostoxx 50 companies and Eurostoxx Mid-Cap to trade-weighted EUR

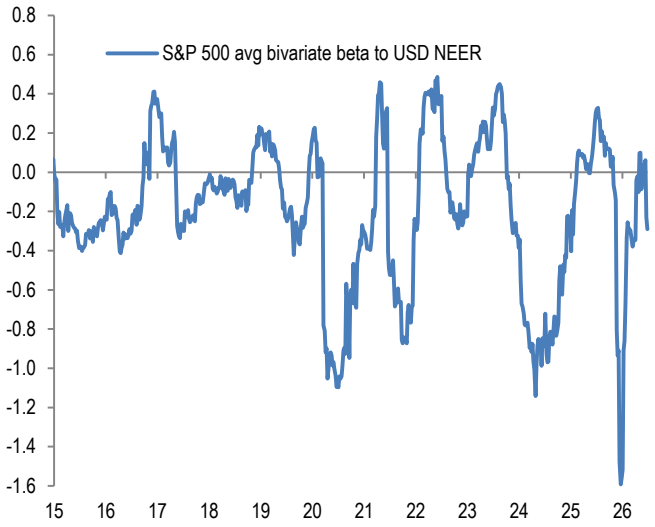
Rolling 26 weeks average betas based on a bivariate regression of the weekly returns of individual stocks in the Eurostoxx 50 index to the weekly returns of the MSCI AC World and JPM EUR Nominal broad effective exchange rate (NEER).



Source: Bloomberg Finance L.P., J.P. Morgan Flows & Liquidity.

Chart A48: Average beta of S&P500 companies to trade-weighted US dollar

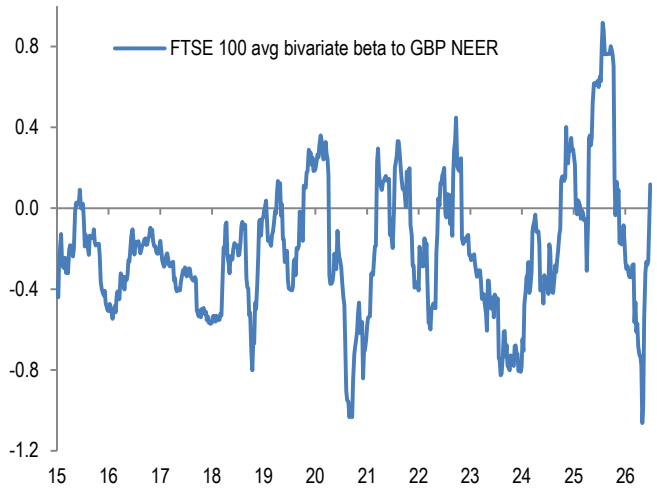
Rolling 26 weeks average betas based on a bivariate regression of the weekly returns of stocks in the S&P500 index to the weekly returns of the MSCI AC World and JPM USD Nominal broad effective exchange rate(NEER).



Source: Bloomberg Finance L.P., J.P. Morgan Flows & Liquidity.

Chart A49: Average beta of FTSE 100 companies to trade-weighted GBP

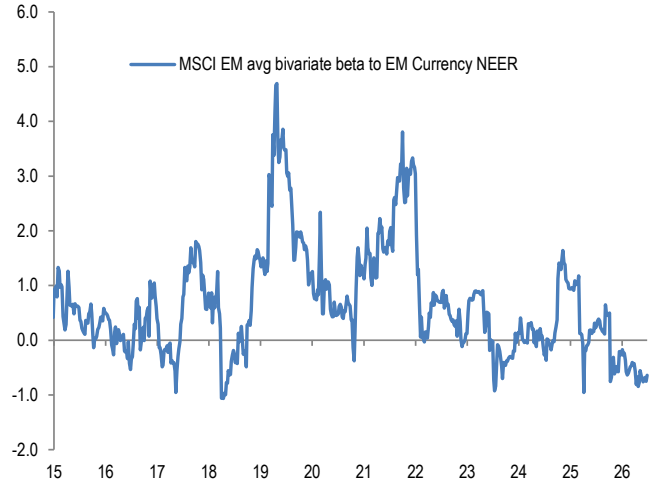
Rolling 26 weeks average betas based on a bivariate regression of the weekly returns of individual stocks in the FTSE 100 index to the weekly returns of the MSCI AC World and JPM GBP Nominal broad effective exchange rate (NEER).



Source: Bloomberg Finance L.P., J.P. Morgan Flows & Liquidity.

Chart A50: Average beta of MSCI EM companies to trade-weighted EM Currency Index

Rolling 26 weeks average betas based on a bivariate regression of the weekly returns of individual stocks in the MSCI EM index to the weekly returns of the MSCI AC World and JPM EM Nominal broad effective exchange rate (NEER).



Source: Bloomberg Finance L.P., J.P. Morgan Flows & Liquidity.

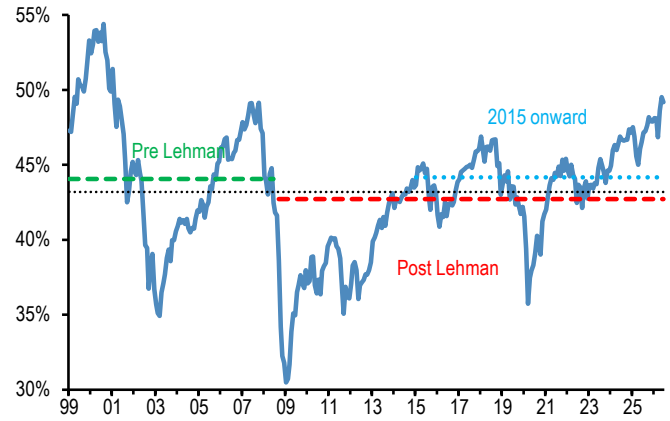
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Non-Bank investors' implied allocations

Chart A51: Implied equity allocation by non-bank investors globally

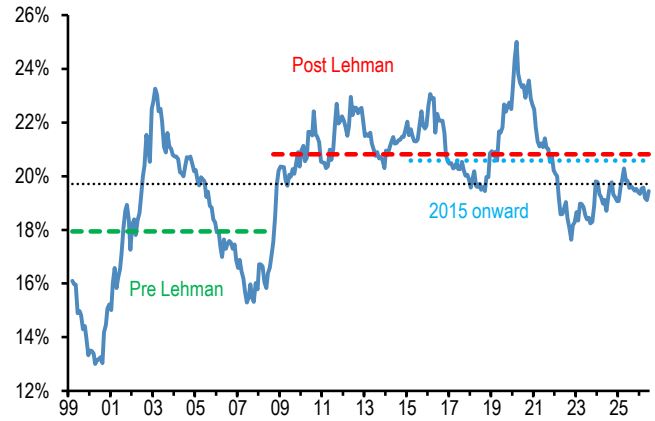
Global equities as % total holdings of equities/bonds/M2 by non-bank investors/ Commodities including gold held by private investors. Dotted lines are averages.



Source: Bloomberg Finance L.P., LSEG DataStream, J.P. Morgan Flows & Liquidity.

Chart A52: Implied bond allocation by non-bank investors globally

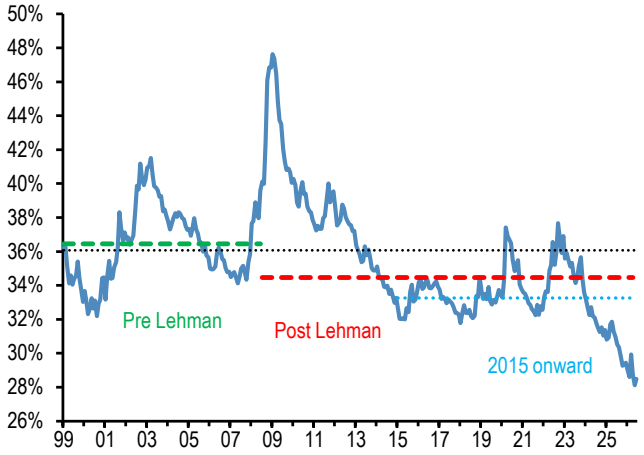
Global bonds as % total holdings of equities/bonds/M2 by non-bank investors/ Commodities including gold held by private investors. Dotted lines are averages.



Source: Bloomberg Finance L.P., LSEG DataStream, J.P. Morgan Flows & Liquidity.

Chart A53: Implied cash allocation by non-bank investors globally

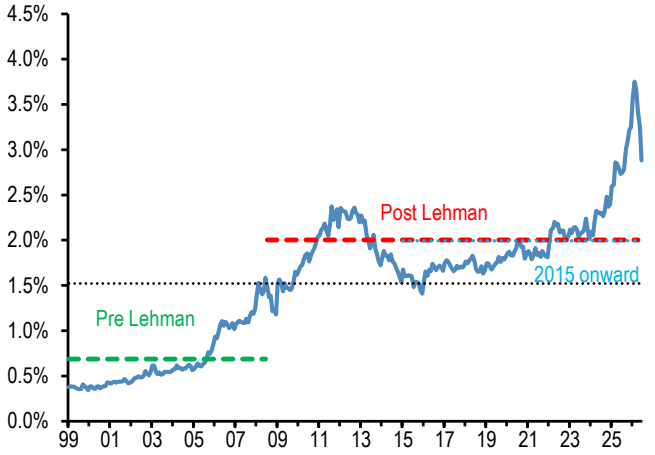
Global cash held by non-bank investors as % total holdings of equities/bonds/M2 by non-bank investors/Commodities including gold held by private investors. Dotted lines are averages.



Source: Bloomberg Finance L.P., LSEG DataStream, J.P. Morgan Flows & Liquidity.

Chart A54: Implied commodity allocation (including privately held gold) by non-bank investors globally

Proxied by the open interest of commodity futures ex gold and privately held gold as % of the stock of equities, bonds, cash held by non-bank investors globally and commodities including gold held by private investors.



Source: Bloomberg Finance L.P., LSEG DataStream, J.P. Morgan Flows & Liquidity.

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****Percentage of subject companies within each of the "buy," "hold" and "sell" categories for which J.P. Morgan has provided investment banking services within the previous 12 months.**
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