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# Flows & Liquidity

## Equity Risk Premia shrink further to levels last seen in 2002

- **Going forward, we see three implications from the shrinkage of Equity Risk Premia towards 2%, 100bp below historical averages: 1) higher sensitivity of equities to bond yields, 2) greater inclination by longer-term investors to rebalance from equities to bonds, and 3) reinforcement of the positive bond-equity correlation.**
- **How much of this year's real bond yield increase reflects growth optimism vs. term premia?**
- **The scars from July's deleveraging continued to weigh on Equity Sector TMT hedge funds in August.**

**Global Markets Strategy**

**Nikolaos Panigirtzoglou** [AC]
(44-20) 7134-7815
nikolaos.panigirtzoglou@jpmorgan.com
J.P. Morgan Securities plc

**Mika Inkinen**
(44-20) 7742 6565
mika.j.inkinen@jpmorgan.com
J.P. Morgan Securities plc

**Mayur Yeole**
(91 22) 6157 3872
mayur.yeole@jpmchase.com
J.P. Morgan India Private Limited

**Krutik P Mehta**
(91-22) 6157-5016
krutik.mehta@jpmchase.com
J.P. Morgan India Private Limited

### 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 2nd Sept 26.

| MF & ETF Flows | Min | Max | 4 wk avg ($bn) | 2025 avg ($bn) |
|---|---|---|---|---|
| All Equities | | | 11.2 | 8.1 |
| All Bonds | | | 12.4 | 11.3 |
| US Equities | | | 1.6 | 3.5 |
| US Bonds | | | 6.8 | 4.3 |
| Non-US Equities | | | 9.6 | 4.6 |
| Non-US Bonds | | | 5.5 | 7.0 |
| US HG Bonds | | | 7.7 | 3.4 |
| US HY Bonds | | | -0.6 | 0.4 |
| US Lev. Loans * | | | 0.6 | 0.0 |
| US MMFs | | | 0.9 | 4.0 |
| EM Equities | | | 1.2 | 0.9 |
| EM Bonds | | | 0.75 | 0.50 |
| Japan Equities | | | 0.4 | -0.1 |
| China Equities | | | -0.25 | -0.15 |
| **Europe** | | | | |
| Europe Equities | | | 0.3 | 0.9 |
| Europe Bonds | | | 3.0 | 4.3 |
| Europe HG Bonds | | | 0.0 | 0.9 |
| Europe HY Bonds | | | 0.08 | 0.17 |
| Europe MMFs | | | 6.3 | 3.8 |
| Other Equities | | | 7.92 | 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 08-Sep-26 | MIN | MAX | Current percentile |
|---|---|---|---|
| Equities | | | 0.81 |
| Govt Bonds | | | 0.59 |
| Credit | | | 0.22 |
| Dollar | | | 0.53 |
| Commodities ex Gold | | | 0.85 |
| Gold | | | 0.57 |
| Bitcoin | | | 0.77 |
| EM Equities | | | 0.79 |
| EM Bonds/FX | | | 0.24 |
| Japan Equities | | | 0.59 |
| Europe Equities | | | 0.72 |
| **US Equity Sectors:** | | | |
| Energy | | | 0.76 |
| Materials | | | 0.55 |
| Industrials | | | 0.38 |
| Discretionary | | | 0.55 |
| Staples | | | 0.25 |
| Health Care | | | 0.50 |
| Financials | | | 0.41 |
| Technology | | | 0.72 |
| Communication Services | | | 0.26 |
| Utilities | | | 0.35 |

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 26 for analyst certification and important disclosures.**

Nikolaos Panigirtzoglou [AC] (44-20) 7134-7815
nikolaos.panigirtzoglou@jpmorgan.com
J.P. Morgan Securities plc
Mika Inkinen (44-20) 7742 6565
mika.j.inkinen@jpmorgan.com
J.P. Morgan Securities plc
Mayur Yeole (91 22) 6157 3872
mayur.yeole@jpmchase.com
J.P. Morgan India Private Limited
Krutik P Mehta (91-22) 6157-5016
krutik.mehta@jpmchase.com
J.P. Morgan India Private Limited



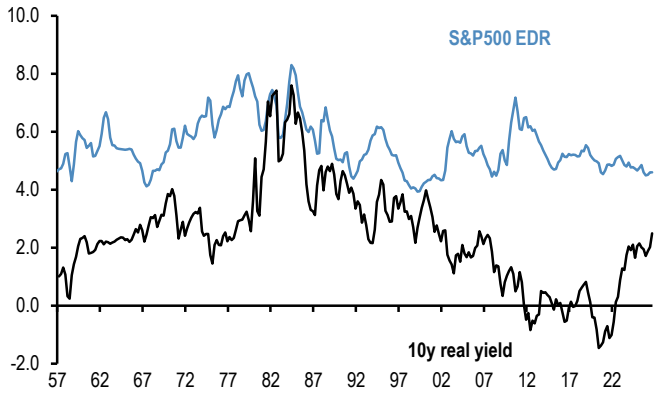
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- The steep rise in real bond yields over the past weeks is once again raising questions about its impact on the equity risk premium (ERP), i.e. the real yield or expected real rate of return gap between equities and bonds. We had argued last May in our publication that the S&P500 Equity Risk Premium had already breached the previous cycle low of 2.4% seen in Q3 2007. Since last May, because of the equity rally and the further increase in real bond yields, the S&P500 Equity Risk Premium has currently declined to only 2.1% on our estimates, its lowest level since 2002.
- How do we estimate the S&P500 Equity Risk Premium i.e., the gap between the S&P500 equity discount rate vs. the 10y real UST yield? The obvious challenge is that equity discount rates or expected rate of returns for equities are not observable and are thus less straightforward to calculate than bond yields as one needs to make assumptions about the future path of dividends or equity cash flows to be able to derive the equity discount rate as the residual in an equity valuation model. To address this issue, we resort to our long-term fair value framework for the S&P500 index for which we have historical data since 1957 (see A fair value model for US Bonds, Credit and Equities, Panigirtzoglou and Loeys, June 2005). The starting point of this valuation model is the Dividend Discount Model (DDM). Equity valuation is more complicated than bond valuation because of the difficulty in measuring expectations of future cash flows, but ultimately equities also need to be analyzed in a discounted cash flow model.
- That is, the equity price is equal to the expected future cash flows (i.e. dividends) discounted to the present using an Equity Discount Rate (EDR). The equation below illustrates the discounted cash flow model:

$$P = \sum_i \frac{k.E_0(1+g)^i}{(1+EDR)^i}$$

- where P denotes the equity price, E0 is current earnings, k is the payout ratio, g is the growth rate of dividends, and EDR is the Equity Discount Rate.
- In brief, we take as the starting point for current earnings the four-quarter rolling sum of earnings per share. For the growth rate of dividends, we assume a two-stage DDM, where the first five years are modelled in a recursive model that depends on lagged 5-year earnings and the previous period's P/E ratio. In the second stage, we assume that real earnings growth reverts to a long run average. And the EDR or equity yield is then derived as the residual by inserting the current price of the S&P500 in the above equation.
- This model-based real Equity Discount Rate or real equity yield of the S&P500 index is depicted along with the real 10y UST yield in Figure 1. The latter is proxied by the nominal 10y UST yield minus the Philly Fed 10y ahead inflation expectation as index linked yields are only available since late 1990s. Figure 2 shows the gap between the two yields or expected rates of return, i.e. the Equity Risk Premium.

**Figure 1: Our model based S&P500 Equity Discount Rate vs. the real 10y UST yield**



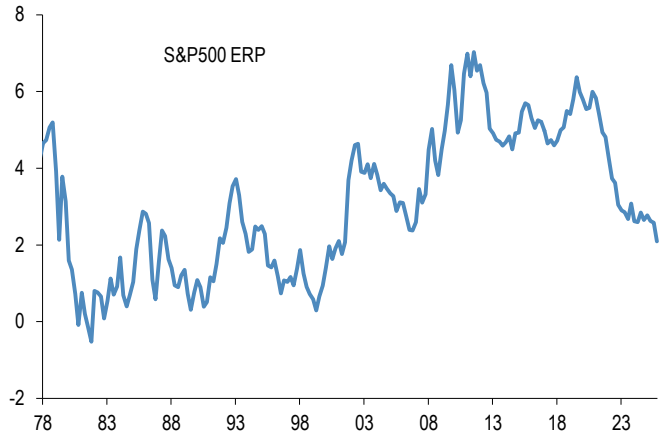

Source: J.P. Morgan Flows & Liquidity.

- Figure 1 and Figure 2 imply relative insensitivity of equity yields to bond yields except from the 1974-1998 period, which was a backdrop of low Equity Risk Premia. This period encompasses sub-periods of both elevated inflation as well as a downward trend in inflation as tighter monetary policy helped bring it under control, with the common theme being low equity risk premia. During that period, the equity yield of the S&P500 exhibited higher sensitivity to bond yields, at times increasing almost in tandem with bond yields. With the Equity Risk Premium declining to 2.1% currently, it appears that we have entered a similar backdrop of low Equity Risk Premium. If this assessment is correct, then the lesson from the 1974-1998 period is that going forward equity markets could exhibit higher sensitivity to bond yields than the one exhibited over the past couple of decades.

Nikolaos Panigirtzoglou [AC] (44-20) 7134-7815
nikolaos.panigirtzoglou@jpmorgan.com
J.P. Morgan Securities plc
Mika Inkinen (44-20) 7742 6565
mika.j.inkinen@jpmorgan.com
J.P. Morgan Securities plc
Mayur Yeole (91 22) 6157 3872
mayur.yeole@jpmchase.com
J.P. Morgan India Private Limited
Krutik P Mehta (91-22) 6157-5016
krutik.mehta@jpmchase.com
J.P. Morgan India Private Limited



**Figure 2: Equity Risk Premium proxied by the difference between the S&P500 Equity Discount Rate and the real 10y UST yield**

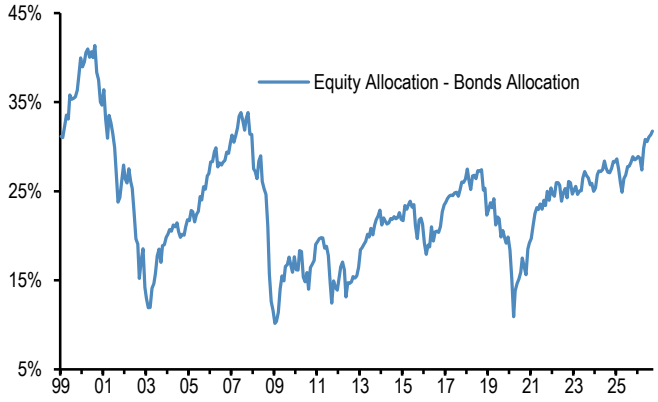



Source: J.P. Morgan Flows & Liquidity.

- The second implication is on asset allocation. From a long-term asset allocation point of view, given the shrinkage of the Equity Risk Premium or the difference between the expected rate of return in equities vs. bonds, bonds should in principle command a higher weight relative to equities compared to the norms of the post Lehman period. Indeed, our asset allocation metrics of Figure 3 for non-bank investors globally and in Figure 4 for G4 pension funds and insurance companies specifically, both show that investors are currently very overweight equities vs. bonds, the most overweight since 2002. While the current lower risk premium can in principle be sustained e.g. if AI-related productivity gains provide a boost to earnings growth, this greater sensitivity to bond yields, particularly in the event real rates drift higher from current levels, could provide multi-asset investors with an incentive to increase bond allocations going forward, and rebalancing flows from equities to bonds could become more pronounced than those seen in recent years.

**Figure 3: Implied equity minus bond allocation by non-bank investors globally**

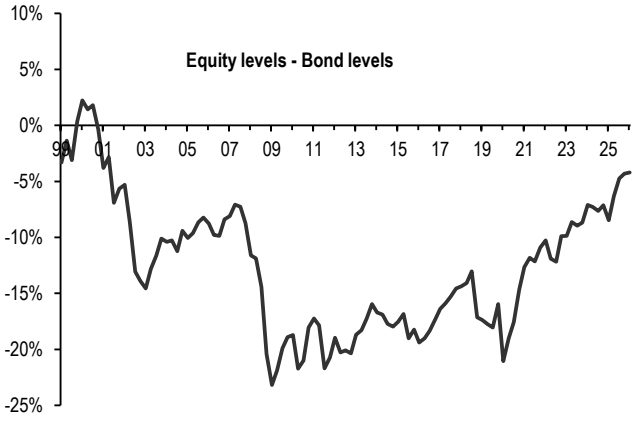
Global equities & bonds as % total holdings of equities/bonds/M2 by non-bank investors/Commodities including gold held by private investors.




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

**Figure 4: G4 pension funds and insurance companies - equity minus bond allocation**

Equity and bond as % of total assets per quarter. G4 includes the US, the UK, Euro area and Japan. Last observation is Q1 2026.




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

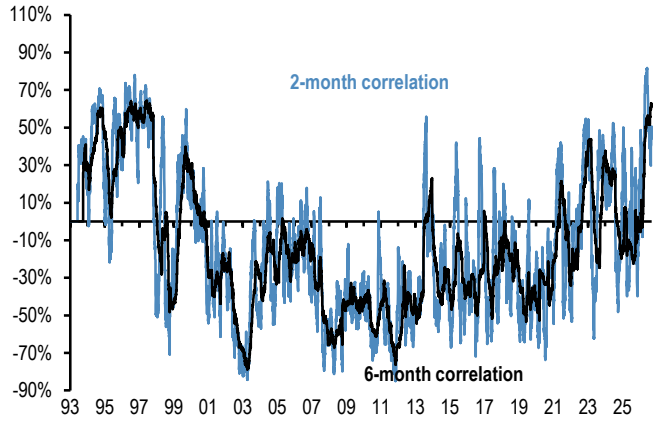
- The third implication is on bond-equity correlation. A higher sensitivity of equity markets to bond yields going forward would reinforce the positive bond-equity correlation phase that already emerged since 2022 (Figure 5) in the aftermath of the inflation shock. In other words, this positive correlation could be sustained both through a valuation channel, with equities more sensitive to bond yields, as well as through a macro regime channel, if inflation volatility remains more elevated. In turn, this could create a more sustained headwind for the so-called "risk parity trade" (which relies on bond duration as a hedge to equity risk) and increase demand for more direct

Nikolaos Panigirtzoglou [AC] (44-20) 7134-7815
nikolaos.panigirtzoglou@jpmorgan.com
J.P. Morgan Securities plc
Mika Inkinen (44-20) 7742 6565
mika.j.inkinen@jpmorgan.com
J.P. Morgan Securities plc
Mayur Yeole (91 22) 6157 3872
mayur.yeole@jpmchase.com
J.P. Morgan India Private Limited
Krutik P Mehta (91-22) 6157-5016
krutik.mehta@jpmchase.com
J.P. Morgan India Private Limited



equity market hedges such as equity puts by multi-asset investors.

Figure 5: Global bond-equity correlation of daily returns




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

## How much of this year's real bond yield increase reflects growth optimism vs. term premia?

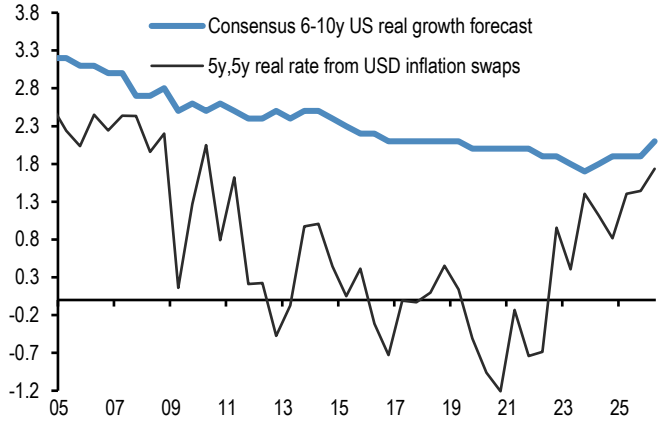
- The rise in real rates has prompted questions in our conversations over the degree to which it could signal greater optimism that AI investments are prompting some re-assessment about long-term growth prospects due to expected productivity advancements. In principle, there should be a link between the two over time, but that link is not necessarily mechanical as long-term interest rates can also be affected by global savings vs. investment imbalances, risk premia and the inflation regime.
- We can look at the empirical relationship e.g. by looking at long-term growth forecasts from Consensus Economics, which include in their April and October surveys annual real GDP growth forecasts from 1 to 5 years out as well as a 6-10y ahead forecast, and 5y, 5y forward real rates derived from USD OIS and inflation swaps. This is shown in Figure 6. The period between the financial crisis and the pandemic does show a steady downward trend in consensus long-term real GDP growth forecasts as well as a steady downward trend in 5y,5y real rates. At the same time, in terms of magnitude there was clearly a difference, perhaps on a combination of QE programs acting to depress long-term yields, disinflationary effects from a prolonged recovery from a balance sheet recession after the financial crisis that saw inflation persistently below central bank targets, and perceptions of a savings glut. In the aftermath of the pandemic, the inflation shock of 2021/22 saw a sharp repricing of real rates even as real growth forecasts remained subdued, perhaps reflecting a combination of central banks reversing course on QE and raising real policy rates, as well as a greater focus on persistently wide fiscal deficits. These concerns over fiscal deficits have also manifested themselves via negative swap spreads. After late 2023, however, long-term growth expectations have begun to improve, suggesting that some of the rises in real rates recently could reflect optimism over the implications from the AI investment cycle for growth, though ongoing fiscal pressures remain a potential contributing factor. Indeed, our colleagues in rates research noted that valuation gaps across different bond markets have become more sensitive to demand side drivers (Say Anything: Translating between market rates and central bank speak, Sep 9th).

Nikolaos Panigirtzoglou [AC] (44-20) 7134-7815
nikolaos.panigirtzoglou@jpmorgan.com
J.P. Morgan Securities plc
Mika Inkinen (44-20) 7742 6565
mika.j.inkinen@jpmorgan.com
J.P. Morgan Securities plc
Mayur Yeole (91 22) 6157 3872
mayur.yeole@jpmchase.com
J.P. Morgan India Private Limited
Krutik P Mehta (91-22) 6157-5016
krutik.mehta@jpmchase.com
J.P. Morgan India Private Limited



**Figure 6: Consensus forecasts for 6-10y ahead US real growth rates and 5y,5y USD real rates from swaps**

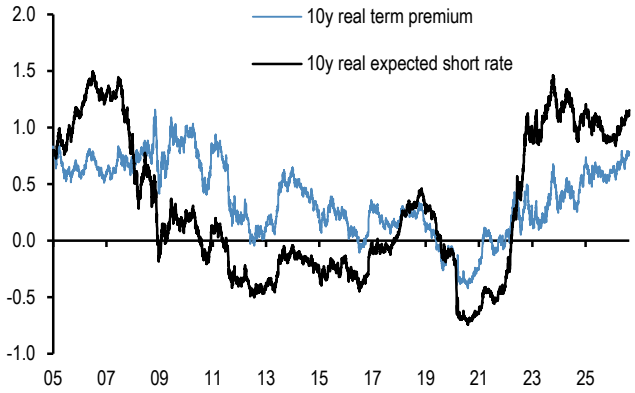
In %. 6-10y ahead growth forecasts from twice yearly long-term forecasts from Consensus Economics and real 5y,5y USD real rates derived from OIS and inflation swap rates on the same dates.




Source: Consensus Economics, J.P. Morgan.

- One way to try and disentangle between the two potential explanations is to look at term premia on real rates. Similar to nominal yields, which contain information about the expected path of nominal policy rates and a term premium component, real yields contain information about real policy rate expectations and a real term premium component, leaving out the component of nominal yields related to inflation expectations and inflation risk premia. Measuring term premia, or the compensation investors require for holding long-term fixed income instruments rather than rolling over a series of short-term bonds, is clearly not straightforward, given that they are not directly observable and must instead be inferred by trying to separate out term premia from expectations of the path of future short-term rates. This can be done, for example, by using surveys to estimate expectations about future interest rates and to infer term premia. Another way is the literature around term structure models. Survey-based methods and term structure models have their benefits and drawbacks, and for simplicity we focus on a model-based metric given the less timely nature of survey-based metrics and complications in ensuring a like-for-like comparison for real interest rates. For a fuller discussion on term premia, please see our previous F&L from Oct 2023 and In the eye of the beholder, Sep 2023.
- Typically, we have focused on this decomposition in nominal terms (see e.g. F&L, Aug 6th). Focusing here on real metrics, for a model-based measure we focus on the model by D'Amico, Kim and Wei (DKW), which jointly models nominal and real yields in a no-arbitrage term structure framework, and is regularly updated on the Federal Reserve website (see FEDS Notes: Tips from TIPS, 2019 for further detail and data). This model takes into account a liquidity factor to reflect the lower liquidity of TIPS markets relative to nominal Treasury securities, and similar to the Kim-Wright model also incorporates information from surveys.
- Figure 7 shows the 10y real expected short rate and term premium components derived from the DKW model. The sharp repricing of real rates in 2022 was largely driven by a repricing of real expected short rates, consistent with a significant tightening of real monetary policy rates. After the initial rise in 2022/23, real term premia moderated somewhat through 2024 and into late 2025. Since late Feb26, the decomposition suggests that the rise in real rates has been roughly evenly split between expected real short rates and term premia. This pattern could be consistent with some upward revision to perceived potential growth rates, potentially linked to optimism around the AI investment cycle, though fiscal dynamics and an ongoing role of QT from other DM central banks likely remain contributing factors.

**Figure 7: Decomposition of 10y real UST yields into expected future short rates and term premia**




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

Nikolaos Panigirtzoglou [AC] (44-20) 7134-7815
nikolaos.panigirtzoglou@jpmorgan.com
J.P. Morgan Securities plc

Mika Inkinen (44-20) 7742 6565
mika.j.inkinen@jpmorgan.com
J.P. Morgan Securities plc

Mayur Yeole (91 22) 6157 3872
mayur.yeole@jpmchase.com
J.P. Morgan India Private Limited

Krutik P Mehta (91-22) 6157-5016
krutik.mehta@jpmchase.com
J.P. Morgan India Private Limited



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## The scars from July's deleveraging continued to weigh on Equity Sector TMT hedge funds in August

- Preliminary data by Pivotal Path suggest that hedge funds returned 1.4% in August, fully reversing the July loss. Within hedge fund categories, while both Equity Long/Short and Multi-Strat hedge funds fully reversed their July losses, Equity Sector TMT hedge funds lagged by recapturing only a third of the July loss. This suggests that the scars from July's deleveraging continued to weigh on Equity Sector TMT hedge funds in August.
- Both Discretionary Macro hedge funds and CTAs returned above 2% in August, more than reversing their July loss. The implied equity beta of Discretionary Macro hedge funds increased markedly in August, pointing to an increase in their equity exposures last month (Figure 9). The implied equity beta of Equity Long/Short hedge funds also stood above average levels in August (Figure 10).

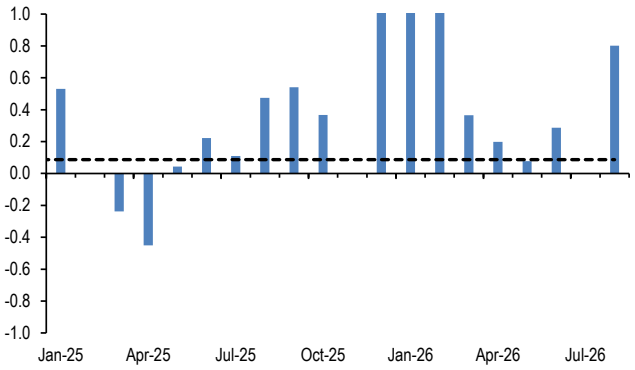
### Figure 8: Hedge fund performance from January to August 2026

| | Jan-26 | Feb-26 | Mar-26 | Apr-26 | May-26 | Jun-26 | Jul-26 | Aug-26 | Jan - Aug 26 |
|---|---|---|---|---|---|---|---|---|---|
| ALL HFs | 1.99% | 1.16% | -2.62% | 4.46% | 2.07% | 0.93% | -1.36% | 1.40% | 8.14% |
| Equity L/S | 2.15% | 1.22% | -4.53% | 6.27% | 2.55% | 1.10% | -1.47% | 1.62% | 8.90% |
| Macro | 3.13% | 1.81% | -2.62% | 2.02% | 0.40% | -0.23% | -0.22% | 2.14% | 6.49% |
| Managed Futures/CTAs | 3.71% | 3.13% | -0.86% | 2.11% | -0.21% | -0.86% | -0.64% | 2.31% | 8.89% |
| Multi Strat | 1.93% | 1.07% | -1.40% | 2.52% | 1.18% | 0.94% | -0.51% | 0.64% | 6.49% |
| Credit | 1.03% | 0.23% | -0.54% | 1.45% | 0.85% | 0.40% | 0.07% | 0.16% | 3.69% |
| Equity sector | 1.39% | 1.00% | -2.53% | 7.75% | 4.82% | 3.27% | -4.11% | 2.02% | 13.89% |
| Event Driven | 1.48% | 0.84% | -2.46% | 4.58% | 2.60% | 1.01% | -1.14% | -0.22% | 6.71% |
| Equity Quant | -0.72% | 0.80% | 0.61% | 1.10% | -1.00% | 1.22% | 1.74% | 0.34% | 4.13% |
| Volatility | 1.30% | 1.29% | 1.26% | -0.15% | 0.27% | -0.21% | 0.35% | -0.28% | 3.88% |
| Equity sector TMT | 2.34% | -1.23% | -3.71% | 13.10% | 11.43% | 3.49% | -8.27% | 2.66% | 19.54% |

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

### Figure 9: Implied equity beta of monthly reporting Macro hedge funds

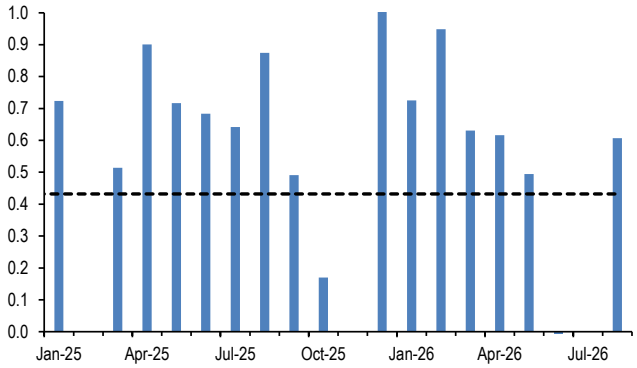
Proxied by the ratio of the monthly performance of Pivotal Path Macro hedge fund index divided by the monthly performance of MSCI AC World Index. Latest obs. as of Aug 26 based on provisional data from Pivotal Path.




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

### Figure 10: Implied equity beta of monthly reporting Equity Diversified 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. as of Aug 26 based on provisional data from Pivotal Path.




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

Nikolaos Panigirtzoglou [AC] (44-20) 7134-7815
nikolaos.panigirtzoglou@jpmorgan.com
J.P. Morgan Securities plc

Mika Inkinen (44-20) 7742 6565
mika.j.inkinen@jpmorgan.com
J.P. Morgan Securities plc

Mayur Yeole (91 22) 6157 3872
mayur.yeole@jpmchase.com
J.P. Morgan India Private Limited

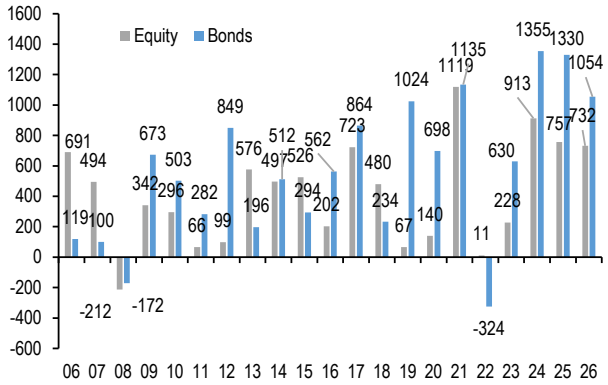
Krutik P Mehta (91-22) 6157-5016
krutik.mehta@jpmchase.com
J.P. Morgan India Private Limited



# Appendix

## Chart A1a: Global equity & bond fund flows

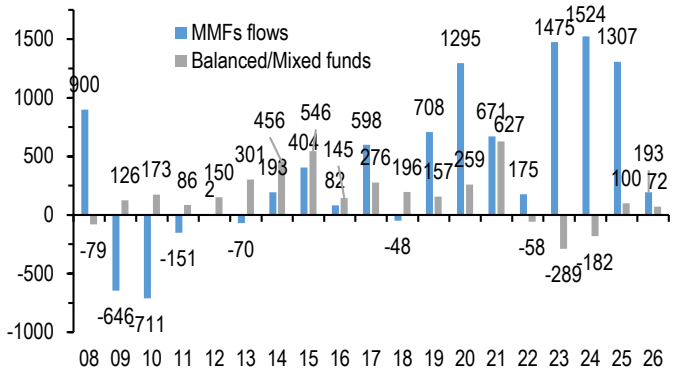
$bn per year of Net Sales, i.e. includes net new sales + reinvested dividends for Mutual Funds and ETFs globally, i.e. for funds domiciled both inside and outside the US. Flows come from ICI (worldwide data up to Q1'26). Data since then are a combination of monthly and weekly data from Lipper and Bloomberg.




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

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

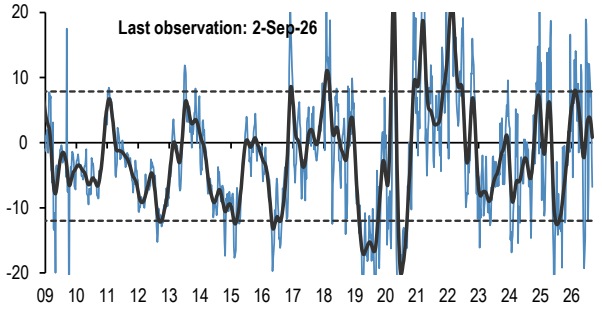
$bn per quarter of Net Sales, i.e. includes net new sales + reinvested dividends for Mutual Funds and ETFs globally, i.e. for funds domiciled both inside and outside the US. Data come from ICI (worldwide data) and are till Q1'26.




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 Jun-26 | MIN | MAX | Turnover ratio | Vol (tr) | y/y chng |
|---|---|---|---|---|---|
| **Equities** | | | | | |
| EM Equity | | | 1.4 | $2.1 | 135% |
| DM Equity | | | 1.4 | $16.2 | 44% |
| **Govt Bonds** | | | | | |
| UST cash | | | 12.3 | $17.7 | 5% |
| UST futures | | | 0.8 | $14.9 | 8% |
| JGBs | | | 49.1 | ¥5,035 | 11% |
| Bund futures | | | 1.5 | €10.1 | 18% |
| **Credit** | | | | | |
| US HG | | | 1.1 | $0.8 | 15% |
| US HY | | | 0.5 | $0.1 | -1% |
| US Convertibles | | | 3.6 | $0.04 | 15% |
| **Commodities** | | | | | |
| Gold | | | 52.4 | $1.4 | 39% |
| Oil | | | 80.1 | $2.3 | 0% |
| Copper | | | 1.9 | $0.7 | 70% |
| **Digital Assets** | | | | | |
| CME Bitcoin | | | 115.0 | $0.061 | -34% |
| CME Ethereum | | | 134.8 | $0.023 | 25% |

* Data with one month lag

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

Nikolaos Panigirtzoglou [AC] (44-20) 7134-7815
nikolaos.panigirtzoglou@jpmorgan.com
J.P. Morgan Securities plc
Mika Inkinen (44-20) 7742 6565
mika.j.inkinen@jpmorgan.com
J.P. Morgan Securities plc
Mayur Yeole (91 22) 6157 3872
mayur.yeole@jpmchase.com
J.P. Morgan India Private Limited
Krutik P Mehta (91-22) 6157-5016
krutik.mehta@jpmchase.com
J.P. Morgan India Private Limited

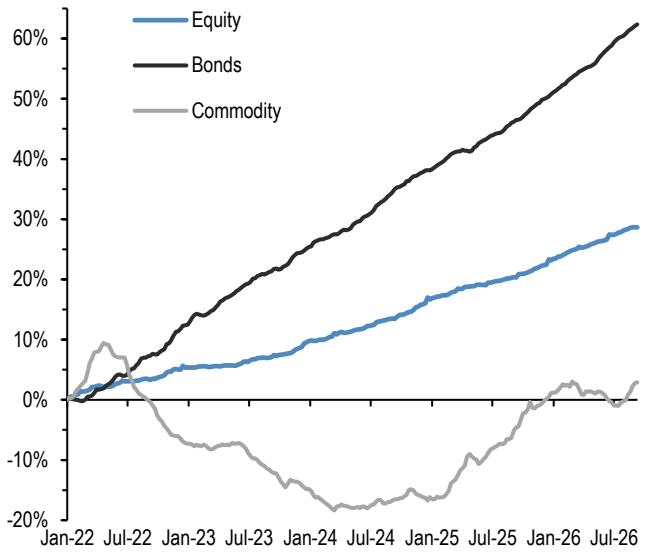


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# ETF Flow Monitor (as of 9th September)

## Chart A3: Global Cross Asset ETF Flows

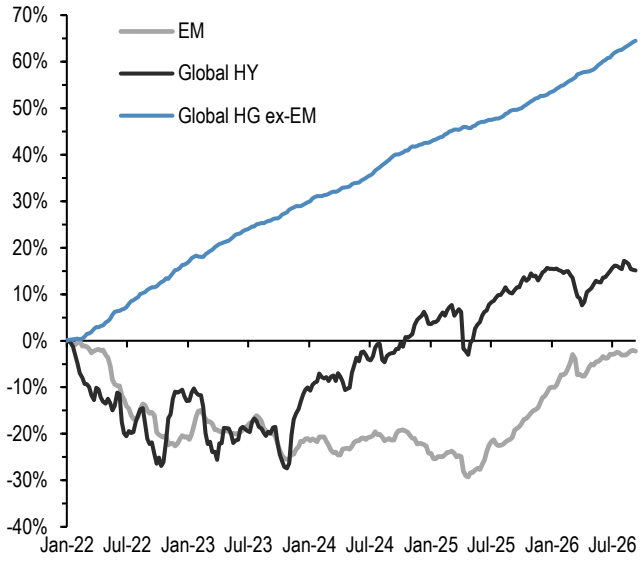
Cumulative flows into ETFs as a % of AUM




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

## Chart A4: Bond ETF Flows

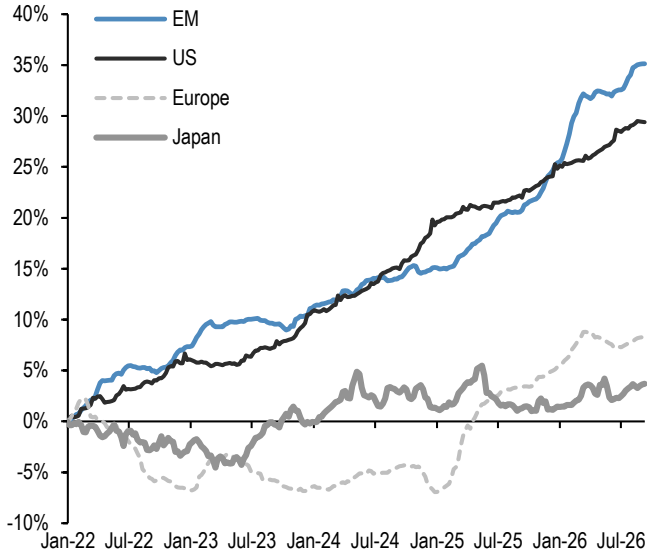
Cumulative flows into bond ETFs as a % of AUM




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

## Chart A5: Global Equity ETF Flows

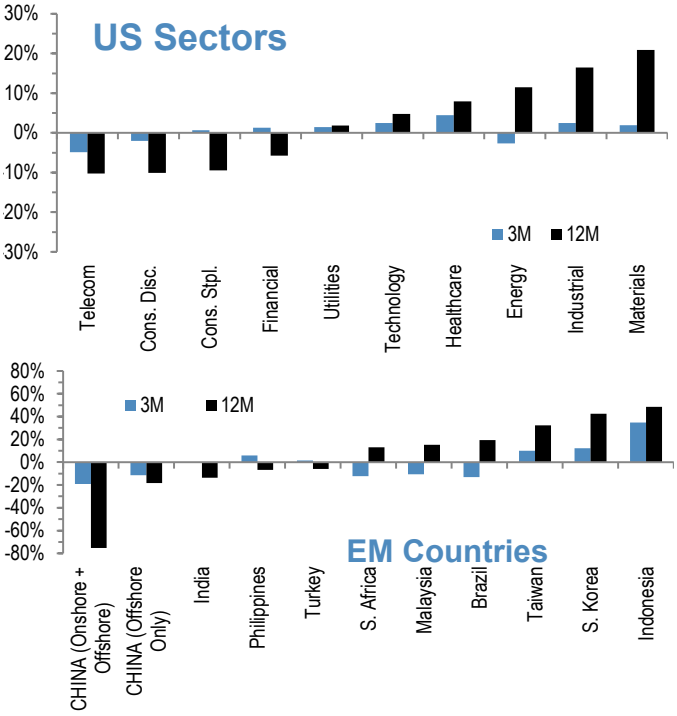
Cumulative flows into global equity ETFs as a % of AUM




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.

Nikolaos Panigirtzoglou [AC] (44-20) 7134-7815
nikolaos.panigirtzoglou@jpmorgan.com
J.P. Morgan Securities plc

Mika Inkinen (44-20) 7742 6565
mika.j.inkinen@jpmorgan.com
J.P. Morgan Securities plc

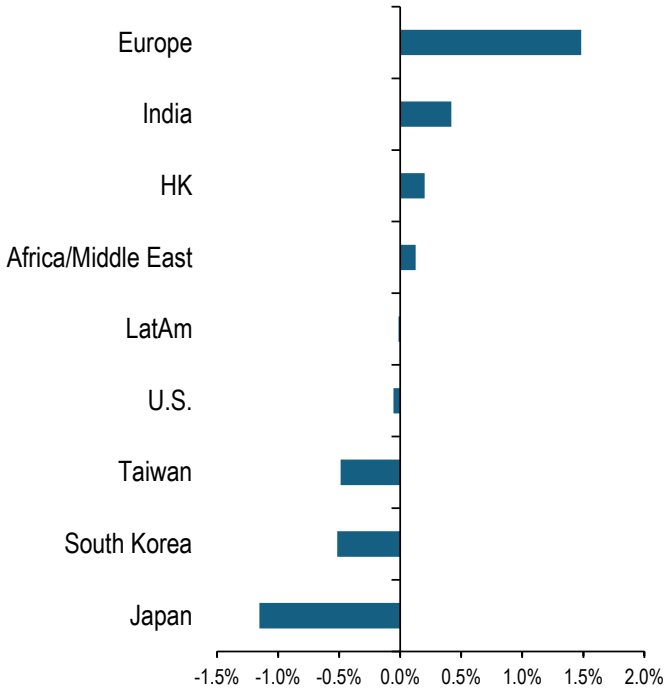
Mayur Yeole (91 22) 6157 3872
mayur.yeole@jpmchase.com
J.P. Morgan India Private Limited

Krutik P Mehta (91-22) 6157-5016
krutik.mehta@jpmchase.com
J.P. Morgan India Private Limited



### 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.

Nikolaos Panigirtzoglou [AC] (44-20) 7134-7815
nikolaos.panigirtzoglou@jpmorgan.com
J.P. Morgan Securities plc
Mika Inkinen (44-20) 7742 6565
mika.j.inkinen@jpmorgan.com
J.P. Morgan Securities plc
Mayur Yeole (91 22) 6157 3872
mayur.yeole@jpmchase.com
J.P. Morgan India Private Limited
Krutik P Mehta (91-22) 6157-5016
krutik.mehta@jpmchase.com
J.P. Morgan India Private Limited

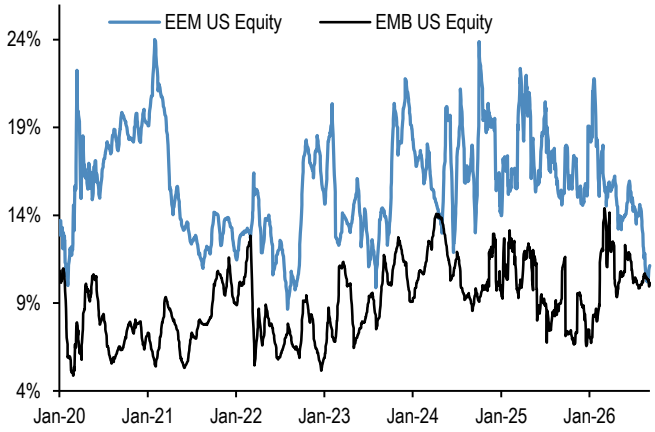


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# Short Interest Monitor

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

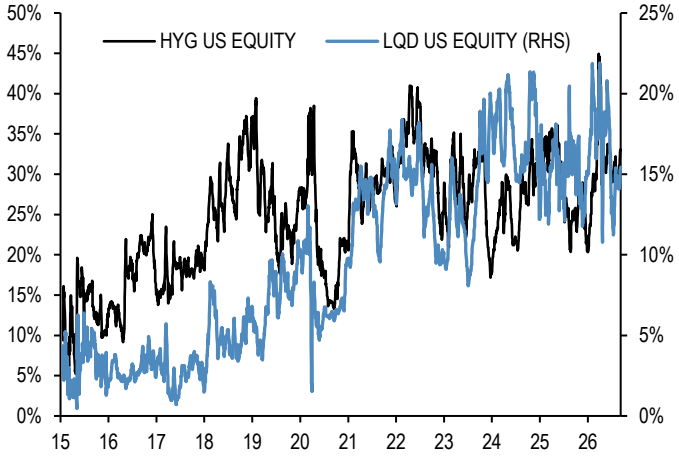
Short Interest as a % share of shares outstanding.




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

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

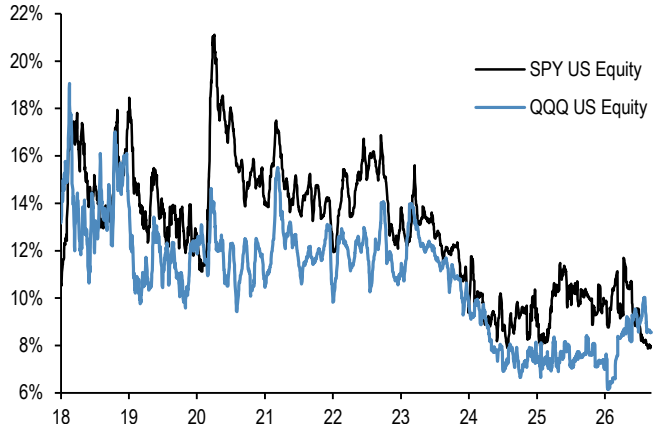
Short Interest as a % share of shares outstanding.




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

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

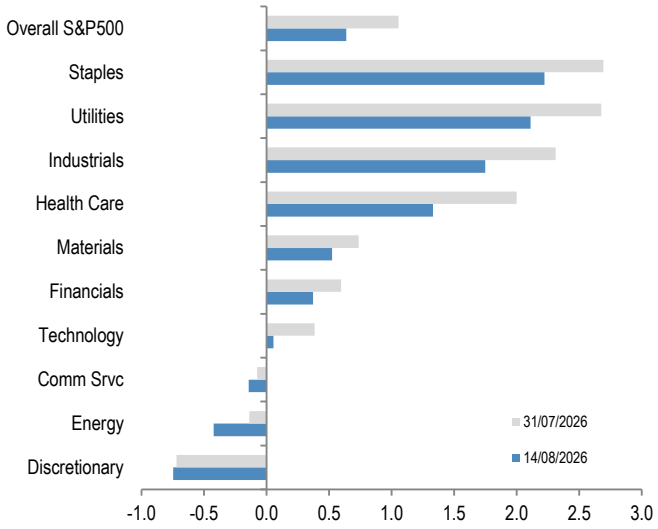
Short Interest as a % share of shares outstanding. Last obs is for 7th Sept 2026.




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.

Nikolaos Panigirtzoglou [AC] (44-20) 7134-7815
nikolaos.panigirtzoglou@jpmorgan.com
J.P. Morgan Securities plc

Mika Inkinen (44-20) 7742 6565
mika.j.inkinen@jpmorgan.com
J.P. Morgan Securities plc

Mayur Yeole (91 22) 6157 3872
mayur.yeole@jpmchase.com
J.P. Morgan India Private Limited

Krutik P Mehta (91-22) 6157-5016
krutik.mehta@jpmchase.com
J.P. Morgan India Private Limited



## Chart A11a: Cross Asset Volatility Monitor 3m ATM Implied Volatility (1y history), as of 7th Sep-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 | 14% | 13% | 11-Sep-25 | 24% | 27-Mar-26 | | 10% | 0% | 1.59x |
| EuroSTOXX | 14% | 13% | 18-Sep-25 | 26% | 27-Mar-26 | | 12% | 1% | 1.74x |
| Nikkei 225 | 24% | 19% | 09-Sep-25 | 33% | 31-Mar-26 | | 9% | 5% | 1.02x |
| Hang Seng | 17% | 17% | 04-Sep-26 | 24% | 26-Mar-26 | | 7% | 0% | 1.17x |
| MSCI EM | 25% | 14% | 18-Sep-25 | 38% | 01-Jul-26 | | 13% | 11% | 1.34x |
| Gold | 24% | 15% | 19-Sep-25 | 33% | 26-Mar-26 | | 10% | 9% | 0.99x |
| Oil (brent) | 44% | 27% | 19-Sep-25 | 89% | 30-Mar-26 | | 45% | 17% | 1.41x |
| Copper | 19% | 16% | 10-Sep-25 | 37% | 03-Feb-26 | | 18% | 3% | 1.23x |
| BB commodity index | 17% | 13% | 10-Dec-25 | 25% | 30-Mar-26 | | 8% | 4% | 1.55x |
| EUR/USD | 6% | 5% | 15-Jun-26 | 8% | 13-Mar-26 | | 2% | 0% | 1.70x |
| USD/NOK | 8% | 8% | 17-Dec-25 | 11% | 30-Mar-26 | | 3% | 0% | 1.55x |
| USD/JPY | 9% | 7% | 16-Jul-26 | 10% | 27-Mar-26 | | 1% | 2% | 1.01x |
| GBP/USD | 6% | 6% | 14-Aug-26 | 8% | 27-Mar-26 | | 2% | 0% | 2.15x |
| USD/CHF | 7% | 6% | 29-May-26 | 9% | 29-Jan-26 | | 2% | 1% | 1.11x |
| 10y US swaps | 74% | 62% | 27-Jan-26 | 96% | 27-Mar-26 | | 22% | 12% | 1.17x |
| 10y Eur swaps | 63% | 43% | 26-Feb-26 | 97% | 27-Mar-26 | | 33% | 21% | 1.27x |
| CDX IG | 40% | 37% | 29-May-26 | 62% | 27-Mar-26 | | 23% | 3% | 1.96x |
| CDX HY | 36% | 31% | 09-Jan-26 | 57% | 30-Mar-26 | | 21% | 5% | 1.90x |
| iTraxx | 42% | 37% | 09-Jan-26 | 70% | 27-Mar-26 | | 28% | 4% | 1.89x |
| iTraxx X/O | 42% | 38% | 16-Jun-26 | 66% | 27-Mar-26 | | 25% | 3% | 1.78x |

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 (07-Sep-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 |

Nikolaos Panigirtzoglou [AC] (44-20) 7134-7815
nikolaos.panigirtzoglou@jpmorgan.com
J.P. Morgan Securities plc

Mika Inkinen (44-20) 7742 6565
mika.j.inkinen@jpmorgan.com
J.P. Morgan Securities plc

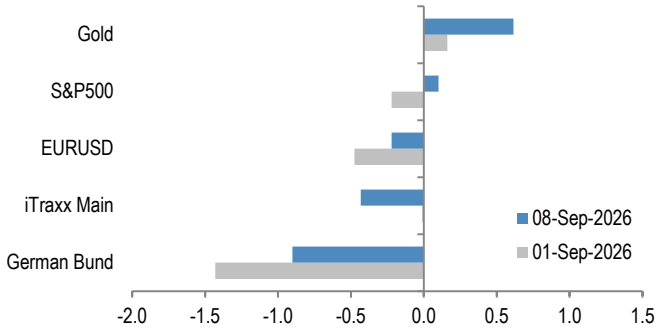
Mayur Yeole (91 22) 6157 3872
mayur.yeole@jpmchase.com
J.P. Morgan India Private Limited

Krutik P Mehta (91-22) 6157-5016
krutik.mehta@jpmchase.com
J.P. Morgan India Private Limited



## Chart A11b: Option skew monitor

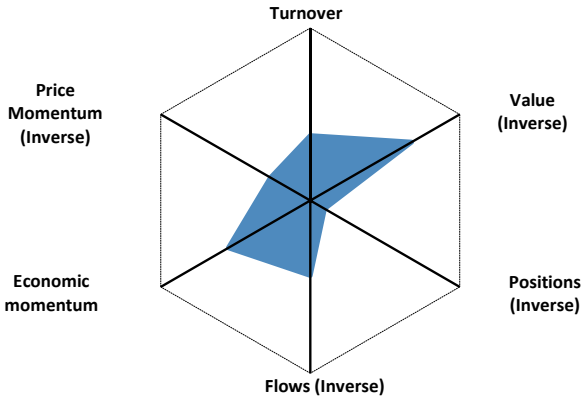
Skew is the difference between the implied volatility of out-of-the-money (OTM) call options and put options. A positive skew implies more demand for calls than puts and a negative skew, higher demand for puts than calls. It can therefore be seen as an indicator of risk perception in that a highly negative 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 4th Sep.




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

Nikolaos Panigirtzoglou [AC] (44-20) 7134-7815
nikolaos.panigirtzoglou@jpmorgan.com
J.P. Morgan Securities plc

Mika Inkinen (44-20) 7742 6565
mika.j.inkinen@jpmorgan.com
J.P. Morgan Securities plc

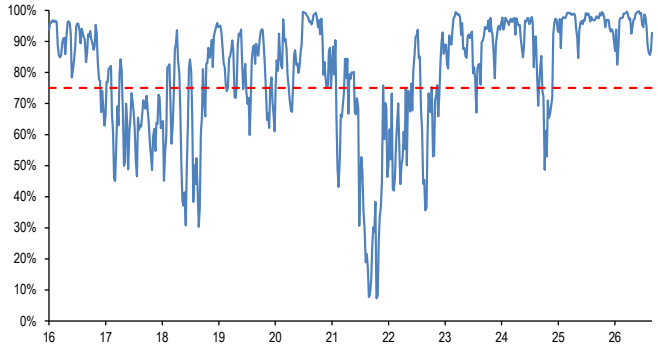
Mayur Yeole (91 22) 6157 3872
mayur.yeole@jpmchase.com
J.P. Morgan India Private Limited

Krutik P Mehta (91-22) 6157-5016
krutik.mehta@jpmchase.com
J.P. Morgan India Private Limited



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

Based on the methodology laid out in the F&L, 25th June 2025.




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

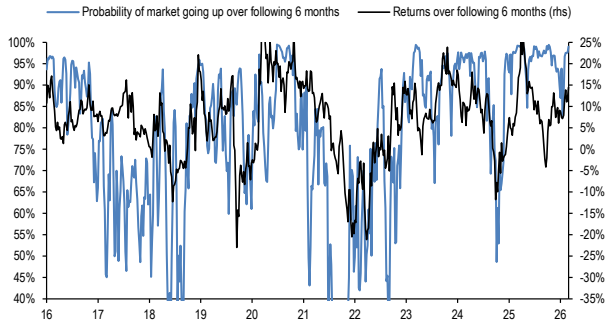
In %. Based on the methodology laid out in the F&L, 25th June 2025.

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.

Nikolaos Panigirtzoglou [AC] (44-20) 7134-7815
nikolaos.panigirtzoglou@jpmorgan.com
J.P. Morgan Securities plc
Mika Inkinen (44-20) 7742 6565
mika.j.inkinen@jpmorgan.com
J.P. Morgan Securities plc
Mayur Yeole (91 22) 6157 3872
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J.P. Morgan India Private Limited

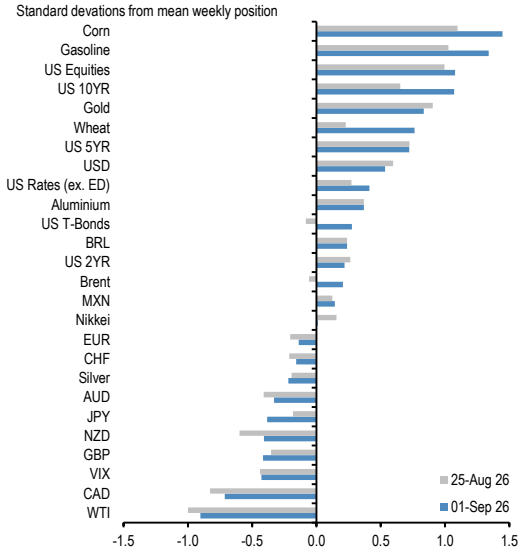


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# Spec position monitor

## Chart A12: Weekly Spec Position Monitor

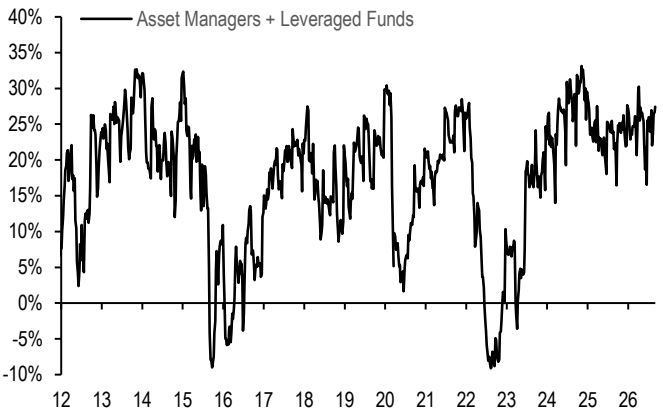
Net spec positions are proxied by the number of long contracts minus the number of short contracts using the speculative category of the Commitments of Traders reports (as reported by CFTC). To proxy for speculative investors for equity and US Treasury bond futures positions we use Asset managers and 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

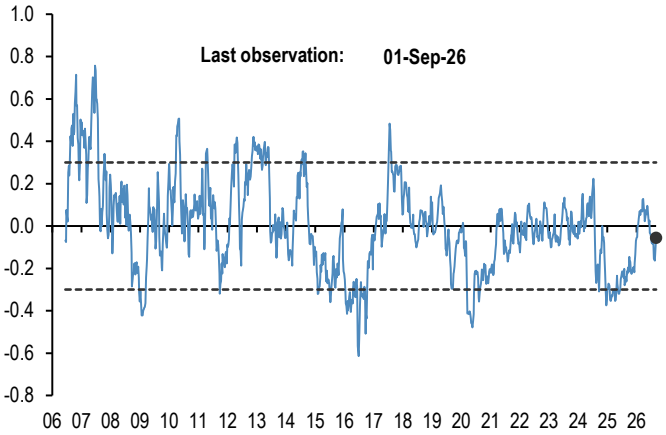
CFTC positions in US equity futures by Leveraged funds and Asset managers (as a % of open interest). It is an aggregate of the S&P500, DowJones, NASDAQ and their Mini futures contracts.




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

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

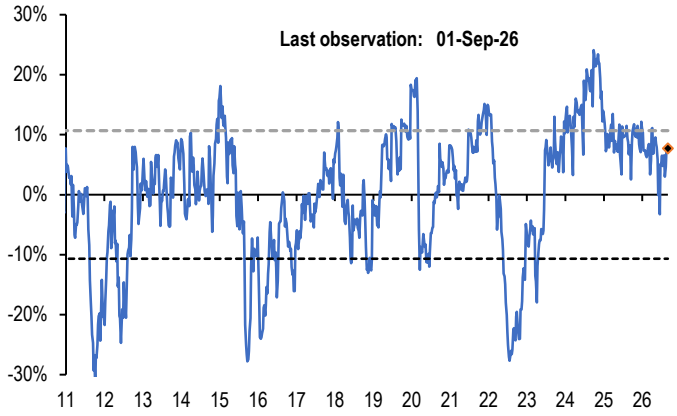
Difference between net spec positions on risky & safe currencies. Net spec position is calculated in USD across 5 'risky' and 3 'safe' currencies (safe currencies also include Gold). These positions are then scaled by open interest and we take an average of 'risky' and 'safe' assets to create two series. 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.

Nikolaos Panigirtzoglou [AC] (44-20) 7134-7815
nikolaos.panigirtzoglou@jpmorgan.com
J.P. Morgan Securities plc

Mika Inkinen (44-20) 7742 6565
mika.j.inkinen@jpmorgan.com
J.P. Morgan Securities plc

Mayur Yeole (91 22) 6157 3872
mayur.yeole@jpmchase.com
J.P. Morgan India Private Limited

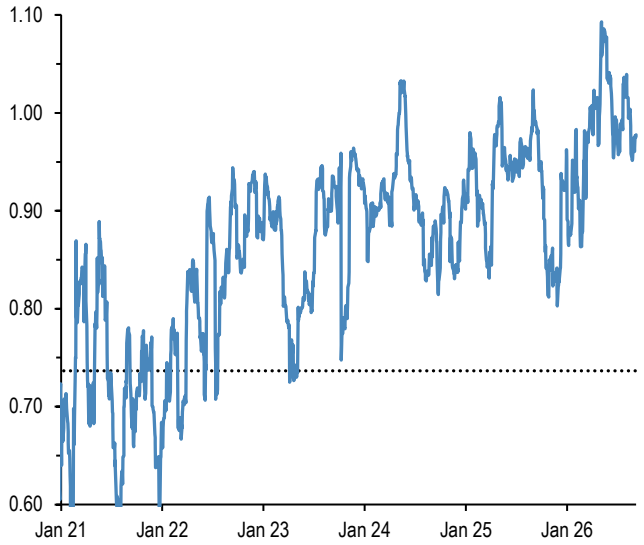
Krutik P Mehta (91-22) 6157-5016
krutik.mehta@jpmchase.com
J.P. Morgan India Private Limited



# 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

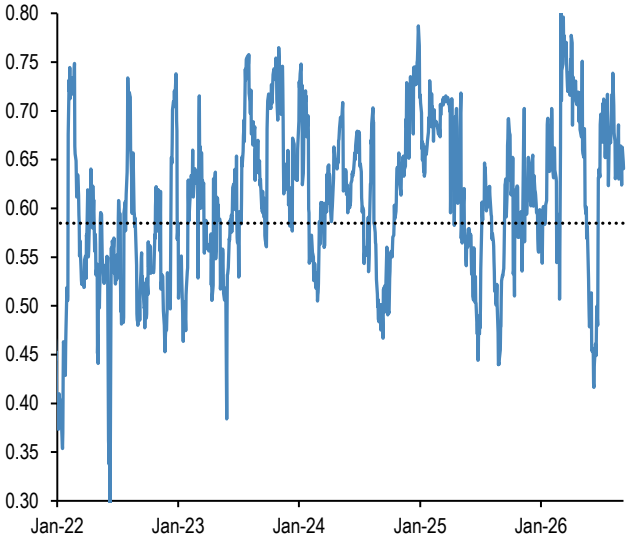
The dotted line shows the average beta since 2013.




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

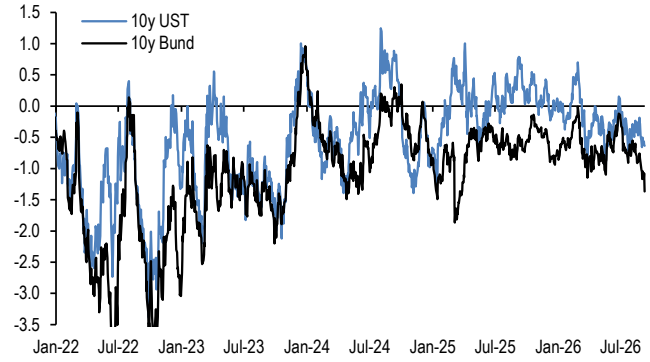
The table depicts the performance of various types of investors in % as of 8th Sept 2026.

| Date | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 |
|---|---|---|---|---|---|---|---|
| **Investors** | | | | | | | |
| Equity L/S | 13.4% | 9.3% | -7.0% | 11.3% | 13.0% | 15.5% | 8.9% |
| Macro ex-CTAs | 4.9% | 4.3% | 11.5% | 1.3% | 6.0% | 10.2% | 6.5% |
| CTAs | 1.2% | 8.8% | 14.7% | -2.5% | 2.9% | -1.1% | 8.9% |
| Risk Parity Funds | 3.5% | 4.7% | -18.6% | 6.0% | 5.0% | 17.3% | 8.9% |
| US Balanced MFs | 13.2% | 14.4% | -13.0% | 13.8% | 11.4% | 14.4% | 8.4% |
| **Benchmark** | | | | | | | |
| MSCI AC World | 16.3% | 16.4% | -18.4% | 22.2% | 17.5% | 22.3% | 14.6% |
| Barclays Global Agg | 5.6% | -2.5% | -11.2% | 7.1% | 3.4% | 4.9% | 0.2% |
| S&P Riskparity Vol 10 | 11.5% | 12.8% | -16.2% | 15.0% | 5.4% | 15.9% | 18.1% |
| 60 US Equity : 40 US Bonds | 13.3% | 14.8% | -15.4% | 18.6% | 16.4% | 12.7% | 7.8% |

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.

Nikolaos Panigirtzoglou [AC] (44-20) 7134-7815
nikolaos.panigirtzoglou@jpmorgan.com
J.P. Morgan Securities plc

Mika Inkinen (44-20) 7742 6565
mika.j.inkinen@jpmorgan.com
J.P. Morgan Securities plc

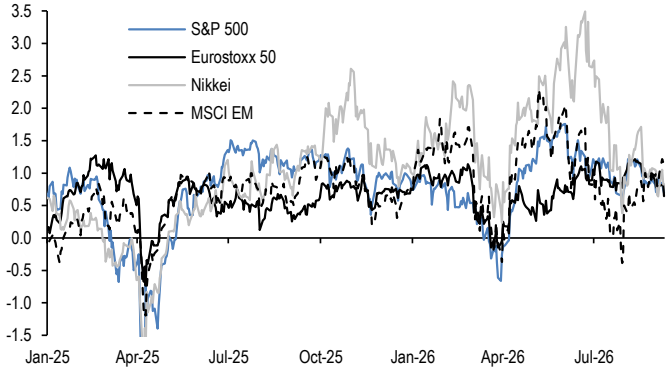
Mayur Yeole (91 22) 6157 3872
mayur.yeole@jpmchase.com
J.P. Morgan India Private Limited

Krutik P Mehta (91-22) 6157-5016
krutik.mehta@jpmchase.com
J.P. Morgan India Private Limited



## Chart A20: Momentum signals for S&P500

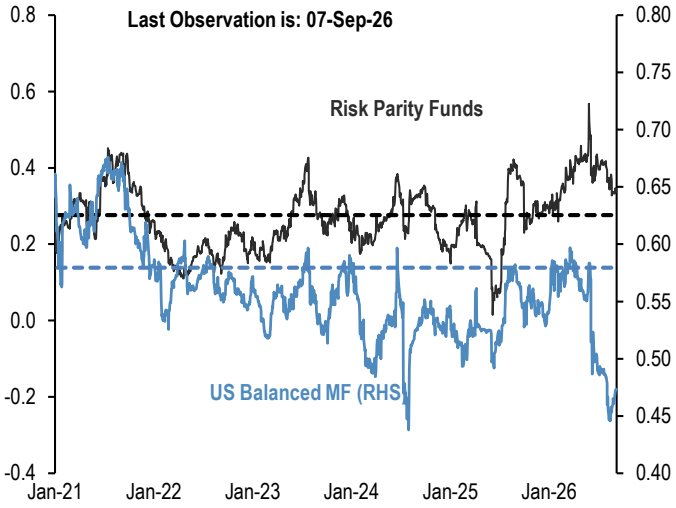
Average z-score of Short- and Long-term momentum signal in our Trend Following Strategy framework shown in Tables A3 and A4 below in the Appendix.




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

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

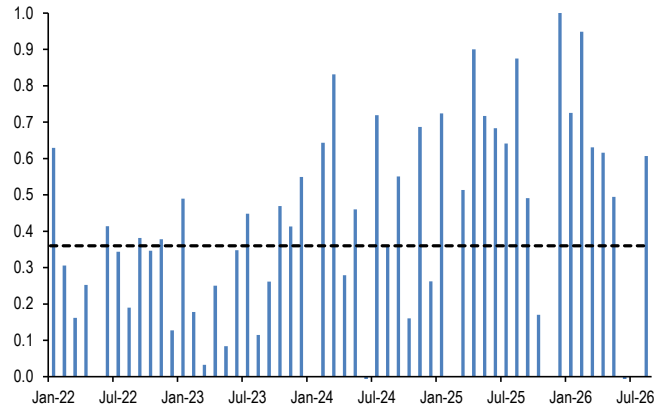
Rolling 42-day equity beta based on a bivariate regression of the daily returns of our Balanced Mutual fund and Risk Parity fund return indices to the daily returns of the S&P 500 and BarCap US Agg indices. Given that these funds invest in both equities and bonds we believe that the bivariate regression 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

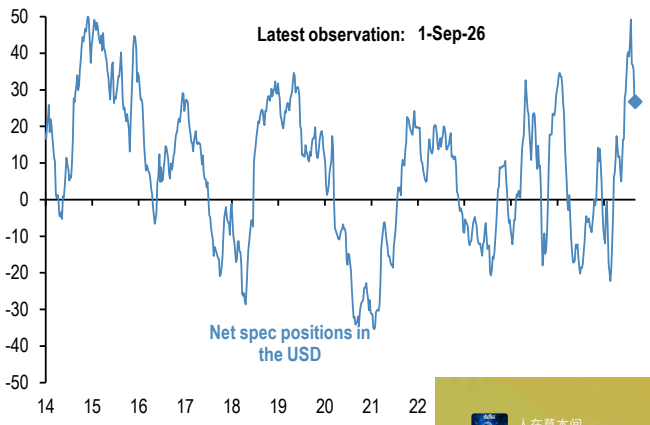
Proxied by the ratio of the monthly performance of Pivotal Path Asset-Weighted Equity Diversified hedge fund index divided by the monthly performance of MSCI AC World Index. Latest obs. is July 26 based on provisional data.




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

Nikolaos Panigirtzoglou [AC] (44-20) 7134-7815
nikolaos.panigirtzoglou@jpmorgan.com
J.P. Morgan Securities plc

Mika Inkinen (44-20) 7742 6565
mika.j.inkinen@jpmorgan.com
J.P. Morgan Securities plc

Mayur Yeole (91 22) 6157 3872
mayur.yeole@jpmchase.com
J.P. Morgan India Private Limited

Krutik P Mehta (91-22) 6157-5016
krutik.mehta@jpmchase.com
J.P. Morgan India Private Limited



# 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 | 6.4 | 22.8 | 0.28 | 0 | 0 | 1.7 | 10.3% |
| | long | 462 | | | | 0 | 6 | 1.9 | 55.0% |
| Brent | short | 84 | 4.3 | 21.4 | 0.20 | 1 | 18 | 1.5 | 17.8% |
| | long | 504 | | | | 0 | 9 | 2.2 | 61.2% |
| Unleaded gas | short | 105 | 3.5 | 23.3 | 0.15 | 1 | 24 | 1.3 | 17.8% |
| | long | 483 | | | | 0 | 52 | 2.7 | 72.6% |
| Heat Oil | short | 63 | 4.3 | 22.0 | 0.20 | 0 | 8 | 2.4 | 25.3% |
| | long | 483 | | | | 0 | 136 | 3.7 | 116.0% |
| Gasoil | short | 63 | 8.6 | 21.3 | 0.41 | 0 | 22 | 2.8 | 29.9% |
| | long | 378 | | | | 0 | 52 | 3.9 | 115.7% |
| Nat gas | short | 105 | 13.6 | 35.8 | 0.38 | -1 | 45 | -0.3 | -5.2% |
| | long | 315 | | | | -1 | 157 | -0.6 | -17.2% |
| Emission allowances | short | 42 | 10.7 | 28.8 | 0.37 | 1 | 16 | 0.4 | 4.0% |
| | long | 483 | | | | 1 | 65 | 0.3 | 11.5% |
| TTF | short | 21 | 43.8 | 43.5 | 1.01 | 1 | 22 | 1.2 | 14.5% |
| | long | 294 | | | | 0 | 0 | 1.5 | 91.0% |
| Gold | short | 21 | 3.1 | 10.7 | 0.29 | -1 | 3 | -0.6 | -1.6% |
| | long | 483 | | | | 1 | 68 | 0.9 | 11.6% |
| Silver | short | 10 | 6.4 | 19.7 | 0.32 | -1 | 8 | -0.1 | -0.4% |
| | long | 462 | | | | 1 | 59 | 0.9 | 21.5% |
| Palladium | short | 42 | 11.2 | 23.1 | 0.48 | 1 | 5 | 0.2 | 1.9% |
| | long | 273 | | | | -1 | 81 | -0.4 | -10.2% |
| Platinum | short | 105 | 3.4 | 18.7 | 0.18 | 1 | 1 | 0.2 | 2.1% |
| | long | 273 | | | | -1 | 10 | -0.1 | -1.3% |
| Aluminium | short | 105 | 5.7 | 15.2 | 0.38 | -1 | 57 | -0.2 | -1.2% |
| | long | 357 | | | | 1 | 62 | 0.8 | 12.0% |
| Copper | short | 147 | 7.6 | 17.2 | 0.44 | 1 | 149 | 0.8 | 9.6% |
| | long | 399 | | | | 1 | 155 | 1.2 | 26.6% |
| Lead | short | 126 | 0.7 | 19.2 | 0.04 | -1 | 67 | -0.2 | -2.6% |
| | long | 357 | | | | -1 | 168 | -0.4 | -8.0% |
| Nickel | short | 42 | 11.4 | 22.9 | 0.50 | -1 | 8 | -0.1 | -0.9% |
| | long | 336 | | | | 0 | 5 | 0.0 | -0.7% |
| Zinc | short | 126 | 8.4 | 19.6 | 0.43 | 1 | 117 | 1.3 | 15.0% |
| | long | 399 | | | | 1 | 247 | 1.3 | 30.4% |
| Wheat | short | 168 | 4.1 | 23.3 | 0.18 | 1 | 4 | 1.3 | 15.3% |
| | long | 294 | | | | 1 | 4 | 1.3 | 20.5% |
| Kansas wheat | short | 147 | 8.7 | 20.9 | 0.42 | 0 | 1 | 1.5 | 18.1% |
| | long | 483 | | | | 1 | 47 | 1.2 | 25.7% |
| Corn | short | 63 | 7.6 | 16.6 | 0.46 | 1 | 0 | 1.5 | 11.5% |
| | long | 399 | | | | 1 | 12 | 0.3 | 6.3% |
| Soybeans | short | 42 | 4.9 | 14.6 | 0.33 | 1 | 3 | 1.3 | 6.9% |
| | long | 231 | | | | 1 | 20 | 0.9 | 11.3% |
| Cotton | short | 168 | 5.7 | 18.5 | 0.31 | 1 | 64 | 0.8 | 10.4% |
| | long | 483 | | | | 1 | 29 | 0.4 | 11.0% |
| Sugar | short | 63 | 6.6 | 21.6 | 0.30 | 0 | 16 | 1.8 | 16.9% |
| | long | 252 | | | | 1 | 24 | 1.1 | 19.8% |
| Coffee | short | 63 | 7.9 | 24.0 | 0.33 | -1 | 1 | -0.2 | -2.2% |
| | long | 273 | | | | -1 | 1 | -0.1 | -2.3% |
| Cocoa | | 10 | 4.9 | 31.5 | 0.16 | -1 | 4 | -1.4 | -5.2% |

* 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 | 7.8 | 12.3 | 0.63 | 1 | 29 | 0.3 | 1.6% |
| | long | 315 | | | | 1 | 61 | 1.1 | 11.0% |
| Nasdaq 100 | short | 84 | 9.4 | 16.2 | 0.58 | 1 | 3 | 0.1 | 0.4% |
| | long | 462 | | | | 1 | 50 | 1.1 | 21.8% |
| Nikkei | short | 63 | 3.5 | 13.3 | 0.26 | -1 | 15 | -0.4 | -2.4% |
| | long | 420 | | | | 0 | 115 | 2.1 | 31.9% |
| FTSE 100 | short | 168 | 5.3 | 12.1 | 0.44 | 1 | 134 | 0.6 | 3.5% |
| | long | 504 | | | | 0 | 63 | 1.6 | 17.6% |
| Eurostoxx 50 | short | 168 | 4.9 | 16.6 | 0.29 | 1 | 110 | 0.5 | 4.6% |
| | long | 294 | | | | 1 | 117 | 0.8 | 8.9% |
| MSCI EM | short | 42 | 12.8 | 11.5 | 1.11 | 1 | 14 | 0.8 | 4.2% |
| | long | 357 | | | | 1 | 42 | 1.4 | 21.9% |
| LQD credit return | short | 168 | 0.4 | 3.4 | 0.13 | -1 | 44 | -0.2 | -0.6% |
| | long | 273 | | | | -1 | 42 | -0.2 | -0.6% |
| HYG credit return | short | 10 | 2.4 | 6.5 | 0.37 | -1 | 6 | -0.2 | -0.2% |
| | long | 189 | | | | -1 | 6 | -0.1 | -0.7% |
| 2Y USTs | short | 252 | 0.9 | 1.1 | 0.79 | -1 | 137 | -1.0 | -1.1% |
| | long | 462 | | | | -1 | 135 | -0.7 | -1.3% |
| 5Y USTs | short | 252 | 1.5 | 2.8 | 0.55 | -1 | 130 | -1.0 | -2.4% |
| | long | 420 | | | | -1 | 101 | -0.7 | -2.5% |
| 10Y USTs | short | 42 | 2.0 | 3.6 | 0.57 | -1 | 10 | -0.6 | -0.9% |
| | long | 441 | | | | -1 | 101 | -0.6 | -2.9% |
| 2Y Schatz | short | 189 | 0.6 | 0.8 | 0.81 | 0 | 18 | -2.0 | -1.7% |
| | long | 504 | | | | 0 | 134 | -2.0 | -3.5% |
| 5y Bobl | short | 63 | 1.4 | 1.9 | 0.76 | -1 | 4 | -1.4 | -1.3% |
| | long | 483 | | | | -1 | 387 | -1.3 | -4.5% |
| 10y Bund | short | 105 | 2.3 | 3.4 | 0.67 | 0 | 0 | -1.5 | -3.2% |
| | long | 462 | | | | -1 | 736 | -1.2 | -6.3% |
| 10Y JGB | short | 126 | 0.9 | 2.3 | 0.38 | -1 | 3 | -1.2 | -1.2% |
| | long | 273 | | | | 0 | 136 | -2.1 | -3.2% |
| 10Y Gilts | short | 42 | 2.4 | 4.1 | 0.58 | -1 | 33 | -0.6 | -0.9% |
| | long | 399 | | | | -1 | 80 | -1.2 | -6.6% |
| 10y OAT vs Bund | short | 189 | 0.4 | 1.5 | 0.27 | -1 | 40 | -0.7 | -0.6% |
| | long | 294 | | | | -1 | 18 | -0.3 | -0.3% |
| 10y BTP vs. Bund | short | 84 | 2.2 | 6.3 | 0.35 | -1 | 0 | -0.1 | -0.2% |
| | long | 273 | | | | 0 | 16 | 0.0 | 0.0% |
| Euro | short | 42 | 3.2 | 6.4 | 0.50 | 1 | 26 | 0.2 | 0.4% |
| | long | 273 | | | | -1 | 145 | -0.5 | -2.9% |
| Yen | short | 21 | 3.4 | 6.3 | 0.55 | 0 | 1 | 2.0 | 3.1% |
| | long | 462 | | | | -1 | 29 | -0.8 | -6.5% |
| Sterling | short | 168 | 1.5 | 7.1 | 0.22 | -1 | 8 | -0.1 | -0.5% |
| | long | 294 | | | | -1 | 139 | -0.2 | -1.2% |
| AUD | short | 42 | 3.8 | 7.8 | 0.49 | 1 | 26 | 0.7 | 1.8% |
| | long | 420 | | | | 1 | 164 | 0.5 | 4.4% |
| CAD | short | 168 | 1.4 | 5.9 | 0.24 | -1 | 92 | -0.4 | -1.3% |
| | long | 504 | | | | -1 | 374 | -0.7 | -4.5% |
| G10 FX | short | 42 | 2.1 | 5.2 | 0.40 | -1 | 29 | -0.7 | -1.2% |
| | long | 189 | | | | -1 | 1 | -0.1 | -0.2% |
| EMCI | short | 42 | 2.6 | 4.9 | 0.52 | 1 | 4 | 0.7 | 1.3% |
| | long | 189 | | | | 1 | 303 | 0.5 | 2.0% |

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

Nikolaos Panigirtzoglou [AC] (44-20) 7134-7815
nikolaos.panigirtzoglou@jpmorgan.com
J.P. Morgan Securities plc
Mika Inkinen (44-20) 7742 6565
mika.j.inkinen@jpmorgan.com
J.P. Morgan Securities plc
Mayur Yeole (91 22) 6157 3872
mayur.yeole@jpmchase.com
J.P. Morgan India Private Limited
Krutik P Mehta (91-22) 6157-5016
krutik.mehta@jpmchase.com
J.P. Morgan India Private Limited

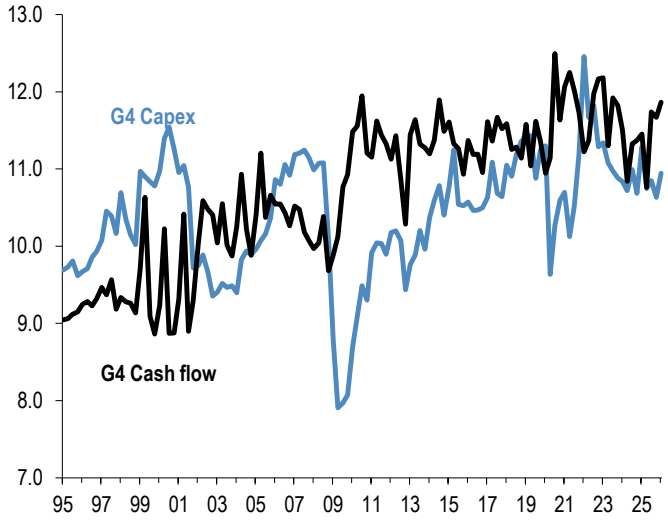


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## Corporate Activity

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

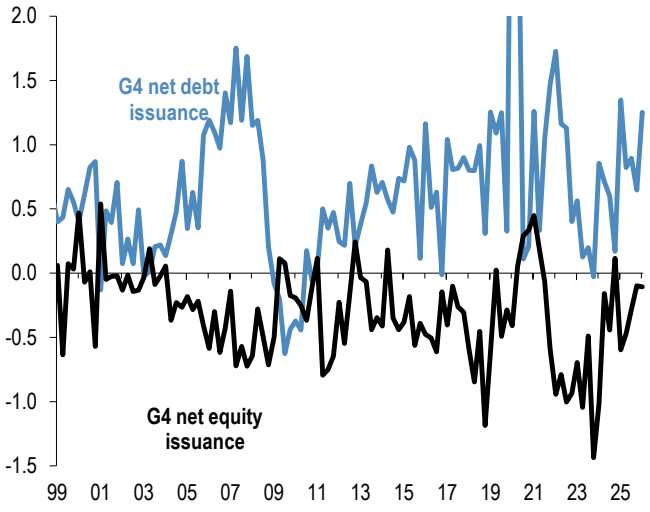
% of GDP, G4 includes the US, the UK, the Euro area and Japan. Last observation as of Q1 2026.




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

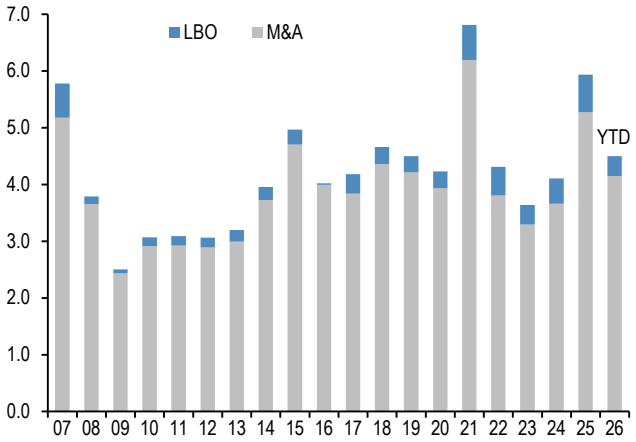
$tr per quarter, G4 includes the US, the UK, the Euro area and Japan. Last observation as of Q1 2026.




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

### Chart A26: Global M&A and LBO

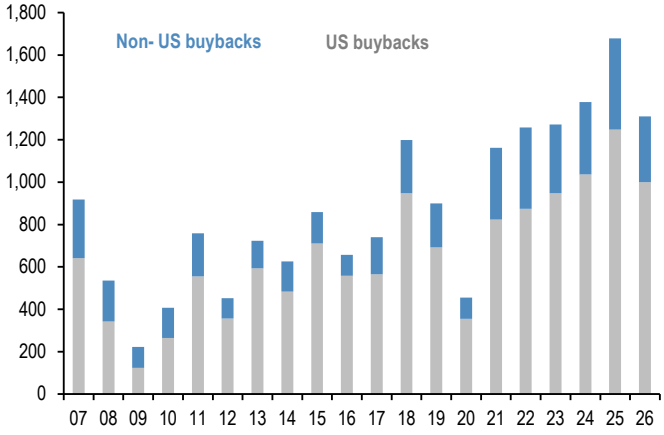
$tr. M&A and LBOs are announced.




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

### Chart A27: US and non-US share buyback

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




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

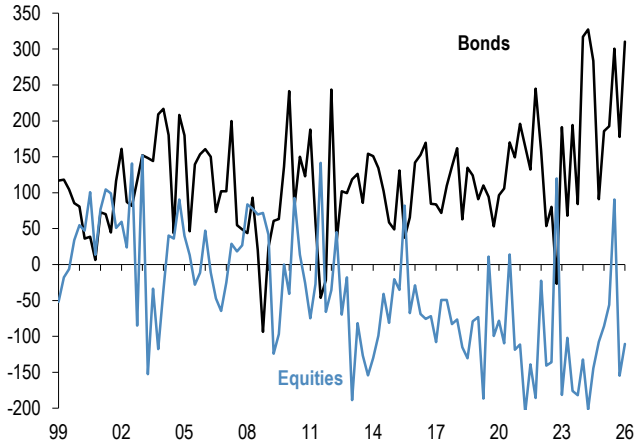
Nikolaos Panigirtzoglou [AC] (44-20) 7134-7815
nikolaos.panigirtzoglou@jpmorgan.com
J.P. Morgan Securities plc
Mika Inkinen (44-20) 7742 6565
mika.j.inkinen@jpmorgan.com
J.P. Morgan Securities plc
Mayur Yeole (91 22) 6157 3872
mayur.yeole@jpmchase.com
J.P. Morgan India Private Limited
Krutik P Mehta (91-22) 6157-5016
krutik.mehta@jpmchase.com
J.P. Morgan India Private Limited



# Pension fund and insurance company flows

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

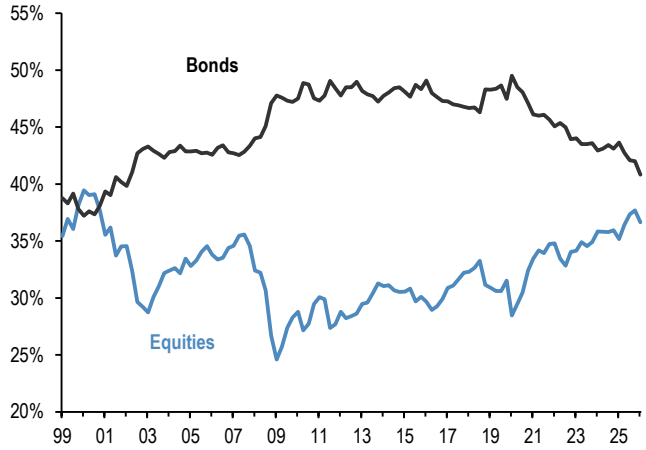
Equity and bond buying in $bn per quarter. G4 includes the US, the UK, Euro area and Japan. Last observation is Q1 2026.




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

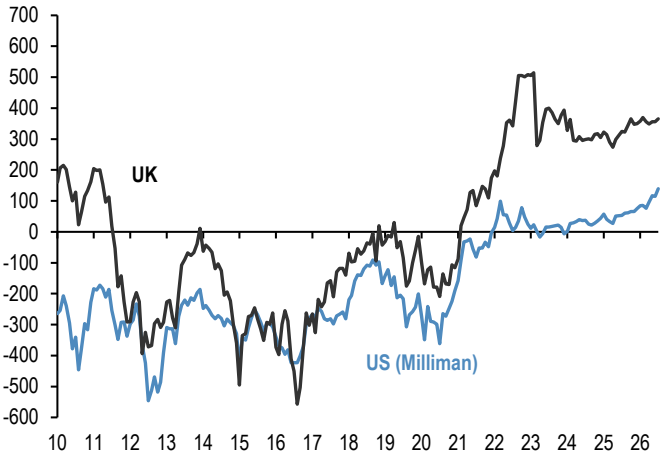
Equity and bond as % of total assets per quarter. G4 includes the US, the UK, Euro area and Japan. Last observation is Q1 2026.




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

## Chart A30: Pension fund deficits

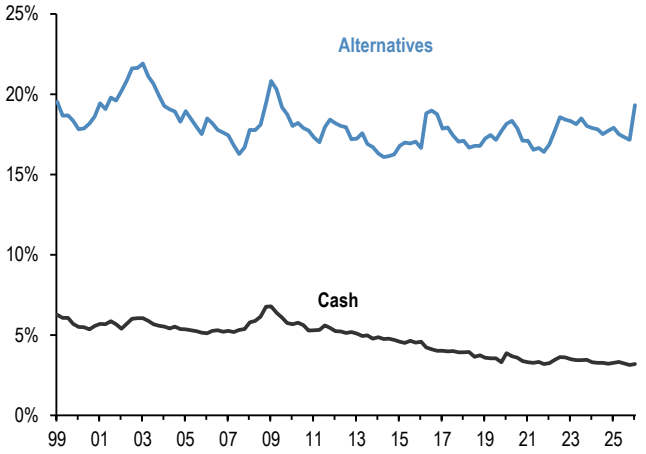
US$bn. For US, funded status of the 100 largest corporate defined benefit pension plans, from Milliman. For UK, funded status of the defined benefit schemes eligible for entry to the Pension Protection Fund, converted to US$ at today's exchange rates. Last obs. is July'26 for US & UK.




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 Q1 2026.




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

Nikolaos Panigirtzoglou [AC] (44-20) 7134-7815
nikolaos.panigirtzoglou@jpmorgan.com
J.P. Morgan Securities plc
Mika Inkinen (44-20) 7742 6565
mika.j.inkinen@jpmorgan.com
J.P. Morgan Securities plc
Mayur Yeole (91 22) 6157 3872
mayur.yeole@jpmchase.com
J.P. Morgan India Private Limited
Krutik P Mehta (91-22) 6157-5016
krutik.mehta@jpmchase.com
J.P. Morgan India Private Limited

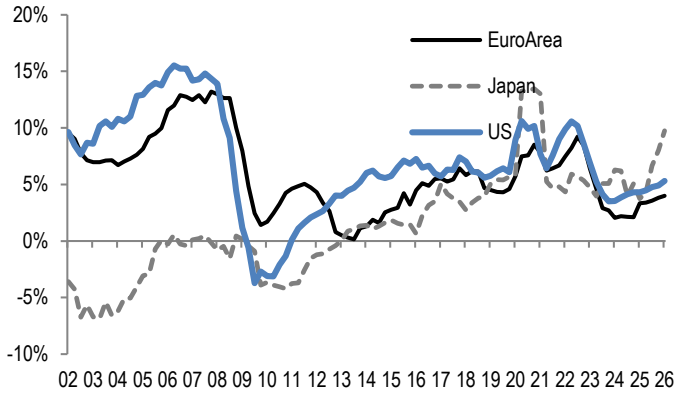


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# Credit Creation

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

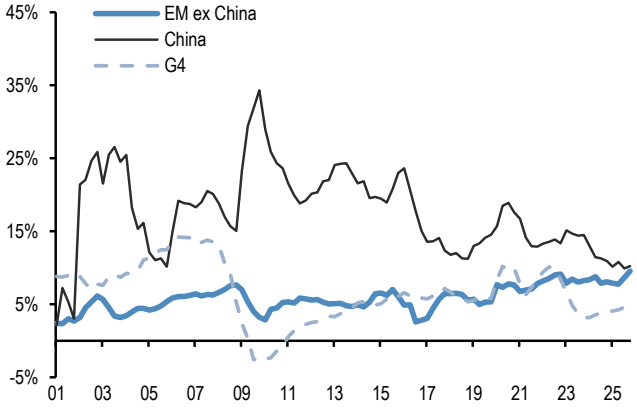
Rolling sum of 4-quarter credit creation as % of GDP. Credit creation includes both bank loans as well as net debt issuance by non-financial corporations and households. Last obs. is Q1'26 for Japan, Euro Area and US.




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

## Chart A33: Credit creation in EM

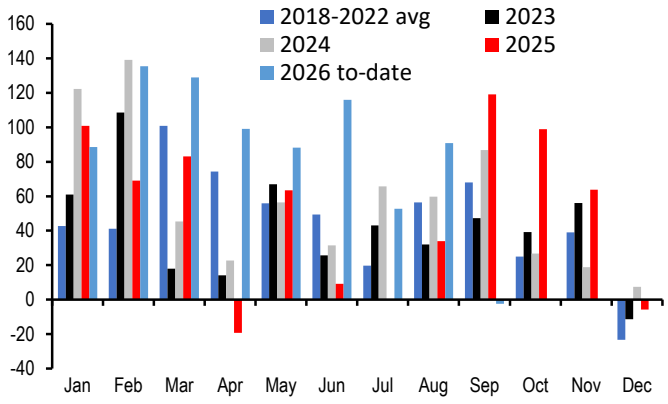
Rolling sum of 4-quarter credit creation as % of GDP. Credit creation includes both bank loans as well as net debt issuance by non-financial corporations and households. The chart uses the FX rates as of the latest observation to calculate the credit creation at constant exchange rates. Last obs. is for Q4'25.




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 September 3rd.




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 | 28-Aug | 4 wk avg | 13 wk avg | y/y chng |
|---|---|---|---|---|
| Global IPOs | 3.7 | 3.0 | 11.9 | 171% |
| Secondary Offerings | 15.3 | 16.8 | 17.2 | 43% |
| **Corporate announcements** | | | | |
| M&A - Global | 50.6 | 86.9 | 113.9 | 36% |
| - US Target | 23.7 | 37.9 | 55.8 | 55% |
| - Non-US Target | 26.9 | 49.1 | 58.1 | 21% |
| **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.

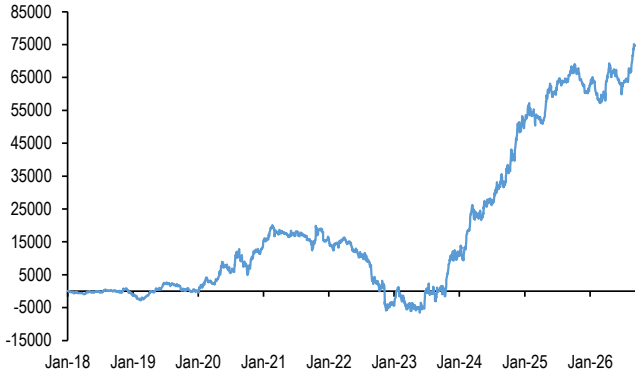
Nikolaos Panigirtzoglou [AC] (44-20) 7134-7815
nikolaos.panigirtzoglou@jpmorgan.com
J.P. Morgan Securities plc
Mika Inkinen (44-20) 7742 6565
mika.j.inkinen@jpmorgan.com
J.P. Morgan Securities plc
Mayur Yeole (91 22) 6157 3872
mayur.yeole@jpmchase.com
J.P. Morgan India Private Limited
Krutik P Mehta (91-22) 6157-5016
krutik.mehta@jpmchase.com
J.P. Morgan India Private Limited



# Bitcoin monitor

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

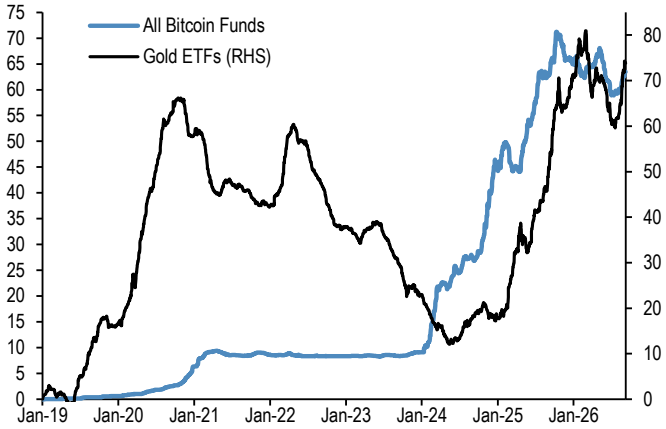
In number of contracts. Last obs. for 8th September 2026.




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

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

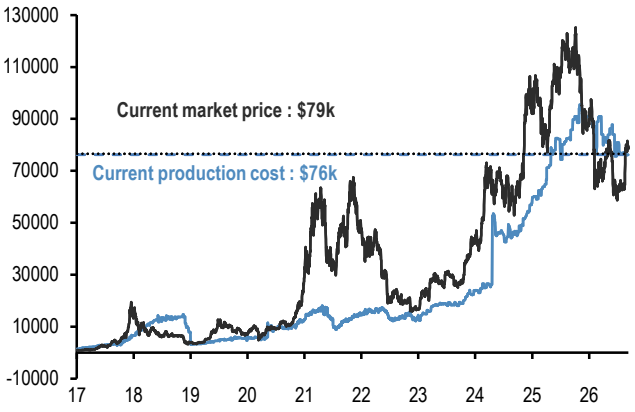
Both the y-axis in $bn.




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

## Chart A37: Ratio of bitcoin market price to production cost

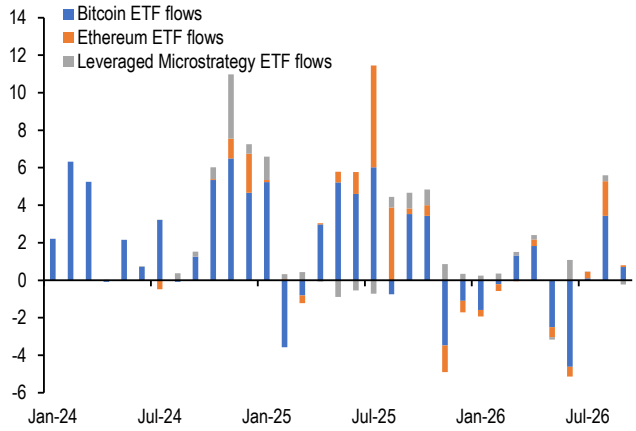
Based on the cost of production approach following Hayes (2018).




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.

Nikolaos Panigirtzoglou [AC] (44-20) 7134-7815
nikolaos.panigirtzoglou@jpmorgan.com
J.P. Morgan Securities plc
Mika Inkinen (44-20) 7742 6565
mika.j.inkinen@jpmorgan.com
J.P. Morgan Securities plc
Mayur Yeole (91 22) 6157 3872
mayur.yeole@jpmchase.com
J.P. Morgan India Private Limited
Krutik P Mehta (91-22) 6157-5016
krutik.mehta@jpmchase.com
J.P. Morgan India Private Limited

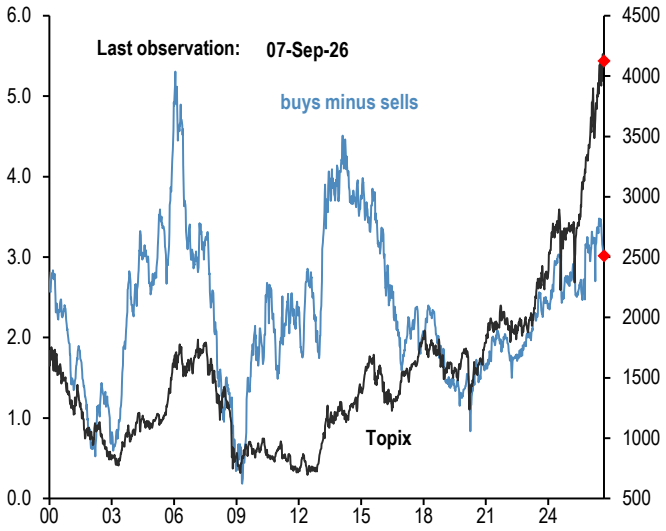


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# Japanese flows and positions

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

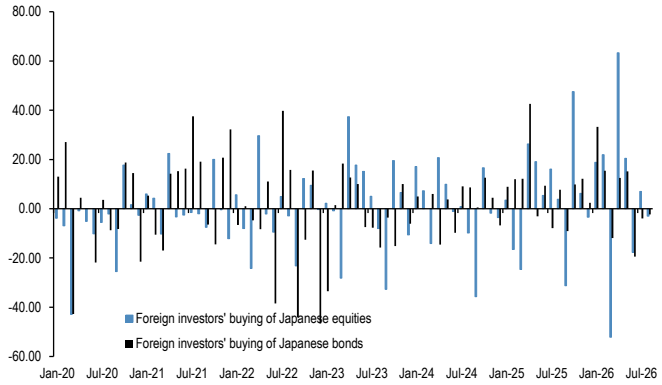
In bn of shares. Topix on right axis.




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

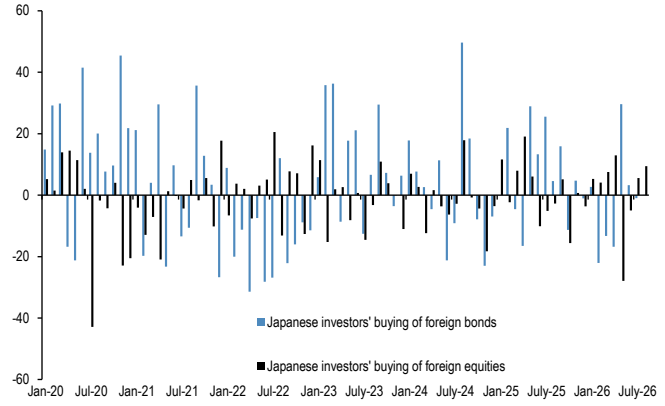
$bn, Last weekly obs. is for 28th Aug' 26.




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

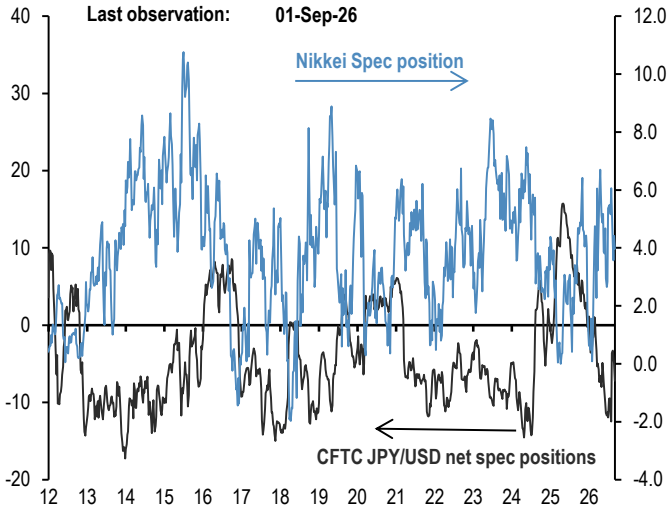
$bn, Last weekly obs. is for 28th Aug' 26.




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.

Nikolaos Panigirtzoglou [AC] (44-20) 7134-7815
nikolaos.panigirtzoglou@jpmorgan.com
J.P. Morgan Securities plc

Mika Inkinen (44-20) 7742 6565
mika.j.inkinen@jpmorgan.com
J.P. Morgan Securities plc

Mayur Yeole (91 22) 6157 3872
mayur.yeole@jpmchase.com
J.P. Morgan India Private Limited

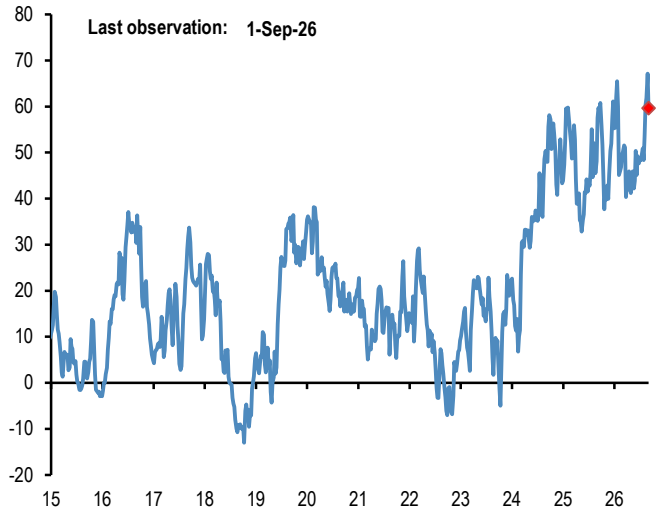
Krutik P Mehta (91-22) 6157-5016
krutik.mehta@jpmchase.com
J.P. Morgan India Private Limited



# Commodity flows and positions

## Chart A43: Gold spec positions

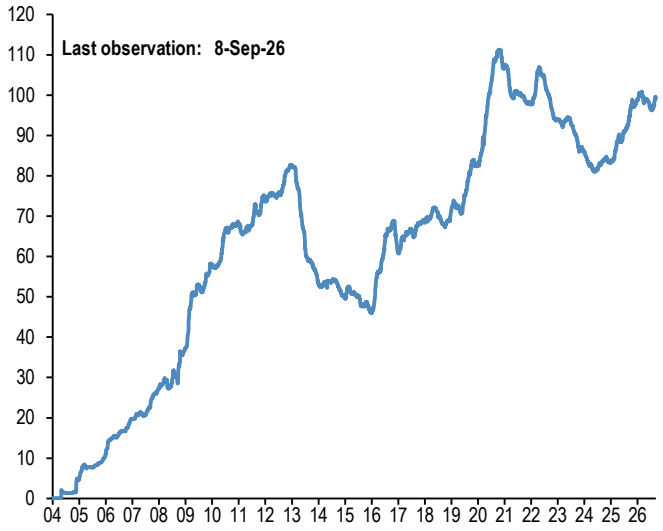
$bn. CFTC net long minus short position in futures for the Managed Money category.




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

## Chart A44: Gold ETFs

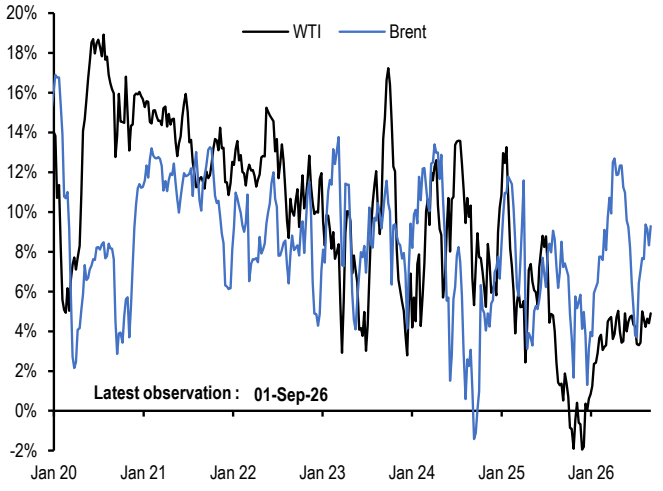
Mn troy oz. Physical gold held by all gold ETFs globally.




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

## Chart A45: Oil spec positions

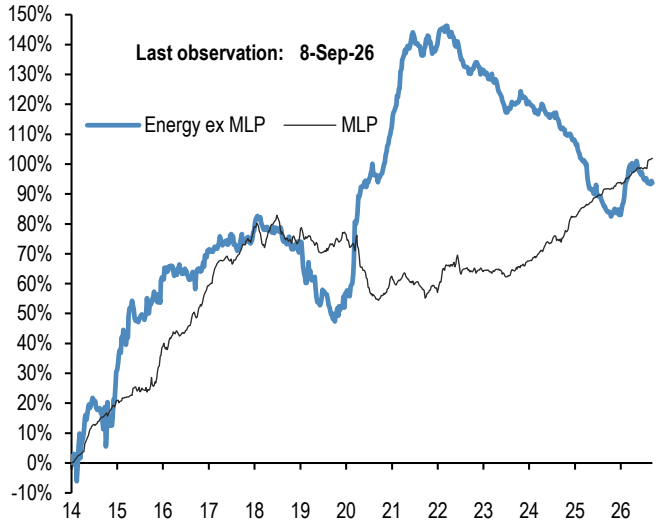
Net spec positions divided by open interest. CFTC futures positions for WTI and Brent are net long minus short for the Managed Money category.




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.

Nikolaos Panigirtzoglou [AC] (44-20) 7134-7815
nikolaos.panigirtzoglou@jpmorgan.com
J.P. Morgan Securities plc
Mika Inkinen (44-20) 7742 6565
mika.j.inkinen@jpmorgan.com
J.P. Morgan Securities plc
Mayur Yeole (91 22) 6157 3872
mayur.yeole@jpmchase.com
J.P. Morgan India Private Limited
Krutik P Mehta (91-22) 6157-5016
krutik.mehta@jpmchase.com
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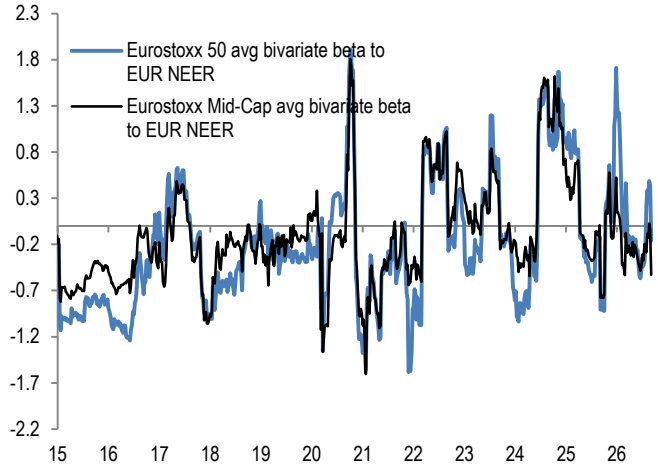


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## Corporate FX hedging proxies

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

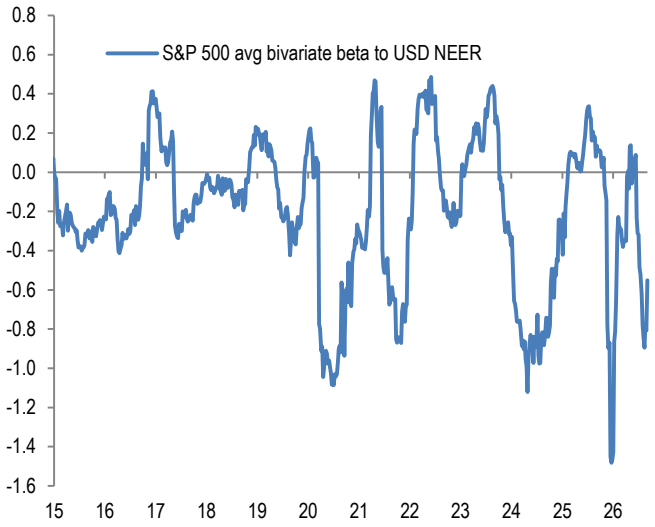
Rolling 26 weeks average betas based on a bivariate regression of the weekly returns of individual stocks in the Eurostoxx 50 index to the weekly returns of the MSCI AC World and JPM EUR Nominal broad effective exchange rate (NEER).




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

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

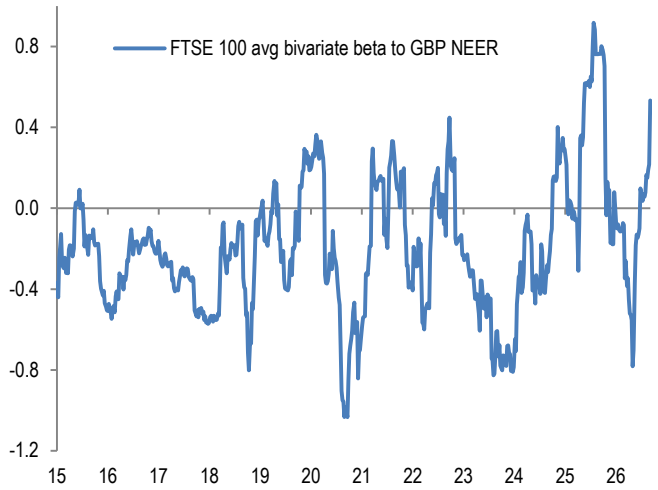
Rolling 26 weeks average betas based on a bivariate regression of the weekly returns of stocks in the S&P500 index to the weekly returns of the MSCI AC World and JPM USD Nominal broad effective exchange rate(NEER).




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

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

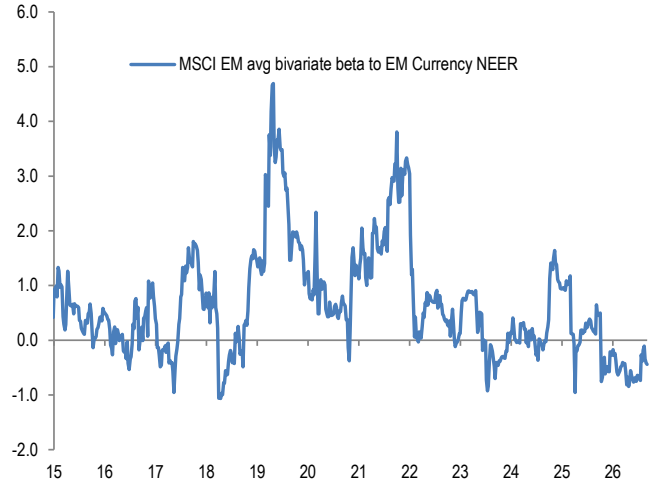
Rolling 26 weeks average betas based on a bivariate regression of the weekly returns of individual stocks in the FTSE 100 index to the weekly returns of the MSCI AC World and JPM GBP Nominal broad effective exchange rate (NEER).




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.

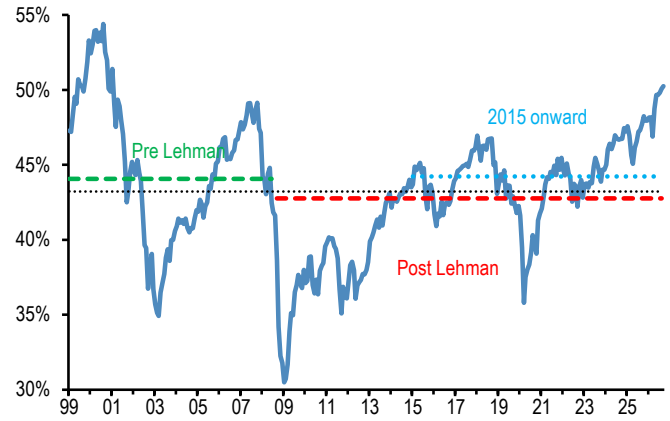
Nikolaos Panigirtzoglou [AC] (44-20) 7134-7815
nikolaos.panigirtzoglou@jpmorgan.com
J.P. Morgan Securities plc
Mika Inkinen (44-20) 7742 6565
mika.j.inkinen@jpmorgan.com
J.P. Morgan Securities plc
Mayur Yeole (91 22) 6157 3872
mayur.yeole@jpmchase.com
J.P. Morgan India Private Limited
Krutik P Mehta (91-22) 6157-5016
krutik.mehta@jpmchase.com
J.P. Morgan India Private Limited



# Non-Bank investors' implied allocations

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

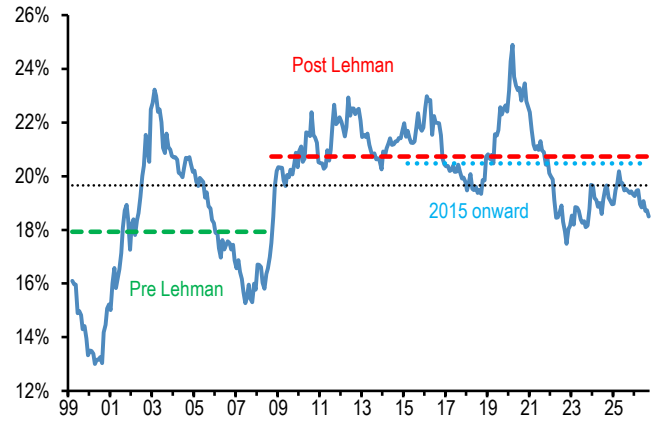
Global equities as % total holdings of equities/bonds/M2 by non-bank investors/ Commodities including gold held by private investors. Dotted lines are averages.




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

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

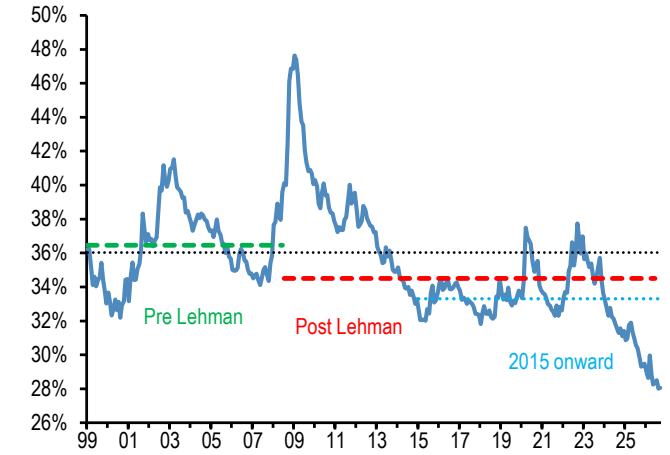
Global bonds as % total holdings of equities/bonds/M2 by non-bank investors/ Commodities including gold held by private investors. Dotted lines are averages.




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

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

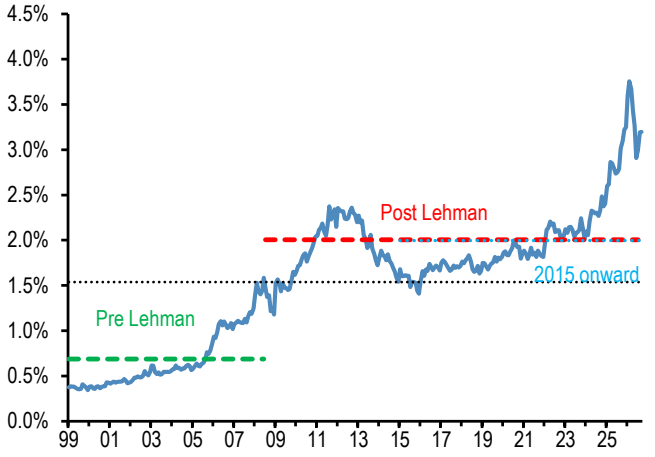
Global cash held by non-bank investors as % total holdings of equities/bonds/M2 by non-bank investors/Commodities including gold held by private investors. Dotted lines are averages.




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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| | Overweight (buy) | Neutral (hold) | Underweight (sell) |
|---|---|---|---|
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| IB clients** | 83% | 80% | 73% |
| JPMS Equity Research Coverage* | 51% | 37% | 12% |
| IB clients** | 95% | 92% | 87% |

***Please note that the percentages may not add to 100% because of rounding.**
****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.**
**For purposes of FINRA ratings distribution rules only, our Overweight rating falls into a buy rating category; our Neutral rating falls into a hold rating category; and our Underweight rating falls into a sell rating category. Please note that stocks with an NR designation are not included in the table above. This information is current as of the end of the most recent calendar quarter.**

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Nikolaos Panigirtzoglou [AC]
(44-20) 7134-7815
nikolaos.panigirtzoglou@jpmorgan.com



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