

UNCOVERING MARKET DRIVERS THROUGH FLOW DATA

Locations, currency pairs, investors and sentiment

September 2025



LMAX | Group

LMAX Group is a global financial technology company and the leading independent operator of multiple institutional execution venues for FX and digital assets trading. With offices in 9 countries and a global client base, the Group builds and runs its own high performance, ultra-low latency exchange infrastructure, which includes matching engines in London, New York, Tokyo and Singapore.

The LMAX Group portfolio includes LMAX Exchange, LMAX Global and LMAX Digital.

LMAX | Exchange

LMAX Exchange operates global institutional FX exchanges, an FCA regulated MTF and MAS regulated RMO, offering Spot FX, FX NDFs, metals, commodities and indices. Our central limit order book model delivers efficient market structure and transparent, precise, consistent execution to all market participants, including funds, banks, proprietary trading firms, brokerages, asset managers and buy-side institutions.



Macro Hive is a leading independent provider of global macro research and strategy with a worldwide user base spans 160 countries and over 1,000 institutions. Our mission is to give investors a trusted platform to discover the best investment opportunities in an accessible and concise format. To do this, we combine best-in-class human and artificial intelligence, leveraging all the latest technologies to develop innovative, data-driven solutions to complex financial problems. Our state-of-the-art models and indicators use predictive analytics, deep learning, and natural language processing in search of alpha signals across asset classes. Our team of seasoned experts features ex-heads from global organisations such as JP Morgan, Nomura, Deutsche Bank, the IMF, and the NY Fed.

From the Authors



FX flows and positioning data is critical to understanding real-time market behaviour. In our latest report, in collaboration with LMAX Group, we show how such data can be used to build sentiment measures, reveal the drivers of short- and long-term asset price fluctuations, and identify the decisions of different types of clients. The findings emphasise the value of high-frequency flow data in complimenting technical and fundamental analyses, thereby providing a significant advantage to investors.

Bilal Hafeez
CEO and Head of Research, MacroHive

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Key information on the flows and positioning data across LMAX Group's matching venues with granularity on the client segments has facilitated discussions around both traditional and 'alternative' data sets for various use cases. We leverage Macro Hive's ability to analyse the data and setting the market context, to generate predictive, actionable insights for clients across different workflows.

Arun Sundaram
Head of Market Data, LMAX Group

Summary

- LMAX Exchange FX flow data delivers real-time, unique insights into pricing, sentiment and market drivers.
- Fed announcements trigger immediate EUR/USD responses, while data also unveils long-term drivers influencing gold prices.
- Directional flows allow comparison of order flow growth versus net positioning, giving investors an edge in tracking market momentum.
- Sentiment analysis reveals strong contemporaneous links between flows, sentiment, and price changes, and shows, for example, that peak gold bullishness has faded.
- With liquidity matching centres in London, New York and Tokyo, clients can capture regional trading dynamics across different market hours.
- Asia-hour trading spikes after FOMC meetings, making local market access increasingly critical.
- The data highlights Chinese demand as a key driver of gold prices early in the year, reflecting the growing influence of Asia on global markets.
- Flow data can also be segmented by professional and institutional clients, revealing that professional traders dominate short-term flows, while institutional flows play a stabilising role.
- Professional flows exhibit significant momentum, highlighting the trend-following behaviour of these clients, whereas institutional flows mean-revert more quickly, avoiding volatility generated by professionals.
- Behavioural differences are most pronounced at daily lags, but at eight-hourly frequencies, flows show strong positive correlation across client types.
- Higher-frequency correlations between sentiment values and prices of six different assets indicate predictive power, offering investors a forward-looking signal for FX and gold markets.
- Flow data delivers actionable insight into sentiment, market drivers, and client behaviour, helping investors anticipate moves and uncover trading opportunities.

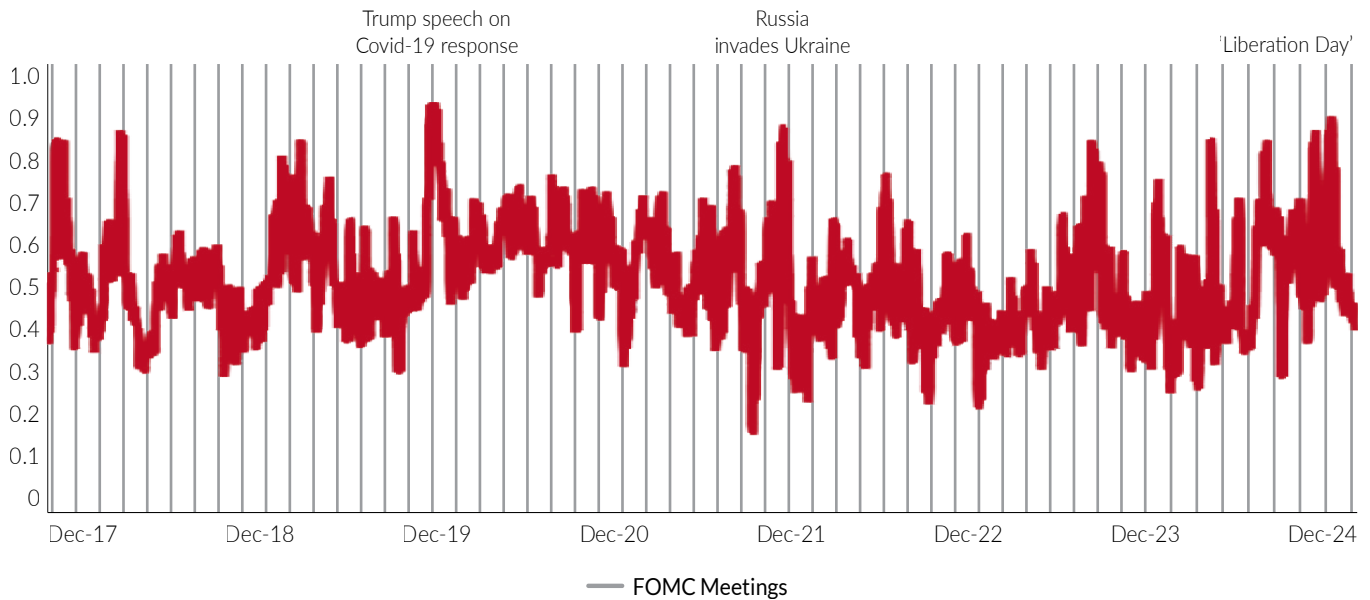
FX Flow Data – Overview

The value of flow and positioning data for FX trading strategies is well documented. As strong contemporaneous indicators, they typically enhance traditional trading rules by giving insights ahead of time on, among other things, the size of directional moves. Flow analysis is typically considered complimentary to technical and fundamental analysis, with flow data giving more granular, real-time information on market behaviour. As such, having access to order flow data can provide a significant advantage to investors.

In this report, we use LMAX Exchange order flow data to examine key insights across locations, FX pairs and investors. Building on earlier findings in [November 2024](#) and [April 2025](#), Fed events provide good case studies for drawing out these insights because they provide significant exogenous, and well-timed macroeconomic shocks that reveal common trading and pricing behaviours of market participants. For example, Chart 1 shows the standardised growth rates of EUR/USD flows over time, with FOMC dates overlayed. A significant portion of shorter-term volatility in EUR/USD flows occur on or around Fed meetings, while the larger cyclical drivers are more linked to overarching geopolitical events.

Chart 1: EUR/USD Flows Exhibit Significant Near-Term Volatility

EUR/USD Flows (standardised)



The importance of Fed meetings in driving monthly flows spans multiple FX pairs, and even gold – which is tightly correlated to inflation risks. Chart 2 shows the relative growth rates in flows in the days preceding and succeeding FOMC meetings. The most pronounced variations are found in XAU/USD and AUD/USD, reflecting both the importance of Fed policy for commodities, but also that daily flows for both these pairs are less than a fifth and a third of those for EUR/USD and USD/JPY. Given the uplift in order flows, it is no surprise that absolute price changes also increase sharply into the event, although they are less quick to revert to pre-FOMC levels than flows (Chart 3).

Chart 2: Order Flows around FOMC Meetings

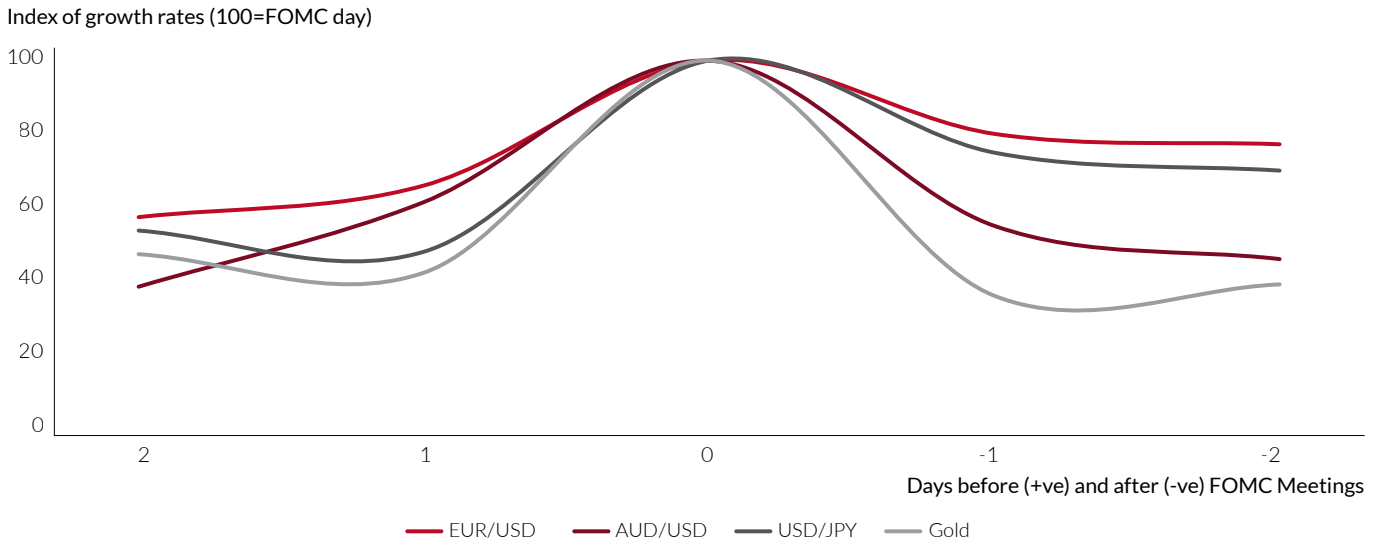
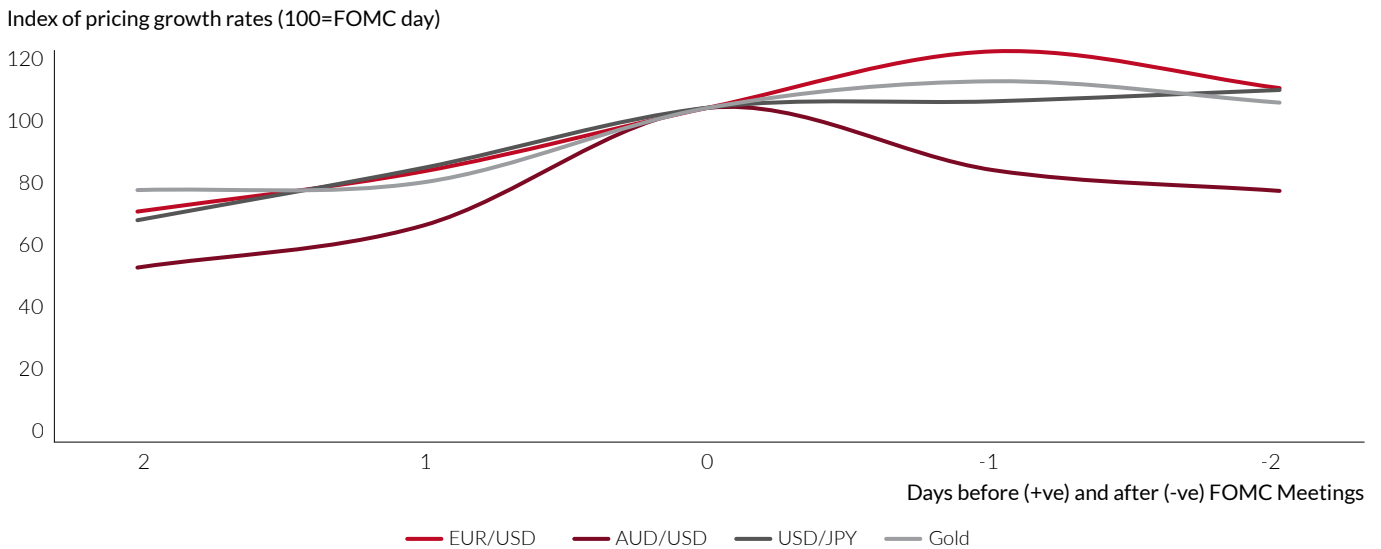


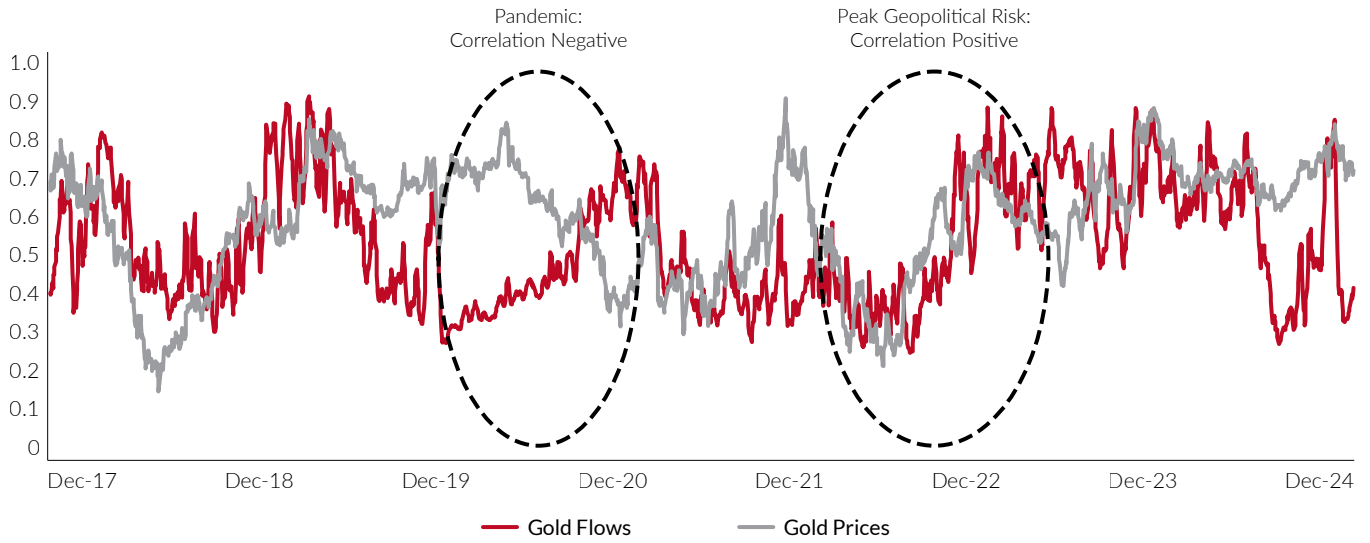
Chart 3: Price Changes around FOMC Meetings



Despite the significance of monetary policy news in short-term order flows, the variability in the growth rates for gold over time appear much more closely linked to the longer-term macroeconomic environment. Chart 4 maps trading activity and price changes in XAU/USD over the last eight years. Variations are less volatile than EUR/USD and feature larger and more deliberate cycles. One such example is between Q4 2022 and Q2 2023, when the de-dollarisation of Russian and Chinese assets brought about significant momentum in gold flows. This supported a 25% increase in gold prices during an eight-month window, with daily price moves strongly correlated to flows.

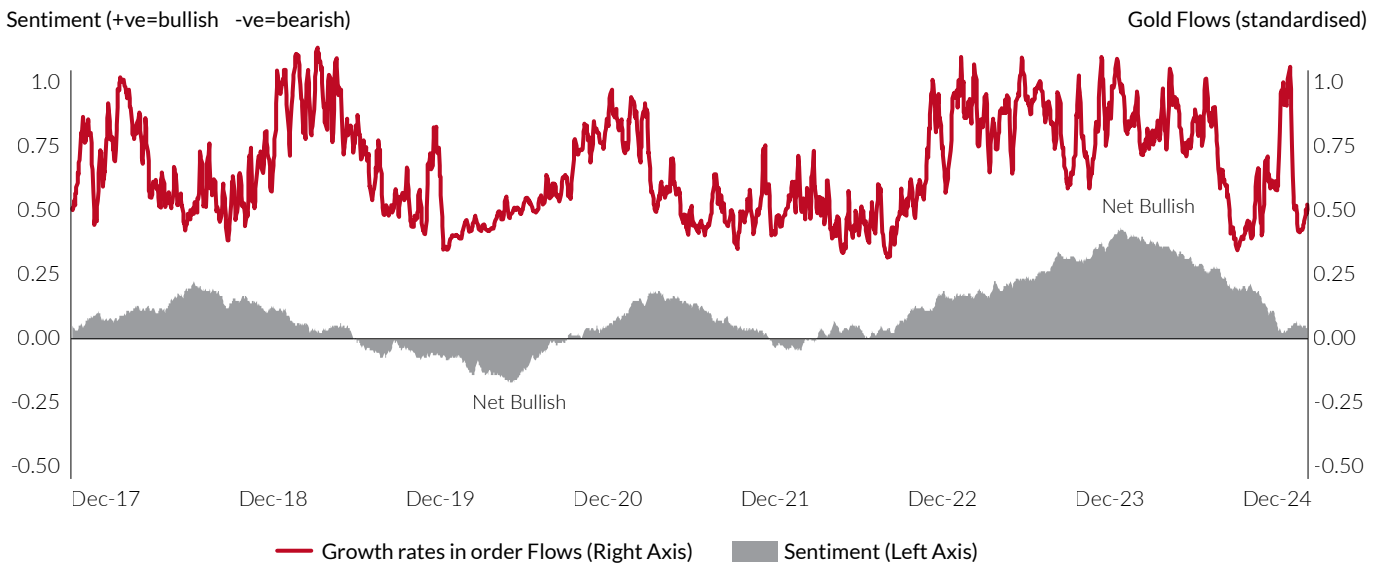
Chart 4: Trading Activity in Gold Driven by Long Term Factors

Gold Flows (standardised)



With access to LMAX Exchange directional flows, we can also show that heightened trading activity in 2022 through to 2024 was net bullish (Chart 5). That relative bullishness has faded in recent months, with the ratio of buy-to-sell orders much more balanced. The dynamics of gold sentiment are closely linked to changes in trading activity, and recent surges have coincided with bullish moves (Mar 2020 – June 2021, Mar 2022 – May 2024). However, this need not always be true, with the pick-up in volumes in late-2018 to mid-2019 coinciding with a fading bullishness.

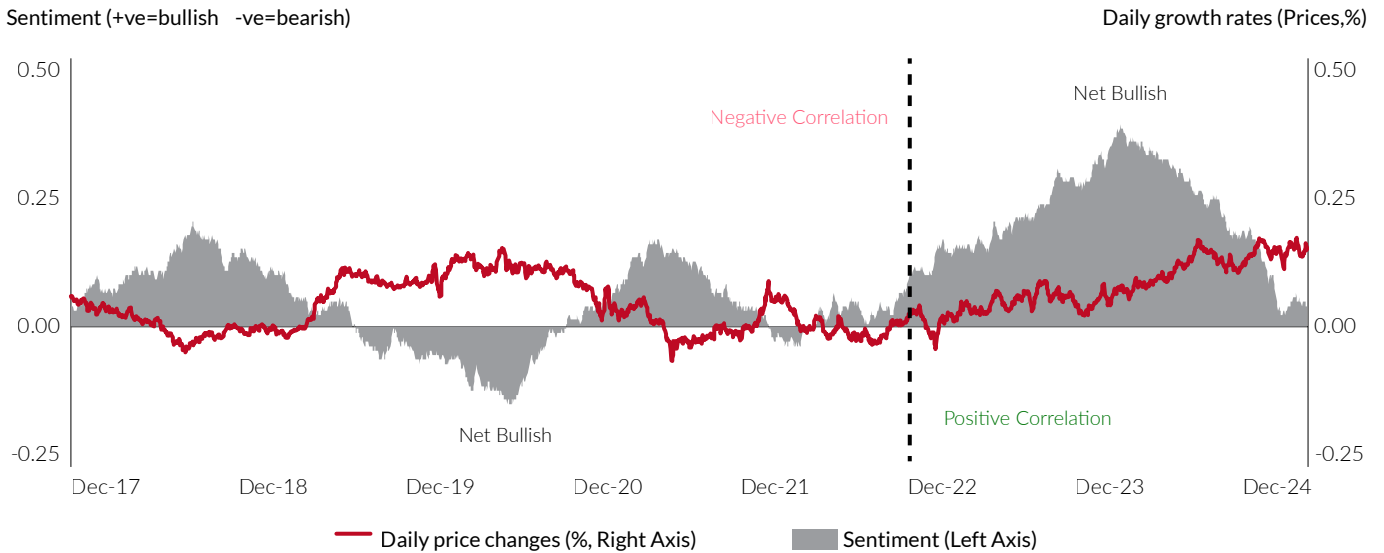
Chart 5: Access to Directional Flows Shows Relative Bullish Sentiment has Faded



Sentiment data is particularly valuable for pricing. Prior to September 2022, directional flows were strongly correlated to daily price changes over the next month (Chart 6). Specifically, growing bullish sentiment predicted lower average daily growth rates over the next 30 days. Saturated positioning, mean reversion expectations and gold’s safe-haven status could explain these factors, and it implied that greater price moves were captured when investors were net bearish.

A structural shift since September 2022, however, means that the correlation has now flipped, with significant momentum being exhibited in prices. With the latest data showing a bump in bullish sentiment in May 2025, a modest increase in gold prices in June would have been predicted. Indeed, this materialised, with prices growing 1.5%.

Chart 6: Investor Sentiment Key for Predicting Price Changes

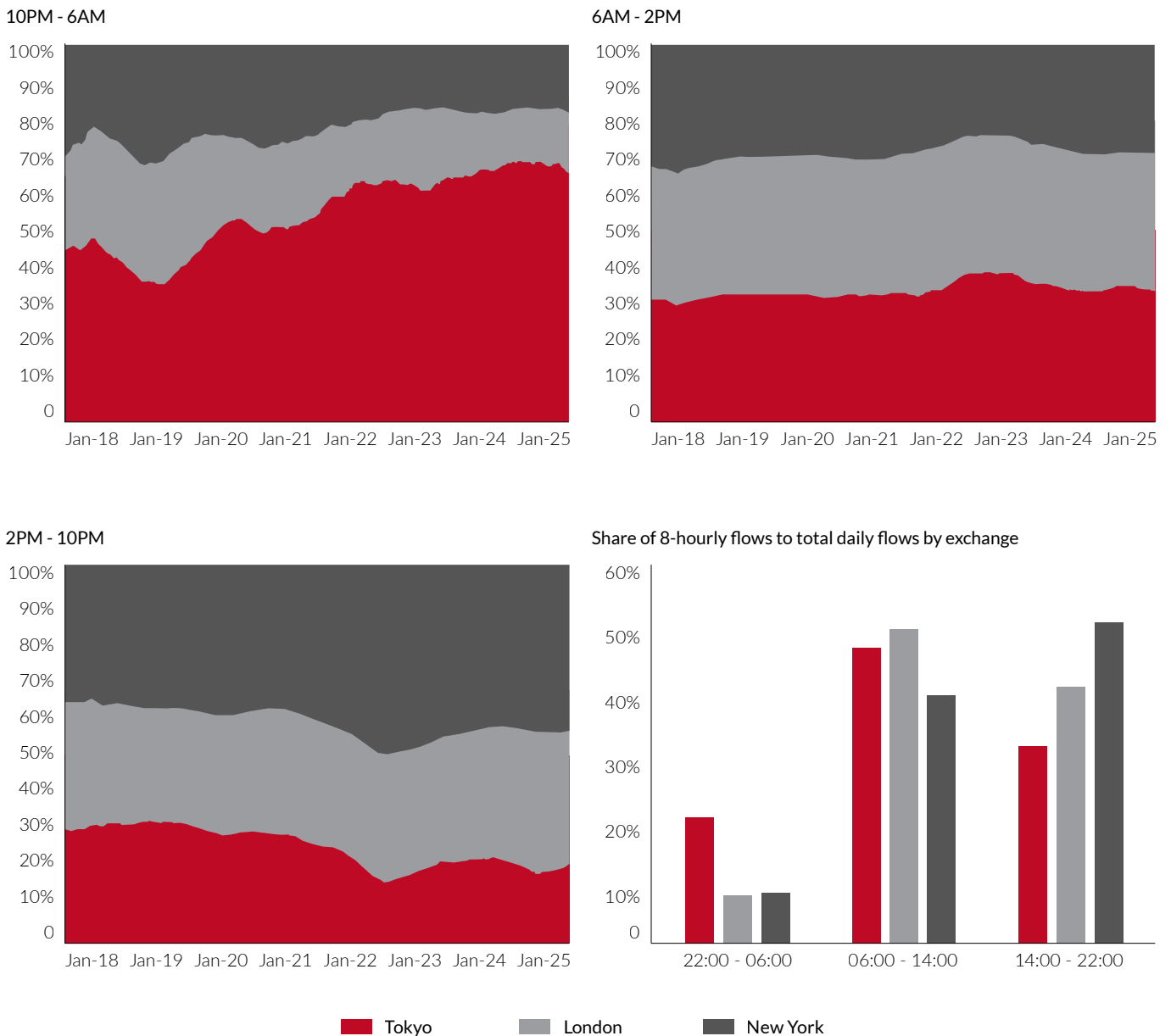


FX Flow Data – By Location

LMAX Exchange has four matching liquidity centres, three of which were analysed as part of this report - London, New York and Tokyo (excluding Singapore SG1). We can leverage this information to see which flows dominate in different trading hours and, similarly, use this to identify where pricing action is greatest. Chart 7 shows the share of order flows by location for three eight-hour windows on trading days. In red, is the share of flows that go through the Tokyo exchange, in light grey is London, and in dark grey is New York. In the bottom right, we have order flows within an eight-hour window for each exchange, as a share of total flows during the day.

The charts reveal that the majority of FX trading activity occurs during UK hours, from 6am to 2pm – roughly half of all flows that go through Tokyo and London occur during this window. The least active window is during Asia hours, with the Tokyo exchange receiving the greatest share of flows during that period. This is clearest in the top left corner, with flows between 10pm and 6am coming increasingly through Tokyo. In the bottom left, on the other hand, flows in the later part of the day typically come through New York.

Chart 7: FX Flows in Asia, London and New York Hours



Source: LMAXExchange, Authors' Calculations

If we overlay trading activity throughout the day with price moves, then it appears the greatest action occurs instead during New York hours (Table 1). Broken down by different FX pairs, only AUD/USD has historically moved an equivalent amount during Asia hours. Otherwise, price moves between 22:00 to 06:00 are the smallest throughout the day. Since 2021, only EUR/USD and JPY/USD moves during London hours have matched or beaten those between 14:00 and 22:00. This likely reflects that many key US data releases occur at 12:30 GMT time, and that those events have increased in importance since the pandemic.

Table 1: Absolute Price Moves in Different Trading Hours

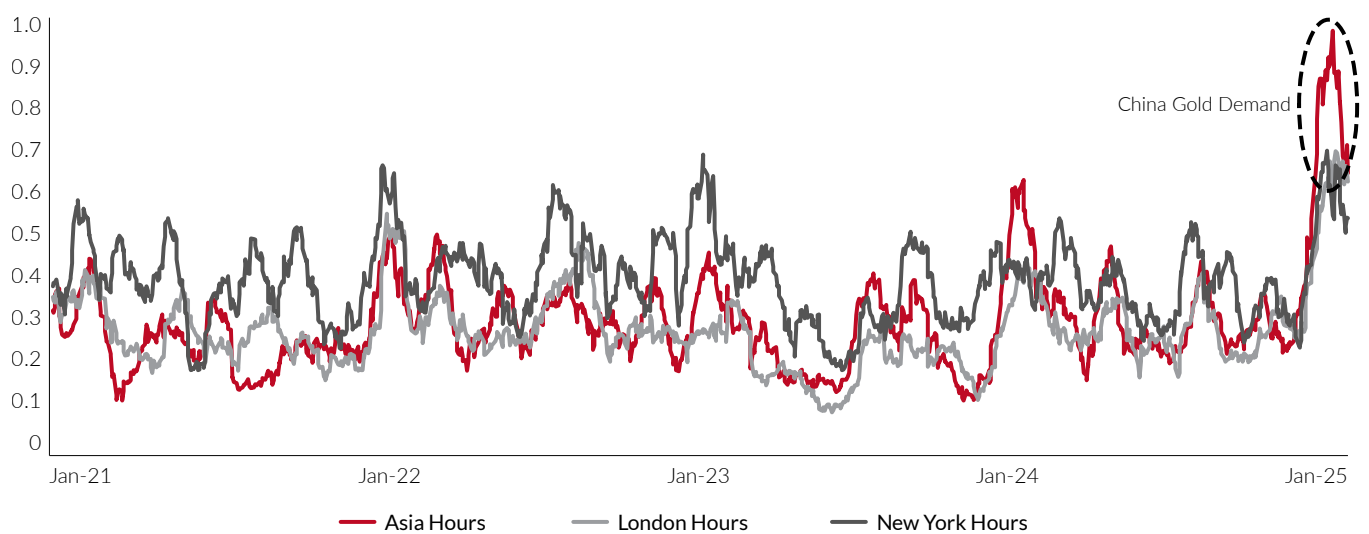
2017-2025	EUR/USD	GBP/USD	JPY/USD	AUD/USD	Gold
22:00-06:00	0.15%	0.16%	0.18%	0.23%	0.28%
06:00-14:00	0.18%	0.19%	0.22%	0.21%	0.27%
14:00-22:00	0.20%	0.22%	0.22%	0.23%	0.36%

2021-2025	EUR/USD	GBP/USD	JPY/USD	AUD/USD	Gold
22:00-06:00	0.16%	0.17%	0.20%	0.24%	0.30%
06:00-14:00	0.22%	0.19%	0.30%	0.23%	0.28%
14:00-22:00	0.22%	0.21%	0.227%	0.25%	0.39%

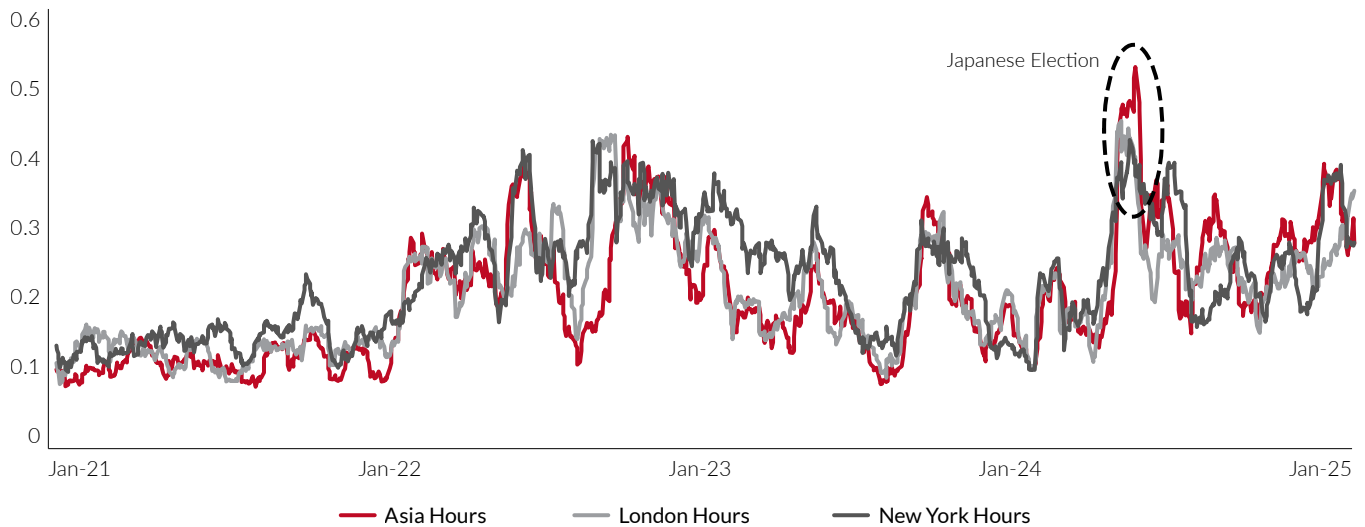
While New York hours typically dominate price action on a normal day, this can change in different contexts, highlighting the benefits of having access to local exchanges. For example, the recent upturn in bullish sentiment and FX flows for gold are believed to have been driven by an increase in demand from China. Chart 8 supports this view, by graphing the absolute price moves in the three trading windows. Specifically, it reveals that the price growth for gold in recent months has been greatest during Asia hours – much more so than on any previous occasion. Similarly, USD/JPY moves between 22:00-06:00 were more sensitive around last year’s Japanese election.

Chart 8: Asia Hours Become Increasingly Important Around Local Narratives

Gold: Average absolute return



USD/JPY: Average absolute return



Lastly, Fed meetings can also drive shorter-term variations across different time zones. With interest rate announcements occurring between 14:00-22:00, Asia hours become a key trading window in the immediate aftermath. Since 2021, gold prices have moved on average, 0.30% in absolute terms between 22:00-06:00. However, just after FOMC meetings, which increases significantly to 0.42%. In contrast, London hours and New York hours decline in importance in the day after, going from 0.28% and 0.39% on normal days to 0.25% and 0.32%, respectively. This difference is also seen for USD/JPY and EUR/USD, although prices continue to move more during London hours in these currency pairs as well.

¹ Broker refers to clients using a collateral or credit arrangement with the entity 'LMAX Broker' to access the market, e.g. broker clients and prime-of-prime LPs. Exchange is everyone else, e.g. executing banks, Liquidity Providers and HFTs with their own PB relationship and prime of prime relationships other than LMAX Broker's. Loosely speaking, brokers are made up predominantly of retail investors, while exchange clients refer mostly to institutional investors.

FX Flow Data – Professional vs Institutional

LMAX Exchange order flow data can also be broken down by Professional and Institutional clients. The distinction can be helpful in determining what share of price action is driven by short-term changes in sentiment (Professional) versus longer-term strategy decisions (Institutional).

The distinction between the behaviours of both groups can be seen most clearly from the predictability of their respective order flows. Order flows are typically very autocorrelated - past flows predict future flows. This feature can be seen in Table 2, which looks at EUR/USD flows broken down by both sets of clients. Order flows over the last five days always have a statistically significant effect on today's order flow, with the effect typically declining the further out we go.

Crucially, however, the autocorrelation is strongest among Professional clients. That is, these types of clients exhibit significant trend-following or herding behaviour. We can confirm that this is different from Institutional clients because the ranges do not overlap beyond one day. Instead, while yesterday's flows still predict today's flows, trading behaviour normalises much quicker to imply a much more systematic and stable approach.

Table 2: Professional Clients Exhibit Greater Trend-Following Behaviour

	Broker	Exchange	Difference
Flows 1 day ago	0.76* (0.70-0.83)	0.69* (0.66-0.73)	<input type="checkbox"/>
Flows 2 days ago	0.73* (0.67-0.78)	0.61* (0.58-0.65)	<input checked="" type="checkbox"/>
Flows 3 days ago	0.68* (0.62-0.75)	0.56* (0.52-0.60)	<input checked="" type="checkbox"/>
Flows 4 days ago	0.69* (0.63-0.76)	0.57* (0.53-0.61)	<input checked="" type="checkbox"/>
Flows 5 days ago	0.68* (0.62-0.75)	0.54* (0.50-0.58)	<input checked="" type="checkbox"/>

Notes: These are daily order flows, aggregated over a 24h window. *indicate statistical significance at 99% level. brackets represent 95% confidence interval.

Building on these findings, cross correlations become particularly interesting as well. That is, how do the order flows of Professional clients respond to past flows of Institutional clients, or vice versa? Our analysis, from regressing past flows on future flows, shows that there is a strong negative correlation, but only between future Institutional flows and past Professional flows. In other words, Institutional flows fall in response to larger Professional flows in the day prior.

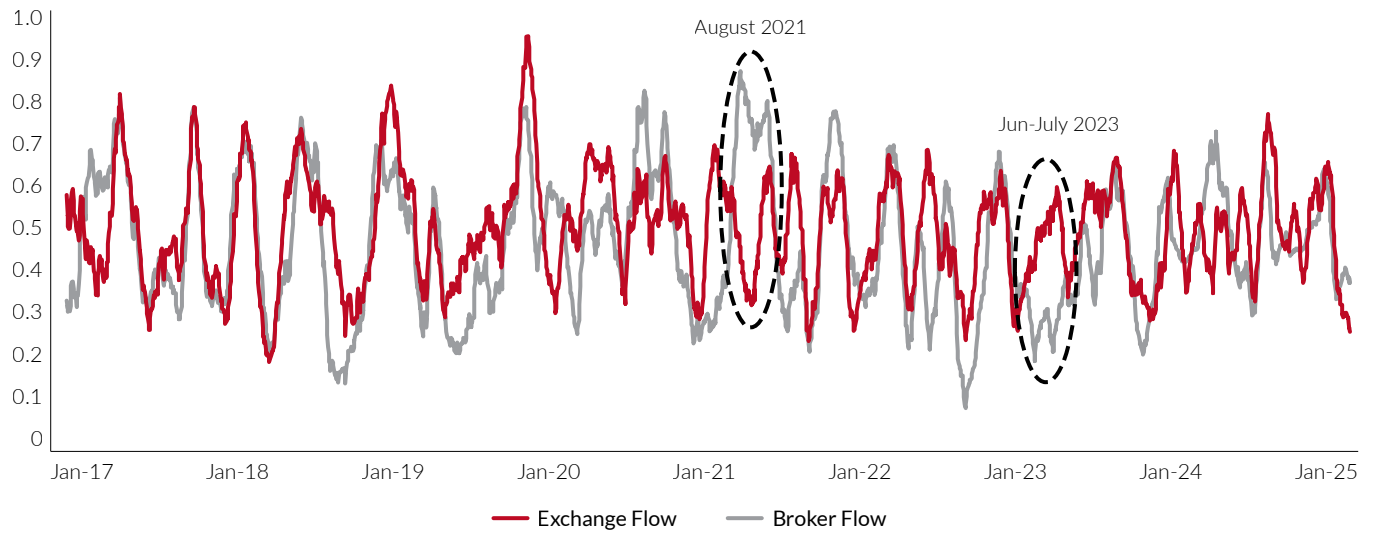
These findings are intuitive given the figures in Table 2. Professional flows exhibit significant momentum, while Institutional flows reverse. It suggests that Institutional clients – of which institutional investors make up a larger share – avoid the volatility introduced by higher Professional clients – of which retail investors make up a larger share – activity from the previous day. Meanwhile, past Institutional flows have no impact on future Professional flows.

Moving to a shorter frequency, the correlations flip. Institutional flows move higher on higher Professional flows in the previous eight hours, and vice versa. This bi-directional correlation suggests intraday trading activity among both sets of clients follow similar motivations, e.g. news-related insights that lead to new price discoveries. Within the context of the previous results, however, Institutional clients appear to interpret intraday volatility more efficiently, with flows reverting more quickly. In contrast, broker clients continue to follow past flows, perhaps reflecting a discrepancy in their ability to extract fundamental information from public news.

The analysis highlights the strong correlation between the flows of both sets of clients. Comparing standardised flows over three-month rolling windows, Chart 9 maps this relationship over time. Typically, the correlation is positive, however, there are a couple of noticeable occasions on which flows have moved in opposite directions. These are August 2021, and from June to July 2023. The former was associated with a significant drop in EUR/USD prices over the next 18 months, while the latter covered a sharp short-term price increase.

Chart 9: Strong Correlation Between Institutional and Professional Flows Over Time

EUR/USD Flows (Standardised)



FX Flow Data – Sentiment

As discussed earlier in this report, LMAX Exchange data contains directional flows over time. Accordingly, we can generate a proxy of investor sentiment by measuring the strength and frequency of buy and sell orders. As shown in Charts 5 and 6, this measure of bullish and bearish bias provides important context behind changes in order flows and prices. We can extend this analysis to different currency pairs and the S&P 500 Index (SPXm) to investigate higher-frequency correlations between sentiment values and prices.

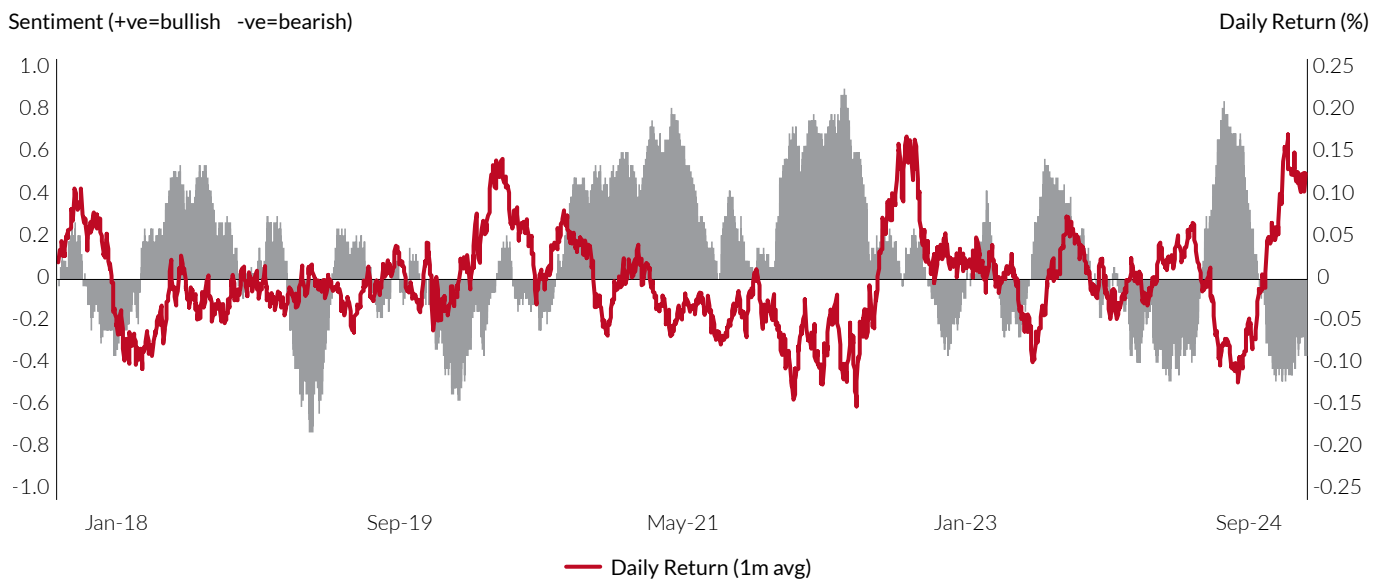
Chart 10 graphs a trailing one-month average of investor sentiment (grey) against the same measure of daily returns (red). Our analysis reveals that changes in sentiment are statistically significant in explaining contemporaneous changes in prices. Furthermore, there is also evidence that lagged values of sentiment can predict current changes in prices. Specifically, over the last two years, a rise in sentiment across all four currency pairs predicted and increase in their respective prices over the next month.

As far as order flows predict what the rest of the market will learn about fundamentals in the future, the results suggest that sentiment data can be used as a forecasting tool of near-term prices. These results are also found in academic work by Evans and Lyons (2007), who find flows forecast future exchange rate returns, and much more effectively than forward discounts.

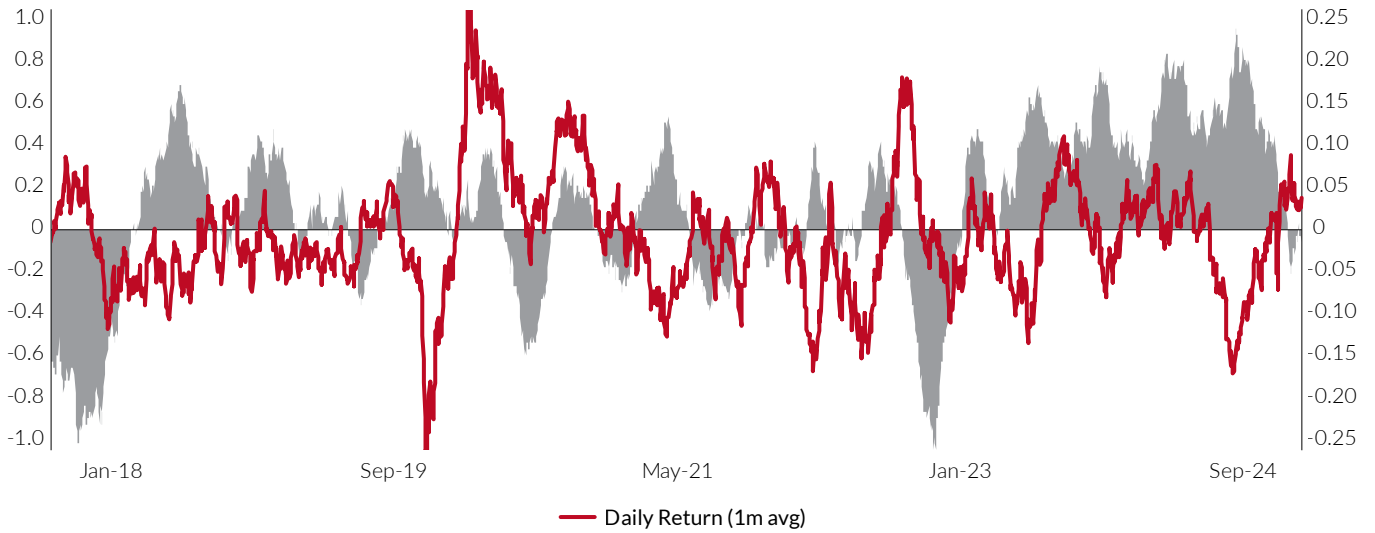
The latest data going up until May 2025, shows USD/JPY appears to be a net buy, especially relative to historical levels. Meanwhile, AUD/USD bullishness has turned bearish, as has EUR/USD. The bullish bias on gold has also declined, and the impact of Trump’s tariffs have moved sentiment and prices lower on SPXm. Combined, the latest observations show a clear decline in investor optimism, which could have a dampening effect on prices in the near term.

Chart 10: Investor Sentiment Correlates with Daily Returns

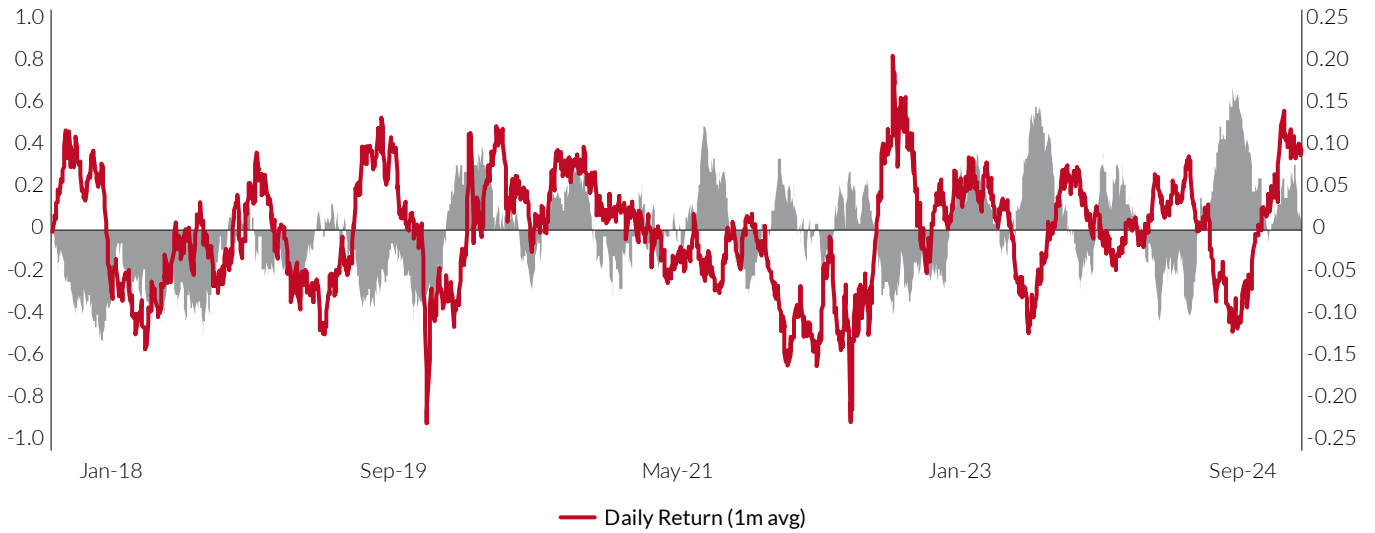
EUR/USD



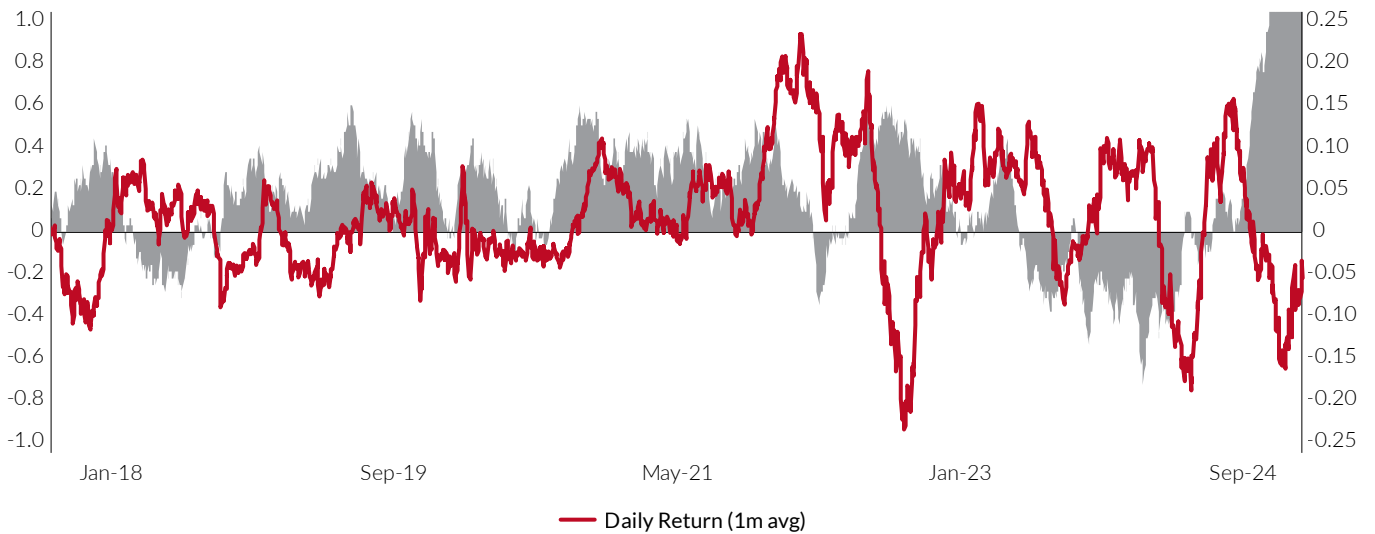
AUD/USD



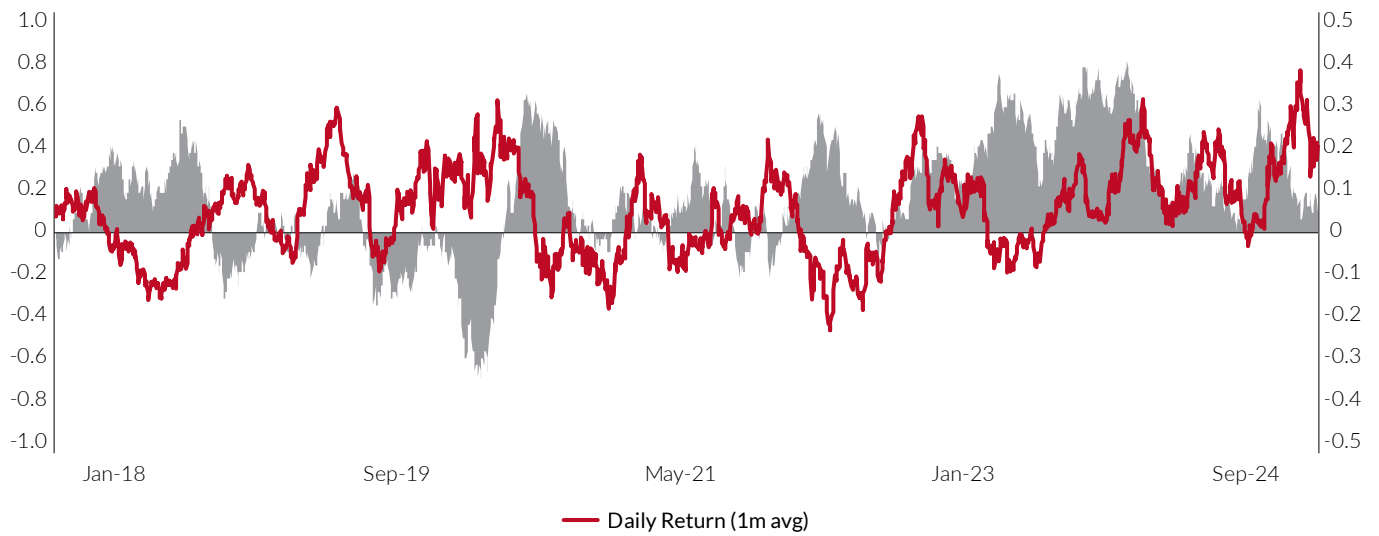
GBP/USD



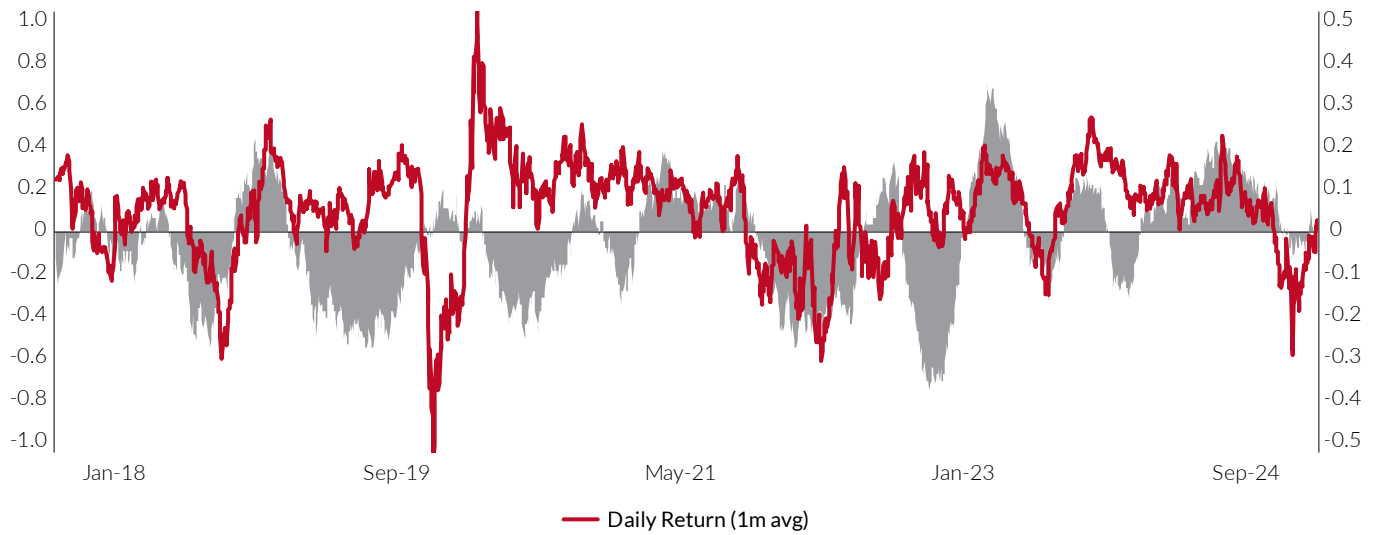
USD/JPY



XAU/USD



SPXm



Conclusion

In conclusion, FX flow data from LMAX Exchange provides investors with important insights into pricing dynamics, investor sentiment, and underlying market drivers. The data underscores the outsized role of Fed events in shaping short-term trading in EUR/USD, while longer-term forces—such as Chinese demand—drive persistent movements in gold.

Access to directional flows enables a nuanced comparison between order flow growth and changes in positioning, with sentiment analysis revealing a strong contemporaneous link between flows, sentiment, and price changes—and a notable fading of peak bullishness in gold. Assessing sentiment and daily returns over shorter horizons also reveals that, over the last two years, changes in sentiment have had some predictive power over future returns.

Lastly, LMAX Group has four matching liquidity centres, three of which were analysed as part of this report - liquidity matching centres in London, New York and Tokyo (excluding Singapore SG1) allow for region-specific insights, particularly the rising importance of Asia hours following FOMC meetings. A distinction between Professional and Institutional clients further enriches the analysis: Professional flows show strong trend-following behaviour and momentum, while Institutional clients' flows are more systematic and mean-reverting. Though both client types align intraday, their lagged behaviours diverge, suggesting retail traders are less efficient at incorporating new information.



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