

Liquid Insight

Do twin deficits matter for rates & FX?

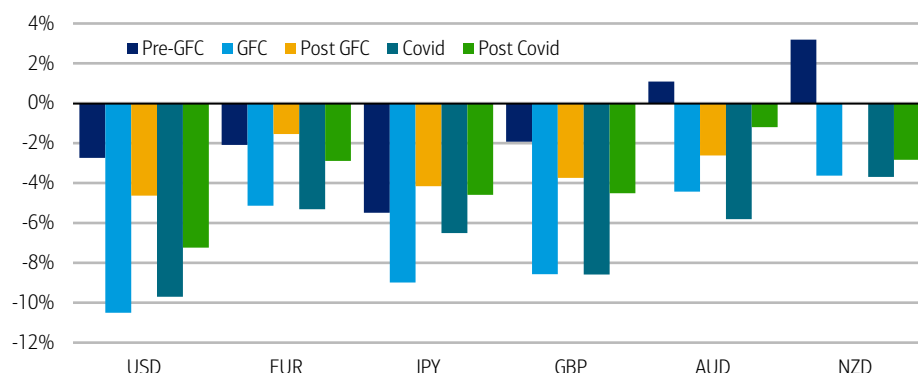
Key takeaways

- Twin deficits = not made equal: FX impact depends on ability to attract inflows & stagflation. Fiscal rules are a red flag
- GBP & EUR suffer due to fiscal rules; no such anchor for USD & protected by reserve status; vol adj x-border flows hurt NZD
- Wider real/nominal rate spreads due to the twins. Reagonomics provides the template on how +ve turns into a -ve for G10.

By Kamal Sharma & Mark Capleton

Exhibit 1: Selected G10 budget balances % GDP

Worse fiscal situations than at the start of the millennium.



Source: BofA Global Research, loomberg, IMF

BofA GLOBAL RESEARCH

Should we be concerned?

In short, yes. We have placed great store in voicing our concerns on the impact of twin deficits on rates and FX. Our priors argue higher r^* and weaker FX on widening deficits to attract cross-border capitals to finance the “twins”. However, evidence of broad based G10 FX/rates volatility has been absent over the last 20-years. Context matters and FX misalignment is perhaps more pertinent to adjustment in a freely floating FX environment. Notional anchors (fixed exchange rates; fiscal rules) provide markets with a target to aim at. The main rates market call that falls out from this is the view that the US’s huge and growing dependency on foreign capital, especially when compared with the Eurozone will require a wider US-Euro nominal and real yield difference. This aligns with our views on relative growth prospects and relative neutral real policy rates, which point the same way.

Trading ideas and investment strategies discussed herein may give rise to significant risk and are not suitable for all investors. Investors should have experience in relevant markets and the financial resources to absorb any losses arising from applying these ideas or strategies.

BofA Securities does and seeks to do business with issuers covered in its research reports. As a result, investors should be aware that the firm may have a conflict of interest that could affect the objectivity of this report. Investors should consider this report as only a single factor in making their investment decision.

Refer to important disclosures on page 7 to 9.

12799173

Timestamp: 25 February 2025 02:40AM EST

25 February 2025

Rates and Currencies Research
Global

Global Rates & Currencies Research
MLI (UK)

Kamal Sharma
FX Strategist
MLI (UK)
+44 20 7996 4855
ksharma32@bofa.com

Adarsh Sinha
FX and Rates Strategist
Merrill Lynch (Hong Kong)
+852 3508 7155
adarsh.sinha@bofa.com

Janice Xue
Emerging Asia FI/FX Strategist
Merrill Lynch (Hong Kong)
+852 3508 8587
janice.xue@bofa.com

See Team Page for List of Analysts

Liquid Insight
Recent Publications

- 24-Feb-25 [Funding European defence](#)
- 20-Feb-25 [Contrast of US macro vs rates dynamic](#)
- 19-Feb-25 [Will 2s10s JGB curve invert?](#)
- 18-Feb-25 [China's double-edged sword for USD](#)
- 17-Feb-25 [RBA Preview: An easing cycle like no other](#)
- 12-Feb-25 [How could tariffs end up weakening the USD?](#)
- 11-Feb-25 [FX FAQ: The USD, DeepSeek and US Exceptionalism](#)
- 10-Feb-25 [Anatomy of demand for European SSAs](#)
- 6-Feb-25 [Growing headwinds for NZD: we lower our forecasts](#)
- 5-Feb-25 [Tariff chasers](#)

BofA GLOBAL RESEARCH

Should we be concerned by twin deficits?

In short, yes but all currencies will not be treated equally and the conditions for a “crisis” are relatively narrow. Lessons from the past 30 years suggest that markets are likely to pinpoint idiosyncratic stories/anchors and discriminate against currencies where valuation/market reputation make the case clear.

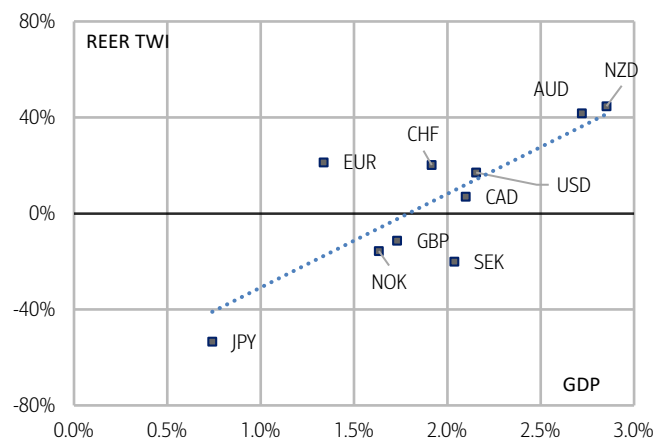
However, the UK experience is telling in that it represents an insight into what a perfect storm of large twin deficits and concerns about growth could look like for FX performance. The key ingredient to the recent tumult in UK markets has been concerns that widening deficits come at the same time as stagflation. This is the scenario that we are most concerned about for the global economy: stretched fiscal positions against the backdrop of rising stagflation concerns.

It is therefore worth looking at the current G10 position: dual balances versus a measure of stagflation. For the latter, we look at the Misery Indices compiled by Bloomberg which incorporate inflation and unemployment to gauge stagflation pressures.

Normalising the indices for G10 using 1yr rolling Z-scores shown in Exhibit 3, shows that most G10 currencies are not experiencing concurrent rises in inflation and the unemployment rate. Japan has been the outlier. US, Canada and UK are exhibiting some signs of stagflation but the rest of G10 are not. Exhibit 3 perhaps best explains why the UK has been in focus at the start of the year, with the Misery Index close to flipping into positive territory. Even then, we do not think the urgency with which the market latched onto the fiscal distress theme was warranted, as subsequent data has shown.

Exhibit 2: G10 GDP vs REER TWI, average 2000-2024

Stronger growth – stronger inflation.

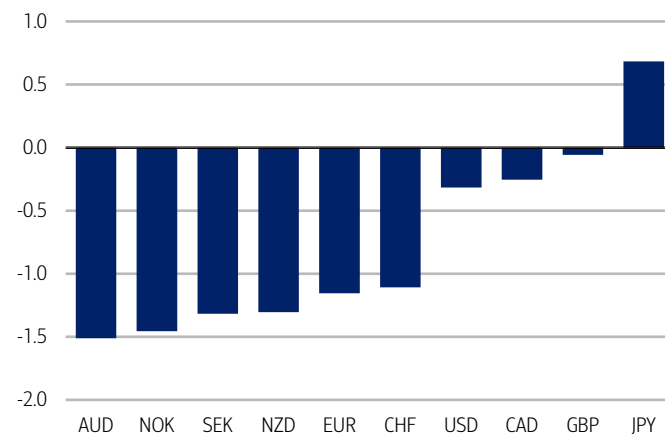


Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

Exhibit 3: 1yr rolling z-score Bloomberg Misery Index*

Minimal stagflation concerns in G10.



Source: BofA Global Research, Bloomberg. *+ve z-score = rising stagflation risks and vice versa

BofA GLOBAL RESEARCH

This point is reinforced in Exhibit 4. We look at the min/max z-scores for the Misery Index versus current values. For now, our analysis suggests that global imbalances are unlikely to be an imminent issue for G10 FX. In Exhibit 5, we use a scatter plot to look at those currencies that are potentially more vulnerable.

The direction of travel is as follows – a wider twin deficit combined with rising stagflation risks (top left quadrant) should be potential warning signs. None of the G10 currencies is currently populating this quadrant but GBP, USD and to a lesser extent CAD are close.

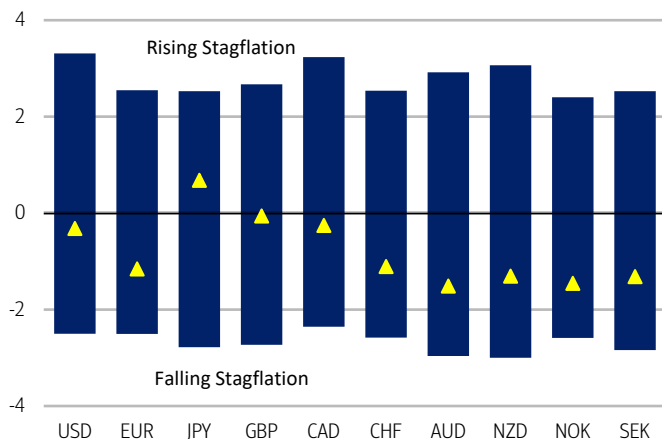
On the flip side, NOK, SEK and CHF fall comfortably into the bottom right quadrant – no risks of fiscal concerns for strong surpluses and low stagflation risks. EUR is interesting



in that the aggregate masks significant divergence amongst the Eurozone with France and Italy the most exposed to relatively high dual deficits.

Exhibit 4: Z-Score Bloomberg Misery Index – Range & Current Reading

Little sign of stagflation in G10 = dual deficits not under imminent threat

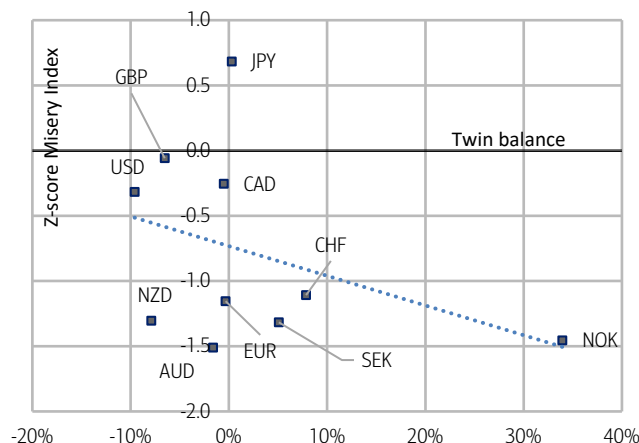


Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

Exhibit 5: G10 Twin balances (2025F) vs z-score Misery Index

GBP, USD twin deficits vulnerable to rise in stagflation



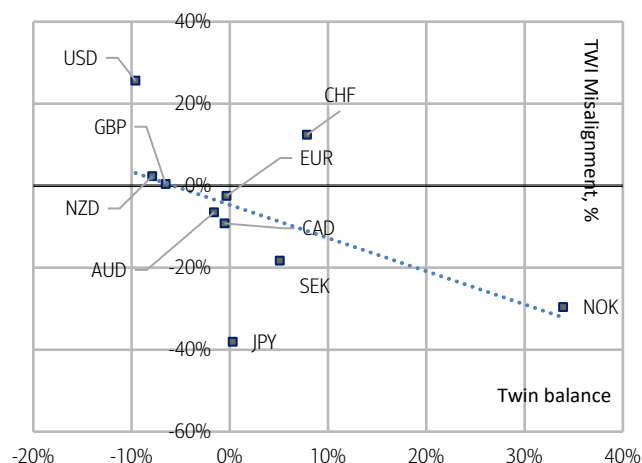
Source: BofA Global Research, Bloomberg, IMF WEO

BofA GLOBAL RESEARCH

Exhibit 6 plots FX misalignments using our Bilateral Effective Exchange Rate Models versus twin balances in G10. What is striking is the coalescence of G10 currencies around the trendline with CHF, SEK and JPY the notable outliers. Based on this framework – twin balances would favour higher JPY & SEK and lower CHF & USD. On CHF, we find this result interesting – a strong twin surplus position, yet CHF is significantly overvalued relative to the trend.

Exhibit 6: G10 Twin balances (2025F) vs TWI Misalignment (%)

Higher JPY & SEK vs lower USD and CHF

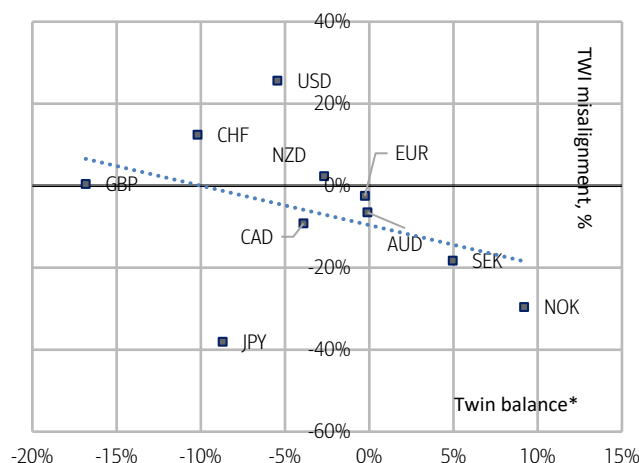


Source: BofA Global Research, Bloomberg, IMF WEO

BofA GLOBAL RESEARCH

Exhibit 7: G10 Twin balances* vs TWI Misalignment (%)

Basic balances suggest less TWI misalignment for most G10 FX



Source: BofA Global Research, Bloomberg. *Using basic balance rather than current account

BofA GLOBAL RESEARCH

Can we trade dual deficits?

Our medium-term framework leverages heavily on FX misalignment yet we find ourselves in a situation where FX misalignments have been persistent, most notably for JPY and USD. In Exhibit 7 we modify the twin balances, substituting the current account with the basic balance which adjust for net portfolio flows. One of the key drivers for FX performance over the last 10yrs has been the impact of the portfolio/FDI channel and the flow of funds into the US asset market. As the chart shows, many G10 currencies appear to be consistent with this modified twin balance metric, the obvious outliers being USD & JPY.

Our Japan colleagues has placed great store in the structural FDI outflow story weighing on JPY (see report: [FX Watch: Japan BoP: Capital flow from Japan to US backed by US-Japan relations 10 February 2025](#)). Exorbitant privilege; US exceptionalism and AI revolution are all factors which have sucked current account surpluses into the US. Confidence in the US productivity story remains key to market perceptions on its twin deficits.

As discussed above, context matters. Twin deficits in and of themselves will not trigger an FX event, if deficits are caused by “good reasons” – strong internal demand dynamics, productivity growth. Markets have fretted about the size of the US twin deficits for over two decades, yet the USD has not faced a pivotal moment nor has been subjected to market discipline. As we describe below, the USD’s reserve status and lack of anchor of a fiscal target are important reasons.

As the Asia Crisis and the recent tumult in the UK and France have shown, markets have tended to gravitate towards some form of notional anchor – be it fixed exchange rates or fiscal rules. This gives investors a better sense of whether twin balances are inconsistent with those anchors. For Asian currencies – exchange pegs were seen as preventing necessary depreciation in Asian FX.

More recently, the market has focused on the UK and France as potential soft spots in the fiscal spectrum, with the UK also having to contend with a current account deficit. Why have the UK and France been singled out by markets for particular attention? In our view, ruled based fiscal policy in both countries has provided the anchor that the fixed exchange rate regimes in Asia did in 1997.

Fiscal headroom in the UK and the growth trade-off due to large spending cuts in France to meet Maastricht targets have weighed on sentiment in both the rates and FX markets. The Eurozone debt crisis perhaps provides the clearest example of systematic risk –breakup risks – for contagion throughout the region. Whilst the Credit Crisis exposed these fault lines, this episode clearly illustrates the risks of a challenging cross-border flow environment.

The twin deficits hypothesis and rates

Twin deficits can evolve in different ways. How they come into being and their relative sizes will have an important bearing on their market implications. The classic narrative, under a Mundell-Fleming framework with perfect capital mobility and free-floating exchange rates, starts the process with an increase in the fiscal deficit.

The rising budget deficit increases yields in the economy (strictly speaking, we should say it increases real yields relative to those in other economies). This rise in yields can be because the fiscal stimulus boosts growth and inflation expectations and/or because the consequence of a greater government call on savings to finance the deficit is a higher clearing yield for government bonds. Likely both.

Higher yields attract foreign capital inflows and the currency appreciates. Leakage of the demand boost from the fiscal stimulus into imports and the loss of currency competitiveness then causes the current account of the balance of payments to deteriorate.

Evidence of the hypothesis in the wild

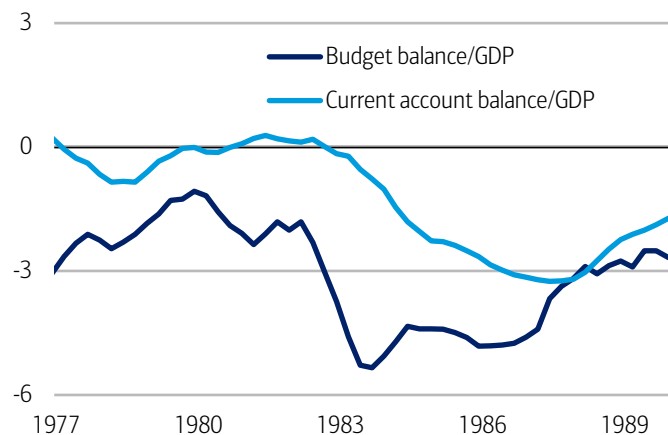
Although economists agree on few things, perhaps the clearest real-life example of this framing of the evolution of twin deficits is the early 1980s Reaganomics episode – the period that led to the coining of the term “twin deficits”.

1981’s Economic Recovery Tax Act cut personal and business taxes substantially, starting the rise in the budget deficit/GDP ratio that peaked in 1983, as shown in Exhibit 8. This sharp increase in the government call on savings drove yields higher (Exhibit 9) peaking in 1984, attracting foreign capital and pushing up the dollar.

The dollar's rise was so profound because, initially, the current account was close to balance (Exhibit 8), with no meaningful net sale of dollars associated with the external sector. It is necessary to be circumspect when interpreting messages from flow of funds relationships, which are after all identities, but it appears that improving consumer and business confidence as a result of the fiscal stimulus (and the exit from recession) meant that private domestic sectors were encouraged to spend and invest, so did not wish to accumulate domestic savings that might have financed the fiscal expansion.

Exhibit 8: The 1980s era that gave us the “twin deficits” term

Budget deficit grew, prompting rising yields, taking dollar to uncompetitive levels. In turn, this plus deficit-fuelled demand hurt the external balance, %.

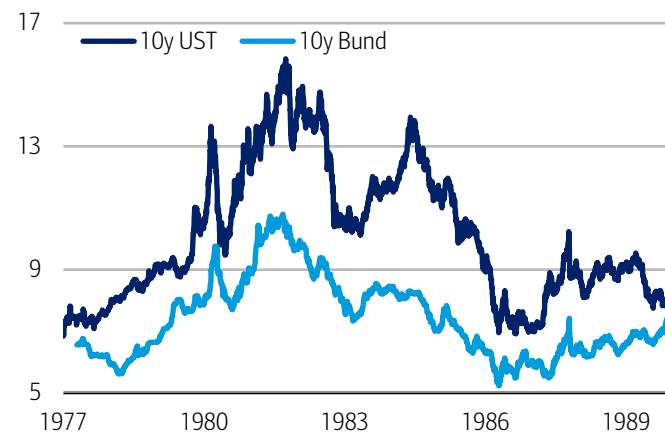


Source: BofA Global Research, LSEG Data & Analytics

BofA GLOBAL RESEARCH

Exhibit 9: Twin peaks, different causes

Early 80s yield high caused by punitive policy rates from Fed's Volcker to deal with inflation. 1984 peak caused by fiscal deficit expansion, %.



Source: BofA Global Research, LSEG Data & Analytics, Bloomberg

BofA GLOBAL RESEARCH

Notable Rates and FX Research

- **Global Macro Year Ahead 2025** – [Stretching the rubber band](#), 24 November 2024
- **Global Rates Year Ahead 2025** – [Continental Drift](#), 24 November 2024
- **G10 FX Year Ahead 2025** – [Policy Uncertainty](#), 26 November 2024
- [EUR needs some stability](#), **Liquid Cross Border Flows**, 17 February 2025

Rates, FX & EM trades for 2025

For a complete list of our open trade recommendations as well as our trade recommendations closed over the past 12 months, see the reports below:

[Global FX weekly: The epicentre of US foreign policy 21 February 2025](#)

[Global Rates Weekly: QT-ing time 21 February 2025](#)



Disclosures

Important Disclosures

BofA Global Research personnel (including the analyst(s) responsible for this report) receive compensation based upon, among other factors, the overall profitability of Bank of America Corporation, including profits derived from investment banking. The analyst(s) responsible for this report may also receive compensation based upon, among other factors, the overall profitability of the Bank's sales and trading businesses relating to the class of securities or financial instruments for which such analyst is responsible. BofA Securities fixed income analysts regularly interact with sales and trading desk personnel in connection with their research, including to ascertain pricing and liquidity in the fixed income markets.

Other Important Disclosures

Prices are indicative and for information purposes only. Except as otherwise stated in the report, for any recommendation in relation to an equity security, the price referenced is the publicly traded price of the security as of close of business on the day prior to the date of the report or, if the report is published during intraday trading, the price referenced is indicative of the traded price as of the date and time of the report and in relation to a debt security (including equity preferred and CDS), prices are indicative as of the date and time of the report and are from various sources including BofA Securities trading desks.

The date and time of completion of the production of any recommendation in this report shall be the date and time of dissemination of this report as recorded in the report timestamp.

This report may refer to fixed income securities or other financial instruments that may not be offered or sold in one or more states or jurisdictions, or to certain categories of investors, including retail investors. Readers of this report are advised that any discussion, recommendation or other mention of such instruments is not a solicitation or offer to transact in such instruments. Investors should contact their BofA Securities representative or Merrill Global Wealth Management financial advisor for information relating to such instruments.

Rule 144A securities may be offered or sold only to persons in the U.S. who are Qualified Institutional Buyers within the meaning of Rule 144A under the Securities Act of 1933, as amended. SECURITIES OR OTHER FINANCIAL INSTRUMENTS DISCUSSED HEREIN MAY BE RATED BELOW INVESTMENT GRADE AND SHOULD THEREFORE ONLY BE CONSIDERED FOR INCLUSION IN ACCOUNTS QUALIFIED FOR SPECULATIVE INVESTMENT.

Recipients who are not institutional investors or market professionals should seek the advice of their independent financial advisor before considering information in this report in connection with any investment decision, or for a necessary explanation of its contents.

The securities or other financial instruments discussed in this report may be traded over-the-counter. Retail sales and/or distribution of this report may be made only in states where these instruments are exempt from registration or have been qualified for sale.

Officers of BofAS or one or more of its affiliates (other than research analysts) may have a financial interest in securities of the issuer(s) or in related investments.

This report, and the securities or other financial instruments discussed herein, may not be eligible for distribution or sale in all countries or to certain categories of investors, including retail investors.

Refer to [BofA Global Research policies relating to conflicts of interest](#).

"BofA Securities" includes BofA Securities, Inc. ("BofAS") and its affiliates. Investors should contact their BofA Securities representative or Merrill Global Wealth Management financial advisor if they have questions concerning this report or concerning the appropriateness of any investment idea described herein for such investor. "BofA Securities" is a global brand for BofA Global Research.

Information relating to Non-US affiliates of BofA Securities and Distribution of Affiliate Research Reports:

BofAS and/or Merrill Lynch, Pierce, Fenner & Smith Incorporated ("MLPF&S") may in the future distribute, information of the following non-US affiliates in the US (short name: legal name, regulator): Merrill Lynch (South Africa): Merrill Lynch South Africa (Pty) Ltd., regulated by The Financial Service Board; MLI (UK): Merrill Lynch International, regulated by the Financial Conduct Authority (FCA) and the Prudential Regulation Authority (PRA); BofASE (France): BofA Securities Europe SA is authorized by the Autorité de Contrôle Prudentiel et de Résolution (ACPR) and regulated by the ACPR and the Autorité des Marchés Financiers (AMF). BofA Securities Europe SA ("BofASE") with registered address at 51, rue La Boétie, 75008 Paris is registered under no 842 602 690 RCS Paris. In accordance with the provisions of French Code Monétaire et Financier (Monetary and Financial Code), BofASE is an établissement de crédit et d'investissement (credit and investment institution) that is authorised and supervised by the European Central Bank and the Autorité de Contrôle Prudentiel et de Résolution (ACPR) and regulated by the ACPR and the Autorité des Marchés Financiers. BofASE's share capital can be found at www.bofam.com/BofASEdisclaimer; BofA Europe (Milan): Bank of America Europe Designated Activity Company, Milan Branch, regulated by the Bank of Italy, the European Central Bank (ECB) and the Central Bank of Ireland (CBI); BofA Europe (Frankfurt): Bank of America Europe Designated Activity Company, Frankfurt Branch regulated by BaFin, the ECB and the CBI; BofA Europe (Madrid): Bank of America Europe Designated Activity Company, Sucursal en España, regulated by the Bank of Spain, the ECB and the CBI; Merrill Lynch (Australia): Merrill Lynch Equities (Australia) Limited, regulated by the Australian Securities and Investments Commission; Merrill Lynch (Hong Kong): Merrill Lynch (Asia Pacific) Limited, regulated by the Hong Kong Securities and Futures Commission (HKSF); Merrill Lynch (Singapore): Merrill Lynch (Singapore) Pte Ltd, regulated by the Monetary Authority of Singapore (MAS); Merrill Lynch (Canada): Merrill Lynch Canada Inc, regulated by the Canadian Investment Regulatory Organization; Merrill Lynch (Mexico): Merrill Lynch Mexico, SA de CV, Casa de Bolsa, regulated by the Comisión Nacional Bancaria y de Valores; BofAS Japan: BofA Securities Japan Co., Ltd., regulated by the Financial Services Agency; Merrill Lynch (Seoul): Merrill Lynch International, LLC Seoul Branch, regulated by the Financial Supervisory Service; Merrill Lynch (Taiwan): Merrill Lynch Securities (Taiwan) Ltd., regulated by the Securities and Futures Bureau; BofAS India: BofA Securities India Limited, regulated by the Securities and Exchange Board of India (SEBI); Merrill Lynch (Israel): Merrill Lynch Israel Limited, regulated by Israel Securities Authority; Merrill Lynch (DIFC): Merrill Lynch International (DIFC Branch), regulated by the Dubai Financial Services Authority (DFSA); Merrill Lynch (Brazil): Merrill Lynch S.A. Corretora de Títulos e Valores Mobiliários, regulated by Comissão de Valores Mobiliários; Merrill Lynch KSA Company: Merrill Lynch Kingdom of Saudi Arabia Company, regulated by the Capital Market Authority. This information: has been approved for publication and is distributed in the United Kingdom (UK) to professional clients and eligible counterparties (as each is defined in the rules of the FCA and the PRA) by MLI (UK), which is authorized by the PRA and regulated by the FCA and the PRA - details about the extent of our regulation by the FCA and PRA are available from us on request; has been approved for publication and is distributed in the European Economic Area (EEA) by BofASE (France), which is authorized by the ACPR and regulated by the ACPR and the AMF; has been considered and distributed in Japan by BofAS Japan, a registered securities dealer under the Financial Instruments and Exchange Act in Japan, or its permitted affiliates; is issued and distributed in Hong Kong by Merrill Lynch (Hong Kong) which is regulated by HKSF; is issued and distributed in Taiwan by Merrill Lynch (Taiwan); is issued and distributed in India by BofAS India; and is issued and distributed in Singapore to institutional investors and/or accredited investors (each as defined under the Financial Advisers Regulations) by Merrill Lynch (Singapore) (Company Registration No 198602883D). Merrill Lynch (Singapore) is regulated by MAS. Merrill Lynch Equities (Australia) Limited (ABN 65 006 276 795), AFS License 235132 (MLEA) distributes this information in Australia only to 'Wholesale' clients as defined by s.761G of the Corporations Act 2001. With the exception of Bank of America N.A., Australia Branch, neither MLEA nor any of its affiliates involved in preparing this information is an Authorised Deposit-Taking Institution under the Banking Act 1959 nor regulated by the Australian Prudential Regulation Authority. No approval is required for publication or distribution of this information in Brazil and its local distribution is by Merrill Lynch (Brazil) in accordance with applicable regulations. Merrill Lynch (DIFC) is authorized and regulated by the DFSA. Information prepared and issued by Merrill Lynch (DIFC) is done so in accordance with the requirements of the DFSA conduct of business rules. BofA Europe (Frankfurt) distributes this information in Germany and is regulated by BaFin, the ECB and the CBI. BofA Securities entities, including BofA Europe and BofASE (France), may outsource/delegate the marketing and/or provision of certain research services or aspects of research services to other branches or members of the BofA Securities group. You may be contacted by a different BofA Securities entity acting for and on behalf of your service provider where permitted by applicable law. This does not change your service provider. Please refer to the [Electronic Communications Disclaimers](#) for further information.

This information has been prepared and issued by BofAS and/or one or more of its non-US affiliates. The author(s) of this information may not be licensed to carry on regulated activities in your jurisdiction and, if not licensed, do not hold themselves out as being able to do so. BofAS and/or MLPF&S is the distributor of this information in the US and accepts full responsibility for information distributed to BofAS and/or MLPF&S clients in the US by its non-US affiliates. Any US person receiving this information and wishing to effect any transaction in any security



discussed herein should do so through BofAS and/or MLPF&S and not such foreign affiliates. Hong Kong recipients of this information should contact Merrill Lynch (Asia Pacific) Limited in respect of any matters relating to dealing in securities or provision of specific advice on securities or any other matters arising from, or in connection with, this information. Singapore recipients of this information should contact Merrill Lynch (Singapore) Pte Ltd in respect of any matters arising from, or in connection with, this information. For clients that are not accredited investors, expert investors or institutional investors Merrill Lynch (Singapore) Pte Ltd accepts full responsibility for the contents of this information distributed to such clients in Singapore.

General Investment Related Disclosures:

Taiwan Readers: Neither the information nor any opinion expressed herein constitutes an offer or a solicitation of an offer to transact in any securities or other financial instrument. No part of this report may be used or reproduced or quoted in any manner whatsoever in Taiwan by the press or any other person without the express written consent of BofA Securities.

This document provides general information only, and has been prepared for, and is intended for general distribution to, BofA Securities clients. Neither the information nor any opinion expressed constitutes an offer or an invitation to make an offer, to buy or sell any securities or other financial instrument or any derivative related to such securities or instruments (e.g., options, futures, warrants, and contracts for differences). This document is not intended to provide personal investment advice and it does not take into account the specific investment objectives, financial situation and the particular needs of, and is not directed to, any specific person(s). This document and its content do not constitute, and should not be considered to constitute, investment advice for purposes of ERISA, the US tax code, the Investment Advisers Act or otherwise. Investors should seek financial advice regarding the appropriateness of investing in financial instruments and implementing investment strategies discussed or recommended in this document and should understand that statements regarding future prospects may not be realized. Any decision to purchase or subscribe for securities in any offering must be based solely on existing public information on such security or the information in the prospectus or other offering document issued in connection with such offering, and not on this document.

Securities and other financial instruments referred to herein, or recommended, offered or sold by BofA Securities, are not insured by the Federal Deposit Insurance Corporation and are not deposits or other obligations of any insured depository institution (including, Bank of America, N.A.). Investments in general and, derivatives, in particular, involve numerous risks, including, among others, market risk, counterparty default risk and liquidity risk. No security, financial instrument or derivative is suitable for all investors. Digital assets are extremely speculative, volatile and are largely unregulated. In some cases, securities and other financial instruments may be difficult to value or sell and reliable information about the value or risks related to the security or financial instrument may be difficult to obtain. Investors should note that income from such securities and other financial instruments, if any, may fluctuate and that price or value of such securities and instruments may rise or fall and, in some cases, investors may lose their entire principal investment. Past performance is not necessarily a guide to future performance. Levels and basis for taxation may change.

Futures and options are not appropriate for all investors. Such financial instruments may expire worthless. Before investing in futures or options, clients must receive the appropriate risk disclosure documents. Investment strategies explained in this report may not be appropriate at all times. Costs of such strategies do not include commission or margin expenses.

BofA Securities is aware that the implementation of the ideas expressed in this report may depend upon an investor's ability to "short" securities or other financial instruments and that such action may be limited by regulations prohibiting or restricting "shortselling" in many jurisdictions. Investors are urged to seek advice regarding the applicability of such regulations prior to executing any short idea contained in this report.

This report may contain a trading idea or recommendation which highlights a specific identified near-term catalyst or event impacting a security, issuer, industry sector or the market generally that presents a transaction opportunity, but does not have any impact on the analyst's particular "Overweight" or "Underweight" rating (which is based on a three month trade horizon). Trading ideas and recommendations may differ directionally from the analyst's rating on a security or issuer because they reflect the impact of a near-term catalyst or event.

Foreign currency rates of exchange may adversely affect the value, price or income of any security or financial instrument mentioned in this report. Investors in such securities and instruments effectively assume currency risk.

BofAS or one of its affiliates is a regular issuer of traded financial instruments linked to securities that may have been recommended in this report. BofAS or one of its affiliates may, at any time, hold a trading position (long or short) in the securities and financial instruments discussed in this report.

BofA Securities, through business units other than BofA Global Research, may have issued and may in the future issue trading ideas or recommendations that are inconsistent with, and reach different conclusions from, the information presented herein. Such ideas or recommendations may reflect different time frames, assumptions, views and analytical methods of the persons who prepared them, and BofA Securities is under no obligation to ensure that such other trading ideas or recommendations are brought to the attention of any recipient of this information.

In the event that the recipient received this information pursuant to a contract between the recipient and BofAS for the provision of research services for a separate fee, and in connection therewith BofAS may be deemed to be acting as an investment adviser, such status relates, if at all, solely to the person with whom BofAS has contracted directly and does not extend beyond the delivery of this report (unless otherwise agreed specifically in writing by BofAS). If such recipient uses the services of BofAS in connection with the sale or purchase of a security referred to herein, BofAS may act as principal for its own account or as agent for another person. BofAS is and continues to act solely as a broker-dealer in connection with the execution of any transactions, including transactions in any securities referred to herein.

Copyright and General Information:

Copyright 2025 Bank of America Corporation. All rights reserved. iQDatabase® is a registered service mark of Bank of America Corporation. This information is prepared for the use of BofA Securities clients and may not be redistributed, retransmitted or disclosed, in whole or in part, or in any form or manner, without the express written consent of BofA Securities. This document and its content is provided solely for informational purposes and cannot be used for training or developing artificial intelligence (AI) models or as an input in any AI application (collectively, an AI tool). Any attempt to utilize this document or any of its content in connection with an AI tool without explicit written permission from BofA Global Research is strictly prohibited. BofA Global Research information is distributed simultaneously to internal and client websites and other portals by BofA Securities and is not publicly-available material. Any unauthorized use or disclosure is prohibited. Receipt and review of this information constitutes your agreement not to redistribute, retransmit, or disclose to others the contents, opinions, conclusion, or information contained herein (including any investment recommendations, estimates or price targets) without first obtaining express permission from an authorized officer of BofA Securities.

Materials prepared by BofA Global Research personnel are based on public information. Facts and views presented in this material have not been reviewed by, and may not reflect information known to, professionals in other business areas of BofA Securities, including investment banking personnel. BofA Securities has established information barriers between BofA Global Research and certain business groups. As a result, BofA Securities does not disclose certain client relationships with, or compensation received from, such issuers. To the extent this material discusses any legal proceeding or issues, it has not been prepared as nor is it intended to express any legal conclusion, opinion or advice. Investors should consult their own legal advisers as to issues of law relating to the subject matter of this material. BofA Global Research personnel's knowledge of legal proceedings in which any BofA Securities entity and/or its directors, officers and employees may be plaintiffs, defendants, co-defendants or co-plaintiffs with or involving issuers mentioned in this material is based on public information. Facts and views presented in this material that relate to any such proceedings have not been reviewed by, discussed with, and may not reflect information known to, professionals in other business areas of BofA Securities in connection with the legal proceedings or matters relevant to such proceedings.

This information has been prepared independently of any issuer of securities mentioned herein and not in connection with any proposed offering of securities or as agent of any issuer of any securities. None of BofAS or any of its affiliates or their research analysts has any authority whatsoever to make any representation or warranty on behalf of the issuer(s). BofA Global Research policy prohibits research personnel from disclosing a recommendation, investment rating, or investment thesis for review by an issuer prior to the publication of a research report containing such rating, recommendation or investment thesis.

Any information relating to sustainability in this material is limited as discussed herein and is not intended to provide a comprehensive view on any sustainability claim with respect to any issuer or security.

Any information relating to the tax status of financial instruments discussed herein is not intended to provide tax advice or to be used by anyone to provide tax advice. Investors are urged to seek tax advice based on their particular circumstances from an independent tax professional.

The information herein (other than disclosure information relating to BofA Securities and its affiliates) was obtained from various sources and we do not guarantee its accuracy. This information may contain links to third-party websites. BofA Securities is not responsible for the content of any third-party website or any linked content contained in a third-party website. Content contained on such third-party websites is not part of this information and is not incorporated by reference. The inclusion of a link does not imply any endorsement by or any affiliation with BofA Securities. Access to any third-party website is at your own risk, and you should always review the terms and privacy policies at third-party websites before submitting any personal information to them. BofA Securities is not responsible for such terms and privacy policies and expressly disclaims any liability for them.

All opinions, projections and estimates constitute the judgment of the author as of the date of publication and are subject to change without notice. Prices also are subject to change without notice. BofA Securities is under no obligation to update this information and BofA Securities ability to publish information on the subject issuer(s) in the future is subject to applicable quiet periods. You should therefore assume that BofA Securities will not update any fact, circumstance or opinion contained herein.

Certain outstanding reports or investment opinions relating to securities, financial instruments and/or issuers may no longer be current. Always refer to the most recent research report relating to an issuer prior to making an investment decision.



In some cases, an issuer may be classified as Restricted or may be Under Review or Extended Review. In each case, investors should consider any investment opinion relating to such issuer (or its security and/or financial instruments) to be suspended or withdrawn and should not rely on the analyses and investment opinion(s) pertaining to such issuer (or its securities and/or financial instruments) nor should the analyses or opinion(s) be considered a solicitation of any kind. Sales persons and financial advisors affiliated with BofAS or any of its affiliates may not solicit purchases of securities or financial instruments that are Restricted or Under Review and may only solicit securities under Extended Review in accordance with firm policies. Neither BofA Securities nor any officer or employee of BofA Securities accepts any liability whatsoever for any direct, indirect or consequential damages or losses arising from any use of this information.



Research Analysts

US

Ralph Axel
Rates Strategist
BofAS
+1 646 855 6226
ralph.axel@bofa.com

Paul Ciana, CMT
Technical Strategist
BofAS
+1 646 855 6007
paul.ciana@bofa.com

John Shin
FX Strategist
BofAS
+1 646 855 9342
joong.s.shin@bofa.com

Vadim Iaralov
FX Strategist
BofAS
+1 646 855 8732
vadim.iaralov@bofa.com

Mark Cabana, CFA
Rates Strategist
BofAS
+1 646 855 9591
mark.cabana@bofa.com

Bruno Braizinha, CFA
Rates Strategist
BofAS
+1 646 855 8949
bruno.braizinha@bofa.com

Meghan Swiber, CFA
Rates Strategist
BofAS
+1 646 855 9877
meghan.swiber@bofa.com

Europe

Ralf Preusser, CFA
Rates Strategist
MLI (UK)
+44 20 7995 7331
ralf.preusser@bofa.com

Ruben Segura-Cayuela
Europe Economist
BofA Europe (Madrid)
+34 91 514 3053
ruben.segura-cayuela@bofa.com

Mark Capleton
Rates Strategist
MLI (UK)
+44 20 7995 6118
mark.capleton@bofa.com

Athanasios Vamvakidis
FX Strategist
MLI (UK)
+44 020 7995 0279
athanasios.vamvakidis@bofa.com

Sphia Salim
Rates Strategist
MLI (UK)
+44 20 7996 2227
sphia.salim@bofa.com

Kamal Sharma
FX Strategist
MLI (UK)
+44 20 7996 4855
ksharma32@bofa.com

Ronald Man
Rates Strategist
MLI (UK)
+44 20 7995 1143
ronald.man@bofa.com

Michalis Rousakis
FX Strategist
MLI (UK)
+44 20 7995 0336
michalis.rousakis@bofa.com

Pac Rim

Adarsh Sinha
FX Strategist
Merrill Lynch (Hong Kong)
+852 3508 7155
adarsh.sinha@bofa.com

Janice Xue
Rates Strategist
Merrill Lynch (Hong Kong)
+852 3508 8587
janice.xue@bofa.com

Shusuke Yamada, CFA
FX/Rates Strategist
BofAS Japan
+81 3 6225 8515
shusuke.yamada@bofa.com

Trading ideas and investment strategies discussed herein may give rise to significant risk and are not suitable for all investors. Investors should have experience in relevant markets and the financial resources to absorb any losses arising from applying these ideas or strategies.

