# Liquid Insight

# GBP – As good as it gets?

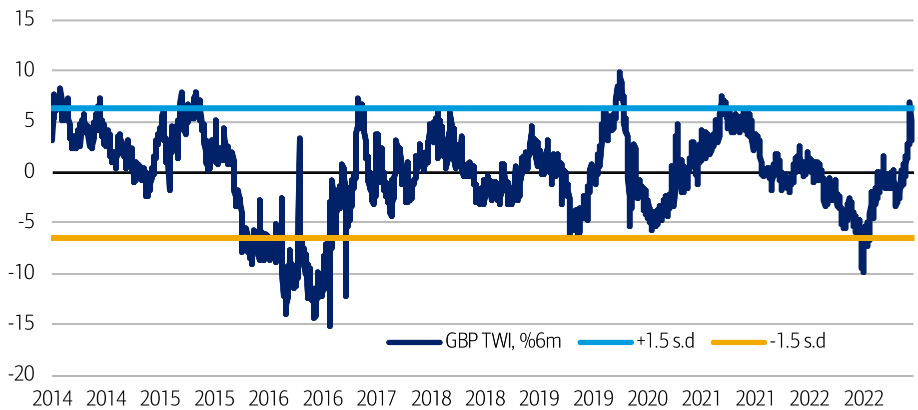
## Key takeaways

- April seasonality propels GBP TWI to strongest since start of year but momentum indicators look overbought - bias to fade
- Data continues to price out worst case & risks remain for further hikes. But lead indicators are pointing to gloomy outlook
- Meanwhile, little evidence of a return to UK asset markets by foreign investors, a crucial input for constructive GBP outlook

## *By* Kamal Sharma

**Chart of the Day: 6mth annualized change in GBP TWI**

YTD rally is pushing GBP into overbought territory and opportunity to fade




**Source:** BofA Global Research, Bloomberg

BofA GLOBAL ESEARCH

## A rare ray of optimism

GBP has recently fallen off many investors' radars against the backdrop of concern that "something must break" as rates go higher. Thankfully for UK watchers, that concern has not focused on the UK which in itself must be considered a victory given the barrage of negativity over the last decade. Consequently, we have witnessed a rare event where GBP TWI has delivered positive returns in the first three months of the year, only the second time in 25 years and with positive April seasonality also exerting its influence, we could see an unprecedented fourth. So far so good and one of our key calls this year is that GBP should benefit from the removal of tail risk premium and news flow becoming "less bad". However, this may be as good as it gets: the best of UK data surprises may be behind us and there is little encouragement that international investors are returning to UK asset markets – a necessary condition for medium-term optimism.

**19 April 2023**

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 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

See Team Page for List of Analysts

**Liquid Insight**
**Recent Publications**

| | |
|---|---|
| 18-Apr-23 | Don't pay BOB: bank funding task falls |
| 17-Apr-23 | Yen-carry trade redux |
| 13-Apr-23 | What the IMF didn't say about real yields |
| 12-Apr-23 | Les Misérables: A year later |
| 11-Apr-23 | Bank of Canada preview: On hold with a hawkish message |
| 6-Apr-23 | Scandies FX: NOKSEK higher |
| 5-Apr-23 | Fed + FHLB to the liquidity rescue |
| 4-Apr-23 | EGB credit rating cycle turns less positive |
| 3-Apr-23 | RBA/RBNZ preview: Nearing a pause |
| 30-Mar-23 | Sudden tumult for G10 FX |

BofA GLOBAL RESEARCH

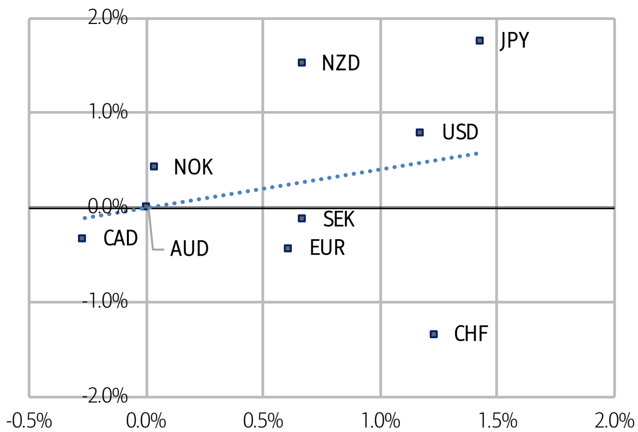


Timestamp: 19 April 2023 12:30AM EDT

## Out of the limelight

The pound currently finds itself in a rare, sweet spot. Though April seasonality has been a well-known positive for many years and appears to be exerting its influence once again, 2023 has so far been kind to GBP. Exhibit 1 plots the performance of GBP versus in April over the past 15 years (x-axis) versus the current month-to-date performance (y-axis). With the exception of CHF and EUR to a lesser extent, GBP has been conforming to historical trends so far this April. This tends to suggest that some normality is returning to the sterling markets. In many ways, GBP has retreated from the headlines as other forces dominate FX markets. The nuance, however, is that this is not because the UK has done something fundamentally positive. The cognitive bias of the markets suggests relief that the UK has not done anything else wrong. GBP has therefore become less of an idiosyncratic risk than it was towards the latter part of 2022. It is not just another G10 currency.

**Exhibit 1: April GBP performance vs G10: 15yrs (x-axis); MTD (y-axis)**
MTD GBP performance through April conforming with 15-year average




**Source:** BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

**Exhibit 2: 1yr rolling correlation GBP TWI vs UK Data surprises**
UK Data is not a major driver for GBP


**Source:** BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

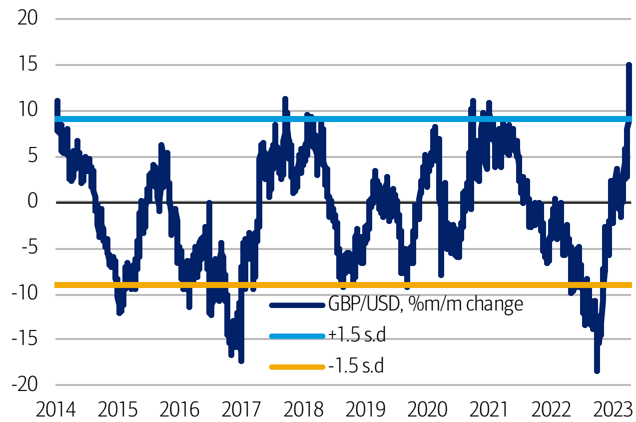
Yet for all the positivity about the direction of travel, it is worth noting that GBP TWI remains caught in the post-Brexit referendum range and towards the bottom end of its range since the signing of the Brexit deal. Nonetheless, given the scale of bearishness at the start of the year, a +1% YTD return in GBP TWI should be viewed through a positive lens. But is this as good as it gets? We have emphasized on numerous occasions that the global cycle rather than the domestic cycle matters more for GBP at present. Exhibit 2 shows how the 1yr rolling correlation between GBP and UK data surprises remains low.

This is not to say that UK data does not matter as this is what will ultimately define the BoE reaction function. But the disconnect between GBP and UK data was highlighted this week with the release of stronger-than-expected average earnings data – the GBP rally could not be sustained versus the crosses. The unique nature of the shock that has hit the UK suggests to us that the BoE is fighting forces (largely supply side) that it ultimately cannot control. Their rate hikes are not necessarily going to feed into higher GBP.

### So, is that it for GBP?

So, whilst March was all about the deleveraging of GBP shorts, we do not think that GBP will act as positively as it did to further global macro shocks and higher volatility. Seasonality is not the sole basis for our near-term views on GBP, but May/June have historically been weak months for the TWI and GBP has fallen in every Q1 since 2016. Our chart of the day suggests that GBP momentum is looking increasingly overbought and of the major pairs, GBP/USD looks most overbought (Exhibit 3). This feeds into the narrative that strong April seasonality will eventually give way to fading the GBP rally. Whether the BoE hikes again or not is immaterial given current pricing for the May meeting which expects a further 25bp hike.

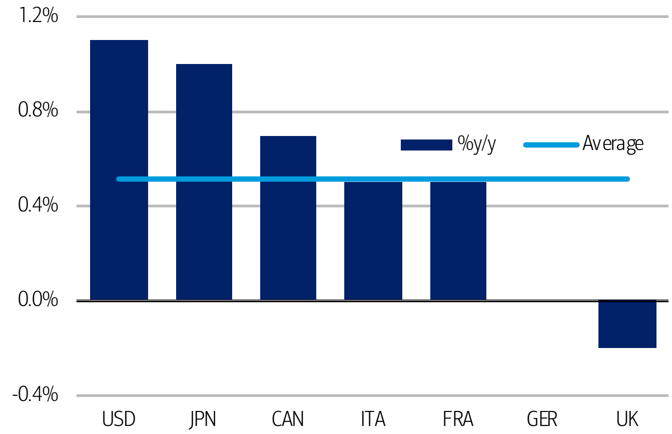
**Exhibit 3: GBP/USD 6mth annualized change**
GBP/USD momentum appears overbought




**Source:** BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

**Exhibit 4: G7 2023 GDP Consensus forecasts (% YoY)**
Not as bad but not great for UK growth this year

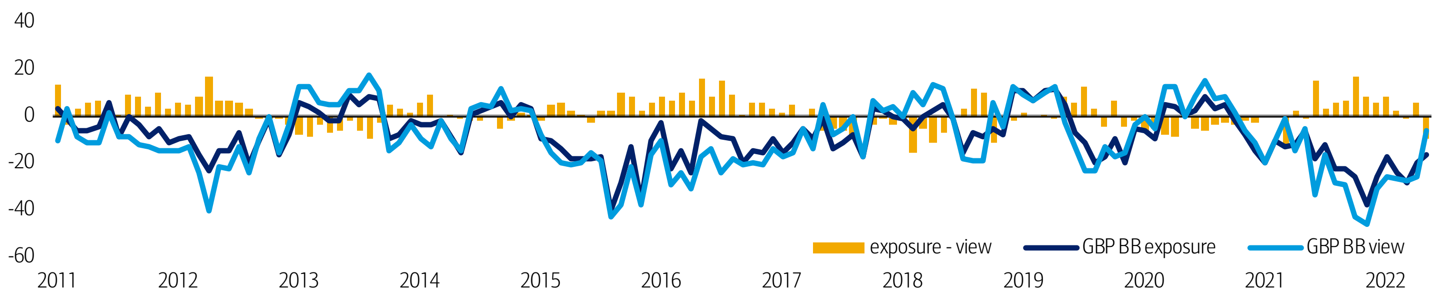



**Source:** BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

The observation that things could have been a lot worse does not translate into things getting much better. 2023 growth forecasts in G7 still anchor the UK at the bottom of the table, albeit following upward revisions. So, whilst the worst may be over, the UK forecast profile still indicates that things are not going to get much better anytime soon versus major peers. This narrative plays in nicely to the evidence from our recent FX and Rates Sentiment Survey: Shaken, not stirred 17 April 2023, where the GBP dynamics are evolving as we had expected: markets have priced our tail risks, sentiment has improved but a catalyst has yet to emerge to embolden longer-term investors to go establish long positioning (Exhibit 5).

**Exhibit 5: GBP: FX Exposure and View**
GBP sentiment has turned less bearish but yet to translate into long positioning




**Source:** BofA Global Research FX and Rates Sentiment Survey. BB is the Bull-Bear Index for exposure and view. It weights responses to create an index ranging from -100 to + 100, zero representing neutral.

## Where are the kind strangers?

Two new reports from our research colleagues provide a strong anchor in connecting the dots on why GBP will continue to struggle in the absence of underlying demand for UK assets. We have focused on the regular monthly foreign gilt purchase data (European Rates Watch: Overseas buying of Gilts in February: domestics to the rescue 29 March 2023) to gauge investor sentiment towards UK plc. The Bankstats data has shown consistent foreign sales of UK gilts and this is being corroborated by our own proprietary indicators (FX Viewpoint: FX flows & positioning in Q1 18 April 2023) which shows significant official selling of GBP through Q1. The pick-up in GBP buying by the leveraged community appears to have been more opportunistic than a vote of confidence in the UK but the longer-term structural backdrop remains weak. In the April edition of the Global Fund Manager Survey: You Can Bank On It 18 April 2023, FMS allocation to UK equities collapsed by 15ppt MoM to net 21% underweight. April was the first monthly decline in UK equity allocation since Oct'22 and took place against the backdrop of improving sentiment towards the UK.

Sterling's rally since the start of the year does not mean that the outlook has improved enough to compel global investors to return to the UK asset markets. Six months after the GBP crisis, investors remain nervy in their allocations to the UK. We are less concerned about the outlook in 2023 than we were about the outlook in 2022 but are also aware that reputational damage and a fundamental reappraisal of pros and cons of Brexit will continue to limit investor participation. We thought 2023 would be a year of struggle for GBP even as the tail risks were being priced out. We maintain this view particularly as GBP finds itself at an important juncture: do markets forgive and forget or do they still have reservations about GBP and the UK? We continue to err towards the latter.

# Notable Rates and FX Research

- **Global Rates, FX & EM Year Ahead 2023 – Year Ahead 2023: Pivot ≠ Peak**, 20 Nov 2022
- After the IMF, **Global FX Weekly**, 14 Apr 2023
- Finger on the pause button**, Global Rates Weekly**, 14 Apr 2023
- As the market dust settles, **Liquid Cross Border Flows**, 3 Apr 2023

# Rates, FX & EM trades for 2023

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: After the IMF 14 April 2023

Global Rates Weekly: Finger on the pause button 14 April 2023

# 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.bofaml.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 (HKSFC); 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 Investment Industry Regulatory Organization of Canada; Merrill Lynch (Mexico): Merrill Lynch Mexico, SA de CV, Casa de Bolsa, regulated by the Comisión Nacional Bancaria y de Valores; Merrill Lynch (Argentina): Merrill Lynch Argentina SA, regulated by Comisión Nacional 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 HKSFC; 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:**



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 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 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.

# 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