Euro Area Watch

ECB Review: not lowering the guard

14 December 2023

Macro
Europe

Global Economics Rates & FX
BofAS

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

Evelyn Herrmann
Europe Economist
BofASE (France)
+33 1 8770 0292
evelyn.herrmann@bofa.com

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

Erjon Satko
Rates Strategist
BofASE (France)
erjon.satko@bofa.com

Ronald Man
Rates Strategist
MLI (UK)
ronald.man@bofa.com

Athanasios Vamvakidis
FX Strategist
MLI (UK)
+44 20 7995 0279
athanasios.vamvakidis@bofa.com

See Team Page for List of Analysts

A proper and smooth pushback

We expected no policy changes or changes to written guidance from the ECB. And this is what we got. We were also expecting a modest pushback on market pricing of too early and too fast of a cutting cycle. And we got a more forceful one, particularly when following a dovish performance from the Fed the day before. Our call is still for a first cut in June, quarterly in 2024 year then per meeting in 2025 until 2% is reached. Markets have moved fast, but perhaps has gone too far now. An April cut is no longer unthinkable, but would take more data surprises, at least in Dec, if not even in Jan/Feb given the usual noise at the beginning of the year. Overall, we think cuts are coming but they are not immediate.

Not so fast

True, the ECB stayed away from giving any calendar guidance, and we weren't expecting them to do so. Still, Lagarde managed to deliver a proper pushback. Cuts were not discussed at all. More importantly, Lagarde pointed to the move in market pricing since the forecast cut-off date, implicitly indicating that market pricing today is not necessarily consistent with inflation going back to target. She also put the emphasis on the fact that domestic inflationary pressures remain strong, and that the ECB needs to see how 1H data on wages and profits evolve to feel comfortable the job is done. Finally, and more subtle, the balance of risks to the inflation outlook did not change as much as we expected in the preview.

All in all it doesn't feel like a central bank that will consider the beginning of a cutting cycle in the next two meetings. As we have been arguing, April is not unthinkable for the first cut, but you need more downward surprises to core inflation. June is still the base case.

An early PEPP quantitative tightening

We had been expecting partial reinvestments on PEPP starting in June 2024 for quite some time. Last week, after Lagarde flagged the issue would be discussed shortly we took that as June 2024 potentially being too late and we changed our call to April. Instead, we got a preannouncement that in six months (June 2024) only 50% of reinvestments will take place. Reinvestments would stop fully after that. This should have little economic implications at this point.

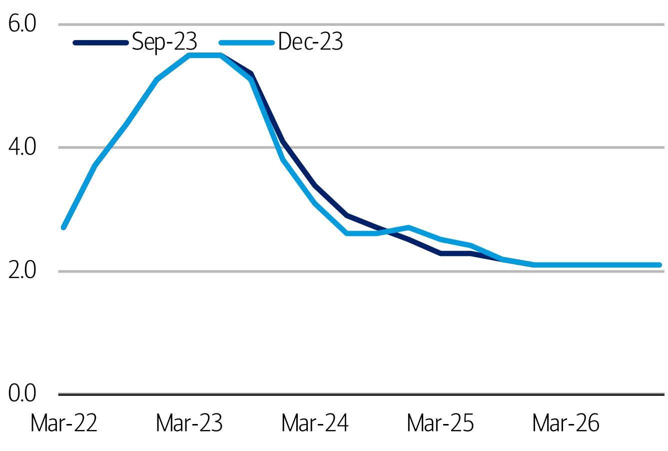
(Continued on next page.)

ECB forecasts: current pricing not compatible with return to target

We expected the ECB to use recent unit labour cost developments as a justification for sticky inflation forecasts close to 2% in 2025/26. They did – and even more forcefully than we thought. Core inflation in 2025 was actually revised marginally higher to 2.3%, and is forecast at a steady 2.1% in 2026. It is compelling to argue the ECB might be forced to cut forecasts as early as March, creating room for a cut in April. In terms of growth, that might be true, because the forecast assumes an imminent improvement in sequential growth, expected at 0.8% in 2024.

But in terms of core inflation in particular, this is not so obvious. The ECB has intensified the disinflation trajectory in its quarterly core inflation forecast compared to the September profile, but then assumes inflation will move sideways in 2H24 (Exhibit 1). That creates some resilience against early cuts. Even if inflation were to decline a tad faster by March than the new forecast assumes, the ECB could point to the expected persistence in 2H24 to justify policy rates on hold for a little longer – unless the unit labour cost assumption were to change. This is not impossible given ECB staff rather than National Central Banks are in charge of the forecast update then.

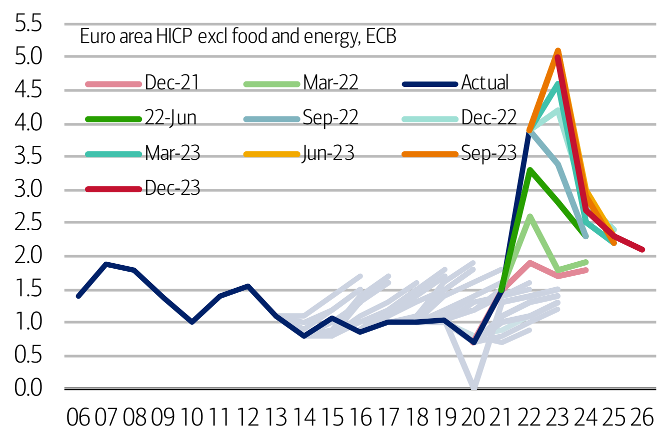
Exhibit 1: ECB core inflation forecast – quarterly trajectory
Steeper downward adjustment now, stickier in 2H24



Source: ECB Staff Projections, BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 2: ECB core inflation forecasts – annual averages
Core inflation in 2025 was actually revised marginally higher to 2.3%, and is forecast at a steady 2.1% in 2026



Source: ECB Staff Projections, BofA Global Research

BofA GLOBAL RESEARCH

Rates: ECB pushes back on cuts, but data is what counts

The ECB's message today was less dovish than the Fed's. The ECB remains concerned about risks of second round effect on wages and is not keen to declare victory on inflation just yet. In fact, we find that Lagarde was less dovish than Schnabel last week. The continued rally in rates may have caused uneasiness even as the latest inflation print surprised to the downside.

Still, Lagarde noted that the ECB remains data dependent, with a lot of data and surveys due in 1H24. We believe this is what the market will ultimately focus on. In particular, downside surprises in the next inflation prints can result in the market pricing in still around 150bp of cuts in 2024. In fact, if coupled with weaker than expected growth data, we would not rule out that the market converges to pricing in a return to 2%, the ECB's current guidance for neutral, as soon as 2024. If such surprises occur but the ECB's message remains unchanged, the market could then view the central bank as being behind the curve in recognising the disinflationary pressures, creating scope for the pricing of cuts larger than 25bp in 2H24, akin to the dynamic in the hiking cycle.

This data dependence can keep volatility elevated in the front end of the EUR curve for the next few months. On an outright basis, we would not fade the 150bp of ECB rate cuts priced in by the market for 2024. However, we see value in considering structures that present limited downside in order to hedge against the pricing out of early ECB cuts and position for a convergence in pricing towards our economists' baseline.

BTP tightening looks exaggerated

Despite Lagarde's pushback against market pricing of cut and the announcement of PEPP QT, 10y BTP-Bund spreads tightened by close to 9bp during the press conference. The PEPP announcement was a bullish surprise vs our call of 50% reinvestments pace (roughly equivalent to €7.5bn decline a month) starting from April. Given BTP's reaction, market expectations must have been even more aggressive (on the hawkish side).

The PEPP change is, in the big picture, a small development and should not be the basis of a significant repricing in EGB space. Net-net EGB issuance is likely above €500bn next year and €40bn variations driven by PEPP do not change the fundamental picture.

However, Italy stands out as the issuer with the biggest net supply increase on a YoY basis (we project c. €100bn in 2024 vs €40bn in 2023). With that in mind, the market euphoria on central banks cuts next year and their positive effect on risk assets starts to appear excessive in terms of the tightening impact on BTP spreads. We argued that a rally in Bunds to 2% and a decline in rates volatility can tighten the 10y BTP-Bund spread to 160bp in 2024. We are now already at 167bp but supply is looming in 1Q24, making the risk reward in BTP-Bund spreads unattractive near term.

Front-end: it's happening

The acceleration of balance sheet reduction by the ECB is happening. The decision to begin partial reinvestments in the PEPP portfolio from June 2024, even if a later than our economists' expectations of April, is an important signal for the front-end euro rates market that liquidity will continue to decline even when the ECB cuts rates.

The impact of accelerated QT on bank reserves was not mentioned in either the accompanying statement or President Lagarde's press conference. This is worrying because we believe there are risks of bank reserve demand exceeding supply next year.

We remain concerned over the risk that the ECB does not agree upon lending operations that could satiate banks' reserve demand as it continues to wind down its balance sheet. Such uncertainty could prompt the market to price in higher funding costs for banks as funding competition intensifies. In our view, the price of any such operations by the ECB must be sufficiently low, have a sufficiently long maturity, and with no negative stigma attached on usage even in size. That, however, may potentially need to be squared with such operations becoming comparable to TLTROs but without any conditions attached.

FX: Stronger EURUSD until Q1 data reality check

The Fed was from Venus and the ECB was from Mars this week. Despite much weaker data and lower inflation, the ECB pushed against market pricing for early rate cuts next year, diverging strongly from the very dovish Fed yesterday by emphasizing that the ECB would not "lower its guard." The market moved from pricing more and earlier ECB cuts next year, to pricing broadly the same. EURUSD was already strengthening after the Fed but moved even higher after the ECB.

For now, this divergence could support EURUSD further, but at the end the data in the first quarter will determine who is right. The truth may end up somewhere in the middle, pointing to some downward EURUSD risks in Q1. All this is consistent with our view for stronger EURUSD next year, but on a choppy path, and also consistent with the way the market has traded in November and so far in December.

The price action this week was also another demonstration that the Fed matters more for EURUSD. Beyond rate differentials, which is not the main FX driver right now, the Fed affects FX markets through risk sentiment. This suggests to us that even if the two central banks cut rates at the same time and at the same pace, EURUSD can still strengthen. We stick with our forecast for EURUSD at 1.15 by the end of 2024.

Disclosures

Important Disclosures

Due to the nature of strategic analysis, the issuers or securities recommended or discussed in this report are not continuously followed. Accordingly, investors must regard this report as providing stand-alone analysis and should not expect continuing analysis or additional reports relating to such issuers and/or securities.
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.
Individuals identified as economists do not function as research analysts under U.S. law and reports prepared by them are not research reports under applicable U.S. rules and regulations. Macroeconomic analysis is considered investment research for purposes of distribution in the U.K. under the rules of the Financial Conduct Authority.
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 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; 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.

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

Research Analysts

North America Economics

Michael Gapen
US Economist
BofAS
michael.gapen@bofa.com

Aditya Bhave
US Economist
BofAS
aditya.bhave@bofa.com

Stephen Juneau
US Economist
BofAS
stephen.juneau@bofa.com

Jeseo Park
US Economist
BofAS
jeseo.park@bofa.com

Developed Europe Economics

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

Robert Wood
UK Economist
MLI (UK)
robert.d.wood@bofa.com

Evelyn Herrmann
Europe Economist
BofASE (France)
evelyn.herrmann@bofa.com

Chiara Angeloni
Europe Economist
BofA Europe (Milan)
chiara.angeloni@bofa.com

Alessandro Infelise Zhou
Europe Economist
BofASE (France)
alessandro.infelise_zhou@bofa.com

Japan Economics

Izumi Devalier
Japan and Asia Economist
BofAS Japan
+81 3 6225 6257
izumi.devalier@bofa.com

Takayasu Kudo
Japan and Asia Economist
BofAS Japan
+81 3 6225 8592
takayasu.kudo@bofa.com

Australia Economics

Micaela Fuchila
Economist
Merrill Lynch (Australia)
micaela.fuchila@bofa.com

Emerging Asia Economics

Helen Qiao
China & Asia Economist
Merrill Lynch (Hong Kong)
+852 3508 3961
helen.qiao@bofa.com

Jojo Gonzales ^^
Research Analyst
Philippine Equity Partners
jojo.gonzales@pep.com.ph

Aastha Gudwani
India Economist
BofAS India
aastha.gudwani@bofa.com

Pipat Luengnaruemitchai
Emerging Asia Economist
Kiatnakin Phatra Securities
pipat.luen@kkpfg.com

Miao Ouyang
China & Asia Economist
Merrill Lynch (Hong Kong)
miao.ouyang@bofa.com

Benson Wu
China & Korea Economist
Merrill Lynch (Hong Kong)
benson.wu@bofa.com

Chun Him Cheung, CFA
Emerging Asia FI/FX Strategist
Merrill Lynch (Hong Kong)
chunhim.cheung@bofa.com

EEMEA Cross Asset Strategy and Economics

David Hauner, CFA >>
Global EM FI/FX Strategist
MLI (UK)
+44 20 7996 1241
david.hauner@bofa.com

Mai Doan
CEE Economist
MLI (UK)
mai.doan@bofa.com

Vladimir Osakovskiy >>
EM Sovereign FI/EQ strategist
Merrill Lynch (DIFC)
vladimir.osakovskiy@bofa.com

Zumrut Imamoglu
Turkey & Israel Economist
MLI (UK)
zumrut.imamoglu@bofa.com

Tatonga Rusike
Sub-Saharan Africa Economist
MLI (UK)
tatonga.rusike@bofa.com

Jean-Michel Saliba
MENA Economist/Strategist
MLI (UK)
jean-michel.saliba@bofa.com

Merveille Paja
EEMEA Sovereign FI Strategist
MLI (UK)
merveille.paja@bofa.com

Mikhail Liluashvili
EEMEA Local Markets Strategist
MLI (UK)
mikhail.liluashvili@bofa.com

Latin America Strategy and Economics

Claudio Irigoyen
Global Economist
BofAS
+1 646 855 1734
claudio.irigoyen@bofa.com

David Beker >>
Bz Econ/FI & LatAm EQ Strategy
Merrill Lynch (Brazil)
david.beker@bofa.com

Jane Brauer
Sovereign Debt FI Strategist
BofAS
jane.brauer@bofa.com

Carlos Capistran
Canada and Mexico Economist
BofAS
carlos.capistran@bofa.com

Pedro Diaz
Caribbean Economist
BofAS
pdiaz2@bofa.com

Christian Gonzalez Rojas
LatAm Local Markets Strategist
BofAS
christian.gonzalezrojas@bofa.com

Lucas Martin, CFA
Sovereign Debt FI Strategist
BofAS
lucas.martin@bofa.com

Alexander Müller
Andean(ex-Ven) Carib Economist
BofAS
alexander.muller@bofa.com

Natacha Perez
Brazil Economist
Merrill Lynch (Brazil)
natacha.perez@bofa.com

Sebastian Rondeau
LatAm FI/FX Strategist
BofAS
sebastian.rondeau@bofa.com

BofA Securities participated in the preparation of this report, in part, based on information provided by Philippine Equity Partners, Inc. (Philippine Equity Partners). ^^Philippine Equity Partners employees are not registered/qualified as research analysts under FINRA rules.

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.

>> Employed by a non-US affiliate of BofAS and is not registered/qualified as a research analyst under the FINRA rules.

Refer to "Other Important Disclosures" for information on certain BofA Securities entities that take responsibility for the information herein in particular jurisdictions.