

## ASEAN Watch

## Swift recovery not in sight

**Tourist arrivals climb above 80% of 2019 levels**

Tourism recovery has regained momentum, having [stalled earlier in 2Q-3Q23](#) (see report). Since Dec '23, tourism arrivals to ASEAN (as a whole) have climbed above 80% of 2019 levels (on a 2MMA basis) from an average of 72% between May '23 and Nov '23. Key drivers include returning Chinese tourists and host countries' efforts to boost tourism (e.g. visa waivers and events). The recovery momentum is likely to be sustained at least through 1Q'24, with (1) Chinese outbound seats to ASEAN expanding (see [Aviation Nowcast #98](#)) and (2) early daily releases out of Thailand pointing to a [solid tourism recovery over LNY](#) (see report). See Exhibit 1 to Exhibit 5.

**Exports: Near-term outlook still somewhat patchy....**

In y-o-y terms, ASEAN-6 exports growth in Jan '24 turned positive for the first time in almost a year. However, in dollar terms (3MMA basis), exports remain >2% below trend (based on past 10 years' data). This points to the y-o-y turnaround being driven more so by the low base from last year, rather than a sharp upswing in activities. The near-term outlook still seems somewhat patchy to us, with PMIs for *future* manufacturing output into early 2024 pointing to a slight softening of sentiment. See Exhibit 6 to Exhibit 8.

**...but firmer recovery possible in latter part of 2024**

External demand may pick-up more discernibly only in the latter part of the year as possibly lower inflation and less restrictive monetary conditions (as policy rate cuts commence) lift private consumption in developed markets. Meanwhile, our global semiconductor analysts expect inventories (still at elevated levels in 4Q'23 - 23 days above 5-year median) to [normalize further through 2024](#) (see report).

**2024 GDP growth to remain slightly below trend-pace**

All in, we see ASEAN-6 GDP growth rebounding just modestly from 4.2% in 2023 to 4.7% in 2024. Private consumption should remain the key growth driver, supported by further tourism recovery and generally healthy labour market conditions. However, 2024 GDP growth would remain below the 2015-19 average of 5%, with external demand recovery likely incomplete (Exhibit 10). [Our latest 2024 GDP forecast is also 0.1ppt lower vs. Nov '23](#), after [we revised down](#) Thailand's 2024 GDP forecast by 1.1ppt, with a full-scale digital wallet implementation no longer in our baseline (see reports).

**Inflation less of a pressing concern for most**

Our forecasts point to headline inflation in 2024 staying well within or below target ranges in Indonesia, the Philippines, Thailand & Vietnam, and close to the historical average in Malaysia (Exhibit 11). Singapore is an outlier, with core inflation (ex-GST) still seen [above historical average](#) (see report) and inflation risks flagged in [Budget 2024](#) (see report). Any reforms to energy subsidies present inflation tail-risks, but likely gradual and modest in the case of [Malaysia](#) (thus capping upside risk) and more likely to be considered only in 2025 in the case of [Indonesia](#) (new President takes office only in Oct; see reports).

**Divergence in monetary policy rate paths**

*Continue on page 2*

04 March 2024

GEM Economics  
ASEAN

**Kai Wei Ang**  
Asia & ASEAN Economist  
Merrill Lynch (Singapore)  
+65 6678 5518  
[kaiwei.ang@bofa.com](mailto:kaiwei.ang@bofa.com)

Glossary

y-o-y: year-on-year

PMI: Purchasing Managers Index

**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 6 to 7.**

12666599

Timestamp: 03 March 2024 04:00PM EST

We expect ASEAN central banks to diverge in their policy rate paths (Exhibit 12) if/when the Fed commences policy rate cuts from Jun. We split them into 3 camps below.

(1) **Easing cycle (Indonesia, the Philippines & Thailand):** We expect all 3 central banks to commence policy rate cuts from Jun, in sync with the Fed.

- **Bank Indonesia (BI) & Bangko de Sentral (BSP)** are more sensitive to capital flows & FX movements, and should follow the Fed's gradual easing cycle closely, facilitated by high real policy rates in both (Exhibit 13). [We expect BSP to cut](#) policy rate by 100bp (25bp in 2Q, 50bp in 3Q and 25bp in 4Q) and [BI to cut policy rates](#) by 75bp (once every quarter from 2Q) (see reports).
- **Bank of Thailand (BOT):** Monetary policy stance could turn tighter as (a) lower inflation expectations imply real interest rates, and (b) lower potential growth may result in lower neutral rates. As such, [we expect BOT to cut policy rate](#) by 50bp in 2024 (2Q and 4Q).

(2) **No change, but bias towards easing (Malaysia & Vietnam).**

- **Bank Negara Malaysia (BNM):** Current growth-inflation dynamics are in favour of [BNM](#) staying on an extended pause (see report). However, with policy rate at neutral setting and factoring in BNM's final objective of sustainable growth, policy rate cuts may be considered if GDP growth is seen tracking decisively below 4%.
- **State Bank of Vietnam (SBV).** Preference would be to keep policy rates unchanged amidst financial concerns (having already cut multiple times in 2023), and to rely on easing of macro-prudential policies (e.g. extending debt rescheduling) to support growth. However, SBV may cut policy rates if political pressures mount.

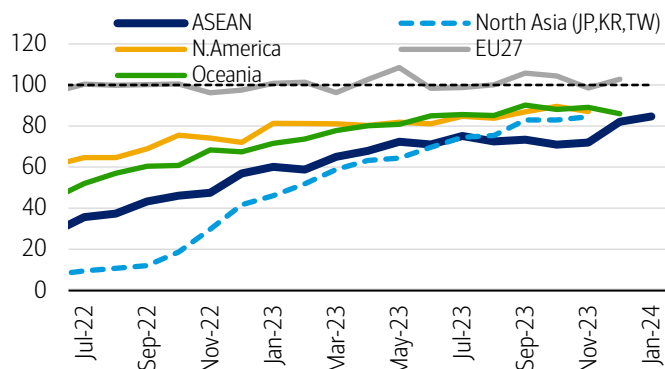
(3) **No change, but bias towards tightening (Singapore).**

- **Monetary Authority of Singapore (MAS).** [We see a stronger case for MAS to stay on an extended pause, after Jan inflation report](#) pointed to early signs of upward price pressures easing (see report). However, more durable slope steepening may be needed if core inflation surprises to the upside in the coming months and is seen staying sticky longer than expected.

## Tourism

### Exhibit 1: Arrivals into different regions (% 2019 levels, 2MMA)

ASEAN tourism recovery gained grounds towards end '23...

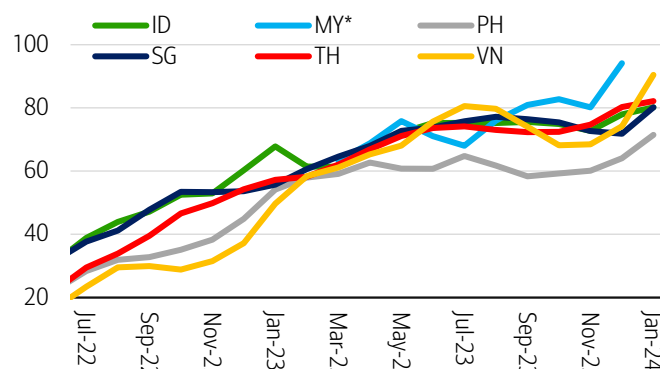


**Source:** BofA Global Research estimates, CEIC, Haver Note: (1) ASEAN covers ID, MY, PH, SG, TH & VN; North Asia: JP, KR & TW; N.America: CA & US; Oceania: AU & NZ; (2) Aggregates are calculated as a simple average of individual economy's available data

BofA GLOBAL RESEARCH

### Exhibit 2: Arrivals into ASEAN countries (% of 2019 levels, 2MMA)

...with similar upswing seen across the region

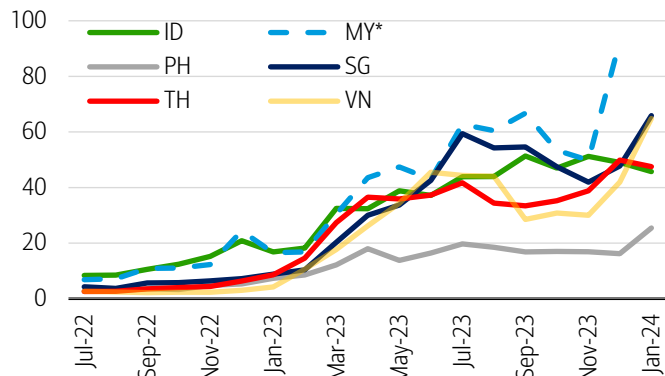


**Source:** BofA Global Research, Haver, CEIC Note: MY's figures exclude arrivals from Brunei and Singapore (majority of which are arrivals via land borders)

BofA GLOBAL RESEARCH

### Exhibit 3: Arrivals from China into ASEAN (% of 2019 levels)

Arrivals from China saw noticeable improvement towards end '23...

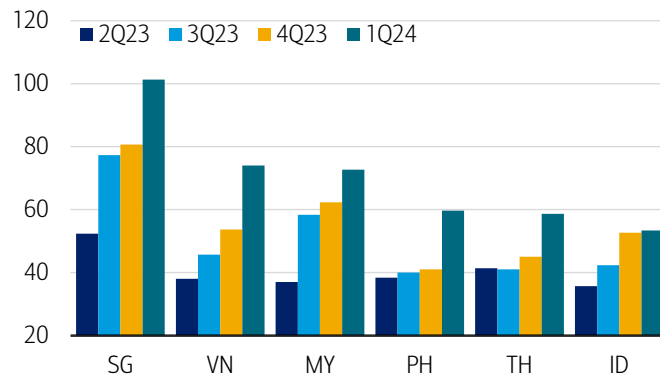


**Source:** BofA Global Research, Haver Note: Malaysia's data includes Macao & HK

BofA GLOBAL RESEARCH

### Exhibit 4: China outbound seats into ASEAN (% of 2019 levels)

...and likely sustained through 1Q'24 amidst seat capacity expansion

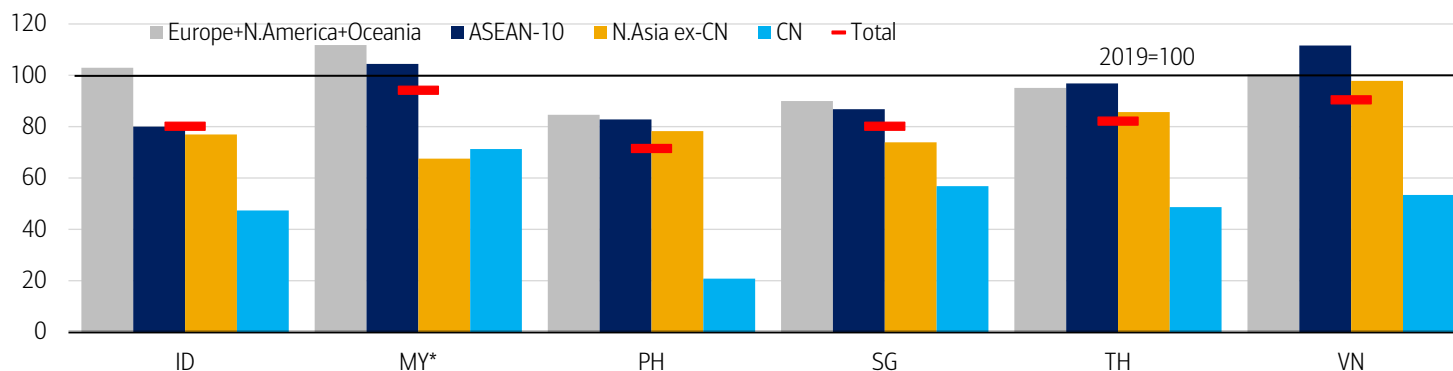


**Source:** BofA Global Research, OAG See: [Asia Pacific Aviation Nowcast: Nowcast #98: High Frequency travel trends tracker: Chinese New Year special edition](#)

BofA GLOBAL RESEARCH

### Exhibit 5: Sources of tourist arrivals into ASEAN (latest 2MMA data, % of 2019 levels)

Arrivals from North Asia (especially China) lagging relative to Developed Markets and ASEAN-10



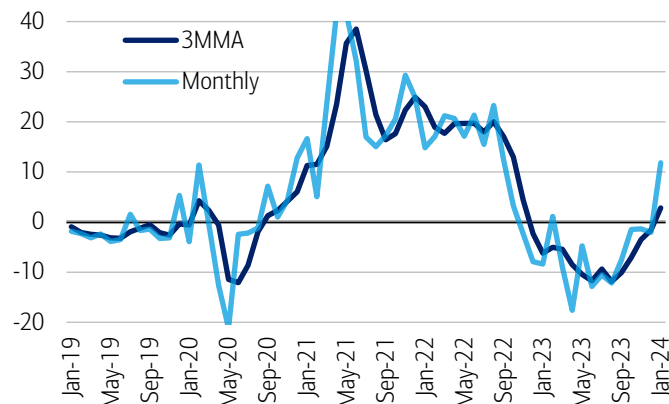
**Source:** BofA Global Research, CEIC Note: (1) MY's figures exclude arrivals from Brunei and Singapore (majority of which are arrivals via land borders), (2) Latest data refer to Dec '23 for MY, and Jan '24 for others

BofA GLOBAL RESEARCH

## Exports

### Exhibit 6: ASEAN-6 exports (%yoy)

Exports turned positive for the first time since end-22 in y-o-y terms...

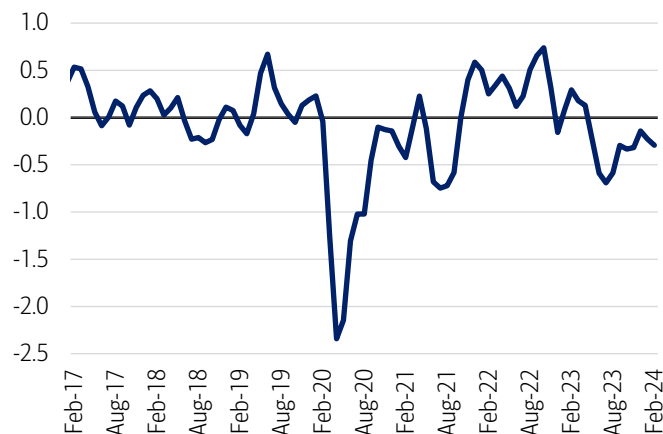


Source: BofA Global Research, Haver, CEIC

BofA GLOBAL RESEARCH

### Exhibit 8: S&P Mfg PMI: Future Output for ASEAN (z-score) (lower reading = more pessimistic)

Purchasing managers' sentiment softened slightly in early 2024

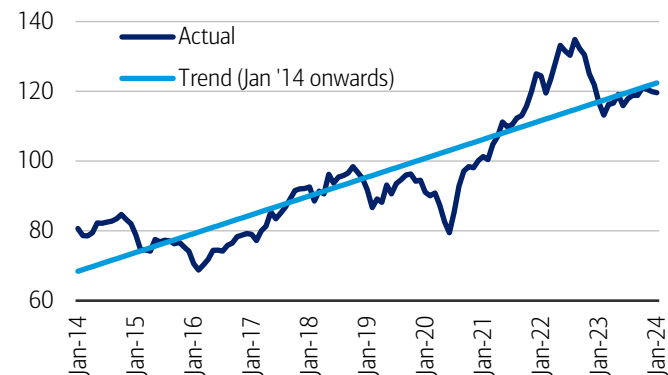


Source: BofA Global Research, S&P, Haver Note: Figures above refer to deviation away from 2016-2023 mean

BofA GLOBAL RESEARCH

### Exhibit 7: Exports, actual vs. trend (3MMA, \$bn)

...but remained below trend in dollar terms

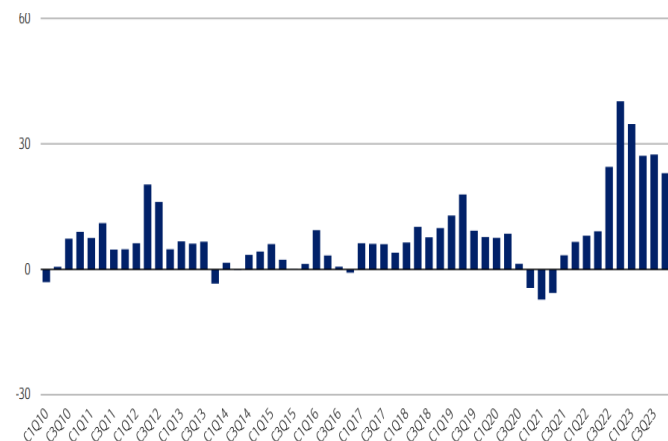


Source: BofA Global Research, Haver, CEIC

BofA GLOBAL RESEARCH

### Exhibit 9: Semiconductor inventory days relative to the 5-year median

Inventory days in 4Q'23 remain 23 days above the 5-year median



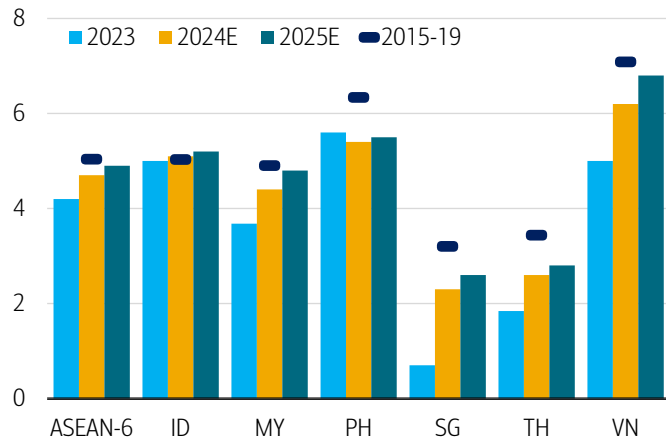
Source: BofA Global Research, Factsheet See [Global Semiconductors: Q4 inventory recap: Semis inventories still on the path to CY24E normalization](#)

BofA GLOBAL RESEARCH

## Growth / Inflation / Policy Rates

**Exhibit 10: ASEAN-6 GDP growth (% yoy)**

Further growth recovery expected in 2024 &amp; 2025

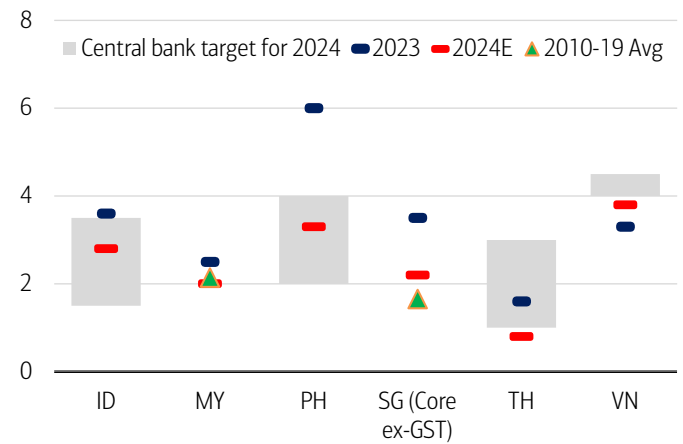


Source: BofA Global Research, Haver

BofA GLOBAL RESEARCH

**Exhibit 11: Inflation forecasts (%) relative to target & historical average**

Inflation less of a pressing concern across the region, except in Singapore

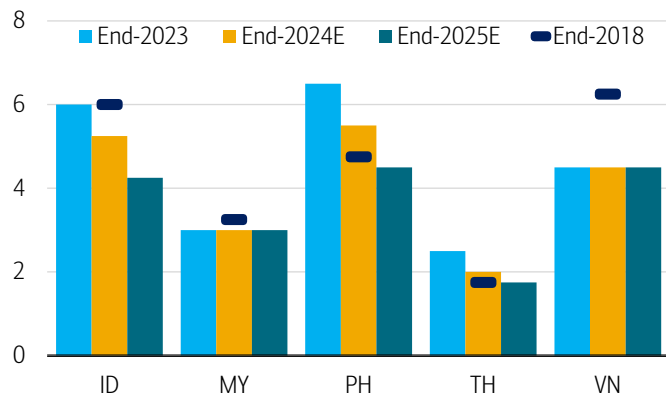


Source: BofA Global Research, Haver

BofA GLOBAL RESEARCH

**Exhibit 12: Central banks' policy rates (% p.a.)**

2024: We expect BI/BOT/BSP to cut rates, and the rest to stay status quo

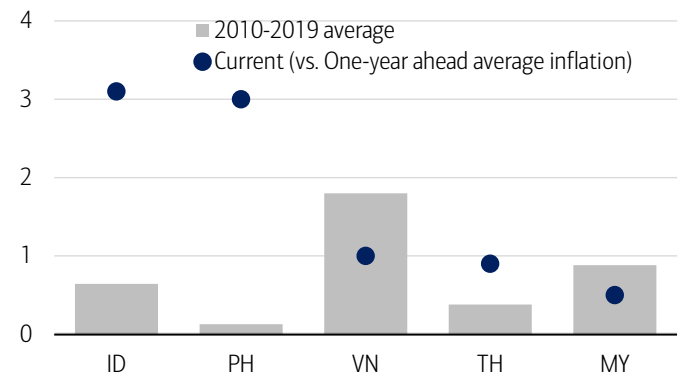


Source: BofA Global Research, Haver

BofA GLOBAL RESEARCH

**Exhibit 13: Real policy rate (%)**

Real policy rates widest in PH &amp; ID, followed by VN &amp; TH



Source: BofA Global Research, Haver (1) For one-year ahead, we refer to 2025 average inflation forecast as compiled by FocusEconomics

BofA GLOBAL RESEARCH

# 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.

## 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.

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.

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.

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.bofam.com/BofASEdisclaimer](http://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; 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 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.

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.

Certain investment strategies and financial instruments discussed herein may only be appropriate for consideration in accounts qualified for high risk investment.

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 2024 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. 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 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.