

# Japan Rates Watch

# BoJ to continue QT into FY27: Another interim assessment in June 2026

Select Subject

### Key takeaways

- BoJ reductions in JGB purchases through March 2027 in line with market consensus; unsurprising
- However, another interim assessment will be conducted in June 2026, suggesting that QT may continue into FY27
- BoJ will also modify SLF amid deteriorating market functionality

# BoJ to reduce purchases by ¥200bn per quarter from FY26

At its 16-17 June policy meeting, the BoJ decided to keep its policy rate at 0.5%, as widely expected, and released an interim review of JGB purchase reductions. The BoJ announced it plans to reduce JGB purchases by ¥400bn per quarter until March 2026 and then by ¥200bn per quarter starting April 2026 and extend the reductions for one year, as the Nikkei mentioned in an article on 14 June (17:00 JST).

The decision was not a surprise, given that a Bloomberg survey of 53 economists conducted 3-10 June showed 40% expected a pullback in the reduction to ¥200bn (25% expected reductions of ¥300bn and 21% expected the reductions to remain at ¥400bn).

However, the interim assessment of JGB purchase reductions was not necessarily dovish. First, Policy Board Member Tamura stated that long-term interest rates should be determined by the market and market participants, and proposed continuing quarterly reductions of ¥400bn in FY26. Second, the BoJ also announced there will be another interim assessment at the June 2026 MPM, signaling that QT is likely to continue beyond April 2027 (i.e. 100% reinvestment of redemptions is unlikely for the time being). In fact, after the BoJ released its statement, JGB futures declined and yields rose, especially in the 7-10 years.

#### 17 June 2025

Rates Research Japan

Tomonobu Yamashita Rates Strategist BofAS Japan +81 3 6225 7950 tomonobu.yamashita@bofa.com

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

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 8. Analyst Certification on page 5.

Timestamp: 17 June 2025 05:05AM EDT

# Other decisions related to BoJ's market operations

In addition, the following changes were announced at the today's MPM. (1) A reduction in the number of offers for JGBs with maturities of 10 years or less in the Quarterly schedule of Rinban operation for Jul-Sep, and (2) change in the Treatment of the Reduction in the BoJ's Repurchase Amount under the securities lending facility (SLF). We believe these changes were aimed at restoring bond market functions and made in reflection of a significant deterioration in market functioning evident in the May Bond Market Survey.

# Reduction in number of offers for JGBs with maturities of 10 years or less in Rinban operations

Along with a statement, the BoJ released a quarterly schedule for JGB purchases in Jul—Sep. The amount and frequency of offers for superlong bonds is unchanged from Apr—Jun, and the BoJ did not merge the superlong category into a single "10yr+" bracket. Meanwhile, the number of monthly offers for JGBs in the 1-3, 3-5 and 5-10 year zones was reduced from four to three in Rinban operations, while the offer amount per auction was increased (Exhibit 7).

#### Modification of reduction measures in SLF

Along with releasing its statement, the BoJ also announced changes to reduction measures in the SLF. Specifically, (1) the scope of SLF reduction measures, previously limited to the cheapest-to-deliver (CTD) issues, will be expanded to include 10-year JGBs maturing in 2031 or later where the BoJ's holdings in the market exceed 80%, and (2) the upper limit for reduction measures "until the amount outstanding in the market recovers" will be raised from around ¥1.2tn to ¥1.5tn. We believe these changes are intended to alleviate concerns around JGB futures settlement and facilitate a recovery in bond market functions. The changes to the reduction measures will be applied to offers made on 1 July 2025, with a monthly cap of around ¥200bn, meaning the amount outstanding of CTD issues in the market will not increase soon.

# Implications for rates market

If the BoJ proceeds with the JGB purchase reductions it decided at the June MPM, its monthly JGB purchases will fall to around ¥2.9tn by March 2026 and ¥2.1tn by March 2027. Assuming JGB issuance continues at the current pace, we estimate that the BoJ's share of outstanding JGBs, now around 50.5%, will fall to 46.4% by March 2026 and 41.7% by March 2027.

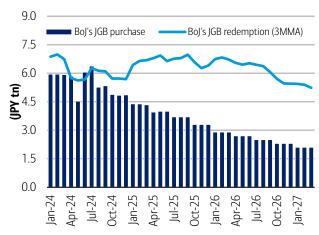
If the BoJ continues reducing JGB purchases beyond April 2026, it will likely exert upward pressure on JGB yields over the long term. The BoJ currently purchases about 34% of monthly issuance, but this ratio would fall to around 24% by end-FY25 and 18% by end-FY26 if JGB issuance amounts remain constant. As we noted above, the BoJ's holdings will probably decline only gradually, but JGB yields could rise with large tails at each JGB auction.

That said, we anticipate near-term investment appeal in JGBs, especially in the medium-term zone. Bond market participants apparently believe the BoJ's next rate hike might come in October 2025 at the earliest. Governor Ueda has continued to stress the high levels of uncertainty around the Trump administration's tariff policy, and no agreement was reached at the Japan-US summit held on the 17 June (JST), but talks will continue. In other words, it may be a while before the market begins to price in the next rate hike. Moreover, carry & rolldown has been relatively attractive for JGBs with maturities around 2yrs. Risks to our view is the possibility that the MoF will increase issuance, mainly 2y JGBs, while reducing issuance of 20y, 30y, 40y and superlong liquidity enhancement auctions.



#### Exhibit 1: BoJ's JGB purchases and JGB redemption held by BoJ

Quarterly pace of JGB purchase reductions to be ¥200bn from April 2026



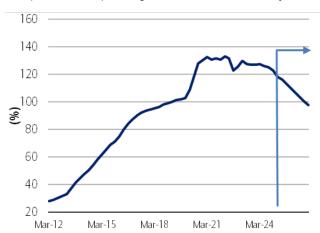
Source: BofA Global Research, Bloomberg, BoJ

Note: The estimated redemption amount is the 3-month moving average

BofA GLOBAL RESEARCH

#### Exhibit 3: BoJ's balance sheet as percentage of nominal GDP

We expect BoJ's BS as percentage of GDP to fall to about 97% by end-2026



**Source**: BofA Global Research, Bloomberg, BoJ, MoF Note: BofA's estimates for the April-June 2025 and beyond.

BofA GLOBAL RESEARCH

#### Exhibit 2: BoJ's JGB holdings vs outstanding JGBs

We expect BoJ's JGB holdings to decrease to around 41.7% in March 2027



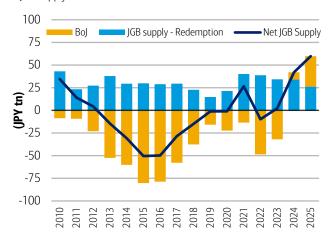
**Source**: BofA Global Research, Bloomberg, BoJ, MoF

Note: It is assumed that the issuance will continue at the same level. BofA's estimates from June 2025

BofA GLOBAL RESEARCH

#### Exhibit 4: BoJ's JGB purchases and net supply of JGBs

Net JGB supply would increase to around ¥59.8tn in 2025



**Source**: BofA Global Research, Bloomberg, BoJ, MoF Note: Actual figures are up to 2024

BofA GLOBAL RESEARCH



# Exhibit 5: BoJ's ownership by issue (as of 10 June 2025)

BoJ will expand the JGB issues that are applicable to the reduction in the repurchase amount under the SLF

	Current		Current		Current		Current		Current		Current
2Y	Ratio	5Y	Ratio	10Y	Ratio	20Y	Ratio	30Y	Ratio	40Y	Ratio
JN473	4.0%	JS178	12.0%	JB378	11.0%	JL192	1.7%	JX86	0.0%	JU18	0.0%
JN472	1.4%	JS177	9.4%	JB377	18.1%	JL191	5.8%	JX85	0.2%	JU17	5.7%
JN471	2.9%	JS176	16.9%	JB376	21.4%	JL190	2.8%	JX84	1.3%	JU16	13.7%
JN470	1.8%	JS175	13.7%	JB375	31.3%	JL189	3.8%	JX83	4.2%	JU15	18.8%
JN469	19.2%	JS174	29.9%	JB374	40.1%	JL188	8.6%	JX82	1.2%	JU14	3.7%
JN468	8.9%	JS173	38.6%	JB373	45.5%	JL187	7.1%	JX81	9.5%	JU13	2.0%
JN467	18.5%	JS172	60.3%	JB372	64.2%	JL186	16.3%	JX80	11.1%	JU12	10.9%
JN466	19.9%	JS171	70.1%	JB371	69.0%	JL185	13.8%	JX79	4.8%	JU11	18.8%
JN465	34.5%	JS170	39.4%	JB370	80.4%	JL184	24.7%	JX78	8.5%	JU10	33.7%
JN464	35.4%	JS169	58.0%	JB369	86.0%	JL183	23.7%	JX77	19.8%	JU9	37.3%
JN463	52.4%	JS168	43.3%	JB368	86.9%	JL182	14.9%	JX76	10.0%	JU8	53.0%
JN462	41.7%	JS167	30.7%	JB367	85.9%	JL181	8.7%	JX75	9.7%	JU7	48.8%
JN461	42.9%	JS166	34.4%	JB366	86.4%	JL180	3.1%	JX74	7.4%	JU6	42.4%
JN460	45.1%	JS165	50.2%	JB365	81.7%	JL179	5.9%	JX73	1.1%	JU5	9.4%
JN459	54.0%	JS164	60.7%	JB364	82.7%	JL178	4.6%	JX72	5.4%	JU4	15.8%
JN458	35.2%	JS163	82.9%	JB363	80.9%	JL177	11.4%	JX71	16.8%	JU3	18.6%
JN457	50.1%	JS162	65.2%	JB362	84.5%	JL176	19.5%	JX70	5.5%	JU2	10.1%
JN456	41.0%	JS161	62.3%	JB361	86.8%	JL175	9.4%	JX69	2.9%	JU1	35.0%
JN455	37.6%	JS160	72.8%	JB360	87.9%	JL174	9.2%	JX68	14.2%		
JN454	40.4%	JS159	63.4%	JB359	84.6%	JL173	13.8%	JX67	15.3%		

Source: BofA Global Research, Bloomberg, BoJ, MoF

BofA GLOBAL RESEARCH

# Exhibit 6: The amount outstanding in the market by issue (JPY bn, as of 10 June 2025)

#362, #364, #366, #367, #368, and #369 are less than 1.5tn in the market.

2	Υ	Current	5Y	Current	10Y	Current	20Y	Current	30Y	Current	40Y	Current
JN4	473	2,691.3	JS178	4,435.3	JB378	7,299.1	JL192	2,052.2	JX86	2,530.4	JU18	548.5
JN4	472	2,817.9	JS177	2,090.0	JB377	6,604.6	JL191	2,996.8	JX85	2,873.0	JU17	4,168.4
JN∠	471	2,825.8	JS176	1,912.2	JB376	6,939.3	JL190	3,042.4	JX84	2,743.4	JU16	3,782.8
JN∠	470	2,551.3	JS175	2,355.5	JB375	5,639.4	JL189	3,071.0	JX83	2,785.6	JU15	3,684.1
JN4	169	2,165.4	JS174	3,418.9	JB374	5,156.4	JL188	2,951.4	JX82	2,963.7	JU14	3,867.0
JN4	468	2,373.0	JS173	1,413.8	JB373	4,681.9	JL187	3,007.9	JX81	2,734.1	JU13	4,162.7
JN∠	167	2,126.3	JS172	1,018.6	JB372	3,065.1	JL186	3,266.6	JX80	2,489.0	JU12	2,783.4
JN∠	166	2,204.7	JS171	758.8	JB371	2,798.2	JL185	3,307.3	JX79	2,848.2	JU11	2,365.6
JN4	465	1,823.9	JS170	1,531.9	JB370	1,656.6	JL184	2,863.4	JX78	2,693.4	JU10	2,413.6
JN4	164	1,853.0	JS169	967.4	JB369	1,183.9	JL183	2,930.1	JX77	2,289.6	JU9	2,671.0
JN4	463	1,351.3	JS168	1,422.9	JB368	1,171.5	JL182	3,147.1	JX76	2,601.9	JU8	1,142.2
JN4	462	1,651.3	JS167	1,596.6	JB367	1,194.3	JL181	3,671.6	JX75	2,745.9	JU7	1,162.8
JN4	461	1,637.1	JS166	1,838.9	JB366	1,225.5	JL180	3,689.4	JX74	2,714.4	JU6	1,307.9
JN4	460	1,541.7	JS165	1,244.2	JB365	1,576.1	JL179	3,892.0	JX73	2,975.5	JU5	1,861.4
JN4	459	1,234.2	JS164	1,011.5	JB364	1,454.7	JL178	3,714.3	JX72	2,789.5	JU4	1,737.6
JN4	458	1,889.5	JS163	928.5	JB363	1,581.9	JL177	3,491.2	JX71	2,414.7	JU3	1,192.5
JN4	457	1,590.6	JS162	931.0	JB362	1,285.6	JL176	3,127.7	JX70	2,686.3	JU2	1,322.3
JN4	456	1,710.6	JS161	1,048.2	JB361	1,107.9	JL175	3,778.1	JX69	2,884.7	JU1	732.3
JN4	455	1,819.9	JS160	682.2	JB360	1,029.5	JL174	3,967.7	JX68	2,560.7		
JN4	154	1,754.3	JS159	1,008.5	JB359	1,349.1	JL173	3,700.8	JX67	2,501.3		

Source: BofA Global Research, Bloomberg, BoJ, MoF

BofA GLOBAL RESEARCH



#### Exhibit 7: Details about the BoJ's Rinban operations

BoJ reduces the monthly offers for maturities up to 10yrs

Jul-Sep 2025

Jul 3-5 1-013								
Residual maturity	Purchase size per Rinban (JPY bn)	Monthly purchase size (JPY bn)	Frequency of auction (per month)					
Up to 1yr	100	100	1					
More than 1yr and up to 3yr	325	975	3					
More than 3yr and up to 5yr	325	975	3					
More than 5yr and up to 10yr	350	1050	3					
More than 10yr and up to 25yr	135	405	3					
More than 25yr	75	150	2					
JGBi	50	50	1					
Total JGBs		3,705						

Apr-Jun 2025

	Purchase size per Rinban	Monthly purchase size	Frequency of auction		
Residual maturity	(JPY bn)	(JPY bn)	(per month)		
Up to 1yr	100	100	1		
More than 1yr	275	1100	4		
and up to 3yr	2/5	1100	4		
More than 3yr	275	1100	4		
and up to 5yr	2/5	1100	4		
More than 5yr	300	1200	4		
and up to 10yr	300	1200	4		
More than 10yr	135	405	3		
and up to 25yr	155	403	3		
More than 25yr	75	150	2		
JGBi	50	50	1		
Total JGBs		4,105			

Source: BofA Global Research, BoJ

BofA GLOBAL RESEARCH

# **Analyst Certification**

I, Tomonobu Yamashita, hereby certify that the views expressed in this research report accurately reflect my personal views about the subject securities and issuers. I also certify that no part of my compensation was, is, or will be, directly or indirectly, related to the specific recommendations or view expressed in this research report.



# **Disclosures**

# **Important Disclosures**

#### **BofA Global Research Credit Opinion Key**

BofA Global Research provides recommendations on an issuer's bonds (including corporate and sovereign external debt securities), loans, capital securities, equity preferreds and CDS as described below. Convertible securities are not rated. An issuer level recommendation may also be provided for an issuer as explained below. BofA Global Research credit recommendations are assigned using a three-month time horizon.

**Issuer Recommendations**: If an issuer credit recommendation is provided, it is applicable to bonds and capital securities of the issuer except bonds and capital securities specifically referenced in the report with a different credit recommendation. Where there is no issuer credit recommendation, only individual bonds and capital securities with specific recommendations are covered. Loans, CDS and equity preferreds are rated separately and issuer recommendations do not apply to them.

BofA Global Research credit recommendations are assigned using a three-month time horizon:

**Overweight:** Spreads and /or excess returns are likely to outperform the relevant and comparable market over the next three months. **Marketweight:** Spreads and/or excess returns are likely to perform in-line with the relevant and comparable market over the next three months.

**Underweight:** Spreads and/or excess returns are likely to underperform the relevant and comparable market over the next three months.

BofA Global Research uses the following rating system with respect to Credit Default Swaps (CDS):

**Buy Protection:** Buy CDS, therefore going short credit risk. **Neutral:** No purchase or sale of CDS is recommended. **Sell Protection:** Sell CDS, therefore going long credit risk.

The issuer is or was, within the last 12 months, an investment banking client of BofAS and/or one or more of its affiliates; lapan.

BofAS or an affiliate has received compensation from the issuer for non-investment banking services or products within the past 12 months: Japan.

The issuer is or was, within the last 12 months, a non-securities business client of BofAS and/or one or more of its affiliates: Japan.

BofAS or an affiliate has received compensation for investment banking services from this issuer within the past 12 months: Japan.

BofAS or an affiliate expects to receive or intends to seek compensation for investment banking services from this issuer or an affiliate of the issuer within the next three months: Japan. BofAS or one of its affiliates has a significant financial interest in the fixed income instruments of the issuer. If this report was issued on or after the 15th day of the month, it reflects a significant financial interest on the last day of the previous month. Reports issued before the 15th day of the month reflect a significant financial interest at the end of the second month preceding the report: Japan.

BofAS or one of its affiliates trades or may trade as principal in the debt securities (or in related derivatives) that are the subject of this research report: Japan.

The issuer is or was, within the last 12 months, a securities business client (non-investment banking) of BofAS and/or one or more of its affiliates: Japan.

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.

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 Sector Conduct Authority; 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 <a href="https://www.bofaml.com/BofASEdisclaimer">www.bofaml.com/BofASEdisclaimer</a>; 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 (Hong Kong): Merr (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; 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 (DIFC): Merrill Lynch (DIFC): Merrill Lynch (Brazil): M 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.

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

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

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

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

BofA Securities, through business units other than BofA Global Research, may have issued and may in the future issue trading ideas or recommendations that are inconsistent with, and reach different conclusions from, the information presented herein. Such ideas or recommendations may reflect different time frames, assumptions, views and analytical methods of the persons who prepared them, and BofA Securities is under no obligation to ensure that such other trading ideas or recommendations are brought to the attention of any recipient of this information. In the event that the recipient received this information pursuant to a contract between the recipient and BofAS for the provision of research services for a separate fee, and in connection therewith BofAS may be deemed to be acting as an investment adviser, such status relates, if at all, solely to the person with whom BofAS has contracted directly and does not extend beyond the delivery of this report (unless otherwise agreed specifically in writing by BofAS). If such recipient uses the services of BofAS in connection with the sale or purchase of a security referred to herein, BofAS may act as principal for its own account or as agent for another person. BofAS is and continues to act solely as a broker-dealer in connection with the execution of any transactions, including transactions in any securities referred to herein.

#### Copyright and General Information:

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



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

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

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

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

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

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

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

In some cases, an issuer may be classified as Restricted or may be Under Review or Extended Review. In each case, investors should consider any investment opinion relating to such issuer (or its security and/or financial instruments) to be suspended or withdrawn and should not rely on the analyses and investment opinion(s) pertaining to such issuer (or its securities and/or financial instruments) nor should the analyses or opinion(s) be considered a solicitation of any kind. Sales persons and financial advisors affiliated with BofAS or any of its affiliates may not solicit purchases of securities or financial instruments that are Restricted or Under Review and may only solicit securities under Extended Review in accordance with firm policies.

Neither BofA Securities nor any officer or employee of BofA Securities accepts any liability whatsoever for any direct, indirect or consequential damages or losses arising from any use of this information.

