

## Spanish Banks

## Santander and BBVA - Brazil vs. Mexico

**Price Objective Change** 

### BBVA dependant on Mexico growing volumes double-digit

Mexico represents a significant c.60% of BBVA's group profits. The bank has been reducing its sensitivity to rates, a -100bps parallel shift in Mexico currently accounts for -2.3% of NII, down from -3.7%. Our economists expect Banxico to begin cutting soon and the MXN to weaken in 2024, so it's volume growth that will likely sustain BBVA's NII in Mexico, with the market expecting >10% expansion in loan over 2024e. Delivery on volumes is key, we believe. Federal elections are also due in June.

## Brazil: the best (of NIM expansion) has yet to come

Santander has a large share of funding tied to the SELIC rate in Brazil, while its loans are on fixed rates. The 18-month duration gap between assets and liabilities means Santander's funding cost started to drop, but it's only the start of the NIM expansion due. Given the loan mix skew towards households, lower rates would also support the LLPs outlook, 4Q was affected by single ticket, and increases appetite for new lending. We expect another c.225bps cuts by end of this year, for 9.5% in 2024e.

### BBVA - Neutral (unchanged), PO €9.50 (from €9.30)

We updated our EPS after 4Q results. We reflect the move in Euribor and increase EPS by c.1% to reflect the exit rate at c2.6% on Spain, in-line with the Euribor forward curve and factor-in hedging against rate cuts in Mexico. NII estimates grow by c.4% in Spain in 2024e and by 8% YoY in Mexico. Resilience of double-digit volume growth in Mexico is key for consensus expectations to be met. We plan to be monitoring activity levels in Mexico closely. Reiterate Neutral

## Santander - Buy (unchanged), PO €5.10 (from €5.00)

We lift NII in Spain and in the UK driving group NII up 1-2%. We have group NII growing 4% YoY in 2024e and group earnings up 14% YoY supported by progressive margin/volume improvement in Brazil and resilient asset quality in the US. Overall, we are c.13% ahead of consensus net profit in 2024-25e. Reiterate Buy – Santander is positively geared to rate cuts in Brazil & US and trades at attractive 4.5x P/E 2025e.

## Santander remains our top pick in Spain

Santander is a 'show-me story' – it trades at the lowest P/PPOP multiple in Europe and we believe its Brazilian unit, which accounts for >25% of profits, has inflected with SELIC cuts running at 50bps per BCB meeting. While the US auto lending market remains challenged short-term, data suggests loan losses will likely remain resilient vs. cons. We expect some rotation into SAN from BBVA. Reiterate SAN as top pick in Spain.

#### 23 February 2024

Equity Spain Banks

Antonio Reale >> Research Analyst MLI (UK) +44 20 7996 1763 antonio.reale@bofa.com

Filippo Munari >> Research Analyst MLI (UK) +44 20 7995 2198 filippo.munari@bofa.com

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 11 to 15. Analyst Certification on page 9. Price Objective Basis/Risk on page 8.

<sup>&</sup>gt;> 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.

## **Investment thesis**

# **Exhibit 1: Investment thesis – Spanish banks**Buy SAN, CABK. Neutral on BBVA

Bank	Rating	Price Objective	Investment Thesis
Santander	Buy	EUR 5.10	Santander is a 'show-me story' as its shares have underperformed the synthetic valuation of its subsidiaries. It trades at the lowest P/PPOP multiple in Europe and we believe its Brazilian unit, which accounts for >25% of earnings, has inflected with SELIC cuts running at 50bps per BCB meeting. While we think its capital buffers will now be supported by the organic generation and although the US auto lending market remains challenged short-term, loan losses will likely be much more resilient than consensus expectations. With Santander trading on 4.5-5x P/E 2024e, we have a Buy rating.
BBVA	Neutral	EUR 9.50	Mexico represents a significant c.60% of BBVA's group profits. This has been a key source of growth for BBVA, which is set to normalize as we approach peak rates with early signs of an economic 'normalization' in Mexico and with elections this year. While Türkiye has been performing better than feared, it will likely continue to affect valuation both positively and negatively, being a source of volatility. BBVA is inexpensive in absolute terms trading at c.6-6.5x P/E 2024e, but we increasingly see growth expectations in Mexico as demanding. We have limited potential upside near-term – Neutral rating.

Source: BofA Global Research



## NII: Euribor forward curve moving up

## Hedging policy is reducing NII impact deriving from rates

Banks use replicating investment portfolios to manage the interest rate risk of variable savings deposits. These are portfolios of fixed-income assets that aim to replicate the typical interest rate maturity of sight deposits. The strategy is set so that the margin between the portfolio return, and the savings interest rate is as stable as possible. This allows banks to base their interest rate risk on investments with a fixed maturity and price, even though sight deposits don't have a contractual maturity, by turning the investments into contractual obligations. Banks tend to pay variable and receive fixed. While the euroswap curve is not immune to rate cuts, the back-book yield is, in some cases negative and well below the front-book, suggesting a positive accrual from the maturity reinvestments. Inevitably, this is also a function of a banks' view when it comes to rate changes. For details, see Exhibit 2.

#### Exhibit 2: Change in NII sensitivity to +/-100bps parallel shift in yield curve from the start of the rate cycle to 4Q23

Average c.45% reduction in NII sensitivity across our coverage, with higher proportion of fixed rate assets and higher proportion of floating liabilities

	NII sensitivity to +/-100bps parallel shift in yield curve							
	As of 2Q/3Q22	As of 4Q23	% change	% NII 2024e				
Santander Spain	1,700	1,000	-41%	6%				
BBVA Spain	843	351	-58%	6%				
BBVA Mexico	409	274	-33%	2%				

Source: BofA Global Research estimates. Notes: we rebase sensitivities to +/-100bps shift in rates on a proportional basis when sensitivity is provided only to 25/50bps shift. Sensitivity in 2Q/3Q22 refers to positive NII impact from +100bps parallel shift in yield curve, whereas sensitivity as of 4Q23 refers to negative NII impact from -100bps shift in yield curve.

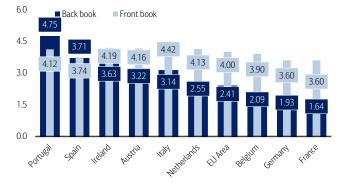
BofA GLOBAL RESEARCH

### Back book yields yet to catch up with front book in Italy

Spain is for the most part a variable rate market with about two-third of mortgages tied to Euribor 12 months. By now one would assume banks have mechanically repriced the entire mortgage book. In fact, looking at ECB data Spanish back-book mortgages are priced inline with their front book rates. However, front-book rates only reprice once or twice a year in Spain which would suggest even front-book repricing comes with a lag. In any case, looking at Exhibit 3 Spanish loan repricing seems mostly done. That's not the case for the Italian mortgage market. In fact, Italian mortgages are still priced c.130bps below their front book rates. So, when investors implicitly assume repricing has happened on the asset side, we think that is incorrect as it would understate the NII resilience in a falling rates environment, due to the starting back-book point being lower to begin with. Hence, when rates ultimately drop, it's simply the front book that will meet the back book, somewhere halfway, providing more resilience to customer loan yields. Although there is no symmetry in the way rate cuts affect loan yields, illustratively a potential 150-200bps rate cut could result in a mere c.25-75bps cut to loan yields in Italian mortgages, due to the repricing lag.

#### Exhibit 3: Delta front vs. back-book yield on mortgages

Still significant repricing to come through in Italy

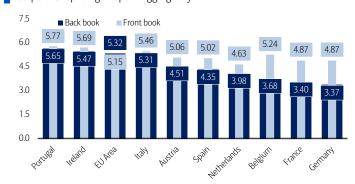


Source: BofA Global Research, Haver Analytics

BofA GLOBAL RESEARCH

## Exhibit 4: Delta front vs. back-book yield on corporate loans

Corporate repricing in Spain lagging Italy



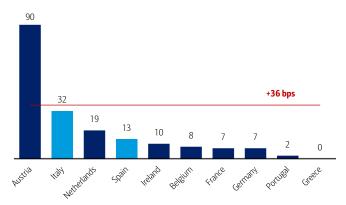
Source: BofA Global Research, Haver Analytics



### Absolute deposit remuneration to drive NII in 2024

As rates fall, banks' pass-throughs would mechanically move up even if deposit remuneration remains unchanged. Deposit beta is currently at c.15% on average i.e. with rates at 4%, deposit cost stands at c.0.6% on average. Assuming rates were to fall to say c.3%, deposit beta would increase to c.25% even if deposit remuneration is unchanged. Hence, deposit beta assumptions are less relevant when rates fall. It's absolute deposit cost and deposit flows that would drive NII in 2024e. Stability in overall deposit flows will likely be key and absent a competitive war we believe this will be down in 2024e and 2025e sequentially, despite the mix effect. We've seen broadly stabilizing deposits overall, but with a sharp increase in more expensive term deposits combined with lower current accounts, see Exhibit 9. We believe this trend is set to continue as we forecast a varying portion of current accounts (c. 20-30%) moving into time deposits and retail bonds depending on the bank over the next few years. Below we show the front book pricing rates of sight deposits and term deposits. While retail sight deposits have barely repriced, term deposits are running at 2-2.5% in Spain and 3-3.5% in Italy from zero in July 2022.

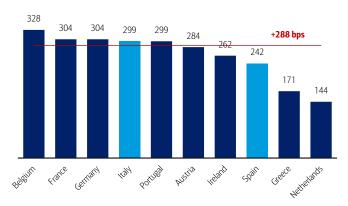
**Exhibit 5: Change in front-book household sight deposit rates** Italy ahead of EU peers ex. Austria



**Source:** BofA Global Research, Haver Analytics. Notes: change in rates from Jul-22 to Dec-23

BofA GLOBAL RESEARCH

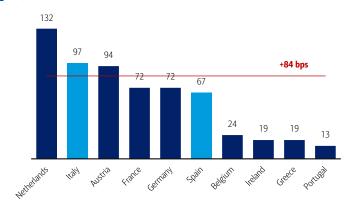
**Exhibit 7: Change in front-book household term deposit rates** Italy in line with EU peers, Spain below



**Source:** BofA Global Research, Haver Analytics. Notes: change in rates from Jul-22 to Dec-23

BofA GLOBAL RESEARCH

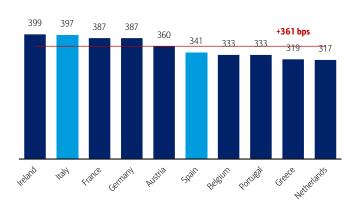
**Exhibit 6: Change in front-book corporate sight deposit rates**Italy ahead of EU peers, Spain below



Source: BofA Global Research, Haver Analytics. Notes: change in rates from Jul-22 to Dec-23

BofA GLOBAL RESEARCH

## Exhibit 8: Change in front-book corporate term deposit rates Italy ahead of EU peers, Spain slightly below



**Source:** BofA Global Research, Haver Analytics. Notes: change in rates from Jul-22 to Dec-23

BofA GlOBAL RESEARCH



#### Exhibit 9: Change in YoY deposit growth 2023 vs. 2022 across European countries

Clear shift in mix from sight to term deposits across all countries. Deposits volumes in Italy contracting in 2023 driven by migration to AUC products; more flattish development in Spain, with sight deposit contraction in sight deposits almost fully offset by increase in term deposits

Change in deposit growth '23 vs. '22	Euro Area	Austria	Belgium	France	Germany	Greece	Ireland	Italy	Netherlands	Portugal	Spain
Household	🤚 -2.1pp	<b>थ</b> -0.7pp	🤚 -6.3pp	🤚 -1.9pp	→ -0.3pp	№ -0.8pp	🤚 -2.8pp	🤚 -4.6pp	⊌ -3.3pp	⊌ -7.1pp	🤚 -5.1pp
Sight	🤚 -10.9pp	🤚 -13.6рр	🤚 -22.2pp	🤚 -10.3pp	🤚 -9.5рр	🖐 -14.8pp	🤚 -6.5pp	🖐 -10.8pp	🤚 -18.8pp	🤚 -20.2pp	🤚 -13.7pp
Term	47.5pp	♠ 32.8pp	n 196.2pp	🛖 12.1pp	₱ 71.7pp	♠ 64.1pp	🛖 176.9pp	n 103.1pp	♠ 28.7pp	♠ 8.9pp	🛖 110.7pp
Corporate	🤚 -5.3pp	<b>-</b> 0.4pp	🤚 -4.4pp	🤚 -6.4pp	🤚 -8.4pp	🤚 -7.7pp	🤚 -4.3pp	0.7pp	🤚 -11.3pp	🤚 -13.0pp	🥙 -0.8pp
Sight	🤚 -9.1рр	🤚 -3.4pp	🤚 -18.6рр	🤚 -10.3pp	🤚 -10.6рр	🤚 -7.1рр	🤟 -7.7pp	→ -0.1pp	🤚 -20.1pp	🤚 -25.7рр	🤚 -3.7pp
Term	🤚 -4.2pp	🤟 -10.7pp	🤚 -43.9рр	🤚 -6.8рр	🤚 -12.0pp	🤚 -31.4pp	🤚 -7.8pp	🤚 -36.8pp	♠ 37.6pp	43.8pp	🤚 -17.8pp
Total	🤚 -3.0pp	🕙 -0.6рр	🤚 -5.8pp	🤚 -3.4pp	🤚 -2.1pp	🤚 -2.4pp	🤚 -3.3pp	🤚 -3.3pp	🤚 -6.6рр	🤚 -8.7рр	🤚 -4.0рр
Dec-23 y/y	Euro Area	Austria	Belgium	France	Germany	Greece	Ireland	Italy	Netherlands	Portugal	Spain
Household	1.2%	1.1%	-4.6%	2.5%	2.2%	3.8%	2.7%	-3.3%	2.7%	-1.4%	-0.4%
Sight	-7.7%	-10.5%	-20.7%	-9.2%	-6.9%	-5.7%	-0.2%	-8.6%	-10.5%	-10.7%	-7.1%
Term	52.1%	31.3%	327.6%	15.4%	88.5%	52.3%	162.5%	94.1%	29.1%	8.6%	94.4%
Corporate	-0.6%	-1.4%	-0.8%	-2.9%	1.0%	0.9%	2.7%	-0.6%	-4.3%	-4.6%	0.4%
Sight	-11.1%	-11.8%	-18.4%	-16.6%	-8.2%	-8.1%	-5.4%	-5.6%	-16.8%	-21.8%	-8.7%
Term	46.5%	35.0%	149.9%	35.9%	35.4%	41.1%	49.0%	77.9%	71.9%	79.4%	59.7%
Total	0.7%	0.5%	-3.6%	0.7%	1.9%	3.1%	2.7%	-2.7%	-0.1%	-2.2%	-0.2%
Dec-22 y/y	Euro Area	Austria	Belgium	France	Germany	Greece	Ireland	Italy	Netherlands	Portugal	Spain
Household	3.3%	1.8%	1.7%	4.4%	2.5%	4.6%	5.5%	1.2%	6.1%	5.7%	4.7%
Sight	3.2%	3.1%	1.4%	1.2%	2.6%	9.1%	6.4%	2.2%	8.2%	9.5%	6.6%
Term	4.6%	-1.4%	131.4%	3.3%	16.8%	-11.8%	-14.4%	-9.1%	0.4%	-0.3%	-16.3%
Corporate	4.6%	-1.0%	3.7%	3.5%	9.4%	8.7%	6.9%	-1.3%	7.0%	8.4%	1.2%
Sight	-2.0%	-8.5%	0.3%	-6.3%	2.4%	-1.0%	2.2%	-5.5%	3.3%	3.9%	-5.0%
Term	50.7%	45.7%	193.7%	42.6%	47.4%	72.5%	56.8%	114.7%	34.3%	35.6%	77.5%
Total	3.7%	1.1%	2.2%	4.1%	4.0%	5.5%	6.1%	0.6%	6.4%	6.4%	3.8%

Source: BofA Global Research, Have Analytics

BofA GLOBAL RESEARCH

### Exhibit 10: Change in YoY deposit growth 2023 vs. 2022 across Italian and Spanish banks

Material pick-up in term deposits in 2023 across banks in our coverage (ex BAMI), with migration from sight to term deposits driving large part of the increase

Change in deposit growth '23 vs. '22	Inte	sa Sanpaolo	١	UniCredit	В	anco BPM	N	lediobanca	Mo	nte Paschi	;	Santander		BBVA	(	CaixaBank		Sabadell		Bankinter
Sight	4	-8pp	•	-9рр	•	-4pp	•	-6рр	7	0рр	•	-14pp	•	-11pp	•	-11pp	•	-9рр	•	-18pp
Term	P	56рр	Ψ	-17pp	P	58pp	₩	-101pp	P	70pp	₩	-35pp	EN	1pp	P	132pp	P	50pp	P	234pp
Total	•	-5pp	₩	-7pp	•	-3pp	₩	-16pp	P	5рр	₩	-15pp	₩	<b>-</b> 9pp	3	-1pp	•	-3pp	P	5рр

Dec-23 y/y	Intesa Sanpaolo	UniCredit	Banco BPM	Mediobanca	Monte Paschi	Santander	BBVA	CaixaBank	Sabadell	Bankinter
Sight	-10%	-12%	-5%	-20%	-1%	-10%	-5%	-8%	-9%	-16%
Term	62%	36%	-13%	16%	37%	23%	23%	109%	59%	248%
Total	-7.0%	-4.6%	-4.7%	-8.6%	1.8%	-4.2%	-2.3%	-0.1%	-2.4%	7.7%

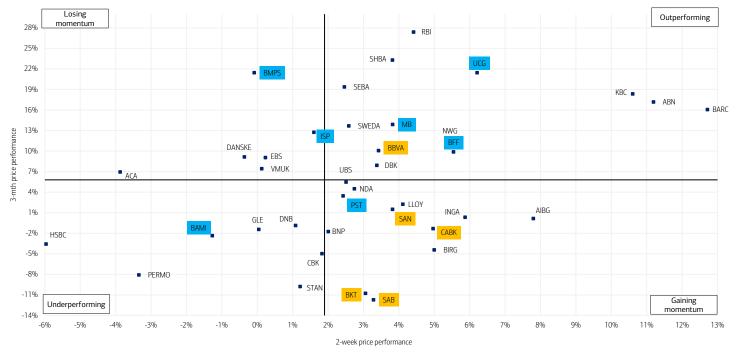
Dec-22 y/y	Intesa Sanpaolo	UniCredit	Banco BPM	Mediobanca	Monte Paschi	Santander	BBVA	CaixaBank	Sabadell	Bankinter
Sight	-3%	-4%	-1%	-14%	-1%	4%	6%	3%	0%	2%
Term	6%	53%	-71%	117%	-33%	58%	22%	-23%	9%	14%
Total	-2.2%	2.5%	-1.3%	7.0%	-3.4%	10.9%	6.9%	0.5%	1.0%	2.9%

**Source:** BofA Global Research, company report. Notes: we use deposit data as of 1H23 for ISP as FY23 data are not available

## **Share price performance**

#### Exhibit 11: 2-week vs. 3-month share price performance across EU Banks with SX7P as intersecting axes

Italian banks outperforming the index over the last 3 months, ex. BAMI. Spanish domestics and SAN underperforming



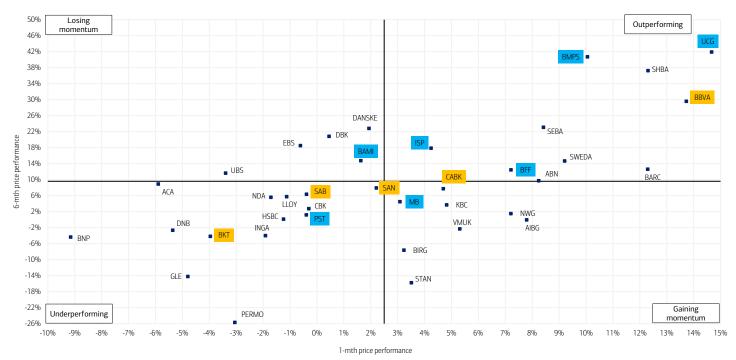
Source: BofA Global Research, Bloomberg

Notes: 1. SX7P performance = axes interception; 2. Prices as of 21/02/2024

BofA GLOBAL RESEARCH

### Exhibit 12: 1-month vs. 6-month share price performance across EU Banks with SX7P as intersecting axes

UCG and BBVA best performing banks in Europe over the last 1 month. BKT worst performer in Southern Europe



Source: BofA Global Research, Bloomberg

Notes: 1. SX7P performance = axes interception; 2. Prices as of 21/02/2024



## What's changed: new estimates & ratings

We update estimates, POs and ratings reflecting changes to the following three main items: i) latest Euribor and Euro swap forward curves – and we now assume terminal rate at year-end 2024 at c.2.7%; ii) higher NII due to hedging policies implemented to lower impact from rates, iii) higher capital distributions given CET1 levels and organic generation. This is what drives a re-rating in our POs as we believe the market already over-discounts the NII 'peak' as reflected by consensus estimates. Peak in NII does not equal peak in EPS however. Our estimates also incorporate some house-keeping post 4Q results. We also update for latest FX where applicable. For more details, we highlight below key changes to earnings reflected in our updated POs & ratings.

#### Exhibit 14: RoTBV 2025e vs. P/TBV 2024e

SAN, UCG, ISP and BBVA screening undervalued

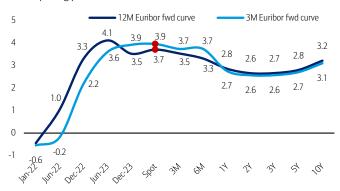


Source: BofA Global Research. Notes: prices as of 21/02/2024

BofA GLOBAL RESEARCH

#### Exhibit 13: Euribor 3m/12m forward curves

Market pricing peak Euribor behind us



Source: BofA Global Research, Bloomberg. Notes: as of 22/02/2024

BofA GLOBAL RESEARCH

#### Exhibit 15: BofA ratings, price objectives and EPS estimates new vs. old, 2024-26e

We slightly increase our EPS estimates at SAN & BBVA in 2025-26e

Company	BofA rating		Price Objective		Potential Upside / Downside	Adj. EPS FY24e		Adj. EPS FY25e			Adj. EPS FY26e			
	New	Old	New	Old	%	New	Old	% change	New	Old	% change	New	Old	% change
Santander	Buy	Buy	5.10	5.00	34%	0.79	0.78	1%	0.85	0.83	2%	0.93	0.90	4%
BBVA	Neutral	Neutral	9.50	9.30	2%	1.45	1.44	0%	1.49	1.48	1%	1.58	1.55	2%

**Source:** BofA Global Research estimates

BofA GLOBAL RESEARCH

#### Exhibit 16: BofA EPS estimates vs. consensus, 2024-26e

We are ahead of consensus earnings

Company		Adj. EP FY24e			Adj. EP FY25e		Adj. EPS FY26e			
	BofA est.	Cons	BofA vs Cons	BofA est.	Cons	BofA vs Cons	BofA est.	Cons	BofA vs Cons	
Santander	0.79	0.71	11.0%	0.85	0.75	13.7%	0.93	0.80	16.2%	
BBVA	1.45	1.37	5.6%	1.49	1.36	9.7%	1.58	1.38	14.7%	

Source: BofA Global Research estimates, Visible Alpha.

BofA GLOBAL RESEARCH

#### Rationale behind our ratings

#### Santander – Buy (unchanged), PO €5.10 (from €5.00)

We lift NII in Spain and in the UK driving group NII up 1-2%. We have group NII growing 4% YoY in 2024e and group earnings up 14% YoY supported by progressive margin/volume improvement in Brazil and resilient asset quality in the US. Overall, we



are c.13% ahead of consensus net profit in 2024-25e. Reiterate Buy and top pick in Spain – Santander is positively geared to rate cuts in key regions (Brazil, US) and shares trade at an undemanding 4.5x P/E 2025e.

#### BBVA - Neutral (unchanged), PO €9.50 (from €9.30)

We updated our EPS after 4Q results. We reflect the move in Euribor and increase EPS by c.1% to reflect the exit rate at c2.6% on Spain, in-line with the Euribor forward curve and factor-in hedging against rate cuts in Mexico. NII estimates grow by c.4% in Spain in 2024e and by 8% YoY in Mexico. Resilience of double-digit volume growth in Mexico is key for consensus expectations to be met. We will be monitoring activity levels in Mexico closely. Reiterate Neutral.

#### **Exhibit 17: Stocks mentioned**

Prices and ratings for stocks mentioned in this repor

<b>BofA Ticker</b>	Bloomberg ticker	Company name	Price	Rating
BBVA	BBVA US	BBVA	US\$ 10.09	B-2-7
BBVXF	BBVA SQ	BBVA	EUR 9.332	B-2-7
BCDRF	SAN SQ	Santander	EUR 3.839	B-1-7
SAN	SAN US	Santander	US\$ 4.09	B-1-7

Source: BofA Global Research

BofA GLOBAL RESEARCH

#### **Investment Rationale**

#### **BBVA**

Mexico represents a significant c.60% of BBVA's group profits. This has been a key source of growth for BBVA, which is set to normalize as we approach peak rates with early signs of an economic 'normalization' in Mexico and with elections this year. While Türkiye has been performing better than feared, it will continue to affect valuation both positively and negatively being a source of volatility. We have limited upside near-term - Neutral rating.

#### Santander

Santander is a 'show-me story' its shares have underperformed the synthetic valuation of its subsidiaries. It trades at the lowest P/PPOP multiple in Europe and we believe its Brazilian unit (>25% of earnings) has inflected with SELIC cuts running at 50bps per BCB meeting. While its capital buffers will now be supported by the organic generation and although the US auto lending market remains challenged short-term, loan losses will be more resilient than cons. especially as rates fall. Buy.

## Price objective basis & risk

#### **BBVA (BBVXF / BBVA)**

We derive our PO of €9.50 (ADR USD 10.28) using a sum of the parts (SoTP) on our 2024e estimates whereby we value each geography using a Gordon growth-implied P/CET1 multiple assuming 13% common equity tier 1 (CET1) allocation to each region's risk-weighted assets (RWAs). We assume 13% CoE for Spain, 14% for Mexico, 30% for Türkiye and a blended 18% for South America. We then add the market value of the stake in Telefonica, the cumulative dividends over 2023-24 and capital excess/deficit to steady-state CET1 and discount to 1 year forward from today.

Upside risks to our forecasts:

1. Positive earnings revision deriving from NII and cost of risk, provide upside to capital distribution



- 2. More stable markets would favour a recovery in AUMs, driving fee growth
- 3. Stronger real GDP growth in Spain and Mexico

Downside risks to our forecasts:

- 1. Deterioration in sovereign risk in key geographies
- 2. Türkiye risk could still affect capital and shareholders' returns
- 3. Asset quality deteriorating more than we forecast

#### Santander (BCDRF / SAN)

We derive our PO of €5.10 (ADR USD 5.52) using a SoTP on 2024e estimates where we value each geography using a Gordon growth-implied P/CET1 multiple assuming 13% CET1 allocation to each region's RWAs. We assume 13% CoE for Spain, 13.5% for the UK and the US, 14% for Mexico and 15% for Brazil. We then add cumulative dividends over 2023-24 and capital excess/deficit to the steady-state CET1, and discount back to 1yr fwd from today.

Upside risks to our forecasts:

- 1. Geared to interest rates in Spain
- 2. Positive earnings revision deriving from NII and cost of risk, from more resilient US and better growth in Brazil
- 3. Better asset quality than market fears

Downside risks to our forecasts:

- 1. Selic rate in Brazil may not drop as fast as we forecast
- 2. Deposit beta may be higher than we forecast affecting funding mix
- 3. Higher default rates may affect cost of risk normalization and capital levels

### **Analyst Certification**

I, Antonio Reale, 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.



## EMEA - Banks Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
BUY				
	Allied Irish Banks	AIBRF	AIBG ID	Alastair Ryan
	Bank of Ireland Group	XBOIF	BIRG ID	Alastair Ryan
	BFF Banking Group	XBBZF	BFF IM	Antonio Reale
	BNP Paribas	BNPQF	BNP FP	Tarik El Mejjad
	BNP Paribas	BNPQY	BNPQY US	Tarik El Mejjad
	CaixaBank	CIXPF	CABK SQ	Antonio Reale
	Credit Agricole	CRARF	ACA FP	Tarik El Mejjad
	Danske Bank	DNSKF	DANSKE DC	Tarik El Mejjad
	Erste Bank	EBKOF	EBS AV	Alastair Ryan
	Erste Bank	EBKDY	EBKDY US	Alastair Ryan
	HSBC	XHSBF	5 HK	Alastair Ryan
	HSBC	HBCYF	HSBA LN	Alastair Ryan
	HSBC -A	HSBC	HSBC US	Alastair Ryan
				,
	Intesa Sanpaolo	IITSF	ISP IM	Antonio Reale
	Intesa Sanpaolo	ISNPY	ISNPY US	Antonio Reale
	KBC Group	KBCSF	KBC BB	Tarik El Mejjad
	KBC Group NV	KBCSY	KBCSY US	Tarik El Mejjad
	NatWest Group	RBSPF	NWG LN	Rohith Chandra-Rajan
	Natwest Group PLc	NWG	NWG US	Rohith Chandra-Rajan
	Nordea	NBNKF	NDA FH	Tarik El Mejjad
	Nordea	XSABF	NDA SS	Tarik El Mejjad
	Nordea Bank Abp	NRDBY	NRDBY US	Tarik El Mejjad
	Santander			**
		SAN	SANUS	Antonio Reale
	Santander	BCDRF	SAN SQ	Antonio Reale
	Societe Generale	SCGLF	GLE FP	Tarik El Mejjad
	Societe Generale	SCGLY	SCGLY US	Tarik El Mejjad
	Unicredit	UNCFF	UCG IM	Antonio Reale
	Unicredit	UNCRY	UNCRY US	Antonio Reale
IEUTRAL				
	ABN AMRO	ABMRF	ABN NA	Tarik El Mejjad
	Banco Bilbao Vizcaya Argentaria	BBVA	BBVA US	Antonio Reale
	Banco BPM	BNCZF	BAMI IM	Antonio Reale
	Bankinter	BKIMF	BKT SQ	Antonio Reale
			·	
	BBVA	BBVXF	BBVA SQ	Antonio Reale
	Handelsbanken	SVNLF	SHBA SS	Tarik El Mejjad
	ING Groep NV	ING	ING US	Tarik El Mejjad
	ING Groep NV	INGVF	INGA NA	Tarik El Mejjad
	Lloyds Banking Group	LLDTF	LLOY LN	Rohith Chandra-Rajan
	Lloyds Banking Group	LYG	LYG US	Rohith Chandra-Rajan
	Monte dei Paschi	BMDPF	BMPS IM	Antonio Reale
	Raiffeisen Bank International	RAIFF	RBI AV	Alastair Ryan
	StanChart	SCBFF	STAN LN	Alastair Ryan
	StanChart	XCHBF	2888 HK	-
				Alastair Ryan
	Svenska Handelsbanke	SVNLY	SVNLY US	Tarik El Mejjad
	UBS	XUHJF	UBSG SW	Alastair Ryan
	UBS	UBS	UBS US	Alastair Ryan
INDERPERFORM				
	Banco Sabadell	BNDSF	SAB SQ	Antonio Reale
	Barclays	BCLYF	BARC LN	Rohith Chandra-Rajan
	Barclays	BCS	BCS US	Rohith Chandra-Rajan
	Commerzbank	CRZBF	CBK GY	Rohith Chandra-Rajan
	Deutsche Bank	DB	DB US	Rohith Chandra-Rajan
	Deutsche Bank	XDUSF	DBK GY	Rohith Chandra-Rajan
	DNB	DNBBF	DNB NO	Tarik El Mejjad
	DNB ASA	DNBBY	DNBBY US	Tarik El Mejjad
	Mediobanca	MDIBF	MB IM	Antonio Reale
	Permanent TSB	ILPMF	PTSB ID	Alastair Ryan
	Poste Italiane	PITAF	PST IM	Antonio Reale
	SEB	SVKEF	SEBA SS	Tarik El Mejjad
	Swedbank	SWDBF		
			SWEDA SS	Tarik El Mejjad
	Swedbank AB	SWDBY	SWDBY US	Tarik El Mejjad
	Virgin Money UK PLC	CBBYF	VMUK LN	Rohith Chandra-Rajan
	Virgin Money UK PLC	CYBBF	VUK AU	Rohith Chandra-Rajan



#### **EMEA - Banks Coverage Cluster**

Investment rating Company BofA Ticker Bloomberg symbol Analyst

## **Disclosures**

## **Important Disclosures**

#### **BBVA (BBVA) Price Chart**



B: Buy, N: Neutral, U: Underperform, PO: Price Objective, NA: No longer valid, NR: No Rating

The Investment Opinion System is contained at the end of the report under the heading "Fundamental Equity Opinion Key". Dark grey shading indicates the security is restricted with the opinion suspended. Medium grey shading indicates the security is under review with the opinion withdrawn. Light grey shading indicates the security is not covered. Chart is current as of a date no more than one trading day prior to the date of the report.

#### **BBVA (BBVXF) Price Chart**



B: Buy, N: Neutral, U: Underperform, PO: Price Objective, NA: No longer valid, NR: No Rating

The Investment Opinion System is contained at the end of the report under the heading "Fundamental Equity Opinion Key". Dark grey shading indicates the security is restricted with the opinion suspended. Medium grey shading indicates the security is under review with the opinion withdrawn. Light grey shading indicates the security is not covered. Chart is current as of a date no more than one trading day prior to the date of the report.



#### Santander (BCDRF) Price Chart



B: Buy, N: Neutral, U: Underperform, PO: Price Objective, NA: No longer valid, NR: No Rating

The Investment Opinion System is contained at the end of the report under the heading "Fundamental Equity Opinion Key". Dark grey shading indicates the security is restricted with the opinion suspended. Medium grey shading indicates the security is under review with the opinion withdrawn. Light grey shading indicates the security is not covered. Chart is current as of a date no more than one trading day prior to the date of the report.

#### Santander (SAN) Price Chart



B: Buy, N: Neutral, U: Underperform, PO: Price Objective, NA: No longer valid, NR: No Rating

The Investment Opinion System is contained at the end of the report under the heading "Fundamental Equity Opinion Key". Dark grey shading indicates the security is restricted with the opinion suspended. Medium grey shading indicates the security is under review with the opinion withdrawn. Light grey shading indicates the security is not covered. Chart is current as of a date no more than one trading day prior to the date of the report.

#### Equity Investment Rating Distribution: Banks Group (as of 31 Dec 2023)

Coverage Universe	Count	Percent	Inv. Banking Relationships R1	Count	Percent
Buy	100	49.75%	Buy	84	84.00%
Hold	54	26.87%	Hold	41	75.93%
Sell	47	23.38%	Sell	35	74.47%

#### Equity Investment Rating Distribution: Global Group (as of 31 Dec 2023)

Coverage Universe	Count	Percent	Inv. Banking Relationships R1	Count	Percent
Buy	1895	53.62%	Buy	1083	57.15%
Hold	832	23.54%	Hold	454	54.57%
Sell	807	22.84%	Sell	383	47.46%

R1 Issuers that were investment banking clients of BofA Securities or one of its affiliates within the past 12 months. For purposes of this Investment Rating Distribution, the coverage universe includes only stocks. A stock rated Neutral is included as a Hold, and a stock rated Underperform is included as a Sell.



FUNDAMENTAL EQUITY OPINION KEY: Opinions include a Volatility Risk Rating, an Investment Rating and an Income Rating. VOLATILITY RISK RATINGS, indicators of potential price fluctuation, are: A - Low, B - Medium and C - High. INVESTMENT RATINGS reflect the analyst's assessment of both a stock's absolute total return potential as well as its attractiveness for investment relative to other stocks within its Coverage Cluster (defined below). Our investment ratings are: 1 - Buy stocks are expected to have a total return of at least 10% and are the most attractive stocks in the coverage cluster; 2 - Neutral stocks are expected to remain flat or increase in value and are less attractive than Buy rated stocks and 3 - Underperform stocks are the least attractive stocks in a coverage cluster. An investment rating of 6 (No Rating) indicates that a stock is no longer trading on the basis of fundamentals. Analysts assign investment ratings considering, among other things, the 0-12 month total return expectation for a stock and the firm's guidelines for ratings dispersions (shown in the table below). The current price objective for a stock should be referenced to better understand the total return expectation at any given time. The price objective reflects the analyst's view of the potential price appreciation (depreciation).

# Investment rating Total return expectation (within 12-month period of date of initial rating) Ratings dispersion guidelines for coverage cluster<sup>R2</sup>

 Buy
 ≥ 10%
 ≤ 70%

 Neutral
 ≥ 0%
 ≤ 30%

 Underperform
 N/A
 ≥ 20%

INCOME RATINGS, indicators of potential cash dividends, are: 7 - same/higher (dividend considered to be secure), 8 - same/lower (dividend not considered to be secure) and 9 - pays no cash dividend. Coverage Cluster is comprised of stocks covered by a single analyst or two or more analysts sharing a common industry, sector, region or other classification(s). A stock's coverage cluster is included in the most recent BofA Global Research report referencing the stock.

Price Charts for the securities referenced in this research report are available on the Price Charts website, or call 1-800-MERRILL to have them mailed.

BofAS or one of its affiliates acts as a market maker for the equity securities recommended in the report: BBVA, Santander.

BofAS or an affiliate was a manager of a public offering of securities of this issuer within the last 12 months: BBVA, Santander.

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

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

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: BBVA, Santander.

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

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: BBVA, Santander

BofAS together with its affiliates beneficially owns one percent or more of the common stock of this issuer. If this report was issued on or after the 9th day of the month, it reflects the ownership position on the last day of the previous month. Reports issued before the 9th day of a month reflect the ownership position at the end of the second month preceding the date of the report: BBVA.

BofAS or one of its affiliates is willing to sell to, or buy from, clients the common equity of the issuer on a principal basis: BBVA, Santander.

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: BBVA, Santander.

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**

From time to time research analysts conduct site visits of covered issuers. BofA Global Research policies prohibit research analysts from accepting payment or reimbursement for travel expenses from the issuer for such visits.

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. 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 Prudential 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 (Hong Kong): Merrill (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): Merrill Lynch (Canada): Merrill Lynch (Mexico): Merrill Ly 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 (I 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.



R2 Ratings dispersions may vary from time to time where BofA Global Research believes it better reflects the investment prospects of stocks in a Coverage Cluster.

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 in Germany and is regulated by BaFin, the ECB and the CBI. BofA Securit

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.

This report may contain a short-term trading idea or recommendation, which highlights a specific near-term catalyst or event impacting the issuer or the market that is anticipated to have a short-term price impact on the equity securities of the issuer. Short-term trading ideas and recommendations are different from and do not affect a stock's fundamental equity rating, which reflects both a longer term total return expectation and attractiveness for investment relative to other stocks within its Coverage Cluster. Short-term trading ideas and recommendations may be more or less positive than a stock's fundamental equity rating.

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 herein. Investors in such securities and instruments, including ADRs, 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.

#### BofA ESGMeter Methodology:

ESGMeter is a proprietary metric based on quantitative analysis and fundamental analyst inputs that reflects our assessment of a company's Environmental, Social and Governance-related attributes. The ESGMeter is intended to indicate a company's likelihood of experiencing stronger financial stability (higher return on equity and lower earnings and price volatility) over the next three years relative to peer group. There are three ESGMeter levels - Low, Medium, and High - which indicate whether a company has attributes most likely to translate into superior financial stability (in the case of a High level) over the next three years relative to its peer group. A Medium level suggests that a company exhibits ESG characteristics that are likely associated with financial stability results in line with its peer group over the next three years. Full details of our methodology, financial stability definition and disclaimers are available at <a href="mailto:BofA ESGMeter methodology">BofA ESGMeter methodology</a>. ESGMeter is not indicative of a company's future stock price performance and is not an investment recommendation or rating. ESGMeter is independent of the BofA Global Research fundamental equity analyst's investment rating, volatility risk rating, income rating or price objective for that company.

#### 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 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.

Subject to the quiet period applicable under laws of the various jurisdictions in which we distribute research reports and other legal and BofA Securities policy-related restrictions on the publication of research reports, fundamental equity reports are produced on a regular basis as necessary to keep the investment recommendation current.

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.

