Banks - Brazil

Year Ahead ‘24: Stick with the heavy weights; upgrading Itau to Buy

Rating Change

16 January 2024

Equity
Brazil
Financial Services

Mario Pierry
Research Analyst
BofAS
+1 646 743 0047
mario.pierry@bofa.com

Flavio Yoshida >>
Research Analyst
Merrill Lynch (Brazil)
+55 11 2188 4588
flavio.yoshida@bofa.com

Antonio Ruette >>
Research Analyst
Merrill Lynch (Brazil)
+55 11 2188 4225
antonio.ruette@bofa.com

Ernesto Gabilondo >>
Research Analyst
Merrill Lynch (Mexico)
+52 55 5201 3428
ernesto.gabilondo@bofa.com

Sticking to last year’s winners

With NPLs peaking and loan growth about to accelerate, we see banks performing well in ’24. We upgrade Itau to Buy from Neutral, as we believe that its premium valuation is deserved given its superior execution.

1. Delinquency rate finally peaking

NPLs showed signs of stabilization in 3Q, mainly supported by an improvement in the individuals portfolio following banks’ conservative lending approach. Moreover, renegotiation and NPL formation levels are also cooling-off.

2. Loan book growth near an inflection point

We estimate loan growth to accelerate to 10% in ’24 from 7% in ’23 supported by macro tailwinds such as lower interest rates, controlled inflation, low unemployment and improving household indebtedness. While growth should remain focused on lower-risk/ secured loans in the short-term, a riskier approach should take place throughout ‘24.

3. NII gradually normalizing in ‘24

Despite still pressured Client NII in 1H24 following the weak loan book expansion in ’23, we expect improving trends in 2H24 reflecting: i) loan book growth acceleration, ii) riskier loan mix and iii) normalized Market NII contribution.

4. Room for re-rating

We see room for valuation re-rating (multiples are c.30% below pre-pandemic levels) supported by decreasing cost of equity, solid balance sheets, lower regulatory noise and well mapped fintech competition.

5. Neobanks competition well mapped

Neobanks changed strategy from growth to profitability and app downloads reduced sharply. Neobanks threat is well mapped and is focused on Nubank.

6. Lower regulatory uncertainties

Main risks discussed in ’23 (interest rate cap on revolving credit card and end of the IoC tax benefit) came with limited impact, lowering potential overhang to earnings.

7. Effective tax rate normalizing (higher)

In general, banks benefited from a low effective tax rate in ’23, driven by pressured pre-tax profit and elevated TJLP. We expect some normalization in ’24, given pre-tax earnings trending higher and lower TJLP (given the expected easing cycle).

Exhibit 1: New POs

ITUB4 and INTR with the highest upsides

	Rating	Old PO	New PO	Upside	Rating
BBD	Neutral	3.8	3.8	17%	C-2-7
BBDC4	Neutral	19	19	19%	B-2-7
BSBR	U/P	5.4	5.8	-7%	B-3-7
INTR	Buy	6.0	6.6	26%	C-1-7
ITUB	Buy	6.6	8.0	17%	B-1-7
ITUB4	Buy	33	40	20%	B-1-7
NU	Neutral	9.0	10	8%	C-2-9
SANB11	U/P	27	29	-4%	B-3-7

Source: BofA Global Research

BofA GLOBAL RESEARCH

ALM: Asset and liability management
BBDC: Bradesco
CET1: Common equity tier 1
ITUB: Itau Unibanco
NII: Net interest income
NPL: Non-performing loans
SANB: Santander Brasil
TJLP: Long-term interest rate

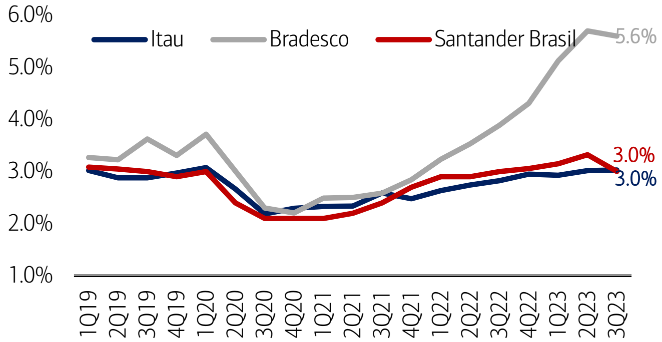
Refer to important disclosures on page 18 to 20. Analyst Certification on page 16. Price Objective Basis/Risk on page 15.
12646106

Timestamp: 16 January 2024 08:07AM EST

2024 in charts

Exhibit 2: Total NPL over 90 days

Excluding Americanas, banks NPL improved/stabilized in 3Q23…

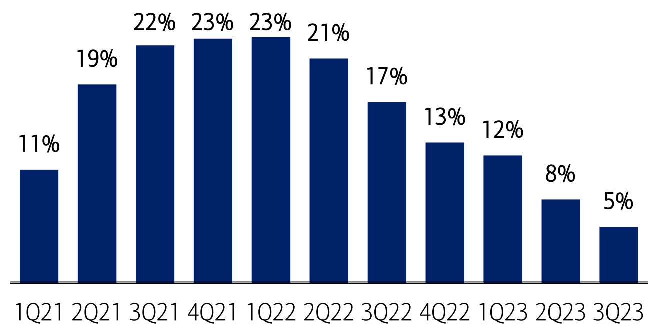


Source: Companies and BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 3: Large cap banks individuals book growth QoQ

…which should support a pick-up on loan growth, following the de-leverage process

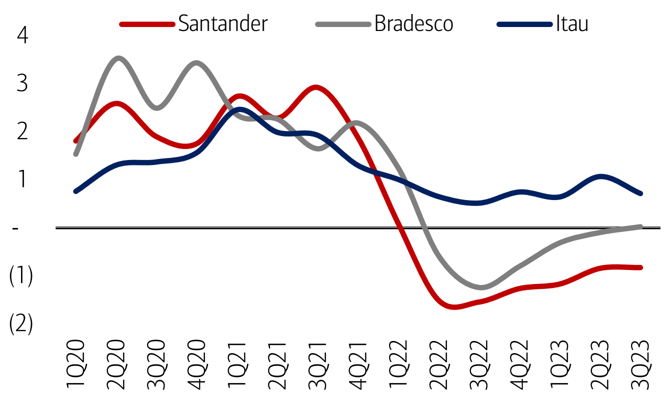


Source: Companies and BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 4: Market NII (R$bn)

Results normalizing gradually for Bradesco and Santander Brasil

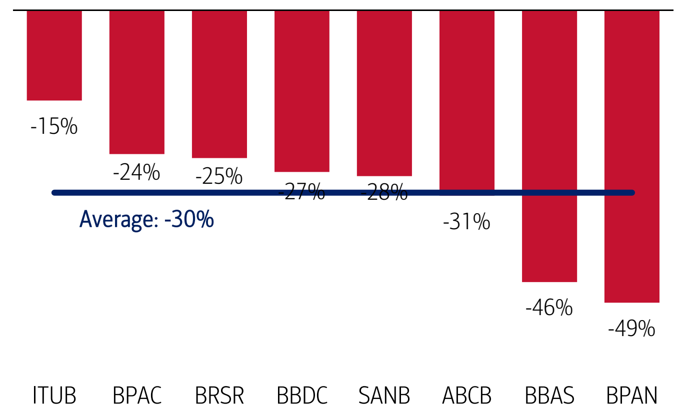


Source: Companies and BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 5: Banks P/E vs. end of '19 (pre-Covid)

All banks P/E are well below pre-Covid levels, and we expect the sector to re-rate on positive dynamics

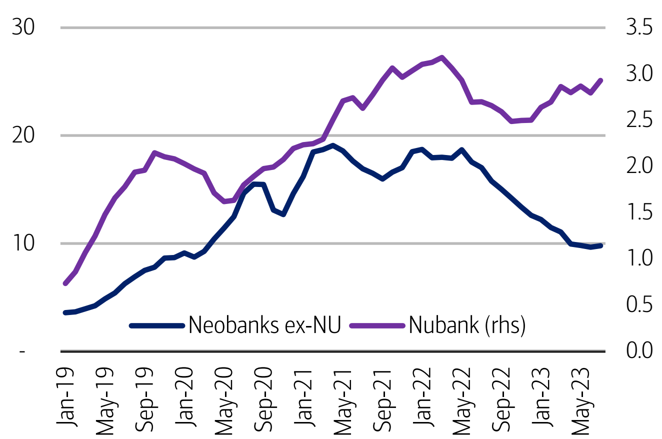


Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

Exhibit 6: Neobanks downloads (3M average, mn)

Digital banks competition is focused on Nubank

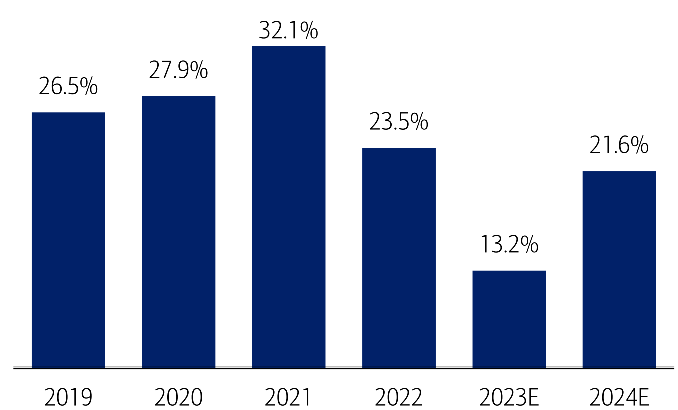


Source: Sensor Tower, BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 7: Large-cap banks effective tax rate

Effective tax-rate should normalize higher in '24



Source: BofA Global Research and Companies

BofA GLOBAL RESEARCH

NPLs close to the peak

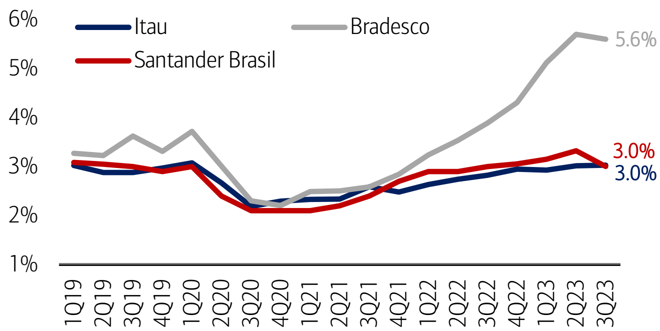
Banks showed stronger hints that NPLs are close to the peak. Total NPL improved/remained stable in 3Q23 (excluding Americanas related loans), with a key contribution from the individuals portfolio.

Following a deterioration in asset quality started in early '21, banks adopted different strategies to curb further deterioration. While Santander Brasil was the first bank to become more selective on growth, Bradesco was the last. Itau has been increasingly focusing on higher income individuals, which are notably less vulnerable to economic cycles.

The loan portfolio de-risking process started in early '22, with lower expansion of riskier loans (credit cards and personal, as well as to non-checking account holders), and growth focused on lower risk loans (mortgages, rural and payroll loans).

Exhibit 8: Total NPL over 90 days

Excluding Americanas, all banks showed NPL improvement/stabilization...

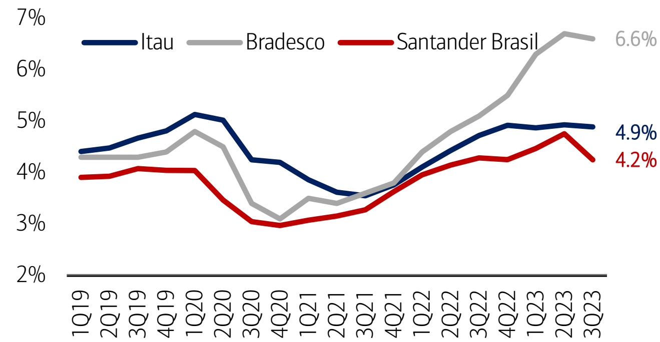


Source: Companies and BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 9: Individuals book NPL over 90 days

...particularly supported by better individuals NPL trends



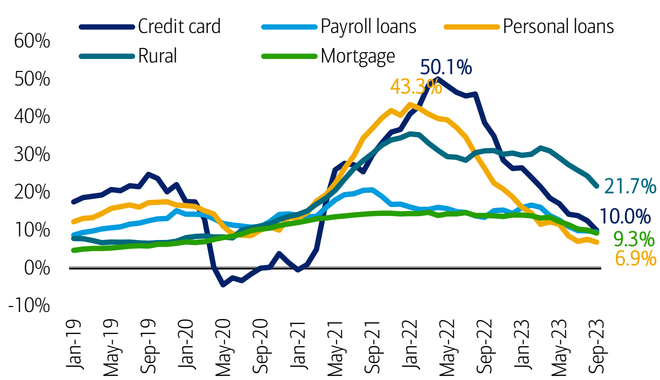
Source: Companies and BofA Global Research

BofA GLOBAL RESEARCH

Another evidence of good asset quality trend is the NPL formation & renegotiated book levels. Santander deployed a more intense renegotiation level in early '22, which is now cooling-off as NPL is improving. Bradesco started a similar strategy in early '23 and showed some stability in 3Q23. Meanwhile, NPL formation and renegotiations at Itau are stable and running in-line with historical levels.

Exhibit 10: Individuals loan growth per product YoY

Riskier loans (credit cards and personal loans) decelerating since early '22

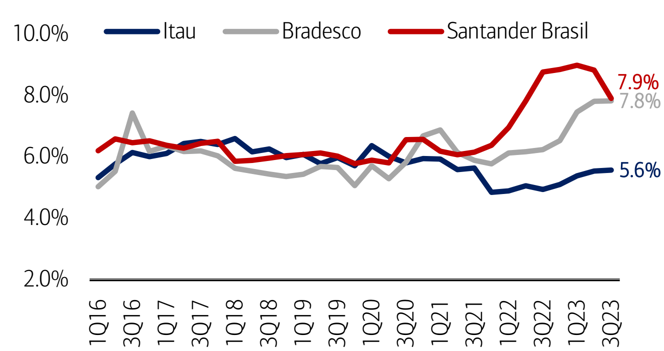


Source: BofA Global Research estimates, Brazilian Central Bank

BofA GLOBAL RESEARCH

Exhibit 11: NPL formation & renegotiated portfolio as % of loans

BBDC and SANB showed some stabilization after a sharp increase



Source: Companies and BofA Global Research

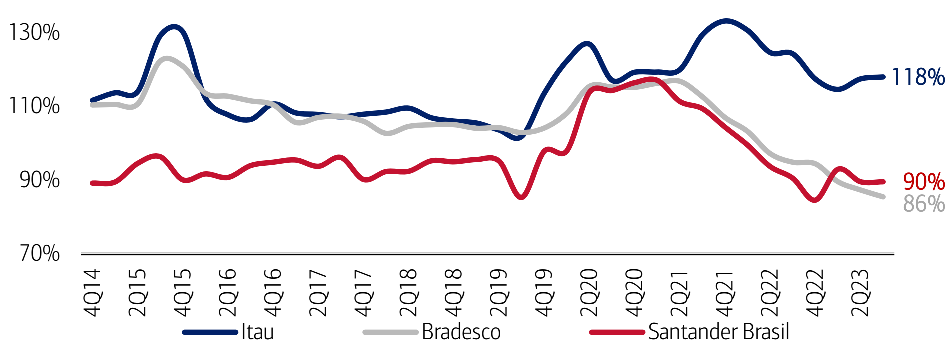
BofA GLOBAL RESEARCH

Coverage ratios stabilized

Following the recent NPL deterioration and the Americanas event in early ’23, banks’ coverage ratio on E-H rated loans decreased but they finally stabilized. Important to highlight that: i) Itau’s gap to Bradesco remains wide, while it used to be similar between ’15-’21, and ii) Bradesco and Santander present the lowest coverage, below historical averages.

Importantly, banks are not treating Americanas loans in the same way. While Itau and Santander are not considering Americanas related loans as overdue, Bradesco is. This is affecting bank’s coverage ratio comparability, reason why we prefer to analyze the coverage ratio of E-H rated loans, which seems more appropriate to track real balance sheet strength.

Exhibit 12: Coverage ratio on E-H rated loans
Itau with the highest coverage and Bradesco with the lowest



Source: BofA Global Research estimates, company report

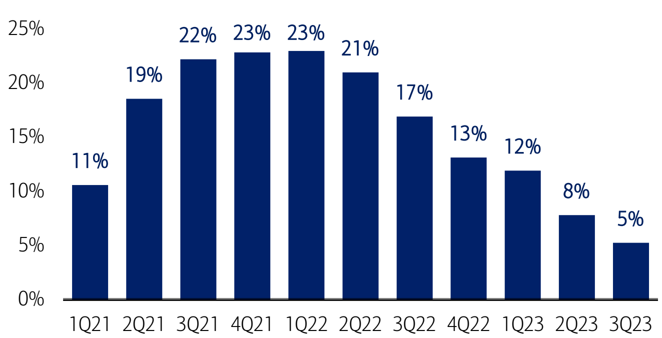
BofA GLOBAL RESEARCH

Growth near an inflection point

Large cap banks individuals loan portfolio growth over the past quarters had been poor given the limited appetite for growth. While good macroeconomic indicators such as decreasing interest rates, controlled inflation, and low unemployment rate, coupled with NPLs stabilizing suggest a sharp recovery on growth, we only expect a gradual acceleration given the still high (but improving) household indebtedness level.

As a result, growth in 4Q should remain focused on lower risk clients (high income) or products (collateralized loans), while acceleration on riskier lines should happen throughout ’24.

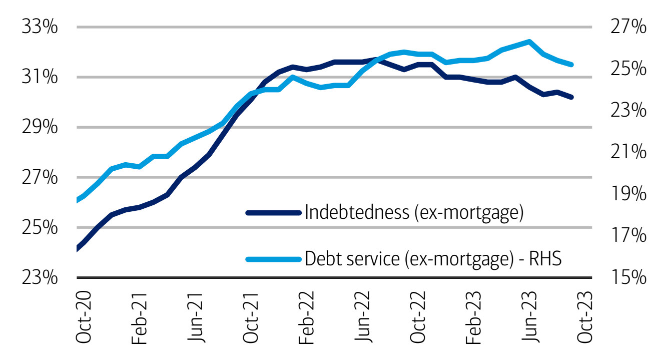
Exhibit 13: Large cap banks individuals book growth YoY
Growth decelerated significantly since ‘21



Source: BofA Global Research estimates

BofA GLOBAL RESEARCH

Exhibit 14: Household indebtedness and debt service
The still high indebtedness level prevents a stronger risk approach



Source: Brazilian Central Bank and BofA Global Research

BofA GLOBAL RESEARCH

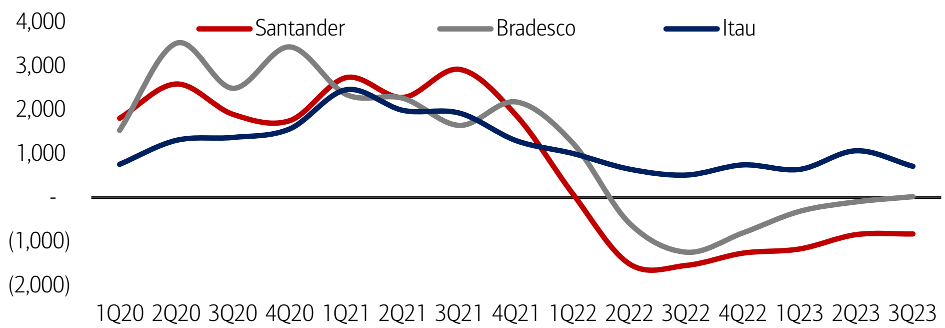
NII improvement throughout '24

Bradesco and Santander Brasil were hit hard by negative market NII contribution in '22 and in most of '23. However, we see improving trends for 4Q23 and throughout '24 given the expected easing cycle and the securities portfolio gradual repricing as part of the ALM strategy.

While Bradesco's Market NII already reached breakeven in 3Q23, Santander is expected to have reached it in Dec '23.

While we expect private banks Market NII to improve, it's important to remark that it should not return to levels seen in '20 given the end of the overhedge related gains.

Exhibit 15: Market NII (R$mn)
Bradesco reached breakeven in 3Q23. Santander remains the only bank with negative results



Source: Companies and BofA Global Research

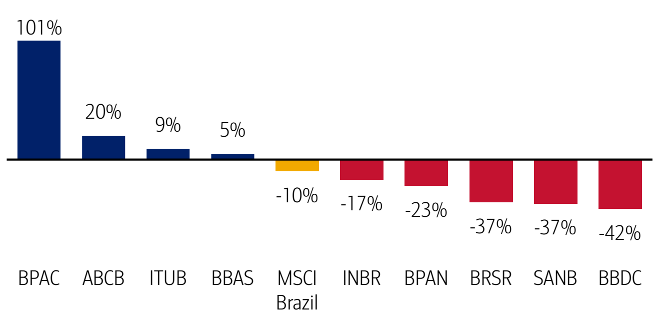
BofA GLOBAL RESEARCH

While Client NII is expected to remain pressured in 1H24 given the recent limited loan growth and conservative mix, we expect it to gradually improve throughout '24 (especially in the 2H). In our view, the combination of loan portfolio growth acceleration and gradual change on the loan mix (towards a riskier portfolio) should yield better Client NII in 2H24 onwards.

Signals of sector re-rating ahead

We see banks under our coverage trading at a P/E 30% below pre-Covid levels ('19), which we think is unjustified given: i) leading banks profitability hovering around 20%, showing ROE resilience amid a challenging macro ii) comfortable capital levels, which could trigger higher pay-out ratios, iii) decreasing cost of equity, iv) lower regulatory noise limiting potential downside, and v) fintechs competition is well mapped, with a few of them standing out as winners and many of them facing financial difficulties.

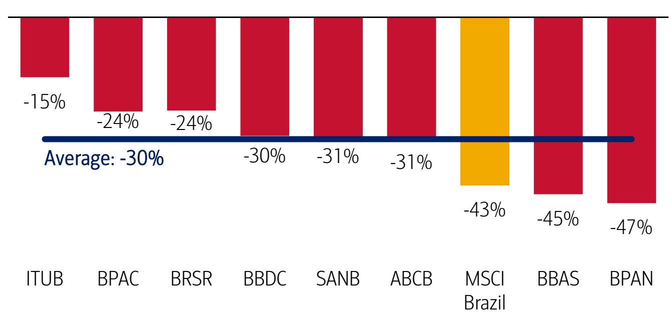
Exhibit 16: Prices evolution since end of '19 (pre-Covid)
Mixed performance, with BTG Pactual leading and Bradesco lagging



Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

Exhibit 17: P/E vs. end of '19 (pre-Covid)
All banks P/E are well below pre-Covid levels



Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

Fintechs competition focused on Nubank

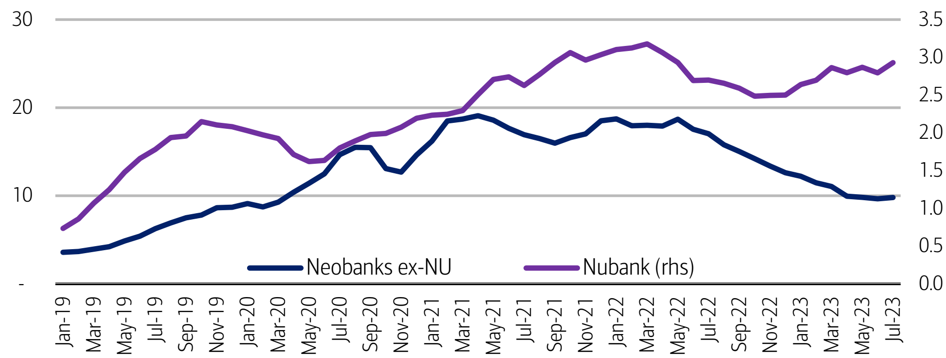
Neobanks app downloads soared during the pandemic, raising concerns on incumbent banks revenue pool. However, as inflation picked up and Central Banks around the world deployed a hiking cycle, fintechs' strategy suddenly changed from growth to profitability, directly impacting fintechs' growth.

According to our tracking, after a sharp increase in app downloads during the pandemic ('20-'21), levels are now normalizing lower, except for Nubank.

While noise related to different fintechs taking share from incumbent banks on different business lines lowered, all eyes are focused on Nubank's next steps, given its sizable client base.

Exhibit 18: Neobanks app downloads per month (3M average, mn)

Neobanks, excluding Nubank, lost traction over the last two years



Source: Sensor Tower, BofA Global Research

BofA GLOBAL RESEARCH

Regulatory uncertainties fading away

We spent great part of '23 discussing potential impacts from regulatory changes mainly related to the revolving credit card interest rate cap, interest-rate free installment and end of the interest on capital tax benefit.

Regulatory changes regarding these themes were announced in Dec '23, with limited impact on banks earnings (see report: Credit card interest rate capped at 100%). These decisions not only brought some relief to the banking sector as it removed important overhang to banks earnings but showed a rational and moderate government approach.

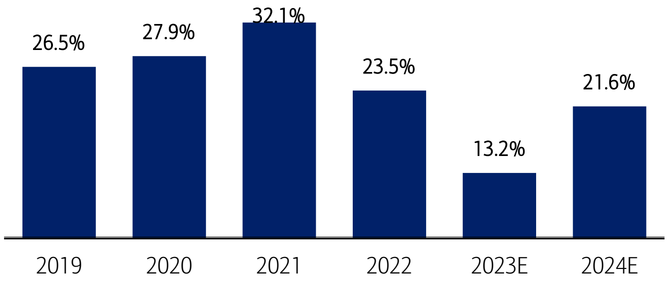
Effective tax rate normalizing (higher)

We expect banks effective tax rate to normalize higher in '24, reflecting: i) TJLP (long-term interest rates) reduction following the expected easing cycle, ii) banks' pre-tax earnings trending higher in '24 and iii) potential increase on pay-out ratios pressuring shareholders' equity growth.

Brazilian companies have two ways to remunerate shareholders: dividends and interest on capital (IoC). The latter is unique to Brazil and is a type of dividend that is tax deductible. The IoC distribution is limited to the result of the TJLP applied to the shareholders' equity, and it is not allowed to exceed 50% of the company's earnings before taxes.

In '23 banks benefited from a high TJLP level (as it is based on the Selic rate) and pressured pre-tax earnings, boosting the IoC tax benefit. As a result, large-cap banks average tax rate in '23 is expected to be 13%, compared to 27% in the previous years.

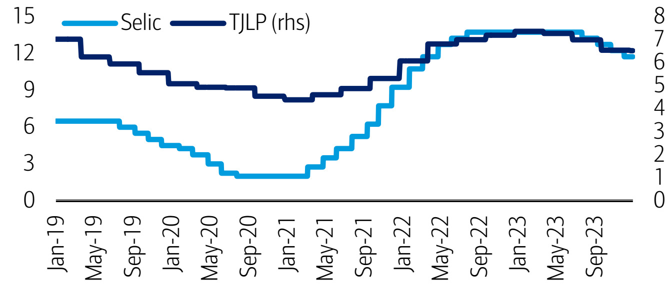
Exhibit 19: Large-cap banks effective tax rate
Effective tax rate in '23 well below previous years



Source: BofA Global Research and Companies

BofA GLOBAL RESEARCH

Exhibit 20: Selic and TJLP (long-term interest rate, %)
TJLP is correlated with Selic



Source: BofA Global Research and Bloomberg

BofA GLOBAL RESEARCH

Americanas recovery getting closer

By the end of '23 Americanas announced that it signed a plan support agreement (PSA) with creditors, signaling that is getting closer to a successful restructuring plan. While the terms of the PSA are still unknown, we estimate 50%-70% debt haircut. Bradesco is the bank that should benefit the most in relative terms from a recovery, as the bank has the highest exposure and should still face pressured pre-tax earnings in '24. Important to highlight that Santander Brasil is the only large-cap bank that didn't provision 100% of the exposure, thus requiring further provisions on a haircut higher than 50%.

Exhibit 21: Americanas provision recovery potential (R$mn)
Bradesco should benefit the most in relative terms (as % of pre-tax earnings in '24)

	BBDC	ITUB	SANB
Americanas exposure	4,851	2,700	3,667
Americanas provisions (until 3Q23)	4,851	2,700	1,833
Coverage on Amer exposure	100%	100%	50%
30% AMER recovery (70% haircut)	1,455	810	-733
As % of pre-tax earnings in '24	*5%*	*1.4%*	*-4%*
50% AMER recovery (50% haircut)	2,426	1,350	0
As % of pre-tax earnings in '24	*9%*	*2%*	*0%*

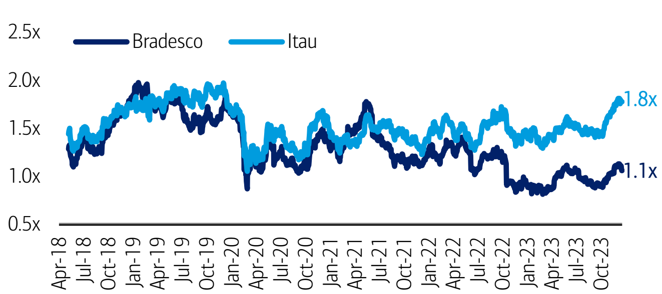
Source: BofA Global Research estimates, company report

BofA GLOBAL RESEARCH

ITUB x BBDC: mind the gap

Itau's valuation gap to Bradesco remains wide and in our view the gap is deserved. Bradesco's poor profitability and weak operating trends compared to Itau explain such disparity. While Itau delivered ROE of 20.9% in 9M23, Bradesco posted 11.4%. On top of this, Itau presented better operating trends than Bradesco, including: i) loan portfolio growth, ii) NPL, iii) coverage ratio, iv) efficiency ratio, v) renegotiation levels and vi) capital position.

Exhibit 22: Historical P/BV
Valuation gap widened following pressured BBDC results in '22



Source: BofA Global Research and Bloomberg

BofA GLOBAL RESEARCH

Exhibit 23: Itau vs Bradesco - operating metrics
Itau with better operating trends than Bradesco

	Itau	Bradesco	Gap
Net income (9M23, R$mn)	26,217	13,419	95%
ROE (9M23)	20.9%	11.4%	953 bp
ROA (9M23)	1.4%	1.0%	41 bp
Loan growth (expanded book, YoY)	5.7%	0.1%	560 bp
Total NPL	3.0%	5.6%	-260 bp
Coverage ratio	209%	155%	5,400 bp
Efficiency ratio	39.8%	47.8%	-805 bp
Renegotiated portfolio	4.5%	6.2%	-169 bp
CET1	13.1%	11.8%	130 bp

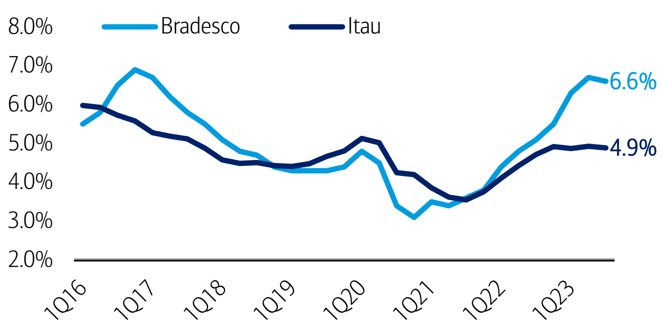
Source: BofA Global Research estimates, companies reports

BofA GLOBAL RESEARCH

We expect Bradesco's profitability to remain pressured given the conservative lending approach (weak growth and focus on better rated clients and lower risk products) limiting NII expansion in '24, coupled with high provision charges expectation (BBDC presents the lowest coverage ratio level among retail banks).

Moreover, given Bradesco's retail client base skewed to mid/low-income clients (differently from Itau's client base on mid/high-income), we believe it will take longer for Bradesco accelerate loan growth given the substantially higher individuals NPL and the still elevated household indebtedness level.

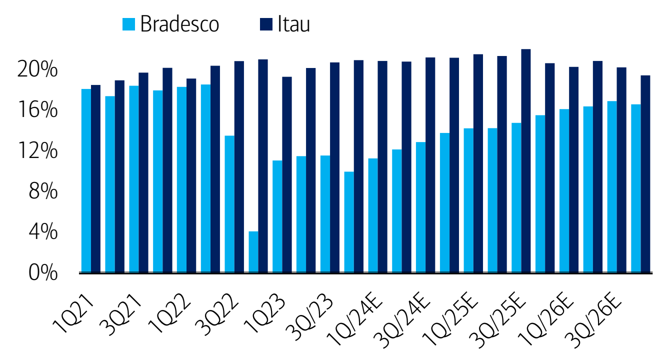
Exhibit 24: Individuals book NPL over 90 days
Bradesco's individuals NPL well above Itau's



Source: BofA Global Research estimates and companies

BofA GLOBAL RESEARCH

Exhibit 25: ROE evolution
Bradesco ROE gap to Itau should narrow gradually



Source: BofA Global Research and companies

BofA GLOBAL RESEARCH

Can Bradesco's new CEO accelerate the ROE recovery process?

In late November Mr. Marcelo Noronha took over as Bradesco's CEO. The earlier replacement than expected is a recognition that changes needed to take place to speed up the earnings recovery process. However, we do not expect a major revolution in the bank's culture, processes and mindset as Mr. Noronha has been at Bradesco for 20y.

We remain skeptical of an acceleration on the profitability improvement until we have greater visibility of the new CEO's strategy and clear signs of recovery. We expect Mr. Noronha to present a plan focused on improving Bradesco's operating leverage, especially related to costs to serve low-income clients. The credit cards and checking account digital offering landscape changed the way of serving retail clients, requiring banks to re-think their branches and headcount allocated to serve this niche.

Revised earnings estimates

Bradesco is the large-cap bank with the greatest net income change (-13%) in '24 vs. our previous forecast. Recently reported results provided evidence that an expected turn around in profitability is likely to be slow (weak revenue generation on pressured loan growth with still high NPL levels). As a result, we lowered our estimates for loan portfolio, NII and market NII growth for '24.

We increased Santander Brasil net income by 4% in '24. The bank is slightly ahead of peers in the credit cycle. It was the first bank to become more conservative on growth, and it already showed improvements on: i) NPLs, ii) renegotiated portfolio, iii) NPL formation and iv) cost of risk. The bank should likely accelerate loan growth before peers, which could result in stronger NII. Nevertheless, we only see ROE converging to the same level of cost of equity, while the stock trades at 1.4x trailing P/BV.

We increased Nubank's net income for '23 by 14% on 4Q23 good results expectation given solid card volume growth, provisions growth below NII and CTS under control. Our estimates for '24 and '25 remained virtually unchanged.

Exhibit 26: Old vs new estimates (R$mn)

Greatest net income changes in '24 on Bradesco

	2023E			2024E			2025E			2026E
	Old	New	Change	Old	New	Change	Old	New	Change	New
Bradesco										
Net income	18,833	17,461	-7%	24,719	21,457	-13%	30,779	27,685	-10%	34,689
ROE	11.7%	11.0%	-78bp	14.2%	12.5%	-172bp	16.2%	14.7%	-150bp	16.5%
Itau Unibanco										
Net income	35,421	35,446	0%	39,162	40,529	3%	42,592	44,337	4%	46,903
ROE	20.7%	20.8%	+8bp	20.1%	21.3%	+120bp	19.2%	20.9%	+168bp	19.6%
Santander Br.										
Net income	10,377	9,724	-6%	13,422	13,930	4%	16,057	15,626	-3%	16,986
ROE	12.4%	11.7%	-72bp	15.0%	15.7%	+69bp	16.6%	16.2%	-34bp	16.3%
Nubank (US$mn)										
Net income	973	1,107	14%	1,975	1,968	0%	3,321	3,218	-3%	5,124
ROE	17.4%	17.4%	0bp	26.5%	26.5%	0bp	33.2%	33.2%	0bp	36.7%
Inter										
Net income	314	321	2%	780	784	0%	1,151	1,124	-2%	1,590
ROE	4.3%	4.4%	+8bp	10.1%	9.9%	-12bp	13.6%	12.8%	-77bp	16.0%

Source: BofA Global Research estimates

Earnings drivers - large cap retail banks

We adjusted our earnings models and expect Bradesco and Santander Brasil to post the strongest net income growth in '24 (+23 and 43% YoY), but it comes with execution risks and from depressed levels in '23. Despite the strong bottom line rebound, both banks' ROE should remain below or in line their cost of equity. On the other hand, while Itau should present lower net income growth in '24 (14%), it should deliver another year with ROE well above cost of equity.

In general, we expect the large cap banks to deliver earnings growth of 16% in '24, supported by: i) 10% loan book expansion and NII growth, ii) fees and expenses growing at similar pace (c.6%), and iii) flat provision charges, following a sharp increase in '23 (+22%).

Exhibit 27: Bradesco – earnings drivers (R$bn)

We expect net income to decrease 9% in '23, but to increase 31% in '24

	22	23E	24E	25E	23E/22	24/23E	25/24E
NII	66	65	71	81	-2%	9%	14%
Fee + insurance	50	54	57	61	7%	6%	7%
Expenses	53	55	57	61	3%	5%	6%
Pre-prov. profit	60	59	67	76	-2%	13%	15%
Provisions	32	39	39	37	21%	0%	-6%
Net income	**20.7**	**17.5**	**21.5**	**27.7**	**-16%**	**23%**	**29%**
ROE	**13.7%**	**11.0%**	**12.5%**	**14.7%**	**-280bp**	**150bp**	**220bp**
Loans	656	643	696	757	-2%	8%	9%
Assets (R$tn)	1.8	2.0	2.1	2.3	7%	8%	9%
Equity	154	164	179	198	6%	9%	11%

Source: BofA Global Research Estimates

BofA GLOBAL RESEARCH

Exhibit 28: Itau Unibanco – earnings drivers (R$bn)

We expect 15% and 12% net income growth in '23 and '24

	22	23E	24E	25E	23E/22	24/23E	25/24E
NII	93	104	112	119	12%	8%	6%
Fee + insurance	49	51	54	57	5%	6%	5%
Expenses	55	58	61	65	7%	5%	5%
Pre-prov. profit	78	87	95	101	12%	9%	6%
Provisions	32	37	36	36	15%	-4%	1%
Net income	**30.8**	**35.4**	**40.5**	**44.3**	**15%**	**14%**	**9%**
ROE	**20.2%**	**20.8%**	**21.3%**	**20.9%**	**60bp**	**60bp**	**-50bp**
Loans	906	946	1,044	1,169	4%	10%	12%
Assets (R$tn)	2.5	2.7	2.9	3.1	11%	7%	7%
Equity	161	180	200	226	12%	11%	13%

Source: BofA Global Research Estimates

BofA GLOBAL RESEARCH

Exhibit 29: Santander Brasil – earnings drivers (R$bn)
We expect net income to decrease 20% in '23, but to increase 29% in '24

	22	23E	24E	25E	23E/22	24/23E	25/24E
NII	52	54	62	69	4%	15%	10%
Fee + insurance	20	21	22	23	4%	5%	4%
Expenses	25	27	29	31	7%	7%	5%
Pre-prov. Profit	41	35	44	51	-13%	25%	15%
Provisions	24	25	25	27	3%	2%	7%
Net income	**12.9**	**9.7**	**13.9**	**15.6**	**-25%**	**43%**	**12%**
ROE	**16.3%**	**11.7%**	**15.7%**	**16.2%**	**-460bp**	**400bp**	**60bp**
Loans	490	513	564	610	5%	10%	8%
Assets (R$tn)	1.0	1.2	1.3	1.4	12%	8%	7%
Equity	82	87	93	101	5%	8%	8%

Source: BofA Global Research Estimates

BofA GLOBAL RESEARCH

Earnings drivers – digital banks

We expect Nubank's net income to reach R$2bn (+78% YoY). Despite the good earnings growth, we discussed in the report: Some wrinkles exposed in 3Q23 are worth monitoring four key concerns that are worth monitoring: i) decline in deposit balance available for lending, ii) decline in capital ratio due to changes in regulation, iii) NPLs moving in the opposite direction from the industry, and iv) another accounting change,

We see Inter well positioned to improve profitability, as important changes in strategy should start to be reflected into results, including: i) growth focused on profitability, ii) balance sheet optimization, iii) leaner cost structure and iv) higher client engagement. Recent reported results confirmed that Inter is on the right path, with NPL stabilizing, improving cost of risk, better fees and stronger capital levels.

Exhibit 30: Nubank - earnings drivers (US$mn)
We expect net income to increase 78% in '24

	22	23E	24E	25E	23/22E	24/23E	25/24E
NII	2,007	4,466	7,047	10,536	122%	58%	50%
Fee + insurance	1,237	1,591	2,046	2,552	29%	29%	25%
Expenses	1,975	1,882	2,566	3,443	-5%	36%	34%
Pre-prov. profit	**1,093**	**3,963**	**6,277**	**9,339**	**262%**	**58%**	**49%**
Provisions	1,405	2,378	3,466	4,742	69%	46%	37%
Net income	**(367)**	**1,107**	**1,968**	**3,218**	**nmf**	**78%**	**64%**
ROE	**-8%**	**20%**	**26%**	**32%**	**2740bp**	**640bp**	**640bp**
Loans	11.2	17.6	27.4	40.0	57%	55%	46%
Assets	29.9	39.8	54.4	66.6	33%	37%	22%
Equity	4.9	6.4	8.7	11.4	32%	36%	31%

Source: BofA Global Research Estimates

BofA GLOBAL RESEARCH

Exhibit 31: Inter - earnings drivers (R$mn)
We expect solid ROE improvement in the coming years

	22	23E	24E	25E	23E/22	24/23E	25/24E
NII	830	1,474	1,572	1,980	78%	7%	26%
Net fees	839	1,166	1,433	1,595	39%	23%	11%
Expenses	2,641	2,731	3,007	3,375	3%	10%	12%
Pre-prov. profit	922	1,985	2,798	3,548	115%	41%	27%
Provisions	1,083	1,538	1,661	1,876	42%	8%	13%
Net income	(14)	321	784	1,124	na	144%	43%
ROE	-0.2%	4.4%	9.9%	12.8%	460bp	550bp	290bp
Loans (R$bn)	24.5	30.3	38.7	46.6	23%	28%	21%
Assets (R$bn)	46.3	57.8	66.7	73.6	25%	16%	10%
Equity (R$bn)	7.1	7.5	8.3	9.3	6%	10%	12%

Source: BofA Global Research Estimates, Company reports

BofA GLOBAL RESEARCH

PO derivation & ratings

We upgrade Itau to Buy from Neutral as we see it as a core holding in the sector. The bank is well ahead of peers in terms of technology (cloud), and strategy on serving high-income retail clients and SME. On top of this, a strong balance sheet should lead to outsized dividend payments in '24. Itau's premium valuation is deserved given its superior execution, evidenced by mgmt's ability to use its scale (often seen as headwind for growth and agility), as a strategic advantage. This also led us to lower Itau's beta to 0.9 from 1.0.

Bradesco seems fairly valued at 1.1x trailing P/BV considering an expected slow recovery in profitability in '24 given pressured top-line growth (following weak loan book expansion in '23). Also, while the new CEO should elaborate a plan to improve profitability, such strategy change comes with execution risks, leading us to increase BBDC's beta to 1.1 from 1.0. We keep our Neutral.

We keep our Underperform rating on Santander Brasil, as the bank is trading at 1.4x trailing P/BV, but with ROE running well below cost of equity. Results in the short-term should remain pressured by weak NII growth and efforts to increase coverage.

Nubank has delivered earnings above our and market estimates in '23, supported by better-than-expected NII, more than offsetting worse than expected asset quality. Nonetheless, we maintain our Neutral rating, as we view valuation as fair at 7.0x trailing P/BV.

We maintain our Buy on Inter, as the digital bank showed that it is on the right path to deliver better profitability ahead, and we see room for a narrower valuation discount to Nubank (Inter is trading at 1.4x trailing P/BV).

We are updating 12-months PO to reflect new earnings estimates and our lower cost of equity, reflecting lower risk-free rate of 350bp vs. 400bp before and lower Brazil risk spread of 250bp vs. 280bp previously. We assume equity risk premium of 570bp and inflation differential of 200bp (unchanged). Our ADR POs are converted from the local POs at an FX rate of 5.0.

Exhibit 32: Assumptions and new POs

Itau upgraded to Buy from Neutral.

	BBDC	ITUB	SANB	NU	INTR
Beta	1.1	0.9	1.1	1.4	1.4
US Treasury - 10 yr	3.5%	3.5%	3.5%	3.5%	3.5%
Brazil risk spread	2.5%	2.5%	2.5%	2.5%	2.5%
Inflation differential	2.0%	2.0%	2.0%	0.0%	2.0%
Equity risk premium	5.7%	5.7%	5.7%	5.7%	5.7%
Sustainable ROE	16%	21%	16%	na	na
Sustainable grth rate (%)	4%	4%	4%	2%	5%
COE (%)	14.3%	13.1%	14.3%	13.9%	16.0%
Implied P/BV	1.1x	1.9x	1.2x	8.2x	1.9x
Price Objective	19	40	29	10	33
Implied '24 P/E	9.3x	9.6x	7.8x	0.0x	16.7x
Upside potential	19%	20%	-4%	8%	28%
Previous PO	19	33	27	9	30
% change	0%	21%	7%	0%	10%
Price Objective (ADR)	3.8	8.0	5.8	na	6.6
Rating	Neutral	Buy	Underperform	Neutral	Buy

Source: BofA Global Research estimates

BofA GLOBAL RESEARCH

Exhibit 33: Banks valuation

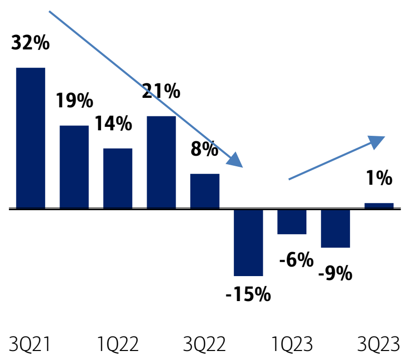
Itau with the highest ROE in'24 among non-digital banks

1/12/2024		Price	Mkt Cap	P/E			P/BV			ROAE			Dividend Yield		
Company	Rating	(Local)	(US$mn)	23	24	25	23	24	25	23	24	25	23	24	25
Inter	Buy	25.72	2,121	32.0	**13.1**	9.1	1.4	**1.2**	1.1	4.4%	**9.9%**	12.8%	0.0%	**0.0%**	1.1%
Itau	Buy	33.45	62,039	9.2	**8.1**	7.4	1.8	**1.6**	1.5	20.8%	**21.3%**	20.9%	3.3%	**6.2%**	5.4%
Bradesco	Neutral	15.81	32,810	9.6	**7.8**	6.1	1.0	**0.9**	0.8	11.0%	**12.5%**	14.7%	4.8%	**3.8%**	4.9%
Nubank	Neutral	9.26	9,012	47.7	**23.5**	14.0	7.1	**5.2**	3.9	17.4%	**26.5%**	33.2%	0.0%	**0.0%**	0.0%
Santander Brasil	Underperform	30.18	23,234	11.6	**8.1**	7.2	1.3	**1.2**	1.1	11.7%	**15.7%**	16.2%	4.8%	**6.0%**	6.8%

Source: BofA Global Research, Bloomberg

Brazilian banks quarterly trends

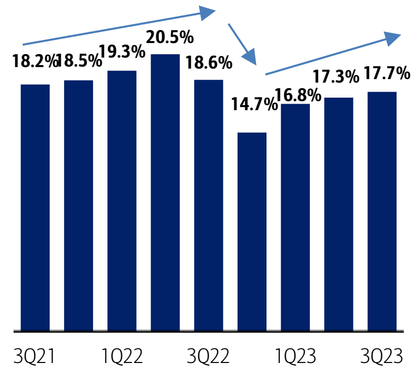
Exhibit 34: Net income, YoY growth
Positive NI growth in 3Q



Companies reports

BofA GLOBAL RESEARCH

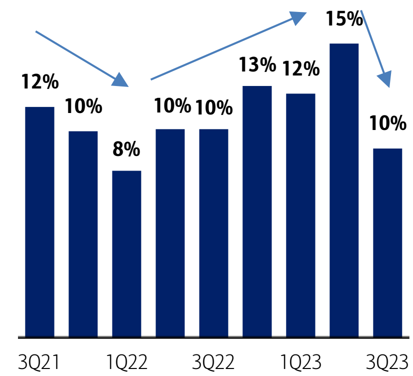
Exhibit 35: ROE Evolution
ROE is gradually improving



Companies reports

BofA GLOBAL RESEARCH

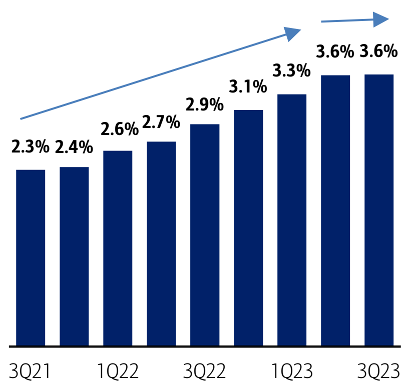
Exhibit 36: NII, YoY growth
Slower NII growth, given loan growth deceleration and conservative mix



Companies reports

BofA GLOBAL RESEARCH

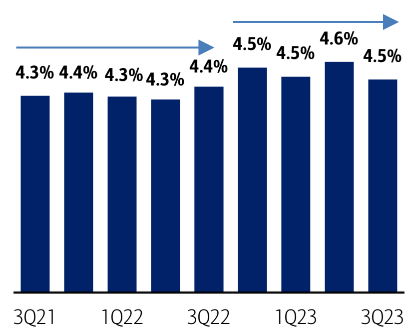
Exhibit 37: NPL
NPLs finally showed some stability



Source: Companies reports

BofA GLOBAL RESEARCH

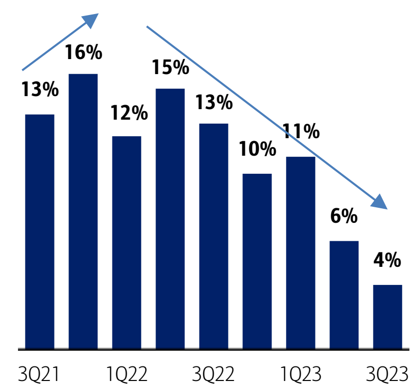
Exhibit 38: NIM
NIMs remained relatively stable



Source: Companies reports

BofA GLOBAL RESEARCH

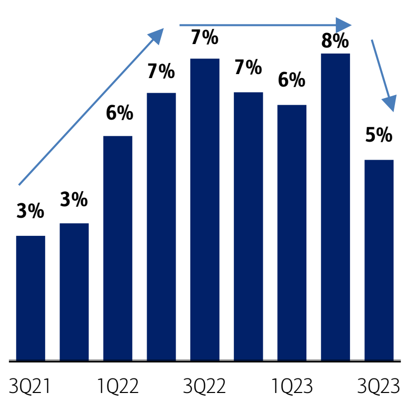
Exhibit 39: Loan growth, YoY
Loan growth continued to decelerate



Source: Companies reports

BofA GLOBAL RESEARCH

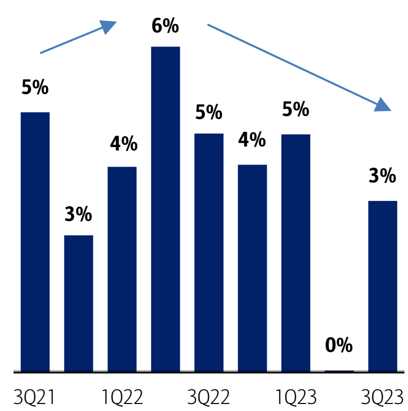
Exhibit 40: Opex, YoY growth
Opex grow decelerated, remaining just above inflation



Source: Companies reports

BofA GLOBAL RESEARCH

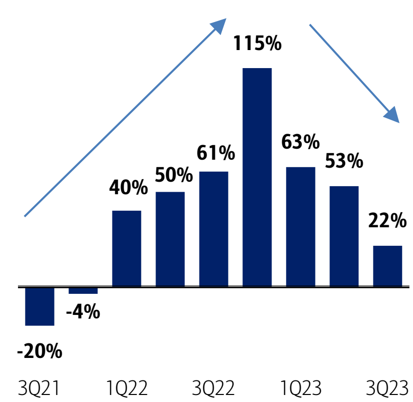
Exhibit 41: Fee, YoY growth
Fees continued to expand below inflation



Source: Companies reports

BofA GLOBAL RESEARCH

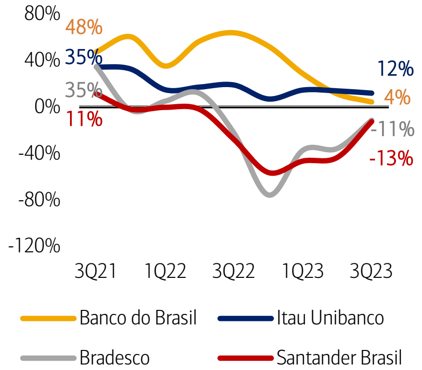
Exhibit 42: Provision, YoY growth
Provision charges growth has been decelerating



Source: Companies reports

BofA GLOBAL RESEARCH

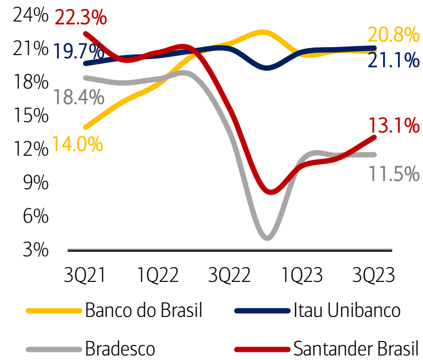
Exhibit 43: EPS trends, YoY growth
ITUB posted the strongest EPS growth



Source: Companies reports

BofA GLOBAL RESEARCH

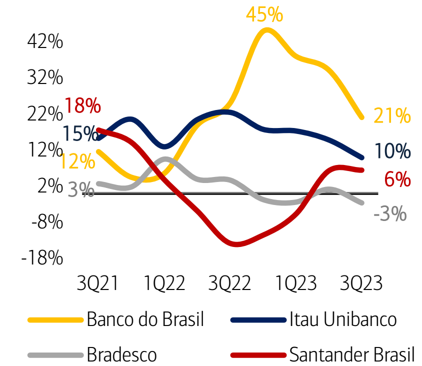
Exhibit 44: ROE
BBDC's ROE remained well below peers



Source: Companies reports

BofA GLOBAL RESEARCH

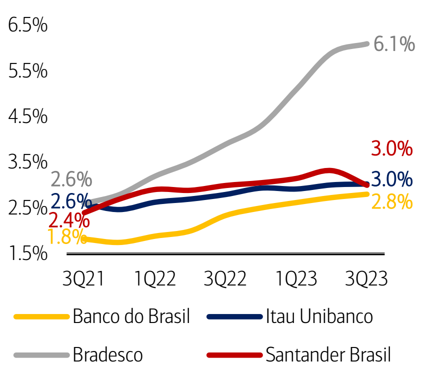
Exhibit 45: NII, YoY growth
BBDC's NII growth remained pressured



Source: Companies reports

BofA GLOBAL RESEARCH

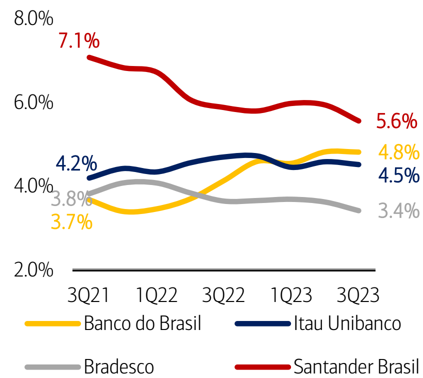
Exhibit 46: NPL
SANB's NPL ratio inflected, while BBDC's remained well above peers



Source: Companies reports

BofA GLOBAL RESEARCH

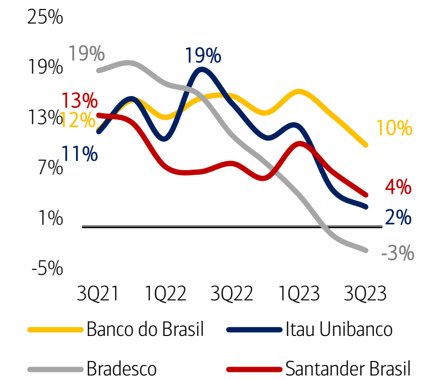
Exhibit 47: NIM
SANB's NIM is trending down due to conservative lending mix



Source: Companies reports

BofA GLOBAL RESEARCH

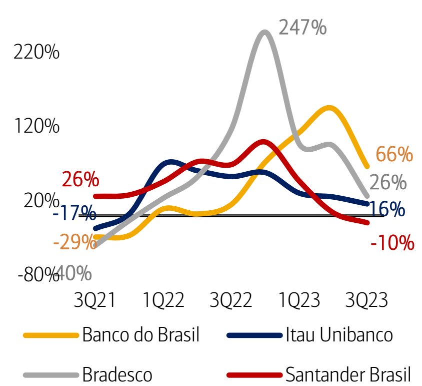
Exhibit 48: Loan, YoY growth
Loan book growth decelerated across the board, particularly on BBDC



Source: Companies reports

BofA GLOBAL RESEARCH

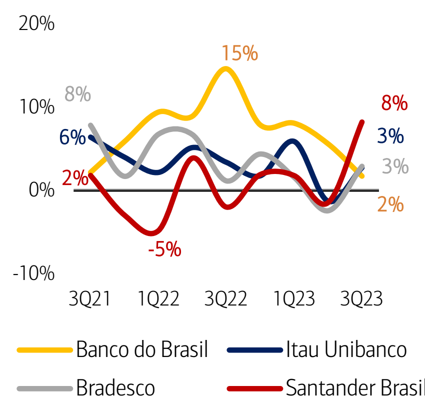
Exhibit 49: Provision, YoY growth
BBAS provisions continued to expand above peers



Source: Companies reports

BofA GLOBAL RESEARCH

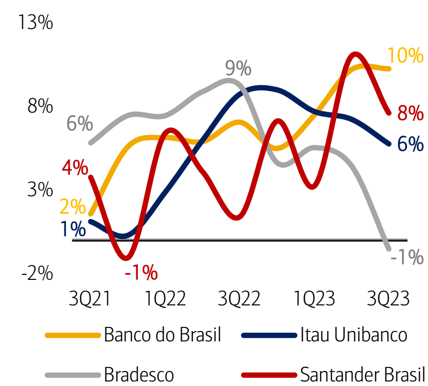
Exhibit 50: Fee Income, YoY growth
SANB posted superior fee income growth



Source: Companies reports

BofA GLOBAL RESEARCH

Exhibit 51: Opex, YoY growth
BBAS' expenses are growing above peers, while BBDC's remained controlled



Source: Companies reports

BofA GLOBAL RESEARCH

Investment Rationale

Bradesco

We rate Bradesco a Neutral, as we think that earnings momentum should remain pressured in the medium-term from weak client NII growth and elevated provision charges. On the other hand, we like the bank's earnings diversification and limited downside potential.

Inter

Inter & Co provides strong net income growth potential as its sizable client base still is in the early stages of monetization. Earnings growth is also supported by NIM and efficiency ratio improvement. Buy.

Itau Unibanco

We have a Buy rating on Itau as we believe that the superior execution skills deserves a premium valuation. The bank is well positioned for the upcoming economic cycle, with limited exposure to riskier segments (low income individuals) and ahead of peers in different initiatives (tech, high-income retail, SME, investments). Itau's management has a proven track record on execution, strategy and communication skills.

Santander Brasil

We have an Underperform recommendation on Santander. We expect results to remain pressured in the coming quarters as: i) we only expect a gradual recovery of NII with market, ii) Santander presented a conservative approach on provisioning during the pandemic and has been renegotiating loans above historical levels, which could translate into higher provision charges in the coming quarters, and iii) the limited risk appetite since Sep/21 prevents better NII with clients in '23.

Price objective basis & risk

Bradesco (BRDPF / BBD)

Our price objective (PO) for Bradesco of R$19/US$3.8 is derived from the Gordon Growth Model, assuming a sustainable ROE of 16%, a COE of 14.3%, and 4% growth in perpetuity. Our PO implies a target '24E P/BV multiple of 1.1x. Our USD/ADR PO is derived from the local PO converted at a 5.0 FX rate.

Downside risks to our PO are 1) weaker economic activity could negatively impact loan growth, 2) corporate NPL deterioration, and 3) regulatory changes could be detrimental to profitability. Upside risks include: 1) stronger than forecasted loan portfolio growth, 2) stronger than expected Selic rate cuts benefiting Market NII and, 3) lower than expected provision charges.

Inter (INTR)

We derive our US$6.6/R$33 PO based on a dividend discount model, with a COE of 16.0%, 5% growth in perpetuity and FX of 5.0.

Downside risks are: 1) execution of the strategy, as growth should be driven by management's ability to originate loans while keeping asset quality under control, 2) inability to maintain a good user experience, and 3) highly competitive landscape with deep pocket incumbent banks and other fintechs. Upside risks are: 1) stronger than forecasted client base growth driving higher than expected loan book expansion 2) lower than expected provision charges and 3) better than expected efficiency ratio improvement

Itau Unibanco (ITUBF / ITUB)

Our price objective (PO) for Itau of R$40/US$8 is derived from the Gordon Growth model, assuming a sustainable ROE of 21%, a COE of 13.1%, and 4% growth in perpetuity. Our USD/ADR PO is derived from the local PO converted at an FX rate of 5.0.

Downside risks to our PO are 1) weaker economic activity could negatively impact loan growth, 2) corporate NPL deterioration requiring higher than anticipated provision charges, and 3) regulatory changes could be detrimental to profitability. Upside risks include: 1) stronger than forecasted loan portfolio growth, 2) lower than anticipated provision charges and, 3) better than expected insurance results

Nubank (NU)

We calculate our price objective of $9.0 based on a DDM model, assuming payout increasing from 0% to 35% at perpetuity, and ROE reaching 24% in perpetuity. We assume CoE of 14.7%, reflecting: i) risk free rate of 440bp, ii) country risk of 250bp, equity risk premium of 570bp and beta of 1.4.

Downside risks to our price objective are: 1) an economic downturn, 2) intensifying competitive landscape, and 3) adverse changes to the regulatory environment. Upside risks to our price objective are: 1) stronger than expected loan portfolio growth, 2) faster revenue diversification process than forecasted and 3) successful expansion into other countries.

Santander Brasil (XCBDF / BSBR)

Our price objective for Santander Brasil of R$29/US$5.8 is derived from the Gordon Growth Model, assuming a sustainable ROAE of 16%, a COE of 14.3%, and 4% growth in perpetuity. Our PO implies a target '24 P/BV multiple of 1.2x. Our USD/ADR PO is derived from the local PO converted at an FX rate of 5.0.

Upside risks are 1) stronger than forecasted loan portfolio growth, 2) better than expected NII with market and 3) lower than expected provision charges. Downside risks includes: 1) faster deterioration in asset quality, which could lead to higher provision charges, and 2) slower revenue generation in a challenging macro environment, which should maintain ROE below the COE.

Analyst Certification

We, Mario Pierry, Antonio Ruette and Flavio Yoshida, hereby certify that the views each of us has expressed in this research report accurately reflect each of our respective personal views about the subject securities and issuers. We also certify that no part of our respective compensation was, is, or will be, directly or indirectly, related to the specific recommendations or view expressed in this research report.

Latin America - Financials Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
BUY				
	ABC Brasil	XBABF	ABCB4 BZ	Flavio Yoshida
	B3	XIMAF	B3SA3 BZ	Mario Pierry
	B3	BOLSY	BOLSY US	Mario Pierry
	Bajio	BBAJF	BBAJIOO MM	Ernesto Gabilondo
	Banco do Brasil	XBBAF	BBAS3 BZ	Mario Pierry
	Banco do Brasil	BDORY	BDORY US	Mario Pierry
	Banco Pan	XQSFF	BPAN4 BZ	Flavio Yoshida
	Banco Santander Chile	BSAC	BSAC US	Ernesto Gabilondo
	Banco Santander Chile	XLDTF	BSAN CI	Ernesto Gabilondo
	Banorte	GBOOF	GFNORTEO MM	Mario Pierry
	Banorte	GBOOY	GBOOY US	Mario Pierry
	Bci	BZCIF	BCI CI	Ernesto Gabilondo
	BTG Pactual	XNXCF	BPAC11 BZ	Flavio Yoshida
	Caixa Seguridade	XDXUF	CXSE3 BZ	Mario Pierry
	Credicorp Ltd	BAP	BAP US	Ernesto Gabilondo
	Gentera	CMPRF	GENTERA* MM	Ernesto Gabilondo
	Grupo BMV	BOMXF	BOLSAA MM	Ernesto Gabilondo
	IFS	IFS	IFS US	Ernesto Gabilondo
	Inter	XBZIF	INBR32 BZ	Mario Pierry
	Inter	INTR	INTR US	Mario Pierry
	Itau Unibanco	ITUBF	ITUB4 BZ	Mario Pierry
	Itau Unibanco	ITUB	ITUB US	Mario Pierry
	PagSeguro Digital Ltd	PAGS	PAGS US	Mario Pierry
	Regional	RGNLF	RA MM	Ernesto Gabilondo
	StoneCo	STNE	STNE US	Mario Pierry
	XP Inc.	XP	XP US	Mario Pierry
NEUTRAL				
	Banrisul	XGRBF	BRSR6 BZ	Flavio Yoshida
	BB Seguridade	XBDPF	BBSE3 BZ	Mario Pierry
	BB Seguridade	BBSEY	BBSEY US	Mario Pierry
	Bradesco	BRDPF	BBDC4 BZ	Mario Pierry
	Bradesco -A	BBD	BBD US	Mario Pierry
	Cielo	CIOXF	CIEL3 BZ	Mario Pierry
	Cielo	CIOXY	CIOXY US	Mario Pierry
	Nubank	NU	NU US	Mario Pierry
	Porto Seguro	PSGUF	PSSA3 BZ	Mario Pierry
UNDERPERFORM				
	Banco Chile-ADR	BCH	BCH US	Ernesto Gabilondo
	Banco de Chile	XHNDF	CHILE CI	Ernesto Gabilondo
	Banco Macro	BMA	BMA US	Ernesto Gabilondo
	Banco Macro	BCVMF	BMA AR	Ernesto Gabilondo
	GFInbur	GPFOF	GFINBURO MM	Ernesto Gabilondo
	Grupo Financiero Galicia	GGAL	GGAL US	Ernesto Gabilondo
	Grupo Financiero Galicia	GGABF	GGAL AR	Ernesto Gabilondo
	Qualitas	QUCOF	Q* MM	Ernesto Gabilondo
	Santander Brasil	XCBDF	SANB11 BZ	Mario Pierry
	Santander Brasil	BSBR	BSBR US	Mario Pierry
	Supervielle	SUPV	SUPV US	Ernesto Gabilondo
	Supervielle	XAZFF	SUPV AR	Ernesto Gabilondo
RSTR				
	Bancolombia	CIB	CIB US	Ernesto Gabilondo
	Bancolombia	XAFFF	PFBCOLO CB	Ernesto Gabilondo

Disclosures

Important Disclosures

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: Financial Services Group (as of 31 Dec 2023)

Coverage Universe	Count	Percent	Inv. Banking Relationships R1	Count	Percent
Buy	156	53.79%	Buy	94	60.26%
Hold	72	24.83%	Hold	48	66.67%
Sell	62	21.38%	Sell	35	56.45%

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 R2
Buy	≥ 10%	≤ 70%
Neutral	≥ 0%	≤ 30%
Underperform	N/A	≥ 20%

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.

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: Bradesco -A, Inter, Itau Unibanco-A, Nubank, Santander Brasil.
BofAS or an affiliate was a manager of a public offering of securities of this issuer within the last 12 months: Nubank.
The issuer is or was, within the last 12 months, an investment banking client of BofAS and/or one or more of its affiliates: Bradesco, Itau Unibanco, Nubank, Santander Brasil.
BofAS or an affiliate has received compensation from the issuer for non-investment banking services or products within the past 12 months: Bradesco, Itau Unibanco, Nubank, Santander Brasil.
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: Bradesco, Itau Unibanco, Nubank, Santander Brasil.
BofAS or an affiliate has received compensation for investment banking services from this issuer within the past 12 months: Itau Unibanco, Nubank, Santander Brasil.
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: Bradesco, Itau Unibanco, Santander Brasil.
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: Bradesco, Itau Unibanco.
The country in which this issuer is organized has certain laws or regulations that limit or restrict ownership of the issuer's shares by nationals of other countries: Bradesco, Itau Unibanco, Santander Brasil.
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: Bradesco -A, Inter, Itau Unibanco-A, Nubank, Santander Brasil.
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: Bradesco, Itau Unibanco, Nubank, Santander Brasil.
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 Prudentiel et de Résolution (ACPR) and regulated by the ACPR and the Autorité des Marchés Financiers (AMF). BofA Securities Europe SA ("BofASE") with registered address at 51, rue La Boétie, 75008 Paris is registered under no 842 602 690 RCS Paris. In accordance with the provisions of French Code Monétaire et Financier (Monetary and Financial Code), BofASE is an établissement de crédit et d'investissement (credit and investment institution) that is authorised and supervised by the European Central Bank and the Autorité de Contrôle Prudentiel et de Résolution (ACPR) and regulated by the ACPR and the Autorité des Marchés Financiers. BofASE's share capital can be found at www.bofaml.com/BofASEdisclaimer; BofA Europe (Milan): Bank of America Europe Designated Activity Company, Milan Branch, regulated by the Bank of Italy, the European Central Bank (ECB) and the Central Bank of Ireland (CBI); BofA Europe (Frankfurt): Bank of America Europe Designated Activity Company, Frankfurt Branch regulated by BaFin, the ECB and the CBI; BofA Europe (Madrid): Bank of America Europe Designated Activity Company, Sucursal en España, regulated by the Bank of Spain, the ECB and the CBI; Merrill Lynch (Australia): Merrill Lynch Equities (Australia) Limited, regulated by the Australian Securities and Investments Commission; Merrill Lynch (Hong Kong): Merrill Lynch (Asia Pacific) Limited, regulated by the Hong Kong Securities and Futures Commission (HKSFC); Merrill Lynch (Singapore): Merrill Lynch (Singapore) Pte Ltd, regulated by the Monetary Authority of Singapore (MAS); Merrill Lynch (Canada): Merrill Lynch Canada Inc, regulated by the Canadian Investment Regulatory Organization; Merrill Lynch (Mexico): Merrill Lynch Mexico, SA de CV, Casa de Bolsa, regulated by the Comisión Nacional Bancaria y de Valores; Merrill Lynch (Argentina): Merrill Lynch Argentina SA, regulated by Comisión Nacional de Valores; BofAS Japan: BofA Securities Japan Co., Ltd., regulated by the Financial Services Agency; Merrill Lynch (Seoul): Merrill Lynch International, LLC Seoul Branch, regulated by the Financial Supervisory Service; Merrill Lynch (Taiwan): Merrill Lynch Securities (Taiwan) Ltd., regulated by the Securities and Futures Bureau; BofAS India: BofA Securities India Limited, regulated by the Securities and Exchange Board of India (SEBI); Merrill Lynch (Israel): Merrill Lynch Israel Limited, regulated by Israel Securities Authority; Merrill Lynch (DIFC): Merrill Lynch International (DIFC Branch), regulated by the Dubai Financial Services Authority (DFSA); Merrill Lynch (Brazil): Merrill Lynch S.A. Corretora de Títulos e Valores Mobiliários, regulated by Comissão de Valores Mobiliários; Merrill Lynch KSA Company: Merrill Lynch Kingdom of Saudi Arabia Company, regulated by the Capital Market Authority.

This information: has been approved for publication and is distributed in the United Kingdom (UK) to professional clients and eligible counterparties (as each is defined in the rules of the FCA and the PRA) by MLI (UK), which is authorized by the PRA and regulated by the FCA and the PRA - details about the extent of our regulation by the FCA and PRA are available from us on request; has been approved for publication and is distributed in the European Economic Area (EEA) by BofASE (France), which is authorized by the ACPR and regulated by the ACPR and the AMF; has been considered and distributed in Japan by BofAS Japan, a registered securities dealer under the Financial Instruments and Exchange Act in Japan, or its permitted affiliates; is issued and distributed in Hong Kong by Merrill Lynch (Hong Kong) which is regulated by HKSFC; is issued and distributed in Taiwan by Merrill Lynch (Taiwan); is issued and distributed in India by BofAS India; and is issued and distributed in Singapore to institutional investors and/or accredited investors (each as defined under the Financial Advisers Regulations) by Merrill Lynch (Singapore) (Company Registration No 198602883D). Merrill Lynch (Singapore) is regulated by MAS. Merrill Lynch Equities (Australia) Limited (ABN 65 006 276 795), AFS License 235132 (MLEA) distributes this information in Australia only to 'Wholesale' clients as defined by s.761G of the Corporations Act 2001. With the exception of Bank of America N.A., Australia Branch, neither MLEA nor any of its affiliates involved in preparing this information is an Authorised Deposit-Taking Institution under the Banking Act 1959 nor regulated by the Australian Prudential Regulation Authority. No approval is required for publication or distribution of this information in Brazil and its local distribution is by Merrill Lynch (Brazil) in accordance with applicable regulations. Merrill Lynch (DIFC) is authorized and regulated by the DFSA. Information prepared and issued by Merrill Lynch (DIFC) is done so in accordance with the requirements of the DFSA conduct of business rules. BofA Europe (Frankfurt) distributes this information in Germany and is regulated by BaFin, the ECB and the CBI. BofA Securities entities, including BofA Europe and BofASE (France), may outsource/delegate the marketing and/or provision of certain research services or aspects of research services to other branches or members of the BofA Securities group. You may be contacted by a different BofA Securities entity acting for and on behalf of your service provider where permitted by applicable law. This does not change your service provider. Please refer to the Electronic Communications Disclaimers for further information.

This information has been prepared and issued by BofAS and/or one or more of its non-US affiliates. The author(s) of this information may not be licensed to carry on regulated activities in your jurisdiction and, if not licensed, do not hold themselves out as being able to do so. BofAS and/or MLPF&S is the distributor of this information in the US and accepts full responsibility for information distributed to BofAS and/or MLPF&S clients in the US by its non-US affiliates. Any US person receiving this information and wishing to effect any transaction in any security discussed herein should do so through BofAS and/or MLPF&S and not such foreign affiliates. Hong Kong recipients of this information should contact Merrill Lynch (Asia Pacific) Limited in respect of any matters relating to dealing in securities or provision of specific advice on securities or any other matters arising from, or in connection with, this information. Singapore recipients of this information should contact Merrill Lynch (Singapore) Pte Ltd in respect of any matters arising from, or in connection with, this information. For clients that are not accredited investors, expert investors or institutional investors Merrill Lynch (Singapore) Pte Ltd accepts full responsibility for the contents of this information distributed to such clients in Singapore.

General Investment Related Disclosures:

Taiwan Readers: Neither the information nor any opinion expressed herein constitutes an offer or a solicitation of an offer to transact in any securities or other financial instrument. No part of this report may be used or reproduced or quoted in any manner whatsoever in Taiwan by the press or any other person without the express written consent of BofA Securities.

This document provides general information only, and has been prepared for, and is intended for general distribution to, BofA Securities clients. Neither the information nor any opinion expressed constitutes an offer or an invitation to make an offer, to buy or sell any securities or other financial instrument or any derivative related to such securities or instruments (e.g., options, futures, warrants, and contracts for differences). This document is not intended to provide personal investment advice and it does not take into account the specific investment objectives, financial situation and the particular needs of, and is not directed to, any specific person(s). This document and its content do not constitute, and should not be considered to constitute, investment advice for purposes of ERISA, the US tax code, the Investment Advisers Act or otherwise. Investors should seek financial advice regarding the appropriateness of investing in financial instruments and implementing investment strategies discussed or recommended in this document and should understand that statements regarding future prospects may not be realized. Any decision to purchase or subscribe for securities in any offering must be based solely on existing public information on such security or the information in the prospectus or other offering document issued in connection with such offering, and not on this document.

Securities and other financial instruments referred to herein, or recommended, offered or sold by BofA Securities, are not insured by the Federal Deposit Insurance Corporation and are not deposits or other obligations of any insured depository institution (including, Bank of America, N.A.). Investments in general and, derivatives, in particular, involve numerous risks, including, among others, market risk, counterparty default risk and liquidity risk. No security, financial instrument or derivative is suitable for all investors. Digital assets are extremely speculative, volatile and are largely unregulated. In some cases, securities and other financial instruments may be difficult to value or sell and reliable information about the value or risks related to the security or financial instrument may be difficult to obtain. Investors should note that income from such securities and other financial instruments, if any, may fluctuate and that price or value of such securities and instruments may rise or fall and, in some cases, investors may lose their entire principal investment. Past performance is not necessarily a guide to future performance. Levels and basis for taxation may change.

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) or weaker financial stability (in the case of a Low 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 BofA ESGMeter methodology. 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.

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.