

Brazil Bond Proxies

External backdrop avoids rates decline acceleration; we favor earnings growth

Industry Overview

Macro: Plentiful rate optimism versus global inflationary events

We are in the middle of the earnings cycle, and BofA Global Research Economics thinks that rates have potential to move lower still, but global uncertainty and less compelling valuations could push investors to look for earnings growth. The top-down rates story lost the novelty factor, and we face a scenario where a further decline in local rates is increasingly dependent on global markets. After a strong rally in 4Q23, global equity markets took a breather in the first week of 2024. Markets could be assessing whether rate optimism is too plentiful while inflationary events are popping up across the world (see the Global Economic Viewpoint report)

Utilities: favoring earnings growth from operations

As the BofA LatAm Research Strategy team does not expect multiple expansion, we favor Utilities names with earnings growth as we enter 2024. We like 1) Eletrobras (13% real IRR), as we estimate +30% yoy EBITDA growth driven by cost-cutting and rollover of energy contracts at higher prices.

Telcos: Expect real growth/strong dividends to continue in 2024

We remain bullish on the telcos, with a relative preference for Telefonica Brasil (Vivo), as we see positive drivers for 2024, with 1) low inflation helping telcos to increase prices above inflation (low pricing power); 2) the more rational competitive landscape after Oi's acquisition; 3) valuation below the 5-year average at 4.3x EV/EBITDA and P/FCFE at 10.5x (similar for both TIM and Vivo); 4) declining capex globally; and 5) high dividend yield of 9% for Vivo and 7.5% for TIM, providing some support in a volatile macro scenario

Brazil's bond proxies tracker: a comprehensive view

Bond proxies are stocks with relatively predictable cash flows, which is why investors tend to value them through implied IRR. In Brazil, investors usually see utilities, transportation (toll roads, rail), and malls as bond proxies. Our tracker gathers bond proxies: 1) current implied equity IRR, 2) equity risk premium, 3) recent performances, 4) stocks' cash-flow duration, 5) dividend yields, and more (see pages 2-11).

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16 January 2024

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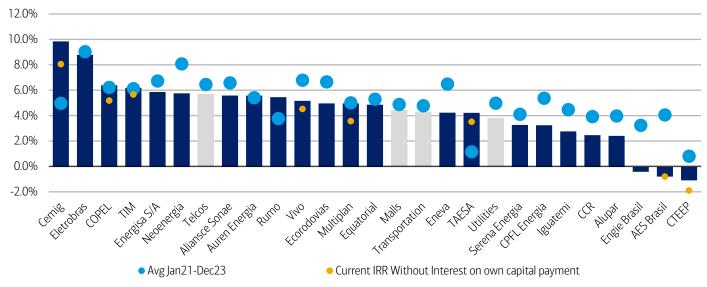
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Bond-proxies: valuation & key ratios

Exhibit 1: Brazil bond proxy stocks' implied equity IRR (real terms) spread versus Brazil 10-year real bond yield (%)

We see higher spreads versus Brazil 10-year real bond yield in stocks from utilities sector

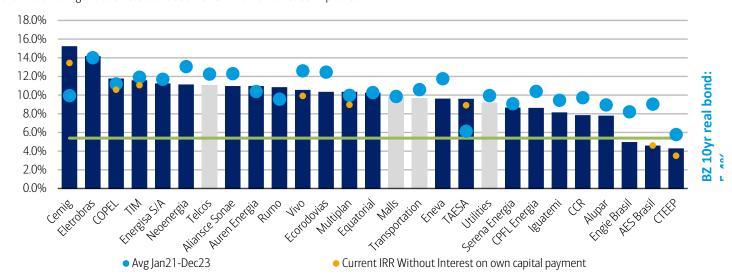


Note: For transportation companies, Telcos and Aliansce Sonae, average was calculated since Sep 22 and Dec 23, respectively. Note: For Telcos our base case assumes IoC payment until 2029. **Source:** BofA Global Research Estimates and Bloomberg

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Exhibit 2: Brazil bond proxy stocks' implied equity IRR (real)

Transmission and generation stocks trade at lower IRRs than other bond proxies

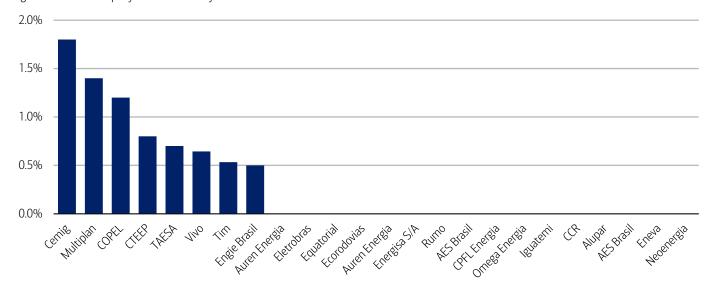


Note: For Transportation companies and Aliansce Sonae, average was calculated since Sep 22 and Dec 23, respectively. Note: For Telcos our base case assumes IoC payment until 2029. For. **Source**: BofA Global Research Estimates and Bloomberg



Exhibit 3: Implied equity IRR (Real) reduction due to termination of Interest on own capital (IoC) payment

Cemig would be the company most affected by the termination of IoC tax benefit

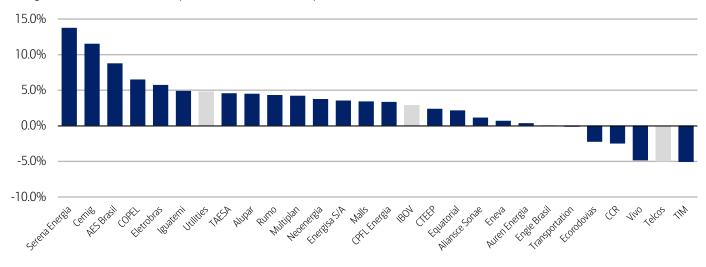


Source: BofA Global Research Estimates

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Exhibit 4: Brazil bond proxies stock performance (%)

Serena Energia was the stock with the best performance since our last report



Note: Monthly stock performance from 11th Nov to 11th Dec. **Source:** Bloomberg, BofA Global Research

Exhibit 5: Long-term real-rates decline during most of the cutting cycle

Brazil nominal and real long-term rates versus Selic

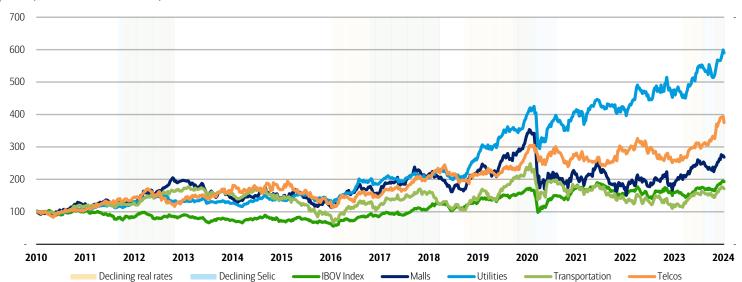


Source: BofA Global Research, Bloomberg

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Exhibit 6: Bond proxies tend to outperform IBOV (ex-Commodities) when rates fall

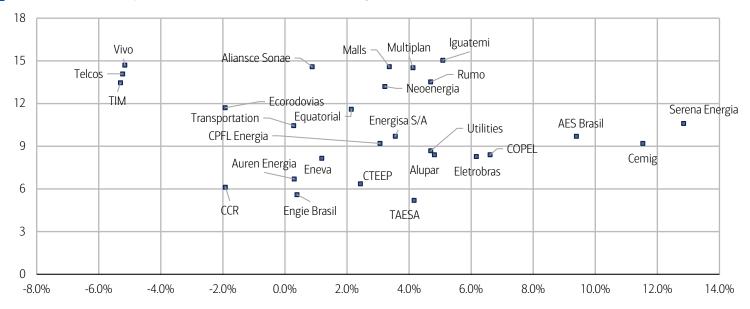
Bond proxies and IBOV historical performance



Source: BofA Global Research, Bloomberg

Exhibit 7: Brazil bond-proxy stock performance (X-axis) versus duration (Y-axis)

Telcos delivered the worst performance between 11 December and 11 January

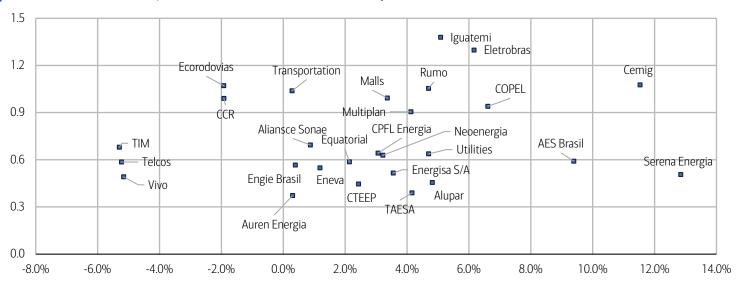


Note: Stock performance between 11 December and 11 January. Source: Bloomberg

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Exhibit 8: Brazil bond-proxy stock performance (X-axis) versus beta (Y-axis)

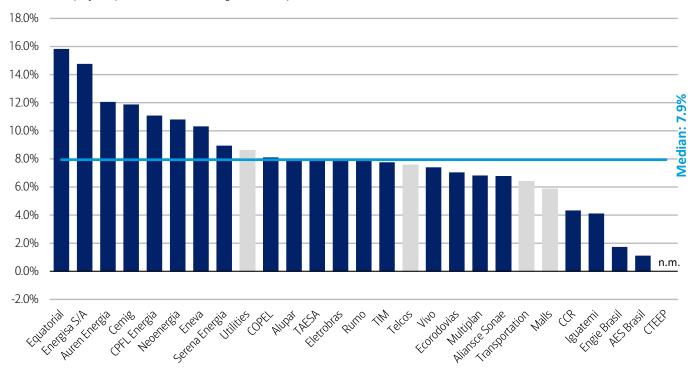
Utilities names delivered the best performances between 11 December and 11 January



Note: Stock performance between 11 December and 11 January. $\textbf{Source:} \ Bloomberg$

Exhibit 9: Stocks' Implied equity risk premium - foreign investors' perspective

We see a median equity risk premium of 7.9% among Brazil bond proxies

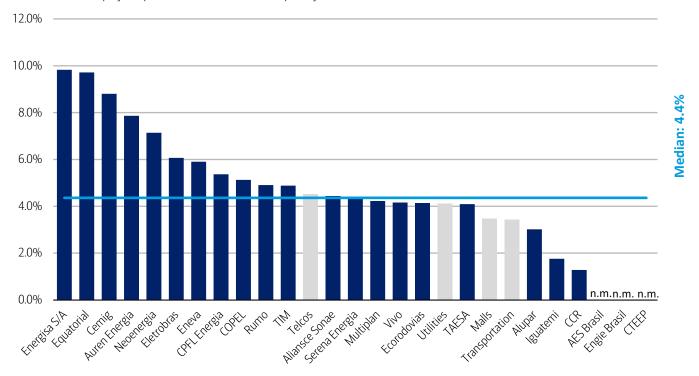


Note: We assume as foreign investors' risk free: rate US 10y bond yield + Brazil 10y CDS + 1.5% Inflation differential. We also divide equity risk premium by stock's beta. **Source:** BofA Global Research Estimates and Bloomberg

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Exhibit 10: Stocks' Implied equity risk premium – local investors' perspective

Some stocks have a low equity risk premium for local investors, especially transmission

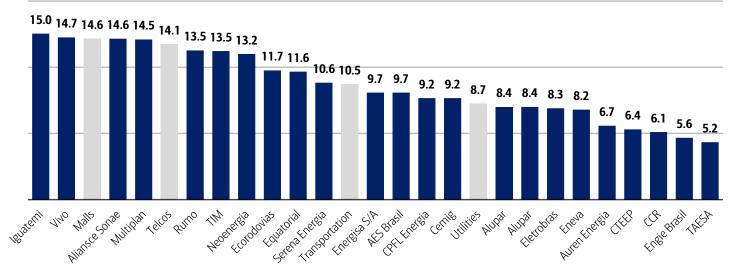


Note: We assume as Brazilian risk-free rate BZ 10y bond yield. We also divide equity risk premium by stock's beta. **Source:** BofA Global Research Estimates and Bloomberg



Exhibit 11: Brazil bond proxy stocks' duration (years)

Malls and telcos have higher duration than utilities and transportation stocks

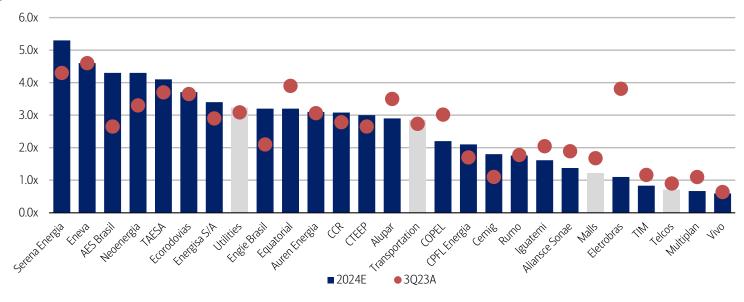


Source: BofA Global Research Estimates

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Exhibit 12: Brazil bond proxy stocks' net debt/EBITDA ratio (x)

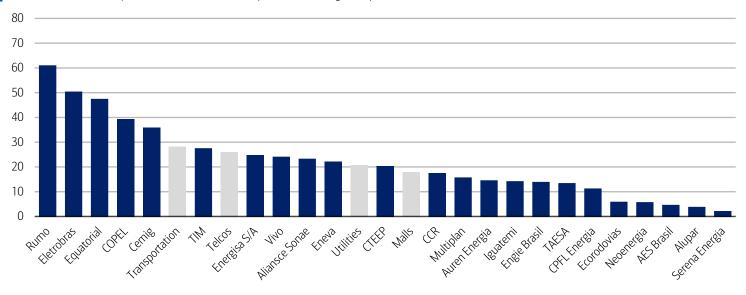
Malls and telcos are the sectors with lowest leverage among bond proxies



Source: BofA Global Research Estimates

Exhibit 13: Brazil bond proxy-stocks' average daily traded value (US\$mn)

Rumo, Eletrobrás, and Equatorial are the three most liquid stocks among bond proxies

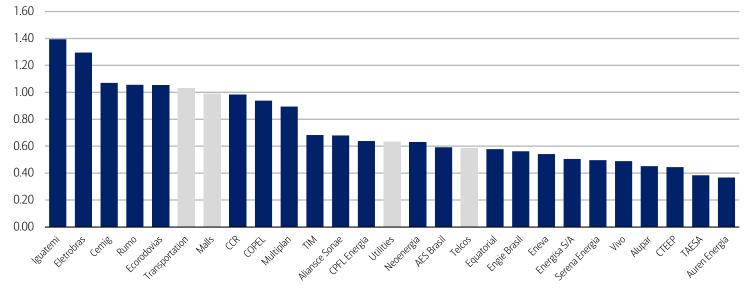


Source: Bloomberg

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Exhibit 14: Brazil bond proxy stocks' 10-year average beta (US\$mn)

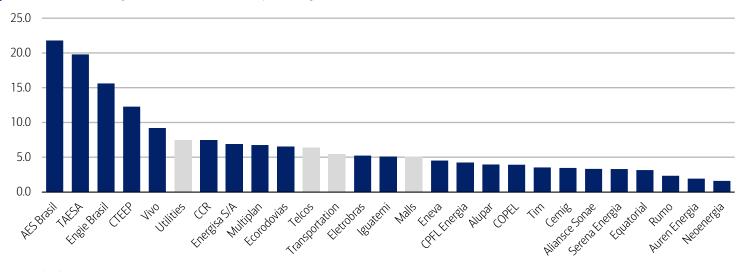
Transportation is the bond proxy sector with the highest beta



Source: Bloomberg

Exhibit 15: Brazil bond proxy stocks' short sell positions (number of days to cover)

AES Brasil, Taesa, and Engie are the stocks with heavier positioning

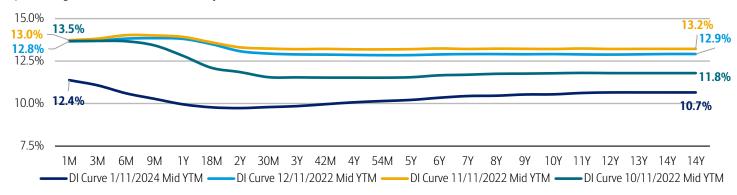


Source: Bloomberg

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Exhibit 16: One-Day Interbank Deposit Futures (nominal terms)

Expected longer-term rates declined in January

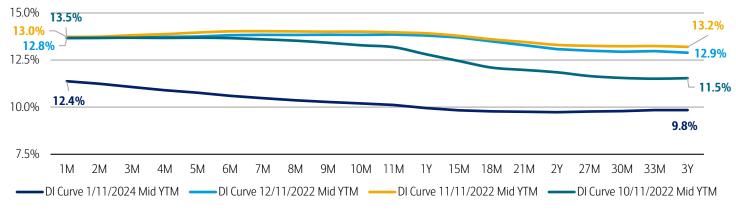


Source: Bloomberg

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Exhibit 17: One-Day Interbank Deposit Futures

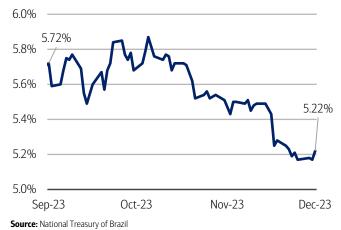
Expected short-term rates also declined in January



Source: Bloomberg

Exhibit 18: National Treasury Bond, 2029 Maturity (NTN-B 2029)

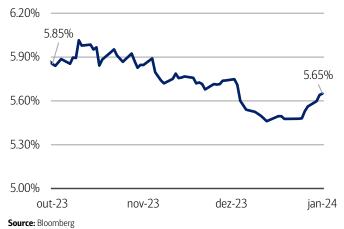
NTN-B 2029 has decreased by 50bps over the past three months



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Exhibit 19: National Treasury Bond, 2045 Maturity (NTN-B 2045)

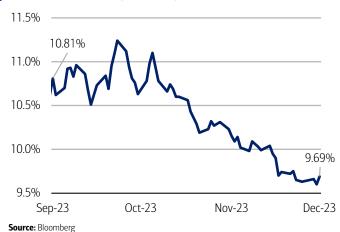
NTN-B 2045 has decreased by ~20bps over the past three months



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Exhibit 20: National Treasury Bill, 2026 Maturity (LTN 2026)

LTN 2026 declined 110bps over the past three months



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Exhibit 21: Stocks mentioned

Prices and ratings for stocks mentioned in this report

BofA Ticker	Bloomberg ticker	Company name	Price	Rating
CAIFF	ELET3 BZ	Eletrobras	BRL 43.49	C-1-7
EBR	EBR US	Eletrobras	US\$ 8.88	C-1-7
CAIGF	ELET6 BZ	Eletrobras-Pref	BRL 49.17	C-1-7
EBRB	EBR/B US	Eletrobras-Pref	US\$ 9.97	C-1-7
VIV	VIV US	Telefonica Brasil	US\$ 10.41	B-1-7
XCPTF	VIVT3 BZ	Telefonica Brasil	BRL 50.69	B-1-7
TIMB	TIMB US	TIM Brasil	US\$ 17.84	B-1-7
XZUAF	TIMS3 BZ	TIM Brasil	BRL 17.46	B-1-7

Source: BofA Global Research BofA GLOBAL RESEARCH

Price objective basis & risk

Eletrobras (CAIFF / EBR)

Our R\$50 PO (ELET3) (US ADR: \$9.40) is built on a sum-of-the-parts valuation that does not incorporate any of the upside of a potential privatization. We derive our fair value from: 1) DCF-based valuation for main subsidiaries, discounted by a 10% real terms (14.3% in nominal terms). We estimate FCFEs through the end of the concession periods and do not assume any residual value. 2) market value of listed equity holdings, and 3) average sector multiples for non-listed equity holdings (wind, hydro and transmission SPVs).

Upside risks: 1) higher energy prices, 2) further cost-cutting initiatives, 3) liability management.

Downside risks: 1) compulsory loans liability increasing above our R\$20bn NPV-loss base-case, and 2) unattractive investments.

Eletrobras-Pref (CAIGF / EBRB)

Our R\$56 PO (ELET6) (US ADR: \$10.60) is built on a sum-of-the-parts valuation that does not incorporate any of the upside of a potential privatization. We derive our fair value from: 1) DCF-based valuation for main subsidiaries, discounted by a 10% real terms (14.3% in nominal terms). We estimate FCFEs through the end of the concession periods and do not assume any residual value. 2) market value of listed equity holdings, and 3) average sector multiples for non-listed equity holdings (wind, hydro and transmission SPVs).

Upside risks: 1) higher energy prices, 2) further cost-cutting initiatives, 3) liability management.

Downside risks: 1) compulsory loans liability increasing above our R\$20bn NPV-loss base-case, and 2) unattractive investments.

Telefonica Brasil (XCPTF / VIV)

Our price objective of R\$63/US\$13 per share is based on a 10-year DCF-to-Firm, discounted at a weighted average cost of capital (WACC) of 12.5%, assuming a capital structure of 95% equity / 5% debt in the long term. Our cost of equity (Ke) is composed of a Beta of 0.80, a risk-free rate of 3%, a market risk premium of 5.7% and a country risk in Brazil of 280bps. We use cost of debt of 5% and terminal growth rate of 3%.

Risks: (i) limited benefit from the macroeconomic recovery given its premium customer base, (ii) legacy business continues to pressure top-line growth, (iii) price pressure in the mobile segment given the highest ARPU in the space, (iv) creation of dividend tax would strongly impact Vivo.

TIM Brasil (XZUAF / TIMB)

Our price objective of R\$22/US\$22 per share is based on a ten-year DCF-to-Firm, discounted at a weighted average cost of capital (WACC) of 12.3%, assuming a capital structure of 90% equity / 10% debt in the long term. Our cost of equity (Ke) is composed of a Beta of 0,90, a risk-free rate of 3%, a market risk premium of 5.7% and country risk in Brazil of 280bps. We use cost of debt of 5% and terminal growth rate of 3%.

Upside risks: (i) leaner than its peers in terms of systems since Pay TV and fixed telephony are irrelevant, (ii) major beneficiary from potential synergies with Oi, (iii) establishment of new fronts of revenue growth, such as the partnership with C6 Bank or advertising, (iv) potential to benefit the most in a scenario of macro recovery, (v) run



sharing agreement with Vivo, which should lead to opex and capex savings.

Downside risks: (i) limited growth for the sector puts pressure on prices, (ii) net adds, which have been weak over the last two years, leading to market share losses, (iii) inefficient capital structure, as its controlling shareholder is highly leveraged, (iv) reduced focus on FTTH, which is a high-growth business but still too small for the company.

Analyst Certification

We, Arthur Pereira, CFA, Fred Mendes, CFA, Gabriel Frazao, Gustavo Faria and Lucca R Brendim, 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.

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BofA Securities is currently acting as Financial Advisor to Telefonica SA in connection with its voluntary public cash offer for outstanding shares of Telefonica Deutschland Holding AG, which was announced on November 7, 2023.



Latin America - Utilities Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
BUY				
	Alupar	XDFCF	ALUP11 BZ	Arthur Pereira, CFA
	COPEL	ELP	ELP US	Arthur Pereira, CFA
	COPEL PN	XLPUF	CPLE6 BZ	Arthur Pereira, CFA
	Edenor	XEDTF	EDN AR	Gustavo Faria
	Edenor	EDN	EDN US	Gustavo Faria
	Eletrobras	CAIFF	ELET3 BZ	Arthur Pereira, CFA
	Eletrobras	EBR	EBR US	Arthur Pereira, CFA
	Eletrobras-Pref	EBRB	EBR/B US	Arthur Pereira, CFA
	Eletrobras-Pref	CAIGF	ELET6 BZ	Arthur Pereira, CFA
	Energisa S/A	XLXGF	ENGI11 BZ	Arthur Pereira, CFA
	Eneva	XZUMF	ENEV3 BZ	Arthur Pereira, CFA
	Equatorial	XKERF	EQTL3 BZ	Arthur Pereira, CFA
	Neoenergia	XGXGF	NEOE3 BZ	Arthur Pereira, CFA
	Pampa Energia	PPENF	PAMP AR	Gustavo Faria
	Pampa Energia	PAM	PAM US	Gustavo Faria
	SABESP	CSBJF	SBSP3 BZ	Arthur Pereira, CFA
	SABESP	SBS	SBS US	Arthur Pereira, CFA
	Serena Energia	XZQAF	SRNA3 BZ	Arthur Pereira, CFA
NEUTRAL				
	Auren Energia	XZMXF	AURE3 BZ	Arthur Pereira, CFA
	Cemig	CIG	CIG US	Arthur Pereira, CFA
	Cemig	CEMCF	CMIG4 BZ	Arthur Pereira, CFA
	Central Puerto	CEPU	CEPU US	Gustavo Faria
	Central Puerto	CEPUF	CEPU AR	Gustavo Faria
	COPASA	CSAOF	CSMG3 BZ	Arthur Pereira, CFA
	TAESA	XTAEF	TAEE11 BZ	Arthur Pereira, CFA
UNDERPERFORM				
	AES Brasil	XDFDF	AESB3 BZ	Arthur Pereira, CFA
	CPFL Energia	XPFGF	CPFE3 BZ	Arthur Pereira, CFA
	CTEEP	XOOTF	TRPL4 BZ	Arthur Pereira, CFA
	Engie Brasil	XZDDF	EGIE3 BZ	Arthur Pereira, CFA
	Sanepar	XJALF	SAPR11 BZ	Arthur Pereira, CFA
RVW				·
L/ A AA	Ambinar	XAPEF	AMBP3 BZ	Arthur Pereira, CFA
	Ambipar	VALEL	AIVIDES DL	ALUIUI FEIEIIA, CFA

Latin America - Telecom Services and Information Technology Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
BUY				
	America Movil	AMX	AMX US	Fred Mendes, CFA
	America Movil	AMXVF	AMXB MM	Fred Mendes, CFA
	Desktop S.A	XNUKF	DESK3 BZ	Fred Mendes, CFA
	Eletromidia	XSUHF	ELMD3 BZ	Fred Mendes, CFA
	Locaweb	XZVMF	LWSA3 BZ	Fred Mendes, CFA
	Telefonica Brasil	XCPTF	VIVT3 BZ	Fred Mendes, CFA
	Telefonica Brasil	VIV	VIV US	Fred Mendes, CFA
	Televisa	TV	TV US	Fred Mendes, CFA
	Televisa	GRPFF	TLEVICPO MM	Fred Mendes, CFA
	TIM Brasil	TIMB	TIMB US	Fred Mendes, CFA
	TIM Brasil	XZUAF	TIMS3 BZ	Fred Mendes, CFA
	TOTVS	XBEGF	TOTS3 BZ	Fred Mendes, CFA
	VTEX	VTEX	VTEX US	Fred Mendes, CFA
NEUTRAL				
	Intelbras S.A.	XLTXF	INTB3 BZ	Fred Mendes, CFA
UNDERPERFORM				
	Brisanet	XNHKF	BRIT3 BZ	Fred Mendes, CFA
	Megacable Holdings SAB	MHSDF	MEGACPO MM	Fred Mendes, CFA
	Unifique S.A	XFYDF	FIQE3 BZ	Fred Mendes, CFA



Latin America - Telecom Services and Information Technology Coverage Cluster

Investment rating Company BofA Ticker Bloomberg symbol Analyst

Disclosures

Important Disclosures

Equity Investment Rating Distribution: Industrials/Multi-Industry Group (as of 31 Dec 2023)

Coverage Universe	Count	Percent	Inv. Banking Relationships R1	Count	Percent
Buy	45	50.56%	Buy	25	55.56%
Hold	26	29.21%	Hold	13	50.00%
Sell	18	20.22%	Sell	7	38.89%

Equity Investment Rating Distribution: Real Estate/Property Group (as of 31 Dec 2023)

Coverage Universe	Count	Percent	Inv. Banking Relationships R1	Count	Percent
Buy	68	61.26%	Buy	22	32.35%
Hold	20	18.02%	Hold	6	30.00%
Sell	23	20.72%	Sell	7	30.43%

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

Coverage Universe	Count	Percent	Inv. Banking Relationships R1	Count	Percent
Buy	57	51.82%	Buy	43	75.44%
Hold	27	24.55%	Hold	17	62.96%
Sell	26	23.64%	Sell	12	46.15%

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

Coverage Universe	Count	Percent	Inv. Banking Relationships R1	Count	Percent
Buy	72	46.45%	Buy	52	72.22%
Hold	45	29.03%	Hold	32	71.11%
Sell	38	24.52%	Sell	21	55.26%

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.

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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%

R2Ratings dispersions may vary from time to time where BofA Global Research believes it better reflects the investment prospects of stocks in a Coverage Cluster.

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Brasil, TIM Brasil.

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