

Latam Equity Quant

Diminishing outflows in sight

Investment Strategy

Key takeaways

- Outflows from Brazil local equity and hedge funds continue to slow down.
- We still see no foreign flows into Brazil local exchange. We saw R\$20bn outflows YTD, mainly from cash equities.
- Brazil and Mexico are trading at 9% discount vs historicals.

Last week in numbers

Performance of the week. Ibov +1.7%, Mexbol -0.4%, SPX +1.6%, EM +0.4%. This week, BZ consumer outperformed commodities: C. Discretionary +6.2%, Staples +3.4% vs Energy -0.3%, Materials +0.5% this week (in USD terms, total return).

Brazil economic activity above expectations in Dec. Result was mainly driven by a stronger industrial production. We still expect 50bps cuts to Selic rates in the next meetings, with a last clip of 25bps in July, leading to a terminal rate of 9.50% (see: [Brazil Watch](#)).

Outflows from BZ equity funds are declining. Outflows from BZ local equity funds were only -R\$0.3bn last week, compared to the average of -R\$0.6bn/week in the last 6M (Exhibit 9). Hedge funds also show smaller outflows (R\$1.9bn outflows last week), vs -R\$2.6bn/week in the last 6M, Exhibit 9).

No foreign flows in Brazil YTD (Exhibit 11). In fact, we saw R\$20bn outflows from foreigners in BZ local exchange YTD, mostly redeemed from cash equities (Exhibit 11).

US\$2.3bn inflows into EM this week, most of which went into China (Exhibit 13). This is the 12th consecutive of inflows into EM, with almost all inflows going into China.

Earnings revisions in Brazil are improving. Last month, our 1-month Earnings Revision Ratio (# upwards / # downwards earnings revisions) neared 1, the highest level in 12 months, mainly driven by Financials, Materials and Staples (Exhibit 22). Consensus sees 34% EPS YoY growth in 2024 for domestic industries in BZ ex-financials. Expectations are relatively stable YTD (Exhibit 16).

Valuations remain discounted in LatAm. In Brazil, Ibov ex-commodities trades at 9% discount vs historicals (vs around 5% discount in the beginning of 2024, Exhibit 3). Mexbol now trades at 9% discount vs historicals (Exhibit 7).

For more details see [Flows to Know](#).

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

>> Employed by a non-US affiliate of BofAS and is not registered/qualified as a research analyst under the FINRA rules.

Refer to "Other Important Disclosures" for information on certain BofA Securities entities that take responsibility for the information herein in particular jurisdictions.

BofA Securities does and seeks to do business with issuers covered in its research reports. As a result, investors should be aware that the firm may have a conflict of interest that could affect the objectivity of this report. Investors should consider this report as only a single factor in making their investment decision.

Refer to important disclosures on page 14 to 16.

12662962

Timestamp: 23 February 2024 04:36AM EST

23 February 2024

Investment Strategy
Latin America

David Beker >>
Bz Econ/FI & LatAm EQ Strategy
Merrill Lynch (Brazil)
+55 11 2188 4371
david.beker@bofa.com

Paula Andrea Soto, CFA >>
LatAm Equity Strategist
Merrill Lynch (Brazil)
+55 11 2188 4226
paula.soto@bofa.com

Carlos Peyrelongue >>
Research Analyst
Merrill Lynch (Mexico)
+52 55 5201 3276
carlos.peyrelongue@bofa.com

Mateus Conceicao >>
LatAm Equity Strategist
Merrill Lynch (Brazil)
+55 11 2188 4201
mateus.conceicao@bofa.com

Exhibit 1: LatAm Earnings Revision Ratio

Earnings Revision Ratio = #Up Revisions / #Down Revisions. Brazil ERR at 0.9. Sector details in Exhibit 22.

LatAm countries	Dec-23	Jan-24
Argentina	1.2	1.2
Brazil	0.9	1.0
Chile	0.9	1.0
Colombia	0.6	0.3
Mexico	0.8	1.0
Peru	0.4	0.6
LatAm	0.8	0.9

Source: BofA Global Research, Factset, Bloomberg
BofA GLOBAL RESEARCH

BZ = Brazil

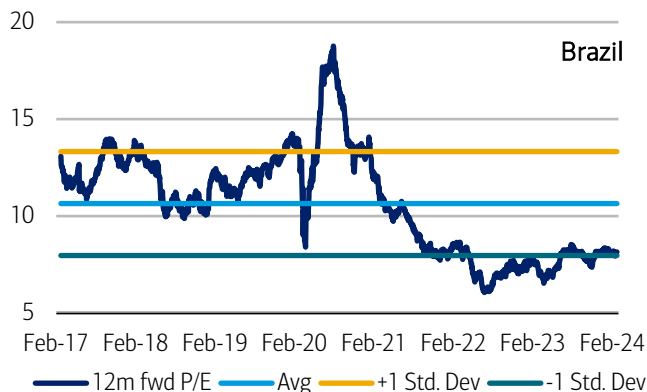
EM = Emergent Markets

ERR = Earnings Revision Ratio

LatAm valuation

Exhibit 2: Ibovespa P/E ratio (12m fwd)

Trading at 1 Std Dev below historical average, mostly driven by commodities.

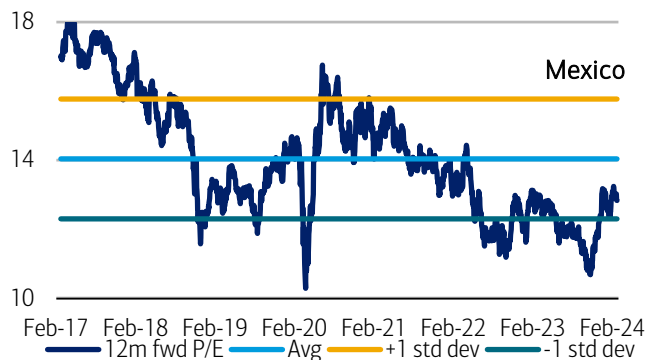


Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

Exhibit 4: Mexbol P/E ratio, Feb-17 to Feb-24

Trading at 9% discount vs hist.

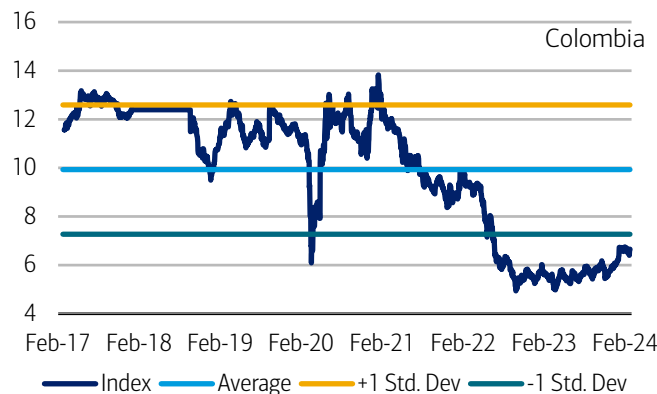


Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

Exhibit 6: Colcap P/E ratio, Feb-17 to Feb-24

Trading more than 1 Std Dev below historical average.

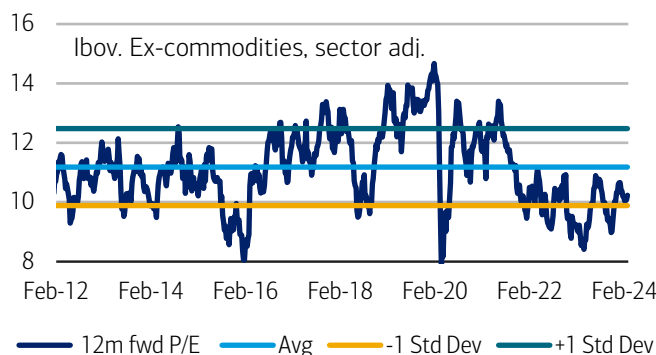


Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

Exhibit 3: Ibovespa P/E ratio (12m fwd, sector adjusted ex. commodities)

Ibov ex-commodities at 9% discount vs hist.



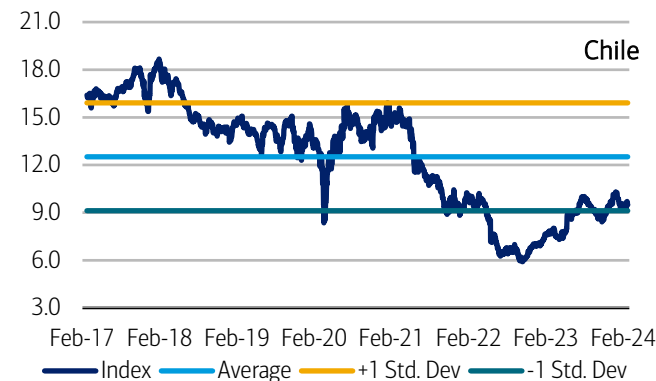
Note: Sector weights were adjusted and kept constant through time.

Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

Exhibit 5: IPSA P/E ratio, Feb-17 to Feb-24

Trading 1 Std Dev below historical average.



Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

Exhibit 7: Valuation summary

Brazil 23% discounted vs hist.

Country	Index	Current	Average	Std. Dev	Prem. to Hist	Prem. to EM*
Brazil	Ibov	8.2	10.6	2.7	-23%	-33%
BZ	Ex-commod.	10.2	11.2	11.2	-9%	-14%
Mexico	Mexbol	12.8	14.0	1.7	-9%	9%
Chile	Ipsa	9.5	12.5	3.4	-24%	-19%
Peru	SPBLPGPT	11.7	12.1	2.6	-3%	7%
Colombia	Colcap	6.7	9.9	2.7	-33%	-51%
Argentina	Merval	6.3	9.6	3.0	-35%	-38%
EM	MXEF	11.8	12.2	1.2	-3%	-

Source: BofA Global Research, Bloomberg

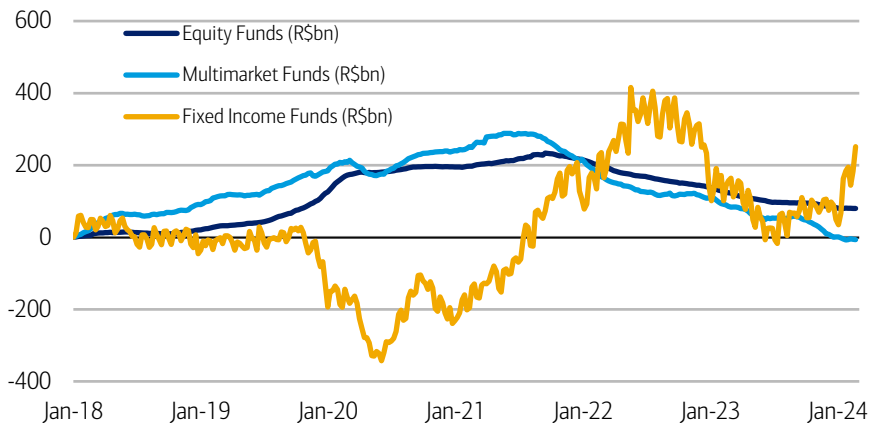
BofA GLOBAL RESEARCH

Flows & Positioning

Brazil flows

Exhibit 8: Cumulative flows into Brazil local fixed income, equity funds and local multimarket (hedge) funds (R\$bn)

R\$57bn outflows from local equity funds in 2023.



Source: BofA Global Research, Economica

BofA GLOBAL RESEARCH

Exhibit 9: Equity and Multimarket funds weekly flows (R\$m) (Brazil local funds)

R\$57bn outflows from local equity funds in 2023.

Fund type (R\$ mn)	AUM	22-Dec	29-Dec	5-Jan	12-Jan	19-Jan	26-Jan	2-Feb	9-Feb	16-Feb	23-Feb*	2024	2023	2022
Free Portfolio	256,729	-111	-547	-1,145	-482	636	831	18	-103	-341	45	-542	-35,568	-42,836
Closed-end Funds	126,262	-523	148	-272	34	37	15	99	21	0	12	-55	373	2,377
Index Enhanced	42,290	-583	-124	-669	-383	-10	-54	-256	-230	-77	-36	-1,714	-11,081	-16,714
Value / Growth	18,541	-4	-67	-85	-30	56	178	-112	85	12	26	130	-4,634	-6,745
FMP - FGTS	13,134	-39	-20	-25	-29	-41	-27	-49	-33	-15	-15	-233	-1,269	4,462
Dividends	11,913	-479	-105	-77	-6	-69	19	23	27	2	-33	-114	-2,658	-434
Sector	10,766	-16	-5	-10	-16	-12	-9	-5	-12	0	-3	-66	420	-1,860
Indexed	10,883	-104	-116	115	43	-32	82	62	3	35	-25	283	-2,045	-2,932
Small Caps	5,441	-64	-18	-33	-8	-4	-16	-101	-20	-11	-5	-199	-453	-2,243
Single Stocks	10,390	-22	-14	-1	0	-16	-41	6	62	32	9	51	-967	-2,225
Sustainability / Governance	40	0	0	0	0	-9	0	0	0	0	0	-10	0	-366
Foreign Investments	154,401	498	4,030	867	256	-17	46	109	208	48	39	1,556	21,794	-18,740
Equity Funds (Total)	660,790	-1,449	3,162	-1,336	-622	519	1,026	-205	7	-313	13	-911	-36,088	-88,257
Equity Funds (Total ex. Foreign Invest.)	366,993	-1,385	-996	-1,905	-883	540	992	-365	-189	-346	-22	-2,179	-56,986	-76,355
Free Portfolio	816,551	-1,809	2,043	1,601	-2,420	-2,744	-1,764	1,786	4,364	-293	-592	-62	-36,493	-69,300
Foreign Investments	791,165	-10,396	-2,411	-1,385	-995	-761	-2,218	427	-4,084	-1,538	72	-10,481	-69,450	-22,102
Macro	230,934	-1,320	-1,134	-1,284	-514	-126	-603	-816	-1,442	-1,288	-284	-6,358	-61,875	-14,754
Dynamic	45,939	-264	-291	-26	-122	-134	-131	-331	-269	-306	-140	-1,459	-7,210	-16,130
Specific Strategy	72,079	-537	62	-27	254	-7	91	107	148	91	252	909	2,110	-2,279
Long/Short Directional	7,250	10	-93	-122	-1	-27	50	-13	-19	-62	13	-181	-2,555	-3,384
Balanced / Mixed	12,120	-48	-31	42	-12	-20	11	-70	95	-3	-7	37	-1,065	-54
Trading	3,091	-18	13	0	-1	-10	-11	3	-1	-3	0	-23	-625	-1,154
Long/Short Neutral	2,392	-4	-9	-12	-3	-2	0	-1	-1	-5	-6	-29	-381	-527
Protected Capital	786	-1	0	0	0	-13	0	-14	0	0	0	-28	73	-196
Multimarket Funds (Total)	1,982,308	-14,387	-1,851	-1,213	-3,814	-3,844	-4,576	1,080	-1,208	-3,406	-691	-17,674	-177,471	-129,878
Multimarket Funds (Total ex. Foreign Invest.)	1,191,143	-3,991	560	172	-2,819	-3,083	-2,358	652	2,875	-1,869	-763	-7,193	-108,022	-107,777

(*) Preliminary data, up to Wednesday.

Source: Economica

BofA GLOBAL RESEARCH

Exhibit 10: Fixed Income funds weekly flows (R\$bn) (Brazil local funds)

Brazil local fixed income funds had R\$225bn inflows YTD

Fund type	AUM	26-Jan	2-Feb	9-Feb	16-Feb	23-Feb*	YTD
Short Duration Inv. Grade	1,043	2.1	-7.1	2.4	8.6	-2.8	18.0
Short Duration Sovereign	976	3.1	-16.0	29.1	21.8	2.8	112.2
All Duration Credit	384	1.9	-2.1	3.2	2.6	1.0	15.8
All Duration Inv. Grade	773	1.9	-8.7	-2.2	9.0	1.1	16.4
All Duration Sovereign	241	0.8	-4.8	0.9	3.7	-1.0	8.5
Simple	392	2.3	-10.4	5.0	12.9	7.1	44.0
Other	497	-1.7	-0.9	0.8	9.4	-0.5	9.5
Fixed Income (Total)							
Ex. Foreign Invest.	4,300	10	-50	39	68	8	225

(*) Preliminary data, up to Wednesday.

Source: Ecomatica

BofA GLOBAL RESEARCH BofA GLOBAL RESEARCH

Exhibit 11: Foreign flow to B3 (R\$bn), Mar-23 to Feb-24

Foreign flows into BZ local exchange (B3) had R\$20bn outflows YTD.

Month	Futures	Cash	IPO/follow-on	TOTAL
Mar-23	-2	-2	2	-3
Apr-23	3	3	1	6
May-23	-6	-4	0	-10
Jun-23	-7	10	4	7
Jul-23	3	7	3	13
Aug-23	-3	-13	3	-13
Sep-23	10	-2	0	8
Oct-23	5	-3	0	2
Nov-23	9	21	0	30
Dec-23	-7	17	0	11
Jan-24	-5	-8	1	-12
Feb-24	2	-9	0	-7
12M Cumulative	2	17	13	32
2024 YTD	-3	-17	1	-20
2023	2	45	13	60
2022	-2	101	17	116

Source: B3, Bloomberg

BofA GLOBAL RESEARCH

Global flows**Exhibit 12: Cumulative flows into EM equity funds (US\$bn), 2018-2024**

EM equity funds had US\$53bn inflows YTD.



Source: EPFR

BofA GLOBAL RESEARCH

Exhibit 13: Weekly flows to LatAm and EM funds (US\$mn)

EM inflows YTD went almost entirely into China.

Region	Week	% Current Assets	4 Weeks	% Current Assets	YTD	% Current Assets
LatAm	(87)	-0.7%	(128)	-1.0%	(316)	-2.6%
Brazil	(363)	-2.1%	(716)	-4.2%	(848)	-5.0%
Mexico	18	0.2%	76	0.8%	(206)	-2.1%
Andean	(2)	-0.1%	(4)	-0.1%	(138)	-4.3%
LatAmTotal	(434)	-1.0%	(747)	-1.8%	(1,457)	-3.4%
China	2,450	0.2%	31,304	2.0%	51,277	3.2%
EM Total	2,330	0.1%	33,016	2.1%	53,585	3.3%

Source: EPFR

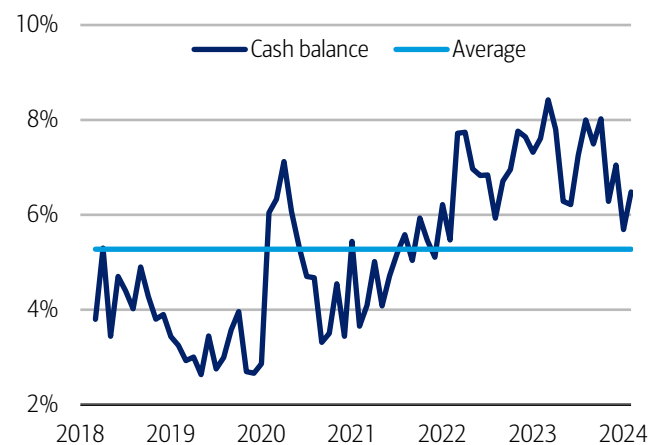
BofA GLOBAL RESEARCH



LatAm positioning

Exhibit 14: Average cash position (2018-2024)

Cash levels increased to 6.5% in Feb-24, vs 5.7% last month

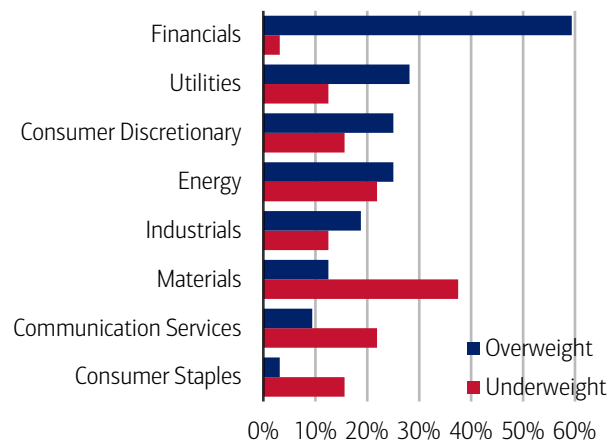


Source: LatAm Fund Manager Survey

BofA GLOBAL RESEARCH

Exhibit 15: Which sectors among equities are you most underweight?

Participants are more underweight Materials, Communication Services and C. Staples than they are overweight.



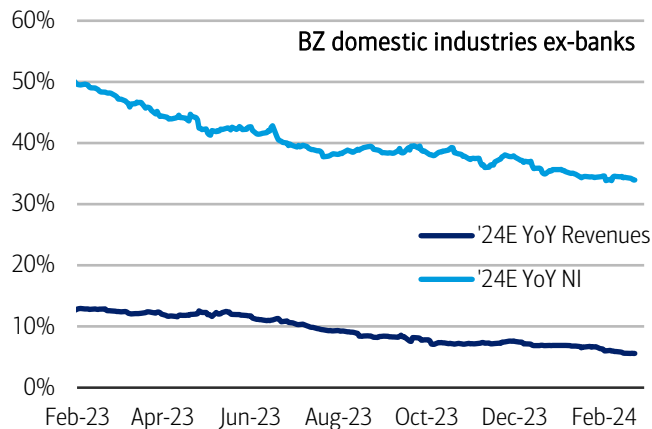
Source: LatAm Fund Manager Survey

BofA GLOBAL RESEARCH

Consensus Earnings Revisions for Brazil

Exhibit 16: Brazil domestic industries: consensus revised NI downwards but still expected at 34% YoY growth

Brazil domestic industries (ex-banks) revenues vs NI consensus estimates (2024E YoY growth).



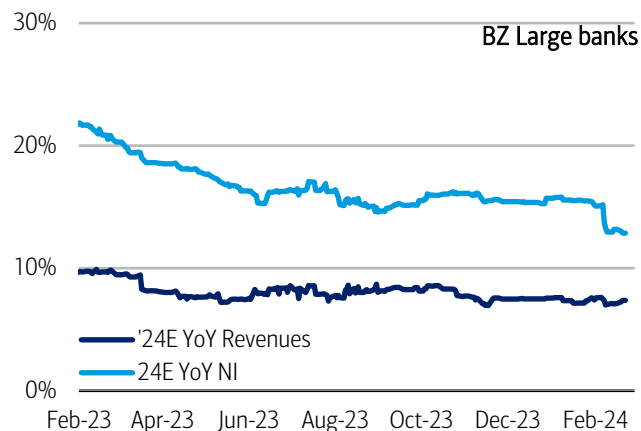
Consensus estimates.

Source: Bloomberg, BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 17: Brazil Banks: consensus revised NI downwards since Jan-23, but still expected at +13% YoY for 2024.

BZ large banks revenues vs NI consensus estimates (2024 YoY growth).



Consensus estimates.

Source: Bloomberg, BofA Global Research

BofA GLOBAL RESEARCH

Earnings Revision Ratio (ERR)

The Earnings Revision Ratio measures the number of revisions for which the consensus EPS estimate has risen versus the number for which it has fallen.

An ERR above 1 means more upwards revisions than downwards revisions. However, historically analysts tend to start overly optimistic and do more downwards revisions down the line. As a result, **the overall historical average of the 3-month ERR is close to 0.8**

Exhibit 18: LatAm 3-month ERR – country details

Brazil 3-month ERR at 0.9 in Jan-24.

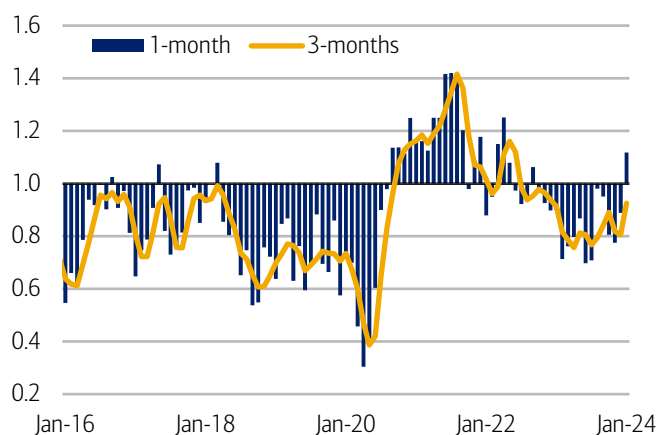
LatAm countries	12m Avg	Nov-23	Dec-23	Jan-24	1M Chg in 3M ERR
Argentina	2.5	1.1	1.2	1.2	0.01
Brazil	0.8	0.8	0.9	1.0	0.11
Chile	0.8	1.0	0.9	1.0	0.02
Colombia	0.6	0.6	0.6	0.3	-0.22
Mexico	0.9	0.8	0.8	1.0	0.19
Peru	0.7	0.4	0.4	0.6	0.26
LatAm	0.8	0.8	0.8	0.9	0.12

Source: BofA Global Research, Factset, Bloomberg

BofA GLOBAL RESEARCH

Exhibit 19: LatAm Earnings Revision Ratio (Jan 16-Jan 24)

3-month ERR at 0.9 in Jan-24.

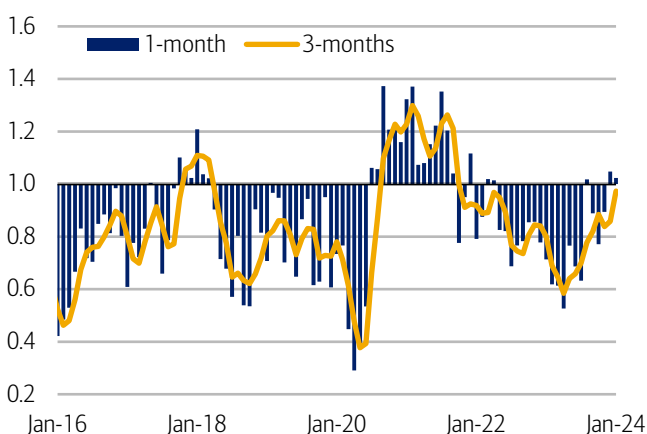


Source: BofA Global Research, Factset, Bloomberg

BofA GLOBAL RESEARCH

Exhibit 21: Brazil Earnings Revision Ratio (Jan 16-Jan 24)

Brazil 3-month ERR nearing to 1 in Jan-24.



Source: BofA Global Research, Factset, Bloomberg

BofA GLOBAL RESEARCH

Exhibit 20: LatAm 3-month ERR – sector details

IT shows the highest ERR (2.2).

LatAm sectors	12m Avg	Nov-23	Dec-23	Jan-24	1M Chg in 3M ERR
C. Discretionary	0.8	0.9	0.8	0.8	-0.01
C. Staples	0.8	0.8	1.0	1.0	0.00
Energy	0.9	1.1	1.0	0.7	-0.27
Financials	1.3	1.1	1.0	1.1	0.13
Health Care	0.7	0.6	0.6	0.7	0.04
Industrials	0.8	0.7	0.8	0.9	0.12
IT	1.3	1.5	1.9	2.2	0.39
Materials	0.6	0.5	0.5	0.7	0.25
Real Estate	1.2	1.6	1.8	2.1	0.25
Communication	0.8	1.0	1.0	1.4	0.33
Utilities	1.1	1.5	1.5	1.2	-0.24
LatAm	0.8	0.8	0.8	0.9	0.12

Source: BofA Global Research, Factset, Bloomberg

BofA GLOBAL RESEARCH

Exhibit 22: Brazil 3-month ERR – sector details

Communication and IT show highest ERR in December.

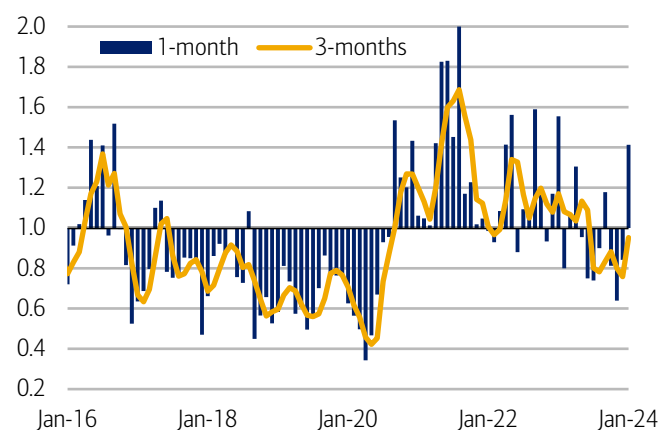
Brazil sectors	12m Avg	Nov-23	Dec-23	Jan-24	1M Chg in 3M ERR
C. Discretionary	0.6	0.9	0.8	0.7	-0.08
C. Staples	0.6	0.6	0.8	1.0	0.23
Energy	0.9	1.2	1.1	0.8	-0.29
Financials	1.2	1.2	1.1	1.2	0.12
Health Care	0.6	0.5	0.6	0.6	0.02
Industrials	0.7	0.7	0.7	0.8	0.07
IT	1.5	1.8	2.4	2.9	0.53
Materials	0.5	0.5	0.5	0.8	0.27
Real Estate	2.3	8.0	4.5	1.8	-2.75
Communication	3.8	4.8	4.3	3.7	-0.62
Utilities	1.1	1.5	1.5	1.3	-0.24
Brazil	0.8	0.8	0.9	1.0	0.11

Source: BofA Global Research, Factset, Bloomberg

BofA GLOBAL RESEARCH

Exhibit 23: Mexico Earnings Revision Ratio (Jan 16-Jan 24)

Mexico 3-month ERR at 1 in Jan-24.



Source: BofA Global Research, Factset, Bloomberg

BofA GLOBAL RESEARCH

Exhibit 24: Mexico 3-month ERR – sector details

Financials has the highest ERR in Mexico (2.1 in Jan-24).

Mexico sectors	12m Avg	Nov-23	Dec-23	Jan-24	1M Chg in 3M ERR
C. Discretionary	1.0	0.5	0.6	0.6	0.03
C. Staples	1.1	1.2	1.4	1.0	-0.43
Energy	NA	NA	NA	NA	NA
Financials	2.2	1.9	1.6	2.1	0.54
Health Care	NA	NA	NA	NA	NA
Industrials	0.8	0.7	0.7	0.9	0.21
IT	NA	NA	NA	NA	NA
Materials	0.8	0.6	0.5	0.8	0.28
Real Estate	0.9	0.8	1.1	1.7	0.58
Communication	0.4	0.3	0.1	0.1	-0.04
Utilities	NA	NA	NA	NA	NA
Mexico	0.9	0.8	0.8	1.0	0.19

Source: BofA Global Research, Factset, Bloomberg

BofA GLOBAL RESEARCH

ERR methodology

The Earnings Revision Ratio (ERR) is calculated as follows: $ERR = \frac{\# \text{Up Revisions}}{\# \text{Down Revisions}}$, where:

Up Revisions = All instances when an analyst revises an estimate up.

Down Revisions = All instances when an analyst revises an estimate down.

We look at 1-Month and 3-Month ERRs; the former may anticipate market turns, while the latter is less volatile. Each company may contribute more than once as the total number of analyst revisions are considered. A company covered by several analysts will have a higher weight in the ratio.

The considered universe is composed of all companies within our current LatAm Coverage countries (Argentina, Brazil, Chile, Colombia, Mexico and Peru). A company will be included in the sample if at least one of the following variables is listed as one of said countries: country of risk, country of incorporation, country of registration, country of Headquarters, and country of top revenue. Panama's Copa Holdings is the only exception to the rule and was also added to the sample. Number of companies with at least one revision in the last 12 months: Argentina: 35, Brazil: 185, Chile: 37, Colombia: 20, Mexico: 106, Peru: 19.

Stock screens

Exhibit 25: Value screen

Within this screen, utilities and retail have the best performance YTD.

Company	Country	Industry	BBG Ticker	BofA Ticker	P/E 2023E	P/E 2024E	Net Debt/EBITDA	30D Performance (local crncy)	YTD Performance (local crncy)
Petrobras PN	BZ	Oils	PETR4 BZ	PTRBF	4.4	5.1	0.8	11%	13%
Vale ON	BZ	Non-Ferrous-Mining	VALE3 BZ	VALEF	5.9	5.2	0.6	-3%	-13%
Copa	CO	Airlines	CPA US	CPA	6.2	5.5	0.7	7%	-7%
Ternium	MX	Steels	TX US	TX	5.2	5.5	-0.5	2%	-6%
Petro-Rio	BZ	Oil & Gas Producers	PRI03 BZ	HRTPF	7.7	5.5	1.1	6%	2%
Ecopetrol	CO	Oil & Gas Producers	ECOPETL CB	XESSF	5.3	5.9	1.6	2%	0%
Sanepar	BZ	Water Utilities	SAPR11 BZ	XJALF	6.3	6.6	1.6	-9%	-10%
COPASA	BZ	Water Utilities	CSMG3 BZ	CSAOF	6.2	6.8	1.4	-5%	5%
Cemig	BZ	Electric Utilities	CMIG4 BZ	CEMCF	5.3	6.9	1.1	2%	2%
Gerdau	BZ	Steels	GGBR4 BZ	GGBUF	7.6	7.6	0.5	2%	-9%
Liverpool Puerto	MX	Retailing-Broadline/Department Stores	LIVEPOLC MM	ELPOF	9.3	8.4	0.9	8%	8%
SQM	CL	Fertilizers	SQM US	SQM	5.8	8.4	0.2	-11%	-28%
CPFL Energia	BZ	Electric Utilities	CPFE3 BZ	XPFGF	8.5	8.8	1.5	-1%	-8%
Usiminas	BZ	Steels	USIM5 BZ	USSPF	11.4	9.2	0.0	23%	15%
Danhos	MX	REITs	DANHOS13 MM	GRFFF	9.2	9.3	1.9	-3%	-1%
GMexico	MX	Non-Ferrous-Mining	GMEXICOB MM	GMBXF	12.1	9.3	0.4	2%	-8%
Engie	BZ	Electric Utilities	EGIE3 BZ	XZDDF	10.2	9.3	1.9	0%	-9%
AMX	MX	Telecom Services-Wireless/Cellular	AMXB MM	AMXVF	11.5	9.8	2.0	2%	3%
Prom y Oper Infra	MX	Toll Road Operators	PINFRA* MM	PYOIF	10.6	10.0	-1.2	10%	1%
Coca-Cola Andina	CL	Soft Drinks	ANDINAB CI	AKOBF	11.3	10.3	1.6	7%	10%
Median								2%	-1%

Source: BofA Global Research, Bloomberg.

Stocks are selected from our LatAm universe of coverage regardless of the rating. Stocks must have at least 5y of trading. Screen criteria: Mkt Cap>US\$1bn. 2021E and 2022E fwd P/E ratio below MSCI LatAm median P/E. Net Debt/EBITDA <2 (this condition is ignored for Financials). If results exceed 20 companies, those with the lowest 2022E P/E ratio are selected. Fundamental ratings are not part of the screening criteria.

This screen is not a recommended list either individually or as a group of stocks. Investors should consider the fundamentals of the companies and their own individual circumstances/objectives before making any investment decision. Fundamental ratings are not part of the screening criteria.

BofA GLOBAL RESEARCH

Exhibit 26: Growth screen

Many traditional retail and e-commerce names in this screen.

Company	Country	Industry	BBG Ticker	BofA Ticker	P/E 2024E	Div. Yield 2023E	30D Performance (local crncy)	YTD Performance (local crncy)
Magazine Luiza	BZ	Retailing-Hardlines	MGLU3 BZ	MGZZF	72.8	0%	9%	-2%
Omega Geração	BZ	Renewable Energy	SRNA3 BZ	XZQAF	64.1	0%	2%	-4%
Brasil Foods	BZ	Food Processors	BRFS3 BZ	BRFFF	43.2	0%	-5%	0%
Mercado Libre	BZ	Internet/e-Commerce	MELI US	MELI	38.0	0%	3%	16%
Raia Drogasil	BZ	Drug Store Chains	RADL3 BZ	RAIAF	31.4	1%	-4%	-12%
DASA	BZ	Healthcare Technology & Distribution	DASA3 BZ	DIAOF	30.5	0%	-17%	-25%
Natura	BZ	Cosmetics/Personal Care	NTCO3 BZ	XZVAF	25.3	0%	-2%	0%
WEG	BZ	Industrials/Multi-Industry	WEGE3 BZ	WGSEF	24.2	2%	5%	-4%
Falabella	CL	Retailing-Broadline/Department Stores	FALAB CI	XDIYF	23.2	1%	8%	0%
Televisa	MX	Cable TV	TLEVICPO MM	GRPFF	21.3	3%	15%	2%
FEMSA	MX	Brewers	FEMSAUBD MM	FMXUF	21.1	2%	-3%	3%
AES Brasil	BZ	Electric Utilities	AESB3 BZ	XDFDF	20.7	2%	-7%	-14%
Eneva	BZ	Electric Utilities	ENEV3 BZ	XZUMF	19.7	1%	-4%	-9%
TOTVS	BZ	Server & Enterprise Software	TOTS3 BZ	XBEGF	19.7	1%	3%	-6%
Rumo Logistica	BZ	Rail Transport/Railroads	RAIL3 BZ	RUMOF	19.4	0%	0%	0%
Vesta	MX	Real Estate/Property	VESTA* MM	VESTF	19.1	2%	-7%	-10%
Ultrapar	BZ	Oil Refining & Marketing	UGPA3 BZ	XLRFU	18.3	3%	11%	17%
Alsea	MX	Restaurants	ALSEA* MM	ALSSF	17.1	0%	2%	1%
Energisa	BZ	Utilities-Other	ENGI11 BZ	XLXGF	16.3	2%	0%	-7%
Alpargatas	BZ	Footwear	ALPA4 BZ	SRDDF	16.1	0%	19%	-2%
Median							1%	-2%

Source: BofA Global Research, Bloomberg.

Stocks are selected from our LatAm universe of coverage regardless of the rating. Stocks must have at least 5y of trading. Screen criteria: Mkt Cap>US\$1bn. 2021E and 2022E fwd P/E ratio above MSCI LatAm median P/E. Dividend yield (2022E) below MSCI LatAm dividend yield. If results exceed 20 companies, those with the highest 2022E P/E ratio are selected. Fundamental ratings are not part of the screening criteria.

This screen is not a recommended list either individually or as a group of stocks. Investors should consider the fundamentals of the companies and their own individual circumstances/objectives before making any investment decision.

BofA GLOBAL RESEARCH



Exhibit 27: High dividend screen

This screen encompasses many utilities, banks and commodities.

Company	Country	Industry	BBG Ticker	BofA Ticker	Div. Yield 2023E	30D Performance (local crncy)	YTD Performance (local crncy)
Petrobras PN	BZ	Oils	PETR4 BZ	PTRBF	19.6	11%	13%
CSN	BZ	Steels	CSNA3 BZ	SIDHF	15.9	0%	-11%
Ecopetrol	CO	Oil & Gas Producers	ECOPETL CB	XESSF	14.5	2%	0%
SQM	CL	Fertilizers	SQM US	SQM	12.0	-11%	-28%
Bradespar	BZ	Non-Ferrous-Mining	BRAP4 BZ	BRDQF	10.8	-6%	-15%
BB Seguridade	BZ	Insurance - Multi-line	BBSE3 BZ	XBDPF	10.1	-3%	-1%
Danhos	MX	REITs	DANHOS13 MM	GRFFF	10.0	-3%	-1%
TAESA	BZ	Electric Utilities	TAEE11 BZ	XTAEF	9.7	-5%	-8%
Banco do Brasil	BZ	Banks-Retail	BBAS3 BZ	XBBAF	9.5	3%	5%
Vale ON	BZ	Non-Ferrous-Mining	VALE3 BZ	VALEF	9.3	-3%	-13%
CPFL Energia	BZ	Electric Utilities	CPFE3 BZ	XPFGF	8.8	-1%	-8%
Alpek	MX	Chemicals-Major	ALPEKA MM	ALPKF	8.7	-5%	-16%
Cemex	MX	Building Materials	CX US	CX	8.5	7%	3%
Trans Paulista	BZ	Electric Utilities	TRPL4 BZ	XOOTF	8.1	-3%	-3%
Cemig	BZ	Electric Utilities	CMIG4 BZ	CEMCF	7.9	2%	2%
SLC Agrícola	BZ	Food-Commodities	SLCE3 BZ	SLQJF	7.8	3%	4%
Itau Unibanco	BZ	Banks-Multinational/Universal	ITUB4 BZ	ITUBF	7.5	5%	1%
Banco de Chile	CL	Banks-Retail	CHILE CI	XHNDF	7.3	12%	7%
Banrisul	BZ	Banks-Retail	BRSR6 BZ	XGRBF	7.3	10%	15%
Median						1%	0%

Source: BofA Global Research, Bloomberg

Stocks are selected from our LatAm universe of coverage regardless of the rating. Stocks must have at least 5y of trading. Screen criteria: Mkt Cap>US\$1bn. Dividend yield

(2022E) above MSCI LatAm dividend yield. If results exceed 20 companies, those with the highest dividend yield are selected. Fundamental ratings are not part of the screening criteria. This screen is not a recommended list either individually or as a group of stocks. Investors should consider the fundamentals of the companies and their own individual circumstances/objectives before making any investment decision.

BofA GLOBAL RESEARCH

Exhibit 28: Defensive screen

Many bond proxies, Utilities, Soft Drinks and Telecom.

Company	Country	Industry	BBG Ticker	BofA Ticker	Beta	Net Debt/EBITDA	30D Performance (local crncy)	YTD Performance (local crncy)
Soriana	MX	Supermarkets/Food Retailers	SORIANAB MM	ONZBF	0.1	1.9	-3%	-6%
Danhos	MX	REITs	DANHOS13 MM	GRFFF	0.4	1.9	-3%	-1%
BB Seguridade	BZ	Insurance - Multi-line	BBSE3 BZ	XBDPF	0.4	NA	-3%	-1%
Auren Energia	BZ	Electric Utilities	AURE3 BZ	XZMXF	0.4	1.9	-1%	-3%
Chedraui	MX	Supermarkets/Food Retailers	CHDRAUIB MM	GCHEF	0.4	1.9	27%	27%
TIM	BZ	Telecom Services-Wireless/Cellular	TIMS3 BZ	XZUAF	0.4	0.9	6%	3%
Grupo Financiero Galicia	AR	Banks-Retail	GGAL US	GGAL	0.4	NA	17%	25%
Vivo	BZ	Telecom Equipment-Wireless/Cellular	VIVT3 BZ	XCPTF	0.4	0.7	10%	5%
Coca-Cola Andina	CL	Soft Drinks	ANDINAB CI	AKOBF	0.5	1.6	7%	10%
Engie	BZ	Electric Utilities	EGIE3 BZ	XZDDF	0.5	1.9	0%	-9%
Banco Macro	AR	Banks-Retail	BMA US	BMA	0.5	NA	17%	23%
Copa	CO	Airlines	CPA US	CPA	0.5	0.7	7%	-7%
Qualitas	MX	Insurance - Non-Life	Q* MM	QUCOF	0.5	NA	13%	12%
Gruma	MX	Food Producers	GRUMAB MM	GPAGF	0.5	1.7	0%	-3%
AmBev	BZ	Brewers	ABEV3 BZ	AVBPF	0.5	-0.6	-3%	-6%
Grupo BMV	MX	Other Financials	BOLSAA MM	BOMXF	0.5	NA	8%	2%
Sanepar	BZ	Water Utilities	SAPR11 BZ	XJALF	0.5	1.6	-9%	-10%
Liverpool Puerto	MX	Retailing-Broadline/Department Stores	LIVEPOLC MM	ELPQF	0.6	0.9	8%	8%
Banco de Chile	CL	Banks-Retail	CHILE CI	XHNDF	0.6	NA	12%	7%
Arca	MX	Soft Drinks	AC* MM	EMBVF	0.6	0.6	8%	5%
Median							7%	2%

Source: BofA Global Research, Bloomberg

Stocks are selected from our LatAm universe of coverage regardless of the rating. Stocks must have at least 5y of trading. Screen criteria: Mkt Cap>US\$1bn. Net Debt/EBITDA <2 (this condition is ignored for Financials).

Beta relative to the local index <0.9. If results exceed 20 companies, those with the lowest beta are selected. Fundamental ratings are not part of the screening criteria.

This screen is not a recommended list either individually or as a group of stocks. Investors should consider the fundamentals of the companies and their own individual circumstances/objectives before making any investment decision.

BofA GLOBAL RESEARCH

Exhibit 29: High Beta screen

Several Banks and Retail names in this screen.

Company	Country	Industry	BBG Ticker	BofA Ticker	Beta	Net Debt/EBITDA	30D Performance (local crncy)	YTD Performance (local crncy)
Cemex	MX	Building Materials	CX US	CX	2.0	2.2	7%	3%
Banco inter	BZ	Banks-Retail	INTR US	INTR	1.9	NA	14%	-3%
B3 SA	BZ	Financial Services-Consumer/Commercial	B3SA3 BZ	XIMAF	1.6	NA	-8%	-13%
Televisa	MX	Cable TV	TLEVICPO MM	GRPFF	1.6	2.8	15%	2%
Banco Pan	BZ	Banks-Retail	BPAN4 BZ	XQSFF	1.6	NA	10%	2%
Ecorodovias	BZ	Toll Road Operators	ECOR3 BZ	XVEDF	1.6	3.7	2%	-3%
CSN	BZ	Steels	CSNA3 BZ	SIDHF	1.5	3.2	0%	-11%
Estacio	BZ	Education & Training Services	YDUQ3 BZ	ECPCF	1.5	2.4	-6%	-11%
GFINbursa	MX	Banks-Retail	GFINBURO MM	GPFOF	1.4	NA	14%	15%
Cosan	BZ	Energy Commodities	CSAN3 BZ	CSAIF	1.4	3.2	-2%	-6%
BTG Pactual	BZ	Banks-Retail	BPAC11 BZ	XNXCF	1.4	NA	2%	1%
DASA	BZ	Healthcare Technology & Distribution	DASA3 BZ	DIAOF	1.3	5.0	-17%	-25%
Brasil Foods	BZ	Food Processors	BRFS3 BZ	BRFFF	1.3	5.4	-5%	0%
Embraer	BZ	Aerospace	ERJ US	ERJ	1.3	2.3	1%	-1%
Localiza	BZ	Car Rental	RENT3 BZ	LZRFF	1.3	3.6	-10%	-16%
Credicorp	PE	Banks-Retail	BAP US	BAP	1.3	NA	13%	13%
Dexco	BZ	Forest Products	DXCO3 BZ	DURXF	1.2	4.7	7%	1%
Aliansce	BZ	Real Estate/Property	ALOS3 BZ	XADSF	1.1	4.0	-3%	-9%
Banco do Brasil	BZ	Banks-Retail	BBAS3 BZ	XBBAF	1.1	NA	3%	5%
Median							2%	0%

Source: BofA Global Research, Bloomberg

Stocks are selected from our LatAm universe of coverage regardless of the rating. Stocks must have at least 5y of trading. Screen criteria: Mkt Cap>US\$1bn. Net Debt/EBITDA >2 (this condition is ignored for Financials). Beta relative to the local index >1.1. If results exceed 20 companies, those with the highest beta are selected. Fundamental ratings are not part of the screening criteria.

This screen is not a recommended list either individually or as a group of stocks. Investors should consider the fundamentals of the companies and their own individual circumstances/objectives before making any investment decision. Fundamental ratings are shown only for information and are not part of the screening criteria

BofA GLOBAL RESEARCH

Exhibit 30: List of stocks within our coverage most discounted to historicals

Many retailers and financials in this screen.

Company	Country	Industry	BBG Ticker	BofA Ticker	Discount to hist.	Current Valuation	10-Year Avg. Valuation	Net Debt/EBITDA	30D Performance (local crncy)	YTD Performance (local crncy)
Eneva	BZ	Electric Utilities	ENEV3 BZ	XZUMF	-79%	9.7	46.1	4.9	-4%	-9%
Televisa	MX	Cable TV	TLEVICPO MM	GRPFF	-74%	2.4	9.6	2.8	15%	2%
Rumo Logistica	BZ	Rail Transport/Railroads	RAIL3 BZ	RUMOF	-73%	19.4	72.3	2.3	0%	0%
Embraer	BZ	Aerospace	ERJ US	ERJ	-63%	9.9	26.8	2.3	1%	-1%
Bradesco	BZ	Banks-Retail	BBDC4 BZ	BRDPF	-49%	0.9	1.8	NA	-9%	-18%
Ecorodovias	BZ	Toll Road Operators	ECOR3 BZ	XVEDF	-48%	7.7	14.8	3.7	2%	-3%
BB Seguridade	BZ	Insurance - Multi-line	BBSE3 BZ	XBDPF	-38%	8.0	12.9	NA	-3%	-1%
Cemex	MX	Building Materials	CX US	CX	-38%	5.0	8.1	2.2	7%	3%
Banrisul	BZ	Banks-Retail	BRSR6 BZ	XGRBF	-37%	0.7	1.0	NA	10%	15%
Gentera	MX	Banks-Retail	GENTERA* MM	CMPRF	-36%	1.7	2.6	NA	19%	12%
DASA	BZ	Healthcare Technology & Distribution	DASA3 BZ	DIAOF	-33%	5.6	8.4	5.0	-17%	-25%
Fleury	BZ	Healthcare Technology & Distribution	FLRY3 BZ	XPOXF	-33%	12.8	19.1	2.1	-5%	-12%
Alpek	MX	Chemicals-Major	ALPEKA MM	ALPKF	-33%	4.3	6.4	2.7	-5%	-16%
BTG Pactual	BZ	Banks-Retail	BPAC11 BZ	XNXCF	-32%	14.5	21.2	NA	2%	1%
YPF SA	AR	Oil & Gas Producers	YPF US	YPF	-31%	2.1	3.1	2.9	14%	5%
CMPC	CL	Paper Products	CMPC CI	XEMCF	-31%	5.7	8.3	4.2	2%	-4%
GFINbursa	MX	Banks-Retail	GFINBURO MM	GPFOF	-31%	9.7	14.1	NA	14%	15%
Orbia	MX	Chemicals-Major	ORBIA* MM	MXCHF	-30%	5.1	7.3	2.7	0%	-10%
Median									2%	-1%

Source: BofA Global Research, Bloomberg

Stocks are selected from our LatAm universe of coverage regardless of the rating. Stocks must have at least 5y of trading. Screen criteria: Mkt Cap>US\$1bn. Net Debt/EBITDA <2 (this condition is ignored for Financials). Valuation ratio < 10y hist avg (or longest available). Valuation ratios are chosen according to a company's sector: for Materials, Energy, Airlines and C. Staples EV/EBITDA is used; for Retail EV/Sales is used; for Financials Price/Book Value is used. For remaining sectors Price/Earnings is used. If results exceed 20 companies, those with the greatest discounts to historicals are selected.

This screen is not a recommended list either individually or as a group of stocks. Investors should consider the fundamentals of the companies and their own individual circumstances/objectives before making any investment decision. Fundamental ratings are shown only for information and are not part of the screening criteria

BofA GLOBAL RESEARCH

Stock screens methodology

Our monthly screens are a quantitative approach for monitoring performance across several investment strategies. The screens are generated through a quantitative process, using consensus projections and historical data. There are two main steps to the selection process: filtering and ranking. For each screening process, filter criteria is applied first, then resulting assets are ranked according to the core variable for each strategy. Each month, we select and rank the 20 stocks that best fit the screen criteria. The stocks are selected from our universe of coverage in LatAm regardless of the rating but must have a market cap above US\$1bn.

There are 5 different screens: Growth, Value, Dividends, Defensive and High Beta. Our Growth screen looks for companies with high projected growth that reinvests free cash flow. Our Value screen looks for companies with low or moderate leverage that are trading at a discounted valuation. The Dividends screen looks for companies with high dividend yields, supported by low moderate leverage. Defensive screen looks for assets with solid performance and lowest volatility while High beta screen looks for market-dependent assets with high leverage and volatility. We also provide a list of stocks within our coverage that are most discounted to historicals.



Disclosures

Important Disclosures

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 ^{R1}
Buy	≥ 10%	≤ 70%
Neutral	≥ 0%	≤ 30%
Underperform	N/A	≥ 20%

^{R1} 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.

BofA Global Research personnel (including the analyst(s) responsible for this report) receive compensation based upon, among other factors, the overall profitability of Bank of America Corporation, including profits derived from investment banking. The analyst(s) responsible for this report may also receive compensation based upon, among other factors, the overall profitability of the Bank's sales and trading businesses relating to the class of securities or financial instruments for which such analyst is responsible.

Other Important Disclosures

Prices are indicative and for information purposes only. Except as otherwise stated in the report, for any recommendation in relation to an equity security, the price referenced is the publicly traded price of the security as of close of business on the day prior to the date of the report or, if the report is published during intraday trading, the price referenced is indicative of the traded price as of the date and time of the report and in relation to a debt security (including equity preferred and CDS), prices are indicative as of the date and time of the report and are from various sources including BofA Securities trading desks.

The date and time of completion of the production of any recommendation in this report shall be the date and time of dissemination of this report as recorded in the report timestamp.

This report may refer to fixed income securities or other financial instruments that may not be offered or sold in one or more states or jurisdictions, or to certain categories of investors, including retail investors. Readers of this report are advised that any discussion, recommendation or other mention of such instruments is not a solicitation or offer to transact in such instruments. Investors should contact their BofA Securities representative or Merrill Global Wealth Management financial advisor for information relating to such instruments. 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 BofA 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.bofamli.com/BofASEdisclaimer; BofA Europe (Milan): Bank of America Europe Designated Activity Company, Milan Branch, regulated by the Bank of Italy, the European Central Bank (ECB) and the Central Bank of Ireland (CBI); BofA Europe (Frankfurt): Bank of America Europe Designated Activity Company, Frankfurt Branch regulated by BaFin, the ECB and the CBI; BofA Europe (Madrid): Bank of America Europe Designated Activity Company, Sucursal en España, regulated by the Bank of Spain, the ECB and the CBI; Merrill Lynch (Australia): Merrill Lynch Equities (Australia) Limited, regulated by the Australian Securities and Investments Commission; Merrill Lynch (Hong Kong): Merrill Lynch (Asia Pacific) Limited, regulated by the Hong Kong Securities and Futures Commission (HKSF); Merrill Lynch (Singapore): Merrill Lynch (Singapore) Pte Ltd, regulated by the Monetary Authority of Singapore (MAS); Merrill Lynch (Canada): Merrill Lynch Canada Inc, regulated by the Canadian Investment Regulatory Organization; Merrill Lynch (Mexico): Merrill Lynch Mexico, SA de CV, Casa de Bolsa, regulated by the Comisión Nacional Bancaria y de Valores; Merrill Lynch (Argentina): Merrill Lynch Argentina SA, regulated by Comisión Nacional de Valores; BofAS Japan: BofA Securities Japan Co., Ltd., regulated by the Financial Services Agency; Merrill Lynch (Seoul): Merrill Lynch International, LLC Seoul Branch, regulated by the Financial Supervisory Service; Merrill Lynch (Taiwan): Merrill Lynch Securities (Taiwan) Ltd., regulated by the Securities and Futures Bureau; BofAS India: BofA Securities India Limited, regulated by the Securities and Exchange Board of India (SEBI); Merrill Lynch (Israel): Merrill Lynch Israel Limited, regulated by Israel Securities Authority; Merrill Lynch (DIFC): Merrill Lynch International (DIFC Branch), regulated by the Dubai Financial Services Authority (DFSA); Merrill Lynch (Brazil): Merrill Lynch S.A. Corretora de Títulos e Valores Mobiliários, regulated by Comissão de Valores Mobiliários; Merrill Lynch KSA Company: Merrill Lynch Kingdom of Saudi Arabia Company, regulated by the Capital Market Authority.

This information has been approved for publication and is distributed in the United Kingdom (UK) to professional clients and eligible counterparties (as each is defined in the rules of the FCA and the PRA) by MLI (UK), which is authorized by the PRA and regulated by the FCA and the PRA - details about the extent of our regulation by the FCA and PRA are available from us on request; has been approved for publication and is distributed in the European Economic Area (EEA) by BofASE (France), which is authorized by the ACPR and regulated by the ACPR and the AMF; has been considered and distributed in Japan by BofAS Japan, a registered securities dealer under the Financial Instruments and Exchange Act in Japan, or its permitted affiliates; is issued and distributed in Hong Kong by Merrill Lynch (Hong Kong) which is regulated by HKSF; is issued and distributed in Taiwan by Merrill Lynch (Taiwan); is issued and distributed in India by BofAS India; and is issued and distributed in Singapore to institutional investors and/or accredited investors (each as defined under the Financial Advisers Regulations) by Merrill Lynch (Singapore) (Company Registration No 198602883D). Merrill Lynch (Singapore) is regulated by MAS. Merrill Lynch Equities (Australia) Limited (ABN 65 006 276 795), AFS License 235132 (MLEA) distributes

this information in Australia only to 'Wholesale' clients as defined by s.761G of the Corporations Act 2001. With the exception of Bank of America N.A., Australia Branch, neither MLEA nor any of its affiliates involved in preparing this information is an Authorised Deposit-Taking Institution under the Banking Act 1959 nor regulated by the Australian Prudential Regulation Authority. No approval is required for publication or distribution of this information in Brazil and its local distribution is by Merrill Lynch (Brazil) in accordance with applicable regulations. Merrill Lynch (DIFC) is authorized and regulated by the DFSA. Information prepared and issued by Merrill Lynch (DIFC) is done so in accordance with the requirements of the DFSA conduct of business rules. BofA Europe (Frankfurt) distributes this information in Germany and is regulated by BaFin, the ECB and the CBI. BofA Securities entities, including BofA Europe and BofASE (France), may outsource/delegate the marketing and/or provision of certain research services or aspects of research services to other branches or members of the BofA Securities group. You may be contacted by a different BofA Securities entity acting for and on behalf of your service provider where permitted by applicable law. This does not change your service provider. Please refer to the [Electronic Communications Disclaimers](#) for further information.

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

General Investment Related Disclosures:

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

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

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

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.

Copyright and General Information:

Copyright 2024 Bank of America Corporation. All rights reserved. iQdatabase® is a registered service mark of Bank of America Corporation. This information is prepared for the use of BofA Securities clients and may not be redistributed, retransmitted or disclosed, in whole or in part, or in any form or manner, without the express written consent of BofA Securities. BofA Global Research information is distributed simultaneously to internal and client websites and other portals by BofA Securities and is not publicly-available material. Any unauthorized use or disclosure is prohibited. Receipt and review of this information constitutes your agreement not to redistribute, retransmit, or disclose to others the contents, opinions, conclusion, or information contained herein (including any investment recommendations, estimates or price targets) without first obtaining express permission from an authorized officer of BofA Securities.

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

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

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

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

to them. BofA Securities is not responsible for such terms and privacy policies and expressly disclaims any liability for them.

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

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.