

The RIC Report

Diamonds in the rough

Valentines and ashes

Investors love expensive stocks and Fed-dependent bonds. It's an odd time for a blind date, one that may come to naught if inflation reaccelerates. US "super-core" inflation's been stuck around 3.9% the past seven months. Consumer, corporate & government activity remain 1-2 standard deviations too hot (Exhibit 2) and the secular shift from a 2% to 5% world rolls on (see page 2). Treasuries are losers again (TLT -4.8% YTD) while Prudent Yield credit & commodities are outperforming.

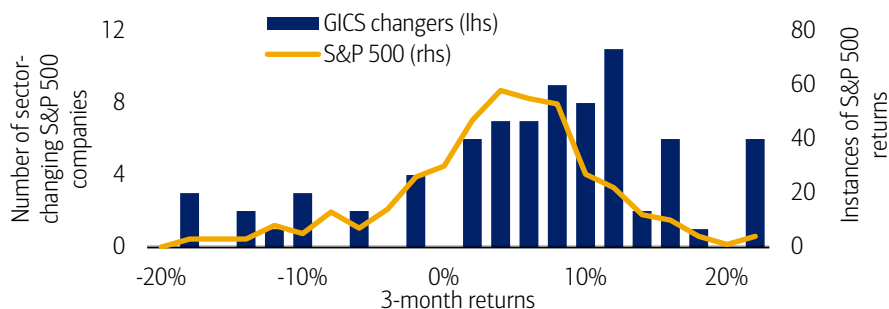
These "irrelevant" catalysts can mean higher stock returns

We describe three catalysts that do not affect company fundamentals yet, historically, have signaled "diamonds in the rough" among equities, with higher average returns:

1. **Buy-rated sector changes:** stocks reclassified to a more suitable sector have led the S&P 500 by 2-4% three months after the shift, on average. This simple change requires \$6tn of investment funds to rebalance. We show the history of sector changes and flag five Buy-rated stocks that could be moved soon (see Exhibit 16).
2. **Index additions:** membership has its perks. Stocks added to the S&P 500 index typically outperform by 5-8% in six months. 24 Buy-rated stocks could be added in the near term with KKR, WDAY, PLTR among the plausible additions (Exhibit 20).
3. **Stock splits:** stocks that announce share splits outperform the S&P 500 by an average of 13% over the next year. Walmart is the latest company to announce a split & 36 others in the index have prices >\$500 (Exhibit 24).

Exhibit 1: After a change of sector, the average stock returns 6% over the next 3 months

Distribution of 3-month total returns for sector-changing companies and the S&P 500, 1990-2023



Source: BofA Research Investment Committee, Bloomberg, see page 7 for details

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13 February 2024

Investment Strategy
Global



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The RIC Outlook

We still prefer credit > equities > government bonds in 2024. Loans, emerging market bonds, and non-US equities offer 6-12% total return potential per our strategists' forecasts, while benchmark equity and bond returns are expected to be flat.

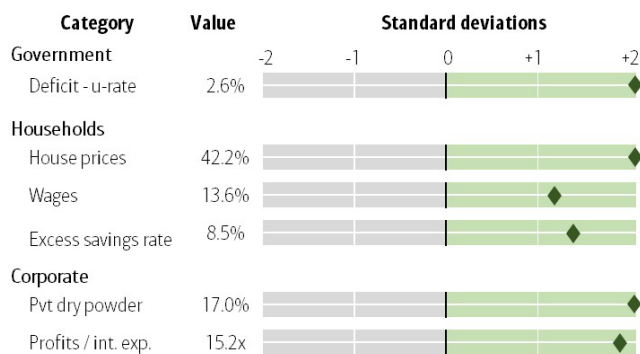
Inflation can reaccelerate in a 5% world

We noted in our [year ahead](#) that many parts of the economy have been impervious to rate hikes. Government deficits, household savings, wages, and corporate balance sheets look stretched at 1-2 standard deviations above historical norms (Exhibit 2).

Claudio Irgoyen warns that [inflation could reaccelerate](#) if nominal spending and labor markets remain robust. Markets are underpricing inflation risks and could be anticipating too many Fed cuts this year. US core CPI excluding housing ("supercore") is still running close to 4%/year, nearly double its pre-COVID pace (Exhibit 3)

Exhibit 2: The lack of slack

Many economic variables are still much stronger & more inflationary than normal, despite Fed hikes

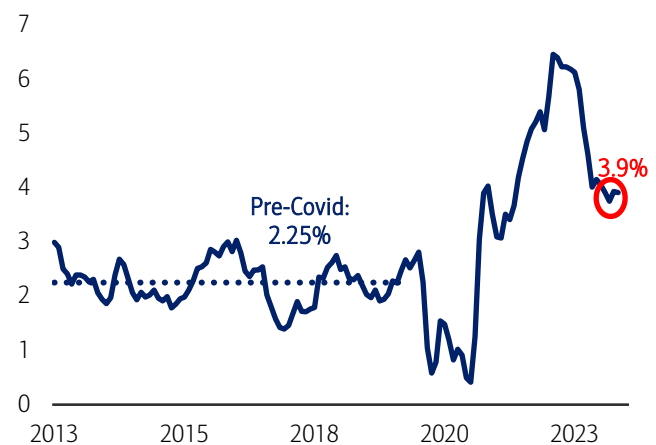


Source: BofA Research Investment Committee, Budget deficit minus unemployment rate measures the spread between the US budget deficit and US unemployment rate (Bloomberg, start date = Jan. 1969); House price = 3-year change in FHFA US House Price Index NSA (Bloomberg, start date = Mar. 1975); Wages = 3 year change in Employment Cost Index (ECI, Bloomberg, start date = Mar. 1982); Savings rate = 4 year annualized savings rate, % disposable income (Bloomberg, start date = Jan 1993); Private credit dry powder (Prequin) divided by total commercial and industrial loans outstanding (Federal Reserve, start state = 200), Profits divided by interest expense (Haver, start date = Jan. 1948)

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Exhibit 3: US "supercore" inflation is still well above target

US CPI core services less housing, y/y%



Source: BofA Research Investment Committee, Bloomberg

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Demographics, debt, and de-globalization will drive the shift from a 2% to 5% world, marked by structurally higher inflation, yields, and policy rates:

- **Aging demographics** have flipped from a deflationary to stagflationary force. Higher dependency ratios mean smaller tax bases must fund larger entitlement pools, with higher consumption but no gain in productivity.
- **De-globalization** means the era of unchecked flows of people, goods & capital is over. Tensions over trade, migration, and capital controls raise the cost of capital and spark macro volatility.
- **Record debt burdens** mean more spending on unproductive programs and interest expense. US debt held by the public is 98% of GDP, the highest since WWII, and [on pace to double](#) over the next 30 years in a conservative baseline scenario.
- **Underinvestment** in natural resources has led to tight and fragile markets. Energy security & decarbonization will require copious quantities of scarce resources.

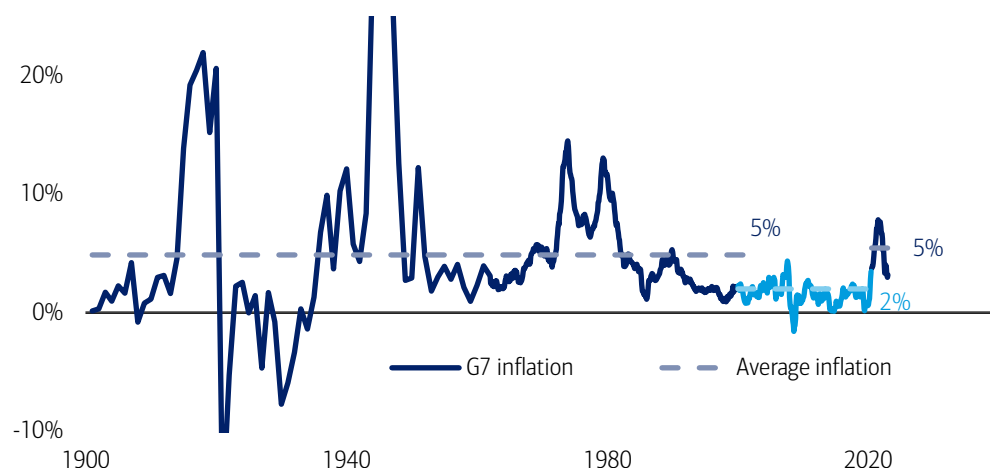
Past 20 years suggests disinflation, but the past 100 warrants caution

G7 CPI has decelerated to 3% year-over-year, after rising at the fastest clip in four decades (Exhibit 4). Inflation surges are not uncommon in history and the past 20 years of low inflation, yields, and policy rates is not the historical norm.

Today's macro backdrop marked by hot wars, expansionary fiscal policy, tight energy markets, and rising political tensions means inflation could reaccelerate toward the 5% average observed between 1900 and 2000.

Exhibit 4: The next era of global disentanglement could drive inflation higher

G7 CPI, YoY



Source: BofA Research Investment Committee, Global Financial Data, US nominal GDP weighted G7 price indices; Annual 1900-1962, monthly 1963-2024

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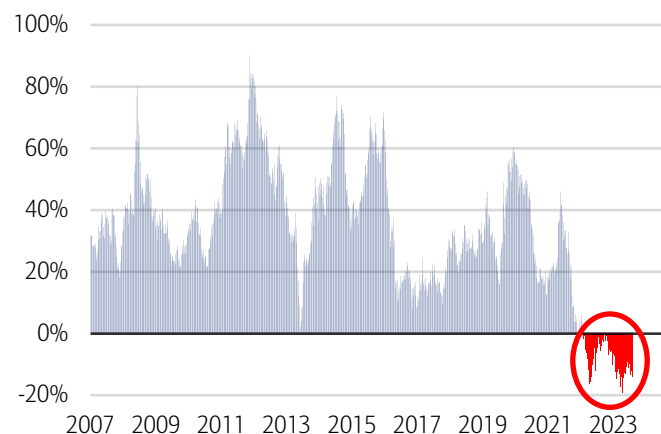
Treasuries are still just for trading

Structurally higher yields and inflation make government bonds less attractive. TLT, the largest government bond ETF, has lost money this year and is down >12% since 2019 (Exhibit 5).

[Our rates strategists](#) expect the US 10-year yield to end 2024 at 4.25% and think the rally in 5-year bonds is over. Paul Ciana highlights technical signals that point to the potential for [a 4.5-4.6% 10-year yield in 1Q24](#). Long-term bonds are now just as volatile as stocks, with less upside potential barring a prolonged recession (Exhibit 2).

Exhibit 5: TLT is still losing money

Rolling 5-year total return

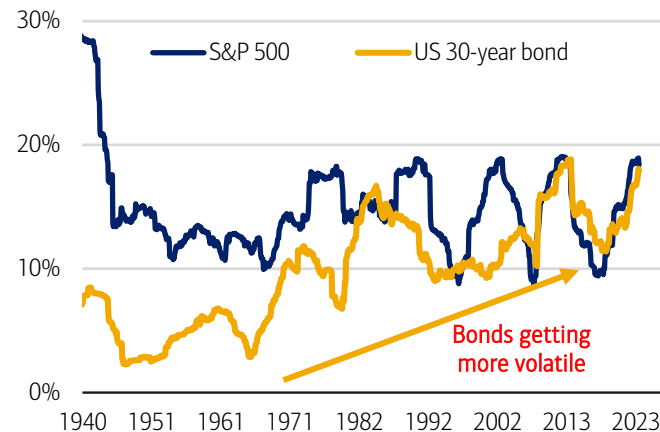


Source: BofA Research Investment Committee, Bloomberg.

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Exhibit 6: Government bonds are as volatile as stocks

5-year realized volatility, annualized



Source: BofA Research Investment Committee, Global Financial Data

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Three “irrelevant” catalysts that can boost returns

Investors can still find bullish signals when the macro backdrop is muddled. Stock performance can be materially impacted by seemingly arbitrary catalysts like 1) sector changes; 2) S&P 500 index additions; and 3) stock splits.

Massive fund flows can drive new demand

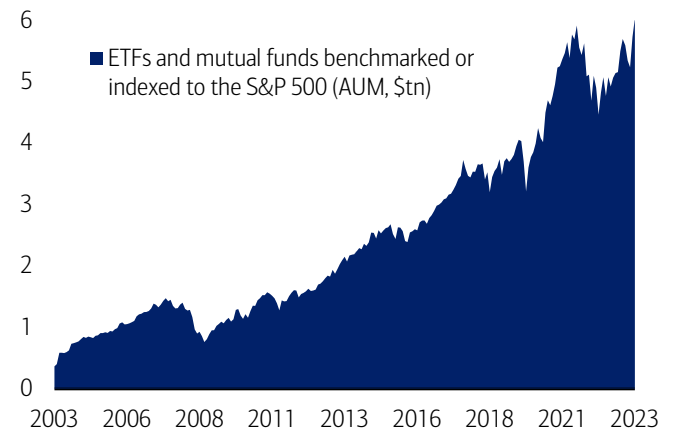
Changes to stock sectors and indexes can cause significant reallocation of capital. \$6tn of AUM is indexed or benchmarked to the S&P 500 and sector funds account for another \$2.5tn.

Every change must be reflected in these funds benchmarked to the S&P 500. Active portfolio managers might also be impacted as they try to outperform their broad index or sector benchmark.

Historically, average returns between 1990 and 2023 have been strong after these stock shifts happen even as company fundamentals stay the same. We explore the history below and screen for today’s top contenders.

Exhibit 7: \$6tn of AUM has to readjust when sectors change

Total AUM of sector funds (\$tn)



Source: BofA Research Investment Committee, EPFR. Data as of 12/31/2023.

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1. Buy-rated sector changes are bullish

The global industry classification standard (GICS) is the conventional method for assigning stocks with similar businesses to a sector and industry group.

Two types of GICS sector changes can impact stock performance: 1) broad GICS sector or industry reclassification; and 2) single stock reclassifications into existing sectors.

Sector reclassifications can create new winners & losers

Three GICS sector reclassifications happened in the seven years between 2016 and 2023. Each case caused underlying stocks to behave differently.

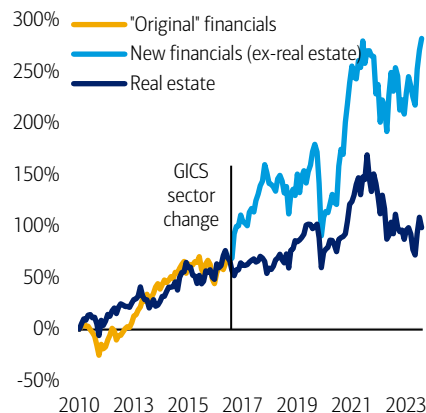
- **August 31st, 2016:** real estate companies were spun out of the financials sector to create the 11th GICS “level 1” sector. The change reflected growth in equity REITs as a distinct investment option. Financials, comprised of industries like banks & insurance, has outpaced real estate by >6%/year since the split (Exhibit 8).
- **September 21st, 2018:** the telecommunications sector was renamed communication services and the sector weight increased from 2% of the S&P 500 to 10%. Stocks previously classified in tech like Google and Meta (nee Facebook) were moved along with former consumer discretionary stocks like Netflix and Disney. Traditional telecoms (e.g., Verizon, AT&T) have lost money since 2018 while the new communication services sector has returned 10% per year (Exhibit 9).
- **March 17th, 2023:** 14 S&P 500 companies accounting for about 3% of S&P 500 market cap were reclassified to new sectors. Retail stocks like Target were moved to consumer staples from consumer discretionary while transaction and payment companies like Visa and Mastercard moved from tech to financials.

Financials gained about 3% weight in the S&P 500 at the expense of tech. [Jill Hall](#) noted that stocks migrating out tech experienced selling pressure in the near term while tech and discretionary ETFs got more concentrated.

The impact on single stocks was clear. For example, Visa became more correlated with the financials sector than the tech sector after the reclassification even though its underlying business didn’t change (Exhibit 10).

Exhibit 8: Financials outpace REITs since '16

Cumulative total return since 2010

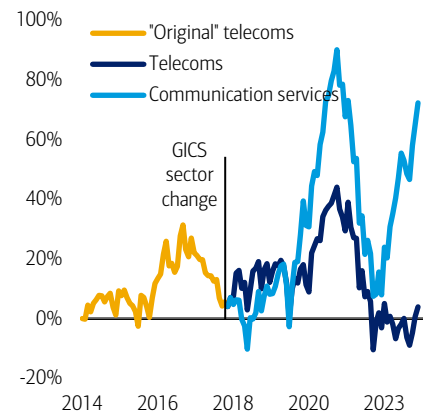


Source: BofA Research Investment Committee, Bloomberg; "Original" financials and New financial (ex-real estate) = XLF; Real estate = XLRE

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Exhibit 9: New media has led old since '18

Cumulative total return since 2014

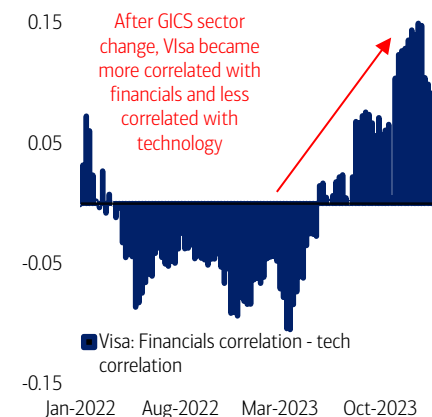


Source: BofA Research Investment Committee, Bloomberg; "Original" telecoms and Telecoms = IY; Communication services = XLC

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Exhibit 10: Correlations flip after migration

Visa net 52w correlation with old & new sector



Source: BofA Research Investment Committee, Bloomberg; Financials = S5FINL; Tech = S5INFNT.

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Stocks tend to better when they're in the appropriate sector

A company might also be reclassified because its business evolves, or it was arguably in the wrong sector to begin with. Sector reclassifications are meaningful for portfolio managers trying to outperform an index, ETF holders, and owners of the underlying stock.

One way to anticipate these changes is by comparing a company's BofA cluster coverage to its assigned GICS sector. Our analysts constantly review company changes like new product lines, divestures, and appropriate peer groups for comparison. Mismatches are a strong signal that our analysts view the forward trajectory of the company differently than rigid, slow changing GICS definitions.

Exhibit 11 shows 5 historical examples where BofA cluster classifications were at odds with a company's GICS classification. These companies then changed sectors, becoming more aligned with BofA clusters.

Potential sector changes can also be anticipated quantitatively with a relatively simple rule set and generated some outperformance in our sample between 1990 and 2023.

A simple rule set to anticipate sector changes

- 1) find a company's 52-week rolling correlation to its assigned sector (e.g., Apple's correlation to the tech sector); and
- 2) subtract by the S&P 500's pairwise correlation, a measure that shows how correlated all stocks in the index are to one another.

Normalizing by the S&P 500's pairwise correlation helps adjust for periods of extreme market correlation and gives a purer expression of a stock's relationship to its sector.

Single stocks that are appropriately classified should be highly correlated to their sector. On average, S&P 500 stocks have a 0.36 normalized correlation with their sector today.

Exhibit 11: Coverage clusters can highlight misunderstood companies

Past GICS sector changes, sector, BofA cluster

Year	Ticker	Old sector	New sector	BofA coverage cluster
2022	TGT	Discretionary	Staples	Broadlines, Hardlines, Food Retailers & Leisure
2022	MA	Info tech	Financials	Payments, Processors, Specialty Finance and IT services
2021	LDOS	Info tech	Industrials	Aerospace and Defense
2018	PARA	Discretionary	Communications	Cable, Entertainment and Satellite
2018	CVS	Staples	Health care	Healthcare Technology & Distribution

Source: BofA Research Investment Committee, BofA Global Research

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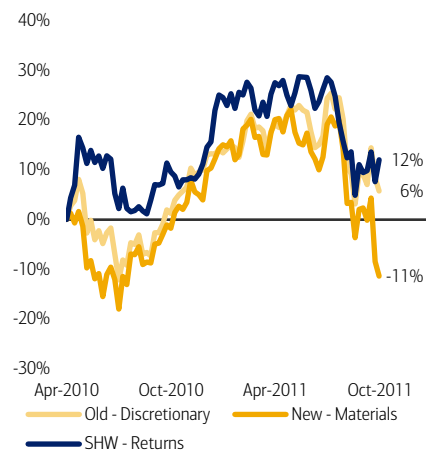
Weaker correlations could indicate a potential change

A normalized correlation that falls below 0.05 suggests that a stock is deviating from its sector and might need to be reclassified. We identify 3 potential causes for this shift using specific stock examples that highlight:

- **Misunderstood from the start:** Stock returns may diverge significantly from the underlying sector because its business is different. For example, Sherwin Williams, was originally classified in consumer discretionary despite its core business looking more like a materials company. In 2010, the paint producer was moved to materials, and the stock outperformed both sectors over the next 18 months (Exhibit 12).
- **Business evolution:** Reclassification can also occur if a company changes its business model. But sometimes timing can be unfavorable. Corning Glassware divested from its consumer product line in the late 1990s to focus its glass and material production on technology customers. Corning was added to the tech sector right before the 2001 crash (Exhibit 13).
- **Sector evolution:** GICS changes might come as other businesses in a sector are changing but a company stays unchanged. Charter, a cable company, was isolated as other consumer discretionary companies became more focused on retail, delivery, and app development. Charter found a home in the newly formed communication services sector and outperformed both sectors by 45-60% (Exhibit 14).

Exhibit 12: SHW - misunderstood

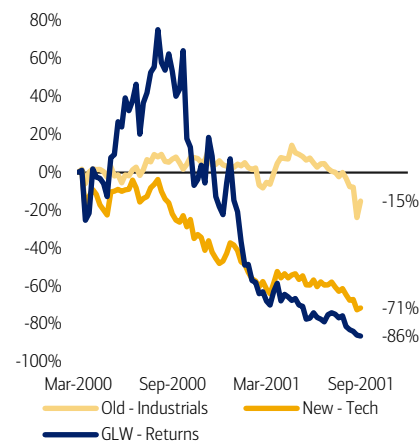
Stock returns relative to new and old GICS



Source: BofA Research Investment Committee, Bloomberg;
Start date is date of change, there was no preannouncement.
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Exhibit 13: GLW – business evolution

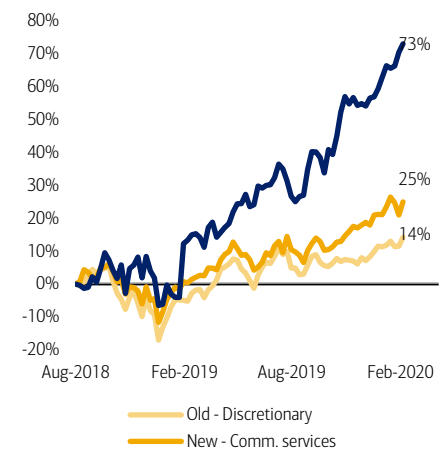
Stock returns relative to new and old GICS



Source: BofA Research Investment Committee, Bloomberg;
Start date is date of change, there was no preannouncement.
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Exhibit 14: CHTR – sector evolution

Stock returns relative to new and old GICS



Source: BofA Research Investment Committee, Bloomberg;
Start date is date of sector change preannouncement.
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Stocks can outperform by 2-4% in 3 months after change

There were 161 companies with sector changes from 1990 to December 2023. These stocks outperformed their old sector and the S&P 500 by 2% on average in the first three months. Stocks also led their new sector by 1% on average in the three months after the shift.

Stocks that hit our threshold described above (i.e., a >5% normalized correlation to its sector and a BofA Buy-rating at time of sector change) outperformed their new sector by 3% in the first three months after the change and led the S&P 500 by 4% on average (Exhibit 15).

The average 3-month return for a stock that hit our threshold is 6%. Many negative outliers were a result of market bubbles. The median return for the same group is 4%.

5 stocks that look misplaced in their sectors today

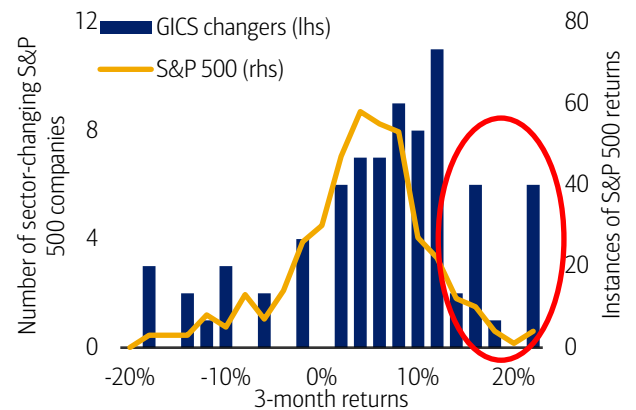
Exhibit 16 shows 5 Buy-rated stocks with low normalized correlations to their assigned sector. Layering our analyst ratings onto our quantitative screen allows us to identify high-quality companies that have been vetted by our analysts.

First Solar is a good example of a stock that looks misclassified today in the Tech sector but is covered by our Utilities analyst Julien Dumoulin-Smith. Its normalized correlation to the Tech sector is negative and they make solar panels not semiconductors.

In our interview this month, Julien points out that if clean energy companies were moved from tech to industrials, they would be compelling on a relative valuation basis and would likely have higher earnings growth than their new sector.

Exhibit 15: Average return is 6% 3m after GICS change

Returns distribution for companies identified by threshold, S&P 500



Source: BofA Research Investment Committee, Bloomberg; **Note:** Returns of companies identified by threshold; Returns start date as of announcement (if preannounced) or actual change. Companies without 3 month returns and companies that were acquired within 3 months of sector change are not included.

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Exhibit 16: Sector switch candidates include well-known companies

Companies with low correlation to GICS level 1 sector; Buy rated

Ticker Name	Sector	1Y correlation to current sector	Corr. to potential sector	Lookalike company & sector	BofA Cluster	BofA Rating
FSLR	First Solar	Tech	-0.20	Industrials = 0.13	SPWR - Industrials	Alt Energy (Energy, utilities, industrials) BUY C-1-9
BG	Bunge Global	Staples	-0.18	Materials = 0.06	NTR - Materials	Chemicals (Materials) BUY B-1-7
TDY	Teledyne	Tech	0.06	Industrials = 0.34	SAABF - Industrials	Aerospace & Defense (Industrials) BUY B-1-9
UBER	Uber	Industrials	0.22	Discretionary = 0.27	EBAY - Discretionary	Internet (Discretionary) BUY C-1-9
PTC	PTC	Tech	0.38	Industrials = 0.49	EXLS - Industrials	Multi-Industrials/Eng. (Industrials) BUY B-1-9

Source: BofA Research Investment Committee, Bloomberg; Correlations normalized using S&P 500 pairwise correlation; Correlations = 1Y, weekly rolling. This screen is not a recommended list either individually or as a group of stocks and may not be consistent with our fundamental view. Investors should consider the fundamentals of the companies and their own individual circumstances/objectives before making any investment decision.

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2. Index additions are bullish

Stocks typically gain 5-8% once they're in the S&P 500

Changes to an equity index might seem arbitrary but classifications can be an important signal to investors that a stock has high quality earnings and provides strong liquidity. The criteria for S&P 500 inclusion are based on:

- **Profitability:** the sum of the prior 4 quarters of GAAP earnings must be positive for all S&P 1500 companies
- **Market cap:** stock must be in the 85th percentile of the S&P 1500, approximately 500 companies.

The index management committee has some discretion when it comes to final addition and deletion decisions including sector composition weights, turnover, and floating shares outstanding.

Index changes have usually come after strong runs

More churn in the S&P 500 is expected after periods of strong returns (Exhibit 17). Six stocks were added in 4Q2023, including Uber, Jabil, and Builders FirstSource while Sealed Air, Alaska Air Group, and SolarEdge Technologies fell out.



Exhibit 20 shows 24 stocks that meet the S&P 500 criteria. [Craig Siegenthaler](#) expects KKR to be added to the index in the next six months and potentially as early as the March 15th rebalance (announced on March 1st).

Craig notes that the Hess/Chevron and Pioneer/Exxon Mobil mergers could open spots in the index. There are also 13 candidates for index deletions detailed in Exhibit 21.

Stocks typically gain 5-8% once they're in the S&P 500

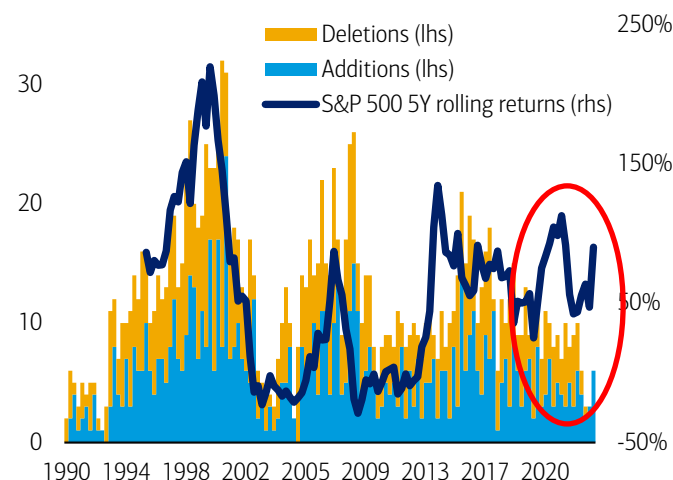
A recent academic paper found that stocks added to the S&P 500 have 5% annualized price increase two months after their addition and 5% annualized decreases if the stock falls out of the index¹.

Our work suggests that companies added to the S&P 500 since 1990 return 4.3% (8.7% annualized) on average in the subsequent 6 months with 22 stocks gaining >65% (Exhibit 18).

The impact of index deletions is debated, but our sample suggests that stocks perform worse than the index one they are removed with a negative skew (Exhibit 19). Deleted stocks typically lose 7% in the 6 months following removal.

Exhibit 17: Strong returns suggest the S&P 500 will see some change

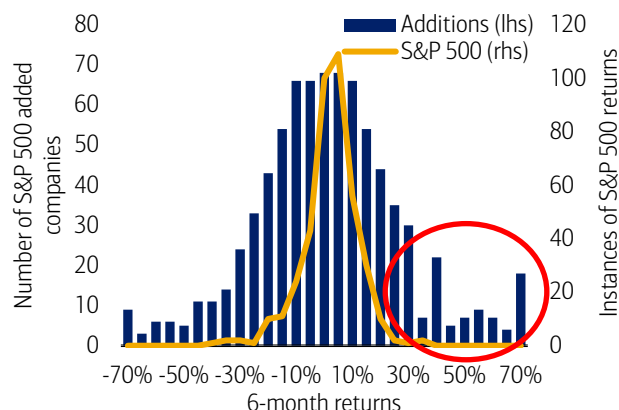
Quarterly S&P 500 additions & deletions vs 5-year rolling returns



Source: BofA Research Investment Committee, Bloomberg; Note: Quarterly data
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Exhibit 18: Addition into the S&P 500 can be positive for stocks...

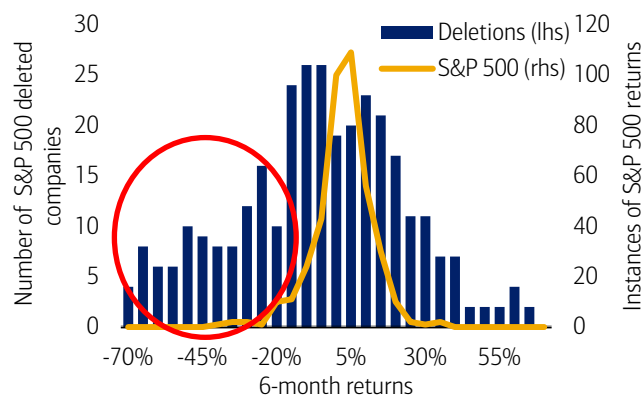
of stocks added to S&P 500 with subsequent 6 month return



Source: BofA Research Investment Committee, Bloomberg; Note: Quarterly data, 1990-2023
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Exhibit 19: ...while deletions can have a negative impact

of stocks deleted from S&P 500 with subsequent 6 month return



Source: BofA Research Investment Committee, Bloomberg; Note: Quarterly data, 1990-2023
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Exhibit 20: 24 S&P 500 addition candidates

BofA Buy-rated S&P 500 index addition candidates, based on S&P US Indices Methodology

Ticker	Name	Mkt Cap (\$bn)	1Y return	What changed?	Last 4 Quarters, GAAP EPS	BofA Rating
KKR	KKR & Co Inc	86.6	71%	Market cap	4.1	BUY B-1-7
WDAY	Workday Inc	78.6	60%	Market cap, earnings	0.2	BUY B-1-9
PLTR	Palantir Technologies Inc	54.0	231%	Market cap, earnings	0.1	BUY C-1-9
ARES	Ares Management Corp	42.3	66%	Market cap	2.4	BUY B-1-7
TW	Tradeweb Markets Inc	23.7	37%	Market cap	1.7	BUY B-1-7
VRT	Vertiv Holdings Co	23.4	325%	Market cap	0.7	BUY C-1-7
DECK	Deckers Outdoor Corp	21.6	103%	Market cap	27.8	BUY B-1-9
BAH	Booz Allen Hamilton Holding Corp	19.1	55%	Market cap	3.1	BUY B-1-7
RPRX	Royalty Pharma PLC	17.3	-22%	Market cap	1.3	BUY B-1-7
BMRN	BioMarin Pharmaceutical Inc	16.6	-19%	Market cap	0.8	BUY B-1-9

¹ Kumar, Rajnish et al., "Additions to and deletions from the S&P 500 index: A resolution to the asymmetric price response puzzle," Journal of Bank & Finance, September 2023

Exhibit 20: 24 S&P 500 addition candidates

BofA Buy-rated S&P 500 index addition candidates, based on S&P US Indices Methodology

Ticker	Name	Mkt Cap (\$bn)	1Y return	What changed?	Last 4 Quarters, GAAP EPS	BofA Rating	
DT	Dynatrace Inc	15.5	21%	Market cap	0.7	BUY	C-1-9
VST	Vistra Corp	15.4	92%	Market cap	3.8	BUY	B-1-7
AVTR	Avantor Inc	15.2	-6%	Market cap	0.5	BUY	B-1-9
SAIA	Saia Inc	14.8	105%	Market cap	13.3	BUY	B-1-9
XPO	XPO Inc	13.6	232%	Market cap	1.6	BUY	C-1-9
OC	Owens Corning	13.3	54%	Market cap	13.0	BUY	B-1-7
NBIX	Neurocrine Biosciences Inc	13.0	26%	Market cap	2.4	BUY	B-1-9
BURL	Burlington Stores Inc	12.7	-12%	Market cap	4.6	BUY	C-1-9
BLD	TopBuild Corp	12.7	105%	Market cap	19.3	BUY	B-1-9
ACM	AECOM	12.2	1%	Market cap	0.9	BUY	B-1-7
RNR	RenaissanceRe Holdings Ltd	12.0	5%	Market cap	51.2	BUY	B-1-7
FND	Floor & Decor Holdings Inc	11.9	19%	Market cap	2.6	BUY	C-1-9
OVV	Ovintiv Inc	11.7	-10%	Market cap	10.1	BUY	C-1-7
REXR	Rexford Industrial Realty Inc	11.3	-14%	Market cap	1.1	BUY	B-1-7

Source: BofA Research Investment Committee, Bloomberg, S&P Dow Jones methodology; GAAP EPS as of calendar quarter. This screen is not a recommended list either individually or as a group of stocks and may not be consistent with our fundamental view. Investors should consider the fundamentals of the companies and their own individual circumstances/objectives before making any investment decision.

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Exhibit 21: 13 S&P 500 deletion candidates

BofA Underperform-rated S&P 500 index deletion candidates, based on S&P US Indices Methodology

Ticker	Name	Mkt Cap (\$bn)	1Y return	What changed?	Last 4 Quarters, GAAP EPS	BofA Rating	
ZION	Zions Bancorp NA	6.1	-17%	Market cap	4.4	UNDERPERFORM	C-3-7
WHR	Whirlpool Corp	6.2	-16%	Market cap	8.7	UNDERPERFORM	B-3-7
FMC	FMC Corp	6.7	-58%	Market cap	10.5	UNDERPERFORM	B-3-7
VFC	VF Corp	6.8	-30%	Market cap, earnings	-2.0	UNDERPERFORM	B-3-8
MHK	Mohawk Industries Inc	7.4	1%	Market cap, earnings	-6.9	UNDERPERFORM	B-3-9
RHI	Robert Half Inc	8.8	0%	Market cap	3.9	UNDERPERFORM	B-3-7
CHRW	CH Robinson Worldwide Inc	8.9	-25%	Market cap	2.7	UNDERPERFORM	B-3-7
PARA	Paramount Global	9.0	-36%	Market cap, earnings	-2.0	UNDERPERFORM	C-3-7
PEAK	Healthpeak Properties Inc	9.6	-31%	Market cap	0.6	UNDERPERFORM	B-3-7
AAL	American Airlines Group Inc	9.8	-8%	Market cap	1.1	UNDERPERFORM	C-3-9
HSIC	Henry Schein Inc	9.8	-12%	Market cap	3.4	UNDERPERFORM	B-3-9
CPT	Camden Property Trust	10.0	-20%	Market cap	3.7	UNDERPERFORM	B-3-7
QRVO	Qorvo Inc	11.1	10%	Market cap, earnings	-2.2	UNDERPERFORM	B-3-9

Source: BofA Research Investment Committee, Bloomberg, S&P Dow Jones methodology; GAAP EPS as of calendar quarter. This screen is not a recommended list either individually or as a group of stocks and may not be consistent with our fundamental view. Investors should consider the fundamentals of the companies and their own individual circumstances/objectives before making any investment decision.

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3. Stock splits are bullish

Walmart's 3:1 stock split announcement in late January was the 12th since 2022 (see [The RIC Report: Bullish stock splits, bearish rate hits](#)). Current owners will get three shares for each one they own today. Splits do not affect company fundamentals but can increase liquidity by making shares more accessible.

Split stocks beat index by double digits on average

Historically, stocks have notched 25% total returns in the 12 months after a split is announced, compared to 12% for the broad index (Exhibit 22). Splits have boosted returns in every decade including the early 2000s when the S&P 500 struggled.

Comparing the distribution of stock split returns relative to the S&P 500 shows us that a few strong companies may pull up average performance (Exhibit 23). Outliers like Copart gained 56% in the 12 months following its October 2022 split announcement. Palo Alto Networks was another top performer last year, up 39% after its August 2022 split announcement.

Outperformance is no guarantee. While splits could be an indication of strong momentum, companies can struggle in a challenging macro environment. Companies like Amazon, Google, Tesla, and Dexcom struggled in the 12 months after splits were announced in 2022 as interest rates spiked.



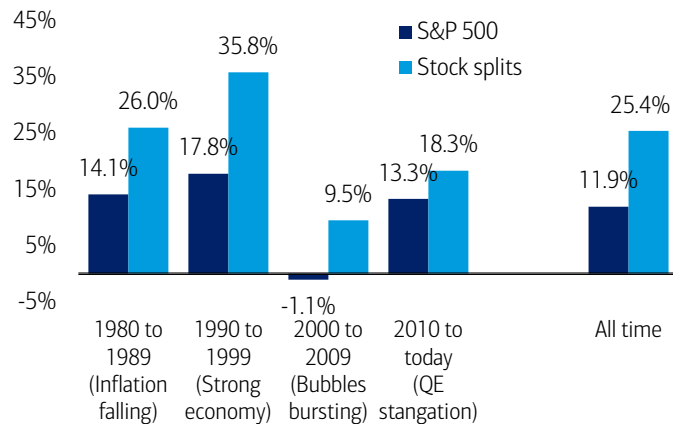
36 S&P 500 stocks trade above \$500/share

Stocks with high share prices are typically prime candidates for split announcements. Management teams might feel that lower stock prices broaden access to the stock or, in the case of Walmart where the share price is not high, signal shareholder friendly policies. Stocks trading >\$500/share are in the 95th percentile of prices.

Exhibit 24 shows 36 companies trading above \$500 per share in the S&P 500, representing 15% of total index market cap.

Exhibit 22: Stocks that split tend to beat the index

Average 12m total returns after stock split is announced

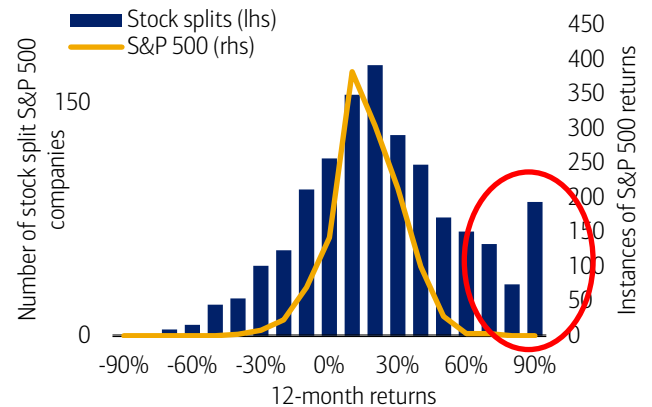


Source: BofA Research Investment Committee, Bloomberg, Global Financial Data

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Exhibit 23: Stock split returns have a positive skew

12m stock performance distribution, stock splits, S&P 500



Source: BofA Research Investment Committee, Bloomberg

BofA GLOBAL RESEARCH

Exhibit 24: \$6.6 trillion in market cap (15% of S&P 500) trade >\$500/share

S&P 500 companies trading above \$500 per share*

Ticker Name	Sector	Price/share	BofA Rating
NVR NVR Inc	Consumer Discretionary	7447.99	Buy B-1-9
BKNG Booking Holdings Inc	Consumer Discretionary	3758.18	Neutral B-2-9
AZO AutoZone Inc	Consumer Discretionary	2680.00	Neutral B-2-9
CMG Chipotle Mexican Grill Inc	Consumer Discretionary	2638.35	Buy B-1-9
FICO Fair Isaac Corp	Information Technology	1323.81	n/a n/a
AVGO Broadcom Inc	Information Technology	1283.44	Buy B-1-7
MTD Mettler-Toledo International Inc	Health Care	1174.51	Neutral B-2-9
TDG TransDigm Group Inc	Industrials	1119.89	Buy B-1-9
ORLY O'Reilly Automotive Inc	Consumer Discretionary	1025.82	Buy B-1-9
GWW WW Grainger Inc	Industrials	959.01	n/a n/a
REGN Regeneron Pharmaceuticals Inc	Health Care	953.42	Underperform B-3-9
LRCX Lam Research Corp	Information Technology	911.58	Buy C-1-7
EQIX Equinix Inc	Real Estate	855.76	Buy B-1-7
NOW ServiceNow Inc	Information Technology	812.94	Buy B-1-9
BLK BlackRock Inc	Financials	797.21	Buy B-1-7
MPWR Monolithic Power Systems Inc	Information Technology	752.31	n/a n/a
LLY Eli Lilly & Co	Health Care	740.16	Buy B-1-7
COST Costco Wholesale Corp	Consumer Staples	723.40	Buy B-1-7
NVDA NVIDIA Corp	Information Technology	721.33	Buy C-1-7
INTU Intuit Inc	Information Technology	658.16	Buy B-1-7
URI United Rentals Inc	Industrials	650.35	Buy C-1-7
KLAC KLA Corp	Information Technology	649.80	Buy B-1-7
ADBE Adobe Inc	Information Technology	627.21	Buy B-1-9
CTAS Cintas Corp	Industrials	618.22	Buy B-1-7
MSCI MSCI Inc	Financials	592.42	Underperform B-3-7
SNPS Synopsys Inc	Information Technology	575.30	Buy B-1-9
IDXX IDEXX Laboratories Inc	Health Care	572.21	Neutral B-2-9
NFLX Netflix Inc	Communication Services	561.32	Buy B-1-9
TMO Thermo Fisher Scientific Inc	Health Care	550.75	Buy B-1-7
ROP Roper Technologies Inc	Information Technology	550.26	n/a n/a

Exhibit 24: \$6.6 trillion in market cap (15% of S&P 500) trade >\$500/share

S&P 500 companies trading above \$500 per share*

Ticker Name		Sector	Price/share	BofA Rating	
MLM	Martin Marietta Materials Inc	Materials	527.14	Neutral	B-2-7
ULTA	Ulta Beauty Inc	Consumer Discretionary	522.63	Neutral	B-2-9
PH	Parker-Hannifin Corp	Industrials	521.38	Buy	B-1-7
UNH	UnitedHealth Group Inc	Health Care	518.22	Buy	B-1-7
ELV	Elevance Health Inc	Health Care	506.08	Buy	B-1-7
MCK	McKesson Corp	Health Care	501.35	Buy	B-1-7

Source: BofA Research Investment Committee, Bloomberg. *As of close on 2/9/2024. This screen is not a recommended list either individually or as a group of stocks and may not be consistent with our fundamental view. Investors should consider the fundamentals of the companies and their own individual circumstances/objectives before making any investment decision.

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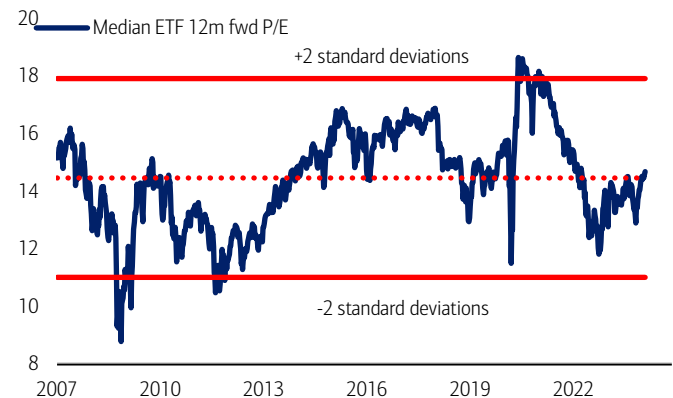
ETF Valuation

January median ETF P/E climbs higher

- The median equity ETF in our coverage ended January at 14.7x forward earnings, slightly above average (Exhibit 25).
- Composite valuations rose across the board except for clean energy. ICLN fell 11% in January.
- Large cap ETF valuation continue to diverge from small and mid-cap ETFs. The average large cap ETF trades at 23x P/E, vs 18x for small cap.
- Information technology further cements itself as the most expensive sector. With a 1.7x composite valuation and a 26x average P/E, tech is twice as expensive as energy.
- Japan ETF valuations continue to climb, driven by strong performance from hedged ETFs like DXJ. China remains the cheapest among international equity ETFs.

Exhibit 25: Equity ETF valuations approaching historical norms

Median 12 month forward P/E ratio across BofA equity ETF coverage



Source: BofA ETF Research, Factset. Note: Median calculated using 12m fwd P/E ratios for all equity ETFs in our coverage.

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Exhibit 26: Equity ETF valuations by category

ETF valuation ratios and composite score (lower is better)

Sub-category	Composite Valuation (stdev)	12m fwd P/E	12m fwd P/B	12m fwd EV/EBITDA	12m fwd P/FCF	Top-rated fund		Bottom-rated fund	Link
US Equity Sector	Communication Services	-0.36	17.39	2.74	9.12	15.88	XLC	IYZ	Getting so defensive
	Real Estate	-0.26	15.63	2.58	16.75	19.35	XLRE	SCHH	Getting so defensive
	Utilities	-0.03	14.92	1.67	10.55	-78.41	XLU	RSPU	ETFs for the cyclical extremes
	Energy	-0.03	11.31	1.86	6.00	n.a.	XLE	PXI	ETFs for the cyclical extremes
	Consumer Staples	0.43	18.41	4.88	12.68	20.31	IYK	RSPS	Getting so defensive
	Consumer Discretionary	0.56	21.47	6.15	12.49	21.56	VCR	IYC	ETFs for the cyclical extremes
	Financials	0.75	14.27	1.76	na	na	XLF	FXO	ETFs for the cyclical extremes
	Materials	0.94	17.80	2.48	10.14	22.59	FXZ	IYM	ETFs for the cyclical extremes
	Industrials	1.08	19.06	4.71	12.71	20.86	XLI	FXR	ETFs for the cyclical extremes
	Health Care	1.29	18.56	4.18	14.38	18.72	XLV	PTH	Getting so defensive
Single Factor	Information Technology	1.71	25.88	7.23	17.83	27.25	XLK	QTEC	ETFs for the cyclical extremes
	International Dividend	-0.63	10.42	1.37	7.50	14.46	VYMI	PID	Going global: markets to rent & markets to own
	Dividend	-0.24	13.15	2.57	9.68	15.92	SPYD	AIML	Follow the money with Dividend & Buyback ETFs
	Buybacks	-0.05	12.97	2.67	9.11	13.00	DIVB	IPKW	Follow the money with Dividend & Buyback ETFs
	Value	0.25	13.66	2.22	9.93	16.29	VTV	RPV	Initiating coverage of value ETFs
	Quality	1.29	18.70	5.05	12.78	20.37	COWZ	QLC	One factor to rule them all
US Size	Growth	1.45	26.18	8.26	17.19	26.74	SCHG	IWW	Growth for contrarians
	Small Cap Equity	-0.33	17.82	1.72	9.73	19.90	CALF	FYX	Shopping small
	Mid Cap	-0.05	15.29	2.29	10.62	18.44	SCHM	IJH	The Sweet Middle
	Large Cap Non Market Cap	0.60	17.01	3.35	11.99	19.64	FNDX	LRGF	The Sweet Middle
Thematic	Large Cap Market Cap	1.56	22.97	4.29	13.71	22.62	IVV	OEF	The Sweet Middle
	Clean Energy	0.03	-19.90	1.73	17.86	-17.46	ICLN	PBW	Valuations up, catalysts down: Neutral clean energy ETFs
	ESG Broad	0.64	17.73	3.33	12.61	21.99	ESGV	VSGX	ESG ETFs get a better model and a VOTE
Int'l Equity	AI	0.78	28.09	3.61	16.16	37.33	AIQ	DTEC	Some AI ETFs are smarter than others
	China	-0.97	8.42	0.95	7.58	12.94	KBA	EWI	All the global growth you don't own
	Latin America	-0.85	8.83	1.48	5.22	11.06	EWI	ECH	Going global: markets to rent & markets to own
	Global ex-US	-0.32	11.98	1.47	8.23	16.82	VEU	ACWX	Going global: markets to rent & markets to own
	Emerging Markets	-0.32	11.29	1.44	7.73	16.80	EMXC	DBEM	All the global growth you don't own
	Developed Markets ex-US	-0.15	12.71	1.51	8.61	17.83	HEFA	RODM	Going global: markets to rent & markets to own
	Canada	-0.07	13.83	1.73	9.61	19.09	FLCA	EWC	Going global: markets to rent & markets to own
	Europe	-0.03	12.06	1.65	8.41	16.61	FEZ	FDD	Going global: markets to rent & markets to own
	Single-country Emerging Market	-0.02	11.72	1.21	7.33	15.89	KSA	VNM	Going global: markets to rent & markets to own
	Japan	0.62	14.55	1.36	9.95	23.27	DXJ	JPN	Going global: markets to rent & markets to own
	India	1.71	21.32	3.39	14.14	33.20	EPI	SMIN	Going global: markets to rent & markets to own

Source: BofA ETF Research, Factset. Note: All valuation metrics are based on next twelve month (NTM) I/B/E/S estimates. "Composite Valuation" is the market-cap weighted average standard deviation of each fund's P/E, P/B, EV/EBITDA, and P/FCF ratios. A higher number indicates that funds are more expensive relative to history while lower numbers suggest that funds are inexpensive.

BofA GLOBAL RESEARCH

RIC Themes Watch

February is fully invested for 3rd month in a row

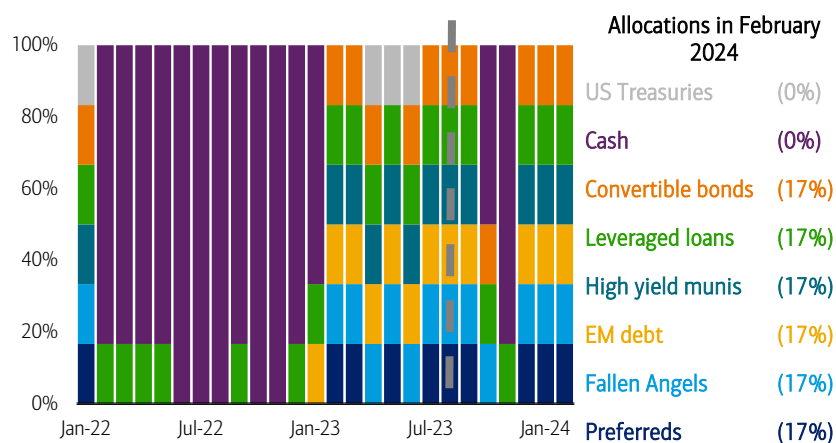
The BofA Dynamic Prudent Yield strategy remains fully invested, with no changes for February. In January, most fixed income sector returns were muted. The 10-year US Treasury yield hovered above 4% for most of the month before falling to 3.9% after Fed announcements on January 31st. Our economics team anticipates the [first rate cut](#) to come in June, despite market hopes for cuts beginning in March.

For details on the Dynamic Prudent Yield Strategy including the full Appendix see: [The RIC Report: A new bond strategy for the end of 60/40](#).

Monthly updates can be received via email immediately after publishing by subscribing to “The ETF Angle”. Full ETF coverage can be found on our ETF Research Library.

Exhibit 27: Dynamic Prudent Yield remains fully invested

Historical allocation of backtested Dynamic Prudent Yield Strategy, 2022-2024



Source: BofA ETF Research, Bloomberg, ICE Data Services LLC. Note: weights rounded from 16.7%. This performance is backtested and does not represent the actual performance of any account or fund. Back-tested performance depicts the theoretical (not actual) performance of a particular strategy over the time period indicated. No representation is being made that any actual portfolio is likely to have achieved returns similar to those shown herein. See appendix for more details

BofA GLOBAL RESEARCH

Macro & Econ Highlights

Nearshoring: Friend, foe, or middleman?

China tariff risk has returned to the spotlight after a year spent focusing on trade dynamics in the Middle East. This time, it's packaged a little differently.

[Friendshoring](#), or nearshoring, has become the strategy of choice for navigating operations during times of geopolitical risk. Countries like Vietnam, Mexico, Taiwan, Korea, India and Thailand have increased their imports to the US by 8.1 p.p. since 2018, according to our US economics team.

Looking under the hood suggests that these imports could still be coming from China anyway. In the case of Vietnam, it appears that increased exports to the US have coincided with an increase in imports from China. This indicates more "rerouting" behavior that would still be prone to potential tariffs and restrictions. In the case of Mexico, this trend doesn't hold and the country stands as a true example of nearshoring.

For investors, true relocation and friendshoring should lead to increased economic growth and productivity, as in the case for Mexico. Meanwhile, rerouting, likely the case in Vietnam, has little gain from simply being an extra leg of the journey.

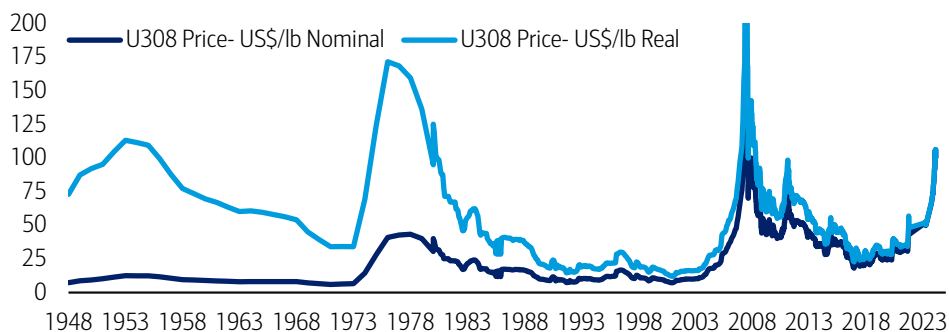
Adjusting Uranium for inflation... China, and supply woes

Uranium's run isn't over yet. Recent news from Kazatomprom suggests that uranium markets will remain in a deficit through 2025, instead of a surplus as originally anticipated. Disruptions for the world's largest miner lead our analysts to see upside risk to their \$115/lb target. They note that historically, commodity cycles are long and prices have peaked at \$150 (or \$200 when adjusted for inflation).

Beyond supply side issues, our metals and mining team sees that China could ramp up on nuclear faster than has been seen in other countries. For those in doubt given the sluggish rate of refiner growth globally, they point to China's past in rapidly increasing demand for steel and aluminum.

Exhibit 28: Spot uranium price history US\$/lb in real & nominal terms

In the last cycle, uranium peaked at > US\$150/lb (nominal) = c. \$200/lb in money of 2024.



Source: Bloomberg, Nuexco, IMF, BofA Global Research estimates

BofA GLOBAL RESEARCH

Lithium caught in the crosshairs

[Lithium](#) has fallen significantly over the last 12 months, and our commodities analysts see further room to go before it reaches a bottom. Trouble began as the market flipped from deficits to surpluses, with operators forgoing any supply discipline.

A bumpy road lies ahead. First, while demand is strong in key markets like China, supply will continue to grow at a faster clip until miners eventually begin exiting the market. Second, slower than expected [electric vehicle](#) demand sours what was once a fertile area of lithium demand. Third, a lack of consolidation means that there is little incentive to reduce output, especially for existing low-cost producers.

BofA's lower lithium price forecasts also spill over into key equities in our chemicals coverage. [Steve Byrne](#) and the Chemicals team lowered their forecasts for Albemarle and Sigma as lithium prices plunge furthers.

3Bs: Bull markets, bubbles, and barbells

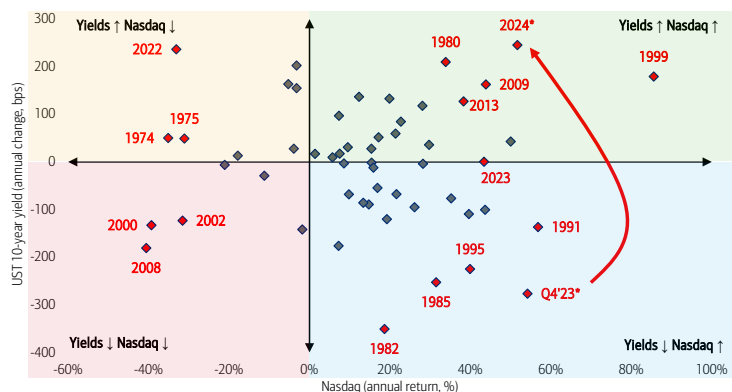
BofA [Global Propriety Signals](#) has delivered another strong sign for bulls: the global growth outlook is the best it has been in 22 months. In the words of our GPS team, “stay bullish” as improving fundamentals and market breadth sooth fears of market exuberance.

Bull markets and [bubbles](#) have a lot in common, though. Michael Hartnett points out while equities are up, yields are too. History says that when stocks and yields rise at the same time, it's due to a bubble or recession rebound. He suggests a barbell of stocks caught in the bubble and distressed assets. For 2024, that could look like the Mag 7 balanced by China or small caps.

Our technical strategist [Stephen Suttmeier](#) also finds bullish signals after a strong January. Current technical point to the S&P 500 at 5400 by year end as strong Januarys in Presidential election years have a 11/11 hit rate for strong next 12-month returns.

Chart 1: Forever blowing bubbles

Nasdaq annual return (%) vs annual change in 10-year Treasury yield (%)



Source: BofA Global Investment Strategy, Bloomberg; *Note: Q4'23 annualized, 2024 YTD annualized through Jan 29th

BofA GLOBAL RESEARCH

3Rs: Rates, rents, and rallies

BofA's [REITs analysts](#) join our economics team to unpack sticky rent inflation. They find that regional differences help explain why rent inflation has stayed above the Fed's 2% target. At the core of it all is location: rents in the Northeast and the Midwest have fallen more slowly than in the South and the West. Falling rents could leave some to believe that the consumer is weakening, but in this case, demand has been resilient; falling rents in certain regions have been driven by supply growth.

Typically, asking rent inflation leads CPI rent inflation, two key indicators to watch as the Fed embarks on its cutting cycle. Applying this relationship to last year has left some surprised as rent inflation has fallen more gradually than many originally anticipated.

Sticky rents and resilient inflation are key considerations for rate cuts in 2024. This month, [Ralph Axel](#) examines what history can tell us about cutting cycles. Relative to past cutting cycles, markets have priced in cuts far sooner. This could imply that the rate rally is over, and that the largest gains in the bond market have already occurred. Still, markets could still be surprised if inflation remains persistent and the Fed holds.

Equity Highlights

AI reach spans all the way to defensive sectors

AI is more than just a revenue story, it's a cost saving story too. In a [joint report](#), Alkesh Shah and BofA's Utilities team unpack the potential for artificial intelligence to unlock value in the utilities sector.

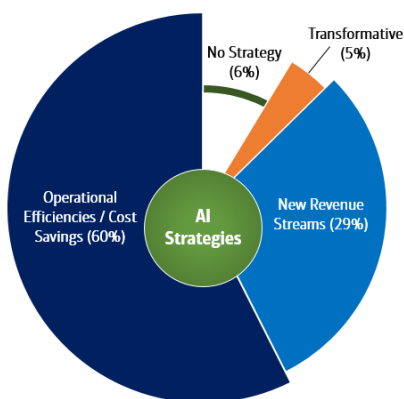
Client conversations are focused on AI's ability to drive electricity load growth, but perhaps the larger opportunity is in cost savings. Shah points out that AI could unlock operational efficiencies and increase productivity, reducing costs significantly.

AI applications in utilities are still in the early innings, but there is plenty of evidence for their potential. Noteworthy AI already has a product that helps utilities companies reduce labor costs by 75%.

Given the nature of the utilities sector, it's natural that investors are skeptical about new technology adoption. Many new AI technologies, however, have already been applied to operational improvements and automation. Nearly 60% of covered utilities companies globally have mentioned plans to implement AI for operational efficiency in the coming years, a benefit to both industries.

Exhibit 29: AI strategies across sectors globally skew toward operational efficiencies

Only 6% of covered companies do not have an AI strategy



Source: BofA Global Research. Results are based on survey responses.

BofA GLOBAL RESEARCH

Caterpillar defies the macro gravity, for now

It's not just the S&P 500 reaching new highs. [Caterpillar](#) earnings sent shares up 2%, setting a new record for the construction company. Michael Feniger thinks that investors are too focused on what could go wrong, and instead should focus on what could go right.

2024 EPS was up 35% year over year, driven by inventory destocking and margin expansion despite a slight sales decline and clear macroeconomic headwinds. For 2025, Feniger sees 2025 EPS upside potentially driven by an easing cycle, strong China demand, improving ISM, and higher copper prices spurring miner demand.

Top SMID ideas for 2024 has something for everyone

Bottoming profits, easing macro, improving breadth, cheap valuations, and strength in SMID biotech and banks give investors plenty reason to believe that small caps are a [major opportunity](#) in 2024.

Investors may be skeptical, looking to the “January effect” that has long indicated 12m performance for SMIDs. Jill points out that this effect hasn’t been seen in recent decades. Generally, investors remain underweight but flows and positioning are becoming more positive. To this point, she highlights Michael Hartnett’s [Global Fund Manager Survey](#).

Jill Hall recently compiled a list of the [31 best SMID cap ideas](#) from across the bank. These companies are more than just small. 90% of the companies have positive earnings, a rarity among many SMID indices and funds. 65% have a value tilt, Jill’s preferred tilt for 2024. Other companies offer a compelling margin expansion and pricing power.

Chart 30: For the first time since Jun’21 large caps expected to underperform small caps

Net % FMS investors who think large caps will outperform small caps in the next 12 months



Source: BofA Global Fund Manager Survey

BofA GLOBAL RESEARCH

Retail consumers can't stomach even higher prices

Another wave of sticker shock may send the US retail consumer into reclus. [Lorraine Hutchinson](#) and the retailing team explore the mounting risks of tariffs and their impact on the retail industry.

In the broader tariff discussion, a focus on retail is warranted given that production is highly labor intensive and cannot easily rely on friendshoring. Hutchinson finds that a 10% tariff could translate to a 25bp headwind to margins.

Investors should note that it's not 2019 anymore, many of the mitigation tactics used to evade Trade War tariffs are less impactful today. Particularly, alternate production countries are already at a tight capacity, less ready to absorb a scramble to shift production outside of China.

Boeing could benefit long term post January nightmare

The FAA recently stepped in to freeze all Boeing 737 production, putting major pressure on near term production and FCF targets for the commercial aircraft company. Not all is lost, though. According to [Ron Epstein](#), a slowdown for Boeing now could allow for a strong ramp up in the future. In his view, the departure of key employees during the pandemic contributed to falling engineering quality, but added newly added scrutiny and oversight could help Boeing correct course.

It's worth remembering that Boeing is one of two companies dominating the commercial aircraft space. While its market share is shrinking, demand remains strong as commercial aircraft supply is scarce.

BofA Global Research house view

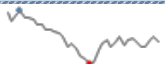



Exhibit 31: BofA Global Research House View

Near-term outlook of our BofA macro & market strategists across key regions and asset classes

Core view (3-6 months)			Rationale
Investment Strategy		Bearish	
			We own Bonds, Bullion, but believe the Q4 rental of Breadth tactically stretched (China is the only leveraged asset left to rally); more broadly while center of gravity for US yields in Q4 ~4%, and bond yields 5% to 4% has been bullish, ultimately we say fall in yields from 5% to 3% = hard landing = bearish, we say Q4 "lower yields = higher stocks" flips to "lower yields = lower stocks" in Q1.
Economics		Bearish	
			In our baseline scenario, we expect a soft landing for the US economy, with positive but below-potential sequential growth for the next 6 quarters. These growth dynamics imply gradual disinflation and a slowdown in employment, which should allow the Fed to start cutting rates by 25bp per quarter in June, until it reaches a terminal rate of 3% in 2026. In 2023, global growth was stronger than expected, driven by the resilience of the US. We forecast a mild deceleration in global growth in 2024, and a gradual recovery in 2025. We expect heterogeneous growth dynamics across regions to persist, but we foresee more homogeneous inflation dynamics, gradually moving lower and allowing central banks to cut rates. Elections will take place in several countries next year. With polarization and populism on the rise, expect volatility driven by the political cycle
Rates & FX		Neutral	
			Central banks including the Fed and the ECB are happy to signal that they are done hiking. Dovish turns by central banks combine with downside surprises on inflation to deliver a weaker dollar and lower rates. However, we are concerned that at this stage markets have pivoted too far towards a hard, rather than soft landing which creates scope for both rates and the dollar to retrace and consolidate before resuming their medium term trend which we still expect as weaker USD and steeper rate curves globally.
Region	Ticker	Core view (3-6 months)	Rationale
Equities		MXWD	Neutral
North America	MXNA	Bullish	Savita Subramanian targets 5000 on the S&P 500 by YE24. She is bullish not because she expects an aggressive Fed easing cycle, but because of what the Fed has accomplished. US corporates have adapted to non-zero hurdle rates, some inflation and a more rational market backdrop. She believes the profits cycle has inflected higher and forecasts EPS of \$235 (+6% YoY) in 2024 despite a decelerating GDP growth outlook. Historically, accelerating EPS and decelerating GDP has been the best environment for stocks. Election years have been positive for equities and bipartisan support for defense spending as well as near-shoring / US manufacturing and jobs are pro-cyclical. She is overweight Energy, Consumer Discretionary, Financials and Real Estate, and are underweight Tech, Consumer Staples, and Health Care.
			Sebastian Raedler expects a slowdown in global growth momentum driven by tightening credit conditions, fading US fiscal support and depleting order backlogs. This is set to translate into widening risk premia and downgrades to EPS expectations, with the resulting drag on equities only mildly offset by falling real bond yields (i.e. a lower discount rate for equities) on the back of dovish central banks. Our macro projections imply around 20% downside for the Stoxx 600 to 390 by the middle of the year, followed by a rebound to 420 by the end of the year, as improving growth momentum and a continued fade in real rates lead to renewed multiple expansion.
			Sebastian Raedler remains negative on UK relative to European equities, given his expectation for energy sector underperformance, with energy a key overweight in the UK index. On an absolute basis, he sees scope for the FTSE 100 to decline to a trough of 6,200 around mid-year (around 20% downside from current levels), before a tepid recovery to 6,550 by year-end.
			Masashi Akutsu has raised his year-end TOPIX and Nikkei forecasts to 2,715 and 38,500, respectively (vs. 2,650 and 37,500 previously). He notes that Apr-Jun market rally hinges on real wages and cyclical recovery and recommends a barbell strategy combining high dividend stocks with quality cyclical names.
Eurozone	MXEM	Bearish	
UK	MXGB	Bearish	
Japan	MXJP	Bullish	
Fixed Income		GFIM	Neutral
Government	WOG1	Neutral	We have closed our long duration bias in both the US and the Euro Area. Markets are pricing in more aggressive cutting cycles than our economists expect – especially for 2024. Supply pressures remain high – in particular in 1Q24, and real money investors are already long duration, which suggests some concession may be necessary to allow for the supply to be absorbed. More medium-term, we continue to see room for term and inflation risk premia to rebuild along the US curve which suggests this cutting cycle may see structurally steeper curves than what we have seen in prior cycles. Finally, we expect to see much more persistent interest differentials between the US and the Euro Area as fundamental differences between the growth and inflation stories since the pandemic remain stark and much more persistent than markets are pricing.
			Almost everything went right in January for IG credit. US data remained robust (U. Michigan Consumer Sentiment, December Retail Sales). The jump in Treasury yields further supported already strong demand, in addition to declining interest rate volatility and heavy inflows to HG funds / ETFs. That allowed investors to easily absorb the big \$193bn of IG supply in January. Such favorable conditions have pushed IG spreads to 102bps on the ICE US IG index. That's at the tight end of our expected 100 - 120bps range, and near record tight vs. comps such as the European IG. While IG spreads are still about 20bps off post-GFC tight, we see risks moderately skewed to the downside. We prefer rotating out of US into underperforming European industrials on relative value. We prefer banks over industrials, BBBs over single-A industrials, and front-end over 30yr.
Investment Grade	GOLC	Neutral	Maintain a heavy barbelled positioning: near-record cash balance and meaningful tilt to lower quality away from default candidates. This positioning has worked well so far in 2024, with bottom two deciles outperforming the index by 300bps in total return, and high quality being flat. This trade can go on for some time as the next stop could be primary market reopening for these wide but not hopeless situations in the 700-1000bp range. The best place to underweight in our view is the belly of the credit spectrum in the 5-8th deciles where we are looking at spreads in the 250-300bp context.
High Yield	HW00	Neutral	
EM debt	DXEM	Neutral	Sovereign: Neutral. EM sovereigns returns should come mostly from yield, given that spreads and UST yields are already near our year-end 2024 targets. The high duration of the sovereign bonds provides some protection in case of a hard landing scenario, as decline in UST yields could offset spread widening. Corp: Neutral positioning on valuation following the Nov/Dec rally. Expect moderate to low returns driven by carry, possible mild spread expansion from current levels. EM elections and issuance key themes going into the next year.
Securitized Products	GOLL	Neutral	Securitized products credit spreads have tightened significantly since October. We turn neutral.
Commodities		MLCXTR	Bullish
Energy	MLCXENTR	Neutral	We project Brent and WTI to average \$80/bbl and \$75/bbl, respectively, in 2024. The global oil balance should remain in a mild surplus during 2024, as OPEC+ withholds more supply from the market to counteract slowing demand growth
Industrial Metals	MLCXIMTR	Neutral	Michael Widmer notes that metal markets have remained tight despite the weakness in China. Copper has rallied into 2023, as China's government has accelerated opening up the economy. Until underlying data and demand in China improve, prices will likely remain range-bound; spending on the energy transition is supportive.
Precious Metals	MLCXPMTR	Neutral	As Michael Widmer notes, gold rallied to \$2,000/oz on what had been perceived to be the end of the hiking cycle; yet, the Fed remains hawkish and that limits upside for now. The next sustained leg higher is unlikely to come until policy rates decline.
Cash	G0B1	Bullish	

Exhibit 32: BofA Year-end 2024 Forecasts vs. Consensus

BofA year-end forecasts, consensus year-end 2024 forecasts for GDP, CPI, rates, and global markets

FX and Rates											
FX	Latest Value	BofA	Consensus	3 year range	High/Low	Rates	Latest Value	BofA	Consensus	3 year range	High/Low
EUR-USD	1.08	1.15	1.12		1.22 0.98	US 10-year	4.07	4.25	3.75		4.93 1.22
USD-JPY	148	142	136		152 107	Germany 10-year	2.24	2.10	2.21		2.84 -0.46
EUR-JPY	160	163	152		161 128	Japan 10-year	0.72	1.05	0.92		0.95 0.02
GBP-USD	1.27	1.31	1.28		1.42 1.12	UK 10-year	3.88	4.00	3.62		4.51 0.57
USD-CNY	7.18	6.90	7.03		7.32 6.31						
Equities and Commodities											
Equities	Latest Value	BofA	Consensus	3 year range	High/Low	Commodities	Latest Value	BofA	Consensus	3 year range	High/Low
S&P 500	4,928	5,000	4,867		4846 3586	WTI Crude - \$/bbl	77	75	80		115 59
2023 EPS	221	235	209		242 177	Brent Crude - \$/bbl	82	80	84		123 64
Stox x 600	485	410	546		488 388	Gold \$/oz	2,033	2,000	2,100		2063 1634
FTSE 100	7,633	6,550	8,958		7876 6483						
Nikkei 225	36,027	38,500	38,020		36287 25937						
GDP and CPI Inflation											
GDP growth	Latest Value	BofA	Consensus		High/Low	CPI inflation	Latest Value	BofA	Consensus		High/Low
US	3.3	2.1	1.6		7.0 -2.0	US	3.4	2.6	2.7		9.1 1.7
Euro area	0.1	0.4	0.5		14.8 -0.2	Euro area	2.8	2.3	2.3		10.6 0.9
Japan	1.5	0.8	0.8		8.0 -0.6	Japan	1.6	2.5	2.2		4.4 -1.2
UK	-0.1	0.3	0.4		7.3 -1.0	UK	4.0	2.4	2.8		11.1 0.4
China	5.2	4.8	4.6		18.7 0.4	China	-0.8	0.8	1.0		2.8 -0.8

Source: BofA Global Research, Bloomberg, Datastream; FX, rates, equities and commodities data as of 1/31/2024; GDP data of 12/31/2023. CPI data for CPI through 1/31/2024; Equity consensus price and EPS forecasts as of 1/31/2024.

BofA GLOBAL RESEARCH

BofA US equity sector views

Exhibit 33: BofA US Equity Strategy sector views

Bull & bear case by sector

Sector	Weight in S&P 500	BofA View	Bull case	Bear case
Energy	3.7%	O/W	Commodity cycles end w/ oversupply; not likely if CEO pay is on ESG / div targets, not production. Avg. \$80/bbl Brent in 2023 (house view); attractive FCF even at \$70 Inflation-protected yield; peak USD? War pushes energy security ahead of decarbonization Re-rating on capital and supply discipline, IRA beneficiary	Lowest Quality sector based on S&P rankings High GHG direct emissions profile + secular headwinds from renewables, green capex Ceasefires, peace breaks out
Consumer Discretionary	10.5%	O/W	Housing (leading indicator) benefits from structural shortages long-only fund and hedge fund positioning near historical lows Real wage growth now positive, #3 in Quant model, Recovery regime beneficiary Secular shift into e-commerce / EVs (AMZN + TSLA: ~50% of the sector) Consumer still resilient - 85% of US mortgages are fixed Fed is done hiking	Risk if job losses extend beyond Silicon Valley/Wall Street Long duration (AMZN + TSLA represent 50% of the sector), AMZN = COVID demand pull forward Expensive (but in line ex. TSLA/AMZN) Continued Fed hiking Temu
Financials	12.9%	O/W	Contagion risk largely mitigated - Regional Banks = 2.5% of the sector High quality and low leverage Mispriced risk: Lower EPS vol than S&P 500 but high price beta Higher interest rates vs. prior cycle 100% hit rate in Recovery regimes; historically inexpensive	Rising deposit costs & increased regulatory risk after bank fallouts Commercial Real Estate (23% of total loans)
Real Estate	2.3%	O/W	Dividend yield (~50% of stocks yielding higher than the 10yr) Inexpensive and unloved by long-only funds and hedge funds Real asset, but also a bond proxy	Commercial real estate risk (but only 14% of sector) Biggest exposure to refinancing risk & most hurt by rising real rates
Materials	2.2%	M/W	Underinvestment in manufacturing, single family, mining over last decade drives higher returns Continued capex cycle Attractive FCF/EV Potential recovery in goods spending (exposed to housing/autos/etc.)	Most exposed sector to China (along with Tech) Overweight by hedge funds, long-only positioning is near a 7-yr high Ranks last in Quant model Commodity chemicals may be near a bottom but recovery could be slow
Industrials	8.6%	M/W	Capex, automation, re-shoring beneficiary Half cyclical, half Quality Fiscal stimulus (bipartisan infrastructure bill = 11% of nonresidential construction spend)	Industrials is crowded (only cyclical sector overweight by both long-only and hedge funds) Rising earnings volatility amid de-globalization / loss of diversification
Communication Services	9.1%	M/W	#2 in our tactical quant model Big buybacks and cash returns mean duration risk shortening Valuations reasonable	Positioning risk rising after strong YTD performance Headline risk in 2024 regulatory, anti-monopolistic Too big to grow Corp ad spend slowdown potential
Utilities	2.1%	M/W	Stable fundamentals / defensive hedge / Quality IRA / energy transition beneficiary Disinflation and lower rates	Positioning risk: HFs are overweight, long only positioning near decade highs Dividend yield vs. 10-yr yield below post-GFC avg. Underperforms in Recovery regimes with a 100% hit rate
Technology	29.9%	U/W	Secular themes (AI, cloud, telecommuting, robotics, etc.) and onshoring automation & capex Long-only positioning risk has largely subsided Clean balance sheets, strong margins, and improving earnings trends AI arms race	Peak globalization (most multinational sector) COVID demand pull-forward was just as extreme as into Y2K Regulatory / anti-monopolistic overhang Expensive, Mag 7 crowding risk Destocking risk evident for semis, tech hardware & autos
Health Care	12.7%	U/W	Defensive sector offering secular growth Baby boomer spend beneficiary Select stocks can benefit from AI	Crowded (overweight by both long-only funds and hedge funds) after a year of preparing for a recession Government sales exposure ahead of fiscal cuts, overhang from drug pricing pressure Labor tightness not likely to be automated or AI'd away Floating rate risk .. Higher refinancing dollar risks than other sectors Election year - drug price regulations likely to hit headlines
Consumer Staples	6.0%	U/W	No matter what, we still have to eat - defensive hedge Benefits from consumers trading down Weakening USD	Elevated positioning: funds have been preparing for recession but soft landing more likely Typically underperforms in Recovery regime Ranks poorly in Quant model; lower quality vs. history Citing deflation trends GLP-1 = thematic overhang

Note: O/W = overweight, M/W = market weight, U/W = underweight. Weights in S&P 500 as of 2/1/2024 and may not add to 100% due to rounding. **Source:** BofA US Equity & Quant Strategy

BofA GLOBAL RESEARCH

Global cross-asset returns

January 2024 Review

- Global equity markets fell -0.6% on average in January, largely dragged down by China. This month, the TOPIX (3.7%) and the S&P 500 (+1.7%) were the best performers. The Hang Seng fell -9.2% to start the year.
- Large caps were the best performing size factor in January (+1.4%), outperforming mid-caps (-1.4%) and small-caps (-3.9%) by a wide margin. Growth outperformed value across all size factors by 1.6% on average.
- Changing rates expectations and earnings announcements lead to high dispersion among sectors in January. Communication services (+5.0%) and tech (+3.9%) were standouts. Real estate was the worst performing sector (-4.7).
- Long duration US Treasuries reversed gains after a strong end to 2023, falling -2.3% returns in January. Preferred were the best performing fixed income sector, gaining almost 4%.
- Oil started the year strong, up 6% In January. While a top asset class last year, gold has started the year with -1.1% losses as inflation cools but rates remain steady.

Exhibit 34: Equity Indexes

Total return (%)

As of 31 January 2024							
Asset class	1mo	3mo	12mo	YTD	3yr ²	5yr ²	10yr ²
Equity Indices (% , US dollar terms)							
S&P 500	1.7	16.0	20.8	1.7	11.0	14.3	12.6
Dow Jones Industrial Avg.	1.3	16.0	14.4	1.3	10.6	11.2	11.8
NASDAQ Comp	1.0	18.2	32.0	1.0	5.9	16.8	15.1
MSCI All Country World	0.6	15.3	15.3	0.6	6.6	10.7	9.0
FTSE 100	-1.6	9.8	5.4	-1.6	7.3	5.1	2.9
DJ Euro Stoxx 50	0.9	17.8	14.3	0.9	8.6	9.4	4.7
MSCI EAFE	0.6	15.8	10.6	0.6	5.1	7.4	5.3
TOPIX	3.7	17.4	17.8	3.7	2.8	6.5	6.2
Hang Seng	-9.2	-9.1	-26.1	-9.2	-15.7	-8.1	-0.1
MSCI Emerging Markets	-4.6	7.1	-2.5	-4.6	-7.1	1.4	3.2
Size & Style (% , US dollar terms)							
Russell 1000	1.4	16.3	20.2	1.4	9.8	14.0	12.3
Russell 1000 Growth	2.5	18.7	35.0	2.5	10.0	18.0	15.5
Russell 1000 Value	0.1	13.6	6.1	0.1	9.2	9.3	8.8
Russell Midcap	-1.4	17.1	6.7	-1.4	5.5	10.1	9.5
Russell Midcap Growth	-0.5	20.1	15.1	-0.5	1.2	11.2	10.8
Russell Midcap Value	-1.8	15.8	2.4	-1.8	7.8	8.6	8.3
Russell 2000	-3.9	17.6	2.4	-3.9	-0.8	6.8	7.0
Russell 2000 Growth	-3.2	18.3	4.5	-3.2	-6.0	6.2	7.0
Russell 2000 Value	-4.5	17.0	-0.1	-4.5	4.5	6.7	6.7
S&P 500 Sectors (% , US dollar terms)							
Consumer Discretionary	-3.5	13.5	19.4	-3.5	2.3	10.7	12.0
Consumer Staples	1.5	8.5	3.0	1.5	8.3	10.1	9.3
Energy	-0.4	-1.4	-4.4	-0.4	34.4	11.0	4.1
Financials	3.0	20.5	8.1	3.0	12.4	10.8	10.8
Health Care	3.0	13.3	7.1	3.0	8.6	11.2	11.6
Industrials	-0.9	15.4	12.9	-0.9	11.9	11.6	10.4
Information Technology	3.9	21.8	50.1	3.9	17.0	26.2	21.6
Materials	-3.9	8.9	-0.8	-3.9	7.4	11.5	8.7
Real Estate	-4.7	16.4	-2.6	-4.7	4.8	5.7	8.0
Communication Services	5.0	18.7	42.9	5.0	6.6	12.2	8.7
Utilities	-3.0	4.0	-8.0	-3.0	2.8	5.7	8.3

Source: BofA Global Research, S&P, MSCI, Bloomberg. Notes: * Performance is gross of foreign dividend withholding taxes, 23yr, 5yr, and 10yr returns are annualized.

BofA GLOBAL RESEARCH

Exhibit 35: Bond/currency/commodity/hedge fund indexes

Total return (%)

As of 31 January 2024							
Asset class	1mo	3mo	12mo	YTD	3yr ²	5yr ²	10yr ²
BofA Global Research Bond Indices (% , US dollar terms)							
2-Year Treasury	0.4	2.5	3.2	0.4	-0.3	1.0	0.9
5-Year Treasury	0.2	5.2	2.1	0.2	-2.9	0.6	0.9
10-Year Treasury	-0.2	8.8	-0.4	-0.2	-5.6	-0.2	1.0
30-Year Treasury	-2.3	15.9	-6.8	-2.3	-12.9	-2.9	0.9
US Broad Market Index	-0.1	8.1	2.2	-0.1	-3.2	0.8	1.7
TIPS	0.4	5.7	2.0	0.4	-1.3	2.9	2.3
Municipals*	-0.2	8.7	3.1	-0.2	-0.7	2.1	2.9
US Corporate Bonds	0.1	10.1	4.5	0.1	-2.7	2.2	2.8
US High Yield Bonds	0.0	8.4	9.2	0.0	1.9	4.3	4.4
Emerging Mkt Corp Bonds	0.1	7.6	4.9	0.1	-3.2	1.3	2.6
Emerging Mkt Sov Bonds	-1.4	10.0	5.9	-1.4	-4.7	-0.1	2.2
Preferreds	3.7	16.6	-0.1	3.7	-1.8	3.3	4.9
Foreign exchange							
DXY Index	1.9	-3.2	1.2	1.9	4.5	1.6	2.4
GBP/USD	-0.3	4.4	3.0	-0.3	-2.5	-0.7	-2.6
EUR/USD	-2.0	2.3	-0.4	-2.0	-3.8	-1.1	-2.2
USD/JPY	4.2	-3.1	12.9	4.2	12.0	6.2	3.7
Commodities** (% , US dollar terms)							
CRB Index	3.3	-3.1	-2.0	3.3	16.1	8.7	-0.4
Gold	-1.1	2.7	6.2	-1.1	3.5	9.2	5.1
WTI Crude Oil	5.9	-6.4	-3.8	5.9	13.3	7.1	-
Brent Crude Oil	6.1	-6.5	-3.3	6.1	13.5	5.7	-2.6
Alternative Investments† (% , US dollar terms)							
Hedge Fund - CS Tremont ¹	0.7	2.0	5.8	5.8	5.0	6.1	3.9
Hedge Fund - Bloomberg ¹	2.8	4.3	7.7	7.7	3.2	5.6	3.8

Source: S&P, MSCI, Bloomberg, FactSet, BofA Bond Indices (US Treasury Current 10yr, Current 2yr, Inflation-Linked; Muni Master, US Corp Master, US HY Master II, EM Corp Plus Index; EM External Debt Sovereign Index; US Preferred Stock Index).

Notes: * Not tax adjusted. **BoE calculated effective FX indices. ¹Data lagged by one month; 23yr, 5yr, and 10yr returns are annualized; CS AUM-weighted, HFRI equal-weighted; †AI data not comparable to other asset classes because of reporting delays, lack of standardized reporting, and survivorship and self-selection biases. Crude oil prices are spot USD.

BofA GLOBAL RESEARCH



Exhibit 36: Stocks mentioned

Ticker, name, price, rating

Ticker	Name	Last price	BofA Rating	
GOOG	Alphabet Inc	148.73	BUY	B-1-9
GOOGL	Alphabet Inc	147.53	BUY	B-1-9
META	Meta Platforms Inc	468.9	BUY	C-1-7
NFLX	Netflix Inc	557.85	BUY	B-1-9
DIS	Walt Disney Co/The	109.29	BUY	B-1-7
V	Visa Inc	275.07	BUY	B-1-7
MA	Mastercard Inc	458.71	BUY	B-1-7
TGT	Target Corp	149.4	BUY	B-1-7
LDOS	Leidos Holdings Inc	114.56	BUY	B-1-7
PARA	Paramount Global	13.41	UNDERPERFORM	C-3-7
CVS	CVS Health Corp	77.29	BUY	B-1-7
FSLR	First Solar Inc	157.22	BUY	C-1-9
BG	Bunge Global SA	90.68	BUY	B-1-7
TDY	Teledyne Technologies Inc	427.07	BUY	B-1-9
UBER	Uber Technologies Inc	69.12	BUY	C-1-9
PTC	PTC Inc	178.54	BUY	B-1-9
SHW	Sherwin-Williams Co/The	310.42	UNDERPERFORM	B-3-7
GLW	Corning Inc	32.18	BUY	B-1-7
CHTR	Charter Communications Inc	297.91	NEUTRAL	B-2-9
JBL	Jabil Inc	140.46	BUY	B-1-7
BLDR	Builders FirstSource Inc	187.12	BUY	C-1-9
SEE	Sealed Air Corp	36.64	BUY	B-1-7
ALK	Alaska Air Group Inc	37.33	BUY	B-1-9
SEDG	SolarEdge Technologies Inc	83.3	UNDERPERFORM	C-3-9
SPWR	SunPower Corp	4.16	UNDERPERFORM	C-3-9
NTR	Nutrien Ltd	50.06	BUY	B-1-7
SAABF	Saab AB	72.62	BUY	B-1-7
EBAY	eBay Inc	43.49	NEUTRAL	B-2-7
EXLS	ExlService Holdings Inc	31.04	BUY	B-1-9
KKR	KKR & Co Inc	97.62	BUY	B-1-7
WDAY	Workday Inc	299.09	BUY	B-1-9
PLTR	Palantir Technologies Inc	25.05	BUY	C-1-9
ARES	Ares Management Corp	137.06	BUY	B-1-7
TW	Tradeweb Markets Inc	100.07	BUY	B-1-7
VRT	Vertiv Holdings Co	61.32	BUY	C-1-7
DECK	Deckers Outdoor Corp	844.67	BUY	B-1-9
BAH	Booz Allen Hamilton Holding Corp	145.89	BUY	B-1-7
RPRX	Royalty Pharma PLC	29.05	BUY	B-1-7
BMRN	BioMarin Pharmaceutical Inc	88.18	BUY	B-1-9
DT	Dynatrace Inc	52.42	BUY	C-1-9
VST	Vistra Corp	42.81	BUY	B-1-7
AVTR	Avantor Inc	22.56	BUY	B-1-9
SAIA	Saia Inc	560.4	BUY	B-1-9
XPO	XPO Inc	117.63	BUY	C-1-9
OC	Owens Corning	149.25	BUY	B-1-7
NBIX	Neurocrine Biosciences Inc	130.43	BUY	B-1-9
BURL	Burlington Stores Inc	197.82	BUY	C-1-9
BLD	TopBuild Corp	399.82	BUY	B-1-9
ACM	AECOM	90.17	BUY	B-1-7
RNR	RenaissanceRe Holdings Ltd	226.24	BUY	B-1-7
FND	Floor & Decor Holdings Inc	111.82	BUY	C-1-9
OVV	Ovintiv Inc	42.59	BUY	C-1-7
REXR	Rexford Industrial Realty Inc	52.34	BUY	B-1-7
ZION	Zions Bancorp NA	41.24	UNDERPERFORM	C-3-7
WHR	Whirlpool Corp	112.12	UNDERPERFORM	B-3-7
FMC	FMC Corp	53.61	UNDERPERFORM	B-3-7
VFC	VF Corp	17.44	UNDERPERFORM	B-3-8
MHK	Mohawk Industries Inc	117.24	UNDERPERFORM	B-3-9
RHI	Robert Half Inc	81.96	UNDERPERFORM	B-3-7
CHRW	CH Robinson Worldwide Inc	75.76	UNDERPERFORM	B-3-7
PEAK	Healthpeak Properties Inc	17.54	UNDERPERFORM	B-3-7
AAL	American Airlines Group Inc	14.93	UNDERPERFORM	C-3-9
HSIC	Henry Schein Inc	75.73	UNDERPERFORM	B-3-9
CPT	Camden Property Trust	94.19	UNDERPERFORM	B-3-7

Exhibit 36: Stocks mentioned

Ticker, name, price, rating

Ticker	Name	Last price	BofA Rating	
QRVO	Qorvo Inc	113.73	UNDERPERFORM	B-3-9
NVR	NVR Inc	7617.24	BUY	B-1-9
BKNG	Booking Holdings Inc	3790.23	NEUTRAL	B-2-9
AZO	AutoZone Inc	2703.88	NEUTRAL	B-2-9
CMG	Chipotle Mexican Grill Inc	2608.23	BUY	B-1-9
FICO	Fair Isaac Corp	1298.35	N/A	N/A
AVGO	Broadcom Inc	1265	BUY	B-1-7
MTD	Mettler-Toledo International Inc	1190.04	NEUTRAL	B-2-9
TDG	TransDigm Group Inc	1109.17	BUY	B-1-9
ORLY	O'Reilly Automotive Inc	1026.39	BUY	B-1-9
GWW	WW Grainger Inc	947.21	N/A	N/A
REGN	Regeneron Pharmaceuticals Inc	947.06	UNDERPERFORM	B-3-9
LRCX	Lam Research Corp	908	BUY	C-1-7
EQIX	Equinix Inc	849.98	BUY	B-1-7
NOW	ServiceNow Inc	787.35	BUY	B-1-9
BLK	BlackRock Inc	801.76	BUY	B-1-7
MPWR	Monolithic Power Systems Inc	729.87	N/A	N/A
LLY	Eli Lilly & Co	737.26	BUY	B-1-7
COST	Costco Wholesale Corp	722.41	BUY	B-1-7
NVDA	NVIDIA Corp	722.48	BUY	C-1-7
INTU	Intuit Inc	656.99	BUY	B-1-7
URI	United Rentals Inc	663.53	BUY	C-1-7
KLAC	KLA Corp	648.05	BUY	B-1-7
ADBE	Adobe Inc	611.84	BUY	B-1-9
CTAS	Cintas Corp	613.69	BUY	B-1-7
MSCI	MSCI Inc	590.19	UNDERPERFORM	B-3-7
SNPS	Synopsys Inc	568.93	BUY	B-1-9
IDXX	IDEXX Laboratories Inc	565.56	NEUTRAL	B-2-9
TMO	Thermo Fisher Scientific Inc	546.86	BUY	B-1-7
ROP	Roper Technologies Inc	542.31	N/A	N/A
MLM	Martin Marietta Materials Inc	532.3	NEUTRAL	B-2-7
ULTA	Ulta Beauty Inc	525.06	NEUTRAL	B-2-9
PH	Parker-Hannifin Corp	518.2	BUY	B-1-7
UNH	UnitedHealth Group Inc	517.64	BUY	B-1-7
ELV	Elevance Health Inc	505.24	BUY	B-1-7
MCK	McKesson Corp	494.48	BUY	B-1-7
ALB	Albemarle Corp	120.09	NEUTRAL	C-2-7
SGML	Sigma Lithium Corp	15.04	BUY	C-1-9
CAT	Caterpillar Inc	321.63	BUY	B-1-7
BA	Boeing Co/The	209.33	NEUTRAL	B-2-9

Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

Exhibit 37: ETFs mentioned

Ticker, name, price, rating

Ticker Name	Last price	BofA Rating	
XLC Communication Services Select Sector SPDR Fund	79.42	MORE ATTRACTIVE	1-UF
XLRE Real Estate Select Sector SPDR Fund	38.29	MORE ATTRACTIVE	1-NV
XLU Utilities Select Sector SPDR Fund	60.97	MORE ATTRACTIVE	1-NV
XLE Energy Select Sector SPDR Fund	84.23	MORE ATTRACTIVE	1-FV
IYK iShares U.S. Consumer Staples ETF	194.1285	MORE ATTRACTIVE	1-FV
VCR Vanguard Consumer Discretionary ETF	308.65	MORE ATTRACTIVE	1-UF
XLF Financial Select Sector SPDR Fund	39.26	MORE ATTRACTIVE	1-FV
FXZ First Trust Materials AlphaDEX Fund	66.9	MORE ATTRACTIVE	1-NV
XLI Industrial Select Sector SPDR Fund	117.12	MORE ATTRACTIVE	1-NV
XLV Health Care Select Sector SPDR Fund	144.2	MORE ATTRACTIVE	1-FV
XLK Technology Select Sector SPDR Fund	206.26	MORE ATTRACTIVE	1-UF
VYMI Vanguard International High Dividend Yield ETF	65.71	MORE ATTRACTIVE	1-FV
SPYD SPDR Portfolio S&P 500 High Dividend ETF	38.53	MORE ATTRACTIVE	1-FV
DIVB iShares Core Dividend ETF	41.77	MORE ATTRACTIVE	1-FV
VTI Vanguard Value ETF	153.27	MORE ATTRACTIVE	1-FV
COWZ Pacer US Cash Cows 100 ETF	52.76	MORE ATTRACTIVE	1-FV



Exhibit 37: ETFs mentioned

Ticker, name, price, rating

Ticker Name	Last price	BofA Rating	
SCHG Schwab U.S. Large-Cap Growth ETF	89.93	MORE ATTRACTIVE	1-FV
CALF Pacer US Small Cap Cash Cows 100 ETF	48.82	MORE ATTRACTIVE	1-FV
SCHM Schwab U.S. Mid-Cap ETF	76.4	MORE ATTRACTIVE	1-FV
FNDX Schwab Fundamental U.S. Large Company Index ETF	63.78	MORE ATTRACTIVE	1-NV
IVV iShares Core S&P 500 ETF	503.38	MORE ATTRACTIVE	1-NV
ICLN iShares Global Clean Energy ETF	14.64	MORE ATTRACTIVE	1-NV
ESGV Vanguard ESG US Stock ETF	89.79	ATTRACTIVE	2-NV
AIQ Global X Artificial Intelligence & Technology ETF	32.86	MORE ATTRACTIVE	1-NV
KBA KraneShares Boser MSCI China A 50 Connect Index ETF	20.1881	MORE ATTRACTIVE	1-UF
EWV iShares MSCI Mexico ETF	67.54	MORE ATTRACTIVE	1-FV
VEU Vanguard FTSE All-World ex-US ETF	56.03	MORE ATTRACTIVE	1-NV
EMXC iShares MSCI Emerging Markets ex China ETF	55.98	MORE ATTRACTIVE	1-FV
HEFA iShares Currency Hedged MSCI EAFE ETF	32.64	MORE ATTRACTIVE	1-NV
FLCA Franklin FTSE Canada ETF	33.01	MORE ATTRACTIVE	1-FV
FEZ SPDR EURO STOXX 50 ETF	48.85	MORE ATTRACTIVE	1-NV
KSA iShares MSCI Saudi Arabia ETF	43.84	MORE ATTRACTIVE	1-FV
DXJ WisdomTree Japan Hedged Equity Fund	98.68	MORE ATTRACTIVE	1-FV
EPI WisdomTree India Earnings Fund	42.95	MORE ATTRACTIVE	1-FV
IYZ iShares U.S. Telecommunications ETF	22.65	LESS ATTRACTIVE	3-UF
SCHH Schwab U.S. REIT ETF	19.78	LESS ATTRACTIVE	3-NV
RSPU Invesco S&P 500 Equal Weight Utilities ETF	52.53	LESS ATTRACTIVE	3-NV
PXI Invesco Exchange-Traded Fund Trust Invesco Dorsey Wright Energy Momentum ETF	44.2475	LESS ATTRACTIVE	3-FV
RSPS Invesco S&P 500 Equal Weight Consumer Staples ETF	31.22	LESS ATTRACTIVE	3-FV
IYC iShares U.S. Consumer Discretionary ETF	78.53	LESS ATTRACTIVE	3-UF
FXO First Trust Financial AlphaDEX Fund	43.93	ATTRACTIVE	2-FV
IYM iShares U.S. Basic Materials ETF	133.85	ATTRACTIVE	2-NV
FXR First Trust Industrials/Producer Durables AlphaDEX Fund	67.16	LESS ATTRACTIVE	3-NV
PTH Invesco Exchange-Traded Fund Trust Invesco Dorsey Wright Healthcare Momentum ETF	44.15	LESS ATTRACTIVE	3-FV
QTEC First Trust NASDAQ-100 Technology Index Fund	189.91	LESS ATTRACTIVE	3-UF
PID Invesco International Dividend Achievers ETF	18	LESS ATTRACTIVE	3-FV
AIVL WisdomTree US AI Enhanced Valu	96.3437	LESS ATTRACTIVE	3-FV
IPKW Invesco International BuyBack Achievers ETF	36.9	LESS ATTRACTIVE	3-FV
RPV Invesco Exchange-Traded Fund Trust - Invesco S&P 500 Pure Value ETF	82.54	LESS ATTRACTIVE	3-FV
QLC FlexShares US Quality Large Cap Index Fund	55.7954	LESS ATTRACTIVE	3-FV
IWV iShares S&P 500 Growth ETF	81.62	LESS ATTRACTIVE	3-FV
FYX First Trust Small Cap Core AlphaDEX Fund	91.48	LESS ATTRACTIVE	3-FV
IJH iShares Core S&P Mid-Cap ETF	282.9	ATTRACTIVE	2-FV
LRGF iShares U.S. Equity Factor ETF	51.01	LESS ATTRACTIVE	3-NV
OEF iShares S&P 100 ETF	238.33	LESS ATTRACTIVE	3-NV
PBW Invesco WilderHill Clean Energy ETF	25.93	LESS ATTRACTIVE	3-NV
VSGX Vanguard ESG International Stock ETF	55.16	LESS ATTRACTIVE	3-NV
DTEC ALPS Disruptive Technologies ETF	41.6046	LESS ATTRACTIVE	3-NV
EWK iShares MSCI Hong Kong ETF	16.2	LESS ATTRACTIVE	3-UF
ECH iShares MSCI Chile ETF	24.91	LESS ATTRACTIVE	3-FV
ACWX iShares MSCI ACWI ex U.S. ETF	50.89	LESS ATTRACTIVE	3-NV
DBEM Xtrackers MSCI Emerging Markets Hedged Equity ETF	23.051	LESS ATTRACTIVE	3-FV
RODM Hartford Multifactor Developed Markets ex-US ETF	26.905	LESS ATTRACTIVE	3-NV
EWC iShares MSCI Canada ETF	36.45	ATTRACTIVE	2-FV
FDD First Trust STOXX European Select Dividend Index Fund	11.195	LESS ATTRACTIVE	3-NV
VNM VanEck Vietnam ETF	13.145	LESS ATTRACTIVE	3-FV
JPXN iShares JPX-Nikkei 400 ETF /US	70.3723	LESS ATTRACTIVE	3-FV
SMIN iShares MSCI India Small-Cap ETF	71.98	ATTRACTIVE	2-FV
TLT iShares 20+ Year Treasury Bond ETF	93.96	MORE ATTRACTIVE	1-NV

Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

Price objective basis & risk

Albemarle (ALB)

Our \$138 PO is based on the average of two methodologies, a comprehensive NAV model and a multiple against our 2024E EBITDA. The NAV model generates a value of \$219/share. For our NAV, we use WACC of 9.2% and terminal growth rate of 2%. The EBITDA methodology uses an 11x multiple against our 2024E EBITDA forecast which drives a price of \$58/share. This 11x is a premium for commodity companies, but reflects the trough nature of the 2024 earnings profile, and implies a more normal, 4.0x our 2025 EBITDA estimate.

Upside risks to our price objective are higher than anticipated selling prices in Lithium, new capacity announcements at ALB, stronger than expected ramp-ups in production and increasing signs of electric vehicle demand.

Downside risks to our price objective are slower than expected demand growth for consumer electronics and electric vehicles, new supply additions at peers, a potential bidding war for acquisition targets, and price pressure in the lithium and bromine businesses.

Boeing (BA)

Our PO of \$225 is based on the 2026e FCF of \$13/share and relative discount to the S&P500 of 0.9x (about one standard deviation above historical average). In our view, a multiple roughly in line with the historical average fairly reflects the looming aerospace recovery, strong demand for commercial jets, defense opportunities, and the lack of dividend.

Upside risks to our PO are the possible involvement of an activist shareholder, better-than-expected cash margins at 787 and/or MAX programs, the company's ability to sustain 777 delivery rates through the bridge to 777X, lower-than-expected 777X, future single-aisle and middle-of-the-market aircraft development costs.

Downside risks to our PO are as follows: Tight competition for engineering talent in the current labor market could make new product development more challenging. Execution risk on new programs and production ramp-ups (737MAX, 777X, KC-46) could result in cost overruns and margin contractions. Changes in trade policy that end in a trade war. A sharp and prolonged surge in oil prices to above \$100/bbl would be negative to aircraft demand. A downturn in commercial aviation, due to an exogenous factor, could adversely affect financial results. As aircraft are priced in USD, an unexpected rapid revaluation in the dollar could significantly affect order activity. Also, a strong dollar could improve Airbus' competitive advantage. 787 fixes could take longer than expected.

Caterpillar Inc (CAT)

Our \$363 PO on CAT is based on 16.5x 2024e EPS which is in-line with the long term historical range of 15-17x. While we see some headwinds that are likely to slow growth (higher inventories, capex plateauing, pricing moderating, backlog softening), there are unique macro and business cycle factors that are underpinning stronger cycle over cycle earnings: infrastructure, construction spending mix shifts towards heavy vs light, higher miner free cash flow generation, aging fleets, and data centers.

Downside risks to our PO: 1) widening global coronavirus pandemic that tilts global economy into recession, 2) a greater-than-expected reduction or delay in capital spending among large mining, and oil and gas customers, 3) intensifying pricing pressure in the construction and mining equipment industries, 4) greater than expected dealer destocking, 5) ongoing deterioration in dealer sales growth.

Upside risks: 1) a faster recovery in the global economy, 2) firming earthmoving



construction equipment market, 3) stronger-than-expected fleet replacement, 4) continuing recovery in commodity prices, 5) stronger-than-expected demand trends in gas compression, 6) quicker-than-expected resolution to the pandemic.

First Solar, Inc. (FSLR)

Our price objective is \$179/share, based on an EV/EBITDA method. We apply a 3.1x multiple from a group of Chinese and other international solar comp group/module peers, and add a 0.5x premium for FSLR's lower risk to protectionist trade policies. We value FSLR's core EBITDA at a lower than historical multiple given significant pressure to 2027+ pricing from Chinese oversupply. We also add net cash balance and \$84/share net present value to account for production tax credits stipulated in Inflation Reduction Act.

Downside risks: 1) worse/declining price environment, 2) declining margins or worse-than-expected cost structure, 3) unfavorable trade policy dynamics, 5) worse Chinese/global demand environment, 6) worse execution on systems business, and 7) technology fails to live up to expectations 8) FSLR capture of production tax credits fall short of expectations

KKR & Co. Inc. (KKR)

Our price objective for KKR is \$111 and is derived from 17.5x 2026E cash earnings. Our definition of cash earnings uses the company's distributable earnings metric and adds back stock-based comp. We apply the multiple on our normalized cash earnings forecast for KKR's asset management business.

Downside risks: Strong capital deployment activity in the frothy years (2020-21), valuation complexity with FRE, expense allocations, insurance business and capital intensive model, business model is private equity heavy and this business is experiencing multiple cyclical headwinds (returns - inflation & bear market, fundraising - crowded backdrop, denominator effect), insider-selling potential, KKR's voting structure may prevent an S&P 500 Index add.

Sigma Lithium (SGML)

Our \$27 PO is derived from our comprehensive net asset value (NAV) model, which is predicated on a three-stage buildout and a 9.8% WACC with no terminal value.

Downside risks to our forecast are lower lithium prices, higher operating costs, and failure to successfully commission the new assets.

Upside risks are further resource discovery, faster speed to commissioning new assets, higher lithium prices, and lower operating costs

Analyst Certification

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

We, Jared Woodard, Craig Siegenthaler, CFA, Michael Feniger, Ronald J. Epstein and Steve Byrne, CFA, hereby certify that the views expressed in this research report accurately reflect our personal views about the subject equity securities and issuers. We also certify that no part of our compensation was, is, or will be, directly or indirectly, related to the specific recommendations or views expressed in this research report.

Special Disclosures

BofA Securities is currently acting as strategic advisor to Sigma Lithium Corp in their review of strategic alternatives.

BofA Securities is currently acting as buy-side advisor to Frontier Tower Associates Philippines Inc, a regional telecom infrastructure platform backed by KKR to acquire a portion of telecoms towers from Smart Communications, a wholly owned subsidiary of PLDT Inc, which was announced on March 17, 2023.

BofA Securities is currently acting as a Financial Advisor to Canadian Solar Inc in connection with its subsidiary Recurrent Energy LLC's secured preferred equity investment commitment, convertible into common equity, for Recurrent Energy BV from BlackRock Inc through a fund managed by its Climate Infrastructure business, which was announced on January 23, 2024.

US - Aerospace and Defense Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
BUY				
	AerCap Holdings N.V.	AER	AER US	Ronald J. Epstein
	Air Lease Corporation	AL	AL US	Ronald J. Epstein
	Booz Allen Hamilton	BAH	BAH US	Mariana Perez Mora
	BWX Technologies, Inc.	BWXT	BWXT US	Ronald J. Epstein
	CACI International	CACI	CACI US	Mariana Perez Mora
	Cadre Holdings Inc	CDRE	CDRE US	Ronald J. Epstein
	Crane Co.	CR	CR US	Ronald J. Epstein
	Embraer	ERJ	ERJ US	Ronald J. Epstein
	General Dynamics	GD	GD US	Ronald J. Epstein
	HEICO Corporation	HEI	HEI US	Ronald J. Epstein
	Howmet Aerospace Inc.	HWM	HWM US	Ronald J. Epstein
	KBR	KBR	KBR US	Mariana Perez Mora
	Leidos Holdings	LDOS	LDOS US	Mariana Perez Mora
	Leonardo DRS, Inc.	DRS	DRS US	Ronald J. Epstein
	Northrop Grumman	NOC	NOC US	Ronald J. Epstein
	Palantir Technologies	PLTR	PLTR US	Mariana Perez Mora
	Parsons Corporation	PSN	PSN US	Mariana Perez Mora
	RBC Bearings Inc	RBC	RBC US	Ronald J. Epstein
	Rocket Lab	RKLB	RKLB US	Ronald J. Epstein
	Teledyne Technologies Inc	TDY	TDY US	Ronald J. Epstein
	TransDigm Group Inc.	TDG	TDG US	Ronald J. Epstein
	Triumph Group	TGI	TGI US	Ronald J. Epstein
NEUTRAL				
	Albany International	AIN	AIN US	Ronald J. Epstein
	Boeing	BA	BA US	Ronald J. Epstein
	Garmin	GRMN	GRMN US	Ronald J. Epstein
	Hexcel Corporation	HXL	HXL US	Ronald J. Epstein
	L3Harris	LHX	LHX US	Ronald J. Epstein
	Lockheed Martin	LMT	LMT US	Ronald J. Epstein
	RTX Corp	RTX	RTX US	Ronald J. Epstein
	Textron	TXT	TXT US	Ronald J. Epstein
UNDERPERFORM				
	Bombardier	BDRBF	BDRBF US	Ronald J. Epstein
	Bombardier Inc.	YBBD B	BBD/B CN	Ronald J. Epstein
	CAE Inc.	YCAE	CAE CN	Ronald J. Epstein
	CAE Inc.	CAE	CAE US	Ronald J. Epstein
	Huntington Ingalls Industries	HII	HII US	Ronald J. Epstein
	Mercury Systems	MRCY	MRCY US	Ronald J. Epstein
	Spirit AeroSys-A	SPR	SPR US	Ronald J. Epstein

US - Chemicals Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
BUY				
	Axalta Coating Systems	AXTA	AXTA US	Steve Byrne, CFA
	Bunge Limited	BG	BG US	Salvator Tiano, CFA
	CF Industries	CF	CF US	Steve Byrne, CFA
	Dow Inc	DOW	DOW US	Steve Byrne, CFA
	Eastman Chemical Co	EMN	EMN US	Salvator Tiano, CFA
	Element Solutions Inc.	ESI	ESI US	Steve Byrne, CFA
	Green Plains	GPRE	GPRE US	Salvator Tiano, CFA
	Huntsman Corp	HUN	HUN US	Salvator Tiano, CFA
	Linde	LIN	LIN US	Steve Byrne, CFA
	Linde	LINGY	LIN GY	Steve Byrne, CFA
	Nutrien	NTR	NTR US	Steve Byrne, CFA
	Olin Corp	OLN	OLN US	Steve Byrne, CFA
	PPG Industries Inc.	PPG	PPG US	Steve Byrne, CFA
	Sigma Lithium	SGML	SGML US	Steve Byrne, CFA
	The Mosaic Company	MOS	MOS US	Steve Byrne, CFA

US - Chemicals Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
NEUTRAL	Air Products	APD	APD US	Steve Byrne, CFA
	Albemarle	ALB	ALB US	Steve Byrne, CFA
	Archer-Daniels-Midland Company	ADM	ADM US	Salvator Tiano, CFA
	Corteva	CTVA	CTVA US	Steve Byrne, CFA
	Ecolab Inc	ECL	ECL US	Steve Byrne, CFA
	International Flavors & Fragrances	IFF	IFF US	Salvator Tiano, CFA
	LyondellBasell Industries	LYB	LYB US	Steve Byrne, CFA
	Origin Materials	ORGN	ORGN US	Steve Byrne, CFA
UNDERPERFORM	Celanese Corporation	CE	CE US	Salvator Tiano, CFA
	DuPont	DD	DD US	Steve Byrne, CFA
	FMC Corporation	FMC	FMC US	Steve Byrne, CFA
	RPM International Inc	RPM	RPM US	Steve Byrne, CFA
	Sherwin-Williams Company	SHW	SHW US	Steve Byrne, CFA
	Westlake Chemical Partners, LP	WLKP	WLKP US	Steve Byrne, CFA
	Westlake Corp	WLK	WLK US	Steve Byrne, CFA

North America - Utilities and Alt Energy Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
BUY	Alliant Energy Corporation	LNT	LNT US	Julien Dumoulin-Smith
	Array Technologies	ARRY	ARRY US	Julien Dumoulin-Smith
	Atlantica Sustainable Infrastructure	AY	AY US	Julien Dumoulin-Smith
	Atmos Energy Corporation	ATO	ATO US	Julien Dumoulin-Smith
	CenterPoint Energy	CNP	CNP US	Julien Dumoulin-Smith
	Cheniere Energy Inc	LNG	LNG US	Julien Dumoulin-Smith
	Clearway Energy	CWENA	CWEN/A US	Julien Dumoulin-Smith
	Clearway Energy	CWEN	CWEN US	Julien Dumoulin-Smith
	CMS Energy	CMS	CMS US	Julien Dumoulin-Smith
	Consolidated Edison	ED	ED US	Julien Dumoulin-Smith
	DTE Energy	DTE	DTE US	Julien Dumoulin-Smith
	Enlight Renewable Energy Ltd	ENLT	ENLT US	Julien Dumoulin-Smith
	Enlight Renewable Energy Ltd	XENLF	ENLT IT	Julien Dumoulin-Smith
	Entergy	ETR	ETR US	Paul Zimbardo
	First Solar, Inc.	FSLR	FSLR US	Julien Dumoulin-Smith
	Fluence Energy	FLNC	FLNC US	Julien Dumoulin-Smith
	Hannon Armstrong	HASI	HASI US	Julien Dumoulin-Smith
	Hydro One	YH	H CN	Julien Dumoulin-Smith
	MDU Resources Group, Inc.	MDU	MDU US	Julien Dumoulin-Smith
	Nextracker Inc	NXT	NXT US	Julien Dumoulin-Smith
	NiSource Inc	NI	NI US	Julien Dumoulin-Smith
	NorthWestern Energy Group	NWE	NWE US	Julien Dumoulin-Smith
	NRG Energy	NRG	NRG US	Julien Dumoulin-Smith
	PG&E Corporation	PCG	PCG US	Julien Dumoulin-Smith
	PNM Resources Inc.	PNM	PNM US	Julien Dumoulin-Smith
	PPL Corporation	PPL	PPL US	Paul Zimbardo
	Public Service Enterprise Group	PEG	PEG US	Julien Dumoulin-Smith
	Sempra	SRE	SRE US	Julien Dumoulin-Smith
	Sunnova Energy	NOVA	NOVA US	Julien Dumoulin-Smith
	SunRun	RUN	RUN US	Julien Dumoulin-Smith
	TPI Composites	TPIC	TPIC US	Julien Dumoulin-Smith
	Vistra Corp	VST	VST US	Julien Dumoulin-Smith
	Xcel Energy Inc	XEL	XEL US	Julien Dumoulin-Smith
NEUTRAL	AES	AES	AES US	Julien Dumoulin-Smith
	Algonquin Power & Utilities Corp	AQN	AQN US	Paul Zimbardo
	Algonquin Power & Utilities Corp	YAQN	AQN CN	Paul Zimbardo
	AltaGas	YALA	ALA CN	Cameron Lochridge
	Ameren Corporation	AEE	AEE US	Julien Dumoulin-Smith

North America - Utilities and Alt Energy Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
	Ameresco	AMRC	AMRC US	Julien Dumoulin-Smith
	American Electric Power	AEP	AEP US	Julien Dumoulin-Smith
	ChargePoint Holdings	CHPT	CHPT US	Cameron Lochridge
	Constellation Energy Corp	CEG	CEG US	Paul Zimbardo
	Duke Energy	DUK	DUK US	Julien Dumoulin-Smith
	Emera Inc	YEMA	EMA CN	Julien Dumoulin-Smith
	Essential Utilities	WTRG	WTRG US	Julien Dumoulin-Smith
	Evergy, Inc	EVRG	EVRG US	Julien Dumoulin-Smith
	Exelon	EXC	EXC US	Paul Zimbardo
	Generac Holdings Inc.	GNRC	GNRC US	Julien Dumoulin-Smith
	Idacorp	IDA	IDA US	Paul Zimbardo
	Maxon Solar Technologies	MAXN	MAXN US	Julien Dumoulin-Smith
	New Fortress Energy	NFE	NFE US	Cameron Lochridge
	NextEra Energy	NEE	NEE US	Julien Dumoulin-Smith
	NextEra Energy Partners	NEP	NEP US	Julien Dumoulin-Smith
	OGE Energy Corp	OGE	OGE US	Julien Dumoulin-Smith
	Ormat Technologies	ORA	ORA US	Julien Dumoulin-Smith
	Pinnacle West	PNW	PNW US	Julien Dumoulin-Smith
	Portland General Electric Company	POR	POR US	Julien Dumoulin-Smith
	Southern Company	SO	SO US	Julien Dumoulin-Smith
	Southwest Gas Holdings	SWX	SWX US	Julien Dumoulin-Smith
	TransAlta Corp	TAC	TAC US	Julien Dumoulin-Smith
	TransAlta Corporation	YTA	TA CN	Julien Dumoulin-Smith

UNDERPERFORM

	Allete Inc	ALE	ALE US	Julien Dumoulin-Smith
	American Water Works	AWK	AWK US	Julien Dumoulin-Smith
	Avangrid	AGR	AGR US	Paul Zimbardo
	Avista	AVA	AVA US	Julien Dumoulin-Smith
	Black Hills Corporation	BKH	BKH US	Julien Dumoulin-Smith
	Bloom Energy	BE	BE US	Julien Dumoulin-Smith
	Dominion Energy	D	D US	Paul Zimbardo
	Edison International	EIX	EIX US	Paul Zimbardo
	Enphase Energy	ENPH	ENPH US	Julien Dumoulin-Smith
	Eversource Energy	ES	ES US	Paul Zimbardo
	FirstEnergy	FE	FE US	Julien Dumoulin-Smith
	Fortis	YFTS	FTS CN	Julien Dumoulin-Smith
	Fortis Inc	FTS	FTS US	Julien Dumoulin-Smith
	FREYR Battery	FREY	FREY US	Julien Dumoulin-Smith
	FTC Solar	FTCI	FTCI US	Julien Dumoulin-Smith
	Hawaiian Electric Industries	HE	HE US	Julien Dumoulin-Smith
	MGE Energy	MGEE	MGEE US	Julien Dumoulin-Smith
	New Jersey Resources Corp	NJR	NJR US	Julien Dumoulin-Smith
	ONE Gas, Inc.	OGS	OGS US	Julien Dumoulin-Smith
	SolarEdge Technologies	SEDG	SEDG US	Julien Dumoulin-Smith
	Spire	SR	SR US	Julien Dumoulin-Smith
	Stem, Inc.	STEM	STEM US	Julien Dumoulin-Smith
	SunPower Corp.	SPWR	SPWR US	Julien Dumoulin-Smith
	UGI Corp.	UGI	UGI US	Julien Dumoulin-Smith
	WEC Energy Group Inc	WEC	WEC US	Julien Dumoulin-Smith

US - Machinery Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
BUY				
	AECOM	ACM	ACM US	Michael Feniger
	Blue Bird Corp	BLBD	BLBD US	Sherif El-Sabbahy
	Caterpillar Inc	CAT	CAT US	Michael Feniger
	CNH Industrial NV	CNHI	CNHI US	Michael Feniger
	Construction Partners Inc.	ROAD	ROAD US	Michael Feniger
	ESAB Corp	ESAB	ESAB US	Sherif El-Sabbahy
	Finning International Inc.	YFTT	FTT CN	Sherif El-Sabbahy
	H&E Equipment Services Inc	HEES	HEES US	Sherif El-Sabbahy

US - Machinery Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
	Knife River Corp	KNF	KNF US	Sherif El-Sabbahy
	Republic Services	RSG	RSG US	Michael Feniger
	Techtronic Industries Co Ltd	TTNDF	669 HK	Michael Feniger
	Techtronic Industries Co Ltd	TTNDY	TTNDY US	Michael Feniger
	United Rentals Inc	URI	URI US	Michael Feniger
	Vulcan Materials	VMC	VMC US	Michael Feniger
	Waste Connections Inc	WCN	WCN US	Michael Feniger
	WillScot Mobile Mini	WSC	WSC US	Sherif El-Sabbahy
NEUTRAL				
	AGCO Corp	AGCO	AGCO US	Michael Feniger
	Deere & Co	DE	DE US	Michael Feniger
	Fluor	FLR	FLR US	Michael Feniger
	GFL Environmental Inc	GFL	GFL US	Michael Feniger
	GFL Environmental Inc	YGFL	GFL CN	Michael Feniger
	Jacobs Eng.	J	J US	Michael Feniger
	Kennametal Inc.	KMT	KMT US	Michael Feniger
	Martin Marietta Materials	MLM	MLM US	Michael Feniger
	NV5 Global Inc.	NVEE	NVEE US	Michael Feniger
	PACCAR Inc	PCAR	PCAR US	Michael Feniger
	RB Global, Inc	RBA	RBA US	Michael Feniger
	Waste Management	WM	WM US	Michael Feniger
UNDERPERFORM				
	Allison Transmission Holdings Inc.	ALSN	ALSN US	Sherif El-Sabbahy
	Casella	CWST	CWST US	Michael Feniger
	Cummins Inc	CMI	CMI US	Michael Feniger
	Herc Holdings Inc	HRI	HRI US	Sherif El-Sabbahy
	IPG Photonics	IPGP	IPGP US	Michael Feniger
	Oshkosh Corp.	OSK	OSK US	Michael Feniger
	Terex Corp.	TEX	TEX US	Michael Feniger
	Timken Company	TKR	TKR US	Michael Feniger

US - Brokers, Asset Managers, & Exchanges Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
BUY				
	AllianceBernstein	AB	AB US	Craig Siegenthaler, CFA
	Ameriprise Financial	AMP	AMP US	Craig Siegenthaler, CFA
	Ares Management Corp	ARES	ARES US	Craig Siegenthaler, CFA
	BlackRock, Inc.	BLK	BLK US	Craig Siegenthaler, CFA
	Blackstone	BX	BX US	Craig Siegenthaler, CFA
	Blue Owl Capital	OWL	OWL US	Craig Siegenthaler, CFA
	Cboe Global Markets	CBOE	CBOE US	Craig Siegenthaler, CFA
	Interactive Brokers	IBKR	IBKR US	Craig Siegenthaler, CFA
	Intercontinental Exchange	ICE	ICE US	Craig Siegenthaler, CFA
	KKR & Co. Inc.	KKR	KKR US	Craig Siegenthaler, CFA
	Raymond James Financial	RJF	RJF US	Mark McLaughlin, CFA
	TPG Inc	TPG	TPG US	Craig Siegenthaler, CFA
	Tradeweb Markets Inc.	TW	TW US	Craig Siegenthaler, CFA
	Victory Capital Holdings, Inc.	VCTR	VCTR US	Craig Siegenthaler, CFA
	Virtu Financial	VIRT	VIRT US	Craig Siegenthaler, CFA
NEUTRAL				
	Affiliated Managers Group	AMG	AMG US	Craig Siegenthaler, CFA
	Apollo Global Management	APO	APO US	Craig Siegenthaler, CFA
	Brookfield Asset Management	BAM	BAM US	Craig Siegenthaler, CFA
	CME Group Inc	CME	CME US	Craig Siegenthaler, CFA
	Invesco	IVZ	IVZ US	Craig Siegenthaler, CFA
	Janus Henderson Group	JHG	JHG US	Craig Siegenthaler, CFA
	LPL Financial Holdings	LPLA	LPLA US	Craig Siegenthaler, CFA
	Patria	PAX	PAX US	Craig Siegenthaler, CFA
UNDERPERFORM				
	Charles Schwab Corp.	SCHW	SCHW US	Craig Siegenthaler, CFA



US - Brokers, Asset Managers, & Exchanges Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
	Franklin Resources	BEN	BEN US	Craig Siegenthaler, CFA
	Nasdaq	NDAQ	NDAQ US	Craig Siegenthaler, CFA
	Robinhood Markets	HOOD	HOOD US	Craig Siegenthaler, CFA
	T. Rowe Price	TROW	TROW US	Craig Siegenthaler, CFA
	The Carlyle Group	CG	CG US	Craig Siegenthaler, CFA

Disclosures

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Equity Investment Rating Distribution: Aerospace/Defense Electronics Group (as of 31 Dec 2023)

Coverage Universe	Count	Percent	Inv. Banking Relationships ^{R1}	Count	Percent
Buy	31	62.00%	Buy	23	74.19%
Hold	11	22.00%	Hold	9	81.82%
Sell	8	16.00%	Sell	6	75.00%

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

Coverage Universe	Count	Percent	Inv. Banking Relationships ^{R1}	Count	Percent
Buy	8	47.06%	Buy	8	100.00%
Hold	5	29.41%	Hold	3	60.00%
Sell	4	23.53%	Sell	1	25.00%

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

Coverage Universe	Count	Percent	Inv. Banking Relationships ^{R1}	Count	Percent
Buy	66	47.83%	Buy	33	50.00%
Hold	33	23.91%	Hold	16	48.48%
Sell	39	28.26%	Sell	20	51.28%

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: 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: Machinery/Diversified Manufacturing Group (as of 31 Dec 2023)

Coverage Universe	Count	Percent	Inv. Banking Relationships ^{R1}	Count	Percent
Buy	27	42.19%	Buy	8	29.63%
Hold	17	26.56%	Hold	8	47.06%
Sell	20	31.25%	Sell	8	40.00%

Equity Investment Rating Distribution: Non-Ferrous Metals/Mining & Minerals Group (as of 31 Dec 2023)

Coverage Universe	Count	Percent	Inv. Banking Relationships ^{R1}	Count	Percent
Buy	58	53.70%	Buy	26	44.83%
Hold	24	22.22%	Hold	10	41.67%
Sell	26	24.07%	Sell	13	50.00%

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

Coverage Universe	Count	Percent	Inv. Banking Relationships ^{R1}	Count	Percent
Buy	215	53.09%	Buy	111	51.63%
Hold	97	23.95%	Hold	45	46.39%
Sell	93	22.96%	Sell	24	25.81%

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.

Exchange-Traded Funds Investment Rating Distribution: Global Group (as of 31 Dec 2023)

Coverage Universe	Count	Percent	Inv. Banking Relationships ^{R2}	Count	Percent
Buy	80	19.61%	Buy	53	66.25%
Hold	317	77.70%	Hold	241	76.03%
Sell	11	2.70%	Sell	7	63.64%

^{R2} Exchange-traded funds (ETFs), or the ETF providers, 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 ETFs. An ETF rated 1-FV is included as a Buy; an ETF rated 2-FV, 3-FV, 1-NV, 2-NV, 3-NV, 1-UF or 2-UF is included as a Hold; and an ETF rated 3-UF 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 ^{R3}
Buy	≥ 10%	≤ 70%
Neutral	≥ 0%	≤ 30%
Underperform	N/A	≥ 20%

^{R3} 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.

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