

Quantitative Profiles

After four years of waiting...

...Global, US & Europe indicators all point up

Our US Regime indicator continued its Recovery (more below) and other regions are signaling expansion. In Europe, after nine months in Recession, the Style Cycle just flipped to Recovery where it has not been for four years ([see Style Cycle](#)). BofA Research's global quantitative framework, the Global Wave, entered its "Upturn" phase in January and has moved higher since ([see Global Wave](#)). This marks the first time since September 2020 that all three frameworks are signaling a synchronized Recovery.

Value, high dividend yield, beta

Our US Regime Indicator improved for the second month in February, confirming its Recovery phase (Exhibit 2). Five inputs point up (Earnings Revisions, Inflation Composite, GDP Forecast, 10-y Treasury yield and High Yield credit spreads) while three weakened (ISM PMI, Leading Economic Indicators and Capacity Utilization). Past Recoveries have lasted eight months on avg., with instances ranging from three to 14 months. Value, Dividend Yield, Low Quality and Risk have fared well in this phase (Exhibit 11).

Momentum has morphed into cyclical & beta

Price momentum has had a 50/50 success rate in past Recoveries (Exhibit 9), as it took time for the trend factors to align with the new leadership. Momentum may fare better in the current Recovery, as the group has already rotated from defensive to cyclical sectors: cyclical exposure of our 12-month Price Momentum basket is 7x more exposed to cyclical than defensive sectors (Exhibit 7). Year-to-date, Momentum factors have outperformed all groups (+7.7% on avg.) and have outperformed Negative Momentum by 9.8ppt (11th percentile since '88).

Value has lagged, but Recovery could help

So far in 2024, Value factors have slightly lagged the equal-weighted S&P 500 index (+2.3% on avg. vs. +3.0%), but an ongoing Recovery should help, as Value led in every previous Recovery. YTD, DDM Valuations, Free Cash Flow Yield and High Trailing EPS Yield (Low P/E on trailing earnings) have led, while High Forward EPS Yield (Low P/E on forecast earnings) and Low Price to Book, the strongest Recovery beneficiaries, have been among the weakest factors. Mixed Value performance may reflect the muddled signaling from the model inputs in the last few quarters, but Value should lead if this Recovery phase continues. Other factors support our preference for Value (Value stocks are really cheap vs expensive Growth stocks, Value is neglected by active US managers (Exhibit 10), and earnings are likely to continue to accelerate ([see EPS Outlook](#)).

Crowded Quality/Growth at risk

All profitability-based Quality factors (ROE, ROA, ROC) outperformed in February - ROA +7.0%, among the top five factors overall. But Quality has underperformed in three out of four Recoveries and is also the most expensive and crowded of all factor groups we follow (Exhibit 9). (*Continues inside...*) **Stock lists/performance in Excel:** [Research Library](#)

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

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Exhibit 1: Best and worst performing screens in February
As of 2/29/2024

Top 5 / Bottom 5 screens

Top 5 screens	Perf.
Price Returns (11-m since 1 y ago)	8.8%
Price Returns (12-Month)	8.7%
Relative Strength (30wk/75wk)	8.1%
Price Returns (9-Month)	7.4%
ROA	7.0%
S&P 500 (Equal weighted)	3.8%

Bottom 5 screens	Perf.
Low Price	-0.8%
Dividend Yield (Total Return)	1.1%
Low Price to Book Value	1.3%
Forward Earnings Yield	2.1%
Most Active	2.3%
S&P 500 (Equal weighted)	3.8%

Source: FactSet, BofA US Equity & Quant Strategy

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Disclaimer: The valuations and screens contained herein are useful in assessing comparative valuations and comparative earnings prospects and are not intended to recommend transactions relating to any specific security. These indicators should be used in investment decisions only with other factors including financial risk, investment risk, management strategies and operating and financial outlooks.

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Growth stocks, which have lagged during Recoveries even more consistently (87% of time), are trading at a 15% premium to history and are 10% overweight in funds. YTD, Growth factors are ahead of the index by 2ppt on avg.

Recovery should spawn breadth

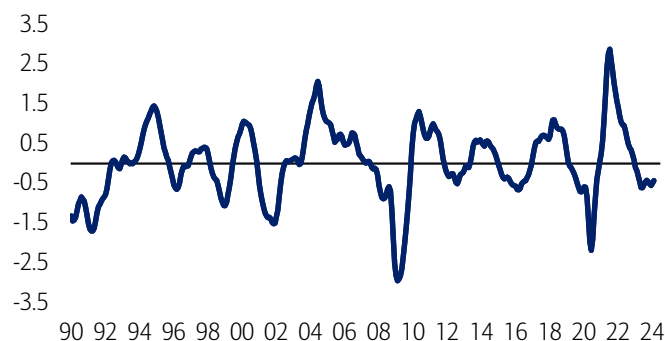
During Recoveries, the equal weighted S&P 500 has outperformed its cap-weighted counterpart 78% of the time, and by 7.2ppt on average. Our preference for income and better breadth are also supported by an earnings catch up story (Exhibit 8) as well as Fed cuts (assuming they happen as expected), pushing retiree cash into higher dividend yielding equities.

US Regime indicator

US Regime Indicator advanced in February

Exhibit 2: US Regime Indicator advanced in February

The US Regime indicator (Jan. 1990-February 2024)



Source: BofA US Equity & Quant Strategy, Refinitiv, ICE Data Indices, LLC, Institute for Supply Management, Bureau of Labor Statistics, Federal Reserve

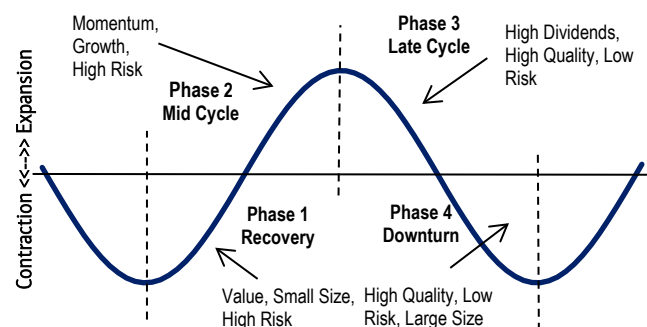
Note: Phase 1 – Early Cycle; Phase 2 – Mid Cycle; Phase 3 – Late Cycle; Phase 4 – Recession

Disclaimer: The indicator identified as the US Regime Indicator above is intended to be an indicative metric only and may not be used for reference purposes or as a measure of performance for any financial instrument or contract, or otherwise be relied upon by third parties for any other purpose, without the written consent of BofA Global Research. This indicator was not created to act as a benchmark.

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Exhibit 3: US Regimes – a heuristic

Value, Small Size, High Risk tend to fare well in Recovery



Source: BofA US Equity & US Quant Strategy

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Exhibit 4: Five raw inputs improved from last month (EPS Revisions, Inflation composite, GDP Forecast, 10-y Treasury yield, High Yield credit spreads)

US Regime indicator inputs (available as of 2/24/2024)

	Z-Score summary				Raw Level summary			Description	
	Z-Score based on:	Z-Score Latest	Z-Score Prev.	1m chg (+/-)	Current Level	Prev Month	1m chg (+/-)	L-T Avg	Description
EPS Revisions Ratio	level	0.02	-0.15	+	0.91	0.83	+	0.9	% of companies with improving EPS forecasts vs 3-m ago vs those with declining forecasts
Inflation composite	y/y	-0.43	-0.41	-	464.3	461.0	+	293.8	A BofA composite based on CPI, PPI, Commodity prices and wage inflation
CPI (12/23)					3.1	3.4	-	2.8	Consumer Price Index
PPI (12/23)					-1.1	-0.1	-	2.4	Producer Price Index
Commodities (y/y, 12/23)					0.0	-5.0	+	4.9	Prices of 19 commodities weighted by importance to global trade
AHE (y/y, 12/23)					4.8	4.6	+	3.2	Average Hourly Earnings
GDP Forecast	level	-0.50	-0.90	+	2.0%	1.5%	+	2.5%	US GDP Economic Forecast
10-yr US Treasury Yield	y/y	0.14	0.23	-	4.25	3.91	+	4.23	General level of interest rates in the economy
ISM Manufacturing PMI	level	-0.96	-0.70	-	47.8	49.1	-	52.5	Survey measuring manufacturing trends (>50 expansion)
Leading Econ. Indicators	y/y	-1.52	-1.56	+	102.7	103.1	-	88.7	Factors that can predict economic changes before shifts occur
Capacity Utilization	y/y	-0.36	-0.09	-	78.5	78.7	-	78.8	Tracks the utilization of the installed productive capacity in the production of goods and svcs
High Yield credit spread	-1*/y/y	0.65	0.39	+	329.0	359.0	+	539.7	A gauge of financial/credit stress (higher = more stress)

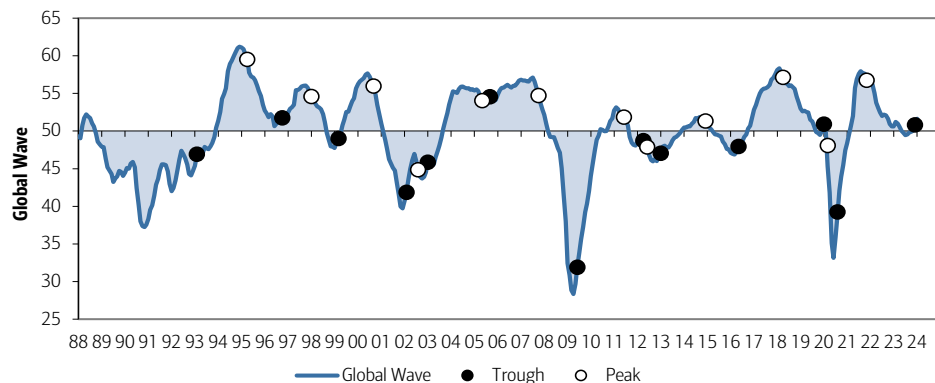
Source: BofA US Equity & Quant Strategy, Refinitiv, ICE Data Indices, LLC, Institute for Supply management, Bureau of Labor Statistics, Federal Reserve

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Chart 1: Global Wave

The Global Wave signal is positive for equities and cyclical assets



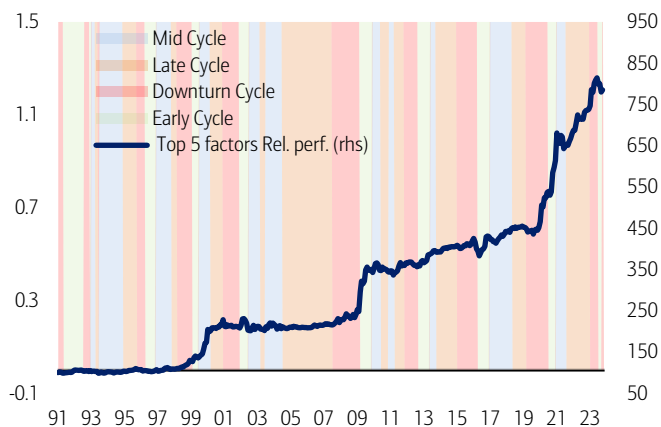
Source: BofA Global Quantitative Strategy, MSCI, IBES, Haver, Bloomberg, OECD, IMF, ICE Bond Indices, National Statistics Database

The sentiment indicator identified as Global Wave above is intended to be an indicative metric only and may not be used for reference purposes or as a measure of performance for any financial instrument or contract, or otherwise relied upon by third parties for other purpose, without the prior written consent of BofA Research. This sentiment indicator was not created to act as a benchmark.

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Exhibit 5: The best three factors for each regime generated 6.6ppt of alpha p.a. since 1990

Relative cumulative performance: the average of three best factors for each regime

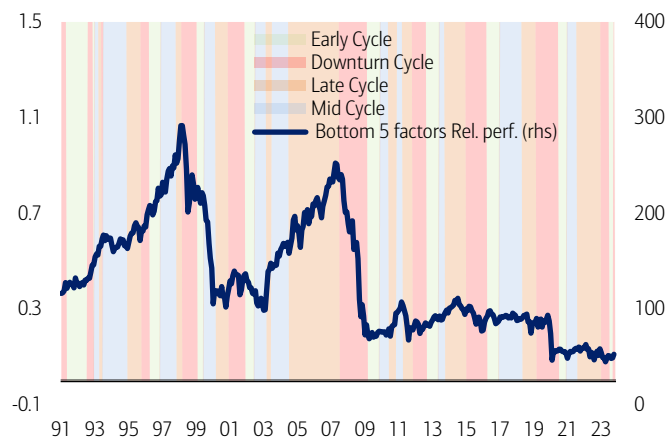


Source: BofA US Equity & Quant Strategy, FactSet

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Exhibit 6: The weakest three factors for each regime underperformed the index by 2.2ppt p.a. since 1990

Relative cumulative performance: the average of three best factors for each regime

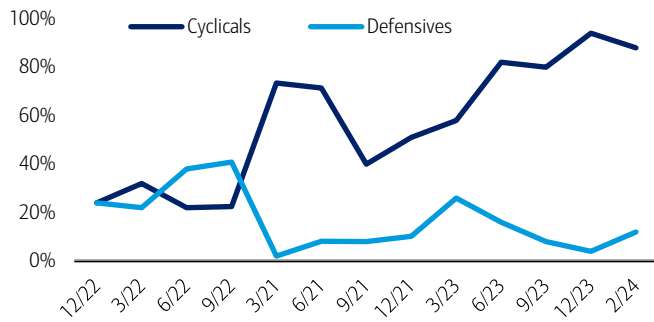


Source: BofA US Equity & Quant Strategy, FactSet

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Exhibit 7: Momentum has rotated into Cyclical and might fare well in the current Recovery

12-month Momentum cyclical and defensive sectors weight



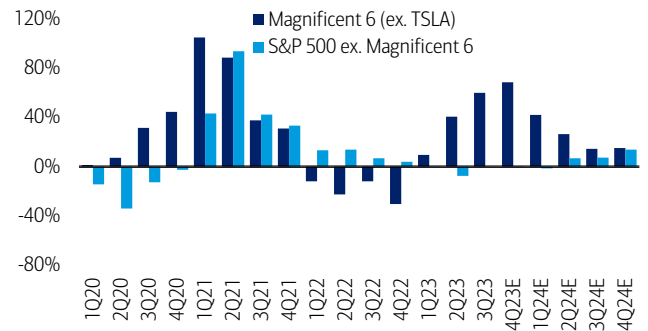
Source: BofA US Equity & Quant Strategy, FactSet

Cyclicals = Discretionary, Industrials, Info. Tech., Materials. Defensives = Staples, Health Care, Utilities

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Exhibit 8: S&P 500 ex. The Magnificent 6 EPS growth is catching up to that of the Magnificent 6

YoY qrtly earnings growth of Magnificent 6 (ex. TSLA) vs. Other 494 (1Q20-4Q24E)

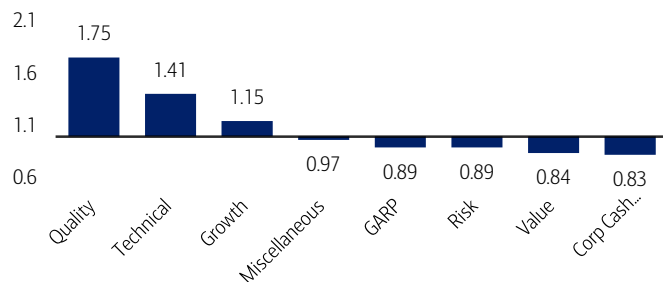


Source: BofA US Equity & Quant Strategy, FactSet

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Exhibit 9: Quality is the most expensive factor group

Average Relative Price / Book vs equal-weighted S&P 500 index

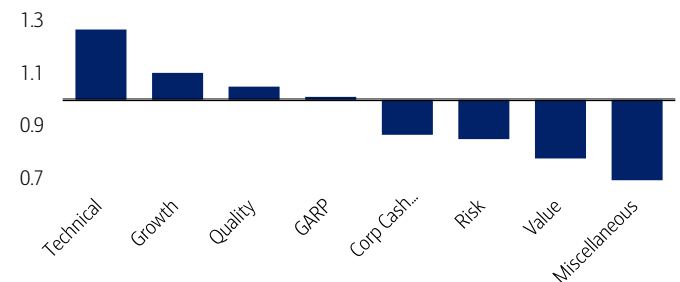


Source: BofA US Equity & Quant Strategy, FactSet

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Exhibit 10: Value is underweight by active managers

Relative weight in mutual fund holdings vs S&P 500 index



Source: BofA US Equity & Quant Strategy, FactSet Ownership

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US Regime Indicator as a tool for factor investing

Factor behavior has been relatively well behaved during different phases of the US Regime cycle. High Quality and Large Cap tend to outperform during the “Downturn” phase of the cycle, whereas Value, High Risk and Small Caps tend to outperform during the “Recovery” phase.

Exhibit 11: Style performance in the four US Regime indicator phases

Relative performance vs. equal-weighted S&P 500

		Value	Growth	Momentum	High Quality	Low Quality	High Risk	Low Risk	Large Cap	Small Cap	Low Beta	High Div. Yield
Phase 1 Recovery	Avg:	19.4%	-7.5%	-5.9%	-6.0%	8.4%	18.4%	-10.7%	-8.4%	19.0%	-12.8%	7.0%
	Median:	14.9%	-5.3%	-1.7%	-6.5%	10.7%	12.9%	-12.5%	-7.8%	11.2%	-13.4%	7.8%
	Hit Rate:	100.0%	12.5%	50.0%	25.0%	75.0%	75.0%	25.0%	12.5%	75.0%	12.5%	87.5%
Phase 2 Mid Cycle	Avg:	3.8%	10.9%	11.2%	0.8%	3.9%	11.0%	-6.6%	-2.1%	6.0%	-12.6%	-6.7%
	Median:	4.3%	2.3%	4.0%	-0.7%	2.2%	10.3%	-4.9%	-6.6%	9.1%	-12.1%	-7.1%
	Hit Rate:	77.8%	66.7%	77.8%	44.4%	66.7%	77.8%	22.2%	33.3%	77.8%	0.0%	11.1%
	Hit Rate ex. Tech Bubble:	87.5%	62.5%	75.0%	37.5%	75.0%	75.0%	25.0%	25.0%	87.5%	0.0%	12.5%
Phase 3 Late Cycle	Avg:	-0.8%	-6.2%	-3.4%	3.5%	-6.9%	-11.4%	8.4%	-1.2%	-7.6%	7.0%	7.5%
	Median:	-0.9%	-1.8%	2.3%	5.8%	-6.6%	-8.9%	9.8%	2.3%	-8.1%	3.2%	3.5%
	Hit Rate:	44.4%	33.3%	55.6%	66.7%	22.2%	11.1%	77.8%	55.6%	11.1%	55.6%	77.8%
Phase 4 Downturn	Avg:	-3.2%	1.5%	2.4%	7.5%	-3.1%	-3.7%	2.3%	6.7%	-3.6%	-2.5%	-3.9%
	Median:	-6.9%	1.1%	-0.1%	7.6%	0.0%	0.0%	3.0%	6.6%	-7.7%	-0.3%	-6.0%
	Hit Rate:	25.0%	62.5%	50.0%	75.0%	37.5%	50.0%	75.0%	87.5%	12.5%	50.0%	25.0%

Note: Performance is calculated as price return relative to equal-weighted S&P 500, for all styles except High Dividend Yield, where total return for the style and the index are used. Hit rate = % of months in phase where style outperformed equal-weighted S&P 500 and based on the January 1990 – present time period.

Source: BofA US Equity & Quant Strategy, Refinitiv, ICE Data Indices, LLC, Institute for Supply Management, Bureau of Labor Statistics, Federal Reserve

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Inputs for the US Regime Indicator include the following eight macroeconomic or top-down variables:

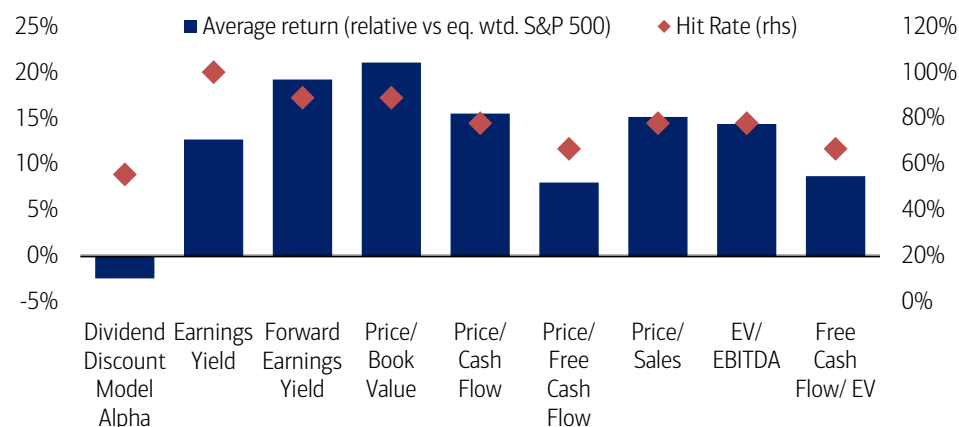
- **Earnings Revision ratio:** Calculated as the ratio between the number of companies in the S&P 500 for which Thomson Financial consensus earnings estimates have been raised versus those that have been lowered. A rising ratio indicates an improving economic cycle.
- **ISM PMI:** ISM PMI Institute for Supply Management Manufacturing Purchasing Managers Index, represented as the Z-Score. The ISM Manufacturing Index monitors economic activity as reported by 300 supply management professionals. The reading of the index above (below) 50 indicated economic expansion (contraction).
- **Inflation:** The 12-month change in the BofA Inflation Composite (see methodology further below), represented as the Z-Score. Rising inflation indicates improving economic conditions.
- **GDP Forecast:** The next 12-month US GDP growth forecast from the Federal Reserve Bank of Philadelphia Survey, represented as the Z-Score.
- **Leading Economic Indicators index:** The 12-month change in the Conference Board US Leading Index of Ten Economic Indicators, represented as a Z-Score. A rising Z-Score indicates improving economic conditions.
- **US Capacity Utilization:** The 12-month change in US capacity utilization, represented as the Z-score. The capacity utilization rate indicates the percentage of total economic capacity currently utilized. Rising capacity utilization implies improving economic conditions. Rising capacity utilization suggests more expanding economic cycle and potentially rising inflationary pressure.

- **10-yr US Treasury Bond Yield:** The 12-month change in the bond yield, represented as the Z-Score. Rising yields indicate improving economic conditions.
- **High Yield corporate bond credit spread:** The 12-month change in the US High Yield credit spread of the ICE BofA US High Yield Index, represented as a Z-score. Falling spreads indicate improving economic conditions.

What to own in a Recovery? Value, dividend payers, beta

Exhibit 12: Deep value factors had the highest hit rates in Recovery – 100% for EPS Yield (i.e. Low P/E) and 89% each for Forward EPS Yield and Low Price / Book

Value factors performance and hit (outperformance) rates during Recoveries



Source: BofA US Equity & Quant Strategy, FactSet, Bloomberg

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Exhibit 13: Historically, Russell 1000 Growth lagged Russell Value after periods of extreme (25%+) outperformance

Subsequent Russell 1000 Growth index relative performance vs the Russell 1000 Value index after 12-month rolling periods of 25%+ outperformance

	Next 3 months	Next 6 months	Next 12 months
Rel. Ret:	-3.9%	-10.4%	-16.5%
Hit Rate (Value led):	63%	79%	74%

Source: BofA US Equity & Quant Strategy, Bloomberg

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The Russell 1000 Growth index outperformed the Russell 1000 Value index by 33% in 2023. Historically, Russell Value led Russell Growth over the 3-, 6- and 12- subsequent months after episodes of Russell Growth extreme outperformance.

Exhibit 14: Dividend yield is relatively inexpensive vs. history

Fwd P/E of high dividend yield factor relative to the equal-weighted S&P 500 (2008-2/2024)



Source: BofA US Equity & Quant Strategy, FactSet Ownership

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Exhibit 15: Dividend Growth valuations remain elevated vs. Dividend Yield

Valuations: Dividend Growth vs Dividend Yield (Relative Price to Book vs index, 2008-2/2024)

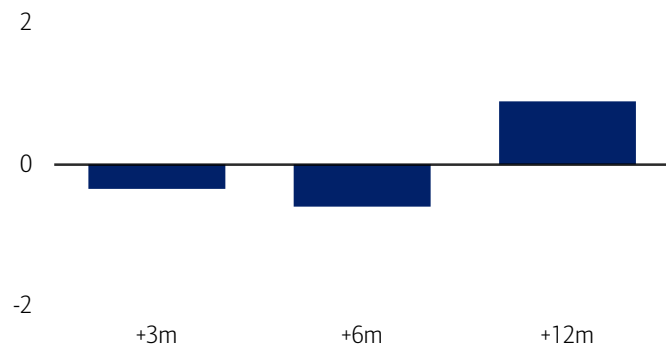


Source: BofA US Equity & Quant Strategy, FactSet

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Exhibit 16: Companies announcing special dividends underperformed over three and six subsequent months, but over 12-months outperformed its sector...

Median Relative Performance vs. Sector (data since 2010)

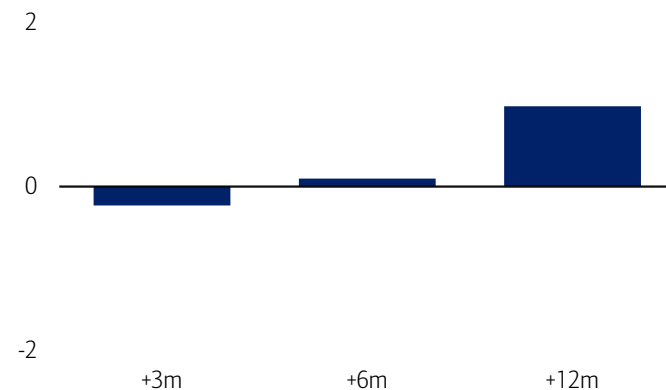


Source: BofA US Equity & Quant Strategy, Bloomberg

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Exhibit 17: as well as the index

Median Relative Performance vs. S&P 500 (data since 2010)

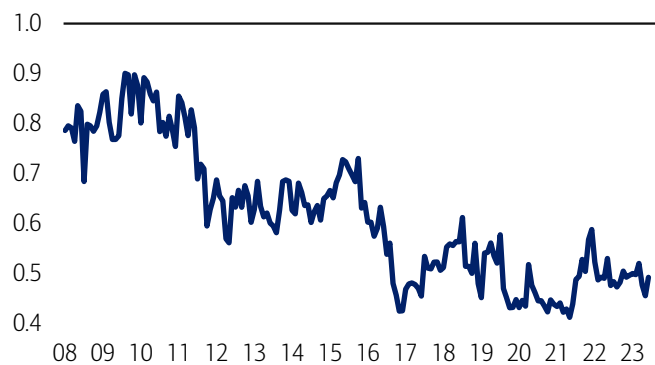


Source: BofA US Equity & Quant Strategy, Bloomberg

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Exhibit 18: Dividend yield is unloved by traditional active funds

LO relative weight in high dividend yield factor (2008-2/2024)



Source: BofA US Equity & Quant Strategy, FactSet Ownership

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Exhibit 19: High beta vs. low beta positioning is closing in on all-time lows

LO relative weight in high beta factor vs. low beta factor (2008-2/2024)



Source: BofA US Equity & Quant Strategy, FactSet Ownership

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Best factors for cut vs. no cut

Exhibit 20: Best performing factors after the first rates cut included, quality factors, momentum, Dividend Growth, FCF/EV among others

12-mth Relative performance vs equal-weighted S&P 500 index after the initial Fed rate cut

Factor	Avg return	Median return	Hit rate
Price Return - 12-mth and 1-mth Reversal	5.1%	5.0%	100%
1yr ROE Adj	9.0%	8.8%	80%
5y ROE	4.9%	8.3%	80%
5yr ROE Adj	7.0%	7.8%	80%
ROC	7.9%	6.8%	80%
1yr ROE	7.7%	6.1%	80%
ROA	8.8%	3.0%	80%
Dividend Growth	1.4%	1.6%	80%
Short Interest	2.2%	2.6%	75%
Price Return - 11-mth Perf.	5.3%	5.6%	60%
Neglect - Analyst Coverage	1.0%	3.2%	60%
Price Return - 12-mth and 1-mth Performance	3.6%	2.3%	60%
Share Repurchase	2.8%	2.1%	60%
Free Cash Flow/ EV	2.0%	1.9%	60%
EV/ EBITDA	-1.2%	1.3%	60%
Relative Strength - 5wk/30wk MA	-0.3%	1.3%	60%
Price Return - 9-mth Perf.	2.7%	1.1%	60%
Price to Moving Average (200 day)	1.2%	0.8%	60%
Price Return - 12-mth Perf.	2.9%	0.1%	60%

Source: BofA US Equity & Quant Strategy, FactSet

Note: based on data since 1989

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Exhibit 21: The weakest factors after the first cut were Risk (Beta, EPS Dispersion and Variability of EPS), deep value, Dividend Yield, Small Size

12-mth Relative performance vs equal-weighted S&P 500 index after the initial Fed rate cut

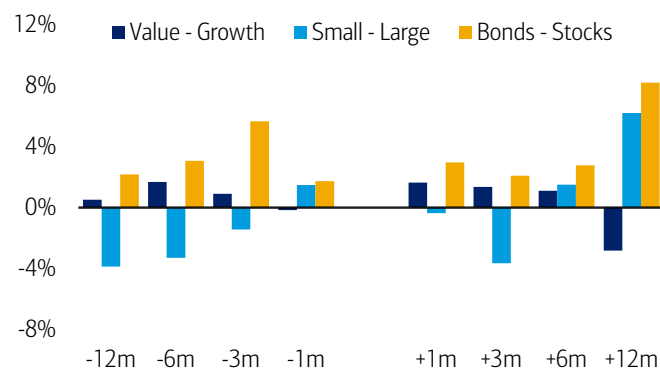
Factor	Avg return	Median return	Hit rate
Estimate Dispersion	-17.3%	-19.2%	0%
Earnings Torpedo	-9.3%	-10.3%	0%
Beta	-14.0%	-10.3%	0%
Variability of Earnings	-9.6%	-10.1%	0%
Price/ Book Value	-12.1%	-16.4%	20%
Forward Earnings Yield	-9.7%	-15.5%	20%
Earnings Yield	-8.4%	-10.2%	20%
Low Price	-10.1%	-9.2%	20%
Price/ Sales	-6.8%	-8.3%	20%
Earning Momentum	-4.4%	-4.8%	20%
Dividend Yield	-1.3%	-4.6%	20%
EPS Estimate Revisions	-4.8%	-4.0%	20%
P/E-to-Growth	-6.2%	-3.4%	20%
Relative Strength - 10wk/40wk MA	-0.8%	-2.4%	20%
Price/ Cash Flow	-7.5%	-8.3%	40%
Proj. 5yr EPS Growth	-6.2%	-7.5%	40%
Price/ Free Cash Flow	-0.1%	-3.5%	40%
Most Active	-2.4%	-3.1%	40%
Price Return - 3-mth Perf.	-1.7%	-1.5%	40%
Relative Strength - 30wk/75wk MA	2.7%	-1.2%	40%
Neglect - Institutional Ownership	-1.8%	-0.9%	40%
Size	-5.2%	-0.1%	40%

Source: BofA US Equity & Quant Strategy, FactSet Note: based on data since 1989

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Exhibit 22: After the first Fed cut Value led Growth for 6 months, Small led Large (3-mth, 6-mth and 12-mth) and bonds led stocks

Factor performance prior and after the first Fed rate cut



Source: Bloomberg, US Equity & Quant Strategy; Dartmouth university data library; Fama-French definition of Value, Growth, Small Cap and Large Cap

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Exhibit 23: S&P 500 sectors' outperformance hit rate around the first Fed cut

% of time sectors outperformed the S&P 500 around the first Fed cut since 1974

	# of months before/after first cut							
	-12	-6	-3	-1	1	3	6	12
Comm. Svcs.	56%	56%	33%	89%	11%	33%	44%	44%
Cons. Disc.	33%	44%	22%	22%	89%	78%	89%	44%
Staples	78%	67%	89%	56%	33%	11%	22%	33%
Energy	56%	44%	56%	67%	56%	56%	22%	56%
Financials	56%	67%	67%	67%	33%	33%	56%	56%
Health Care	56%	44%	67%	22%	22%	22%	22%	11%
Industrials	44%	56%	22%	33%	78%	56%	56%	44%
Tech	33%	33%	33%	33%	78%	44%	78%	67%
Materials	33%	56%	44%	33%	56%	56%	78%	78%
Real Estate	44%	44%	44%	56%	44%	56%	89%	67%
Utilities	22%	44%	56%	56%	44%	33%	22%	67%

Source: BofA US Equity & Quant Strategy, FactSet, Bloomberg

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Exhibit 24: Dividend Yield and Dividend Growth factors fared best after positive economic surprises. Value also did well, led by Price/Free Cash Flow.

12-mth Relative performance vs equal-weighted S&P 500 index after positive economic surprises

Factor	Avg return	Median return	Hit rate
Dividend Growth	5.4%	5.2%	90%
Dividend Yield	13.0%	9.4%	80%
Price/ Free Cash Flow	5.7%	4.3%	80%
Price/ Sales	5.5%	5.2%	80%
EV/ EBITDA	6.5%	5.6%	80%
Price/ Cash Flow	3.3%	3.6%	70%
Free Cash Flow/ EV	7.7%	3.3%	70%
Relative Strength - 5wk/30wk MA	0.1%	1.9%	70%
Price Return - 3-mth Perf.	-0.7%	1.4%	70%
Low Price	2.9%	3.8%	70%
Share Repurchase	5.6%	5.2%	70%
Price Return - 12-mth and 1-mth Reversal	-0.3%	1.8%	60%
Most Active	-1.8%	1.4%	60%
Earning Momentum	-2.1%	0.8%	60%
Earnings Torpedo	5.6%	6.3%	60%
5y ROE	1.8%	2.3%	60%
Size	2.5%	2.4%	60%

Source: BofA US Equity & Quant Strategy, FactSet, Bloomberg

Note: Based on top 10 economic surprises since Jan. 2000 according to the Bloomberg ECO Surprise Index (ESI).

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Exhibit 25: L-T Growth and Beta lagged; Quality underperformed

12-mth Relative performance vs equal-weighted S&P 500 index after positive economic surprises

Factor	Avg return	Median return	Hit rate
Proj. 5yr EPS Growth	-8.0%	-3.1%	20%
Beta	-7.9%	-5.4%	30%
Relative Strength - 30wk/75wk MA	-6.6%	-3.0%	30%
Price to Moving Average (200 day)	-2.4%	-2.2%	30%
Variability of Earnings	-3.4%	-5.2%	40%
1yr ROE Adj	-1.4%	-3.7%	40%
ROA	-1.0%	-3.6%	40%
Forward Earnings Yield	3.4%	-2.3%	40%
Price Return - 11-mth Perf.	-3.6%	-2.3%	40%
ROC	-0.4%	-2.1%	40%
Price Return - 12-mth Perf.	-3.1%	-1.2%	40%
Neglect - Analyst Coverage	0.4%	-0.7%	40%
Neglect - Institutional Ownership	-0.5%	-0.2%	40%

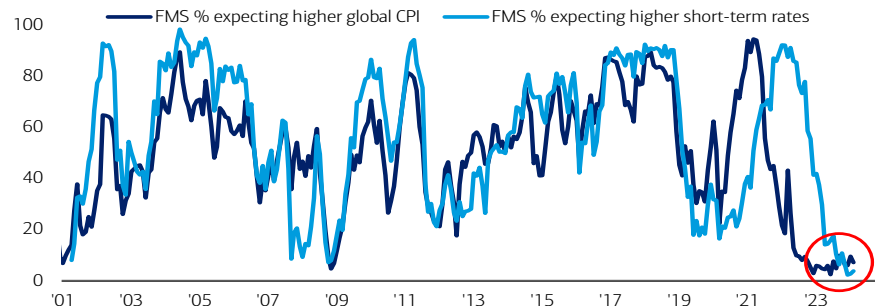
Source: BofA US Equity & Quant Strategy, FactSet, Bloomberg

Note: Based on top 10 economic surprises since Jan. 2000 according to the Bloomberg ECO Surprise Index (ESI).

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Chart 2: Just 4% expect higher short-term rates, 7% higher inflation

FMS % expecting higher global CPI vs % expecting higher short-term rates



Source: BofA Global Fund Manager Survey

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Majority of BofA Global FMS investors ([see the survey](#)) expect lower short-term rates (90%) and lower inflation (77%); only 4% expect higher short-term rates while only 7% expect inflation to rise.

Exhibit 26: Inflation expectations are near the lowest level since 2013

Inflation Expectations Median 3 Year Ahead Expected Inflation Rate



Source: BofA US Equity & Quant Strategy, Federal Reserve Bank of New York, Bloomberg

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Yield curve and factor performance

Exhibit 27: Factor performance in different Yield Curve regimes (relative vs. eq. weighted S&P 500 index)

Based on data from 1986-present

	Average				Median				Hit rate			
	bull-steepener	bull-flattener	bear-flattener	bear-steepener	bull-steepener	bull-flattener	bear-flattener	bear-steepener	bull-steepener	bull-flattener	bear-flattener	bear-steepener
P/E-to-Growth	0.1%	0.0%	0.5%	0.6%	0.2%	-0.1%	0.2%	0.3%	57.1%	49.0%	57.1%	57.1%
Dividend Discount Model Alpha	0.3%	0.1%	0.0%	-0.7%	0.3%	-0.1%	0.1%	-0.4%	53.2%	46.9%	53.1%	41.3%
Earnings Yield	0.0%	0.0%	0.1%	0.5%	0.1%	-0.2%	0.2%	0.1%	51.9%	47.6%	53.1%	53.2%
Forward Earnings Yield	-0.1%	-0.1%	0.3%	0.7%	-0.2%	-0.4%	0.0%	0.7%	49.4%	45.6%	53.1%	60.3%
Price/ Book Value	-0.4%	-0.8%	0.4%	1.1%	-0.6%	-0.8%	0.1%	0.7%	45.5%	35.4%	54.1%	61.9%
Price/ Cash Flow	0.0%	-0.3%	0.0%	0.6%	-0.2%	-0.4%	0.1%	0.5%	49.4%	44.2%	52.0%	62.7%
Price/ Free Cash Flow	0.3%	0.0%	0.1%	0.5%	0.0%	0.2%	0.0%	0.4%	51.9%	53.7%	50.0%	60.3%
Price/ Sales	-0.5%	-0.2%	0.4%	1.0%	-0.8%	-0.6%	0.3%	0.8%	39.0%	40.1%	56.1%	65.1%
EV/ EBITDA	0.2%	-0.2%	0.2%	1.0%	0.4%	-0.3%	0.3%	1.1%	55.8%	44.2%	53.1%	65.1%
Free Cash Flow/ EV	0.6%	0.2%	0.3%	0.5%	0.4%	0.1%	0.4%	0.5%	58.4%	55.1%	56.1%	61.1%
Dividend Yield	0.6%	0.5%	0.0%	-0.1%	0.7%	0.4%	-0.1%	-0.3%	54.5%	53.1%	49.0%	45.2%
Dividend Growth	0.3%	0.1%	0.2%	0.2%	0.5%	0.2%	0.5%	0.2%	61.0%	55.1%	65.3%	56.3%
Share Repurchase	0.3%	0.0%	0.1%	0.2%	0.2%	0.1%	0.1%	0.1%	57.1%	53.1%	56.1%	54.0%
Relative Strength - 30wk/75wk MA	0.0%	0.1%	0.8%	-0.1%	0.3%	0.4%	0.8%	-0.1%	51.9%	55.1%	63.3%	47.6%
Relative Strength - 5wk/30wk MA	-0.3%	0.3%	0.3%	0.0%	-0.2%	0.3%	0.1%	0.3%	47.9%	55.9%	54.6%	52.4%
Relative Strength - 10wk/40wk MA	-0.4%	0.5%	0.3%	-0.1%	-0.1%	0.4%	0.3%	0.1%	47.9%	55.9%	52.6%	50.8%
Price to Moving Average (200 day)	-0.3%	0.4%	0.2%	-0.2%	-0.2%	0.3%	0.1%	-0.2%	46.6%	55.9%	53.6%	46.8%
Price Return - 12-mth Perf.	-0.5%	0.6%	0.6%	-0.2%	-0.3%	0.4%	0.6%	-0.2%	46.6%	55.9%	59.8%	47.6%
Price Return - 9-mth Perf.	-0.5%	0.7%	0.5%	-0.2%	-0.2%	0.5%	0.3%	0.1%	46.6%	60.8%	60.8%	53.2%
Price Return - 3-mth Perf.	-0.6%	0.2%	0.3%	0.1%	0.0%	0.1%	0.3%	0.1%	47.9%	53.1%	53.6%	53.2%
Price Return - 11-mth Perf.	-0.4%	0.5%	0.6%	-0.1%	0.3%	0.4%	0.6%	0.3%	52.1%	56.6%	59.8%	53.2%
Price Return - 12-mth and 1-mth Perf.	-0.6%	0.3%	0.3%	-0.2%	-0.2%	0.3%	0.4%	0.1%	47.9%	56.6%	55.7%	54.0%
Price Ret. - 12-mth and 1-mth Reversal	0.0%	0.5%	0.5%	-0.1%	0.4%	0.4%	0.6%	0.0%	54.8%	59.4%	63.9%	49.2%
Most Active	0.1%	-0.2%	0.7%	0.6%	0.8%	-0.4%	0.6%	0.7%	59.2%	43.2%	58.2%	62.7%
Earning Momentum	-0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.2%	49.4%	51.0%	51.0%	54.8%
Proj. 5yr EPS Growth	-0.6%	-0.2%	0.7%	0.5%	-0.1%	-0.3%	0.6%	0.5%	48.1%	46.9%	63.3%	58.7%
Positive EPS Surprise	0.3%	0.1%	0.0%	0.1%	0.3%	0.1%	0.2%	0.2%	55.8%	52.4%	61.2%	54.8%
EPS Estimate Revisions	-0.6%	0.2%	0.4%	0.3%	-0.6%	0.3%	0.3%	0.2%	41.8%	54.1%	56.3%	52.1%
Equity Duration	-0.8%	0.2%	0.5%	-0.2%	-0.9%	0.2%	0.4%	0.0%	31.2%	52.4%	65.3%	49.2%
1yr ROE	0.4%	0.4%	-0.1%	-0.1%	0.2%	0.4%	0.0%	-0.1%	59.7%	63.3%	50.0%	46.8%
5y ROE	0.3%	0.3%	0.3%	-0.2%	0.4%	0.3%	0.1%	-0.3%	55.8%	58.5%	51.0%	39.7%
1yr ROE Adj	0.5%	0.3%	0.2%	-0.2%	0.1%	0.4%	0.1%	-0.1%	55.8%	61.2%	53.1%	49.2%
5yr ROE Adj	0.5%	0.2%	0.2%	0.0%	0.3%	0.0%	-0.1%	-0.1%	53.2%	49.7%	46.9%	46.8%
ROA	0.6%	0.4%	0.0%	-0.2%	0.6%	0.6%	-0.1%	-0.1%	59.7%	60.5%	49.0%	46.8%
ROC	0.2%	0.6%	0.0%	-0.2%	-0.2%	0.8%	-0.1%	-0.1%	42.9%	61.9%	46.9%	46.0%
Beta	-0.6%	-0.6%	0.7%	1.1%	-0.8%	-0.8%	0.1%	0.5%	42.9%	38.1%	56.1%	59.5%
Variability of Earnings	0.0%	-0.1%	0.1%	0.2%	-0.2%	-0.2%	0.3%	0.1%	45.5%	43.5%	56.1%	53.2%
Estimate Dispersion	-0.6%	-0.9%	0.3%	1.1%	-0.8%	-0.9%	0.2%	0.8%	38.8%	38.5%	52.9%	57.1%
Low Price	-0.6%	-0.6%	0.6%	1.4%	-0.4%	-0.9%	0.4%	1.0%	42.9%	38.8%	57.1%	62.7%
Neglect - Institutional Ownership	0.2%	-0.1%	-0.1%	-0.5%	0.0%	-0.1%	-0.3%	-0.5%	49.4%	45.6%	45.9%	38.1%
Neglect - Analyst Coverage	-0.1%	0.2%	-0.1%	-0.1%	-0.3%	0.2%	0.2%	-0.1%	43.3%	56.3%	56.3%	47.1%
Size	-0.3%	-0.2%	0.2%	1.0%	-0.7%	-0.4%	0.2%	0.6%	36.4%	45.6%	51.0%	62.7%
Foreign Exposure	-0.1%	-0.1%	0.4%	0.6%	0.1%	-0.2%	0.3%	0.7%	51.9%	47.6%	59.2%	61.1%
Short Interest	0.0%	0.1%	0.2%	0.0%	0.1%	0.1%	0.1%	0.0%	51.1%	52.8%	57.5%	49.1%

Source: FactSet, Bloomberg, BofA US Equity & Quant Strategy

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Screening for secure, not stretched, dividends

We believe that we are now in a total return world in which the contribution of dividends to total market returns could be significantly higher than it was in the last decade, a period marked by falling cash yields and lofty price returns (see our [Year Ahead 2023 report](#)). We advise investors to seek out companies with above-market and secure (not stretched) dividend yields. Quintile 2 of the Russell 1000 by trailing dividend yield may be a good first-pass screen: it includes the second-highest tranche of dividend yielders in the index. It has guarded against owning distressed companies that migrate into Quintile 1 (the highest dividend yield group) if prices fall ahead of potential dividend cuts. Quintile 2 also incorporates a “buy low, sell high” valuation discipline in that if prices rise faster than dividends grow, companies will migrate into Quintile 3.

Exhibit 28: Quintile 2 Russell 1000 stocks

For March 2024

Ticker	Company Name	Sector	Dividend Yield (%)	Ticker	Company Name	Sector	Dividend Yield (%)
ESS	Essex Property Trust, Inc.	Real Estate	3.99	MDT	Medtronic Plc	Health Care	3.29
ARE	Alexandria Real Estate Equities, Inc.	Real Estate	3.98	NXST	Nexstar Media Group, Inc.	Comm. Svcs.	3.25
WEC	WEC Energy Group Inc	Utilities	3.98	ALLY	Ally Financial Inc	Financials	3.24
CVX	Chevron Corporation	Energy	3.97	AMT	American Tower Corporation	Real Estate	3.24
FITB	Fifth Third Bancorp	Financials	3.96	DINO	HF Sinclair Corporation	Energy	3.24
STAG	STAG Industrial, Inc.	Real Estate	3.96	OZK	Bank OZK	Financials	3.24
AEP	American Electric Power Company, Inc.	Utilities	3.96	IRM	Iron Mountain, Inc.	Real Estate	3.23
IPG	Interpublic Group of Companies, Inc.	Comm. Svcs.	3.95	PFG	Principal Financial Group, Inc.	Financials	3.22
XEL	Xcel Energy Inc.	Utilities	3.95	MDU	MDU Resources Group, Inc.	Industrials	3.21
KMB	Kimberly-Clark Corporation	Staples	3.90	CSCO	Cisco Systems, Inc.	Info. Tech.	3.20
VTRS	Viatis, Inc.	Health Care	3.88	MSM	MSC Industrial Direct Co., Inc. Class A	Industrials	3.17
INVH	Invitation Homes, Inc.	Real Estate	3.87	GPS	Gap, Inc.	Discretionary	3.17
NI	NiSource Inc	Utilities	3.84	OMC	Omnicom Group Inc	Comm. Svcs.	3.17
CNA	CNA Financial Corporation	Financials	3.82	TPG	TPG Inc Class A	Financials	3.16
LNT	Alliant Energy Corp	Utilities	3.79	HPE	Hewlett Packard Enterprise Co.	Info. Tech.	3.15
MS	Morgan Stanley	Financials	3.78	VAC	Marriott Vacations Worldwide Corporation	Discretionary	3.13
C	Citigroup Inc.	Financials	3.75	REYN	Reynolds Consumer Products Inc	Staples	3.12
AVB	AvalonBay Communities, Inc.	Real Estate	3.73	CLX	Clorox Company	Staples	3.12
MTB	M&T Bank Corporation	Financials	3.72	HRL	Hormel Foods Corporation	Staples	3.11
ED	Consolidated Edison, Inc.	Utilities	3.72	AMGN	Amgen Inc.	Health Care	3.11
HUN	Huntsman Corporation	Materials	3.71	KO	Coca-Cola Company	Staples	3.07
HPQ	HP Inc.	Info. Tech.	3.71	OWL	Blue Owl Capital, Inc. Class A	Financials	3.06
CRI	Carter's Incorporated	Discretionary	3.71	FIS	Fidelity National Information Services, Inc.	Financials	3.01
CRBG	Corebridge Financial, Inc.	Financials	3.71	TXN	Texas Instruments Incorporated	Info. Tech.	3.00
PEG	Public Service Enterprise Group Inc	Utilities	3.65	CG	Carlyle Group Inc	Financials	3.00
NTRS	Northern Trust Corporation	Financials	3.65	APD	Air Products and Chemicals, Inc.	Materials	2.99
PPL	PPL Corporation	Utilities	3.64	PEP	PepsiCo, Inc.	Staples	2.99
IDA	IDACORP, Inc.	Utilities	3.63	REXR	Rexford Industrial Realty, Inc.	Real Estate	2.99
EMN	Eastman Chemical Company	Materials	3.62	MET	MetLife, Inc.	Financials	2.95
JWN	Nordstrom, Inc.	Discretionary	3.62	DRI	Darden Restaurants, Inc.	Discretionary	2.95
FNF	Fidelity National Financial, Inc. - FNF Group	Financials	3.62	PSX	Phillips 66	Energy	2.95
PK	Park Hotels & Resorts, Inc.	Real Estate	3.61	JNJ	Johnson & Johnson	Health Care	2.91
M	Macy's, Inc.	Discretionary	3.61	VLO	Valero Energy Corporation	Energy	2.88
SWK	Stanley Black & Decker, Inc.	Industrials	3.61	JEF	Jefferies Financial Group Inc.	Financials	2.87
FNB	F.N.B. Corporation	Financials	3.60	EGP	EastGroup Properties, Inc.	Real Estate	2.87
FAF	First American Financial Corporation	Financials	3.60	TGT	Target Corporation	Staples	2.85
IBM	International Business Machines Corporation	Info. Tech.	3.58	LMT	Lockheed Martin Corporation	Industrials	2.84
STT	State Street Corporation	Financials	3.58	BAX	Baxter International Inc.	Health Care	2.83
DTE	DTE Energy Company	Utilities	3.58	PAYX	Paychex, Inc.	Industrials	2.82
TSN	Tyson Foods, Inc. Class A	Staples	3.58	BK	Bank of New York Mellon Corp	Financials	2.82
SON	Sonoco Products Company	Materials	3.56	AXS	Axis Capital Holdings Limited	Financials	2.81
PB	Prosperity Bancshares, Inc.(R)	Financials	3.54	UNM	Unum Group	Financials	2.81
AEE	Ameren Corporation	Utilities	3.54	PII	Polaris Inc.	Discretionary	2.80
PARA	Paramount Global Class B	Comm. Svcs.	3.53	CNP	CenterPoint Energy, Inc.	Utilities	2.80
GIS	General Mills, Inc.	Staples	3.52	SUI	Sun Communities, Inc.	Real Estate	2.78
XOM	Exxon Mobil Corporation	Energy	3.52	KDP	Keurig Dr Pepper Inc.	Staples	2.77
MTN	Vail Resorts, Inc.	Discretionary	3.51	BG	Bunge Global SA	Staples	2.77
COLD	Americold Realty Trust, Inc.	Real Estate	3.48	PKG	Packaging Corporation of America	Materials	2.76
COP	ConocoPhillips	Energy	3.47	TPR	Tapestry, Inc.	Discretionary	2.74

Exhibit 28: Quintile 2 Russell 1000 stocks

For March 2024

Ticker	Company Name	Sector	Dividend Yield (%)	Ticker	Company Name	Sector	Dividend Yield (%)
GLW	Corning Inc	Info. Tech.	3.47	NRG	NRG Energy, Inc.	Utilities	2.73
CPB	Campbell Soup Company	Staples	3.47	CHK	Chesapeake Energy Corporation	Energy	2.72
SJM	J.M. Smucker Company	Staples	3.46	BPOP	Popular, Inc.	Financials	2.71
WTRG	Essential Utilities, Inc.	Utilities	3.42	CMCSA	Comcast Corporation Class A	Comm. Svcs.	2.71
ABBV	AbbVie, Inc.	Health Care	3.40	GS	Goldman Sachs Group, Inc.	Financials	2.70
CMS	CMS Energy Corporation	Utilities	3.40	ATO	Atmos Energy Corporation	Utilities	2.68
NEE	NextEra Energy, Inc.	Utilities	3.39	BAC	Bank of America Corp	Financials	2.67
ORI	Old Republic International Corporation	Financials	3.38	ELS	Equity LifeStyle Properties, Inc.	Real Estate	2.66
SRE	Semptra	Utilities	3.37	WELL	Welltower Inc.	Real Estate	2.65
WBS	Webster Financial Corporation	Financials	3.36	RPRX	Royalty Pharma Plc Class A	Health Care	2.64
APA	APA Corporation	Energy	3.36	BKR	Baker Hughes Company Class A	Energy	2.64
CVS	CVS Health Corporation	Health Care	3.33	EWBC	East West Bancorp, Inc.	Financials	2.64
AAP	Advance Auto Parts, Inc.	Discretionary	3.33	CINF	Cincinnati Financial Corporation	Financials	2.63
DLR	Digital Realty Trust, Inc.	Real Estate	3.32	TAP	Molson Coors Beverage Company Class B	Staples	2.63
RYN	Rayonier Inc.	Real Estate	3.31	PLD	Prologis, Inc.	Real Estate	2.61
CFR	Cullen/Frost Bankers, Inc.	Financials	3.30	BX	Blackstone Inc.	Financials	2.60
ADM	Archer-Daniels-Midland Company	Staples	3.30	RTX	RTX Corporation	Industrials	2.59
CHRW	C.H. Robinson Worldwide, Inc.	Industrials	3.29	AVT	Avnet, Inc.	Info. Tech.	2.58

Source: FTSE Russell, Compustat, FactSet, BofA US Equity & Quant Strategy. This screen is not a recommended list either individually or as a group of stocks. Investors should consider the fundamentals of the companies and their own individual circumstances/objectives before making any investment decisions

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Top decile factor performance

Exhibit 29: 11-Month since 1 year ago Price Return fared best in February

Quantitative Strategies Performance (Top Decile as of 2/29/2024)

Strategies (based on the S&P 500)		1 M 3 M 6 M 12 M YTD					2 Yr Perf.		3 Yr Perf.		5 Yr Perf.		Inception Date
							Gross	Anlzd	Gross	Anlzd	Gross	Anlzd	
Price Returns (11-Month since 1 year ago)	Technical	8.8	16.8	15.9	23.7	11.8	23.4	11.1	27.5	8.4	73.4	11.6	1/31/2010
Price Returns (12-Month)	Technical	8.7	18.2	18.6	26.7	11.2	24.1	11.4	36.3	10.9	80.1	12.5	1/31/2010
Relative Strength (30wk/75wk)	Technical	8.1	19.3	22.2	27.6	12.1	22.9	10.9	33.6	10.1	79.1	12.4	8/31/1995
Price Returns (9-Month)	Technical	7.4	15.1	14.2	17.6	9.9	19.0	9.1	22.6	7.0	81.9	12.7	1/31/2010
ROA	Quality	7.0	16.0	15.6	28.8	7.5	19.2	9.2	34.3	10.3	93.6	14.1	4/30/1997
Price Returns (12-Month plus 1-Month)	Technical	6.8	12.7	14.6	20.1	4.4	8.9	4.4	20.0	6.3	68.2	11.0	1/31/2010
High Projected 5-Yr Growth	Growth	6.3	12.8	11.1	18.2	6.9	19.8	9.5	33.2	10.0	86.3	13.3	12/31/1988
Upward Estimate Revisions	Growth	6.3	11.2	9.2	10.4	7.0	17.7	8.5	48.2	14.0	97.7	14.6	12/31/1988
High Dividend Growth (Total Return)	Corp Cash Deployment	6.1	10.1	9.4	12.9	3.5	16.4	7.9	47.3	13.8	91.4	13.9	10/2/2001
Relative Strength (10wk/40wk)	Technical	6.0	12.8	10.6	21.1	10.1	24.7	11.7	17.8	5.6	76.8	12.1	1/31/2010
High Dividend Growth (Price Return)	Corp Cash Deployment	5.9	9.4	8.0	9.9	3.2	10.1	4.9	36.6	10.9	68.9	11.1	12/31/2004
ROE (5-Yr Avg. Adj. by Debt)	Quality	5.9	15.2	14.5	36.3	6.0	25.2	11.9	41.8	12.4	113.3	16.4	4/30/1997
High Beta	Risk	5.8	13.5	6.4	5.7	2.0	1.9	0.9	21.6	6.7	78.6	12.3	12/31/1988
Price Returns (12-Month plus 1-Month Reversal)	Technical	5.7	12.6	12.6	26.1	9.6	28.6	13.4	38.8	11.5	74.5	11.8	1/31/2010
Low PE to GROWTH	GARP	5.7	12.1	9.4	9.2	6.0	7.1	3.5	33.0	10.0	46.8	8.0	12/30/1988
High Foreign Exposure	Miscellaneous	5.5	11.3	7.0	12.8	2.3	10.8	5.2	24.6	7.6	90.8	13.8	12/31/1988
Relative Strength (Price/200-Day Moving Avg)	Technical	5.5	11.5	9.5	16.6	6.3	17.9	8.6	23.2	7.2	90.9	13.8	1/31/2010
ROC	Quality	5.4	13.5	13.7	24.3	7.8	17.0	8.2	33.6	10.1	85.1	13.1	4/30/1997
DDM Valuation	Value	5.3	11.1	7.3	12.2	5.3	8.9	4.3	26.0	8.0	20.4	3.8	12/31/1988
High Duration	Growth	5.3	12.4	13.2	21.1	3.9	6.1	3.0	18.0	5.7	67.4	10.9	12/31/1988
S&P 500 Index (Price Return)	Benchmark	5.2	11.6	13.1	28.4	6.8	16.5	7.9	33.7	10.2	83.0	12.9	
Relative Strength (5wk/30wk)	Technical	4.9	9.0	4.1	11.7	6.0	13.9	6.7	19.9	6.2	75.0	11.8	1/31/2010
ROE (1-Yr Avg. Adj. by Debt)	Quality	4.9	11.5	9.6	22.7	5.0	14.1	6.8	24.0	7.4	74.5	11.8	4/30/1997
ROE (1-Yr Average)	Quality	4.9	13.0	12.7	22.2	5.3	19.8	9.4	42.7	12.6	92.6	14.0	4/30/1997
ROE (5-Yr Average)	Quality	4.9	12.2	11.7	19.3	5.1	20.0	9.5	35.7	10.7	75.6	11.9	4/30/1997
Short Interest	Miscellaneous	4.6	9.7	9.6	12.5	4.2	4.5	2.2	17.3	5.5	38.6	6.7	10/31/2013
S&P 500 Equal Weighted (Total Return)	Benchmark	4.2	10.7	10.2	13.8	3.4	10.9	5.3	29.0	8.9	74.3	11.7	
Price Returns (3-Month)	Technical	4.2	4.0	-0.3	-3.2	2.0	-6.2	-3.2	-3.7	-1.2	49.6	8.4	1/31/2010
Forecast Positive Earnings Surprise	Growth	4.0	8.3	6.7	9.6	3.0	3.1	1.6	18.6	5.9	56.6	9.4	12/31/1988
Forecast Negative Earnings Surprise	Growth (Negative)	3.9	10.4	10.1	7.4	2.4	6.6	3.2	24.2	7.5	46.7	8.0	12/31/1988
S&P 500 Equal Weighted (Price Return)	Benchmark	3.8	10.0	8.9	11.4	3.0	6.3	3.1	21.6	6.7	57.1	9.5	
Analyst Coverage Neglect	Miscellaneous	3.7	9.0	7.8	8.0	1.1	3.7	1.9	22.1	6.9	61.2	10.0	6/30/1989
Low Price to Free Cash Flow	Value	3.7	10.1	10.3	11.6	3.6	3.5	1.8	20.7	6.5	29.7	5.3	7/30/2003
Earnings Yield	Value	3.6	11.6	9.8	3.3	3.0	-10.6	-5.5	8.0	2.6	15.9	3.0	12/31/1988
EPS Momentum	Growth	3.6	9.8	5.4	7.7	3.9	1.3	0.7	19.2	6.0	42.8	7.4	12/31/1988
High EPS Estimate Dispersion	Risk	3.5	8.8	2.6	3.2	-0.1	10.4	5.1	23.9	7.4	39.9	7.0	12/31/1988
Low Price to Cash Flow	Value	3.5	5.7	1.7	5.4	1.0	-2.6	-1.3	16.5	5.2	6.3	1.2	12/31/1988
Low EPS Torpedo	Growth (Negative)	3.2	8.7	6.8	4.3	0.8	2.6	1.3	15.4	4.9	78.4	12.3	12/31/1988
High Free Cash Flow to EV	Value	3.2	8.6	11.2	13.3	3.2	4.3	2.1	17.1	5.4	32.6	5.8	7/31/2010
High Variability of EPS	Risk	3.1	10.3	7.5	11.5	2.3	9.3	4.5	23.3	7.2	58.3	9.6	12/31/1988
Institutional Neglect	Miscellaneous	3.1	8.0	7.0	17.0	2.3	13.7	6.6	25.9	8.0	73.1	11.6	12/31/1988
Low EV/EBITDA	Value	2.9	6.2	3.4	7.8	1.3	1.0	0.5	22.3	6.9	22.2	4.1	9/30/2001
Small Size	Miscellaneous	2.6	12.2	5.8	-0.4	0.0	-7.0	-3.6	5.7	1.9	29.5	5.3	12/31/1988
Low Price to Sales	Value	2.5	8.4	9.0	4.4	2.1	-0.6	-0.3	16.8	5.3	62.9	10.3	12/31/1988
Share Repurchase	Corp Cash Deployment	2.4	9.0	11.2	18.5	3.7	16.5	7.9	43.1	12.7	66.8	10.8	12/31/2004
Most Active	Technical	2.3	8.9	9.3	13.1	1.1	7.2	3.5	18.8	5.9	82.3	12.8	8/31/2003
Forward Earnings Yield	Value	2.1	12.2	10.9	1.7	2.1	-0.7	-0.3	25.2	7.8	36.7	6.5	12/31/1988
Low Price to Book Value	Value	1.3	9.2	9.8	-1.4	-0.9	-10.1	-5.2	11.9	3.8	33.7	6.0	12/31/1988
Dividend Yield (Total Return)	Corp Cash Deployment	1.1	7.9	7.2	6.6	-1.6	8.4	4.1	38.8	11.6	67.0	10.8	10/3/2001
Dividend Yield (Price Return)	Corp Cash Deployment	0.7	6.5	4.4	0.8	-2.4	-2.7	-1.3	19.2	6.0	28.9	5.2	12/31/1988
Low Price	Risk	-0.8	5.7	1.8	-3.5	-3.7	-9.3	-4.8	7.5	2.4	36.6	6.4	12/31/1988

Source: BofA US Equity and Quant Strategy, FactSet

The performance does not reflect transaction costs or tax withholdings or any applicable advisory fees. Had these costs been reflected, the performance would have been lower. Performance is calculated on the basis of price return unless noted. Total return performance calculations assume that dividends paid on securities in a portfolio are deposited in a cash account on the ex-dividend date, and are not reinvested. Please see Performance Calculation methodology on page 60 for a full explanation.

*For screens that have less than 5 years history, the performance is since inception.

Past performance should not and cannot be viewed as an indicator of future performance. A complete performance record is available upon request

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Bottom decile factor performance

Exhibit 30: Low ROA lagged all Bottom decile factors in February Quantitative Strategies Performance (Bottom Decile, as of 2/29/2024)

							2 Yr Perf.		3 Yr Perf.		5 Yr Perf.		Inception
Strategies (Universe based on the S&P 500)		1 M	3 M	6 M	12 M	YTD	Gross	Anlzd	Gross	Anlzd	Gross	Anlzd	Date
Low ROA	Quality	-0.2	8.7	7.3	7.7	-2.1	10.6	5.2	16.6	5.3	69.2	11.1	3/31/2001
Price Returns (12-Month)	Technical	-0.1	7.1	0.9	-5.1	-5.1	-10.6	-5.5	3.5	1.2	35.8	6.3	2/27/1987
Price Returns (11-Month since 1 year ago)	Technical	0.5	8.0	2.2	-1.6	-4.5	-9.2	-4.7	2.5	0.8	36.8	6.5	2/27/1987
Price Returns (9-Month)	Technical	0.5	8.1	5.4	-2.1	-4.7	-12.5	-6.5	6.1	2.0	9.9	1.9	2/27/1987
Relative Strength (30wk/75wk)	Technical	0.6	7.9	3.1	2.0	-4.4	5.7	2.8	21.7	6.8	44.6	7.7	3/31/2001
Low ROC	Quality	0.9	9.5	5.9	9.5	-1.7	13.1	6.3	18.1	5.7	61.4	10.0	3/31/2001
Low EPS Estimate Dispersion	Risk	0.9	3.0	2.1	0.5	-0.6	4.7	2.3	23.9	7.4	37.4	6.6	2/28/1989
Low ROE (1-Yr Average)	Quality	1.0	9.6	5.2	6.8	-1.2	13.0	6.3	15.5	4.9	63.0	10.3	3/31/1986
Low EPS Momentum	Growth	1.2	8.1	4.7	3.9	-1.2	8.0	3.9	6.0	2.0	49.3	8.3	3/31/2001
Low Beta	Risk	1.3	4.4	3.2	2.1	1.9	8.8	4.3	27.6	8.5	33.4	5.9	7/30/1986
Low Earnings Yield	Value	1.4	9.3	7.1	11.9	-0.3	14.0	6.8	15.5	4.9	68.9	11.0	3/30/2001
Price Returns (12-m plus 1-m Reversal)	Technical	1.6	8.8	8.2	13.0	-2.6	1.6	0.8	15.7	5.0	36.7	6.5	2/27/1987
Low Projected 5-Yr Growth	Growth	1.7	9.8	6.8	3.6	0.2	2.5	1.3	10.9	3.5	55.4	9.2	3/31/2001
Price Returns (12-Month plus 1-Month)	Technical	1.9	7.5	2.2	-1.8	-1.3	-9.7	-5.0	9.2	3.0	54.0	9.0	2/27/1987
High Institutional Ownership	Miscellaneous	2.1	10.5	11.3	2.2	1.3	-4.9	-2.5	12.8	4.1	32.7	5.8	3/31/2001
Relative Strength (10wk/40wk)	Technical	2.4	11.1	4.6	-5.5	-1.5	-13.7	-7.1	2.1	0.7	13.9	2.6	2/27/1987
Relative Strength (Price/200-Day Moving Avg)	Technical	2.5	11.4	6.6	-1.2	-0.9	-13.4	-6.9	3.9	1.3	9.7	1.9	2/27/1987
Low ROE (1-Yr Avg. Adj. by Debt)	Quality	2.6	9.4	11.3	19.7	2.8	26.1	12.3	42.4	12.5	79.2	12.4	3/31/2001
Price Returns (3-Month)	Technical	2.7	12.7	6.5	0.9	-0.9	-3.8	-1.9	22.0	6.9	50.9	8.6	2/27/1987
Relative Strength (5wk/30wk)	Technical	2.8	12.2	6.2	-1.2	-1.4	-11.5	-5.9	10.1	3.3	25.5	4.7	2/27/1987
Low Dividend Growth	Cash Deployment	2.9	7.1	8.9	10.3	1.9	10.5	5.1	21.6	6.7	70.0	11.2	9/30/2004
Low Free Cash Flow/ EV	Value	2.9	3.7	0.4	-4.1	-0.7	-9.2	-4.7	-2.7	-0.9	45.5	7.8	3/31/2001
Low Foreign Exposure	Miscellaneous	3.1	7.7	8.6	1.5	1.6	2.3	1.1	25.3	7.8	43.0	7.4	1/31/1995
Low Estimate Revisions	Growth	3.1	9.8	3.1	4.0	-1.6	8.0	3.9	8.0	2.6	47.9	8.1	3/31/2001
High Price/ Sales	Value	3.1	11.3	13.6	24.5	3.3	10.5	5.1	18.3	5.8	70.8	11.3	3/31/2001
Earnings Torpedo	Growth	3.2	8.7	6.8	4.3	0.8	2.6	1.3	15.4	4.9	78.4	12.3	
Low Variability of Earnings	Risk	3.2	8.0	7.0	6.8	3.3	11.7	5.7	28.6	8.7	52.4	8.8	3/31/2001
Rising Short Interest	Miscellaneous	3.3	13.0	9.4	-0.1	2.9	-5.3	-2.7	7.9	2.6	52.7	8.8	4/30/1994
Low ROE (5-Yr Avg. Adj. by Debt)	Quality	3.4	9.8	11.6	19.7	3.4	23.4	11.1	36.3	10.9	72.9	11.6	3/31/2001
Low Forward Earnings Yield	Value	3.4	9.4	7.9	14.1	1.9	2.6	1.3	3.2	1.1	45.1	7.7	5/31/2005
High P/E-to-Growth	GARP	3.5	8.1	6.8	10.4	1.5	10.9	5.3	20.8	6.5	40.5	7.0	3/30/2001
Low ROE (5-Yr Average)	Quality	3.7	7.7	4.6	7.7	1.2	15.8	7.6	41.8	12.4	87.8	13.4	3/31/2001
S&P 500 Equal Weighted (Price Return)	Benchmark	3.8	10.0	8.9	11.4	3.0	6.3	3.1	21.6	6.7	57.1	9.5	
Forecast Negative Earnings Surprise	Growth	3.9	10.4	10.1	7.4	2.4	6.6	3.2	24.2	7.5	46.7	8.0	3/31/1986
Low Share Repurchase	Cash Deployment	3.9	7.6	6.9	2.4	2.4	-9.2	-4.7	6.4	2.1	32.7	5.8	3/31/2005
S&P 500 Equal Weighted (Total Return)	Benchmark	4.2	10.7	10.2	13.8	3.4	10.9	5.3	29.0	8.9	74.3	11.7	
Low Duration	Growth	4.2	10.2	7.4	9.2	2.8	20.7	9.8	46.5	13.6	63.2	10.3	3/31/2001
No Dividend Yield	Cash Deployment	4.6	13.9	11.0	16.8	4.0	10.5	5.1	12.1	3.9	86.0	13.2	3/31/2001
Large Size	Miscellaneous	4.7	12.5	13.2	30.9	8.0	20.8	9.9	36.3	10.9	77.1	12.1	3/31/2001
High Price/ Cash Flow	Value	4.9	13.5	14.3	24.2	6.1	18.5	8.8	19.4	6.1	91.4	13.9	8/31/2003
Most Active	Technical	5.1	12.8	12.6	18.5	4.6	16.4	7.9	27.3	8.4	78.6	12.3	8/31/2003
S&P 500 Index (Price Return)	Benchmark	5.2	11.6	13.1	28.4	6.8	16.5	7.9	33.7	10.2	83.0	12.9	
High Price/ Book Value	Value	5.3	12.6	15.7	25.4	5.5	26.6	12.5	38.3	11.4	103.0	15.2	3/30/2001
High EV/ EBITDA	Value	5.3	14.1	12.6	21.5	6.1	11.2	5.4	14.6	4.7	100.0	14.9	10/30/2004
Dividend Discount Model Alpha	Value	5.4	12.7	12.2	18.8	2.8	10.8	5.3	28.6	8.8	80.6	12.5	3/30/2001
High Price	Risk	5.7	13.8	17.4	31.3	8.2	27.3	12.8	37.8	11.3	98.4	14.7	7/30/1986
High Analyst Coverage	Miscellaneous	6.5	14.2	15.6	32.3	7.8	31.7	14.8	46.3	13.5	114.4	16.5	3/31/2001
High Price/ Free Cash Flow	Value	6.8	13.1	7.4	8.9	4.2	0.4	0.2	6.6	2.1	50.7	8.5	8/31/2003

Source: BofA US Equity and Quant Strategy, FactSet

The performance does not reflect transaction costs or tax withholdings or any applicable advisory fees. Had these costs been reflected, the performance would have been lower. Performance is calculated on the basis of price return unless noted. Total return performance calculations assume that dividends paid on securities in a portfolio are deposited in a cash account on the ex-dividend date, and are not reinvested. Please see Performance Calculation methodology on page 60 for a full explanation.

*For screens that have less than 5 years history, the performance is since inception.

Past performance should not and cannot be viewed as an indicator of future performance. A complete performance record is available upon request.

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Factor crowding

Most expensive / crowded long factors and least expensive / crowded short factors.

Exhibit 31: Factor valuations and positioning as of 2/29/2024

Long-short factors listed from most to least expensive & crowded using a multi-indicator ranking

Factor	Long Factors (S&P 500 top decile)				Short Factors (S&P 500 bottom decile)				
	Price to Book	Forward P/E	Crowded	Long Rank	Price to Book	Forward P/E	Crowded	Short Rank	
	(Relative)	(Relative)	ness		(Relative)	(Relative)	ness	Rank for	Rank for
	Relative multiple vs. history (>1 = expensive vs. history)	Relative multiple vs. history (>1 = expensive vs. history)	Long Only Funds' Relative Wt.		Relative multiple vs. history (>1 = expensive vs. history)	Relative multiple vs. history (>1 = expensive vs. history)	Long Only Funds' Relative Wt.	Short Factor (1=least expensive / crowded)	long-short factor (1=most downside risk)
High (Low) Relative Strength (30wk/75wk)	1.38	1.29	1.31	4	1.06	0.67	0.71	4	1
High (Low) Dividend Growth	1.05	1.38	1.13	13	0.56	0.63	0.87	5	2
High (Low) Price Ret. (11-m since 1 y ago)	1.89	1.38	1.32	1	2.45	1.36	0.67	25	3
High (Low) ROE (1-Yr Avg. Adj. by Debt)	1.13	1.28	1.13	14	0.43	0.98	0.76	7	4
High (Low) Price Returns (12-Month)	1.58	1.33	1.31	2	2.92	1.46	0.67	34	5
High (Low) Rel. Strength (Price/200-Day MA)	1.42	1.19	1.34	4	2.72	1.43	0.69	29	6
High (Low) Relative Strength (5wk/30wk)	1.46	1.19	1.33	6	2.73	1.33	0.72	31	7
High (Low) ROE (5-Yr Avg. Adj. by Debt)	1.16	1.31	1.18	12	1.80	1.33	0.84	29	8
High (Low) Relative Strength (10wk/40wk)	1.48	1.12	1.31	9	2.78	1.47	0.63	31	9
High (Low) Upward Estimate Revisions	1.30	0.91	1.25	18	1.96	1.13	0.70	21	10
High (Low) ROE (5-Yr Average)	1.47	1.17	0.86	19	0.79	0.69	1.13	20	10
High (Low) EPS Momentum	1.02	0.87	1.12	22	0.80	0.73	0.81	10	12
High (Low) ROA	1.61	1.21	1.13	7	7.46	1.33	0.75	38	13
High (Low) ROE (1-Yr Average)	1.34	1.27	1.01	15	2.04	1.56	0.64	27	14
Low EPS Torpedo	na	na	0.61	26	1.07	0.71	0.61	2	15
High (Low) Price Returns (3-Month)	1.38	1.14	1.36	8	2.19	1.35	0.94	39	16
High (No) Foreign Exposure	1.17	0.99	1.11	20	1.36	0.91	0.86	23	17
High (Low) Price Returns (12-m plus 1-m)	1.40	1.25	1.37	3	3.67	1.59	0.74	44	18
Low (High) PE to GROWTH	0.89	0.91	1.01	25	0.90	0.88	0.72	10	19
High (Low) Price Returns (9-Month)	1.25	1.12	1.38	9	3.32	1.58	0.69	40	20
High (Low) Duration	1.51	1.18	0.84	17	1.35	1.00	1.01	27	21
High (Low) ROC	3.81	1.23	1.00	9	3.19	1.45	0.81	41	22
High (Low) Projected 5-Yr Growth	0.95	0.82	1.28	23	1.43	0.85	0.73	17	23
High (Low) Price Ret. (12-m + 1-m Reversal)	1.62	0.96	0.97	16	2.23	1.47	0.71	34	24
Low (High) Price to Book Value	0.87	0.73	0.80	41	0.09	0.47	1.06	1	25
Low (High) DDM Valuation	0.72	0.83	1.04	29	0.59	0.65	0.89	7	26
Low (High) Institutional Ownership	1.20	0.95	0.79	24	0.70	0.84	1.07	19	26
Small (Large) Size	1.01	0.84	0.53	38	0.27	0.62	0.99	3	28
High (Low) Forward Earnings Yield	0.70	0.90	0.81	35	0.41	0.54	1.11	5	29
Low (High) Price to Sales	0.97	0.84	0.79	30	0.30	0.59	1.26	14	30
Low (High) Price to Free Cash Flow	0.87	0.85	0.71	37	0.34	0.56	1.15	10	31
Forecast Positive (Negative) EPS Surprise	0.96	0.99	1.03	21	1.07	1.00	1.14	36	32
Low (High) Price to Cash Flow	0.89	0.79	0.78	40	0.13	0.54	1.26	9	33
Low (High) Analyst Coverage	0.65	1.30	0.31	31	0.51	0.85	1.09	18	34
Low (High) EV/EBITDA	0.84	0.80	0.75	42	0.27	0.63	1.16	13	35
High (Low) Free Cash Flow to EV	0.82	0.85	0.74	39	0.95	0.55	1.11	15	36
Falling (Rising) Short Interest	0.81	0.95	0.64	33	0.67	1.33	0.97	22	37
High (Low) Earnings Yield	0.88	0.92	0.58	33	0.96	0.76	1.13	24	38
High (Low) Dividend Yield	0.69	0.76	0.49	44	0.50	0.62	1.18	15	39
High (Low) Share Repurchase	0.73	0.82	0.98	35	1.30	1.28	1.11	37	40
High (Low) Beta	1.14	0.69	0.91	27	1.93	1.56	0.97	43	41
High (Low) EPS Estimate Dispersion	1.03	0.46	0.90	32	10.87	1.34	0.82	42	42
Most (Least) Active	0.61	0.71	0.96	43	1.50	1.02	1.00	31	43
Low (High) Price	0.67	0.57	0.59	45	0.56	0.84	1.31	26	44
High (Low) Variability of EPS	0.74	0.84	1.01	28	2.71	1.44	1.16	45	45

Source: BofA US Equity and Quant Strategy, FactSet. Based on data since February 2001. For the following short factors valuation data are available as indicated: Fwd EPS Yield since 4/05; Price/ Cash Flow and Price / Free Cash Flo since 7/03; EV/EBITDA since 9/04; FCF/EV since 9/12; Dividend Growth since 8/04; Share Repurchase since 2/05; Most Active since 7/03; Analyst Coverage since 11/05; Foreign Exposure since 7/03. Relative multiple vs. history is based on relative valuation the factor versus the S&P 500 and calculated as the latest value dividend by historic average. Long Only Funds' Relative Wt. (Avg.) is calculated as the average of individual factor constituents' relative weight in funds vs. weight in the index. Long Rank is calculated as the average of ranks of Price / Book, Fwd P/E and Long Only Funds' relative ownership with rank =1 indicating most expensive and most crowded long factor. Short Rank is based on the average of ranks of Price / Book, Fwd P/E and Long Only Funds' relative ownership with rank =1 indicating least expensive and least crowded short factor. Long/Short Rank is based on the average of Long Rank and Short Rank with rank = 1 indicating long / short factor with most downside risk. Fund holdings data as of 12/31/2021

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Exhibit 32: Advances and Declines (Top Decile)

As of 2/29/2024

Quantitative Strategies	1M		3M		6M		12M		YTD		2Yr		3Yr		5Yr	
	Adv.	Dec.	Adv.	Dec.	Adv.	Dec.	Adv.	Dec.	Adv.	Dec.	Adv.	Dec.	Adv.	Dec.	Adv.	Dec.
Price Returns (11-Month since 1 year ago)	42	8	111	39	172	128	340	260	78	22	632	567	936	862	1604	1393
Price Returns (12-Month)	41	9	114	36	177	123	346	254	77	23	638	561	960	838	1627	1370
Relative Strength (30wk/75wk)	39	11	117	34	185	116	350	252	80	21	632	570	952	851	1626	1378
Price Returns (9-Month)	40	10	106	44	170	130	330	270	74	26	620	580	937	863	1630	1368
ROA	42	8	110	40	169	131	344	256	70	30	620	580	963	837	1687	1313
Price Returns (12-Month plus 1-Month)	44	6	108	42	177	123	342	258	65	35	602	598	943	857	1644	1354
High Projected 5-Yr Growth	38	13	103	47	168	132	328	272	64	37	608	592	929	871	1615	1387
Upward Estimate Revisions	42	8	102	48	167	133	306	294	68	32	615	584	965	834	1681	1315
Relative Strength (10wk/40wk)	40	10	107	43	166	134	334	266	79	21	631	569	928	872	1627	1369
High Dividend Growth (Price Return)	36	14	90	59	148	151	309	290	51	49	596	603	971	828	1637	1362
ROE (5-Yr Avg. Adj. by Debt)	41	9	112	38	175	125	363	237	69	31	633	567	976	824	1683	1317
High Beta	36	16	98	58	151	164	313	310	52	53	604	640	954	902	1652	1441
Price Returns (12-Month plus 1-Month Reversal)	36	14	103	46	164	135	336	263	74	26	633	565	946	851	1623	1373
Low PE to GROWTH	39	11	102	47	165	134	316	283	64	36	598	601	959	840	1615	1383
High Foreign Exposure	34	16	95	54	150	149	314	285	50	50	599	599	930	867	1649	1344
Relative Strength (Price/200-Day Moving Avg)	42	8	106	44	172	128	335	265	71	29	618	582	945	855	1658	1340
ROC	40	10	110	40	170	130	340	260	71	29	618	582	959	841	1678	1322
DDM Valuation	26	10	67	33	108	97	219	198	42	27	424	440	796	713	1566	1399
High Duration	42	8	113	37	176	124	358	242	69	31	609	591	941	859	1645	1355
Relative Strength (5wk/30wk)	37	13	97	53	152	148	313	287	68	32	598	602	928	872	1629	1367
ROE (1-Yr Avg. Adj. by Debt)	40	10	108	42	167	133	341	259	71	29	613	587	959	841	1653	1347
ROE (1-Yr Average)	39	11	107	43	166	134	344	256	65	35	624	575	969	830	1673	1326
ROE (5-Yr Average)	39	11	108	42	168	132	337	263	66	34	623	576	955	844	1641	1357
Short Interest	39	10	102	45	164	130	327	260	62	36	595	574	914	844	1590	1328
Price Returns (3-Month)	34	16	82	68	140	160	284	316	55	45	560	640	872	928	1588	1409
Forecast Positive Earnings Surprise	61	27	169	97	278	219	520	442	101	76	920	933	1393	1276	2398	1972
Forecast Negative Earnings Surprise	60	25	187	87	271	218	522	440	102	77	987	937	1466	1313	2452	2106
Analyst Coverage Neglect	32	23	100	81	187	186	366	326	50	75	606	606	946	834	1638	1322
Low Price to Free Cash Flow	37	12	97	52	165	134	318	281	61	38	601	598	930	869	1563	1435
Earnings Yield	36	14	100	50	157	143	306	293	62	38	580	619	947	852	1612	1386
EPS Momentum	30	19	100	49	163	136	322	276	58	41	607	591	949	849	1597	1400
High EPS Estimate Dispersion	29	17	90	56	139	125	275	235	48	47	522	487	682	625	1099	1011
Low Price to Cash Flow	36	14	87	63	145	155	299	301	52	48	583	617	913	887	1519	1480
Low EPS Torpedo	36	14	91	59	151	149	308	292	53	47	601	599	940	860	1594	1404
High Free Cash Flow to EV	28	9	74	39	127	100	245	209	47	28	467	472	735	696	1260	1142
High Variability of EPS	47	22	139	63	225	177	435	351	80	56	798	744	1218	1079	2154	1837
Institutional Neglect	30	20	94	56	164	136	339	266	55	45	622	581	954	848	1632	1370
Low EV/EBITDA	35	15	89	61	151	149	307	293	55	45	598	602	938	862	1573	1426
Small Size	28	22	91	59	153	147	294	306	42	58	566	634	913	887	1560	1437
Low Price to Sales	33	16	98	51	174	125	322	277	59	40	616	583	952	847	1607	1392
Share Repurchase	32	18	99	51	170	130	329	271	63	37	621	579	985	815	1659	1338
Most Active	25	24	91	58	159	140	325	273	48	51	600	596	920	876	1590	1404
Forward Earnings Yield	28	21	98	51	164	135	304	294	54	45	600	598	950	848	1612	1384
Low Price to Book Value	27	22	92	57	162	137	305	293	47	52	589	609	960	845	1647	1375
Dividend Yield (Price Return)	25	25	78	72	140	160	291	307	37	63	588	609	946	850	1604	1389
Low Price	20	30	81	69	145	155	295	303	34	66	577	620	906	890	1565	1426

Source: BofA US Equity and Quant Strategy, FactSet

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Exhibit 33: Advances and Declines (Bottom Decile)

As of 2/29/2024

Quantitative Strategies	1M		3M		6M		12M		YTD		2Yr		3Yr		5Yr	
	Adv.	Dec.	Adv.	Dec.	Adv.	Dec.	Adv.	Dec.	Adv.	Dec.	Adv.	Dec.	Adv.	Dec.	Adv.	Dec.
Low ROA	24	27	97	54	165	136	324	277	49	52	598	600	919	879	1576	1419
Price Returns (12-Month)	21	29	80	70	136	164	288	311	32	68	564	635	892	907	1538	1458
Price Returns (11-Month since 1 year ago)	22	28	81	69	137	163	287	312	34	66	556	643	884	915	1537	1460
Price Returns (9-Month)	25	25	84	66	147	153	295	305	36	64	560	640	903	897	1521	1477
Relative Strength - 30wk/75wk MA	22	27	82	67	139	160	297	302	35	64	579	620	908	891	1561	1437
Low ROC	28	28	100	59	168	141	338	271	51	56	616	589	933	872	1578	1423
Low Estimate Dispersion	46	40	139	123	275	264	570	521	73	102	1047	1068	1644	1485	2769	2312
Low 1yr ROE	25	25	95	55	161	139	323	277	48	52	608	590	918	880	1583	1413
Low Earning Momentum	29	21	97	53	164	136	326	274	51	49	606	592	900	898	1561	1436
Low Beta	29	20	88	66	169	148	337	290	53	48	651	596	1000	865	1678	1420
Low Earnings Yield	27	23	97	53	164	136	329	271	52	48	589	608	900	897	1565	1427
Price Returns (12-Month plus 1-Month Reversal)	27	23	91	59	169	131	319	281	43	57	587	613	936	864	1602	1395
Low Proj. 5yr EPS Growth	27	23	89	61	146	154	294	305	49	51	579	624	903	900	1556	1445
Price Returns (12-Month plus 1-Month)	26	24	82	68	142	158	304	294	39	61	573	625	910	888	1585	1413
High Institutional Ownership	30	20	96	54	157	143	307	295	52	48	570	630	929	871	1607	1392
Relative Strength (10wk/40wk)	29	21	94	56	152	148	295	305	45	55	562	638	911	889	1530	1469
Relative Strength (Price/200-Day Moving Avg)	29	21	91	59	156	144	306	293	43	57	569	630	918	881	1533	1464
Low 1yr ROE Adj	33	17	98	52	163	137	339	261	55	45	623	576	955	844	1634	1364
Price Returns (3-Month)	32	18	94	56	153	147	305	294	45	55	584	615	949	850	1594	1404
Relative Strength (5wk/30wk)	32	18	92	58	153	147	301	298	43	57	574	625	939	860	1563	1434
Low Dividend Growth	37	13	100	50	175	125	331	269	61	39	609	589	928	870	1592	1404
FCF / EV	23	14	59	52	116	106	235	210	31	43	460	456	720	677	1256	1092
Low Foreign Exposure	81	40	218	147	402	327	765	696	125	118	1436	1476	2297	2066	3968	3326
Low EPS Estimate Revisions	30	20	90	60	150	150	315	285	44	56	595	603	912	886	1564	1433
High Price/ Sales	33	17	98	52	166	134	345	255	59	41	594	605	924	875	1627	1371
Low Variability of Earnings	42	16	117	56	194	142	376	280	70	45	678	614	1082	905	1763	1429
Short Interest	34	15	101	48	166	133	317	281	57	42	599	598	934	862	1617	1368
Low 5yr ROE Adj	36	14	101	49	169	131	345	255	59	41	625	574	955	844	1635	1363
Low Forward Earnings Yield	35	15	97	53	163	137	324	275	58	42	570	627	893	904	1534	1460
High P/E-to-Growth	35	15	98	52	162	138	336	264	53	47	614	583	945	852	1610	1385
Low 5y ROE	31	19	88	61	147	152	303	296	50	50	584	614	933	865	1589	1406
Negative EPS Surprise	60	25	187	87	271	218	522	440	102	77	987	937	1466	1313	2452	2106
Low Share Repurchase	29	21	88	62	158	142	319	280	49	51	577	621	927	871	1597	1397
Low Equity Duration	36	14	98	51	161	138	314	285	57	43	604	595	964	835	1629	1369
Low Dividend Yield	71	29	212	91	338	272	689	550	124	77	1260	1250	1996	1897	3408	2857
Large Size	37	13	114	36	180	120	373	227	76	24	632	567	973	826	1666	1333
High Price/ Cash Flow	39	11	111	39	172	128	348	252	71	29	616	583	922	877	1629	1369
Least Active	38	12	105	45	172	128	342	258	62	38	612	588	959	841	1662	1338
High Price/ Book Value	41	9	106	44	176	124	362	238	67	33	631	568	960	839	1665	1334
High EV/ EBITDA	42	8	112	38	177	123	353	247	73	27	604	595	925	874	1651	1347
Dividend Discount Model Alpha	54	13	143	56	222	164	429	318	80	52	744	762	1142	1070	1903	1624
High Price	41	9	112	38	187	113	367	233	76	24	635	565	973	827	1691	1308
High Analyst Coverage	49	13	126	42	201	124	410	253	83	35	716	608	1069	921	1833	1456
High Price/ Free Cash Flow	39	11	98	52	159	141	318	282	57	43	582	618	896	904	1596	1403

Source: BofA US Equity and Quant Strategy, FactSet

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Note on back testing

The analysis of certain indicators in this report is back-tested and does not represent the actual performance of any account or fund. Back-tested performance depicts the hypothetical back-tested performance of a particular strategy over the time period indicated. In future periods, market and economic conditions will differ and the same strategy will not necessarily produce the same results. No representation is being made that any actual portfolio is likely to have achieved returns similar to those shown herein. In fact, there are frequently sharp differences between back-tested returns and the actual results realized in the actual management of a portfolio. Back-tested performance results are created by applying an investment strategy or methodology to historical data and attempts to give an indication as to how a strategy might have performed during a certain period in the past if the product had been in existence during such time. Back-tested results have inherent limitations including the fact that they are calculated with the full benefit of hindsight, which allows the security selection methodology to be adjusted to maximize the returns. Further, the results shown do not reflect actual trading or the impact that material economic and market factors might have had on a portfolio manager's decision-making under actual circumstances. Back-tested returns do not reflect advisory fees, trading costs, or other fees or expenses

Exhibit 34: Growth vs Value expensive on Book Value

Russell 1000 Growth vs Russell 1000 Value relative Price to Book Value, Jan. 1980 – Feb. 2024



Source: FactSet, BofA US Equity & Quant Strategy

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Exhibit 35: Growth vs Value expensive on trailing EPS

Russell 1000 Growth vs Russell 1000 Value relative Price to trailing EPS, Jan. 1980 – Feb. 2024

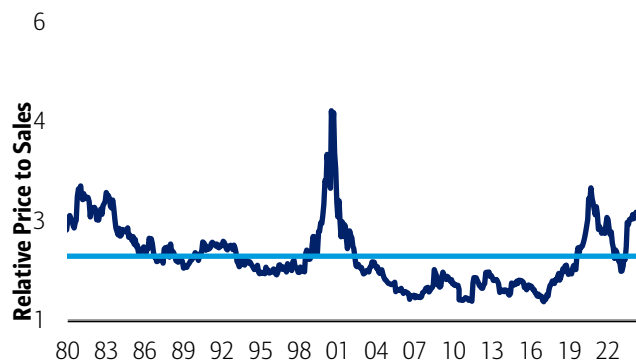


Source: FactSet, BofA US Equity & Quant Strategy

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Exhibit 36: Growth vs Value elevated on Price to Sales

Russell 1000 Growth vs Russell 1000 Value relative Price to Sales Value, Jan. 1980 – Feb. 2024

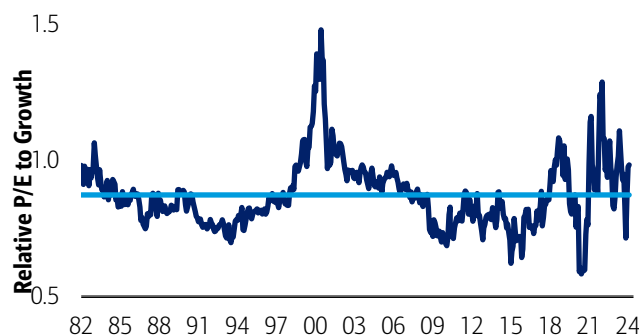


Source: FactSet, BofA US Equity & Quant Strategy

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Exhibit 37: Growth vs Value elevated on PE to Growth

Russell 1000 Growth vs Russell 1000 Value relative PE-to-Growth, Jan. 1980 – Feb. 2024



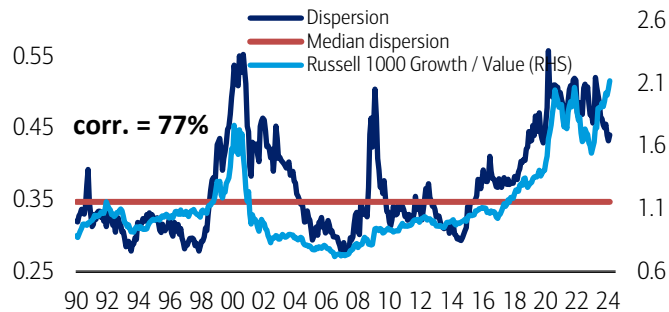
Source: FactSet, BofA US Equity & Quant Strategy

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Exhibit 38: Valuations dispersion remains historically high – lots of alpha

S&P 500 valuation dispersion of forward P/E (std. dev / avg) vs. rel. perf. of Russell 1000 Growth over Value (1990–2/2024)

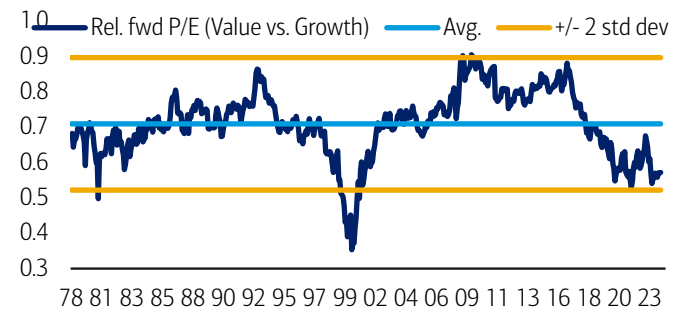


Source: FactSet, BofA US Equity & Quant Strategy

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Exhibit 39: Value vs. Growth valuations dipped almost 2 St. Dev. below the historic average

Relative forward P/E of Russell 1000 Value vs. Growth indices, 1978-2/24



Source: FactSet, BofA US Equity & Quant Strategy

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Exhibit 40: Factor valuations of Fwd P/E vs L-T EPS Growth edged below long-term average

Relative Fwd P/E of Value (Forward P/E) vs Growth (Long-Term EPS Growth), 2/01 – 2/24

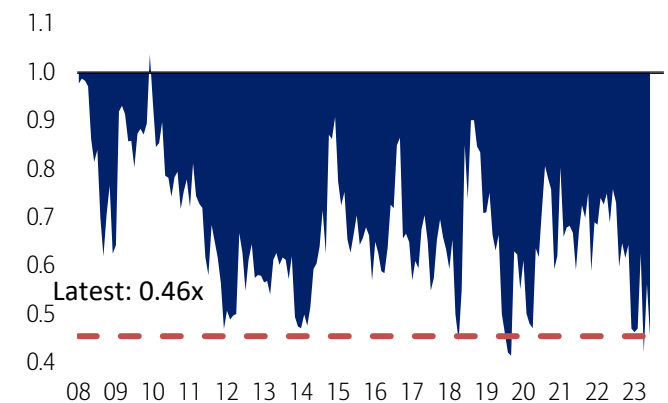


Source: FactSet, BofA US Equity & Quant Strategy

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Exhibit 41: Crowded positions in Growth stocks still evident based on factors (Low P/E vs High LTG)

Long Only Positioning in Value vs Growth proxied by Low P/E vs High Long-Term Growth Deciles of S&P 500 (9/2008-2/2024)

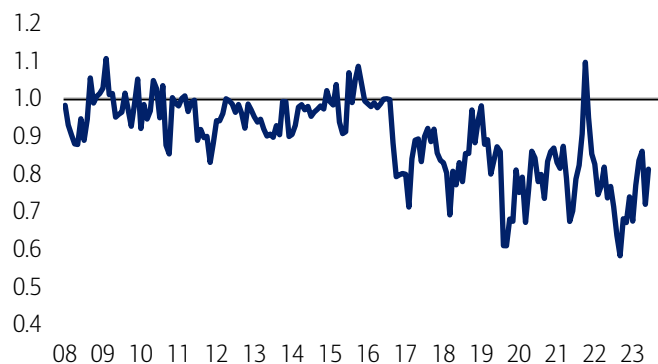


Source: BofA US Equity & Quant Strategy, FactSet Ownership

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Exhibit 42: High Fwd EPS Yield (Low Fwd P/E) remains underowned by Fund Managers

High EPS Yield – Weight in Mutual Funds (9/08-2/24)

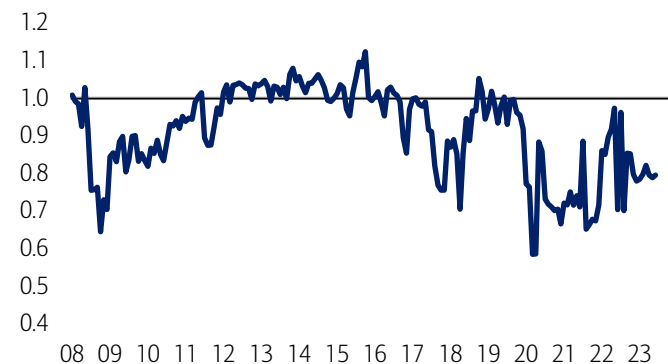


Source: BofA US Equity & Quant Strategy, FactSet Ownership

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Exhibit 43: Low Price to Book is underowned by Fund Managers

Low Price to Book – Weight in Mutual Funds (9/08-2/24)

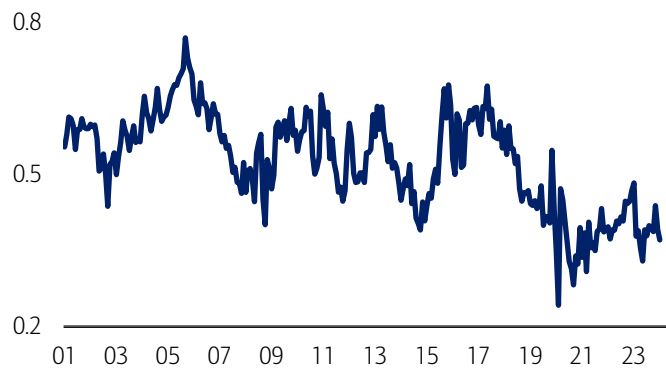


Source: BofA US Equity & Quant Strategy, FactSet Ownership

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Exhibit 44: High Fwd EPS Yield (Low P/E) trades below historical average

Valuations: Relative Price to Book Value (2/01 – 2/24)



Source: FactSet, BofA US Equity & Quant Strategy

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Exhibit 45: Low Price to Book trades below historical average

Valuations: Relative Price to Book Value (2/01 – 2/24)



Source: FactSet, BofA US Equity & Quant Strategy

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Exhibit 46: Share Repurchase factor trades near historic low valuations

Valuations: Price to Book Value (2/01 – 2/24)

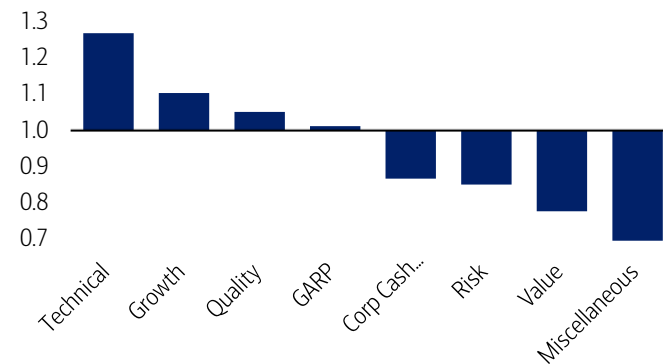


Source: FactSet, BofA US Equity & Quant Strategy

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Exhibit 47: Value remains deeply underweight by active managers

Relative Weight in Mutual Fund holdings (Feb. 2024)

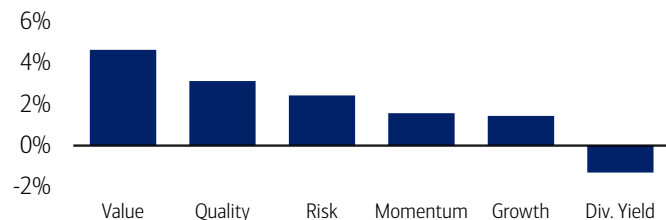


Source: BofA US Equity & Quant Strategy, FactSet Ownership

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Exhibit 48: Factor performance during periods of above average interest rates volatility

Value fared best when volatility was elevated (1990 – present annualized relative performance vs equal weighted index).



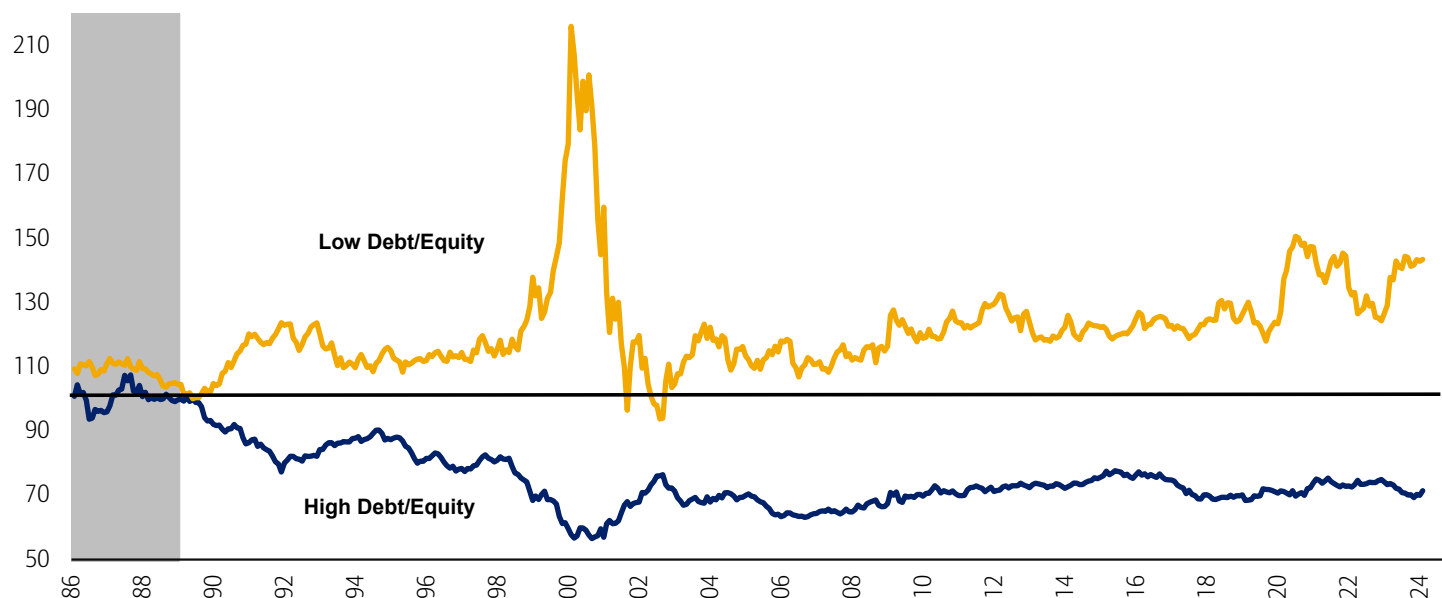
Source: FactSet, BofA US Equity & Quant Strategy

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Interestingly, during periods of above-average interest rate volatility based on big upward or downward daily moves in the 10-yr Treasury yields, Value factors led by the widest margin (4.6ppt vs. the equal-wtd. S&P 500 index).

Exhibit 49: BofA Quantitative Strategy Financial Confidence (back tested results from month end March 1986 to month end December 1988)

Low Debt / Equity companies outperformed the equal weighted S&P 500 index in YTD



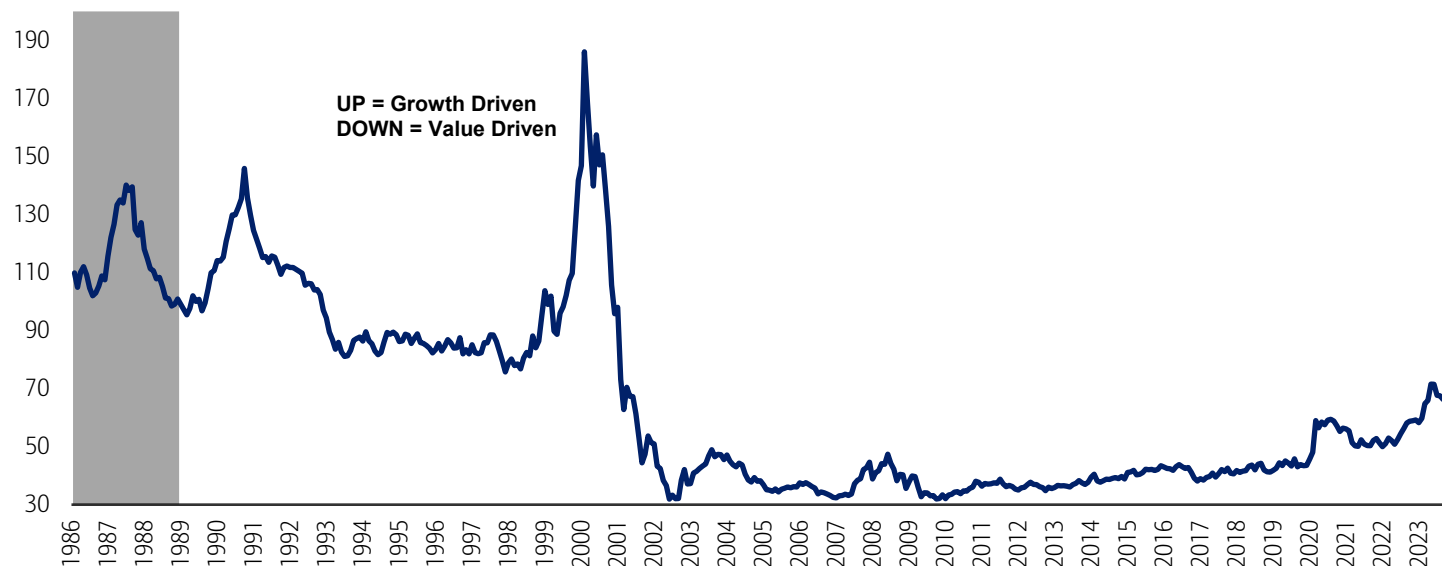
Source: BofA US Equity and Quant Strategy, FactSet

The shaded area in performance chart shows back tested results during the period from month end March 1986 to month end December 1988. The unshaded portion represents actual performance since January 1989. 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.

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Exhibit 50: Secular Growth vs. Value: high 5-yr projected EPS growth vs. high EPS yield

Growth has outperformed Value YTD (Back tested results from month end March 1986 to month end December 1988)



Source: BofA US Equity and Quant Strategy, FactSet

The shaded area in performance chart shows back tested results during the period from month end March 1986 to month end December 1988. The unshaded portion represents actual performance since January 1989. 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.

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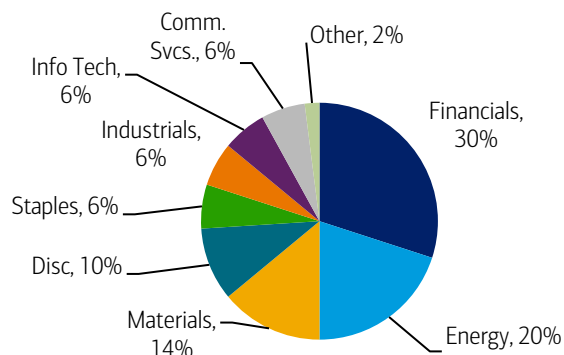
Earnings Yield

Top Decile S&P 500 Companies By High Earnings Yield

Earnings Yield: Trailing 12-month EPS divided by month-end price.

Sector weights of Earnings Yield Model Top Decile

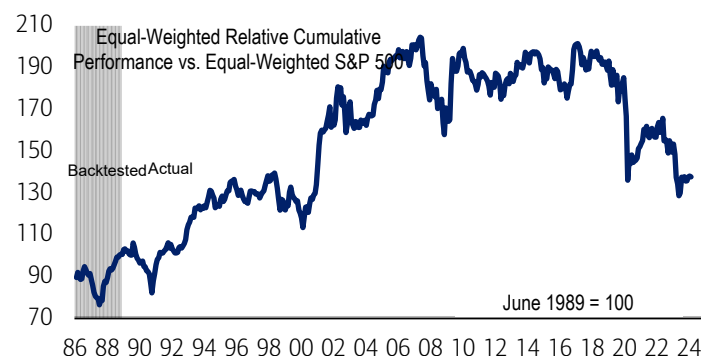
The factor has the highest weight in Financials (30%)



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Earnings Yield Top Decile: Relative cumulative performance

The factor underperformed the index in February



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Table 1: Absolute Returns

Factor performance over 1m, 3m, 6m, 12m and YTD

Last 1 Month

3.58%

Last 3 Months

11.62%

Last 6 Months

9.76%

Last 12 Months

3.26%

2024 YTD

3.01%

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Source: BofA US Equity and Quant Strategy, FactSet

The shaded area in performance chart shows back tested results during the period from month end March 1986 to month end December 1988. The unshaded portion represents actual performance since January 1989. 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. This is a screen and not a recommended list either individually or as a group of stocks. Investors should consider the fundamentals of the companies and their own individual circumstances / objectives before making any investment decisions.

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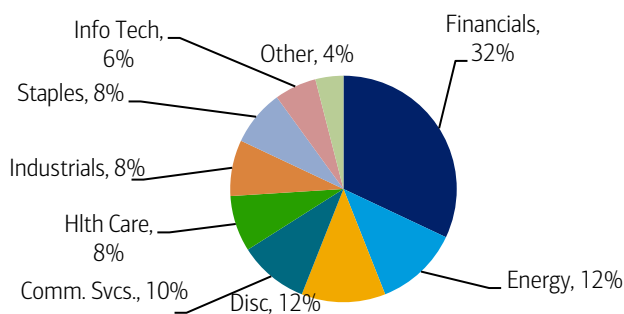
Forward Earnings Yield

Top Decile S&P 500 Companies By High Forward Earnings Yield

Earnings Yield: Rolling 12-month Forward EPS divided by month-end price.

Sector weights of Forward Earnings Yield Model Top Decile

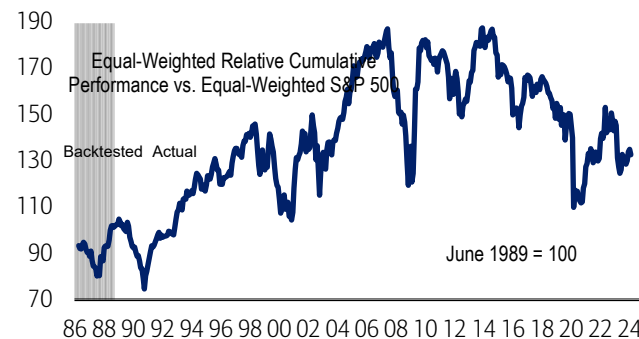
The factor has the highest weight in Financials (32%)



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Forward Earnings Yield Top Decile: Relative cumulative performance

The factor underperformed the index in February



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Table 2: Absolute Returns

Factor performance over 1m, 3m, 6m, 12m and YTD

Last 1 Month

2.08%

Last 3 Months

12.22%

Last 6 Months

10.85%

Last 12 Months

1.67%

2024 YTD

2.06%

BofA GLOBAL RESEARCH

Source: BofA US Equity and Quant Strategy, FactSet

The shaded area in performance chart shows back tested results during the period from month end March 1986 to month end December 1988. The unshaded portion represents actual performance since January 1989. 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. This is a screen and not a recommended list either individually or as a group of stocks. Investors should consider the fundamentals of the companies and their own individual circumstances / objectives before making any investment decisions.

BofA GLOBAL RESEARCH



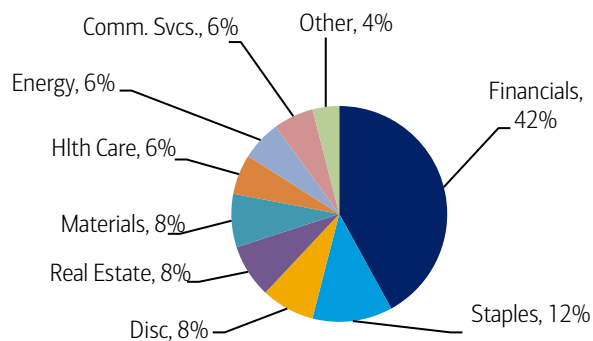
Price/Book Value

Top Decile S&P 500 Companies By Low Price to Book

Price/Book Value: Month-end price divided by latest reported book value per share.

Sector weights of Price/Book Top Decile

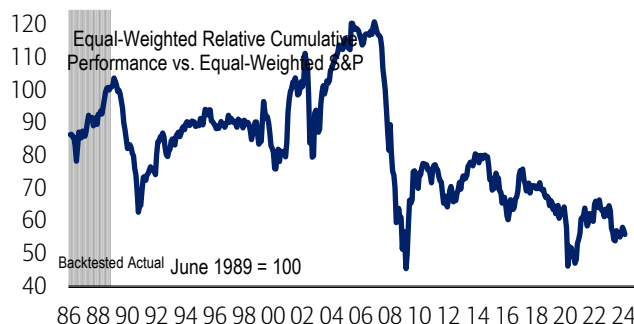
The factor has the highest weight in Financials (42%)



BofA GLOBAL RESEARCH

Price/Book Top Decile: Relative cumulative performance

The factor underperformed the index in February



BofA GLOBAL RESEARCH

Table 3: Absolute Returns

Factor performance over 1m, 3m, 6m, 12m and YTD

Last 1 Month	1.32%
Last 3 Months	9.24%
Last 6 Months	9.80%
Last 12 Months	-1.44%
2024 YTD	-0.92%

BofA GLOBAL RESEARCH

Source: BofA US Equity and Quant Strategy, FactSet

The shaded area in performance chart shows back tested results during the period from month end March 1986 to month end December 1988. The unshaded portion represents actual performance since January 1989. 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. This is a screen and not a recommended list either individually or as a group of stocks. Investors should consider the fundamentals of the companies and their own individual circumstances / objectives before making any investment decisions.

BofA GLOBAL RESEARCH

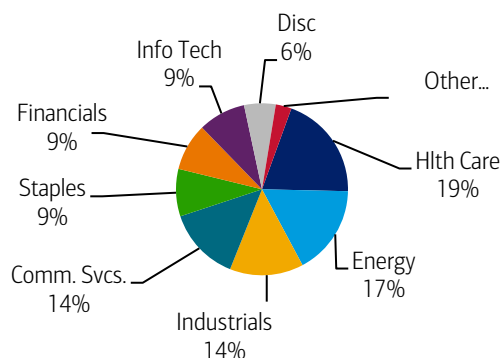
Dividend Discount Model Alpha

Top S&P 500 Companies By High DDM Alpha

Dividend Discount Model Alpha: The implied return from the BofA Quantitative Strategy three-stage dividend discount model less the required return from a Capital Asset Pricing Model. Presented as a decile rank.

Sector weights of Dividend Discount Model Top Decile

The factor has the highest weight in Health Care (19%)



BofA GLOBAL RESEARCH

Dividend Discount Model Top Decile: Relative cumulative performance

The factor outperformed the index last month



BofA GLOBAL RESEARCH

Table 4: Absolute Returns

Factor performance over 1m, 3m, 6m, 12m and YTD

Last 1 Month

Last 3 Months

Last 6 Months

Last 12 Months

2024 YTD

5.34%

11.05%

7.29%

12.20%

5.25%

BofA GLOBAL RESEARCH

Source: BofA US Equity and Quant Strategy, FactSet

The shaded area in performance chart shows back tested results during the period from month end March 1986 to month end December 1988. The unshaded portion represents actual performance since January 1989. 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. This is a screen and not a recommended list either individually or as a group of stocks. Investors should consider the fundamentals of the companies and their own individual circumstances / objectives before making any investment decisions.

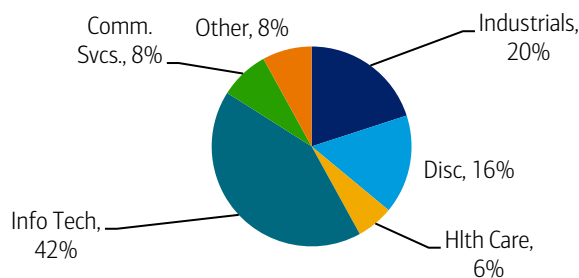
BofA GLOBAL RESEARCH

Price Return – 12-Month Performance

Top Decile S&P 500 Companies By 12-month price return.

Sector weights of Price Return – 12 month Top Decile

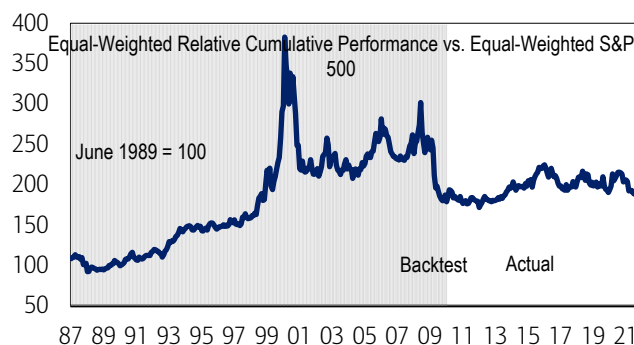
The factor has the highest weight in Info Tech (42%)



BofA GLOBAL RESEARCH

Price Return – 12 month Top Decile: Relative cumulative performance

The factor outperformed the index last month



BofA GLOBAL RESEARCH

Table 5: Absolute Returns

Factor performance over 1m, 3m, 6m, 12m and YTD

Last 1 Month

Last 3 Months

Last 6 Months

Last 12 Months

2024 YTD

8.74%

18.24%

18.61%

26.71%

11.18%

BofA GLOBAL RESEARCH

Source: BofA US Equity and Quant Strategy, FactSet

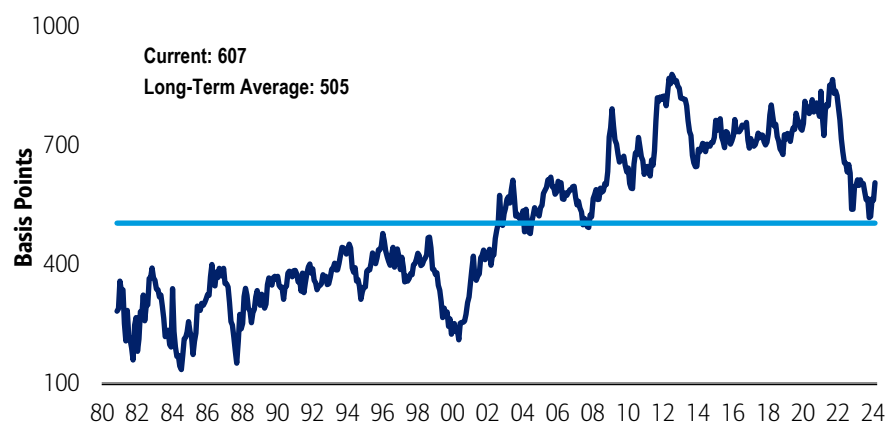
The shaded area in performance chart shows back tested results during the period from month end March 1986 to month end January 2010. The unshaded portion represents actual performance since February 2010. Back-tested performance depicts the theoretical (not actual) performance of a particular strategy 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. This is a screen and not a recommended list either individually or as a group of stocks. Investors should consider the fundamentals of the companies and their own individual circumstances / objectives before making any investment decisions.

BofA GLOBAL RESEARCH

Valuation Backdrop

Exhibit 51: S&P 500 Risk Premium rose in recent months

S&P 500 Risk Premium (DDM Expected Return less AAA Corporate Bond Rate)



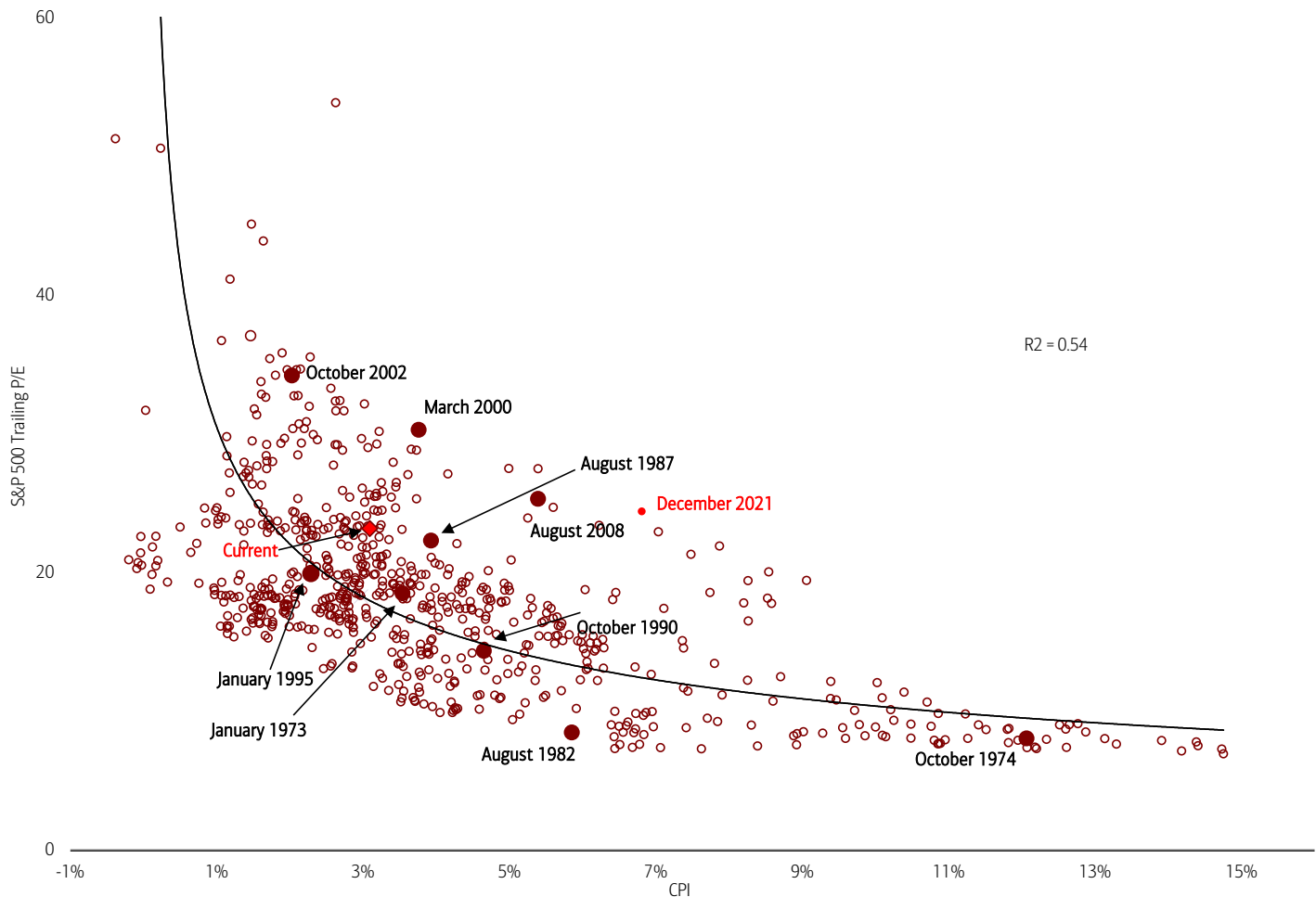
Source: BofA US Equity and Quant Strategy, FactSet

BofA GLOBAL RESEARCH

Note: In the chart below we exclude deflationary points from trend line calculation. Historically, the relationship between inflation and valuation breaks down during deflationary periods. For example, from 1949 to 1950, S&P 500 valuation was below average, and from 1954 to 1955, valuation was well above average.

Exhibit 52: Inflation vs. P/E Model

S&P 500 trailing P/E remains above the trend line (1965 to 2/29/24)

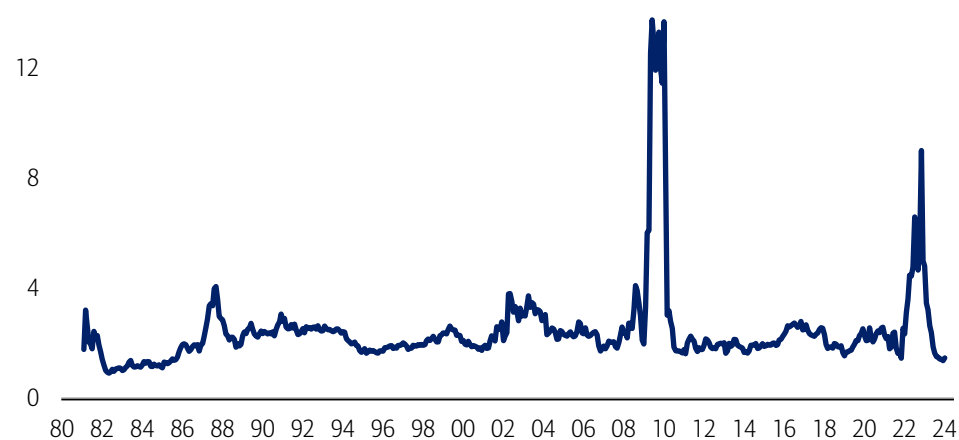


Source: BofA US Equity and Quant Strategy, FactSet

BofA GLOBAL RESEARCH

Exhibit 53: S&P 500 Real PE-to-Growth Ratio (Trailing P/E Divided by Proj. 5-Yr EPS Growth less Inflation)

Real P/E to Growth ratio rose in recent months (as of 2/29/2024)

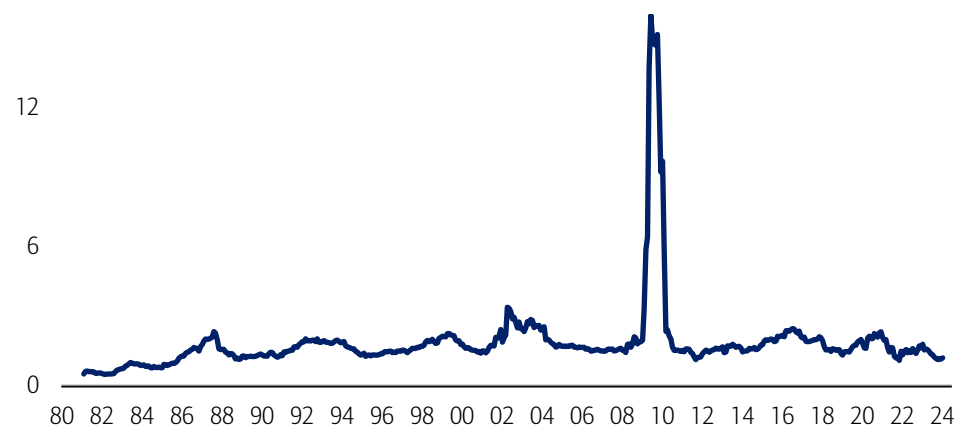


Source: BofA US Equity and Quant Strategy, FactSet

BofA GLOBAL RESEARCH

Exhibit 54: S&P 500 PE-to-Growth Ratio (Trailing P/E Divided by Proj. 5-Yr EPS Growth)

P/E to Growth ratio rose in recent months (as of 2/29/2024)



Source: BofA US Equity and Quant Strategy, FactSet

BofA GLOBAL RESEARCH



Exhibit 55: BofA Universe Sector/Industry Factor Evaluation

As of 2/29/2024

	Valuation Analysis										Expectation Analysis							
	# of Comp	% Univ BofA	Impl. Return	Reqd Return	DDM Alpha	Eqty. Duration	BofA Adj Beta	P/E Ratio	Price/Book	Yield	Surprise	Earnings (Decile)			PR 5yr Growth	EPS Growth		
												Risk	Torp	Disp	Est. Rev.	2023E	2024E	
Economic Sectors																		
Energy	70	4.16	15.1	12.3	2.8	19.5	1.21	11.8	2.05	3.6	6	8	5	7	7	19.2	-11	12
Materials	62	2.62	10.0	11.4	-1.4	36.6	1.10	19	2.87	2.0	4	5	5	4	5	7.5	3	19
Industrials	165	8.21	10.7	11.8	-1.1	35.6	1.10	20	4.69	1.4	6	4	5	4	5	19.5	9	16
Consumer Discretionary	182	11.29	11.3	12.7	-1.4	34.8	1.24	22.4	5.49	0.8	4	6	5	6	4	17.1	18	20
Consumer Staples	57	5.67	9.8	9.5	0.3	35.5	0.75	20	5.10	2.6	6	4	4	2	5	9.8	10	8
Health Care	236	12.54	11.7	9.6	2.1	33.0	0.79	21.2	4.51	1.5	5	4	5	4	5	16.8	15	17
Financials	170	11.35	11.0	11.7	-0.7	32.3	1.09	14.5	2.18	2.0	6	4	6	4	5	13.5	6	15
Information Technology	165	29.15	11.0	12.2	-1.2	37.2	1.16	28.5	10.64	0.7	6	4	5	4	4	20.6	16	18
Communication Services	43	10.32	12.1	11.5	0.6	31.5	1.04	15.9	4.38	0.7	2	4	7	5	4	16.7	21	13
Utilities	55	2.17	10.4	9.4	1	29.2	0.75	15	1.80	3.8	6	5	5	2	5	8.3	9	12
Real Estate	88	2.52	9.7	10.8	-1.1	33.1	0.96	18.7	2.36	3.8	6	5	3	2	8	7.3	1	17
Capitalization Sectors (\$ Million)																		
3 To 2182	259	0.62	12.2	12.7	-0.5	27.0	1.22	174.9	1.59	2.0	5	7	6	7	6	27.8	113	nm
2199 To 5143	258	1.88	11.7	12.3	-0.6	28.9	1.18	16.8	1.83	1.9	5	6	5	6	6	18.4	5	31
5159 To 11612	259	4.39	11.3	12.1	-0.8	32.1	1.17	17.5	2.27	1.5	6	5	6	5	5	17.7	5	21
11638 To 33389	258	10.72	10.7	11.4	-0.7	33.4	1.07	15.9	2.57	1.8	6	5	5	4	5	13.2	6	15
33629 To 3074280	259	82.40	11.2	11.5	-0.3	34.5	1.05	20.7	5.21	1.3	5	4	5	4	4	17.2	11	15
Risk Sectors																		
-3.39 To 0.84	258	20.42	11.2	9.0	2.2	31.7	0.68	17.5	3.64	2.5	5	4	5	3	5	12.8	9	13
0.85 To 1.02	257	22.29	10.1	10.8	-0.7	36.8	0.94	21.8	4.40	1.5	7	3	5	3	5	14.6	5	14
1.03 To 1.19	254	29.75	11.5	11.8	-0.3	33.4	1.10	19.7	4.75	1.0	4	5	6	5	4	17.8	13	15
1.20 To 1.41	244	16.56	10.5	12.9	-2.4	37.1	1.26	18.7	3.89	1.2	5	4	5	4	5	16.4	7	15
1.42 To 3.25	246	10.58	13.6	15.3	-1.7	30.9	1.60	25.8	5.45	0.6	6	7	6	7	4	27.8	32	29
Uncoded	34	0.40	11.3			34.7		17.2	1.99	1.3	6	9	5	4	5	13.0	224	22
DDM Alpha																		
Most Undervalued	188	8.78	16.8	10.8	6	18.5	0.94	16.9	3.16	2.1	5	7	7	7	5	54.4	35	24
Undervalued	187	21.15	13.2	11.1	2.1	27.5	1.00	17.5	4.00	1.5	5	5	6	5	4	20.2	13	14
Fair Value	188	26.33	10.8	11.0	-0.2	34.7	0.98	19.9	5.30	1.2	5	4	6	4	4	14.6	13	14
Overvalued	187	18.12	9.9	11.7	-1.8	38.1	1.08	21.4	4.04	1.4	6	4	5	3	5	10.7	6	13
Most Overvalued	188	17.15	8.9	13.2	-4.3	45.5	1.30	27	7.27	0.7	5	4	4	4	6	10.5	8	16
Uncoded	355	8.47	11.3	-19.2	30.5	34.6	1.07	17.4	2.39	2.6	6	6	4	5	6	0.1	-5	17

Source: BofA US Equity and Quant Strategy, FactSet

BofA GLOBAL RESEARCH

Exhibit 56: BofA Universe Sector/Industry Factor Evaluation (cont'd)

As of 2/29/2024

	# of	% Univ	Impl.	Reqd	Valuation Analysis						Expectation Analysis								EPS Growth	
					DDM	Eqty.	BofA	P/E	Price/	Earnings (Decile)				PR 5yr						
					Comp	BofA	Return	Return	Alpha	Duration	Adj Beta	Ratio	Book	Yield	Surprise	Risk	Torp	Disp	Est. Rev.	Growth
Duration																				
3.80 To 21.36	193	7.50	17.2	11.7	5.5	16.9	1.08	14.2	2.21	2.5	5	8	6	6	6	53.9	33	23		
21.46 To 28.45	192	17.87	14.2	11.9	2.3	24.9	1.12	17.6	3.66	1.5	5	6	7	5	3	25.3	16	17		
28.51 To 33.61	192	21.30	11.3	11.0	0.3	31.8	0.98	17.1	4.28	1.4	4	4	6	4	4	13.4	10	13		
33.62 To 40.62	192	24.38	10.0	11.1	-1.1	37.8	0.99	22.7	5.65	1.3	7	3	5	3	4	12.6	8	14		
40.64 To 81.97	192	20.82	8.7	12.3	-3.6	46.6	1.16	30.2	8.21	0.6	5	4	4	4	5	10.6	8	15		
Uncoded	332	8.12					1.07	17.4	2.41	2.6	6	6	4	6	6	-0.7	-6	17		
Growth Sectors																				
Growth	545	42.00	11.2	11.6	-0.4	34.9	1.07	24.3	6.15	0.7	5	4	6	5	4	19.7	19	20		
Growth Cyclical	243	24.93	11.1	12.4	-1.3	36.3	1.18	23.4	6.56	1.0	5	4	5	4	5	19.8	12	16		
Growth Defensive	124	12.22	10.8	10.2	0.6	33.7	0.86	18.1	3.85	2.5	6	5	5	3	5	12.4	14	14		
Cyclical	242	11.09	11.1	12.3	-1.2	31.5	1.19	13.1	1.99	2.1	6	6	5	5	5	9.9	-1	13		
Defensive	139	9.75	11.2	9.8	1.4	28.8	0.81	14	2.32	3.3	6	5	4	3	6	10.6	3	10		
EPS Surprise																				
Most Optimistic	243	26.55	11.2	11.6	-0.4	34.1	1.08	18.7	5.70	0.8	1	4	6	5	4	16.5	20	14		
Optimistic	242	13.09	11.3	11.5	-0.2	35.2	1.07	19.8	3.87	1.5	4	5	5	5	6	16.5	6	13		
Neutral	242	19.13	11.5	11.4	0.1	32.0	1.03	17.3	3.23	2.1	5	6	5	4	5	14.3	8	14		
Less Optimistic	242	19.39	12.0	12.0	0	30.8	1.11	21.7	4.66	1.5	8	5	5	5	4	22.1	13	18		
Not Optimistic	243	19.83	10.0	11.3	-1.3	38.0	1.02	23.1	4.26	1.3	9	3	5	4	5	15.6	4	17		
Uncoded	81	2.01	6.7	10.0	-3.3	54.1	1.01	27.8	3.47	2.1		6	5	4	7	8.9	-14	45		
Quality Rank																				
A+	26	18.65	9.8	11.4	-1.6	40.3	1.03	26.9	13.09	0.9	6	1	5	3	4	13.2	11	13		
A	66	8.33	9.5	10.6	-1.1	37.9	0.93	21.6	4.65	1.9	6	3	4	3	5	15.9	8	12		
A-	101	13.79	13.2	11.9	1.3	28.9	1.10	20.4	4.62	1.5	6	5	6	5	4	21.5	10	14		
B+	220	24.16	10.9	11.1	-0.2	34.3	0.99	17.3	3.92	1.6	5	4	6	4	5	12.4	11	13		
B	172	15.38	12.4	11.6	0.8	28.2	1.05	16.2	3.16	1.6	4	7	5	5	4	17.8	7	16		
B-	151	9.20	11.0	12.8	-1.8	36.2	1.24	17.6	3.14	1.5	6	8	5	6	6	18.1	6	18		
C & D	95	1.84	12.1	12.4	-0.3	30.7	1.19	22.2	2.61	0.5	4	9	6	7	5	29.2	47	31		
Not Rated	462	8.63	11.4	12.4	-1	33.2	1.20	28.1	3.56	1.2	5	6	6	6	4	26.2	31	30		
B+ or Better	413	64.94	10.9	11.3	-0.4	35.4	1.02	20.6	5.31	1.4	6	3	5	4	5	15.0	10	13		
B or Worse	880	35.06	11.8	12.2	-0.4	31.7	1.15	18.8	3.21	1.4	5	7	5	6	5	20.4	11	19		
BofA Universe	1293	100.00	11.1	11.6	-0.5	34.2	1.06	20.5	4.30	1.4						16.8	11	16		
S&P 500	503	92.05	11.1	11.5	-0.4	34.3	1.04	20.3	4.35	1.4						16.0	10	14		

Source: BofA US Equity and Quant Strategy, FactSet

BofA GLOBAL RESEARCH





Exhibit 57: BofA Universe Sector/Industry Factor Evaluation (cont'd)

As of 2/29/2024

	Valuation Analysis										Expectation Analysis						
	# of Comp	% Univ BofA	Impl. Return	Reqd Return	DDM Alpha	Eqty. Duration	BofA Adj Beta	P/E Ratio	Price/Book	Yield	Surprise	Earnings (Decile)			Est. Rev.	PR 5yr Growth	EPS Growth 2023E 2024E
ENERGY	70	4.16	15.1	12.3	2.8	19.5	1.21	11.8	2.05	3.6	6	8	5	7	7	19.2	-11 12
ENERGY EQUIP & SVS	16	0.39	13.5	14.6	-1.1	25.8	1.50	13.1	2.34	2.0	5	9	8	6	6	22.2	25 24
OIL & GAS	54	3.77	15.6	12.0	3.6	18.5	1.19	11.6	2.02	3.8	6	8	4	7	8	18.9	-13 11
MATERIALS	62	2.62	10.0	11.4	-1.4	36.6	1.10	19.0	2.87	2.0	4	5	5	4	5	7.5	3 19
CHEMICALS	27	1.54	10.1	11.5	-1.4	35.7	1.07	21.0	3.08	1.9	3	5	5	3	6	11.7	4 21
CONSTR MATERIALS	3	0.16	9.5	10.7	-1.2	42.8	0.93	27.4	4.47	0.6	3	1	5	4	2	12.7	18 10
CONTAINERS & PCKG	17	0.31	10.3	10.6	-0.3	37.0	0.94	14.9	2.71	2.6	6	5	5	5	6	6.0	-1 17
METALS & MINING	13	0.59	9.3	11.7	-2.4	37.7	1.29	16.3	2.29	2.2	5	7	4	7	5	-3.8	1 19
PAPER & FOREST PROD	2	0.02					1.37	15.1	3.18	1.6	7	10	8	8	2	-2.4	4 -3
INDUSTRIALS	165	8.21	10.7	11.8	-1.1	35.6	1.10	20.0	4.69	1.4	6	4	5	4	5	19.5	9 16
AEROSPACE & DEF	19	1.44	10.0	10.9	-0.9	32.2	0.97	22.6	3.40	1.4	7	4	6	4	6	51.3	27 17
BLDGS PRODUCTS	12	0.53	9.8	12.7	-2.9	39.1	1.22	19.0	4.72	1.3	6	4	5	3	5	9.2	6 9
CONSTR. & ENGR	8	0.10	11.8	13.0	-1.2	33.2	1.27	17.7	4.30	0.4	7	7	7	5	6	15.4	18 16
ELECTRICAL EQUIP	19	0.64	10.2	12.4	-2.2	37.8	1.19	28.1	4.42	1.2	7	3	6	4	4	15.3	15 24
IND CONGLOMERATES	3	0.74	9.2	11.8	-2.6	44.0	1.10	20.6	7.31	1.9	5	1	7	3	5	8.0	18 15
MACHINERY	27	1.48	11.0	12.0	-1	34.4	1.12	15.9	4.68	1.5	5	4	3	4	5	8.9	-4 8
TRADING COMPANIES	9	0.28	9.3	13.7	-4.4	42.7	1.38	14.4	2.98	1.0	8	4	4	5	5	4.1	1 9
COMMERCIAL SVS	10	0.41	8.8	10.6	-1.8	43.3	0.93	33.1	8.78	1.1	5	2	4	5	4	10.6	10 13
PROFESSIONAL SVS	27	0.80	10.4	10.9	-0.5	36.0	0.97	21.7	5.27	1.4	5	3	5	3	5	12.3	6 15
AIR FREIGHT & LOGIS	3	0.37	11.7	11.8	-0.1	28.7	1.06	15.4	4.24	3.6	4	8	6	6	8	2.2	3 18
PASSENGER AIRLINES	11	0.19	13.2	13.0	0.2	22.4	1.30	7.6	1.77	1.1	5	9	9	7	4	20.3	6 28
MARINE	2	0.01	10.2	12.1	-1.9	38.4	1.23	28.0	1.15	11.6	7		7	7	8	12.0	151 32
GROUND	15	1.21	13.4	12.2	1.2	30.4	1.16	27.1	7.10	1.0	4	2	6	5	5	24.8	17 25
CONSUMER DISCR	182	11.29	11.3	12.7	-1.4	34.8	1.24	22.4	5.49	0.8	4	6	5	6	4	17.1	18 20
AUTO COMP	13	0.19	10.9	14.2	-3.3	33.0	1.44	14.8	1.85	0.7	4	7	7	6	8	14.5	5 27
AUTOMOBILES	7	1.45	9.1	17.0	-7.9	47.6	1.85	27.5	3.66	0.4	4	7	4	9	9	12.5	21 38
HOUSEHOLD DURABLES	15	0.45	10.4	13.4	-3	37.4	1.32	11.8	2.38	1.0	5	3	5	5	4	6.3	4 9
LEISURE PRODUCTS	6	0.05	11.8	12.5	-0.7	27.5	1.21	19.4	2.46	1.7	6	7	7	6	8	17.3	52 5
TEXTILES, APPAREL	18	0.62	10.9	12.4	-1.5	35.0	1.20	22.2	6.80	0.9	7	4	6	4	5	16.7	14 17
HOTELS, RESTAURANTS & LEISURE	57	2.39	10.8	12.2	-1.4	35.0	1.20	23.6	6.81	1.2	5	6	6	4	5	14.5	16 18
DIV CONSUMER SVS	9	0.07	10.0	10.5	-0.5	28.9	0.98	14.6	4.34	0.7	7	4	5	5	4	44.5	26 20
MEDIA	1	0.02					1.07	11.9		0.0					5		nm 6
DISTRIBUTORS	2	0.08	9.4	11.0	-1.6	38.7	0.98	18.9	6.34	2.0	5	7	4	2	7	6.7	4 9
MULTILINE RETAIL	10	3.74	13.8	12.0	1.8	27.1	1.13	24.2	8.78	0.1	1	8	7	7	1	27.2	39 23
SPECIALTY RETAIL	44	2.24	9.3	11.5	-2.2	39.2	1.07	21.6	5.85	1.5	7	4	4	3	6	8.2	3 12
CONSUMER STAPLES	57	5.67	9.8	9.5	0.3	35.5	0.75	20.0	5.10	2.6	6	4	4	2	5	9.8	10 8
DISTRIBUTION & RETAIL	13	1.77	8.9	10.3	-1.4	44.2	0.80	23.8	6.14	1.3	6	4	4	3	4	8.3	27 7
BEVERAGES	11	1.37	9.5	9.6	-0.1	35.2	0.78	21.8	6.65	2.7	6	3	4	1	5	11.8	7 10
FOOD PRODUCTS	20	0.76	10.5	8.9	1.6	30.1	0.69	15.1	2.20	3.0	6	4	4	3	5	12.1	1 7
TOBACCO	2	0.45	12.7	9.6	3.1	18.7	0.77	11.1		7.1	5	3	5	2	6	7.0	4 7
HOUSEHOLD PRODUCTS	5	1.12	9.4	8.5	0.9	37.0	0.62	23.3	8.24	2.4	8	6	4	1	5	8.3	8 8
PERSONAL PRODUCTS	6	0.21	10.5	12.4	-1.9	33.8	1.18	25.0	6.56	2.0	8	8	4	5	6	15.5	18 23

Source: BofA US Equity and Quant Strategy, FactSet

BofA GLOBAL RESEARCH

Exhibit 58: BofA Universe Sector/Industry Factor Evaluation (cont'd)

As of 2/29/2024

	Valuation Analysis										Expectation Analysis							
	# of	% Univ	Impl.	Reqd	DDM	Eqty.	BofA	P/E	Price/		Earnings (Decile)					PR 5yr	EPS Growth	
	Comp	BofA	Return	Return	Alpha	Duration	Adj Beta	Ratio	Book		Yield	Surprise	Risk	Torp	Disp	Est. Rev.	Growth	2023E
HEALTH CARE	236	12.54	11.7	9.6	2.1	33.0	0.79	21.2	4.51	1.5	5	4	5	4	5	16.8	15	17
HEALTH CARE EQUIP	41	2.40	9.6	11.0	-1.4	41.3	0.95	26.0	4.45	1.0	6	5	4	3	5	10.9	7	16
HEALTH CARE PROV	47	2.60	11.3	9.6	1.7	31.9	0.78	15.0	2.99	1.4	4	3	7	2	5	12.2	8	14
HEALTH CARE TECH	8	0.11	9.0	10.7	-1.7	46.7	0.95	49.1	4.56	0.0	2	2	4	5	4	13.8	33	43
BIOTECH	93	2.33	10.8	8.9	1.9	29.6	0.72	31.4	6.17	1.8	5	6	5	6	5	12.9	0	28
PHARMACEUTICALS	29	3.67	14.5	8.7	5.8	26.9	0.65	18.4	5.78	2.3	4	5	7	5	5	29.3	40	15
LIFE SCIENCES	18	1.43	8.6	11.4	-2.8	46.8	0.98	28.4	4.26	0.3	6	4	4	2	7	9.6	-1	15
FINANCIALS	170	11.35	11.0	11.7	-0.7	32.3	1.09	14.5	2.18	2.0	6	4	6	4	5	13.5	6	15
BANKS	33	2.73	11.6	11.9	-0.3	28.0	1.11	10.9	1.26	3.0	8	5	3	4	4	6.8	-7	11
FINANCIAL SERVICES	33	2.81	10.6	11.8	-1.2	37.0	1.11	20.3	5.99	0.7	6	2	6	3	5	15.0	15	16
CONSUMER FINANCE	9	0.54	12.5	12.7	-0.2	29.3	1.25	12.2	2.02	1.7	5	6	8	4	4	14.2	10	23
CAPITAL MARKETS	52	3.20	10.8	12.5	-1.7	32.0	1.19	16.9	2.56	2.2	6	4	6	4	5	16.3	13	20
MORTGAGE REITS	12	0.07	13.1	15.0	-1.9	18.0	1.41	6.5	0.93	12.1	5	6	2	5	5	8.5	-7	0
INSURANCE	31	2.00	10.8	10.0	0.8	32.0	0.83	12.9	2.03	1.6	5	5	7	4	4	15.9	14	11
INFO TECH	165	29.15	11.0	12.2	-1.2	37.2	1.16	28.5	10.64	0.7	6	4	5	4	4	20.6	16	18
INTERNET SOFTWARE	1	0.03	11.3	15.0	-3.7	34.7	1.56	35.8		0.0	7		7	8	3	20.6	5	39
IT SERVICES	20	1.50	9.8	11.3	-1.5	38.3	1.03	27.2	6.71	1.4	6	3	4	5	4	16.9	7	10
SOFTWARE	76	11.14	10.3	11.2	-0.9	38.7	1.01	33.4	11.54	0.5	8	3	5	3	3	20.0	17	17
COMMUNICA. EQUIP	9	0.75	10.6	10.8	-0.2	35.4	0.95	16.5	5.15	2.1	7	2	3	3	6	9.4	3	5
TECH. H/W, STORAGE & PERIPH	9	6.06	9.4	12.4	-3	43.2	1.19	24.0	25.94	0.6	2	2	4	3	5	11.4	11	11
ELECTR EQUIP & INSTR	17	0.62	9.5	12.3	-2.8	41.1	1.17	18.6	3.27	1.0	5	5	5	4	5	7.7	0	15
SEMICONDUCTORS	33	9.05	13.3	13.6	-0.3	30.9	1.35	29.8	9.38	0.7	7	6	7	7	4	30.0	28	29
COMMUNICATION SERVICES	43	10.32	12.1	11.5	0.6	31.5	1.04	15.9	4.38	0.7	2	4	7	5	4	16.7	21	13
DIVERSIFIED TELECOM SVS	5	0.64	11.5	9.0	2.5	22.4	0.64	8.7	1.40	6.4	5	4	2	3	7	1.6	26	2
WIRELESS TELECOM SVS	1	0.18	17.9	8.8	9.1	22.3	0.66	16.7	3.02	1.6	4	7	9	5	9	33.0	31	45
MEDIA	13	0.59	12.6	11.2	1.4	26.1	1.01	10.1	1.94	2.4	6	6	7	5	6	10.6	11	9
ENTERTAINMENT	14	1.39	13.3	12.4	0.9	29.0	1.20	25.8	3.32	0.3	3	6	7	6	3	29.5	49	24
INTERACTIVE MEDIA & SVCS	10	7.53	11.7	11.6	0.1	32.9	1.06	16.6	6.61	0.1	1	4	7	5	3	15.6	19	14
UTILITIES	55	2.17	10.4	9.4	1	29.2	0.75	15.0	1.80	3.8	6	5	5	2	5	8.3	9	12
ELECTRIC UTILITIES	25	1.36	10.5	9.4	1.1	29.2	0.74	14.9	1.88	3.7	6	5	5	2	5	7.1	8	13
GAS UTILITIES	7	0.09	10.7	9.6	1.1	29.3	0.78	13.0	1.42	3.9	6	4	4	2	5	6.6	2	8
MULTI-UTILITIES	13	0.56	10.1	9.1	1	29.7	0.71	15.6	1.69	4.1	5	5	6	2	5	6.1	11	16
WATER UTILITIES	2	0.07	9.3	9.7	-0.4	35.2	0.78	20.4	2.08	2.7	6	4	4	1	5	6.8	7	15
INDEP POWER PROD & ENERGY TRAD	8	0.09	14.0	11.0	3	18.1	1.00	12.5	1.75	3.7	4	6	6	7	5	43.6	26	-5
REAL ESTATE	88	2.52	9.7	10.8	-1.1	33.1	0.96	18.7	2.36	3.8	6	5	3	2	8	7.3	1	17
DIVERSIFIED REITS	5	0.04	10.4	12.5	-2.1	30.4	1.02	11.7	1.31	5.5	9	4	3	1	5	-0.2	-6	9
INDUSTRIAL REITS	6	0.33	10.0	11.0	-1	31.9	0.98	22.3	2.19	3.0	3	5	4	1	9	8.7	0	11
HOTEL & RESORT REITS	9	0.08	11.2	14.2	-3	16.4	1.32	10.6	1.64	3.6	6	9	4	4	6	11.0	4	1
OFFICE REITS	12	0.12	10.7	11.8	-1.1	26.4	1.12	9.9	1.03	4.6	7	7	3	2	7	2.8	2	1
HEALTH CARE REITS	7	0.20	11.1	11.5	-0.4	27.8	1.06	14.3	1.62	4.6	5	8	5	3	8	8.5	0	11
RESIDENTIAL REITS	11	0.34	9.9	10.4	-0.5	31.0	0.89	16.7	2.36	3.8	8	4	3	1	8	5.1	1	5
RETAIL REITS	17	0.35	10.2	12.1	-1.9	26.8	1.14	12.3	1.93	5.1	3	5	3	1	7	2.5	1	4
SPECIALIZED REITS	16	0.96	8.6	9.6	-1	39.7	0.82	27.0	3.98	3.7	7	5	3	2	7	8.2	0	49
REAL ESTATE MGMT & DEV	5	0.11	10.1	11.9	-1.8	40.3	1.11	nm	3.76	0.3	9	3	4	8	8	20.7	34	469
BofA UNIVERSE	1293	100.00	11.1	11.6	-0.5	34.2	1.06	20.5	4.30	1.4						16.8	11	16
S&P 500	503	92.05	11.1	11.5	-0.4	34.3	1.04	20.3	4.35	1.4						16.0	10	14

Source: BofA US Equity and Quant Strategy, FactSet

BofA GLOBAL RESEARCH



APPENDIX

Performance Calculation Methodology

For each of the strategies represented in this report, rebalancing and performance calculations are conducted each month, using data and closing prices corresponding to the market's close on the last business day of each month. The performance of each index is computed on the basis of price return. The performance is presented relative to the benchmark which consists of the equal weighted price performance of stocks in the S&P 500 as of the last business day of each month. For Alpha Surprise model, the performance is also represented as relative to the market capitalization-weighted S&P 500 benchmark.

The results of quantitative strategies presented here may differ from the S&P 500 in that they are significantly less diversified, and, as such, their performance is more exposed to specific stock or sector results. Therefore investors following these strategies may experience greater volatility in their returns.

The analysis in this report is back-tested and does not represent the actual performance of any account or fund. Back-tested performance depicts the hypothetical back-tested performance of a particular strategy over the time period indicated. In future periods, market and economic conditions will differ and the same strategy will not necessarily produce the same results. No representation is being made that any actual portfolio is likely to have achieved returns similar to those shown herein. In fact, there are frequently sharp differences between back-tested returns and the actual results realized in the actual management of a portfolio. Back-tested performance results are created by applying an investment strategy or methodology to historical data and attempts to give an indication as to how a strategy might have performed during a certain period in the past if the product had been in existence during such time. Back-tested results have inherent limitations including the fact that they are calculated with the full benefit of hindsight, which allows the security selection methodology to be adjusted to maximize the returns. Further, the results shown do not reflect actual trading or the impact that material economic and market factors might have had on a portfolio manager's decision-making under actual circumstances. Back-tested returns do not reflect advisory fees, trading costs, or other fees or expenses.

The performance results do not reflect transaction costs, tax withholdings or any investment advisory fees. Had these costs been reflected, the performance would have been lower. The performance results of individuals following the strategies presented here will differ from the performance contained in this report for a variety of reasons, including differences related to incurring transaction costs and/or investment advisory fees, as well as differences in the time and price that securities were acquired and disposed of, and differences in the weighting of such securities. The performance results of individuals following these strategies will also differ based on differences in treatment of dividends received, including the amount received and whether and when such dividends were reinvested.

Dividend Yield and Dividend Growth Strategies

We also provide total returns for dividend oriented strategies (high dividend yield strategy and high dividend growth strategy). The total return performance calculation assumes that dividends paid on securities in a portfolio are deposited in a cash account on the ex-dividend date, and are not reinvested. The performance is presented relative to the equal weighted total returns index of stocks in the S&P 500 as of the last business day of each month.

This report includes strategies for informational or descriptive purposes, and inclusion here is not equivalent to a recommendation of the strategy or portfolio.

Past performance should not and cannot be viewed as an indicator of future performance. A complete performance record is available upon request.



Advances & Declines

Advances and declines are based on the price returns of each stock for each relevant period. The portfolio rebalancing done each month constitutes the start of a new period for each stock in the portfolio. The performance period for the stock being removed will end when the stock is removed from the portfolio. For the stock being added, the performance period will begin when it is added to the portfolio.

Definitions

Absolute return: Absolute return is calculated based on monthly returns and reflects simple price appreciation (depreciation) over the stated period. Stocks in each screen are equally weighted. Returns do not reflect dividend or transaction costs.

P/E-to-Growth: Trailing twelve months P/E divided by the five-year EPS growth rate estimated by BofA Fundamental Equity Research. If no BofA estimate exists, then the IBES Mean Long Term Growth Estimate is used.

Dividend Discount Model Alpha: The implied return from the BofA Quantitative Strategy three-stage dividend discount model less the required return from a Capital Asset Pricing Model. Presented as a decile rank.

Earnings Yield: Trailing 12-month EPS divided by month-end price

Forward Earnings Yield: Rolling 12-month forward EPS divided by month-end price

Price/Book Value: Month-end price divided by the most recently reported book value per share.

Price/Cash Flow: Month-end price divided by the most recently reported cash flow. Cash flow is defined as earnings post extraordinary items plus depreciation.

Price/Free Cash Flow: Month-end price divided by most recently reported free cash flow. Starting November 2022, we updated Free Cash Flow (FCF) calculation methodology from (Net Income + Depreciation & Amortization – CapEx) to use (Operating Cash Flow – CapEx) instead.

Price/Sales: Month-end market value divided by most recently reported sales.

EV/EBITDA: Enterprise Value (Equity Market Capitalization + Long Term Debt + Short Term Debt + Preferred Stock + Minority Interest – Cash & Cash Equivalents) divided by EBITDA (Reported Net Income + Special Items – Minority Interest + Interest Expense + Income Tax Expense + Depreciation and Amortization) – most recently reported.

Free Cash Flow/EV: Free Cash Flow divided by Enterprise Value (Equity Market Capitalization + Long Term Debt + Short Term Debt + Preferred Stock + Minority Interest – Cash & Cash Equivalents). Starting November 2022, we updated Free Cash Flow (FCF) calculation methodology from (Net Income + Depreciation & Amortization – CapEx) to use (Operating Cash Flow – CapEx) instead. For our FCF/EV factor, in addition to the methodology change to our FCF calculation (which represents Free Cash Flow to Equity), we also changed to use FCF to the Firm (FCFF) by adding back interest expense: (Operating Cash Flow – CapEx + Interest Expense*(1-tax rate)).

Dividend Yield: Indicated dividend divided by month-end price.

Dividend Growth: The growth between trailing 4-quarter total common dividends and year-ago trailing 4-quarter total common dividends.

Share Repurchase: The year-to-year change in shares outstanding

Rel Str – 30Wk/75Wk MA: The ratio of the 30-week moving average of price to the 75-week moving average.

Rel Str – 5Wk/30Wk MA: The ratio of the 5-week moving average of price to the 30-week moving average.

Rel Str – 10Wk/40Wk MA: The ratio of the 10-week moving average of price to the 40-week moving average.

Price/200-Day Moving Average: A ratio between month-end closing price and average closing price over the last 200 days.

Price Return – 12-Month Performance: Absolute price return over the last twelve months.

Price Return – 9-Month Performance: Absolute price return over the last nine months.

Price Return – 3-Month Performance: Absolute price return over the last three months.

Price Return – 11-Month Performance: Absolute price return from one year ago, ignoring the most recent month.

Price Return – 12-Month and 1-Month Performance: Equal weighted rank of stocks by (1) highest price return over the last twelve months and (2) highest price return over the most recently ended month.

Price Return – 12-Month and 1-Month Reversal: Equal weighted rank of stocks by (1) highest price return over the last twelve months and (2) lowest price return over the last one month.

Most Active: Stocks have the highest monthly share trading volume.

Earnings Momentum: The difference between 12-month trailing EPS and year-ago 12-month trailing EPS divided by year-ago 12-month trailing EPS.

Projected 5-Year EPS Growth: The five-year EPS growth rate estimated by BofA Fundamental Equity Research. If no BofA estimate exist, then I/B/E/S Mean Long Term Growth Estimate is used.

Forecast Earnings Surprise: A forecast earnings surprise variable which compares BofA estimates to those of the consensus after adjusting for the range of estimates. Stocks are ranked from 1 to 10, with 1 being among the most optimistic, relative to the consensus, 10 being among the most pessimistic. Consensus estimated earnings data are courtesy of I/B/E/S. If the projected Surprise is greater than 13 standard deviations, the stock is excluded as an outlier.

Positive (Negative) Forecast Earnings Surprise: The companies ranked 1 or 2 (9 or 10) by Forecast Earnings Surprise.

EPS Estimate Revision: The difference between the I/B/E/S FY1 estimate and that of three months ago divided by the absolute value of I/B/E/S FY1 estimate of three months ago.

Equity Duration: An adaptation of our Dividend Discount Model which measures the interest-rate sensitivity of a stock. Longer durations (higher numbers) suggest more interest-rate sensitivity.

Earnings Torpedo: I/B/E/S FY2 estimate less latest actual annual EPS divided by month-end price.

Return on Equity One-Year Average: Net income divided by average equity provided.

Return on Equity Five-Year Average: Five-year average return on equity.



Return on Equity One-Year Average (Adjusted for Debt): The ROE of companies with higher debt levels are considered lower than those of companies with lower debt levels based on their debt-to-equity ratios.

Return on Equity Five-Year Average (Adjusted for Debt): The average five year ROE of companies with higher debt levels are considered lower than those of companies with lower debt levels based on their debt-to-equity ratios.

Return on Assets: Net income plus interest and taxes as a percent of average total assets.

Return on Capital: The sum of net income, interest expense and minority interest, as a percent of average total invested capital which is inclusive of long-term debt, preferred stock, common equity, and minority interest.

Beta: A measure of non-diversifiable risk. It is calculated using regression Strategy incorporating 60 months of price performance versus that of the S&P 500.

Variability of EPS: The degree of variability in quarterly EPS over the past 5 years. Stocks are ranked from 10 to 1 with 10 being the most variable.

EPS Estimate Dispersion: The coefficient of variation among I/B/E/S FY2 estimates. Presented as a decile rank.

Price: Absolute price level of the stock at month-end.

Neglect-Institutional Ownership: Those companies with the lowest proportions of float-adjusted shares held by institutional owners are considered more neglected.

Neglect-Analyst Coverage: Those companies with the lowest number of analysts submitting ratings to FirstCall.

Firm Size: Month-end market value.

Foreign Exposure: The ratio of foreign sales to total sales.

Short Interest 12-mth Z-Score: (Most recent number of short shares – 12mth average of short shares)/ 12mth standard deviation of short shares.

Inputs for the US Regime Indicator

Inputs for the US regime indicator include the following eight macroeconomic or top-down variables listed below. In this report we also extended the indicator history going back to 1970, with available inputs listed on the bottom of the page.

- **Earnings Revision ratio:** Calculated as the ratio between the number of companies in the S&P 500 for which Thomson Financial consensus earnings estimates have been raised versus those that have been lowered. A rising ratio indicates an improving economic cycle.
- **ISM PMI:** ISM PMI Institute for Supply Management Manufacturing Purchasing Managers Index, represented as the Z-Score. The ISM Manufacturing Index monitors economic activity as reported by 300 supply management professionals. The reading of the index above (below) 50 indicated economic expansion (contraction).
- **Inflation:** The 12-month change in the BofA Inflation Composite (see methodology further below), represented as the Z-Score. Rising inflation indicates improving economic conditions.
- **GDP Forecast:** The next 12-month US GDP growth forecast from the Federal Reserve Bank of Philadelphia Survey, represented as the Z-Score.

- **Leading Economic Indicators index:** The 12-month change in the Conference Board US Leading Index of Ten Economic Indicators, represented as a Z-Score. A rising Z-Score indicates improving economic conditions.
- **US Capacity Utilization:** The 12-month change in US capacity utilization, represented as the Z-score. The capacity utilization rate indicates the percentage of total economic capacity currently utilized. Rising capacity utilization implies improving economic conditions. Rising capacity utilization suggests more expanding economic cycle and potentially rising inflationary pressure.
- **10-yr US Treasury Bond Yield:** The 12-month change in the bond yield, represented as the Z-Score. Rising yields indicate improving economic conditions.
- **High Yield corporate bond credit spread:** The 12-month change in the US High Yield credit spread of the ICE BofA US High Yield Index, represented as a Z-score. Falling spreads indicate improving economic conditions.

For the historic period from January 1970 to December 1989, the US Regime Indicator was based on the available inputs listed above, which were:

- 1/70 to 1/82: 5 inputs: Inflation, 10-yr US Treasury Bond Yield, ISM PMI, Leading Economic Indicators index, US Capacity Utilization;
- 2/82 to 3/88: 6 inputs: all of the above plus GDP Forecast;
- 4/88 to 4/89: 7 inputs: all of the above plus the High Yield corporate bond credit spread;
- 5/89 to 12/89: all 8 inputs: all of the above plus the Earnings Revision Ratio.

Performance of sizes/styles during regimes prior to January 1990 could be impacted by the more limited set of factors used to determine regimes, different definitions for Growth, Value and Size (where we use Fama-French performance data for the 1970-1989 period vs. performance of our S&P 500 top/bottom decile factors over the original history of our indicator from 1990-present), as well as the different macro backdrop in the earlier period marked by high inflation.



Disclosures

Important Disclosures

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

Investment rating	Total return expectation (within 12-month period of date of initial rating)	Ratings dispersion guidelines for coverage cluster ^{R1}
Buy	≥ 10%	≤ 70%
Neutral	≥ 0%	≤ 30%
Underperform	N/A	≥ 20%

^{R1} Ratings dispersions may vary from time to time where BofA Global Research believes it better reflects the investment prospects of stocks in a Coverage Cluster.

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

Due to the nature of strategic analysis, the issuers or securities recommended or discussed in this report are not continuously followed. Accordingly, investors must regard this report as providing stand-alone analysis and should not expect continuing analysis or additional reports relating to such issuers and/or securities.

Due to the nature of quantitative analysis, the issuers or securities recommended or discussed in this report are not continuously followed. Accordingly, investors must regard this report as providing stand-alone analysis and should not expect continuing analysis or additional reports relating to such issuers and/or securities.

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