

# Research Portfolios Performance

## 4Q 2023 Performance Review

### Portfolio Strategy

### Key Takeaways from 4Q23:

- In 4Q23, 3 out of 6 Research Portfolios outperformed their respective benchmarks (Income, Income and Growth, Large Cap Defensive), while three underperformed (Growth, International and Midcap).
- Similarly, in 2023, 3 out of 6 Research Portfolios outperformed (International, Large Cap Defensive, and Income and Growth). The Growth portfolio slightly underperformed (trailing by 15bps relative, up 42.4% for the year absolute) and Income and Mid Cap trailed their benchmarks.
- In September we recommended a tilt towards value-oriented investing via the Income Portfolio. For most of 4Q growth investing outperformed but the degree of outperformance has been narrowing. We expect this trend to continue for 2024 and thus favor our Income Portfolio.

### Majority of Year's Absolute Returns Occurred in 4Q

4Q was an important quarter for overall absolute returns this year. Driven by lowered rate expectations at the end of the year, the risk-on rally helped all portfolios. In fact, 4Q23 defined on average 62% of the portfolios' total returns for the year (Exhibit 2). This yet again underscores [Savita's caution on the perils of market timing!](#) On a relative basis in 4Q, 3 out of 6 portfolios performed ahead of or in line with their respective benchmarks.

#### Exhibit 1: Portfolios Ranked by 4Q23 Relative Performance

Performance through 12/31/2023

Portfolio	Benchmark	4Q Relative to Benchmark	4Q Absolute
Income & Growth	S&P 500	1.70%	13.36%
Income	Russell 1000 Value	0.93%	10.36%
Large Cap Defensive	Russell 1000	0.01%	11.93%
Growth	Russell 1000 Growth	-0.27%	13.88%
International	MSCI AC World Ex-US	-1.23%	8.54%
Mid Cap	Russell Mid Cap	-1.61%	11.16%

Source: BofA Global Research, S&P Compustat

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**Exhibit 2: Q4 accounted for much of full year's absolute return**

As of 12/31/2023

Portfolio	4Q Absolute Return	% of 2023 Absolute Return
Income	10.36%	112%
Mid Cap	11.16%	83%
Income & Growth	13.36%	51%
International	8.54%	50%
Large Cap Defensive	11.93%	44%
Growth	13.88%	33%

Source: BofA Global Research, S&amp;P Compustat

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Looking at the full year, trends were similar with 3/6 portfolios outperforming their benchmarks. On an absolute basis the Growth portfolio easily led the pack with a gain of 42.36% (just 15bps behind the benchmark). Strong absolute performance was driven by exposure to mega-cap growth stocks. The lowest return for the year was the Income portfolio of 9.29%, but this was a function of its more value-oriented objectives in a year that favored growth investing. The Income portfolio performed well on its two main objectives with a dividend yield that averaged above 3% for the year and cash flow growth approaching 4% which is in line with inflation.

**Exhibit 3: Portfolios Ranked by YTD Absolute Performance**

Performance through 12/31/2023

Portfolio	Benchmark	YTD Relative	YTD Absolute
Growth	Russell 1000 Growth	-0.15%	42.36%
Large Cap Defensive	Russell 1000	0.70%	27.02%
Income & Growth	S&P 500	0.07%	26.15%
International	MSCI AC World Ex-US	0.87%	16.93%
Mid Cap	Russell Mid Cap	-3.53%	13.52%
Income	Russell 1000 Value	-1.99%	9.29%

Source: BofA Global Research, S&amp;P Compustat

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**Lessons from 2023**

As a team we always engage in thinking about the lessons we have learned in the previous 12 months in order to improve. Below are our key lessons from 2023:

- Don't fight rotation especially when confirmed by the [US Regime Indicator](#). While turnover is an important consideration for us, relative and absolute performance are greater priorities. Early in the year there was a significant market rotation which we recognized in January. For this reason (especially in the Income and Growth portfolio) we quickly moved away from our defensive positioning, and this enabled us to eventually beat the benchmark for the year.
- Continue to be very conscious of where we are in the investment cycle when thinking about allocations amongst the Research Portfolios. In early 2023 (with the Regime Indicator in the downturn phase which favors growth) we advised FAs to diversify their value allocation to a balanced approach between growth and value. In September 2023, with the Regime Indicator moving to the Recovery Phase, we recommended value.



- Keep bottom-up stock selection at the heart of what we do. Given that we are bottom-up investors ultimately stock selection is what we want to drive performance. In the same spirit it is important for our investors to know that each of our portfolios have their own distinct objectives and must stay within their respective lanes. Our core portfolios, such as Income and Growth, will never look like an Income Portfolio, or a Growth portfolio, regardless of what investment style is currently in favor.
- Being very aware of expanding addressable markets is critical. Find the industry leaders to invest in these trends. Two examples this year were the AI boom, expressed through our overweight to Nvidia (NVDA), and the promising outlook for GLP1 drugs, expressed through our overweight to Eli Lilly (LLY).
- Downward estimate revisions really do matter. It is important to remind ourselves that if analysts lower estimates twice, generally these stocks will underperform the wider market for quite a long time.
- When a stock that we do not have a strong fundamental view on contributes too much individual risk to a portfolio, we see it as prudent to neutralize that position. Much as we have done with Tesla (TSLA) for example.
- Tax loss selling can create dispersion of performance in volatile years. While tax loss selling at times can be prudent (please refer to your financial advisors for advice), it can create quite a lot of dispersion between our published results and client experience. It is important to note that in a volatile year a stock can move significantly over a 30-day period, which over multiple stocks can create a lot of dispersion from our portfolios.
- The power of interest rate insensitivity. This hiking cycle, the Fed Funds rate is a very blunt instrument which impacts both consumers and companies much more slowly than in the past. Given that over 90% of home mortgages are fixed and that many corporations locked in low rates in 2020-2022, the economy is a lot less sensitive to a rise or fall in rates. Looking into 2024 this is an important consideration. While in the short term the markets can be driven by the Fed lowering rates, the impact on the broader economy will likely be much more muted, just as it was when interest rates were rising.

### Looking Forward to 2024: A Broadening Market Favors Active Investing

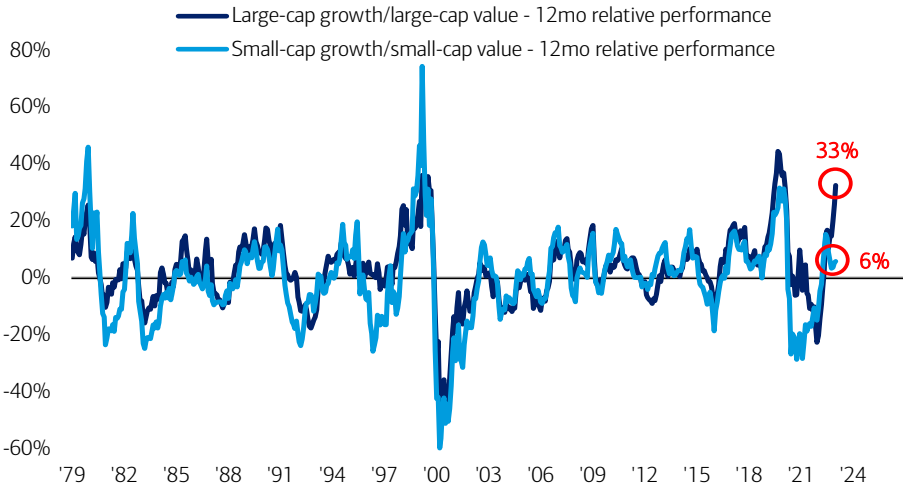
According to Savita Subramanian [only 38% of large cap active managers outperformed their Russell benchmarks in 2023](#). She attributes this to narrow market breadth which created a challenging backdrop for active funds in 2023. Less than 30% of stocks outperformed the S&P 500, the lowest annual breadth in Savita's data since 1987. However, breadth has recently started to improve; with 60% of stocks outperforming since November. Savita goes on to say that "if the rally continues to broaden, active funds will have greater odds of selecting winners in 2024."

### Regime Indicator and Where to Invest in 2024

In September 2023, with the Regime Indicator moving to the Recovery Phase, we published a report which highlighted that the [Recovery Phase favors value-oriented investing \(and therefore the Income portfolio\)](#). While the Russell 1000 Growth continued to outperform the Russell 1000 Value in 4Q, the spread between two indices has been narrowing. It is very important to note that [in 2023 large-cap growth outperformed value by 33%--which is the 2nd biggest beat since 1979](#). Exhibit 4 shows that large-cap growth outperformance was abnormally wide:



**Exhibit 4: Large cap growth abnormal outperformance in 2023**  
Large growth/value & small growth/value (12m)



Source: BofA Global Investment Strategy, Bloomberg

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Given the magnitude of outperformance we reviewed historical periods to analyze what typically follows these large spreads. [When the Russell 1000 Growth led the Russell 1000 Value on a rolling 12 month basis by over 25% \(see our report\)](#), in the next 6 months Russell Value outperformed 79% of the time and by 10.4% on average. Over the next 12 months Russell Value outperformed 74% of the time and by 16.5% on average. Shorter term trends are less convincing as detailed in the table below. While past performance is no guarantee for future performance, these hit rates are quite compelling.

**Exhibit 5: Russell 1000 Value usually “rips” after periods of extreme (25%+) underperformance**  
Subsequent Russell 1000 Value index relative performance vs Russell 1000 Growth after outsized (25%+) outperformance over prior 12m period

	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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Turnover

Turnover remains mixed across the portfolios this year as the team attempts to position for the changing market dynamics.

**Exhibit 6: Portfolio Turnover**  
Turnover percentage is based on sells only; data as of 12/31/2023

	Large Cap Defensive	Income	Income & Growth	Growth	International	Midcap
Turnover- YTD	43%	51%	59%	47%	50%	99%
Turnover-1 yr rolling	43%	51%	59%	47%	50%	99%
Turnover-Full History (Annualized)	34%	42%	42%	48%	50%	84%
Change	9%	9%	17%	-1%	0%	14%

Source: BofA Research Portfolios, S&P Compustat

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Risk Management

We continue to run the portfolios with low to medium tracking error versus each portfolio’s benchmark. We focus on achieving outperformance from stock picking, rather than sector or style exposures. We also continue to monitor the changing factor landscape to give a sense of what styles are in favor, while keeping portfolio tilts to those styles to a minimum. Risk management and a focus on stock picking are especially important given the difficulty in timing sectors and style tilts in this volatile market.



**Takeaways for each portfolio:**

Attribution analysis referenced in the comments below is performed using Bloomberg and FactSet.

**Large Cap Defensive:**

1. The Large Cap Defensive Portfolio returned 11.9% vs. 11.9% for its Russell 1000 (R1) benchmark in Q423, inline in a rapidly advancing market driven by an inflection in the interest rate cycle. The portfolio's overall risk level continues to be lower than the market with a forecast standard deviation of ~0.95 that of the benchmark. We continue to believe that a lower risk portfolio with a bias to higher quality equities can provide downside protection and greater risk-adjusted returns over a market cycle.
2. The Q4 performance was driven by stock selection particularly in Financials, Healthcare, and Consumer Staples while allocation was a detractor due to an overweight to Energy.
3. American Express (AXP), Extra Space Storage (EXR), JPMorgan Chase & Co (JPM), Intuit (INTU), and Salesforce (CRM) were the largest positive contributors in the quarter. AXP is an integrated payments company and a leading charge and credit card issuer. The company reported strong monthly operating metrics in the quarter highlighted by steady loan growth and improved loss rates as consumer spending strength continued.
4. Exxon Mobil (XOM), Walmart (WMT), Comcast (CMCSA), Williams Companies (WMB) and Rockwell Automation (ROK) were the largest detractors versus the benchmark. XOM is a leading integrated oil and gas company that was impacted by the decline in oil prices in Q4.
5. During the period we added new stocks to the portfolio where we had high fundamental conviction like Consolidated Edison (ED) and Fifth Third Bank (FITB), both of which also benefit from declining interest rates, while exiting stocks where the investment thesis became challenged like Aon PLC (AON) and NextEra Energy (NEE).

**Income:**

1. The Income Portfolio returned 10.4% vs. 9.4% for its Russell 1000 Value (R1V) benchmark in Q423, outperforming by 1.0% driven by dividend paying and bond proxy stocks advancing rapidly as the end of the Fed rate hiking cycle became market consensus. Consistent with its primary objective, the Income portfolio's dividend yield at 3.0% remains at a large spread to the S&P 500's 1.5% yield and its R1V benchmark's 2.4% yield.
2. Q4 outperformance was driven by stock selection in high dividend paying sectors including Financials, Communications Services and Energy. Allocation was a small positive contributor driven by an overweight to Real Estate and value Technology stocks.
3. Broadcom (AVGO), Blackrock (BLK), D.R. Horton (DHI), American Express (AXP) and Synchrony Financial (SYF) were the top contributors in the quarter. AVGO is a leading datacenter and communications semiconductor company benefitting from cloud and AI growth.
4. Exxon Mobil (XOM), Beckton, Dickinson and Company (BDX), Hewlett Packard Enterprise (HPE), Emerson Electric (EMR) and Comcast Corporation (CMCSA) were the largest detractors. BDX is a diversified global medical technology company that produces medical devices and instrument systems. While the company gave multi-year targets that were on track, currency translation negatively impacted guidance. The FX outlook has since improved with the decline in interest rates.

- During the period we added new stocks to the portfolio in which we have high fundamental conviction like HP Inc (HPQ) and Consolidated Edison (ED) and sold stocks where the investment thesis was challenged like Toronto Dominion Bank (TD).

#### Income and Growth:

- In the fourth quarter, the Income & Growth portfolio increased 13.4% compared with the S&P 500 benchmark gain of 11.7%. For the full year, the portfolio increased 26.2%, outperforming the benchmark, which rose 26.1%.
- We entered 2023 positioned too defensively as the expectation was that the economy would remain in late cycle for longer as the potential for recession kept getting pushed out. This view turned out to be incorrect and resulted in the portfolio significantly underperforming the benchmark in January.
- Once we recognized a soft landing was more likely, we shifted the portfolio to a more neutral stance, which allowed us to deliver alpha through stock selection and not from styles or regime shifts in the market. This resulted in the portfolio recouping all its relative losses from January and slightly outperforming for the year.
- Some of the largest contributors to returns were NVIDIA (NVDA) on AI excitement and great results, Costco (COST) which continues to deliver consistent strong growth, Zoetis (ZTS) as its new products gain market share and Eli Lilly (LLY) on the GLP1 phenomenon.
- Entering 2024, we maintain our more neutral positioning in terms of portfolio construction and remain focused on the strength of the consumer and the interest rate environment, as we see these as two potentially big swing factors in determining market and sector performance.

#### Growth:

- For the fourth quarter of 2023, the Growth portfolio returned 13.9% vs 14.2% for the benchmark Russell 1000 Growth Index. On the full year, the portfolio underperformed by 0.15%. December performance was challenging as the market shifted on the expectation for interest rate cuts.
- The top 3 stock contributors to active return over the quarter were Datadog Inc. (DDOG), TopBuild Corp. (BLD), and T-Mobile Inc (TMUS). The top 3 detractors were Advanced Micro Devices (AMD), Qualcomm Incorporated (QCOM), and Edwards Lifesciences (EW).
- Among the top contributors for Q4, we want to highlight Datadog Inc. (DDOG). Datadog is a cloud-based monitoring and security platform that integrates infrastructure monitoring, application performance monitoring, and log management. DDOG reported a strong Q3 and upbeat Q4 as DDOG believes optimization headwinds appear to moderate and 21% sales growth guide for Q4 alleviated growing concerns that the company would struggle to sustain 20% growth exiting 2023.
- During the quarter, the Growth portfolio added new names such as TopBuild (BLD), and Lowe's Corporation (LOW), two companies that are well positioned for a strong housing market. We also bought MongoDB (MDB), Unity Software (U), and Take-Two Interactive (TTWO).

#### International:

- For the fourth quarter of 2023, the International portfolio returned 8.5% vs 9.8% for the benchmark MSCI All Country World Ex US Index. On the full year, the portfolio outperformed by 0.9%.



2. The top 3 stock contributors over the quarter were Taiwan Semiconductor Manufacturing (TSM), PDD Holdings Inc. (PDD), and ASML NV (ASML). The top 3 detractors were Yum China (YUMC), Sanofi (SNY), and Argenx SE (ARGX).
3. Among the top contributors for Q4, we want to highlight Taiwan Semiconductor Manufacturing (TSM). TSM is the largest and global leader in integrated circuit (IC) manufacturing. As a build-to-order foundry, it provides a wide range of value-add activities: IC manufacturing, mask-making, IC design services, turnkey solutions, and process development. We attribute its success to its proven, winning business model, unparalleled scale advantage, optimized execution, and technology scope and depth. TSM's outperformance in Q4 was driven by strong 3Q results and 4Q guide above expectations. TSM sees growing business activities from AI.
4. Among the top detractors for Q4, we want to highlight Sanofi (SNY). Sanofi is a global pharmaceutical company headquartered in Paris, France. It has 4 divisions: Specialty Pharmaceuticals (with a focus on atopic allergic disorders, oncology and, through the acquisition of Genzyme, rare diseases), Vaccines, General medicines, and Consumer Health. Sanofi underperformed in Q3 as SNY announced increased R&D spend to fund SNY's improving pipeline after a run of Phase 1 and Phase 2 successes.
5. During the quarter, the International Portfolio added new names such as a Stellantis (STLA), PDD Holdings (PDD), and Eaton Corp (ETN), and sold JD.com (JD).

#### Mid Cap:

1. During the quarter, the Midcap Portfolio underperformed its benchmark by about 160 bps, returning 11.2% against 12.8% for the Russell Midcap benchmark.
2. From a risk model attribution perspective, performance was primarily due to negative alpha. Some of the alpha detractor was due to negative alpha in the portfolio's holdings, while a significant amount was due to names in the benchmark (not held in the portfolio) that performed strongly during the market rally in the last part of the year. There were some slight positive offsets from small industry tilts.
3. From a traditional sector allocation/stock selection perspective, during the quarter an overweight to the Tech sector helped performance, while an underweight to the Industrials sector was a drag.
4. For the quarter, Huntington Bancshares (HBAN) and Elastic (ESTC) were the top contributors at the stock level. ESTC reported encouraging numbers and HBAN rallied alongside strength in the banking sector. R1 RCM (RCM) and Bill.com (BILL) were the biggest detractors. Both RCM and BILL had negative reactions to earnings reports.
5. We exited our positions in Pulte Homes (PHM), Dexcom (DXCM), Grupo Aeroportuario del Centro Norte (OMAB), Splunk (SPLK), Bill.com (BILL), and Hess (HES) during the quarter. We added positions in Nutanix (NTNX), Allstate (ALL), PTC Inc. (PTC), Victoria's Secret (VSCO), Alliant Energy (LNT), Doordash (DASH), and Block Inc. (SQ) during the quarter.





**Exhibit 7: Research Equity Portfolios performance**

All performance numbers as of 12/31/2023

	<b>Dec-24</b>	<b>Qtr. 4</b>	<b>YTD</b>	<b>12 Months</b>	<b>3 Years</b>	<b>5 Years</b>	<b>10 Years</b>
	11/30/2023 - 12/31/2023	09/30/2023- 12/31/2023	12/31/2022 - 12/31/2023	12/31/2022 - 12/31/2023	12/31/2020 - 12/31/2023	12/31/2018 - 12/31/2023	12/31/2013 - 12/31/2023
<b>Large Cap Defensive</b>	<b>4.87%</b>	<b>11.93%</b>	<b>27.02%</b>	<b>27.02%</b>	<b>11.00%</b>	<b>15.71%</b>	<b>11.39%</b>
<b>Russell 1000</b>	<b>4.92%</b>	<b>11.93%</b>	<b>26.32%</b>	<b>26.32%</b>	<b>8.86%</b>	<b>15.23%</b>	<b>11.25%</b>
<b>Relative to benchmark</b>	<b>-0.06%</b>	<b>0.01%</b>	<b>0.70%</b>	<b>0.70%</b>	<b>2.14%</b>	<b>0.48%</b>	<b>0.14%</b>
<b>Income</b>	<b>5.41%</b>	<b>10.36%</b>	<b>9.29%</b>	<b>9.29%</b>	<b>8.52%</b>	<b>9.41%</b>	<b>8.26%</b>
<b>Russell 1000 Value</b>	<b>5.51%</b>	<b>9.43%</b>	<b>11.28%</b>	<b>11.28%</b>	<b>8.79%</b>	<b>10.66%</b>	<b>8.02%</b>
<b>Relative to benchmark</b>	<b>-0.11%</b>	<b>0.93%</b>	<b>-1.99%</b>	<b>-1.99%</b>	<b>-0.27%</b>	<b>-1.25%</b>	<b>0.23%</b>
<b>Income &amp; Growth</b>	<b>4.47%</b>	<b>13.36%</b>	<b>26.15%</b>	<b>26.15%</b>	<b>7.39%</b>	<b>15.59%</b>	<b>11.66%</b>
<b>S&amp;P 500</b>	<b>4.53%</b>	<b>11.65%</b>	<b>26.08%</b>	<b>26.08%</b>	<b>9.88%</b>	<b>15.37%</b>	<b>11.44%</b>
<b>Relative to benchmark</b>	<b>-0.06%</b>	<b>1.70%</b>	<b>0.07%</b>	<b>0.07%</b>	<b>-2.49%</b>	<b>0.22%</b>	<b>0.22%</b>
<b>Growth</b>	<b>3.33%</b>	<b>13.88%</b>	<b>42.36%</b>	<b>42.36%</b>	<b>7.58%</b>	<b>18.58%</b>	<b>13.05%</b>
<b>Russell 1000 Growth</b>	<b>4.43%</b>	<b>14.15%</b>	<b>42.51%</b>	<b>42.51%</b>	<b>8.77%</b>	<b>19.27%</b>	<b>14.31%</b>
<b>Relative to benchmark</b>	<b>-1.09%</b>	<b>-0.27%</b>	<b>-0.15%</b>	<b>-0.15%</b>	<b>-1.19%</b>	<b>-0.69%</b>	<b>-1.27%</b>
<b>International</b>	<b>4.33%</b>	<b>8.54%</b>	<b>16.93%</b>	<b>16.93%</b>	<b>2.77%</b>	<b>9.48%</b>	<b>3.66%</b>
<b>MSCI AC World Ex-US</b>	<b>5.03%</b>	<b>9.77%</b>	<b>16.05%</b>	<b>16.05%</b>	<b>2.10%</b>	<b>7.59%</b>	<b>4.35%</b>
<b>Relative to benchmark</b>	<b>-0.70%</b>	<b>-1.23%</b>	<b>0.87%</b>	<b>0.87%</b>	<b>0.67%</b>	<b>1.88%</b>	<b>-0.69%</b>
<b>Mid Cap</b>	<b>7.83%</b>	<b>11.16%</b>	<b>13.52%</b>	<b>13.52%</b>	<b>6.98%</b>	<b>14.60%</b>	<b>8.72%</b>
<b>Russell Mid Cap</b>	<b>7.71%</b>	<b>12.76%</b>	<b>17.05%</b>	<b>17.05%</b>	<b>5.88%</b>	<b>12.51%</b>	<b>9.11%</b>
<b>Relative to benchmark</b>	<b>0.12%</b>	<b>-1.61%</b>	<b>-3.53%</b>	<b>-3.53%</b>	<b>1.10%</b>	<b>2.08%</b>	<b>-0.38%</b>

Source: BofA Global Research; S&amp;P Compustat

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# Large Cap Defensive

## Investment objective

- The primary objective is to protect principal, with some emphasis on income, from what we view as the most defensive, highest-quality investments.
- This portfolio also furthers its objective by focusing on stocks offering liquidity and consistency of dividend growth to provide some protection against inflation.

## Risk profile: Conservative

- Averse to risk and will accept a lower-than-average return to minimize the risk of principal loss or price volatility.

## Stock selection methodology

- Stocks rated Buy (1) are preferred, but those rated Neutral (2) may be included for diversification purposes, as long as they exhibit characteristics that fulfill the objective and tolerance for risk. Stocks rated Underperform (3) will not be included in the portfolio.
- The dividend distribution should be considered secure, although no minimum yield is required.
- Liquid large-capitalization industry-leading companies are preferred.

### Exhibit 10: Large Cap Defensive

Performance numbers as of 12/31/2023

	Month	Quarter	YTD	12 Months	3 year average Annual Return	5 year average Annual Return	10 year average Annual Return	YTD Turnover
	11/30/2023 - 12/31/2023	09/30/2023- 12/31/2023	12/31/2022 - 12/31/2023	12/31/2022 - 12/31/2023	12/31/2020 - 12/31/2023	12/31/2018 - 12/31/2023	12/31/2013 - 12/31/2023	
<b>Large Cap Defensive</b>	<b>4.87%</b>	<b>11.93%</b>	<b>27.02%</b>	<b>27.02%</b>	<b>11.00%</b>	<b>15.71%</b>	<b>11.39%</b>	<b>43%</b>
Russell 1000	4.92%	11.93%	26.32%	26.32%	8.86%	15.23%	11.25%	

Source: BofA Research, S&P Compustat, Factset

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### Exhibit 8: Risk Metrics

Trailing risk data through 12/31/2023

	1 year	3 year	5 year	10 year
Standard Deviation	13.7%	17.2%	17.3%	13.9%
Sharpe	1.60	0.51	0.80	0.73
Tracking Error	2.5%	3.3%	4.3%	4.2%
Information Ratio	0.28	0.66	0.11	0.03

Note: The explanation of risk metrics is provided in the Performance and Risk Metrics Calculation Methodology at end of this report.

Source: BofA Research Portfolios, S&P Compustat, Factset

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### Exhibit 9: Historical performance – total return – price change plus dividend

Yearly performance vs. benchmark

Period	Large Cap Defensive	Russell 1000
2022	-15.64%	-19.04%
2021	27.62%	26.26%
2020	15.09%	20.59%
2019	31.82%	31.16%
2018	-4.00%	-4.62%
2017	17.64%	21.46%
2016	9.86%	11.86%
2015	2.75%	0.92%
2014	11.17%	13.09%
2013	24.55%	32.80%

Source: BofA Research

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# Income

## Investment objective

- The primary objective is to obtain an ongoing secure income stream from dependable sources with some emphasis on protection of principal.
- Equity focus is not just on the statistical yield, but also on the potential for dividend growth as an offset against inflation.

## Risk profile: Moderately Conservative

- Strongly averse to risk and will accept a lower-than-average return to minimize the risk of principal loss or price volatility.

## Stock selection methodology

- Stocks rated Buy (1) are preferred, but those rated Neutral (2) may be included for diversification purposes, as long as they exhibit characteristics that fulfill the objective and tolerance for risk. Stocks rated Underperform (3) will not be included in the portfolio.
- The dividend distribution must be considered secure (Income rating of 7 only) and a dividend yield at least equal to that of the overall market is preferred.
- Large-capitalization companies are preferred.

### Exhibit 13: Income

Performance numbers as of 12/31/2023

	Month	Quarter	YTD	12 Months	3 year average Annual Return	5 year average Annual Return	10 year average Annual Return	YTD Turnover
	11/30/2023 - 12/31/2023	09/30/2023- 12/31/2023	12/31/2022 - 12/31/2023	12/31/2022 - 12/31/2023	12/31/2020 - 12/31/2023	12/31/2018 - 12/31/2023	12/31/2013 - 12/31/2023	
<b>Income</b>	<b>5.41%</b>	<b>10.36%</b>	<b>9.29%</b>	<b>9.29%</b>	<b>8.52%</b>	<b>9.41%</b>	<b>8.26%</b>	<b>51%</b>
Russell 1000 Value	5.51%	9.43%	11.28%	11.28%	8.79%	10.66%	8.02%	

Source: BofA Research, S&P Compustat, Factset

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### Exhibit 11: Risk Metrics

Trailing risk data through 12/31/2023

	1 year	3 year	5 year	10 year
Standard Deviation	15.6%	16.9%	17.3%	13.7%
Sharpe	0.27	0.37	0.44	0.51
Tracking Error	2.3%	2.4%	3.9%	4.7%
Information Ratio	-0.85	-0.11	-0.32	0.05

Note: The explanation of risk metrics is provided in the Performance and Risk Metrics Calculation Methodology at end of this report.

Source: BofA Research Portfolios, S&P Compustat, Factset

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### Exhibit 12: Historical performance – total return – price change plus dividend

Yearly performance vs. benchmark

Period	Income	Russell 1000 Value
2022	-4.69%	-7.51%
2021	22.68%	24.93%
2020	-0.46%	2.42%
2019	23.23%	26.23%
2018	-7.27%	-8.06%
2017	13.81%	13.46%
2016	16.53%	17.02%
2015	2.65%	-3.77%
2014	11.70%	13.29%
2013	23.44%	32.23%

Source: BofA Global Research

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# Income & Growth

## Investment objective

- The primary objective is to employ a total return approach, with a cross-section of stocks that combine income and dividend growth for inflation protection and earnings growth for wealth accumulation.
- Stock selection should involve less volatility than assumed by the pure growth investor and may have a lower yield than sought by the pure income investor.
- No minimum yield is required.

## Risk profile: Moderate

- Despite the balanced nature of the objective, some measure of risk will be assumed to achieve growth, as long as income is not disturbed.

## Stock selection methodology

- Stocks rated Buy (1) are preferred, but those rated Neutral (2) may be included for diversification purposes, as long as they exhibit characteristics that fulfill the objective and tolerance for risk. Stocks rated Underperform (3) will not be included in the portfolio.
- The dividend distribution should be considered secure, and stocks with potential for dividend growth are favored.
- An estimated five-year earnings growth rate of 4% or higher is preferred.

### Exhibit 16: Income & Growth

Performance numbers as of 12/31/2023

	Month	Quarter	YTD	12 Months	3 year average Annual Return	5 year average Annual Return	10 year average Annual Return	YTD Turnover
	11/30/2023 - 12/31/2023	09/30/2023 - 12/31/2023	12/31/2022 - 12/31/2023	12/31/2022 - 12/31/2023	12/31/2020 - 12/31/2023	12/31/2018 - 12/31/2023	12/31/2013 - 12/31/2023	
<b>Income &amp; Growth</b>	<b>4.47%</b>	<b>13.36%</b>	<b>26.15%</b>	<b>26.15%</b>	<b>7.39%</b>	<b>15.59%</b>	<b>11.66%</b>	<b>59%</b>
<b>S&amp;P 500</b>	4.53%	11.65%	26.08%	26.08%	9.88%	15.37%	11.44%	

Source: BofA Research, S&P Compustat, Factset

### Exhibit 14: Risk Metrics

Trailing risk data through 12/31/2023

	1 year	3 year	5 year	10 year
Standard Deviation	13.9%	17.4%	18.1%	15.0%
Sharpe	1.51	0.30	0.76	0.69
Tracking Error	2.4%	2.7%	2.7%	2.5%
Information Ratio	0.03	-0.93	0.08	0.09

Note: The explanation of risk metrics is provided in the Performance and Risk Metrics Calculation Methodology at end of this report.

Source: BofA Research Portfolios, S&P Compustat, Factset

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### Exhibit 15: Historical performance – total return – price change plus dividend

Yearly performance vs. benchmark

Period	Income & Growth	S&P 500
2022	-23.14%	-18.03%
2021	27.72%	28.48%
2020	22.27%	18.05%
2019	36.31%	31.21%
2018	-3.01%	-4.22%
2017	23.69%	21.60%
2016	9.99%	11.77%
2015	-2.15%	1.37%
2014	13.06%	13.52%
2013	30.95%	32.04%

Source: BofA Global Research

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# Growth

## Investment objective

- A buy-and-hold strategy of well positioned companies in strategically favored economic sectors and industries is employed.
- The focus is on companies with consistent and above average earnings growth that has been demonstrated over time under a variety of economic circumstances. Investors are willing to consider a higher price/earnings multiple for faster pace of future earnings per share growth.

## Risk profile: Moderately Aggressive

- A high level of price volatility and risk of principal loss may be necessary in order to achieve potentially above-average returns.

## Stock selection methodology

- Low volatility risk (A) or Medium volatility risk (B) stocks are preferred. High volatility risk (C) stocks may be chosen for diversification purposes, provided that their EPS growth rate estimate compensates for the higher degree of risk.
- Stocks rated Buy (1) are preferred, but those rated Neutral (2) may be included for diversification purposes, as long as they exhibit characteristics that fulfill the objective and tolerance for risk. Stocks rated Underperform (3) will not be included in the portfolio.
- An estimated five-year earnings growth rate of 8% or higher for (A) or (B) rated stocks, and 10% or higher for (C) rated stocks, is recommended.

### Exhibit 19: Growth

Performance numbers as of 12/31/2023

	Month	Quarter	YTD	12 Months	3 year average Annual Return	5 year average Annual Return	10 year average Annual Return	YTD Turnover
	11/30/2023 - 12/31/2023	09/30/2023 - 12/31/2023	12/31/2022 - 12/31/2023	12/31/2022 - 12/31/2023	12/31/2020 - 12/31/2023	12/31/2018 - 12/31/2023	12/31/2013 - 12/31/2023	
<b>Growth</b>	<b>3.33%</b>	<b>13.88%</b>	<b>42.36%</b>	<b>42.36%</b>	<b>7.58%</b>	<b>18.58%</b>	<b>13.05%</b>	<b>47%</b>
Russell 1000 Growth	4.43%	14.15%	42.51%	42.51%	8.77%	19.27%	14.31%	

Source: BofA Research, S&P Compustat, Factset

### Exhibit 17: Risk Metrics

Trailing risk data through 12/31/2023

	1 year	3 year	5 year	10 year
Standard Deviation	14.6%	21.0%	21.0%	17.6%
Sharpe	2.55	0.26	0.79	0.67
Tracking Error	3.4%	2.6%	2.6%	3.4%
Information Ratio	-0.04	-0.47	-0.27	-0.37

Note: The explanation of risk metrics is provided in the Performance and Risk Metrics Calculation Methodology at end of this report

Source: BofA Research Portfolios, S&P Compustat, Factset

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### Exhibit 18: Historical performance – total return – price change plus dividend

Yearly performance vs. benchmark

Period	Growth	Russell 1000 Growth
2022	-33.28%	-29.05%
2021	31.09%	27.48%
2020	37.70%	38.21%
2019	36.74%	36.20%
2018	4.05%	-1.40%
2017	24.14%	30.00%
2016	8.19%	6.98%
2015	0.28%	5.65%
2014	3.72%	12.93%
2013	37.78%	33.19%

Source: S&P Compustat, Factset, BofA Research Portfolios

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# International

## Investment objective

- The primary objective is to build wealth over a multi-year period through ownership of a geographically diverse portfolio of non-US equities.

## Risk profile: Moderately Aggressive

- The portfolio will invest in a portfolio of primarily ADRs that are exposed to currency and geopolitical risks. Further, the tax withholding policies of various countries can affect the receipt of dividend income by investors.
- Although geographically diverse, the portfolio is likely to have a larger than index weight exposure to emerging markets, that tend to have a high degree of price volatility.

## Stock selection methodology

- Stocks chosen must be considered “international,” implying that the stock is domiciled outside the US. All stocks will be either listed on US exchanges or have Blue Sky regulatory clearance in all US states.
- Low volatility risk (A), Medium volatility risk (B) and High volatility risk (C) stocks may be chosen.
- Stocks rated Buy (1) are preferred, but those rated Neutral (2) may also be included. Stocks rated Underperform (3) will not be included in the portfolio.
- Stocks with market capitalizations in excess of US \$5 billion are preferred.

### Exhibit 22: International

Performance numbers as of 12/31/2023

	Month	Quarter	YTD	12 Months	3 year average Annual Return	5 year average Annual Return	10 year average Annual Return	YTD Turnover
	11/30/2023 - 12/31/2023	09/30/2023- 12/31/2023	12/31/2022 - 12/31/2023	12/31/2022 - 12/31/2023	12/31/2020 - 12/31/2023	12/31/2018 - 12/31/2023	12/31/2013 - 12/31/2023	
<b>International</b>	<b>4.33%</b>	<b>8.54%</b>	<b>16.93%</b>	<b>16.93%</b>	<b>2.77%</b>	<b>9.48%</b>	<b>3.66%</b>	<b>50%</b>
MSCI AC World Ex-US	5.03%	9.77%	16.05%	16.05%	2.10%	7.59%	4.35%	

Source: BofA Research, S&P Compustat, Factset

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### Exhibit 20: Risk Metrics

Trailing risk data through 12/31/2023

	1 year	3 year	5 year	10 Year
Standard Deviation	13.7%	16.3%	17.4%	15.6%
Sharpe	0.87	0.03	0.44	0.16
Tracking Error	3.3%	4.8%	4.8%	4.9%
Information Ratio	0.27	0.14	0.40	-0.14

Note: The explanation of risk metrics is provided in the Performance and Risk Metrics Calculation Methodology at end of this report.

Source: BofA Research Portfolios, S&P Compustat, Factset

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### Exhibit 21: Historical performance – total return – price change plus dividend

Yearly performance vs. benchmark

Period	International	MSCI AC World Ex-US
2022	-17.67%	-15.45%
2021	12.75%	8.24%
2020	17.79%	10.57%
2019	23.00%	21.81%
2018	-16.87%	-13.44%
2017	26.74%	27.38%
2016	0.51%	4.85%
2015	-12.43%	-4.94%
2014	-1.78%	-3.19%
2013	26.24%	15.57%

Source: BofA Global Research

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# Mid-Cap

## Investment objective

For investors who seek to build wealth over a multi-year growth period through investment in stocks in the mid-cap range of capitalization (currently with a market capitalization ranging from \$3 billion to \$30 billion).

## Risk profile: Moderately aggressive

- Given the higher volatility of mid-cap stocks and potential for a number of changes, this portfolio should be considered for moderately aggressive or aggressive investors who can tolerate a higher degree of turnover

## Stock selection methodology

- Stocks added to the portfolio will have market caps between \$3 billion and \$20 billion.
- Stocks added to the portfolio will have quantitative scores that rank above the 50th percentile based on the Aurora (growth) and Enhanced Contrarian (value) models developed by BofA Small Cap research.
- Low volatility risk (A), Medium volatility risk (B) and High volatility risk (C) stocks may be chosen. Stocks rated Buy (1) are preferred, but those rated Neutral (2) may be included for diversification purposes, as long as they exhibit characteristics that fulfill the portfolio objective and tolerance for risk. Stocks rated Underperform (3) will not be included in the portfolio.

## Exhibit 23: Risk Metrics

Trailing risk data through 12/31/2023

	1 year	3 year	5 year	10 Year
Standard Deviation	17.6%	18.5%	20.2%	17.9%
Sharpe	0.48	0.26	0.63	0.42
Tracking Error	3.8%	4.2%	4.6%	5.2%
Information Ratio	-0.94	0.26	0.46	-0.07

Note: The explanation of risk metrics is provided in the Performance and Risk Metrics Calculation Methodology at end of this report.

Source: BofA Research Portfolios, S&P Compustat, Factset

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## Exhibit 24: Historical performance – total return – price change plus dividend

Yearly performance vs. benchmark

Period	Mid-Cap	Russell Mid-Cap
2022	-17.78%	-17.25%
2021	31.18%	22.46%
2020	23.05%	16.72%
2019	31.19%	30.35%
2018	-14.20%	-8.88%
2017	17.91%	18.34%
2016	15.86%	13.62%
2015	-6.71%	-2.39%
2014	6.80%	13.11%
2013	37.83%	34.57%

Source: BofA Global Research

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## Exhibit 25: Midcap

Performance numbers as of 12/31/2023

	Month	Quarter	YTD	12 Months	3 year average Annual Return	5 year average Annual Return	10 year average Annual Return	YTD Turnover
	11/30/2023 - 12/31/2023	09/30/2023- 12/31/2023	12/31/2022 - 12/31/2023	12/31/2022 - 12/31/2023	12/31/2020 - 12/31/2023	12/31/2018 - 12/31/2023	12/31/2013 - 12/31/2023	
Mid Cap	7.83%	11.16%	13.52%	13.52%	6.98%	14.60%	8.72%	99%
Russell Mid Cap	7.71%	12.76%	17.05%	17.05%	5.88%	12.51%	9.11%	

Source: BofA Research, S&P Compustat, Factset

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## Performance and risk metrics calculation methodology

The performance of each of the Research Portfolios is computed on the basis of total return – price change plus dividend – and reflects all recommendations and rebalancing adjustments. For the purposes of calculation of performance, additions and deletions to the portfolios (including those resulting from rebalancing changes) were priced as of the market close on the date the change was published in a BofA Global Research report (or as of the market close on the next trading day if the relevant report either (1) was not published on a trading day or (2) was published after 1pm ET on the date of publication). The performance results do not reflect transaction costs, tax withholdings or any investment advisory fees. The performance calculation assumes that dividends paid on securities in a portfolio are deposited in a cash account on the ex-dividend date. Stock spin-offs are credited as shares of the spun-off entity on ex-date; cash is received in lieu of fractional shares. The performance of the cash account of the Research Portfolios is based on an assumed investment in US Treasury Bills and is based on the total return of the 90-day Secondary Treasury Bill rate in the secondary market as of the last business day of the month prior to the performance calculation date as published by the Federal Reserve. As such, the cash component of the Research Portfolios total return does not reflect the returns of an investment in actual trading instruments.

The performance of each portfolio is shown in relation to an Index that is designed to provide a benchmark for the relevant portfolio's investment objective.

The performance of the Research Growth Portfolio is presented in relation to the Russell 1000 Growth Index solely to provide a benchmark for the relevant portfolios' investment objective.

The performance of the Research Income & Growth Portfolio is presented in relation to the S&P 500 solely to provide a benchmark for the relevant portfolios' investment objective.

The performance of the Research Income Portfolio is presented in relation to the Russell 1000 Value Index solely to provide a benchmark for the relevant portfolio's investment objective.

The performance of the Research Large Cap Defensive Portfolio is presented in relation to the Russell 1000 solely to provide a benchmark for the relevant portfolio's investment objective.

The performance of the Research International Portfolio is presented in relation to the MSCI All Country World Ex-US Index solely to provide a benchmark for the relevant portfolio's investment objective.

The performance of the Research Mid-Cap Portfolio is presented in relation to the Russell Mid Cap Index solely to provide a benchmark for the relevant portfolio's investment objective.

The Research Portfolios differ from their benchmarks in that they are significantly less diversified and, as such, the performance is more exposed to specific stock or sector results. Therefore, the portfolios may experience greater volatility in their returns.

The performance results of individuals following the Research Portfolios will differ from the performance contained in this report for a variety of reasons, including differences related to incurring transactions costs and/or investment advisory fees, as well as differences in the time and price at which securities were acquired and disposed of, and differences in the weighting of such securities. The performance results of individuals following the portfolios will also



differ based on differences in treatment of dividends received, including the amount received and whether and when such dividends were reinvested.

Turnover for each of the Research Portfolios is calculated by taking the value of shares sold during the month divided by the starting portfolio value. These individual months are then summed for the longer periods.

Certain risk metrics are provided to further evaluate the appropriate portfolio for each investor. We have provided the 1, 3, 5, and 10 year annualized standard deviations of each of the Research Portfolios' total returns as a measure of absolute portfolio risk as well as 1, 3, 5, and 10 year annualized tracking errors as a measure of active risk relative to each portfolio's benchmark.

As a measure of risk-adjusted returns, the 1, 3, 5, and 10 year Sharpe and Information Ratios are provided for each of the Research Portfolios. A higher Sharpe or Information Ratio is preferred as it indicates a higher return per unit of risk. The Sharpe Ratio measures the portfolio's return in excess of that of a risk-free security and divides this return by the portfolio's standard deviation. The return of the 90-day Treasury Bill rate in the secondary market as of the last business day of the month prior to the performance calculation date as published by the Federal Reserve is used as the risk-free rate in this calculation. The Information Ratio measures the portfolio's active return in excess of its benchmark and divides this return by the portfolio's tracking error to the same benchmark.

The performance and appropriate risk metrics of the Research Portfolios are calculated by the BofA Research Portfolios Group. S&P Compustat also calculates the performance of the Research Portfolios serving to verify those of the BofA Research Portfolios Group. Performance figures and risk metrics are updated quarterly. *Past performance is no guarantee of future results. A complete performance record is available upon request.*



**Table 1: Stocks mentioned**

Prices and ratings for stocks mentioned in this report

BofA Ticker	Company name	Price (US\$)	Rating	BofA Ticker	Company name	Price (US\$)	Rating
ALL	Allstate Corp.	\$151.03	B-1-7	JPM	JP Morgan Chase	\$169.05	B-1-7
AMD	Advanced Micro	\$146.56	C-1-9	LLY	Eli Lilly	\$642.92	B-1-7
AON	Aon	\$300.24	B-2-7	LNT	Alliant Energy Corp	\$50.38	A-1-7
ARGX	Argenx	\$373.67	C-1-9	LOW	Lowe's	\$218.91	B-1-7
ASML	ASML	\$713.22	B-1-7	MDB	MongoDB	\$391.59	C-1-9
AVGO	Broadcom	\$1107.68	B-1-7	NEE	NextEra Energy	\$61.04	B-2-7
AXP	American Express	\$182.04	B-1-7	NTNX	Nutanix	\$50.31	C-1-9
BDX	Becton Dickinson	\$236.27	B-1-7	NVDA	NVIDIA	\$547.1	C-1-7
BILL	BILL	\$75	C-1-9	OMAB	OMA	\$75.64	B-1-8
BLD	TopBuild	\$365.98	B-1-9	PDD	Pinduoduo Inc.	\$148.63	C-1-9
BLK	BlackRock, Inc.	\$799.6	B-1-7	PHM	PulteGroup Inc.	\$104.91	B-1-7
CMCSA	Comcast Corp	\$42.99	B-1-7	PTC	PTC	\$172.17	B-1-9
COST	Costco	\$683.24	B-1-7	QCOM	Qualcomm	\$140.2	B-1-7
CRM	Salesforce.com	\$271.93	B-1-9	RCM	R1 RCM	\$9.25	C-1-9
DASH	DoorDash	\$104.13	C-1-9	ROK	Rockwell	\$304.59	B-2-7
DDOG	Datadog Inc	\$123	C-2-9	SNY	Sanofi	\$52.21	B-1-7
DHI	D.R. Horton	\$153.92	B-1-7	SPLK	Splunk	\$152.65	-6-
DXCM	Dexcom	\$125	C-1-9	SQ	Block Inc	\$66.48	C-1-9
ED	Consolidated Edison	\$91.62	A-1-7	STLA	Stellantis	\$22.3	B-1-7
EMR	Emerson	\$94.87	B-1-7	SYF	Synchrony Financial	\$36.73	B-2-7
ESTC	Elastic	\$111.94	C-1-9	TD	TD Bank	\$60.05	B-2-7
ETN	Eaton Corp PLC	\$242.11	B-1-7	TMUS	T-Mobile US	\$162.54	B-1-9
EW	Edwards Lifesciences	\$74.03	B-2-9	TSM	TSMC	\$101.24	B-1-7
EXR	Extra Space Storage	\$152.32	B-2-7	TTWO	Take-Two	\$161.68	B-2-9
FITB	Fifth Third Bank	\$34.36	B-1-7	U	Unity	\$34.59	C-1-9
HBAN	Huntington	\$12.52	B-2-7	VSCO	Victoria's Secret	\$23.75	C-1-9
HES	Hess	\$141.77	C-6-7	WMB	Williams Companies	\$34.92	B-1-7
HPE	Hewlett-Packard	\$15.89	B-2-7	WMT	Walmart	\$161.32	A-1-7
HPQ	HP Inc.	\$29.81	B-1-7	XOM	ExxonMobil	\$99.95	B-1-7
INTU	Intuit	\$611.8	B-1-7	YUMC	Yum China	\$37.48	B-1-7
JD	JD.com	\$24.7	C-1-9	ZTS	Zoetis Inc.	\$198.94	B-1-7

Source: BofA Global Research

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## Analyst Certification

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

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# 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 <sup>R1</sup>
Buy	≥ 10%	≤ 70%
Neutral	≥ 0%	≤ 30%
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