

CHIEF INVESTMENT OFFICE

# Capital Market Outlook

May 9, 2022

All data, projections and opinions are as of the date of this report and subject to change.

## IN THIS ISSUE

### **Macro Strategy—Global Growth Weakening Fast, Fed On Track To Make Matters Worse:**

**Worse:** The escalation of the Ukraine/Russia conflict has caused growing worries about the prospects for world peace, food and energy supplies, global growth, and financial market conditions. Heightened risk aversion has resulted in a typical flight to the safety of the dollar, once again frustrating dollar forecasts with a significant upside surprise as the conflict intensified.

The dollar appreciation has sharply slowed the commodity price rally, and lowered expectations for the manufacturing Institute for Supply Management (ISM) Index as well as the corporate revenue and profits outlook, given their typical correlation. This, combined with the biggest inflation shock to the U.S. and Europe since the 1970s, and the Federal Reserve (Fed) outlining an aggressive monetary policy tightening campaign in response, has sharply diminished the outlook for global growth and profits in 2023.

**Market View—A Three-Pronged Framework To Manage Through Volatility:** In our view, 2022 marks a pivot year when policy makers have no choice but to lean hawkish and keep tightening even as the economy slows. As a result, the market environment is likely to be characterized by higher levels of volatility, often confusing internal rotations, and elevated inflation and rising rates leading to higher earnings dispersion.

During these highly uncertain times, it is imperative that investors focus on elements of their investment strategy that are within their control. Here, we outline a three-pronged approach that keeps one invested and positions tactically for near-term volatility while picking up what we believe are attractive secular growth investments.

**Thought of the Week—Anatomy of the Equity Market Decline:** The equity market has struggled year-to-date. An examination of the decline has shown that it is driven by a compression in valuation even as forward earnings are expected to grow. Moreover, the brunt of the valuation correction is concentrated in the highly valued stocks. This decline in price-to-earnings (P/E) ratios has brought valuations closer to their 20-year average.

## MACRO STRATEGY ►

### **Robert T. McGee**

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### **Irene L. Peters, CFA®**

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## MARKET VIEW ►

### **Niladri Mukherjee**

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### **Emily Avioli**

Assistant Vice President and Investment Strategist

## THOUGHT OF THE WEEK ►

### **Arun Kumar**

Managing Director and Senior Portfolio Manager

## MARKETS IN REVIEW ►

### **Data as of 5/9/2022,**

**and subject to change**

## Portfolio Considerations

Given our view that competing forces—inflation and slower growth—are likely to cast large shadows through the balance of the year, we reduced our Equity overweight relative to Fixed Income, by lowering International Developed Market Equities to a slight underweight, and trimming our overweight to Small-cap Value. We will add the balance of allocations from the downgraded areas to Fixed Income and cash evenly. This month we also adjusted our sector allocations to balance cyclical and defensive positioning. We continue to emphasize a diversified, balanced and measured approach to asset allocation. For investors able to assume a lower level of liquidity, we believe Alternative Investments (AI) for qualified investors, including Real Assets, can also help diversify and balance out risks in a multi asset portfolio.

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## Global Growth Weakening Fast, Fed On Track To Make Matters Worse

**Robert T. McGee, Managing Director and Head of CIO Macro Strategy**

**Irene L. Peters, CFA®, Director and Senior Macro Strategy Analyst**

Declining odds for a quick resolution of the Ukraine/Russia conflict have darkened global growth prospects already affected by the biggest U.S. and European inflation shock since the 1970s and virus shutdowns in China. With the Fed also telegraphing aggressive plans to re-anchor inflation closer to its 2% target, financial conditions have tightened meaningfully, creating growing headwinds for the U.S. economy. Credit spreads have continued to decompress, mortgage rates have surged to their highest level in about 12 years, and the dollar has surprised to the upside.

The dollar's sharp 8% year-over-year (YoY) appreciation on a trade-weighted basis, along with the global energy-supply crisis and collapse of business/consumer confidence and growth prospects in Europe are materially dimming the outlook for the manufacturing ISM Index. We now believe that conditions are in place for the index to drop near the critical 50 level that separates expansions from recessions this year, with risks to the downside. Given its strong correlation with earnings revisions ratios and equity market returns, this faster-than-previous-anticipated deterioration in the manufacturing ISM outlook further lowers our corporate revenues and profit forecasts.

According to surveys, U.S. sales in China and Europe have already declined as economic conditions in these two major contributors to S&P 500 revenues and profits have worsened. In fact, not least because the inflation shock is now slightly larger than in 1973-1974, Europe is moving closer to a recession, with real growth expected to be weak or zero this year. According to Applied Global Macro Research, eurozone consumer spending remained below pre-pandemic levels in Q1 2022, and it is now expected to be flat to lower over the next 12 months, as real disposable incomes are on track to fall to 2017 levels. Basically, Europe is already in "stagflation" and faces risks of a serious economic crisis as it attempts to end its reliance on Russian energy supplies. The negative effect of the Ukraine crisis on energy supply and prices as well as on business and consumer confidence creates significant headwinds for global growth and U.S. corporate revenue growth and profits.

While U.S. auto sales remain depressed due to continued supply chain problems and low inventories, pent-up demand for both motor vehicles and housing remains elevated. Nevertheless, consumer spending growth is likely to soften under the burden of high inflation and tightening financial conditions. Leading indicators for equipment investment in the U.S. and Europe are also starting to point to weak-to-moderate growth ahead, as higher inflation, rising interest rates, elevated energy prices, softening profits growth, and growing uncertainty and risk aversion start taking their toll on economic activity. At the same time, inventories have been rebuilt in emerging markets (EM), and that will be a drag on the EM manufacturing cycle for the remainder of the year, as will the Chinese virus shutdowns, given their restraining effect on Asian trade and manufacturing activity.

With labor, energy and materials costs surging and revenue growth expectations revised to the downside (we now see S&P 500 revenues decelerating rapidly from +12% year over year in Q1 2022 to about 5%, or less, by early-to-mid 2023), the U.S. corporate profit margins outlook has deteriorated significantly, with a quick and deep downturn next year even more likely than it seemed just two months ago, as discussed in earlier reports. Indeed, 1) cost inflation tends to lag slowing revenue growth (inflation is a lagging indicator), causing margins to decline quickly once economic growth starts to weaken, and surprisingly aggressive Fed tightening plans greatly increase the likelihood of this outcome; 2) as noted above, revenues from abroad are declining fast, not least because of negative dollar-appreciation effects; 3) slower business revenues and profits tend to restrain investment, further lowering economic growth; 4) an appreciating dollar encourages rising imports and discourages exports; 4) corporate net-interest expense will rise with interest rates; and 5) unprecedented labor-supply constraints are pushing labor costs up at the fastest pace in decades, eroding margins.

High input prices, such as for energy, can be inflationary or deflationary depending on how monetary policy responds. Up until now, with the U.S. money supply growing at the fastest pace since World War II (WWII), policy has been highly accommodative of rising input prices. Ultra-

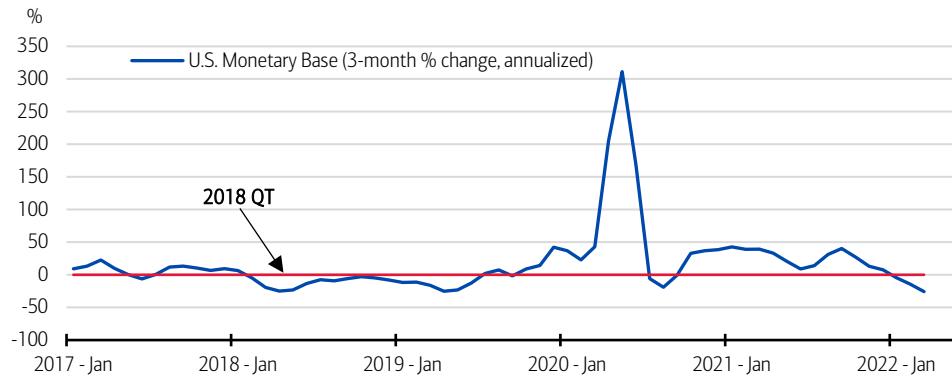
### Investment Implications

The Fed's plan to massively shrink its balance sheet over the next two years suggests the investment environment may become even more challenging. In our view, profit margins are likely to drop significantly from elevated current levels. We have thus increased our tactical tilt to more defensive assets and sectors by raising the allocation to the Healthcare and Utilities sectors while reducing the allocation to Consumer Discretionary and Technology. Dividend income is typically a bigger part of returns during downturns.

easy monetary policy has kept demand for energy strong, for example, and has allowed price increases to be passed through, creating inflation across the spectrum of goods and services. Profit margins have held up as a result of this ability to pass through high input prices.

That is changing now, as liquidity conditions tighten with central bank around the world raising interest rates. The dollar surge in recent months is a sign that dollar liquidity to pay for the doubling of the world's energy bill is becoming strained as the U.S. base-money supply begins to shrink (Exhibit 1). Countries that import food and energy, where prices have surged, are seeing sharp deterioration in their current account balances that are putting downward pressure on their currencies and forcing them to use their dollar foreign-exchange reserves to plug the gap. In contrast, the U.S. and other food, energy and commodity exporters are seeing relative currency strength.

#### **Exhibit 1: Quantitative Tightening (QT) Shrinks Monetary Base, Causing Dollar to Appreciate.**



Sources: Federal Reserve Board; Chief Investment Office. Data as of May 5, 2022.

As the supply of dollars in the global economy comes under pressure and as the scramble to pay high energy bills puts extreme pressure on global dollar liquidity, high energy prices shift from a force transmitting inflation to a force for disinflation. Even though the Fed has just started to withdraw dollar liquidity, this process is well under way. As shown in Exhibit 1, the monetary base declined at a 25% annualized rate as the Fed ended quantitative easing (QE) in the first quarter. What's more, plans to shrink the balance sheet by \$95 billion per month for the indefinite future imply the fastest, biggest reduction in central bank liquidity on record. In our view, the risk of outright contraction in the money supply later this year and next will likely keep upward pressure on the dollar and create the risk of wild swings from 40-year-high inflation to renewed deflationary risks. In other words, the Fed appears headed from one extreme to another, creating massive economic disruption, instability and uncertainty in the process.

Obviously, the Fed can stop draining liquidity before the effect is too damaging to the economy, as it did in December 2018, when the fallout from excessive QT caused it to halt its projected rate hikes for 2019 and to end its balance-sheet contraction sooner than planned. In fact, the Fed had to reverse course, cutting rates in 2019. This time around, the forward rates curve in the money market is also building in such a reversal despite the Fed's current hawkish talk. Still, there is tremendous uncertainty about how hard the Fed will squeeze the economy in the meantime, and a lot will depend on how rapidly inflation comes down over the next year.

We expect market volatility to remain elevated and the shift to more defensive areas of the equity market, like Healthcare and Utility stocks, to help provide some shelter from the storm. Once a reversal in Fed policy becomes visible, it's likely that long-term rates will peak for this cycle, giving bonds an advantage over Equities should a recession materialize in 2023 or 2024, as seems increasingly likely. Dividend income typically becomes a larger part of the overall return to Equities during economic slowdowns, helping explain why dividend stocks have outperformed the S&P 500 so far this year.

## A Three-Pronged Framework to Manage through Volatility

**Niladri Mukherjee, Managing Director and Head of CIO Portfolio Strategy**

**Emily Avioli, Assistant Vice President and Investment Strategist**

Since the Global Financial Crisis, investors have greatly benefited from the “everyone gets a trophy” liquidity regime driven by the dovish leaning of global central banks at the first hint of a growth slowdown. While a sluggish inflationary environment justified this stance, now with inflation levels at 40-year highs, 2022 marks the pivot year when policy makers have no choice but to lean more hawkish and keep tightening even as the economy slows. As a result, the environment is likely to be characterized by higher levels of volatility, often confusing internal rotations, and elevated inflation and rising rates leading to higher earnings dispersion.

While the business cycle and the Fed’s rate hiking path is not in our control, maintaining a disciplined and proactive investment strategy to help manage risk is. We suggest considering a three-pronged approach, as outlined below, that keeps one invested and positions tactically for near-term volatility while picking up what we believe are attractive secular growth investments.

**Part 1: The foundation of diversification and appropriate rebalancing** Having an appropriate balance of traditional and alternative assets can help optimize a portfolio’s risk/return tradeoff over the long term. Even if near-term trends seem treacherous, investors should fade the natural tendency to time market developments in a substantial way and keep maintaining the balance of global diversification, interest rate and credit risk, and Value and Growth exposure. Long-term investors are usually rewarded for their patience because the probability of negative returns in the S&P 500 over a 10-year time horizon is only 6%.<sup>1</sup>

While excessive trading is not beneficial from a performance and tax-efficiency standpoint, appropriate rebalancing of multi-asset portfolios helps with risk management. When implemented at an appropriate time, rebalancing from appreciated Equity positions into Fixed Income can help protect gains and help build ballast as the business cycle ages. Meanwhile, income seeking investors could potentially consider short-term bonds where income opportunities are much improved from just a few months back—the 2-year treasury yield is 2.7%, up 200 basis points (bps) in four months.

**Part 2: Tactical tilts and implementation to help manage through elevated inflation and near-term volatility** The current high levels of inflation should persist for some time and, therefore, at a broader level, emphasizing certain cyclical Equities and Real Assets is preferable. Additionally “below the index,” implementing some exposure to dividend-growth, high-quality and Equity Hedge may help to manage through volatile times.

Dividend-growth Equities may offer an attractive combination of higher quality, better earnings growth and some insulation against rising rates. Historically, dividends have contributed close to 40% of total return of the S&P 500.<sup>2</sup> This was ignored when Equities appreciated by 90% during the period 2019-2021, but dividends should become a more significant contributor.

Quality is subjective, but investment managers usually define it as some combination of good balance sheets, free cash flow generation, defensible profit margins, low earnings variability and high return on equity. Research shows that high-quality stocks outperform low-quality and the broader market over time and tend to exhibit lower variability and drawdowns during recessions.<sup>3</sup> Finally, Equity Hedge strategies may generate alpha while also lowering the volatility of a portfolio, thereby making it easier for investors to “stay the course” and not overreact to market volatility.

**Part 3: Selectively picking up secular growth stories** Predictions about when a recession may happen are seldom useful for investors because every business cycle is different, and economic metrics project signs of a slowdown with variable accuracy and lags. But throughout the late cycle process, the market presents opportunities that short-term or quantitative rules-based investors divest from. Long-term investors can take advantage of better valuations for pockets within the market that may be out of favor, despite attractive long-term fundamentals. For example, today those opportunities may be within semiconductors, homebuilders, biotechnology, clean energy, robotics and cybersecurity (Exhibit 2). Some of these areas are cyclical and sensitive to higher interest rates and therefore susceptible to further downside. However, the strategy is to keep a long-term perspective, acknowledge that the bottom is impossible to time and start to build positions along the way as episodic volatility hits.

## Portfolio Positioning

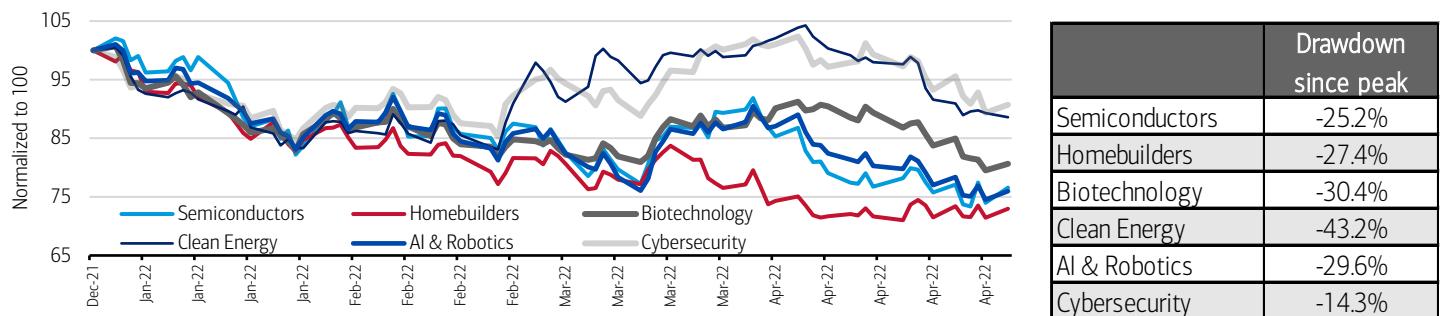
Investors should maintain a well-diversified portfolio during times of heightened volatility. We remain underweight Fixed Income and within Equities suggest focusing on U.S. over International, Value, and Commodity-based cyclicals. Real Assets could add additional diversification and inflation protection to portfolios.

<sup>1</sup> BofA Global Research, April 29 2022. Based on S&P 500 total returns from 1929- March 2022.

<sup>2</sup> BofA Global Research, April 13, 2022.

<sup>3</sup> Clearbridge Investments, May 2021.

## Exhibit 2: Opportunities May Exist In Areas Of The Market That Have Fallen Out Of Favor.



Source: Bloomberg. Data from 12/31/2020 – 5/2/2022. Indexes referenced: Philadelphia Stock Exchange Semiconductor Index, S&P Homebuilding Select Industry Index, NASDAQ Biotechnology Index, S&P Global Clean Energy Index, NASDAQ CTA US CTA Artificial Intelligence (AI) and Robotics Index, NASDAQ CTA Cybersecurity Index. **Past performance is no guarantee of future results.** It is not possible to invest directly in an index. Performance results are extremely short term and do not provide an adequate basis for evaluating performance potential over varying market conditions or economic cycles. Investment results may have been different had another time period been chosen for this example. Please refer to index definitions and important disclosures at the end of this report.

A compelling long-term investment case can be made for each of these areas. Global semiconductor revenue is estimated to grow 13.6% to \$676 billion in 2022, according to Gartner Research. McKinsey & Company analysis suggests the industry's aggregate annual growth could average 6% to 8% a year up to 2030, resulting in a global semiconductor market value of over \$1 trillion by the end of the decade.

Homebuilders should be supported by demographics as millennials enter their prime age for household formation, with the number of 35- to 44-year-olds set to increase by 5 million over the next eight years.<sup>4</sup> Demand has held steady with the millennial share of homebuyers increasing by 6% since last year,<sup>5</sup> even amid tight supply and worsening affordability, which could indicate a need for new construction over the next several years. A reversal of pandemic-era trends could provide an additional boost—if the record number of young adults who lived at home in 2020 decreases by 3% by 2024, 1 million new home buyers would enter the market.<sup>6</sup>

Biotechnology should make outsized contributions to the global economy in coming years. A McKinsey study found that in 10 to 20 years, a visible pipeline of biological applications could create approximately \$2 trillion to \$4 trillion of direct global economic impact.<sup>7</sup> Clean energy should be supported by the massive investment required for a multi-year transition away from fossil fuels. According to BloombergNEF, the required investment in energy supply and infrastructure is estimated to be between \$94 trillion and \$175 trillion over the next three decades to reach net-zero emissions in 2050.

Cybersecurity remains a long-tailed investment theme with an increasingly critical and protected area of enterprise spend. Cybersecurity Ventures estimates that ransomware could cost its victims around \$265 billion annually by 2031, with a 30% YoY growth in damage costs over the next 10 years. BofA Global Research estimates that information security and risk spending will grow at a five-year compound annual growth rate of 10.1% through 2025.

Trends in automation, robotics and artificial intelligence should continue to gather steam in years ahead. Global revenues for the artificial intelligence market are estimated by the International Data Corporation to grow almost 20% yoy to \$432.8 billion in 2022 and reach \$500 billion by 2023. The global robotics market could climb from about \$25 billion to between \$160 billion and \$260 billion by 2030, according to Boston Consulting Group.<sup>8</sup>

### Conclusion

During these highly uncertain times, it is imperative that investors focus on elements of their investment strategy that are within their control. In our view, this includes staying invested and implementing appropriate rebalancing, managing for high inflation and near-term volatility, and taking advantage of long-term secular growth opportunities, when appropriate.

<sup>4</sup> BofA Global Research, February 28, 2022.

<sup>5</sup> National Association of Realtors, March 23, 2022.

<sup>6</sup> Piper Sandler Macro Research, January 2022. Young adults refers to adults aged 25-34 in the U.S.

<sup>7</sup> McKinsey Global Institute, May 2020.

<sup>8</sup> Boston Consulting Group, June 2021.

## THOUGHT OF THE WEEK

### Anatomy of the Equity Market Decline

Arun Kumar, Managing Director and Senior Portfolio Manager

Equity markets have struggled so far in 2022. After reaching an all-time high on the first trading day of 2022, the S&P 500 Index posted a return of -13% in the first four months of the year. However, examining the equity market decline yields some interesting observations.

According to Credit Suisse, since the start of the year, the forward earnings expectations have improved by +5.7% so far this year, while the P/E ratio has declined -18.0%; so the decline is driven completely and overwhelmingly by the compression in the P/E ratio.

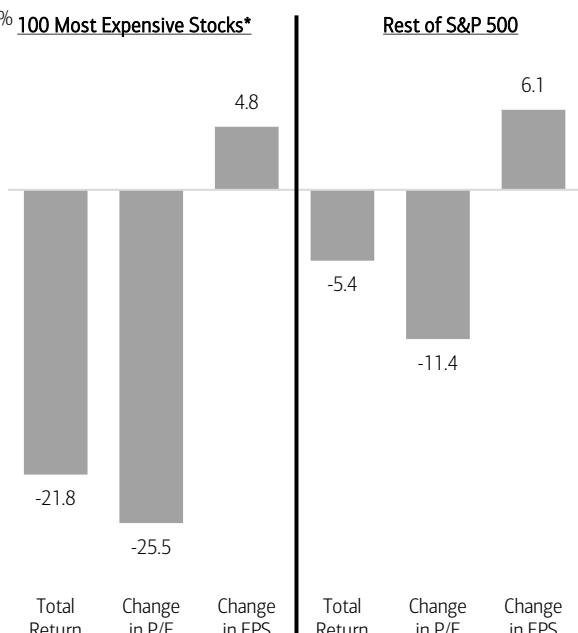
Digging deeper, most of the damage in the P/E compression has occurred in the 100 most highly valued stocks (Exhibit 3)—where the change in P/E contributed to a decline of -25.5% with positive earnings growth limiting the loss to -21.8%. The other stocks in the S&P also declined—but by a much smaller 5.4%, with less of a detraction from multiple compression (-11.4%).

If there is a silver lining to this development, it is that the damage to the 100 most highly valued stocks and to Technology stocks has brought their *relative* valuation to the S&P 500 closer to their 20-year average. By contrast, other stocks and sectors in the S&P 500 have seen a slight improvement in their relative P/E valuation while still remaining below their 20-year average.

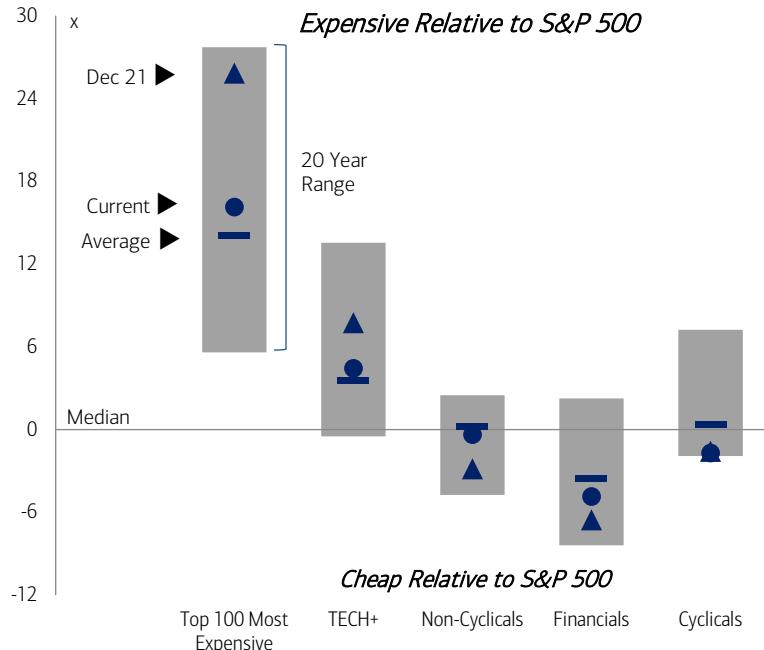
While risk and uncertainty remain in terms of Fed policy, geopolitics, and the coronavirus, the valuation repair to equity markets is perhaps well on its way to conclusion.

#### Exhibit 3: Valuation and Earnings Drivers of Market Performance Year-to-date.

A) Year-to-date Change in Returns, P/E, Earnings Per Share (EPS)



B) P/E Relative to the Market



\*The 100 stocks in the S&P 500 with the highest price relative to their next 12 months earnings (usually referred to as forward P/E or Next Twelve Month P/E). Source: Credit Suisse; S&P, Refinitiv, Factset. Data as of May 4, 2022. **It is not possible to invest directly in an index. Past performance is no guarantee of future results. See Index Definitions at the end of this report.**

### Portfolio Considerations

The equity market decline since the beginning of the year has been driven by the correction in valuation rather than a decline in expected earnings growth. A detailed look shows that the valuation correction is also more concentrated in the highly valued stocks, removing some of the excesses. This could be a healthy development for Equities.

## MARKETS IN REVIEW

### Equities

	Total Return in USD (%)			
	Current	WTD	MTD	YTD
DJIA	32,899.37	-0.2	-0.2	-8.9
NASDAQ	12,144.66	-1.5	-1.5	-22.2
S&P 500	4,123.34	-0.2	-0.2	-13.1
S&P 400 Mid Cap	2,480.95	-0.8	-0.8	-12.3
Russell 2000	1,839.57	-1.3	-1.3	-17.8
MSCI World	2,762.21	-1.1	-1.1	-14.0
MSCI EAFE	1,972.82	-2.8	-2.8	-14.5
MSCI Emerging Markets	1,031.50	-4.1	-4.1	-15.8

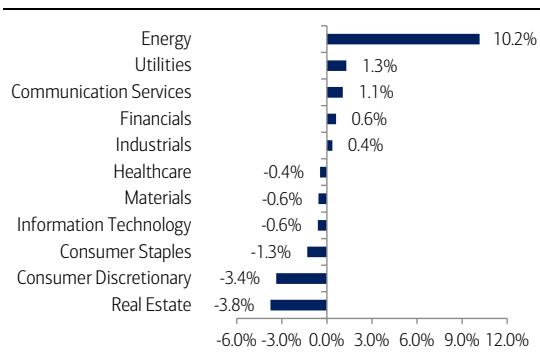
### Fixed Income<sup>†</sup>

	Total Return in USD (%)			
	Current	WTD	MTD	YTD
Corporate & Government	3.56	-1.21	-1.21	-11.13
Agencies	3.04	-0.42	-0.42	-6.16
Municipals	3.32	-0.75	-0.75	-9.50
U.S. Investment Grade Credit	3.62	-1.11	-1.11	-10.51
International	4.46	-1.32	-1.32	-13.89
High Yield	7.29	-1.19	-1.19	-9.31
90 Day Yield	0.81	0.82	0.82	0.03
2 Year Yield	2.73	2.71	2.71	0.73
10 Year Yield	3.13	2.93	2.93	1.51
30 Year Yield	3.23	3.00	3.00	1.90

### Commodities & Currencies

	Total Return in USD (%)			
	Current	WTD	MTD	YTD
Commodities				
Bloomberg Commodity	278.81	0.7	0.7	31.6
WTI Crude \$/Barrel <sup>††</sup>	109.77	4.9	4.9	46.0
Gold Spot \$/Ounce <sup>††</sup>	1883.81	-0.7	-0.7	3.0
	Total Return in USD (%)			
Currencies	Prior Week End	Prior Month End	2020 Year End	
EUR/USD	1.06	1.05	1.05	1.14
USD/JPY	130.56	129.70	129.70	115.08
USD/CNH	6.72	6.64	6.64	6.36

### S&P Sector Returns



Sources: Bloomberg, Factset. Total Returns from the period of 5/2/2022 to 5/6/2022.<sup>†</sup>Bloomberg Barclays Indices.<sup>††</sup>Spot price returns. All data as of the 5/6/2022 close. Data would differ if a different time period was displayed. Short term performance shown to illustrate more recent trend. **Past performance is no guarantee of future results.**

### Economic Forecasts (as of 5/6/2022)

	2021A	Q1 2022A	Q2 2022E	Q3 2022E	Q4 2022E	2022E
Real global GDP (% y/y annualized)	6.1	-	-	-	-	3.3
Real U.S. GDP (% q/q annualized)	5.7	-1.4	3.5	2.5	1.8	2.7
CPI inflation (% y/y)	4.7	8.0	7.6	7.0	5.9	7.1
Core CPI inflation (% y/y)	3.6	6.3	5.4	5.2	5.0	5.5
Unemployment rate (%)	5.4	3.8	3.4	3.2	3.1	3.4
Fed funds rate, end period (%)	0.07	0.33	1.38	2.13	2.63	-

The forecasts in the table above are the base line view from BofA Global Research. The Global Wealth & Investment Management (GWIM) Investment Strategy Committee (ISC) may make adjustments to this view over the course of the year and can express upside/downside to these forecasts. Historical data is sourced from Bloomberg, FactSet, and Haver Analytics. **Past performance is no guarantee of future results. There can be no assurance that the forecasts will be achieved. Economic or financial forecasts are inherently limited and should not be relied on as indicators of future investment performance.**

A = Actual. E/\* = Estimate.

Sources: BofA Global Research; GWIM ISC as of May 6, 2022. BofA Global Research is research produced by BofA Securities, Inc. ("BofAS") and/or one or more of its affiliates. BofAS is a registered broker-dealer, Member SIPC, and wholly owned subsidiary of Bank of America Corporation.

### Asset Class Weightings (as of 5/3/2022)

Asset Class	CIO View			Sector	CIO View		
	Underweight	Neutral	Overweight		Underweight	Neutral	Overweight
Equities	●	●	●	●	●	●	●
U.S. Large Cap	●	●	●	●	●	●	●
U.S. Mid Cap	●	●	●	●	●	●	●
U.S. Small Cap	●	●	●	●	●	●	●
International Developed	●	●	●	●	●	●	●
Emerging Markets	●	●	●	●	●	●	●
Fixed Income	●	●	●	●	●	●	●
U.S. Investment Grade	●	●	●	●	●	●	●
Taxable	●	●	●	●	●	●	●
International	●	●	●	●	●	●	●
Global High Yield Taxable	●	●	●	●	●	●	●
U.S. Investment Grade	●	●	●	●	●	●	●
Tax Exempt	●	●	●	●	●	●	●
U.S. High Yield Tax Exempt	●	●	●	●	●	●	●
Alternative Investments*							
Hedge Funds				●			
Private Equity							
Real Estate							
Tangible Assets / Commodities							
Cash							

\*Many products that pursue Alternative Investment strategies, specifically Private Equity and Hedge Funds, are available only to qualified investors. CIO asset class views are relative to the CIO Strategic Asset Allocation (SAA) of a multi-asset portfolio. Source: Chief Investment Office as of May 3, 2022. All sector and asset allocation recommendations must be considered in the context of an individual investor's goals, time horizon, liquidity needs and risk tolerance. Not all recommendations will be in the best interest of all investors.

## Index Definitions

**Securities indexes assume reinvestment of all distributions and interest payments. Indexes are unmanaged and do not take into account fees or expenses. It is not possible to invest directly in an index. Indexes are all based in U.S. dollars.**

**S&P 500 Equity Index** is a stock market index that measures the stock performance of 500 large companies listed on stock exchanges in the United States. It is one of the most commonly followed equity indices.

**Supply Management (ISM) Index** is a composite index that gives equal weighting to new orders, production, employment, supplier deliveries, and inventories.

**Philadelphia Stock Exchange Semiconductor Index** is capitalization-weighted index composed of the 30 largest companies primarily involved in the design, distribution, manufacture, and sale of semiconductors.

**S&P Homebuilding Select Industry Index** represents the homebuilding sub-industry portion of the S&P Total Markets Index.

**NASDAQ Biotechnology Index** is a stock market index made up of securities of NASDAQ-listed companies classified according to the Industry Classification Benchmark as either the Biotechnology or the Pharmaceutical industry.

**S&P Global Clean Energy Index** is designed to measure the performance of companies in global clean energy-related businesses from both developed and emerging markets,

**NASDAQ CTA US CTA Artificial Intelligence and Robotics Index** is designed to track the performance of companies engaged in the artificial intelligence and robotics segment of the technology, industrial, medical and other economic sectors.

**NASDAQ CTA Cybersecurity Index** is designed to track the performance of companies engaged in the Cybersecurity segment of the technology and industrial sectors.

## Important Disclosures

**Investing involves risk, including the possible loss of principal. Past performance is no guarantee of future results.**

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