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CHIEF INVESTMENT OFFICE

Capital Market Outlook

March 20, 2023

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

IN THIS ISSUE

Macro Strategy—*Time to End Quantitative Tightening Fast Approaching:* Quantitative tightening (QT) has reached its limits in the regional banking sector where reserves are now back to the "ample reserve" minimum that forced the Federal Reserve (Fed) to reverse course after its 2018 QT caused problems in the money market by that year's end. The new Bank Term Funding Program (BTFP) announced on March 12 essentially provides a safety valve to mitigate the liquidity strains that the Fed's QT and massive rate hikes are putting on small banks. In essence, the BTFP facility is like quantitative easing (QE), providing new base money reserves in exchange for the Fed taking bond collateral out of the market.

Market View—*A-fib not a Heart Attack:* This time is different—analogies to 2008/09 are off-base in our opinion. Today's financial crisis is more a case of A-fib—a serious but non-fatal heart problem—versus the Great Financial Crisis of 2008/2009, which was akin to a global financial heart attack. Near term, we expect more market chop and churn but want to remind investors that every crisis is also an investment opportunity. The financial heart of the world is still thumping.

Thought of the Week—*Volatility Reawakens:* Over the past week, we have seen equity market volatility react to recent events in the banking sector with the Volatility Index (VIX) picking up from the low teens to high twenties, the highest level since October. However, the VIX has not yet reached a level consistent with the end of a bear market. As markets started the year with rallies and rotations, we maintained a neutral and defensive position in Equities, with a view that we had not seen the final spike in the VIX yet.

Market Volatility: *Venture Capital in the Aftermath of Silicon Valley Bank:* Allocators are understandably focused on the potential effects of Silicon Valley Bank's (SVB) collapse on Venture Capital (VC) given the bank's prominence in that ecosystem. Rising inflation and interest rates had already put pressure on the asset class in 2022. Time will be needed to assess the ultimate ramifications, but we see both positive and negative developments for VC strategies. SVB's failure will likely contribute to the already ongoing decline in company valuations. For newly launching VC funds, as well as existing VC funds still early in their investment periods, this is positive for prospective return expectations. Historically, Private Markets funds launched during downturns have generated compelling returns. The difficult fundraising environment, coupled with the withdrawal of "tourist capital" from the industry, may also rebound to the benefit of top-tier VCs with significant amounts of cash to deploy. On the founder/VC spectrum, the pendulum has certainly swung in favor of the latter. All else equal, VCs will be making investments on better terms. However, this is occurring against the backdrop of the loss of a key financing source, which may exacerbate a dynamic that was already in motion: declining valuations, deal-making and exit activity. VCs may also find it necessary to focus on tending to portfolio companies at the expense of sourcing new investments. Alternative sources will ultimately fill the financing hole left by SVB, though the cost of capital for VC companies may rise in the interim. We are closely monitoring the space and will look to expound our views in the coming weeks.

MACRO STRATEGY ▶

Chief Investment Office
Macro Strategy Team

MARKET VIEW ▶

Joseph P. Quinlan
Managing Director and Head of CIO Market Strategy

THOUGHT OF THE WEEK ▶

Marci A. McGregor
Managing Director and Head of CIO Portfolio Strategy

MARKETS IN REVIEW ▶

Data as of 3/20/2023, and subject to change

Portfolio Considerations

With our view of a "grind it out" atmosphere for markets, weakness in growth around the corner, and yields to peak, we believe staying neutral stocks and bonds makes sense at this point. This month we lowered our allocation to muni bonds to slight underweight. While we still like municipal credit and think that tax-free municipals should play a key role in portfolios for clients in a high tax bracket, valuations have become excessive versus Treasurys. The inclusion of Alternative Investments,* for qualified investors, to help mitigate risk and/or potentially enhance portfolio returns, should also increase in importance in 2023, in our opinion.

* Many products that pursue Alternative Investment strategies are available only to qualified investors.

MACRO STRATEGY

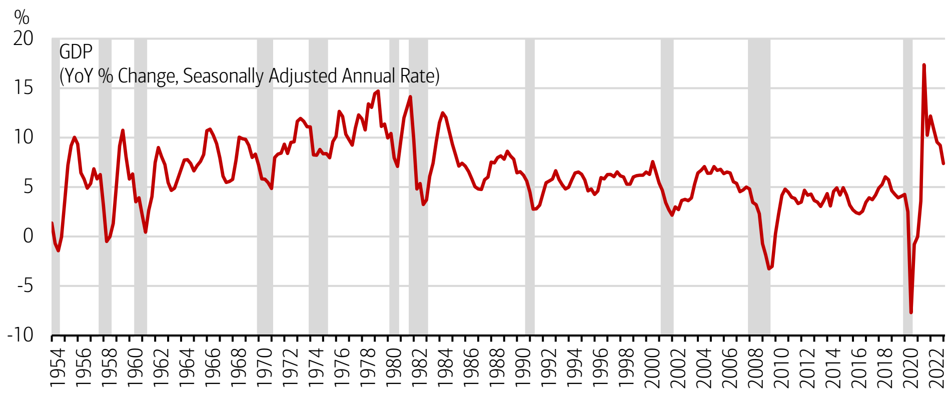
Time to End Quantitative Tightening Fast Approaching

Chief Investment Office Macro Strategy Team

Hopes for a soft or even no landing evaporated as the recent bank failures trumped Fed Chair Powell's hawkish March 7 testimony. After surging to the highest level since 2007, two-year Treasury note yields declined over three days by the most since the epic 1987 stock market crash, the biggest in history. Essentially the outlook for Fed policy turned on a dime as market concerns shifted from cooling an overheated economy to saving the financial system.

These events illustrate the underlying sources of the unfolding financial trends. First, the greatest U.S. stimulus outside of wartime, both monetary and fiscal, caused the most abrupt surge in nominal gross domestic product (GDP) growth and inflation ever seen outside of wartime. Nominal GDP growth, which tracks the resultant surge in aggregate demand, rose by over 20 percentage points on a year-over-year (YoY) basis (Exhibit 1), a direct result of the similar size excessive surges in the money supply and fiscal handouts. Now, as that stimulus fades and the money supply contracts, nominal GDP growth is rapidly declining but still well above the average that prevailed prior to the pandemic (about 4%). The current above-average nominal growth rate has created the illusion of a healthy economy. But as the rapid decline in Exhibit 1 shows, that health is likely to prove transitory. Over the next year, nominal GDP is likely to fall below 4%, in our view. That's what the bear market in stocks and declining corporate earnings have been telling us. As the *Wall Street Journal* editorial board put it on March 12: "You can't run the most reckless monetary and fiscal experiment in history without the bill eventually coming due."

Exhibit 1: Biggest Swing Up and Down in GDP Ever Caused by Massive Stimulus.



Gray areas represent recession periods. Sources: Bureau of Labor Statistics/Haver Analytics. Data as of February 23, 2023.

As the nominal GDP tide is receding, it is exposing the market swimmers without bathing trunks. Crypto was first to fall, followed by long-duration technology companies that were valued based on zero interest rates, often with no earnings or even revenues. The bear market started in these most speculative assets two years ago before spreading into the overall market in early 2022.

The pandemic stimulus bloated the revenues and earnings of companies, especially the big tech beneficiaries of the work-from-home phenomenon. Initially regarded as safe, high-quality havens deserving bigger valuations of their earnings and revenues were more extended and consequently have dropped more than the average S&P 500 company. A recession would hit the value-oriented parts of the market that have held up better as we are seeing now as the banking sector starts to price in the looming recession. Overall, the market is showing similar patterns to the 2000-2002 bear market that followed the first tech bubble.

It is not a coincidence that market dynamics are following the early 2000s script. There have been three secular bear markets in the past century. Each started with massive unsustainable valuations that capped the major indexes for over a decade. The ratio of stocks' value to their cyclically adjusted earnings is one measure of valuation that crested in each instance. The bear markets that followed took time because earnings had to grow enough to justify the old peak prices. The biggest overvaluation measured this way occurred in 1999-2000. The second-biggest marked the latest market top in 2021-2022.

Investment Implications

Risk-off flows and rising volatility are the typical results of the monetary policy tightening end-game. High-quality Fixed Income and gold benefit when monetary policy shifts toward supporting an ailing financial system.

Both saw overvaluations in areas like tech that benefited from an excessively low interest rate and extended easy money period, justified by Y2K fears in the first instance and pandemic concerns in the latest case. Current market dynamics in terms of relative performance in sectors, styles and countries are similar to those of the 2000-2002 bear market because the relative overvaluation patterns are similar; for example, tech was most overvalued, while energy was least.

As additional fiscal stimulus becomes difficult given political gridlock and growing signs that the budget debt is straining financial markets, the pressure on monetary policy to succumb to higher inflation is likely to grow more intense. Recall that a similar dynamic caused the fall of the U.K. government last October and forced the Bank of England to reverse course and temporarily resume QE to avoid funding difficulties related to declining gilt values in pension funds. The new Fed BTFP facility is like QE to help regional bank funding. It allows banks to borrow freshly created reserves in exchange for bond collateral that the Fed holds without markdowns to market value. Like QE, this is new money printing that takes bonds out of an oversupplied market that is pressuring rates higher.

A major catalyst for the latest crisis is the QT policy that takes reserves out of the banking system, causing them to scramble for funding. Small banks have seen their reserves as a percentage of overall assets fall back to the "ample reserve" limits that precipitated the late 2018 money market crisis during the end phase of the Fed's last QT adventure. This suggests we are near the end of QT, especially since it works at cross-purposes to the Fed's new BTFP facility.

The timeline for the debt ceiling crisis endpoint has been pulled forward by the fact that tax revenues are likely to prove weaker than expected in April, as huge capital losses from the bear market are causing state tax revenues to decline in New York and California, where a lot of high-income earners reside. Also depleting Treasury finances is an unplanned $40 billion tab for the Federal Deposit Insurance Corporation (FDIC) to cover recently displaced depositors at failed banks, according to Strategas Research. The drawdown of the Treasury's account at the Fed was offsetting QT, but that is ending sooner than anticipated, moving the timeline for the debt ceiling resolution forward. All this argues for an announcement to end or phase out QT at the next Federal Open Market Committee (FOMC) meeting.

The basic problem is simple. All-time high government debt was no problem when central banks were buying it and printing money. They printed too much, and now inflation is a problem. Now that the Fed is shrinking its bond portfolio, the private sector is having difficulty absorbing all the Treasury debt without pressuring rates even higher. Rising rates from excessive government debt supplies are an accelerant to further debt growth as the interest bill on over $30 trillion of borrowing skyrockets. In the meantime, strains in the banking system from QT and the new interest rate regime will slow growth and most likely cause a recession. Surveys of lending officers already show a dramatic decline in the willingness to lend that is typical in recessions. The latest crisis and falling bank share prices foreshadow bigger-than-expected declines in bank profits in our view.

The zero-rate economy caused the financial system to reach for riskier yields bidding up speculative asset prices. Crypto and tech VC firms were at the forefront of the frenzy. Firms without earnings or revenues with high cash-burn rates were sustained in the zero-rate environment. As rates have surged, banks with the deposits of these cash-burn companies are seeing deposits run down rapidly, putting them at the leading edge of the problems caused by QT shrinking the overall reserve pie in the banking system. More generally, banks have been slow to raise deposit rates, causing depositors to move into more competitive liquid investments like Treasury bills and money market funds. When some rates topped 5% compared to zero on deposits, the surge out of bank deposits exploded, causing the money and reserve supply to continue shrinking—a highly deflationary force.

The longer QT shrinks the reserve base, and these rate adjustments shrink deposits, the more likely a deflationary recession develops over the year ahead. Now that the Fed has received this wake-up call it is doubtful that it will continue much longer with QT and rapid rate increases. The decline in two-year Treasury yields is a powerful signal that monetary policy will be easing before year-end. It also suggests that we have seen the peak in 10-year Treasury yields for this cycle. For investors, these looming adjustments favor high quality longer duration bonds and avoiding riskier assets. Easier monetary policy and lower real interest rates are negative for the dollar's foreign exchange value and positive for gold prices.

MARKET VIEW

A-fib not a Heart Attack

Joseph P. Quinlan, Managing Director and Head of CIO Market Strategy

Think of the U.S. financial system as the beating heart of the global economy, seamlessly and continuously pumping out credit and capital (oxygen) to every corner of the world each day. Banks and financial institutions are the main vessels of this complex circulatory system and are tasked with delivering capital to all parts of the globe (body). This system is vast, intertwined and intricate—and as we all humbly know, extraordinarily fragile.

One blip, one uncoordinated beat, one irregular pulse from the heart can rattle nerves, boost anxiety, and, in extreme cases, be fatal (think heart attack). On the other hand, and more often than not, when things go wrong with the body's primary organ, it's frightening but hardly the end of the world (think atrial fibrillation or A-fib).

Today's financial crisis is more a case of A-fib—a serious but non-fatal heart problem—versus the Great Financial Crisis of 2008/2009, which was akin to a global financial heart attack. Back then, the world's financial heart effectively stopped beating; capital was blocked from being pumped to the rest of the world. As Wall Street seized, global credit lines were frozen. The globe's financial circulatory system went haywire—causing banks to collapse, defaults to soar, bankruptcies to spike. Wall Street's heart attack resulted in the Great Recession of 2008/2009 and mass destruction in global wealth. It took years to recover.

Medically or financially, you never forget a heart attack. So when all the screens on Wall Street suddenly flashed abnormal electrocardiograms (EKG) last week following the collapse of Silvergate and then the run on SVB, financial stress metrics like overnight index swaps, credit default spreads, and the Chicago Board Options Exchange (CBOE) VIX spiked. And they remained elevated after investors started to heavily discount not just bank earnings in the U.S., but also financial institutions around the world.

Not helping matters, and layering on concerns of financial contagion, one of Switzerland's largest banks had to be backstopped by Swiss monetary authorities to the tune of $54 billion. Other sectors and assets of the global economy (commodities, industrials, real estate) gapped lower as well. That's not surprising—when the financial heart of the global economy malfunctions, no part goes unaffected.

But one blip doesn't make for a bad heart.

A-fib is often described as an "irregular" heart rhythm, and that, financially speaking, is the best way to describe SVB, the epicenter of the current crisis. The institution was "irregular" in that its business model was overly leveraged to one specific investment/sector, aggressive in lending to startups, and posted well above normal deposit growth over the past few years. And in a case of asset-liability mismanagement, the bank's portfolio was brutally caught offsides with the Fed's aggressive rate tightening cycle.

The bank didn't survive, but the world's financial heart—while under stress—beats on. While A-fib is a serious medical condition, it's highly treatable and does not, according to the Mayo Clinic, create the conditions for a heart attack. Parlaying that into financial terms, and speaking to recent financial events, Alan Blinder, former vice chairman of the Fed, put it bluntly to the *Wall Street Journal*, "this isn't a replay of 2008."[1] Translation to investors: Not a heart attack but A-fib.

Another distinction from 2008 is depicted in Exhibit 2. Prior to the Great Financial Crisis, the financial sector's share of global Equities ballooned to almost 26% of the global total, well above its long-term average of 20%. So when the financial crisis struck in the fall of 2008, the pain across many major indexes was more acute and deeper; however, today,

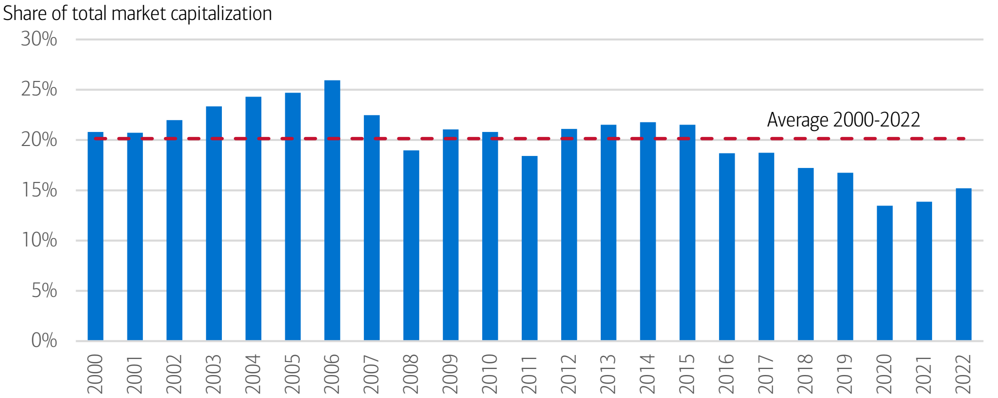
[1]See "Policy Lessons from the Silicon Valley Bank Collapse," Wall Street Journal, March 16, 2023.

Investment Implications

Crises can be opportunities, and this time is no different. We will churn through the current turmoil and believe maintaining a disciplined, long-term approach to investing in high-quality assets is now more important than ever.

financials represent 15% of the total market capitalization of the MSCI All Country World Index, mitigating, to a degree, the downside risks to global Equities over the near-term.

Exhibit 2: Financials Weight in Global Equity Index.



Source: MSCI. Data as of 2022. Based on MSCI All Country World Index. **Please refer to index definitions at the end of this report.**

Finally, the prognosis isn't as dire today given the underlying strength of America's largest banks, the policy supports of the Fed, the Treasury Department and FDIC, and the extensive policy tools still at the disposal of the U.S. government. Per the large banks, this time is different from 2008—with America's largest financial institutions holding high-quality assets, a diversified deposit base, low exposure to high-growth startups, and significantly higher levels of capital. Meanwhile, embracing the lessons of the Great Financial Crisis, U.S. monetary authorities have gone fast and large this time around versus slow and small back in the fall of 2008. This has helped rebuild and restore some stability in the global financial system, but much work remains to be done. Headline risks remain paramount.

Near-term aftershocks most likely include tighter and tougher lending standards, less borrowing, falling capital investment and, broadly speaking, a weaker U.S. economy heading into the back half of this year. It also includes more day-to-day volatility as investors shift through market and economic crosscurrents, and try to divine the next move of the Fed. The latter finds itself in uncharted territory—or between a rock (the need for financial stability) and a hard place (price stability). This time is different. Fed Chair Powell and company confront 6% Consumer Price Index (CPI)-based inflation rate versus an inflation rate that averaged just 2.1% between 1997-2020, according to figures from the Department of Commerce. In other words, financial crises since the late 1990s have happened against a backdrop of benign inflation readings, giving policy makers more leeway to cut rates and boost liquidity. Today, in contrast, the Fed doesn't have that luxury, creating more volatility and uncertainty as a result. A 50 basis point (bps) interest rate hike in the Fed's fund rates is off the table, with the likely outcome boiling down to either a 25 bps hike or a pause in the tightening cycle.

Derisking of portfolios is likely to continue in the weeks ahead. Fed guidance following the March meeting, along with the start of the Q1 earnings season in early April, is set to drive asset prices in the months ahead. So too will events overseas. Because Wall Street is the heart of the global financial order, financial flutters in the U.S. manifest themselves overseas, so the policy actions in Asia and Europe deserve close watching in the days ahead.

In the end, we believe the financial heart of the world economy, while under stress, remains strong and vibrant. It's fragile, for sure, but as the volatile days ahead unfold, investors need to take a deep breath and think A-fib, not a heart attack.

THOUGHT OF THE WEEK

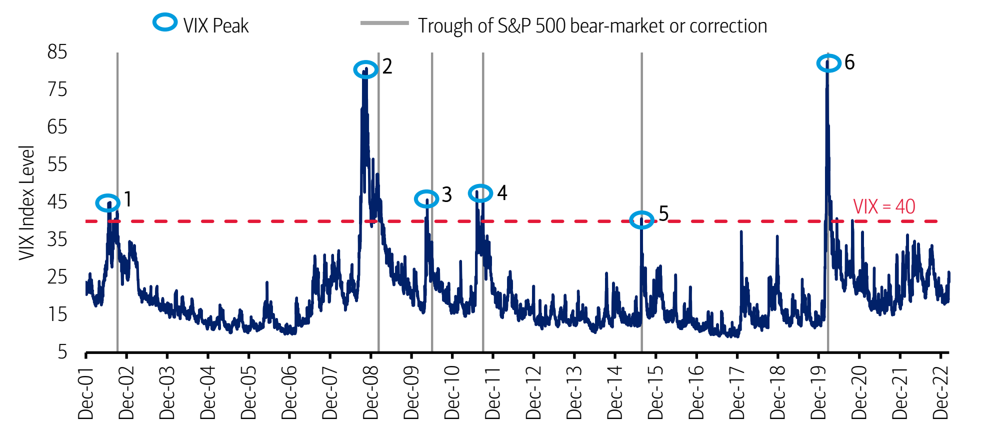
Volatility Reawakens

Marci A. McGregor, Managing Director and Head of CIO Portfolio Strategy

Over the past week, we have seen equity market volatility react to recent events in the banking sector with the VIX picking up from the low teens to high twenties, the highest level since October. To put this in perspective, this is only a bit above the average over the past 12 months, and well below the recent spikes of May, June and October 2022. In fact, we have seen more volatility in the bond market—as measured by the MOVE Index, which measures U.S. interest rate volatility which recently hit its highest level since March 2009, surpassing the March 2020 spike. That said, rate volatility has been elevated over the past year, as the Fed has rapidly adjusted monetary policy in its battle to bring down inflation. While interest rate swings have been wide by historic standards, credit spreads are still not at recessionary levels, despite widening over the past week. Looking back, we have not seen a period where the MOVE Index was so elevated but the VIX was not. This may augur for increased Equity volatility ahead.

As markets started the year with rallies and rotations, we maintained a neutral and defensive position in Equities, with a view that we had not seen the final spike in the VIX, which typically accompanies the end of a cyclical bear market. Looking back to the last six bear market corrections in the S&P 500 going back to 2002, each was accompanied by a VIX over 40 (Exhibit 3), which we have not seen yet in this cycle. Beyond the final stages of volatility, however, recoveries following a VIX spike have been swift, with the average price return for the S&P 500 up 11.22% over three months, 16.25% over a six-month period, and 31.9% one year after the final VIX spike. While our view is for this choppy, "grind it out" market to continue, we would wait for volatility to subside before increasing risk in general. However, we do believe now is not the time to take outsized risks, and we continue to emphasize a more measured approach to asset allocation.

Exhibit 3: The VIX Index Spikes Around Significant Events.



Note: The numbered bear markets correspond to the following events: 1) Post dot-com bubble, 2) Global financial crisis, 3) Europe sovereign debt crisis, 4) U.S. credit downgrade, 5) China currency devaluation, 6) Pandemic. Sources: Bloomberg; Yardeni. Data as of March 15, 2023. **Please see index definitions at the end of this presentation.**

Investment Implications

We continue to emphasize higher-quality investments within Equities and Fixed Income and a high level of diversification overall. As the uncertainty fades, we expect a new long-term bull market to be created as corporate earnings growth turns positive, investor sentiment shifts for the better, and asset prices are at more attractive levels.

Equities

	Total Return in USD (%)			
	Current	WTD	MTD	YTD
DJIA	31,861.98	-0.1	-2.2	-3.4
NASDAQ	11,630.51	4.4	1.6	11.4
S&P 500	3,916.64	1.5	-1.2	2.4
S&P 400 Mid Cap	2,374.47	-3.1	-8.6	-1.9
Russell 2000	1,725.89	-2.6	-8.9	-1.7
MSCI World	2,656.19	0.0	-2.0	2.4
MSCI EAFE	1,986.73	-3.1	-3.0	2.6
MSCI Emerging Markets	951.56	-0.3	-1.1	-0.3

Fixed Income†

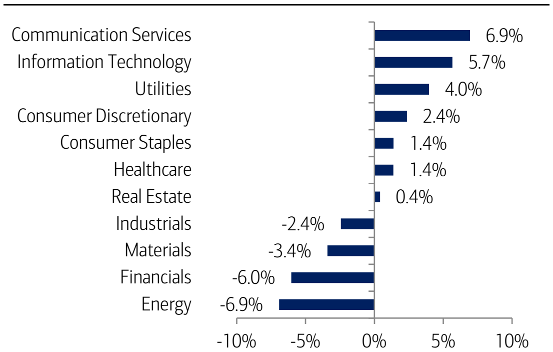
	Total Return in USD (%)			
	Current	WTD	MTD	YTD
Corporate & Government	4.32	1.28	2.56	2.91
Agencies	4.21	1.21	2.02	2.18
Municipals	3.35	0.78	1.54	2.10
U.S. Investment Grade Credit	4.36	1.43	2.48	2.90
International	5.30	0.76	1.75	2.46
High Yield	8.98	-0.42	-1.00	1.44
90 Day Yield	4.34	4.87	4.77	4.34
2 Year Yield	3.84	4.59	4.82	4.43
10 Year Yield	3.43	3.70	3.92	3.87
30 Year Yield	3.62	3.71	3.92	3.96

Commodities & Currencies

	Total Return in USD (%)			
Commodities	Current	WTD	MTD	YTD
Bloomberg Commodity	225.87	-1.8	-3.1	-8.1
WTI Crude $/Barrel††	66.74	-13.0	-13.4	-16.8
Gold Spot $/Ounce††	1989.25	6.5	8.9	9.1

	Total Return in USD (%)			
Currencies	Current	Prior Week End	Prior Month End	2022 Year End
EUR/USD	1.07	1.06	1.06	1.07
USD/JPY	131.85	135.03	136.17	131.12
USD/CNH	6.89	6.94	6.95	6.92

S&P Sector Returns



Sources: Bloomberg; Factset. Total Returns from the period of 3/13/2023 to 3/17/2023. †Bloomberg Barclays Indices. ††Spot price returns. All data as of the 3/17/2023 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 3/17/2023)

	Q4 2022A	2022A	Q1 2023E	Q2 2023E	Q3 2023E	Q4 2023E	2023E
Real global GDP (% y/y annualized)	-	3.4*	-	-	-	-	2.6
Real U.S. GDP (% q/q annualized)	2.7	2.1	1.0	0.5	-1.0	-2.0	1.0
CPI inflation (% y/y)	7.1	8.0	5.8	4.3	3.6	3.2	4.2
Core CPI inflation (% y/y)	6.0	6.1	5.5	5.0	4.1	3.4	4.5
Unemployment rate (%)	3.6	3.6	3.5	3.5	3.7	4.2	3.7
Fed funds rate, end period (%)	4.33	4.33	4.88	5.38	5.38	5.38	5.38

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. **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 March 17, 2023.

Asset Class Weightings (as of 3/7/2023)

	CIO View				
Asset Class	Underweight		Neutral	Overweight	
Global Equities			●		
U.S. Large Cap Growth			●		
U.S. Large Cap Value				●	
US. Small Cap Growth			●		
US. Small Cap Value			●		
International Developed		●			
Emerging Markets			●		
Global Fixed Income			●		
U.S. Governments				●	
U.S. Mortgages			●		
U.S. Corporates			●		
High Yield		●			
U.S. Investment Grade Tax Exempt		●			
U.S. High Yield Tax Exempt		●			
International Fixed Income			●		
Alternative Investments*					
Hedge Funds			●		
Private Equity			●		
Real Assets			●		
Cash					

CIO Equity Sector Views

	CIO View				
Sector	Underweight		Neutral	Overweight	
Healthcare					●
Energy				●	
Financials				●	
Utilities				●	
Consumer Staples			●		
Industrials			●		
Real Estate			●		
Information Technology			●		
Materials		●			
Consumer Discretionary	●				
Communication Services	●				

*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 March 7, 2023. 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.

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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.

Global Equity Index/S&P 500 Index includes a representative sample of 500 leading companies in leading industries of the U.S. economy. Although the index focuses on the large-cap segment of the market, with approximately 75% coverage of U.S. equities, it is also an ideal proxy for the total market.

Consumer Price Index (CPI) is a price index, the price of a weighted average market basket of consumer goods and services purchased by households.

Chicago Board Options Exchange (CBOE) Volatility Index (VIX) is the ticker symbol and the popular name for the Chicago Board Options Exchange's CBOE Volatility Index, a popular measure of the stock market's expectation of volatility based on S&P 500 index options.

Overnight indexed swap is an interest rate swap over some given term, e.g. 10Y, where the periodic fixed payments are tied to a given fixed rate while the periodic floating payments are tied to a floating rate calculated from a daily compounded overnight rate over the floating coupon period.

MSCI All Country World Index is a stock index designed to track broad global equity-market performance.

MOVE Index measures Treasury rate volatility through options pricing.

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All 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.

Asset allocation, diversification, rebalancing and dollar cost averaging do not ensure a profit or protect against loss in declining markets.

Investments have varying degrees of risk. Some of the risks involved with equity securities include the possibility that the value of the stocks may fluctuate in response to events specific to the companies or markets, as well as economic, political or social events in the U.S. or abroad. Investing in fixed-income securities may involve certain risks, including the credit quality of individual issuers, possible prepayments, market or economic developments and yields and share price fluctuations due to changes in interest rates. When interest rates go up, bond prices typically drop, and vice versa. Bonds are subject to interest rate, inflation and credit risks. Income from investing in municipal bonds is generally exempt from Federal and state taxes for residents of the issuing state. While the interest income is tax-exempt, any capital gains distributed are taxable to the investor. Income for some investors may be subject to the Federal Alternative Minimum Tax (AMT). Single-state municipal bonds pose additional risks due to limited geographical diversification. Treasury bills are less volatile than longer-term fixed income securities and are guaranteed as to timely payment of principal and interest by the U.S. government. Investments in foreign securities involve special risks, including foreign currency risk and the possibility of substantial volatility due to adverse political, economic or other developments. These risks are magnified for investments made in emerging markets. Investments in a certain industry or sector may pose additional risk due to lack of diversification and sector concentration. There are special risks associated with an investment in commodities, including market price fluctuations, regulatory changes, interest rate changes, credit risk, economic changes and the impact of adverse political or financial factors.

Cryptocurrency and many crypto-related investments are subject to minimal regulatory oversight, and there may be no recourse should the cryptocurrency disappear due to a cybersecurity breach or hack. Cryptocurrency investors rely upon unregulated exchanges that may lack appropriate internal controls, making them susceptible to fraud, theft and hacking. Direct holding of cryptocurrency only exist on the Internet. Issuers can be located anywhere in the world, so it may be impossible to trace and recover lost funds through the courts. Cryptocurrency accounts are not insured by U.S. depository insurance. Creating a digital wallet to store cryptocurrency involves installing software on an investor's computer. As with any software download, hackers may include malicious code, creating unwanted files or programs that can cause harm to a computer or compromise data store.

Alternative Investments are speculative and involve a high degree of risk.

Alternative investments are intended for qualified investors only. Alternative Investments such as derivatives, hedge funds, private equity funds, and funds of funds can result in higher return potential but also higher loss potential. Changes in economic conditions or other circumstances may adversely affect your investments. Before you invest in alternative investments, you should consider your overall financial situation, how much money you have to invest, your need for liquidity and your tolerance for risk.

Nonfinancial assets, such as closely-held businesses, real estate, fine art, oil, gas and mineral properties, and timber, farm and ranch land, are complex in nature and involve risks including total loss of value. Special risk considerations include natural events (for example, earthquakes or fires), complex tax considerations, and lack of liquidity. Nonfinancial assets are not in the best interest of all investors. Always consult with your independent attorney, tax advisor, investment manager, and insurance agent for final recommendations and before changing or implementing any financial, tax, or estate planning strategy.