

October 2022

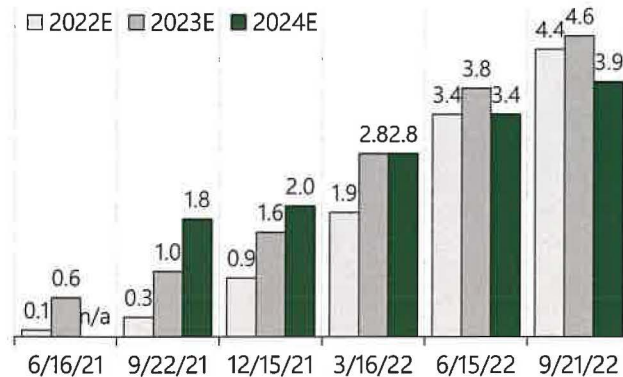
GLOBAL INVESTMENT OUTLOOK AND STRATEGY

- Simultaneous Global Tightening Increasing Risk of a Policy Overshoot
- Strengthening U.S. Dollar Also Exacerbating Global Economic Woes
- We Expect a Traditional Cyclical Downturn in the U.S. vs a GFC-Repeat
- Attractive Investment Opportunities Emerging for Patient Investors
- Equities Well-Positioned for Another Bounce Off Oversold Conditions

Equity Valuations Increasingly Attractive as PE Multiples Compress on Fed's Resolve

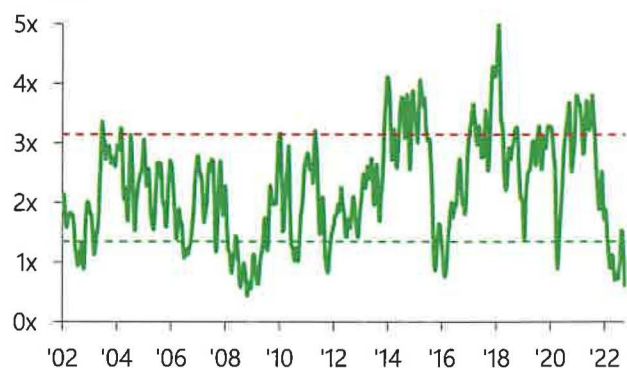
1 Rising Fed Hawkishness Spooking Markets

FOMC Median Fed Funds Rate Projections
Percent



2 But Sentiment May Be Bottoming Out

Advisors Sentiment Report, Bull-Bear Ratio
Weekly



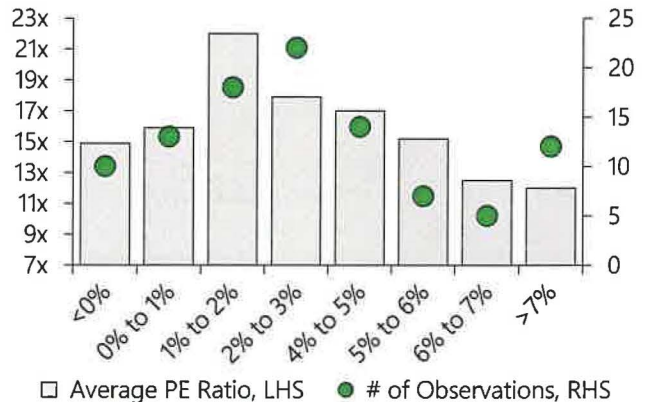
3 S&P 500's PE Back to its Historical Average

S&P 500 Forward Price-to-Earnings Ratio



4 Possible PE Expansion as Inflation Declines

U.S. PE Ratio by Different Inflation Buckets



Sources: Federal Reserve, Investors Intelligence, FactSet, Deutsche Bank, 9/30/22

Financial Markets Oversold on Fed Fears

Investor hopes that slumping GDP growth and preliminary signs of peaking inflation might compel the Federal Reserve to tighten less vigorously (a.k.a., the “peak Fed hawkishness” narrative) underpinned the early-to-mid summer rallies in equities and bonds. The yield on 10-year Treasuries sank -87 basis points over a seven-week period starting on June 15. Correspondingly, the S&P 500 Index rallied +17.4 percent and regained over 50 percent of its year-to-date point loss between mid-June and mid-August. However, the rise in bonds and stocks promoted looser financial conditions, counter to the Federal Reserve’s tightening objective. In addition, consumer inflation has proved much stickier than the Federal Open Market Committee’s continually overoptimistic projections. So, central bankers felt compelled to articulate a harder line in August to anchor inflation and investor expectations, leading to a sharp market reversal and a fresh low for the S&P 500 in September.

Released on August 17, minutes from the July Federal Open Market Committee meeting dispelled any notion of a proactive early exit from tightening. Instead, they affirmed the Federal Reserve’s intention to aggressively front-load hikes or risk inflation becoming embedded. Moreover, in his August 26 speech at the Jackson Hole Economic Symposium, Chair Powell asserted that “restoring price stability will likely require maintaining a restrictive policy stance for some time.” Naturally, the Federal Reserve implemented its third consecutive 75-basis-point rate hike in September, bringing the target fed funds rate’s upper limit to +3.25 percent. Thus, fed funds futures now imply a peak rate of +4.5 percent by early 2023, with investors now envisaging a recession-deepening policy mistake rather than a soft landing.

Higher Bond Yields Have Pressured Equity PEs



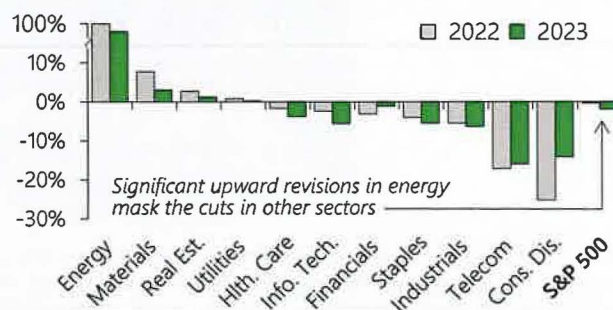
Source: FactSet, 9/30/22

The S&P 500 Index fell -24.8 percent in the first nine months of 2022, with 10 of 11 GICS sectors producing negative returns. Valuation compression has been the key driver of year-to-date equity losses, as the surge in ten-year Treasury yields and drop in excess liquidity have contributed to a broad-based contraction in stock

price-to-earnings multiples. As a result, the S&P 500 is currently trading at about 15.3 times forward earnings, which is in line with its long-term average. Consensus earnings forecasts will come under increasing pressure in the coming months as economic growth wanes and sell-side analysts catch up with what the equity market has already discounted. That is, we believe U.S. equity valuations generally reflect a mild recession scenario.

Earnings Estimates Becoming More Realistic

Year-to-Date Change in S&P 500 Forward EPS Estimates



Source: FactSet, 9/30/22

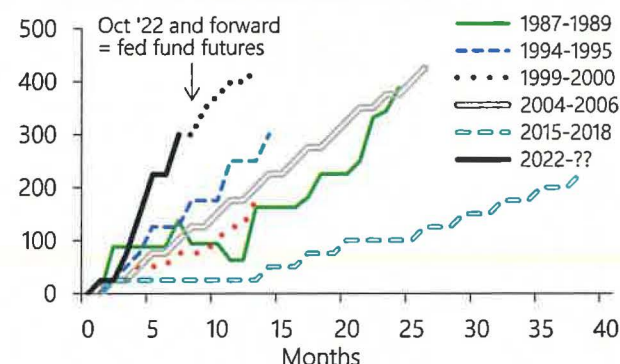
Investors fear the Federal Reserve will continue to raise interest rates until something breaks. Likewise, the risk of a policy overshoot that upends the global economy is rising as the highest number of central banks on record tighten concurrently. The combined effects of slowing economic growth, rising interest rates, a stronger U.S. dollar, and falling asset values will undoubtedly expose vulnerabilities somewhere on the globe. But, unless the Federal Reserve makes a colossal error, we believe the U.S. will undergo a conventional cyclical downturn and not a repeat of 2007-2009. Albeit, some indicators look downright gloomy. While the economic landscape will likely be challenging for the next year or so, the stock market is a forward discounting mechanism, trying to look ahead by around 12 to 18 months for better days.

Anticipated monetary policy actions will remain top of mind for investors, with any macroeconomic data that reassures Fed hawks likely viewed with cynicism. Still, dislocations offer attractive stock-picking opportunities for investors with a medium to long-term horizon. In addition, favorable stock seasonality, peaking inflation, depressed investor sentiment, and the wrap-up of the U.S. midterm elections may give equities another shot to rebound in the fourth quarter. Crucially, we believe valuations and increasingly realistic corporate earnings expectations are creating appealing investment opportunities in several industries, including software, semis, autos, aerospace, banks, biotechnology, and energy. A pending dovish Fed pause/pivot will ultimately lead to a market recovery. Until then, stocks will stay volatile, with a sustained rally unlikely until tail risks wane and investors can better grasp when/where interest rates, inflation, GDP growth, and earnings might settle out.

The Federal Reserve's policy rate decisions over the last nine months have been the most aggressive in decades, resulting in a surge in the general level of interest rates. On September 21, the Fed increased the fed funds rate by 75 basis points for the third time in a row to a target range of +3.00 to +3.25 percent. Given the current level of interest rates and our outlook for weak GDP growth, we think the worst is over for bond investors and expect positive bond market returns over the next year.

The Most Aggressive Fed Hike Cycle in Decades

Increase in Fed Funds Rate, Basis Points



Source: Federal Reserve, CME Group, 9/30/22

The fed funds rate hikes have driven an average year-to-date interest rate increase of 270 basis points to +4.1 percent across U.S. Treasuries with two-to-thirty-year maturities. Those rate increases have resulted in year-to-date total returns of -3.8 percent for the benchmark two-year U.S. Treasury, -10.3 percent for the five-year, -16.9 percent for the ten-year, and -32.1 percent for the thirty-year. The broad U.S. investment-grade market, as measured by the Bloomberg Aggregate Bond Index, plummeted -14.6 percent year to date, its lowest rolling nine-month return on record.

We expect the Federal Reserve to hike rates at the next two meetings in November and December but believe there is a strong likelihood it will pause in the next year and could even cut rates in the second quarter of 2023. Also, we expect the decline in real wages will continue, resulting in weak economic growth, a moderation in interest rate increases, and eventually a declining interest rate environment and attractive bond market returns.

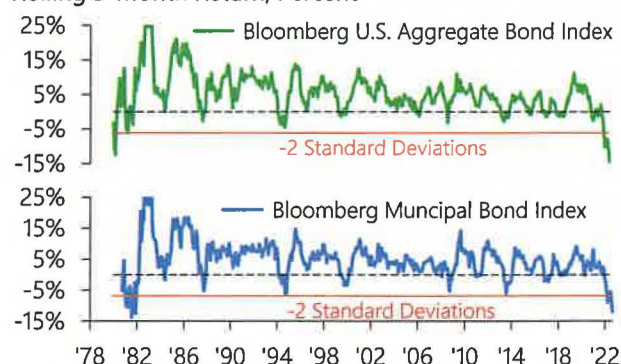
The year-to-date surge in interest rates and continuing signs of weak economic growth have made bonds with maturities of four to six years attractive. Accordingly, we shifted investments into that part of the yield curve. Higher yields have also provided opportunities to add value by trading out of floaters and TIPS and into fixed-rate corporate bonds. We have also been investing in callable U.S. agency bonds where yields are attractive relative to the bond's embedded call option. Moreover, mortgage-backed security spreads have widened in the

last few weeks, and we are selectively adding to those bonds. On the other hand, we are cautious regarding corporate bonds, especially the BBB segment. Finally, we have maintained a higher liquidity profile than usual as we anticipate additional dislocations and investment opportunities as the economy responds to the Federal Reserve's aggressive policies.

As for municipal bonds, the sharp rise in interest rates in 2022 has generated the weakest performance in over 40 years. The Bloomberg Municipal Bond Index sank -3.46 percent in the third quarter, which was the second weakest of three negative quarters in 2022. Long-duration bonds fared markedly worse than short and intermediate bonds. In addition, lower-rated and high-yield municipal bonds have had a worse year than bonds of higher credit quality. While of little comfort to investors, municipal bonds have outperformed most other domestic fixed-income bond markets this year. Ratios of municipal bond yields to those of corresponding U.S. Treasuries ended the third quarter moderately higher than long-term historic norms.

... Led to the Worst Bond Returns in Decades

Rolling 9-Month Return, Percent



Source: Bloomberg, 9/30/22

We believe the historic surge in municipal bond yields has presented attractive investment opportunities. For instance, high quality tax-exempt municipal bonds are now on sale at yields not seen in many years. We seek to capitalize on these attractive valuations selectively by deploying available capital. Where feasible, we are also de-emphasizing low-coupon bonds and swapping into bonds with higher coupons, boosting income for many years ahead. Municipal bond credits should fare very well in a recessionary downturn, especially versus comparably rated corporate bonds. Short and intermediate duration bonds are now at yields close to those of longer-term bonds but with far less interest rate sensitivity. We believe that our emphasis on tax-exempt income over short-term gains will differentiate our performance.



Simultaneous Rate Hikes Amplify the Risk of a Downturn-Deepening Policy Error

The global economic slowdown is gaining steam as lingering inflationary pressures, tightening financial conditions, the strengthening U.S. dollar, China's zero-Covid policy, and the ill effects of the war in Ukraine dampen activity. Moreover, the risk of a monetary policy overshoot that upends the global economy is growing as the highest number of central banks on record tighten simultaneously (Exhibit 1). Against constrained supply, the extraordinary stimulus unleashed during the coronavirus pandemic contributed to the multi-decade-high inflation many nations currently face. In a mea culpa of sorts, central banks globally, some of which were late to act, are now aggressively boosting interest rates. As a result, global short rates have spiked to near +3.0 percent (about +1.5 percent pre-pandemic) and could climb another 100-200 basis points in the coming months. Central banks are not only tightening into slowing growth but are also largely acting in isolation, seemingly unmindful of the cumulative effect of the concurrent rate hikes. Investors had hoped deteriorating global growth prospects would elicit a policy rethink. Instead, monetary hawks dug in deeper for a lengthy fight against inflation. Central banks can do little to tackle ongoing supply issues, so they risk overplaying their hand. A policy overshoot would be especially painful against the 54 percent surge in global debt over the last decade.

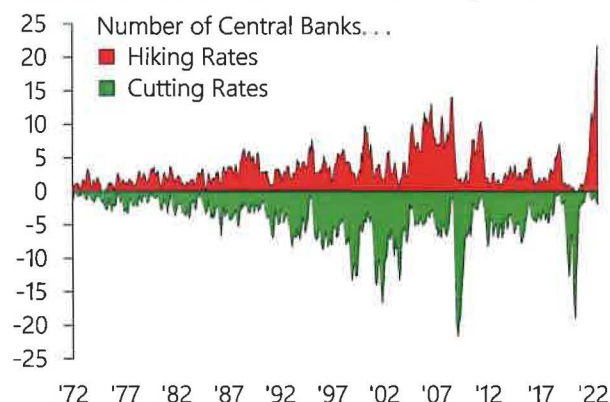
An Increasingly Stretched U.S. Dollar Also Exacerbating Global Economic Woes

A flight to safety and interest rate differentials have helped strengthen the U.S. dollar, with the Federal Reserve's trade-weighted U.S. dollar index climbing to an all-time high. The dollar has also advanced considerably against other traditional safe-haven currencies. The yen has fallen -20 percent versus the dollar year to date, the euro -14 percent, and the Swiss franc -7 percent. The strengthening U.S. dollar is placing additional strain on global growth via the "dollar doom loop" (Exhibit 2). Moreover, emerging markets, some of which have high dollar-denominated debt, are especially vulnerable to the cascading effects of increasing interest rates and a rallying dollar. While a stronger dollar may help ease inflation slightly on the homefront, it exacerbates pressures elsewhere via higher import prices. Besides, a soaring dollar takes a toll on domestic growth by dampening demand for U.S. exports and contributing to tighter financial conditions. Additionally, unfavorable currency translation will depress the earnings of U.S. multinationals. Nevertheless, we see very little chance the Federal Reserve will work with other central banks in a coordinated effort to rein in the U.S. dollar near-to-medium term. After all, an appreciating dollar fits well with (and partly due to) the Federal Reserve's tightening agenda. Still, stretched on fundamental and technical bases, the U.S. dollar is at risk of at least a near-term reversal.

An Ever-Resilient U.S. Consumer and Solid Job Growth Emboldening Fed Hawks

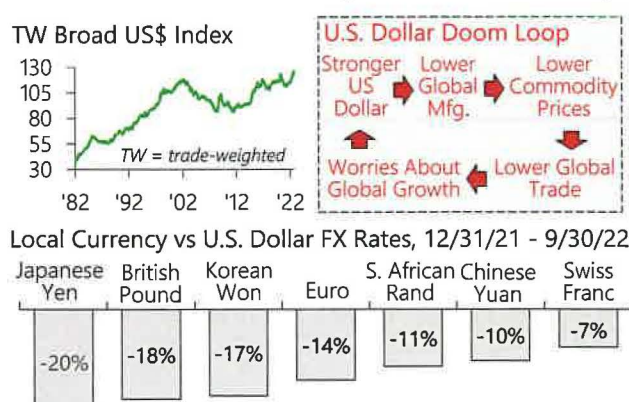
A sharp deterioration in U.S. leading indicators implies a hard landing may be all but inevitable, led by the downturn in housing. However, despite mounting headwinds, consumer spending

Exhibit 1: Global Central Bank Policy Rates



Source: World Bank, Bank for International Settlements, 9/30/22

Exhibit 2: U.S. Dollar Strength & The Doom Loop



Source: Federal Reserve, Bloomberg, Sit Investment Associates, 9/30/22



has stayed relatively resilient as households draw down excess savings and tap revolving credit. According to our calculations, U.S. consumers still have excess savings of around \$1.5 trillion, though this amount skews heavily toward higher-income groups. Moreover, consumer credit outstanding continues to grow, with revolving credit climbing +15.3 percent year over year in August. Despite the negative wealth effect from plunging asset values, consolidated household balance sheets are in good shape. Importantly, consumers are considerably less leveraged than before the 2007-2008 global financial crisis. For that matter, U.S. banks are also much better capitalized this time around. Moreover, U.S. nonfarm payrolls, although decelerating, continue to expand at an above-average pace, supporting spending growth. Consequently, the Atlanta Fed's GDPNow model points to real GDP growth of +2.9 percent for the third quarter following two consecutive quarters of negative growth (Exhibit 3). Nonetheless, net exports are a sizable swing factor, indicating a relatively "low quality" print. Still, solid growth figures could further embolden monetary hawks, resulting in higher rate expectations and a deeper downturn.

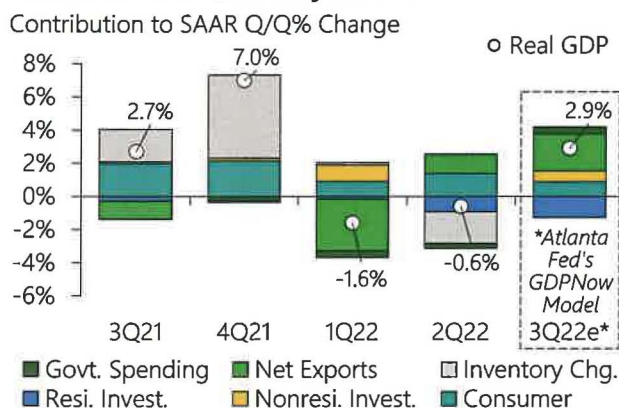
All Eyes on China's National Congress as Economic Growth Remains Challenged

The Chinese Communist Party will hold its 20th National Congress starting October 16, 2022, which many consider the most important political event of the decade in China. The meeting will elect the new Politburo and its Standing Committee, a group of the most senior leaders in China who will hold office for the next five years. General Secretary Xi Jinping, widely expected to be reappointed for a third term, will also deliver a policy blueprint, which will likely focus on economic development and social-political stability via "common prosperity." Moreover, dual circulation, or fostering internal demand/self-sufficiency and external trade, will likely provide the framework for future policy decisions. As for the economy, headwinds such as a property downturn, the zero-Covid policies, and slowing global trade imply growth will remain sluggish for the remainder of 2022. However, assuming policymakers relax Covid-19 restrictions and stabilize the property market, China should experience better growth in 2023 against easy year-over-year comparisons. The recently stricter Covid-19 controls should normalize following the National Congress, but it is less clear if policymakers will also promptly pivot away from zero-Covid. Even so, growth will likely continue to slow longer term, given demographic challenges and policymakers' resolve to address structural issues and avoid massive stimulus measures.

Europe Facing Tough Times, With Policymakers at Odds on How Best to Respond

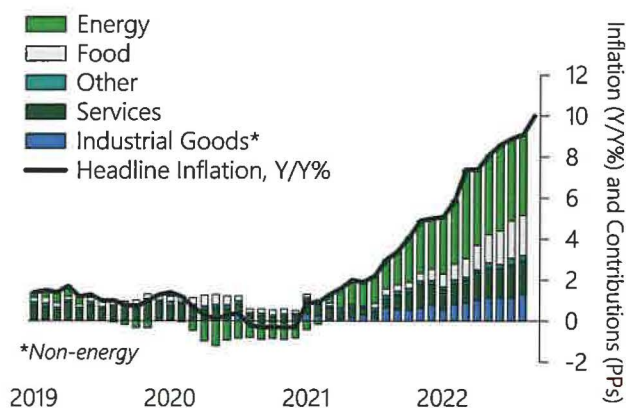
Europe's heedless reliance on Russian natural gas risks plunging the region into a moderate, if not a deep, downturn as Putin weaponizes exports. Higher imports via Norway and LNG have helped offset the drop in Russian flows. As a result, overall European Union storage builds for winter have kept pace with the ten-year average. Still, the loss of Nord Stream 1 pipeline flows since August 30 raises the chance stocks will be deficient if winter temperatures are well below historical norms. Plus, governments are lifting fiscal support to soften the blow from sky-high energy costs as central banks tighten assertively to tackle record-high inflation (Exhibit 4). The seeming policy mismatch adds to already-high macro uncertainty and may lead to a recession-

Exhibit 3: U.S. Quarterly Real GDP Growth



Source: Bureau of Economic Analysis, Atlanta Federal Reserve, 10/7/22

Exhibit 4: Euro Area Consumer Inflation



Source: Eurostat, 9/30/22



deepening policy error. Increasing interest rates as economic growth weakens could also cause fragmentation (i.e., the widening of government bond yield spreads) within the Euro Area and spark another 2011-type debt crisis. The European Central Bank has hoisted its policy rate to +1.25 percent from zero since July, with overnight index swaps now discounting a +2.00 rate by year-end. Fortunately, the mere existence of newly-created anti-fragmentation tools seems to have kept sovereign debt spreads in check. Still, Europe faces some difficult quarters ahead, given the energy crisis, record inflation, rising rates, and slowing global trade. Not to mention, an increasingly desperate Putin risks escalating the war in Ukraine as Russian setbacks mount.

Growth in Japan to Slow While Policymakers Aim to Blunt External Pressures

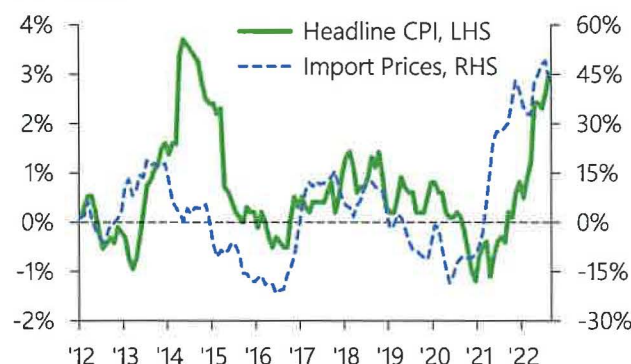
Following a modest recovery, we expect Japan's economy to slow amid inflationary pressures and waning international growth. A broad reopening of the service economy in recent months, coming after a delayed exit from the pandemic, has bolstered growth. However, challenges lie ahead. Prices continue to rise, particularly for necessities such as food and fuel, exacerbated by Japan's reliance on imports and the weakened yen. As a result, headline consumer inflation rose +3.0 percent year over year in August, while the trade deficit surged (Exhibit 5). Wages, meanwhile, have ticked up but continue to trail broader inflation. The resulting real income squeeze suggests a tepid consumption backdrop as the reopening boost fades. Furthermore, exports have benefited little from a weak currency amid ongoing supply chain constraints and looking ahead, deteriorating growth abroad limits an immediate recovery. The Bank of Japan, recognizing the headwinds, has bucked the global trend and kept its easing stance. However, a weaker yen and resulting inflationary effects are the near-term cost. Policymakers, though, have compensated with targeted fiscal measures and, most recently, an intervention to temper the yen's depreciation. The policy response has been adequate, if not disjointed, and will likely help the economy muddle through the current external-driven headwinds.

Emerging Markets Face Deeper Recession as Rising Rates & U.S. Dollar Take a Bite

Ongoing risks for emerging market (EM) economies include elevated inflation, rising interest rates, a deeper economic recession, and the strong U.S. dollar. The consensus forecast for EM inflation has climbed to +6.1 percent in 2022 on continued supply shocks. At the same time, real GDP growth projections have been lowered to +3.1 percent in 2022 from +3.7 percent on weaker global economic growth. Also, the strong U.S. dollar has raised the cost of imports and dollar-denominated debt servicing (Exhibit 6). Nonetheless, we believe EM economic growth will recover as supply chain issues improve, interest rates peak, and central banks begin easing to stimulate growth. Importantly, some EM economies, such as India, depend less on external demand. As a percentage of GDP, India's consumption has grown to 61 percent, up from 55 percent a year ago, and we expect it will move higher. India is also near the end of its monetary policy tightening cycle, with inflation falling to +7.0 percent in August from a peak of +7.8 percent in April (helped by declining oil prices). As a result, the Reserve Bank of India projects 2022-23 inflation of +6.7 percent and real GDP growth of +7.2 percent.

Exhibit 5: Japan Headline CPI & Import Prices

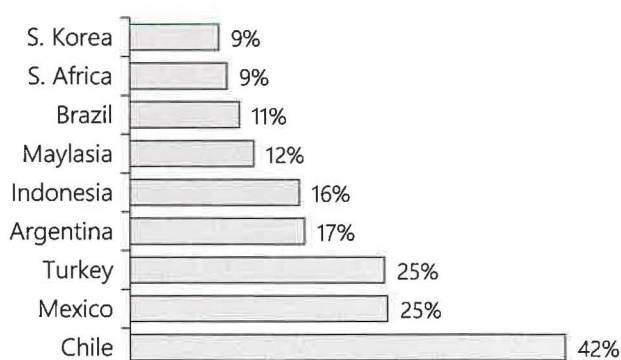
Y/Y Percent



Source: Japan Cabinet Office, Bank of Japan, 9/30/22

Exhibit 6: U.S. Dollar-Denominated Debt

Percent of GDP, 1Q 2022



Source: Bank for International Settlements, 9/30/22

Global Macro: Other Notable Data Points

Leading Indicators Imply Recession Imminent

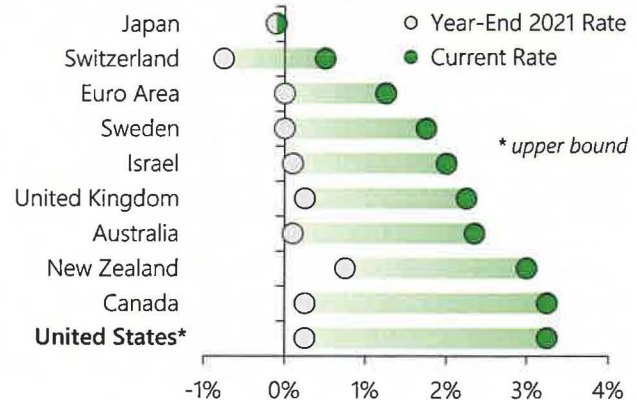
U.S. Leading Economic Index
Six-Month % Change Annualized



Source: The Conference Board, 9/30/22

Central Banks Racing to Raise Interest Rates

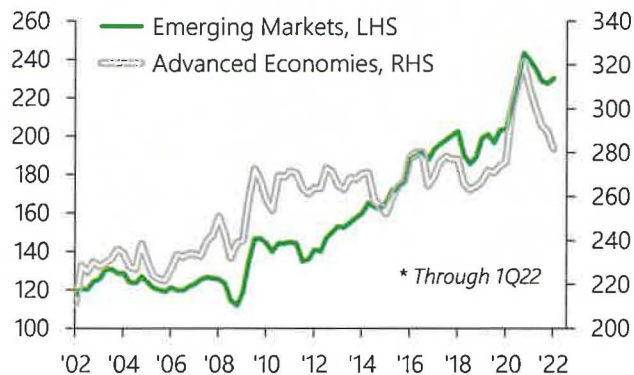
Policy Rate Changes, Developed Markets, YTD 2022



Source: FactSet, 9/30/22

High Global Debt a Notable Risk as Rates Rise

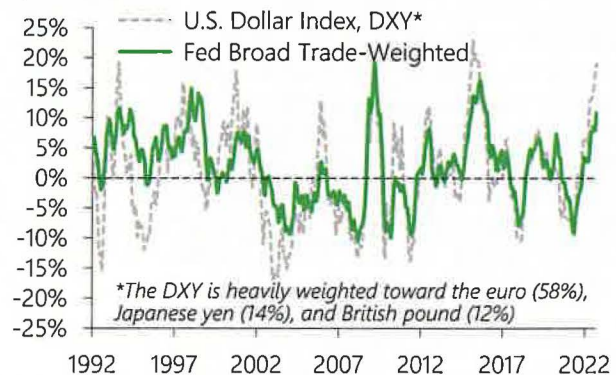
Total Credit to the Non-Financial Sector*
Percent of GDP



Source: Bank for International Settlements, 9/30/22

U.S. Dollar (DXY) Appears Increasingly Stretched

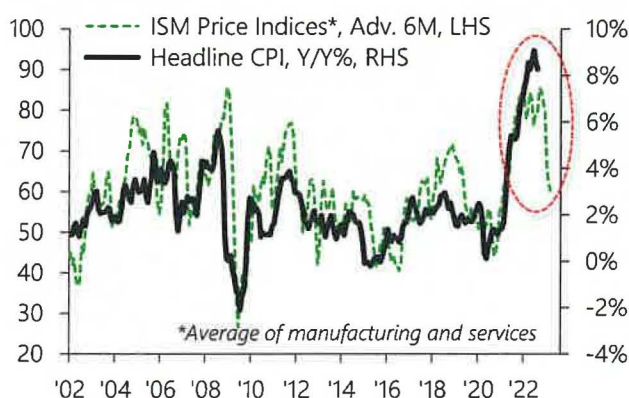
U.S. Dollar Indices
Y/Y Percent



Source: Federal Reserve, FactSet, 9/30/22

Inflationary Pressures Appear Poised to Subside

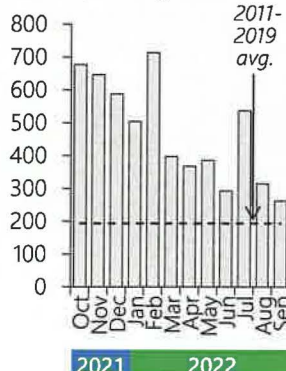
ISM Price Indices* vs Headline CPI



Source: Institute for Supply Mgmt., Department of Labor, 10/6/22

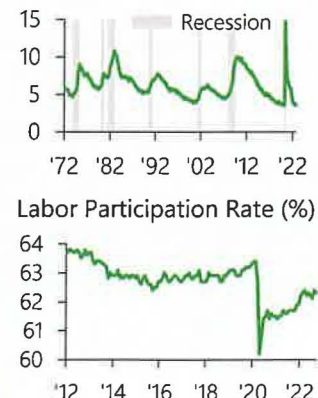
Low Labor Participation Remains a Headwind

U.S. Nonfarm Payrolls
Monthly Change, 000



Source: Department of Labor, 10/7/22

Unemployment Rate (%)





Inflation Responds to Excesses in Fiscal and Monetary Policies

We believe unprecedented fiscal and monetary stimulus since the pandemic's onset has created substantial demand while reducing the motivation or need for some individuals to maintain or seek employment. The U.S. government has approved \$6.3 trillion of pandemic aid since early 2020, equivalent to more than 11 percent of nominal GDP over the last two years. In March 2020, the Federal Reserve (Fed) reduced the fed funds rate from +1.50 percent to zero. The Fed also aggressively employed its other primary monetary policy tool, quantitative easing. It purchased nearly \$5 trillion of U.S. Treasury and agency MBS, equivalent to over 30 percent of the pre-pandemic M2 money supply, which pushed interest rates lower. Concurrently, the U.S. labor force participation rate declined from 63.4 percent in February 2020 to an average level of 61.5 percent between April 2020 and December 2021. The decline is equivalent to approximately 5 million workers and 3.0 percent of the U.S. workforce. The resulting supply-demand imbalance helped drive the spike in inflation. U.S. headline CPI began 2021 at year over year rate of +1.4 percent and steadily accelerated to +7.0 percent by year-end. In 2022, the rate has ranged between +7.5 percent and +9.1 percent.

Inflation and the Supply-Demand Gap Persist

After fifteen months of accelerated inflation, the Fed began aggressively raising interest rates with a 50 basis point hike in the fed funds rate in May 2022. It subsequently increased the rate an additional 75 basis points at each of the following three meetings to the current target range of +3.00 to +3.25 percent. Moreover, the Fed began a balance sheet reduction program in June 2022. The program effectively places an additional \$60 billion of Treasuries and \$35 billion of mortgage-backed securities into the market each month. Accordingly, the balance sheet will decline from \$9 trillion to \$4 to \$5 trillion over the next couple of years. The balance sheet reduction and policy rate hikes have also driven the mortgage rate increase from approximately +3.0 percent throughout 2021 to a recent level of over +7.0 percent. Despite rising interest rates, we expect fiscal policies and excess household savings will bolster demand for goods and services. As a result, we forecast the Fed's aggressive rate hikes will continue for the next two meetings. Additional rate hikes will likely result in the fed funds rate "overshooting" the level necessary to bring inflation down, resulting in a recession. Still, demand destruction should bring the supply-demand relationship back into balance and, through that mechanism, reduce inflation.

Taxable Fixed Income Strategy

We began the quarter anticipating rising rates, and during the quarter, we increased portfolio durations to be closer to, but still below, benchmarks. Our outlook is for anemic and possibly negative economic growth, lower corporate earnings, and weaker credit metrics. The increase in yields has made fixed-rate corporate bonds more attractive relative to the floating-rate bonds we owned, so we traded out of floaters and into fixed-rate. We also reduced our TIPS allocation as we forecast lower inflation-related accruals. In July, the yield curve began to invert, with the two-year Treasury having a higher yield than those maturing in five to thirty years. During the quarter, we also made incremental adjustments to our positioning along the yield curve to express our views about the timing and amount of the yield curve inversion. Specifically, we added to bonds with maturities of four to six years in anticipation of a reversal of the yield curve inversion. We have also recently been investing in callable U.S. agency bonds where we believe the yield spread is attractive relative to the bond's embedded call options. Moreover, mortgage-backed security spreads have widened over the last few weeks. So, we are carefully evaluating opportunities in those bonds. Finally, we have maintained a higher liquidity profile than usual as we anticipate additional dislocations and investment opportunities as the economy responds to the Fed's aggressive policies.



Volatile 3rd Quarter Raises Municipal Bond Yields to Highest Levels in Many Years

The municipal bond market was swept along by the rising tide of interest rates that overtook the bond markets during the third quarter, with the Bloomberg Municipal Index falling -3.46 percent. Tax-exempt bond yields rose to an extraordinary degree at the short end of the yield curve during the third quarter, surging 146 basis points to +3.06 percent for 1-year bonds and 101 basis points to +3.10 percent for 3-year bonds. Longer-term municipal bonds experienced jumps of around 60 basis points as the 10-year municipal yield climbed to +3.30 percent and the 30-year to +3.90 percent for AAA general obligation bonds (Exhibit 7). Yields have risen for seven of the first nine months of 2022, reaching highs not seen since 2008 for 10-year municipal bonds and even longer for short-term securities. The stunning rise in interest rates throughout 2022 has led to the weakest municipal bond performance in over 40 years.

Market Supply and Demand Both Fade Late in the Third Quarter

A bearish trend persisted through most of 2022, seemingly without regard for technical factors such as seasonal fluctuations in supply and reinvestment flows. Reinvestment flows peak in the summer as more bonds are scheduled for redemption and may have contributed to a July rally (although Treasuries also rallied that month). Still, strong reinvestment flows could not prevent a sell-off in August. Municipal bond mutual fund outflows that had started early in the year halted briefly in July but then resumed later in the quarter, establishing a new record of over \$90 billion (Exhibit 8). Market volatility eventually caused new tax-exempt issuance to contract markedly in the third quarter, as volume was 26 percent below the year-ago quarter.

Municipal Bond Credit Remains Exceptionally Strong

The negative market results this year are unrelated to municipal credit fundamentals. Rating upgrades of municipal bond credits have vastly exceeded downgrades over the last two years. Aggregate fund balances held by states (general fund ending balance and rainy-day reserves) are estimated to have hit a record \$262 billion at fiscal year-end 6/30/22, which is more than double the amount as of pre-pandemic fiscal year-end 2019. Tax revenues (property, sales, income) will be buoyed for some time by peaks in inflation. As a result, states are much better positioned to weather a moderate recession than in the past.

Tax-Exempt Fixed Income Strategy: Seizing Opportunities

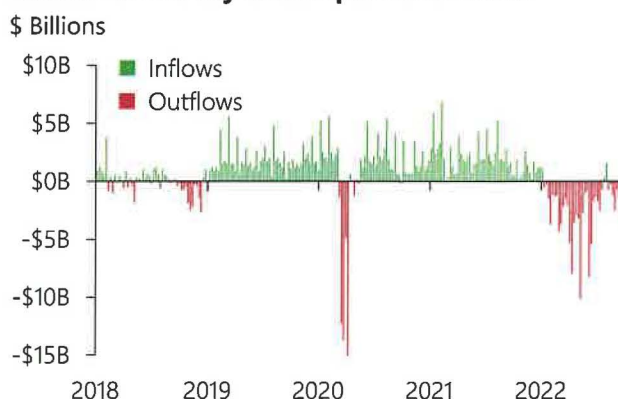
The historic surge in municipal bond yields presents attractive investment opportunities in the current market. High-quality tax-exempt municipal bonds are now on sale at yields not seen in many years. We will seek to capitalize on these attractive valuations selectively by deploying available capital. Where feasible, we will de-emphasize low coupon bonds and swap into bonds with higher coupons, boosting income for many years ahead. Municipal bond credits should fare very well in a recessionary downturn, especially versus comparably rated corporate bonds. Short and intermediate-duration bonds are now at yields close to those of longer-term bonds but with far less interest rate sensitivity. We believe our emphasis on tax-exempt income over short-term gains will differentiate our performance.

Exhibit 7: Municipal Bond Index Returns

	QTD	YTD		QTD	YTD
Muni Bond	-3.46	-12.13	Revenue Bond Index	-3.62	-12.96
3-Year	-1.98	-5.37	Electric	-2.96	-10.68
5-Year	-2.71	-8.06	Hospital	-4.66	-15.30
7-Year	-2.66	-9.30	Housing	-5.19	-16.33
10-Year	-2.54	-10.59	IDR/PCR	-3.48	-13.01
Long	-5.95	-19.74	Transportation	-3.23	-12.55
AAA	-3.50	-11.71	Education	-3.58	-12.98
AA	-3.34	-11.62	Water & Sewer	-3.25	-11.54
A	-3.51	-12.55	Resource Recovery	-3.58	-8.57
BAA	-4.07	-14.93	Leasing	-3.68	-13.25
			Special Tax	-3.58	-12.51
GO Bond	-3.30	-11.45	Tobacco Index	-2.66	-11.47

Source: Bloomberg, 10/1/22

Exhibit 8: Weekly Municipal Fund Flows

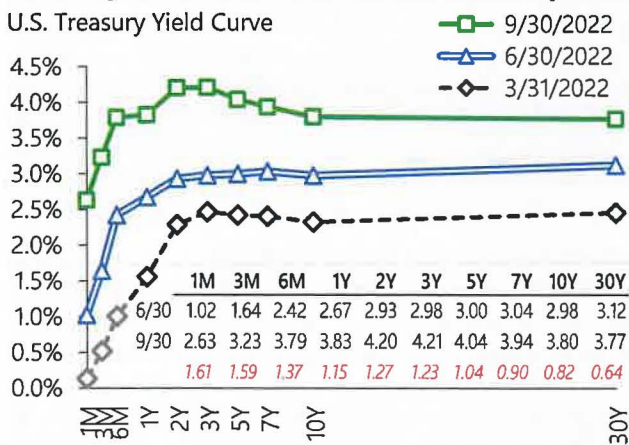


Source: Goldman Sachs, Refinitiv, 10/1/22

Fixed Income: Other Notable Data Points

Treasury Yield Curve Continues to Shift Upward

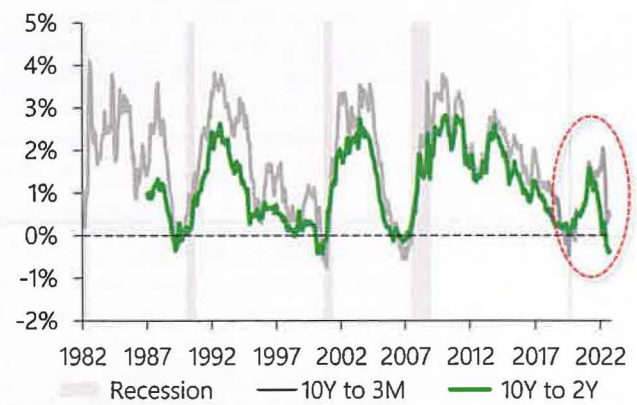
U.S. Treasury Yield Curve



Source: FactSet, 9/30/22

Curve Flattening With Inversion From 1Y to 10Y

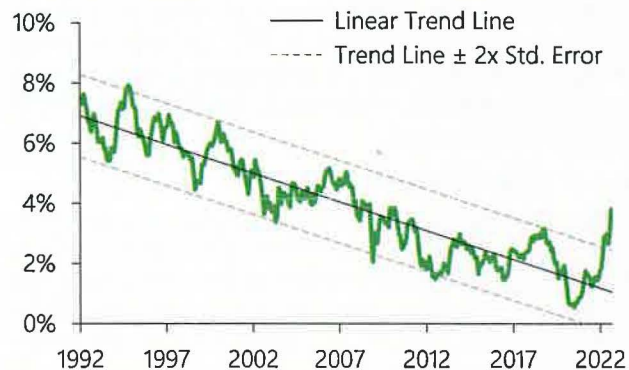
U.S. Treasury Spreads



Source: FactSet, 9/30/22

Yields Now at Levels Not Seen Since Pre-GFC

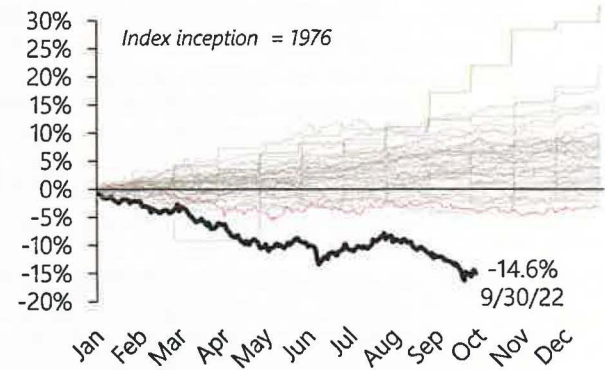
U.S. 10-Year Treasury Note Yield



Source: FactSet, 9/30/22

Awful YTD Market Returns on Spike in Rates

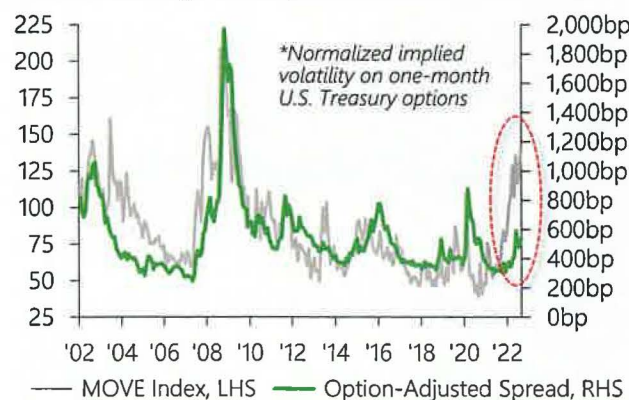
Bloomberg U.S. Aggregate Bond Index Year-to-Date Total Return, Percent



Source: Bloomberg, Bianco Research, 9/30/22

HY Spreads Muted Relative to Recession Risk

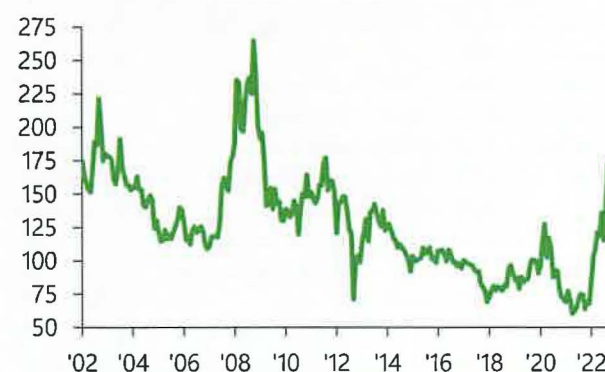
ICE BofA U.S. High Yield Spreads vs MOVE Index*



Source: FactSet, 9/30/22

MBS Spreads Widening as Fed Unwinds QE

Average MBS Yield versus 5-10-Year Treasury Yield Spread, Basis Points



Source: Bloomberg, 9/30/22



GLOBAL EQUITIES: ENVIRONMENT AND STRATEGY

Investor Sentiment Bottoming Out; Stocks Oversold and Poised for a Bounce

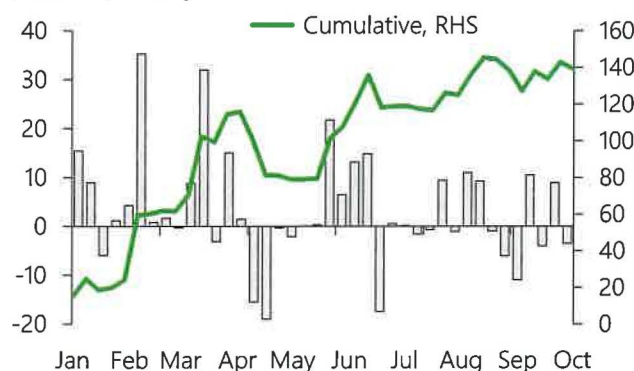
The S&P 500 Index returned -4.9 percent in the third quarter after a considerable price swing as the Federal Reserve took a sledgehammer to the market's "peak Fed hawkishness" narrative starting in mid-August. Unfortunately, persistently hawkish Fed speak, weakening macro data, and unfavorable equity market seasonality kept the S&P 500 in a downtrend for the rest of the quarter. Consequently, the headline Index established a new low at the end of September, with nine of the eleven GICS sector sub-indices doing the same. However, investor sentiment looks increasingly washed out. Investor Intelligence's advisor bull-to-bear ratio is approaching the previous low set in late 2008, while individual investors are the most bearish since March 2009. Sentix's institutional investor expectations survey is also closing in on a record low. In addition, according to the BofA Global Fund Manager Survey, the average portfolio cash balance of 6.1 percent in September is the highest since October 2001 (after 9/11), indicative of the fear and uncertainty embedded in markets at the moment. Remarkably, despite investors' dour mood, equity fund flows remain buoyant. Cumulative flows into U.S. equity mutual funds and ETFs have totaled \$139 billion year to date, benefitting from flows out of fixed income and European equities (Exhibit 9). All considered, depressed investor sentiment, favorable equity seasonality, peaking inflation, and the wrap-up of the U.S. midterm elections may give U.S. equities another shot to rebound in the fourth quarter from technically oversold levels.

S&P 500 Earnings Headed Lower, but Market Already Discounts a Mild Downturn

Investors are apt to enter the upcoming third-quarter earnings reports with some trepidation, knowing slowing global growth, a strengthening U.S. dollar, tight labor markets, and, in some instances, excess inventories will take a toll. On the flip side, decreasing commodity and freight costs could be a crucial offset. However, earnings cuts and a reset of sell-side expectations are likely necessary for a sustained recovery in the stock market. The bottom-up estimate (i.e., the weighted sum for all constituents) for the S&P 500 implies earnings growth of +7.5 percent in 2022 and +8.2 percent in 2023. The top-down estimate for operating earnings is less sanguine at +7.7 percent and +3.0 percent, respectively. While the top-down estimate for 2023 is down -12.1 percent from its June 2022 high (bottom-up cut -4.5 percent), earnings expectations are still too high, given the strong odds of a mild recession. S&P 500 earnings have sunk a median of -13 percent from peak to trough during recessions since WWII. A slightly softer decline is likely in the cards, implying trough earnings of around \$200 per share versus the current top-down and bottom-up estimates of \$224 and \$240, respectively. Applying a historical average price-to-earnings multiple of 15.5 times infers an S&P 500 price target of 3,100 and a downside risk of about -15 percent. Nonetheless, markets usually apply a considerably higher valuation multiple to trough earnings. A higher-than-average multiple on trough earnings indicates the stock market has already discounted a mild recession (Exhibit 10).

Exhibit 9: U.S. Equity Mutual Fund & ETF Flows

\$ Billions, Weekly



Source: EPFR, 10/5/22

Exhibit 10: S&P 500 EPS & Valuation Scenarios

	Projected Trough S&P 500 EPS				
	\$190	\$195	\$200	\$205	\$210
13.5x	\$2,565	\$2,633	\$2,700	\$2,768	\$2,835
14.5x	\$2,755	\$2,828	\$2,900	\$2,973	\$3,045
15.5x	\$2,945	\$3,023	\$3,100	\$3,178	\$3,255
16.5x	\$3,135	\$3,218	\$3,300	\$3,383	\$3,465
17.5x	\$3,325	\$3,413	\$3,500	\$3,588	\$3,675
18.5x	\$3,515	\$3,608	\$3,700	\$3,793	\$3,885
19.5x	\$3,705	\$3,803	\$3,900	\$3,998	\$4,095
20.5x	\$3,895	\$3,998	\$4,100	\$4,203	\$4,305
21.5x	\$4,085	\$4,193	\$4,300	\$4,408	\$4,515

Source: Sit Investment Associates, 10/7/22



Global Equity Strategy

An emphasis on stock picking relative to executing large sector “bets” is core to our strategy, as we do not see a case for sectoral valuation dislocations at the moment. We have consistently communicated a strong preference for “quality” throughout 2022 as market volatility increased and downside tail risks to the global economy mounted. In general, quality-oriented factors (ROE, balance sheets, cash flow) have performed relatively well this year, a trend we expect to continue. In this regard, we favor dividend-paying growth stocks, which allow investors to participate in a market rebound with somewhat less volatility. In addition, companies that can grow cash flows and increase dividends will provide some inflation protection over time.

Despite its quality orientation, the technology sector has significantly lagged the overall market as “risk off” market sentiment and slowing growth in key sub-sectors led to a massive re-rating. While it may be too early to aggressively add to the sector as earnings revisions will likely stay negative in the short term, long-term growth prospects remain promising. The sector’s growth drivers are secular and multifaceted, including cloud computing, artificial intelligence, cyber security, data analytics, automation, and the simple fact that electronic content (i.e., chips) is increasing in virtually all devices and equipment. Furthermore, we expect the slowdown in the economy, coupled with shortages of workers in many sectors, will drive corporations toward productivity solutions, including automation, digital transformation (to streamline workflows), and cloud computing (to reduce hardware and labor costs).

We continue to add to energy opportunistically. The sector offers a combination of improving fundamentals buoyed by durable supply-side constraints and a hedge against ongoing elevated geopolitical risk. Multiple years of industry underinvestment, waning spare capacity, and a wholesale reshuffling of global energy flows amid the Russia-Ukraine conflict point to enduring challenges in sourcing new energy supplies. With no quick fixes, energy prices should remain elevated. While demand remains a near-term risk, supply limits will re-emerge once the next upcycle takes hold. Within energy, we favor companies with high-quality/differentiated assets, talented management teams, and the ability to grow shareholder returns durably.

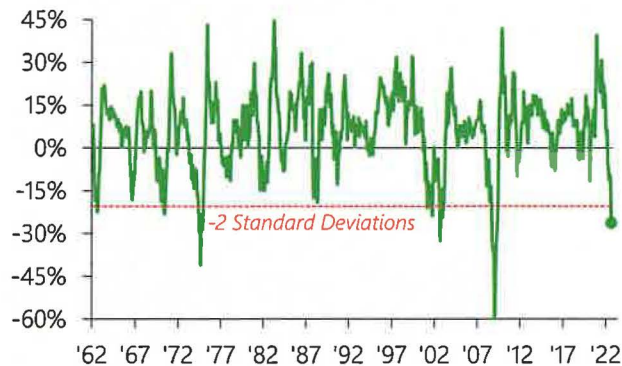
For the international portfolios, we prefer investments in South Korea, Singapore, India, and Mexico. Asia ex-Japan economic growth of +3.5 percent in 2022 is still robust, though down from our prior +4.7 percent estimate on slower growth in China. In addition, we now forecast Latin America’s GDP will grow by +3.1 percent, up from our previous +2.2 percent estimate, led by Mexico and Brazil. Valuations for emerging market stocks are also attractive, with the MSCI Emerging Markets Index trading at a forward price-to-earnings ratio of 11.1 times, or about a -6 percent discount to its 10-year average. Moreover, downward earnings revisions have been minimal (-5.3 percent over the last three months). Finally, we maintain a balanced portfolio of cyclical and secular growth stocks and prefer holdings within financials, e-commerce, and gaming. We also like Covid-19 re-opening plays and technology/material firms benefiting from the secular global transition to renewable energy.

We also maintain an overweight position in China. The MSCI China Index plummeted -31.1 percent for the first nine months of 2022, underperforming both the MSCI World Index and the MSCI Emerging Markets Index. As global financial conditions will continue to tighten, we are cautious on Chinese stocks near term. However, given the MSCI China Index is currently trading at an undemanding 10-11x price-to-earnings ratio and investor sentiment is very bearish, we are cautiously constructive on the China market over a twelve-to-eighteen-month investment horizon. That said, the primary variable is when we will see an easing of zero-Covid policy – the current consensus is early 2023. We will also watch for risk factors such as ripple effects from Federal Reserve rate hikes, a global recession, and geopolitical tensions. Within a diversified portfolio, we prefer reopening trades and are sticking with internet stocks, given depressed valuations and bottoming fundamentals.

Global Equities: Other Notable Data Points

One of the Worst Rolling 9-Month Returns YTD

S&P 500 Index
Rolling 9-Month Price Return, Percent



Source: FactSet, 9/30/22

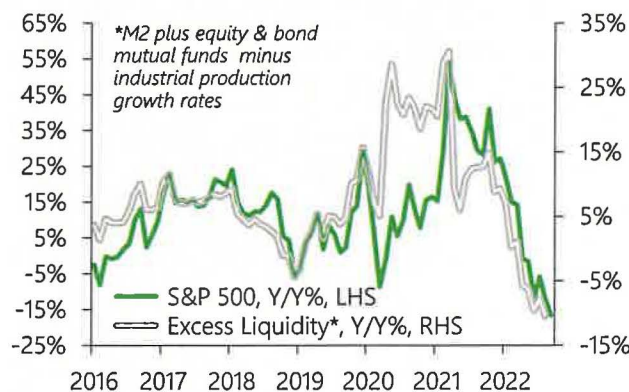
S&P 500 Drop Within Range of Prior Recessions

Date	Price Level		%	Days to	Recess.
Peak - Trough	High	Low	Down	Trough	Start
Jun-48 - Jun-49	17	14	-21%	363	Nov-48
Jul-57 - Oct-57	49	39	-21%	99	Aug-57
Nov-68 - May-70	108	69	-36%	543	Dec-69
Jan-73 - Oct-74	120	62	-48%	630	Nov-73
Nov-80 - Aug-82	141	102	-27%	622	Jul-81
Jul-90 - Oct-90	369	295	-20%	87	Jul-90
Mar-00 - Oct-02	1,527	777	-49%	929	Mar-01
Oct-07 - Mar-09	1,565	677	-57%	517	Dec-07
Feb-20 - Mar-20	3,386	2,237	-34%	33	Feb-20
Average			-35%	425	
Median			-34%	517	
Jan-22 - Sep-22	4,797	3,586	-25%	270	??

Source: FactSet, 9/30/22

Declining Excess Liquidity a Market Headwind

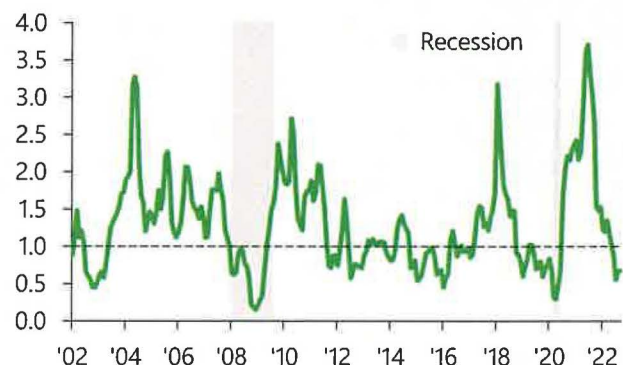
S&P 500 Index vs U.S. Excess Liquidity



Source: Federal Reserve, ICI, FactSet, 9/30/22

Earnings Revisions Ratio Near Historical Trough

S&P 500 Earnings Revision Ratio
Number of Up Revisions ÷ Number of Down Revisions



Source: FactSet, 9/30/22

S&P 500 Approaching Oversold Levels Again

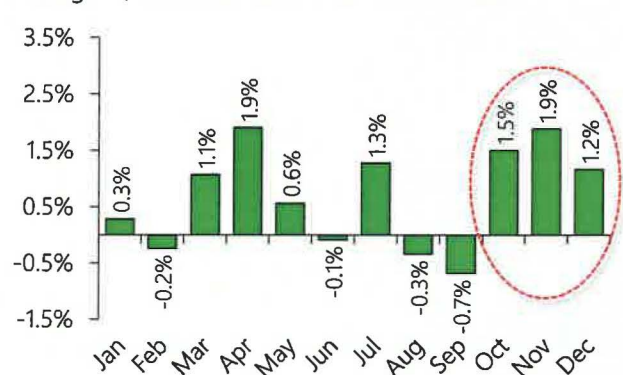
Relative Strength Indicator
S&P 500 Index



Source: FactSet, 9/30/22

Seasonality a Possible Near-Term Tailwind

Seasonality of S&P 500 Index Price Returns
Average M/M Percent Returns for Last 30 Years



Source: FactSet, 9/30/22

NOTICE: This analysis contains the collective opinions of our analysts and portfolio managers and is provided for informational purposes only. While the information is accurate at the time of writing, such information is subject to change at any time without notice, and therefore, so may the investment decisions of Sit Investment Associates.