HARBOR MULTI-ASSET SOLUTIONS

Q3 2023 Asset Allocation Viewpoints

Asset Allocation Viewpoints & Positioning

Actionable investment conclusions from Harbor's Multi-Asset Solutions Team

Macro Landscape: Q3 2023

The End of a Mid-cycle Slowdown? Or the Last Stand for the U.S. Economy?

- The U.S. economy continues to weather the fastest hiking cycle in decades. A lower savings rate and household wealth gains since the pandemic continue to power the consumer contributing to an unexpected recovery in the housing market. However, declining corporate profits and eroding margins as wage gains catch up in real terms means something must give.
- History tells us that the labor market will deteriorate before the necessary real adjustment is complete as companies protect profitability. Job gains continue to be robust, but a few cracks are starting to appear. Transitions into recessions are rarely gradual.
- The surprising resilience of the U.S. economy calls into question two of the Fed's policy assumptions: 1) that policy is in restrictive territory, and 2) that interest rates are biased lower once policy normalizes. The implication is that higher for longer interest rates is a question for 10-year bonds just as much as it's a question for the federal funds rate.
- The swift fall in inflation from 9% to 4% marks significant progress for the Fed's price mandate. However, that progress is concentrated in the predictable sectors of disinflation like shelter, goods, and commodities. Progress on more persistent sectors of inflation is less clear leaving the Fed to keep at it.
- The combination of slowing profits, declining margins, higher interest rate prospects, and valuations above historical averages makes for unattractive risk-reward in the equity market. We continue to favor high-quality companies and high-rated fixed income exposures.
- Three months ago, we all focused on a regional banking crisis. Higher interest rates and declining deposits will likely only exacerbate the lingering concerns. The other tailwinds in the first half, China's reopening and a recovery in Europe, are unlikely to be repeated.

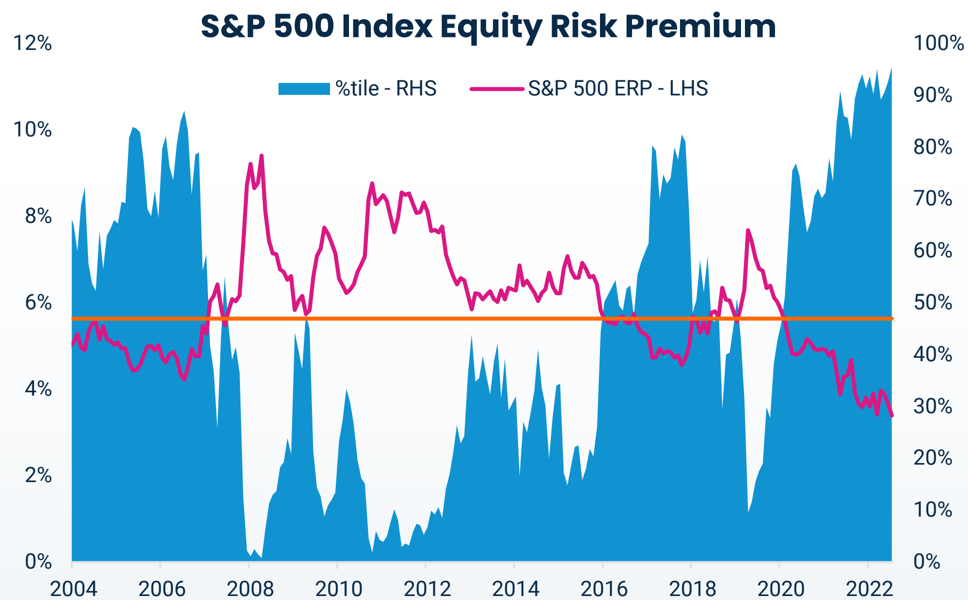
Asset Class Review

Equities

We believe that U.S. large cap equities are currently overvalued and earnings estimates remain optimistic. As a result, the risk/reward for equities remains unfavorable. We expect negative revisions to resume in the second half of the year as pricing power weakens, availability and demand for credit contracts, and real activity levels remain below trend. Additionally, equities have yet to re-price to a higher risk premium and look expensive relative to interest rates.

Within equities, we maintain our preference for growth over value. The growth style should be rewarded in a slowing aggregate demand environment, with peaking interest rates and inflation falling from elevated levels. We have expressed our growth tilt with sector allocations where we believe valuations are attractive, earnings have already reset, and there is potential for positive earnings revisions as we anniversary idiosyncratic sector headwinds.

Investors have become more sanguine about the economic outlook, with ~2/3 now expecting a soft landing, according to Bank of America's Fund Manager Survey. As a result, sentiment has reached its most bullish level since November 2021. While there is a path to a soft landing, we continue to expect a recession over the next twelve months. As such, we maintain that the risk to assets is skewed negatively.

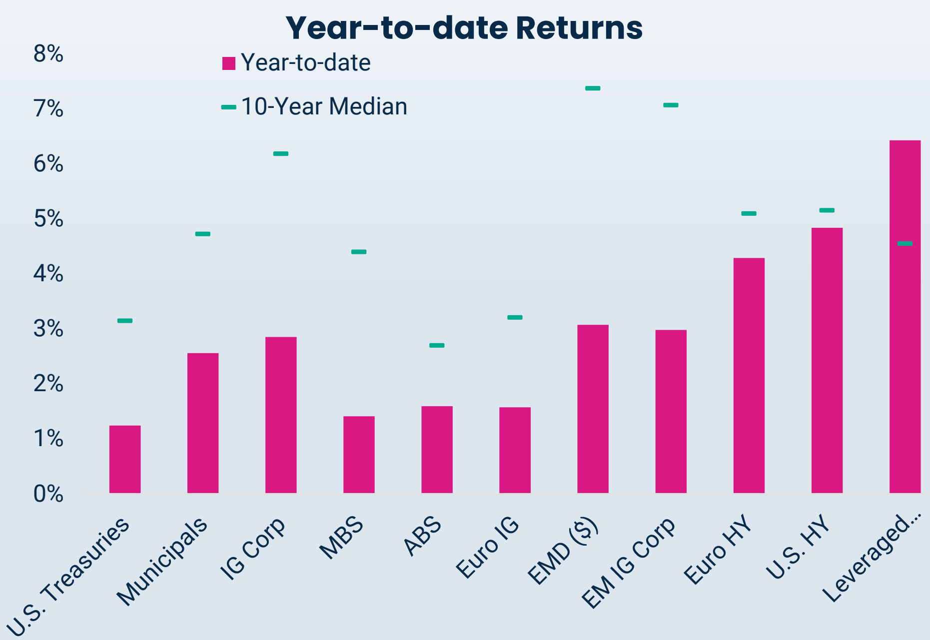


Fixed Income & Credit

Credit delivered significant excess returns in H1 '23 as risk assets recovered from 2022's correction. The good news is disinflation continues with shelter prices beginning to incorporate low rents of the past and goods prices falling as we work through excess inventory on the other side of the pandemic shortages. The bad news is services inflation remains sticky due to elevated wage increases and a strong labor market. As a result, we see elevated risks to credit as markets continue to be too optimistic about the timing and likelihood of Fed rate cuts.

One question challenging our negative outlook is: "Are we seeing evidence in favor of structurally higher interest rates because of higher productivity this cycle?" Faster trend growth could explain a resilient economy despite high interest rates, and elevated valuations akin to what we saw in the mid-90's with the IT boom. While there's optimism that AI may be a similar catalyst, we do not see much evidence of a productivity boom so far. Markets are forward-looking and may prove us naïve, but we continue to think that this is more likely an extended business cycle rather than the beginning of a secular shift.

The risks in the banking sector and commercial real estate still linger under the surface. Despite being early, we are not abandoning our call that a recession can be highly likely over a 6–12-month horizon. We retain our overweight to fixed income and high-quality exposures as return prospects far surpass equities, but remain neutral duration overall.



For Illustrative purposes only. This information should not be considered as a recommendation to purchase or sell a particular security. Sources: Harbor MAST, Bloomberg L.P., Data as of June 30, 2023

Tactical Asset Allocation & Market Themes

Balanced Model	Chg	Underweight			Neutral	Overweight			Rationale
Portfolio Risk (Beta, Relative Vol)			●						Maintaining an underweight risk posture due to macroeconomic uncertainty
Equities (ACWI)			●						Underweight equities where valuations are stretched relative to risk free rates
U.S. Large Cap				●					USLC equities are expensive at 19x earnings with downside risk to earnings estimates
US SMID Cap				●					Relative valuations appear attractive but maintain underweight due to unfavorable risk environment
Western Europe	↓			●					Cyclical value exposure which should underperform as economic momentum slows
Japan	↑					●			Attractive valuation, favorable inflationary backdrop, and improving corporate governance
Emerging Markets	↓				●				Valuations appear attractive, but the re-opening tailwind has stalled
Equity Styles[1]									
Value				●					Fed near the end of their hiking cycle which should lead to below trend growth
Growth						●			Beneficiary of peak rates and peak inflation. Fundamentals are improving with positive estimate revisions
Quality						●			Maintain positive bias towards quality favoring companies that can maintain pricing power
Low Vol	↓				●				Neutral Low Vol as economic growth has proven to be more resilient
Fixed Income (Bloomberg Agg)							●		Fixed income offers attractive real yields adjusting for the business cycle and equity valuations
Treasury				●					Treasury underweight reflects the potentially better opportunities in IG and MBS for quality exposures
IG						●			While rich to MBS, IG credit risk more conservatively priced than HY or equity markets
MBS							●		MBS continues to offer significant relative value as economy slows and rate vol. normalizes
Credit (Non Agg)			●						Our cautious macro outlook leaves us underweight lower-rated credit exposures
HY Bonds			●						HY valuations either assume no credit cycle or a historically low risk premia, we are more pessimistic
EMD	↓				●				Trimmed our overweight to local currency EM debt as rate differentials narrow
Loans									Similar to HY, implied default rates in the loan market run counter to our macroeconomic view
Currency (USD)					●				Recent dollar weakness is more a valuation story than a change in the U.S. economy's relative strength
Vs. Developed					●				Signs of economic weakness abroad will likely slow dollar's normalization
Vs. Emerging					●				Proactive policy supports currencies, however, macro slowdown will likely weigh on EM
Commodities[2]						●			While secular underinvestment is a tailwind for commodities, we remain cautious as growth slows
Precious Metals						●			Gold provides diversification should a significant recession occur
Industrial Metals, Agg, Energy					●				The energy transition requires more investment, but macro concerns dominate currently
Cash (T-Bills)						●			Cash offers significant yield potential amidst elevated macroeconomic uncertainty

[1] Overall "equity styles" cannot be o/w or u/w, only individual equity styles

[2] Commodities can only be o/w or neutral given a 0% weight in the Strategic Asset Allocation (SAA)

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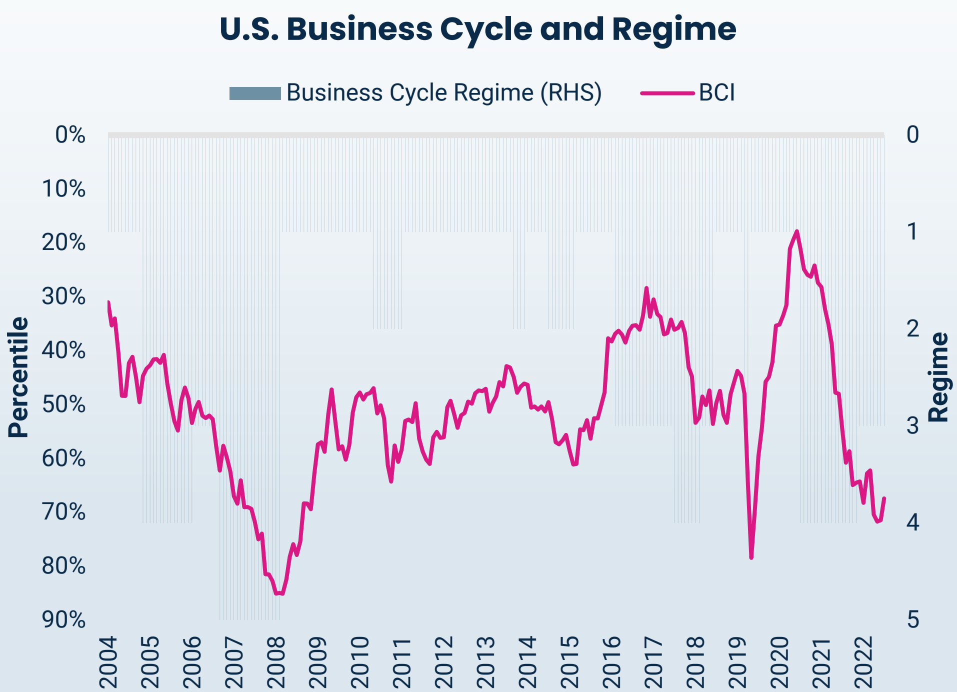
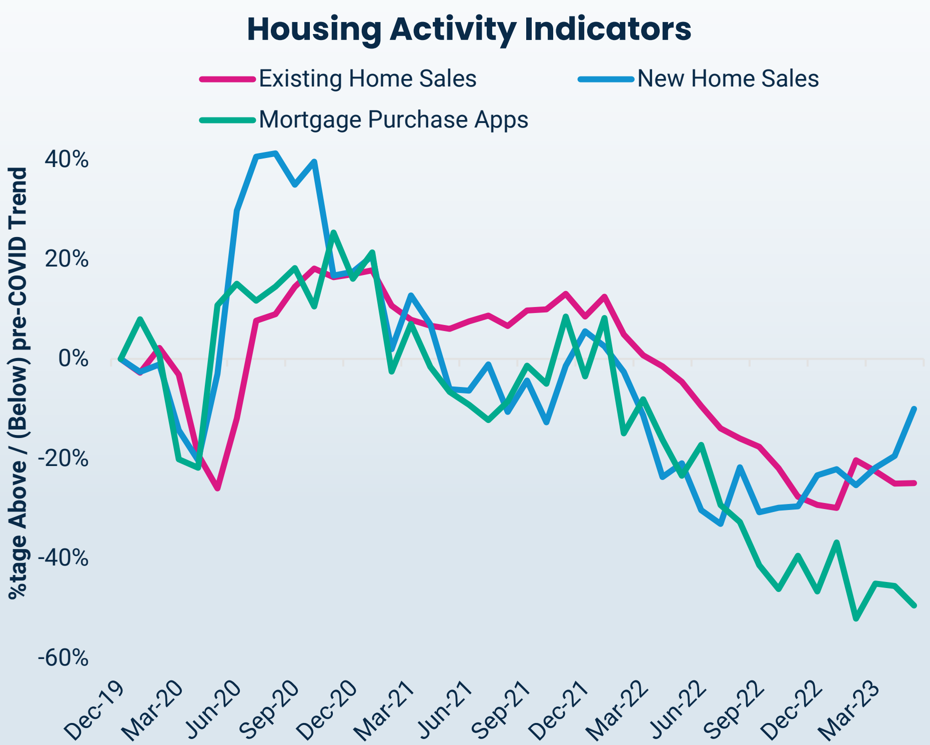
Source: Harbor MAST; Positioning as of June 30, 2023

Asset Allocation Views: Growth Conditions

- Global growth remains below trend with our Business Cycle Regime model suggesting the U.S. economy is in a "Late-Cycle environment" though it remains a two-track economy with a strong services sector offsetting an ongoing manufacturing recession.
- The housing market has shown resilience despite low affordability driven by strong secular demand and limited inventory. New home sales are outpacing existing home sales, indicating households' reluctance to relocate due to elevated mortgage rates.
- Consumer spending surpassed expectations in the first half of 2023, but has moderated from 2021/2022 levels, aligning with central banks' efforts to slow aggregate demand. Potential headwinds to spending include the expiration of student loan forgiveness, tighter credit standards, a weaker labor market, and a trickling up of excess savings.

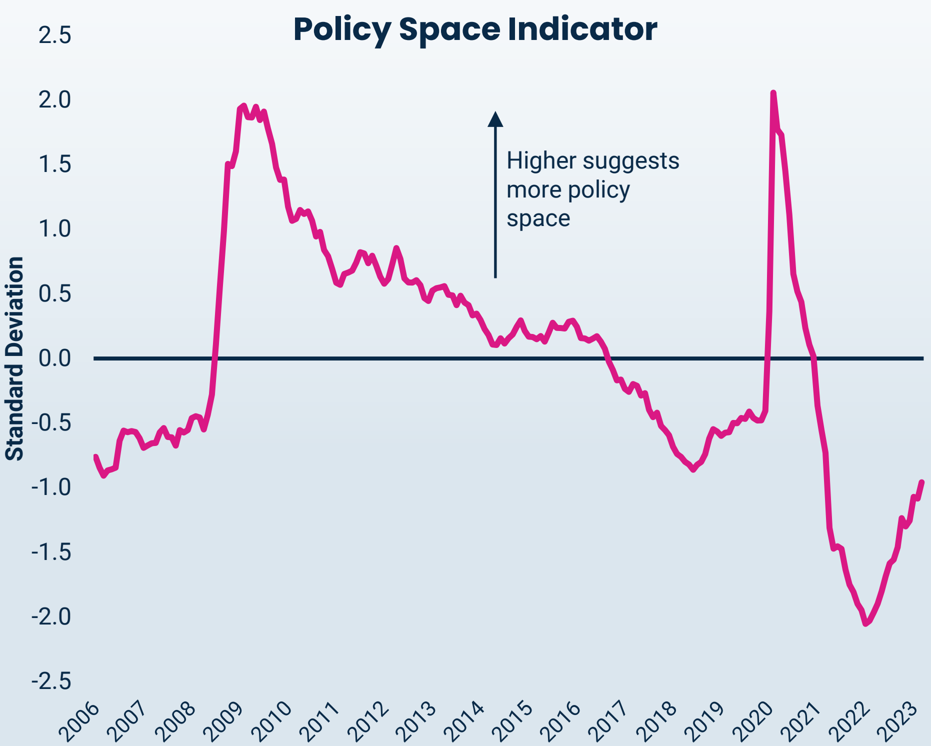


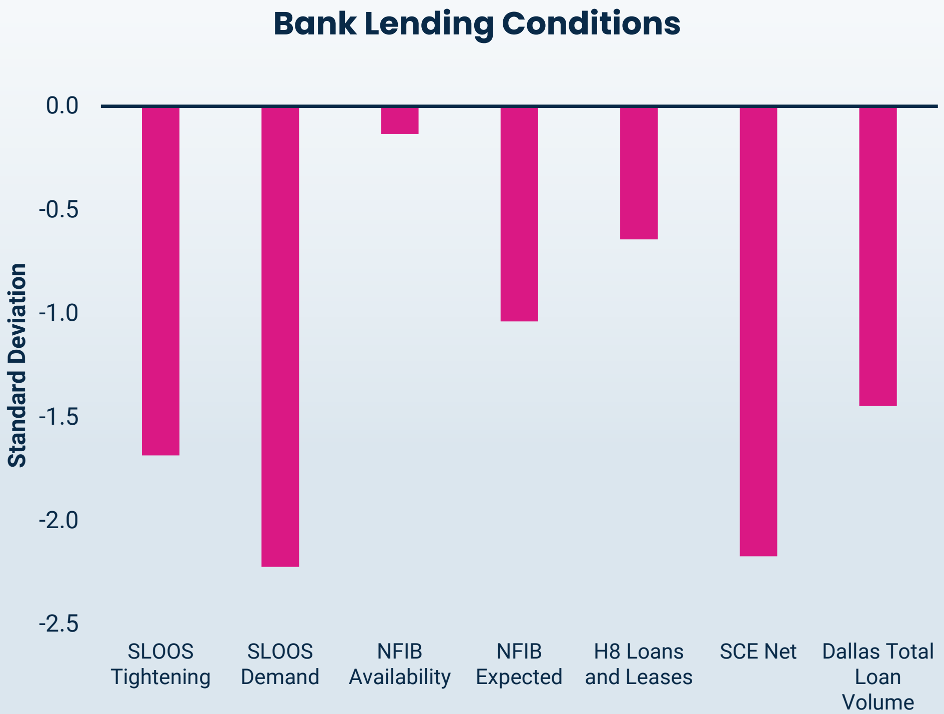
Note: Business cycle regimes are as follows: 1) Early Cycle 2) Mid Cycle 3) Late cycle 4) Late Cycle Risk Averse 5) Contraction



Asset Allocation Views: Liquidity Conditions

- Despite steady progress, the Fed's focus remains on inflation. A tight labor market and firm wage increases precludes rate cuts for the foreseeable future.
- The economy's ability to withstand a 5% Fed Funds rate stems from increases in household wealth following the pandemic and the terming out of debt at historically low interest rates by corporates and households. While credit conditions have tightened affecting interest-sensitive spending like homes and capex, wealth buffers and strong corporate profits reduced the economy's reliance on credit growth.
- The expiration of the student loan forgiveness this summer will negatively affect consumer spending, and the rise in non-mortgage delinquencies suggests increasing vulnerability to tighter credit. Alongside less consumer momentum, lower nominal growth and higher real wages are contributing to declining corporate profits.

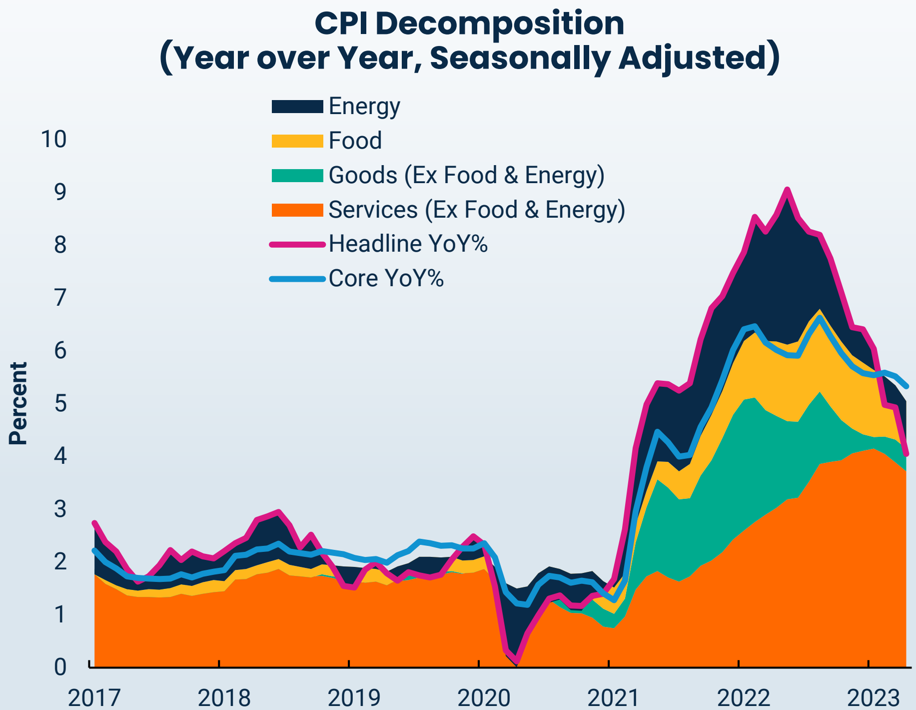


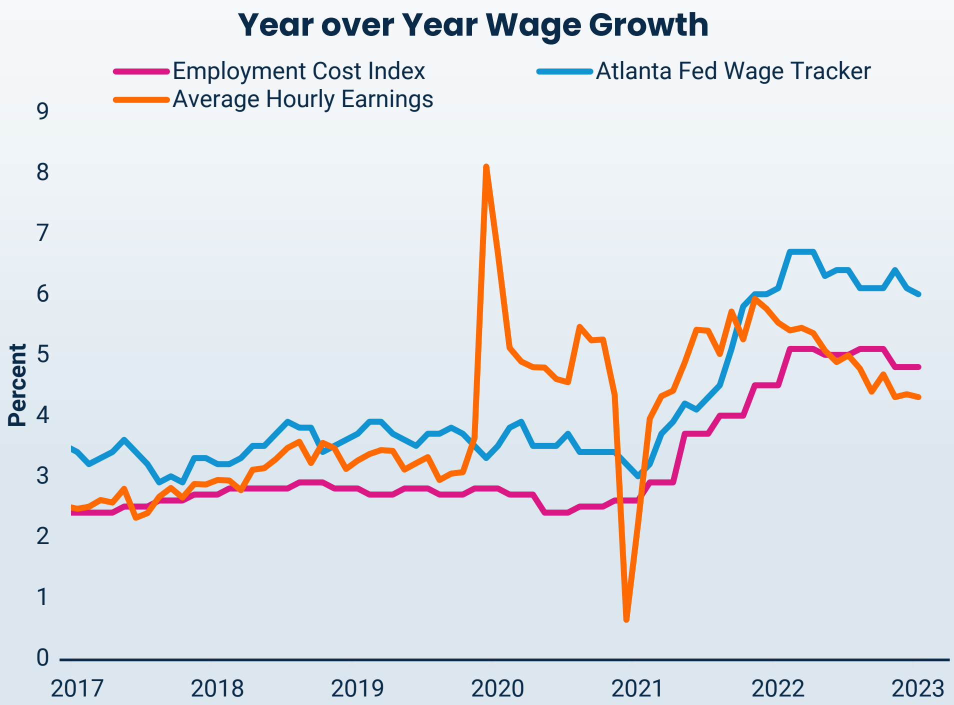


For more information about Harbor's indicators and models, please see the end of this document. For Illustrative purposes only. This information should not be considered as a recommendation to purchase or sell a particular security. Sources: Harbor MAST, Bloomberg L.P., Federal Reserve Senior Loan Officer Survey, NFIB, Federal Reserve Bank of New York, Federal Reserve Bank of Dallas; Data as of June 2023

Asset Allocation Views: Inflation Conditions

- Since peaking last summer, inflation has declined materially driven by lower energy and food prices, improved supply chain conditions, and decreased demand for goods.
- Shelter inflation declined last year and its lagged passthrough will likely continue to contribute to the moderation in inflation for several months. Leading indicators also suggest further disinflation in goods.
- Despite the progress, measures of persistent inflation remain elevated. Wages are decreasing; however, they have not declined sufficiently as workers make up for real wage losses. The Federal Reserve must see further progress on wages and the labor market before contemplating interest rate cuts.





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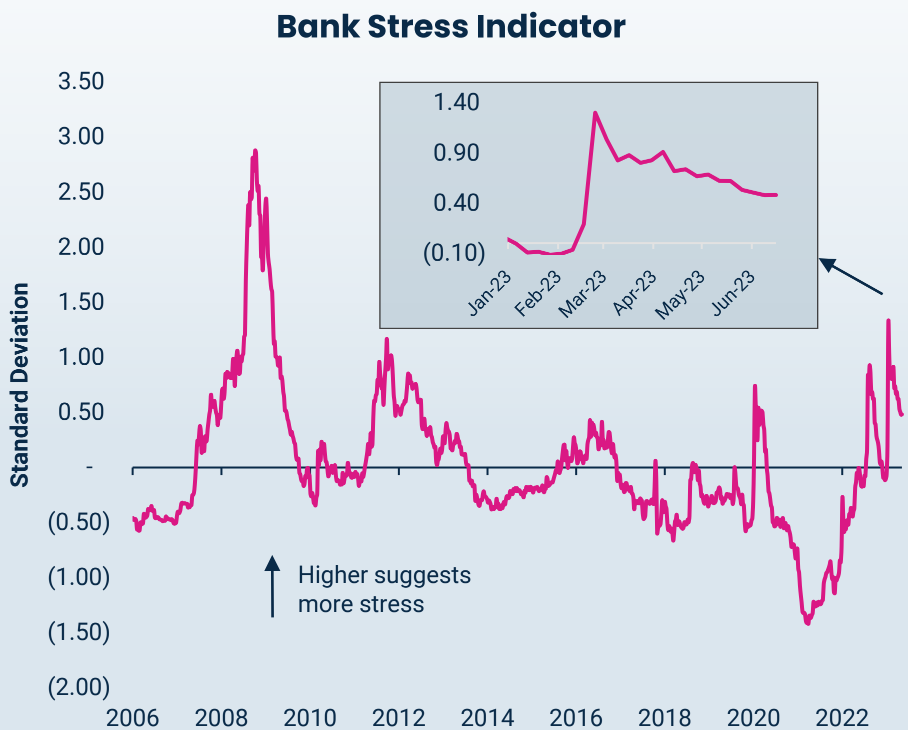
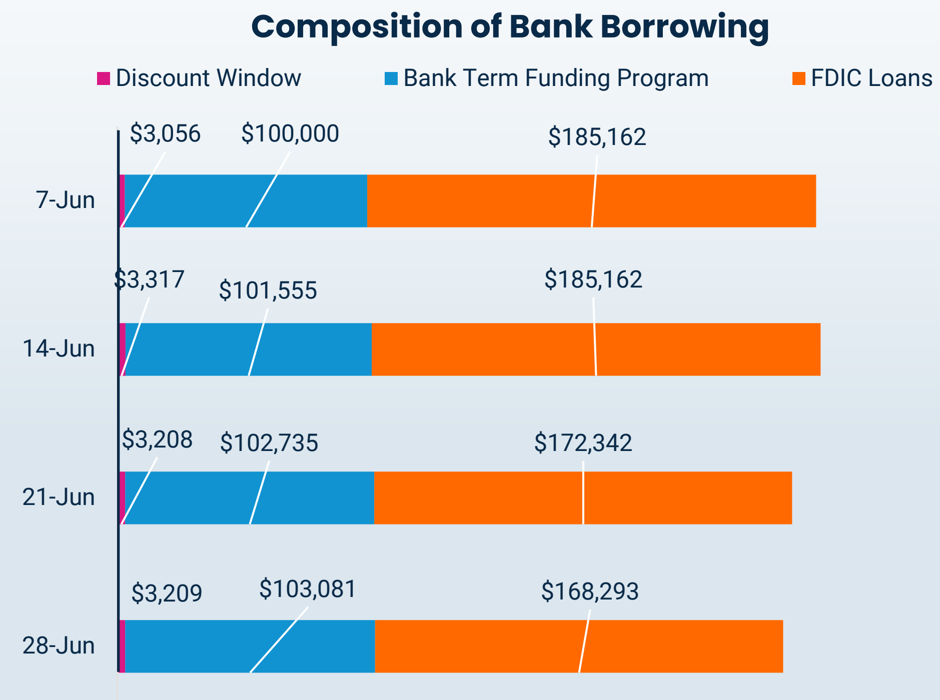
Asset Allocation Views:
Regional Banking Crisis Forgotten not Gone

- Despite the alleviation of regional banking concerns, the issues that resulted in bank failures linger as aggregate deposit balances shrink and losses on held-to-maturity assets remain.
- Adding to the franchise concerns, high interest rates put pressure on net interest margins (NIMs) impacting the profitability of regional banks.
- Encouragingly, bank funding strains are normalizing. Discount window usage and FHLB issuance to fund advances has declined, meanwhile usage at the Bank Term Funding Program continues to increase. These loans are termed out for 1-year, so we expect usage to hover around $100 billion.





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Important Information

The views expressed herein are those of the Harbor Multi Asset Solutions Team at the time the comments were made. They may not be reflective of their current opinions, are subject to change without prior notice, and should not be considered investment advice. These views are not necessarily those of the Harbor Investment Team and should not be construed as such. The information provided is for informational purposes only.

Past performance is no guarantee of future results.

The information shown relates to the past. Past performance is not a guide to the future.

All investments are subject to market risk, including the possible loss of principal. Stock prices can fall because of weakness in the broad market, a particular industry, or specific holdings. Bonds may decline in response to rising interest rates, a credit rating downgrade or failure of the issue to make timely payments of interest or principal. International investments can be riskier than U.S. investments due to the adverse affects of currency exchange rates, differences in market structure and liquidity, as well as specific country, regional, and economic developments. These risks are generally greater for investments in emerging markets.

Fixed income securities fluctuate in price in response to various factors, including changes in interest rates, changes in market conditions and issuer-specific events, and the value of an investment may go down. This means potential to lose money.

As interest rates rise, the values of fixed income securities are likely to decrease and reduce the value of a portfolio. Securities with longer durations tend to be more sensitive to changes in interest rates and are usually more volatile than securities with shorter durations. Interest rates in the U.S. are near historic lows, which may increase exposure to risks associated with rising rates. Additionally, rising interest rates may lead to increased redemptions, increased volatility and decreased liquidity in the fixed income markets.

Indices listed are unmanaged, and unless otherwise noted, do not reflect fees and expenses and are not available for direct investment.

Investing entails risks and there can be no assurance that any investment will achieve profits or avoid incurring losses.

Important Information About Harbor's Models & Indicators

Certain forecasts, estimates and returns are based on hypothetical assumptions. It is for informational and illustrative purposes only. This material does not constitute investment advice and should not be viewed as a current or past recommendation or a solicitation of an offer to buy or sell any securities or to adopt any investment strategy. The forecasts, estimates and return presented do not represent the results that any particular investor may actually attain. Actual performance results will differ, and may differ substantially, from the hypothetical information provided. There is no guarantee that any of the forecasts and projections will come to pass.

Performance indices on slide 3 are as follows: Treasuries, the Bloomberg U.S. Treasury Index; Municipals, the Bloomberg U.S. Municipals Index; IG Corp, the Bloomberg U.S. Corporate Bond Index; MBS, the Bloomberg U.S. Mortgage-backed Securities Index; ABS, the Bloomberg U.S. Agg ABS Index; Euro IG, the Bloomberg Euro-Aggregate Corporates Index; EMD ($), the Bloomberg Emerging Markets Hard Currency Aggregate Index; EM IG Corp, the Bloomberg Emerging Markets Investment Grade Index; Euro HY, the Bloomberg Pan-European High Yield Index; US HY, the Bloomberg U.S. Corporate High Yield Bond Index; Leveraged Loans, the Morningstar LSTA U.S. Leveraged Loan Index. 10-year median refers to the median annual total return for the respective index over the past 10 years.

The Harbor Liquidity Cycle Indicator is a proprietary Indicator used by the Multi-Asset Solutions Team to measure the prevailing conditions that we believe drive the Central Bank's reaction function. The Indicator utilizes a set of indicators that are standardized and then aggregated into a singular composite score. The input variables measure growth momentum, inflation, normalized equity market valuations, and levels of leverage across the private sector and consumer. Liquidity Cycle Indicator Sources: Harbor MAST, Bloomberg, Institute of Supply Management, Federal Reserve, Bureau of Labor Statistics. The Liquidity Cycle Indicator assumes that the historical relationship between the selected indicators and future liquidity conditions remain stable. A limiting factor for our modeling approach is if these relationships change, our models may be less accurate in terms of measuring the conditions that drive liquidity.

Harbor uses Fundamental Recession Forecasts that are generated using a set of long lead economic indicators and a logit regression to determine the probability of a NBER defined recession in the forward six and 12 months. When the identified threshold has been breached historically, that generally corresponds with a recession in the forecast period. The Market Implied Recession Forecasts use equity market internals and a logit regression to determine the probability markets are pricing of a NBER defined recession in the forward six and 12 months. Recession Forecast: Harbor MAST, Bloomberg, Factset. The Fundamental and Market Implied Recession models assume that the historical relationship between the selected indicators and future recession probability remains stable. A limiting factor for our modeling approach is if these relationships change, our models may be less accurate in terms of predicting a future recession.

The Harbor Business Cycle Indicator is a proprietary Indicator used by the Multi-Asset Solutions Team to measure growth momentum by country/region. The Indicator utilizes a set of leading United States economic indicators that are standardized and then aggregated into a singular composite score. The team produces a Business Cycle Regime measurement using the business cycle indicator, liquidity cycle indicator, fundamental recession probability model, and gauges of market internals. Harbor MAST BCI Sources: Business Cycle Indicator and Regime Sources: Bloomberg, Factset. The Business Cycle Indicator and Rate of Change Models assume that the historical relationship between the selected leading indicators and future economic growth remains stable. A limiting factor for our modeling approach is if these relationships change, our models may be less accurate in terms of measuring growth momentum.

The Policy Space Indicator is a composite indicator of inflation and labor market data that is z-scored and averaged to indicate the amount of policy optionality for the fed relative to their dual mandate of full employment and stable prices.

SLOOS tightening and demand are the Fed's Senior Loan Officer Survey net % of banks tightening lending standards and % of banks seeing increased demand for credit, respectively; NFIB availability and expected are the NFIB's availability of loans and expected credit conditions, respectively; H8 data is the 6-month % change in domestically chartered banks loans and leases; SCE is the Federal Reserve Bank of New York's SCE year ahead change in credit availability; Dallas total loan volume is from the Federal Reserve Bank of Dallas' Banking Conditions Survey

The results of Harbor's Bank Stress Indicator (the "Indicator") are for illustrative and educational purposes only and are not intended to be relied upon as a forecast, research, investment advice, and is not a recommendation, offer, or solicitation to buy or sell any securities or adopt any investment strategy. The Indicator seeks to measure the overall stress in the US and European banking system. The Indicator and the underlying data of the Indicator may not fully represent all aspects of such system and are not a complete analysis of such system. There may be other data and/or weightings of such data that more accurately represent such system.

The Bank Stress indicator is intended to provide a singular reading of stress in the banking system by measuring 13 different variables that the Harbor Multi Asset Team views as informative to this end. Each of the 13 variables fall into one of three categories: US Bank Stress (measuring stress with US Banks), International Bank Stress (measuring stress with European Banks), or Growth Activity (measuring economic growth).

Once all 13 variables have been selected and assigned to one of the three categories, each measure is then standardized (Z-scored vs. history) to allow for an apples-to-apples comparison between the variables. A positive/higher standardized score suggests elevated stress for each variable and a negative/lower standardized score suggests low levels of stress. The score for each standardized variable is then averaged within each of the three categories producing three category scores. The three category scores are then averaged to produce an overall Bank Stress Indicator score. This process is repeated each month going back to 2004 to produce a time series of the Bank Stress Indicator score.