SECOND QUARTER 2023

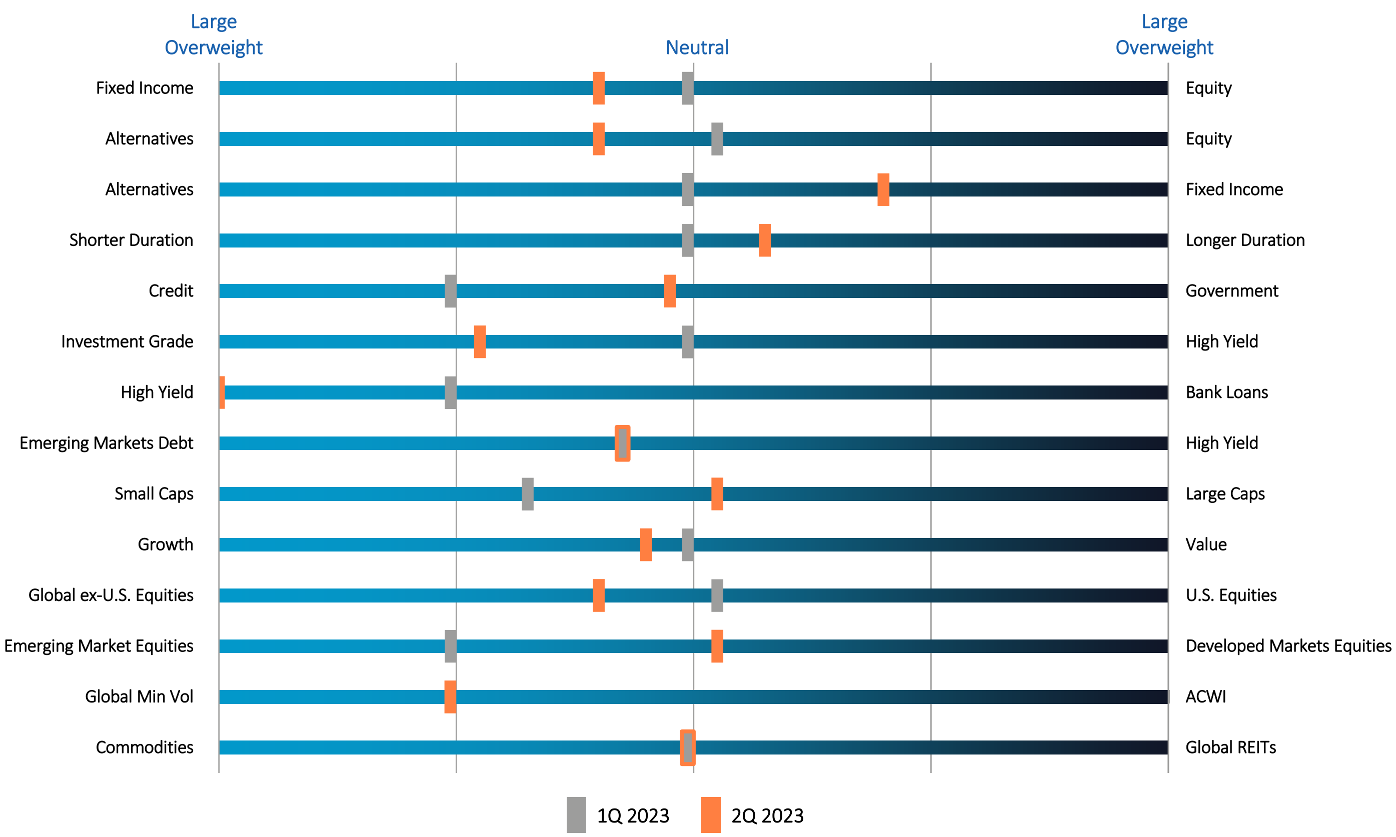
Investment Strategy Update

In this quarter's Investment Strategy Update, we discuss the challenges to the current economic environment and the associated uncertainty on the path of monetary policy. It is unclear as to whether the greater risk that the U.S. economy faces is a pending credit crunch or the risk of inflation becoming further entrenched, but we expect this picture to become increasingly clear over the course of 2023.

The implications of this uncertainty warrant heightened awareness and the judicious management of absolute and active risks, which result in the following implications to client portfolios:

- Preference for fixed income relative to alternatives, given the improvement in fixed income valuations
- Neutralization of our overweight to corporate credit versus government bonds, with a renewed preference for investment-grade credit relative to high yield
- Significant underweight to bank loans relative to high yield, driven by more attractive valuations and structural headwinds for bank loans on a forward-looking basis
- Neutralization of our active overweight exposures to emerging markets and small caps given signs of deterioration in the financial system and the potential implications on risk assets
- Positioning overweight to low volatility equities in an effort to facilitate a more defensive bias in our equity exposure without explicitly underweighting equities

Wilshire Investment Strategy Views

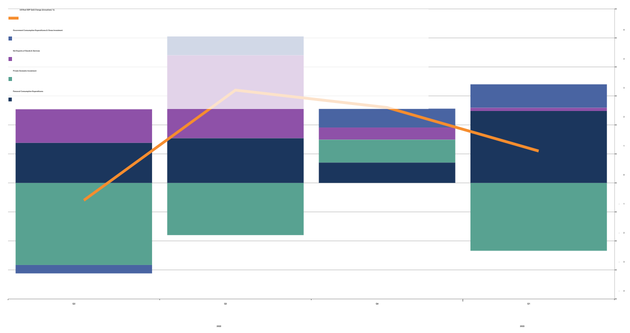


Asset Class	Change	View	Summary Of Rationale
Fixed Income vs. Equity	≈	Neutral	We maintain a bias in our fundamental view towards fixed income, as valuations remain more attractive in fixed income relative to equities, however given the technical strength and generally light investor positioning in equities, and economic and policy uncertainty, we believe that maintaining a neutral posture is prudent.
Alternatives vs. Equity	≈	Neutral	We maintain a bias in our fundamental view towards alternatives, as equities remain richly valued relative to history; however given the technical strength and generally light investor positioning in equities, we believe that maintaining a neutral posture is prudent.
Alternatives vs. Fixed Income	↓	Underweight	Given the historical price correction in fixed income markets, the rapid increase in real yields, and wider credit spreads, we recommend underweighting alternatives relative to fixed income.
Duration vs. Bloomberg Barclays Capital Aggregate Bond Index	≈	Neutral	While long-term U.S. real rates now offer relatively attractive value to investors looking for yield, which may provide more diversification benefits relative to one year ago, we are maintaining a neutral position in duration given higher short-term yields.
Credit vs. Government	↓	Neutral	We have seen a very recent widening of credit spreads over the past month, which have resulted in attractive return opportunities in credit, however we believe that maintaining a neutral posture is prudent given heightened volatility in both interest rates and credit spreads.
Investment Grade vs. High Yield	↑	Overweight	We see an attractive risk-adjusted valuation opportunity between investment grade and high yield and believe that maintaining a bias towards quality is important in the current market environment.
High Yield vs. Bank Loans	↑	Large Overweight	Fundamentals for high yield remain healthy with valuations becoming increasingly attractive relative to bank loans. Spreads and absolute yields of high yield bonds are beginning to attract demand from investors looking for yield.
EMD vs. High Yield	≈	Neutral	We do not see an attractive risk-adjusted return difference in EMD versus high yield.
Large-Cap vs. Small-Cap Equities	↑	Neutral	Valuations of small caps look compelling relative to large caps, however given the growing signs of stress in the financial system, we are concerned about potential headwinds for small caps and also believe that increasing quality relative to our prior positioning is prudent. Therefore, we are moving from an underweight to large caps to a neutral posture.
Growth vs. Value Equities	≈	Neutral	While value equities offer a reasonable valuation opportunity relative to growth equities, the uncertain economic outlook warrants a balanced posture of secular growers and cyclicals.
Global ex-U.S. vs. U.S. Equities	≈	Neutral	The geopolitical conflict and the continued uncertainty it creates for the European economy and equity markets results in enough uncertainty for us to remain neutral despite more attractive valuations in global ex-U.S. equities.
Emerging Markets vs. Developed Markets	↓	Neutral	While developed markets need to play catch-up which is likely to lead to downward pressure on valuation multiples, we are concerned with the growing geopolitical risk in Asia, and we also believe that the momentum associated with the China reopening may already be priced in. Therefore, we are moving to a neutral posture.
Global Min Vol vs. ACWI	↑	Overweight	Our fundamental view is that equity valuations are expensive relative to history and we recognize the growing signs of financial stress in the banking system, and the risk of persistently tight monetary policy. At the same time, we recognize the technical strength and generally light investor positioning in equities. Therefore, we believe that it's prudent to only modestly decrease our equity beta by favoring global low volatility securities.
Commodities vs. Global REITS	≈	Neutral	Despite the recent correction in commodities, the challenging technical environment and higher volatility of this relative pair warrants continued neutral positioning.

Positioning and Rationale

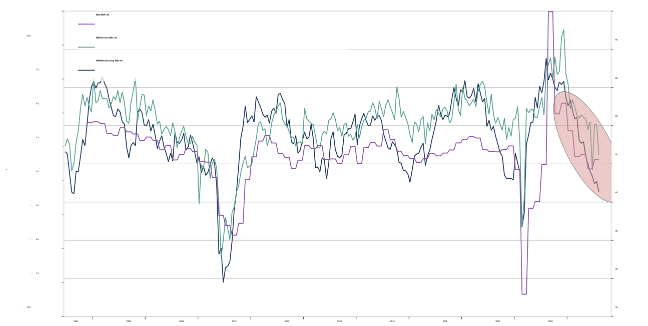
Global growth outlook: Growth likely to continue slowing, as consumption slows and credit conditions tighten on regional bank stress.

Exhibit 1: Personal consumption fuels positive U.S. real GDP growth despite declining capex



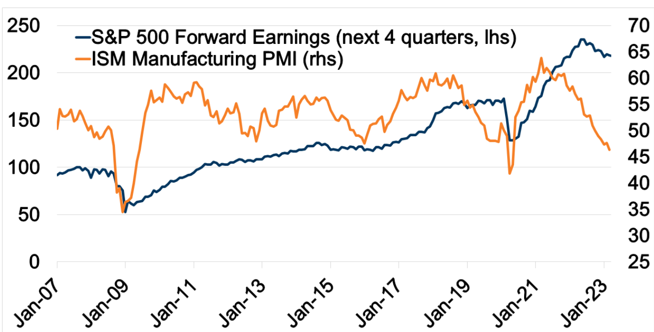
Source: BEA, Macrobond.

Exhibit 2: ISM PMI surveys indicate declining negative economic sentiment



Source: ISM, BEA, Macrobond.

Exhibit 3: ISM manufacturing levels below 50 have historically coincided with earnings recessions



Source: ISM, Bloomberg.

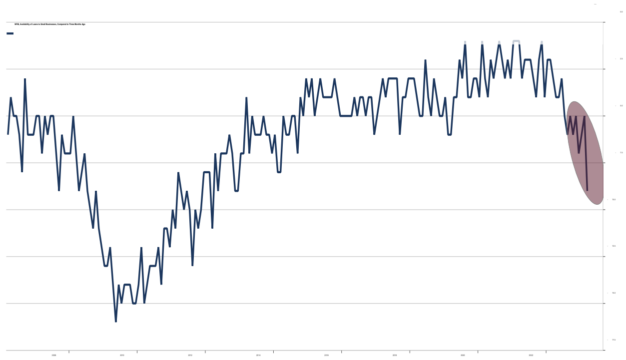
Global economic growth forecasts continued to moderate with a growing consensus of investors expecting that the United States will enter a recession in 2023. Although economic growth slowed to an annualized rate of 1.1% in the first quarter, the U.S. economy was somewhat buoyed by a very strong labor market and resilient personal consumption, as households continue to have the capacity to borrow more to support spending. The increase in personal consumption reflected spending in goods (motor vehicles and parts) and services (health care and food services and accomodations) in January, however consumption slowed materially in February and March. The decline in private domestic investment reflected a drop in private inventory investment and new single-family home construction. It's important to note that private investment has declined in three of the last four quarters, reflecting a more negative outlook on behalf of corporations relative to the spending habits of households, which appear to have deteriorated later in the quarter. (Exhibit 1)

The ISM PMI surveys reflect the growing negative sentiment in the services and manufacturing sectors, the combination of which has historically tracked changes in annual GDP growth. (Exhibit 2) The ISM Manufacturing PMI currently sits at 46 – trending lower for two years. History shows that readings below 50, indicative of a contraction, have coincided with declining earnings for U.S. companies. (Exhibit 3)

These measures of corporate sentiment in combination with the recent challenges and failures in the U.S. regional banking system, are indications that tighter monetary policy and financial conditions are beginning to weigh on corporations and the financial sector, which is likely to cause more material tightening of credit conditions and weigh on economic growth.

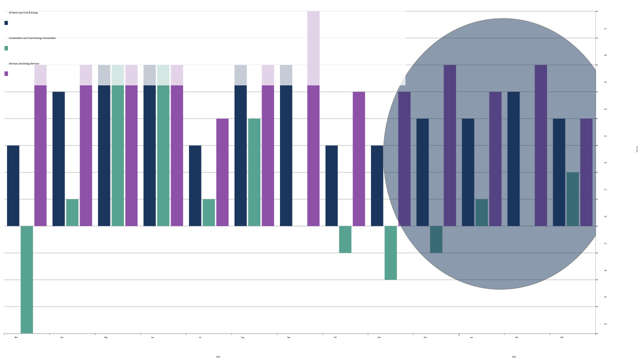
Uncertain path of monetary policy requires balancing the concern of inflation getting entrenched against growing risk of a credit crunch.

Exhibit 4: Declining availability of loans to small businesses is an indication of tightening conditions



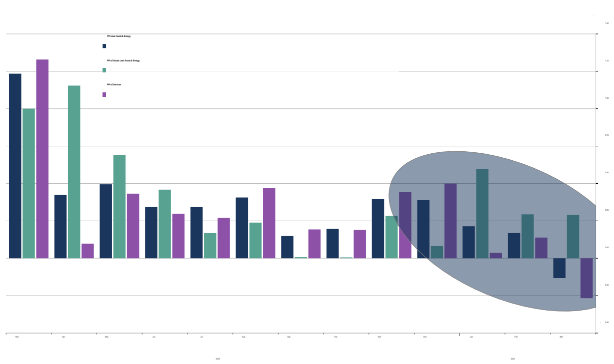
Source: NFIB, Macrobond.

Exhibit 5: Core consumer prices remain stubbornly elevated



Source: BLS, Macrobond.

Exhibit 6: Producer prices exhibiting disinflation over the past several months



Source: BLS, Macrobond.

One indication of tightening credit conditions following several regional bank failures in mid-March can be observed in the NFIB's most recent small business survey, which showed a material decline in the availability of loans to small businesses compared to three months ago. (Exhibit 4). Regional banks represent a significant source of funding for the commercial real estate industry, which is facing a wave of refinancing over the coming years, and small businesses also rely heavily on regional banks for financing, which is likely to become more challenging as the Federal Reserve (Fed) continues to raise interest rates, tightening credit conditions and putting increasing pressure on the U.S. financial system.

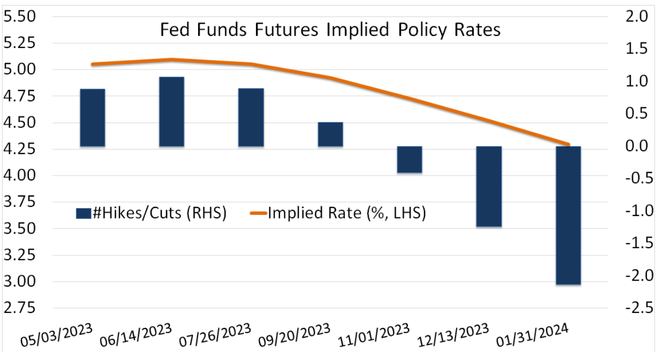
The recent signs of stress in the financial system have caused growing uncertainty regarding the correct path forward for interest rate policy. It is unclear as to whether the greater risk that the U.S. economy faces is a pending credit crunch or the risk of inflation becoming further entrenched. Although headline inflation data indicates a disinflationary trend, core consumer prices have remained stubbornly elevated over the past four months at a persistent average MoM rate of 0.4%, or nearly 5% annualized. (Exhibit 5) Fortunately, the most recent report on services inflation showed some potential indications that owner-equivalent rents are starting to moderate.

Despite elevated readings in core inflation, core producer prices (PPI) have been showing signs of disinflation, with the most recent measure showing an actual decline in core PPI, led by a sharp fall in the prices of services. Supply chain issues have largely been resolved, which is likely contributing to the decline in PPI. (Exhibit 6)

Producer prices have historically been a reasonable indicator of the direction in future consumer prices, however we have yet to see this softening flow through to CPI. The Fed faces the most challenging decisionmaking environment that we have seen in decades, which also leaves investors with heightened uncertainty.

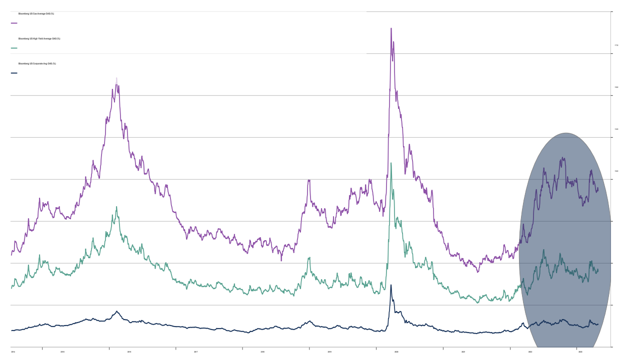
Fixed income: Uncertainty has led to unusually elevated levels of interest rate volatility, and while spreads introduce return opportunities, favoring quality is prudent.

Exhibit 7: Market implied policy rate contrasts with FOMC median projection of 5.12% for the end of 2023



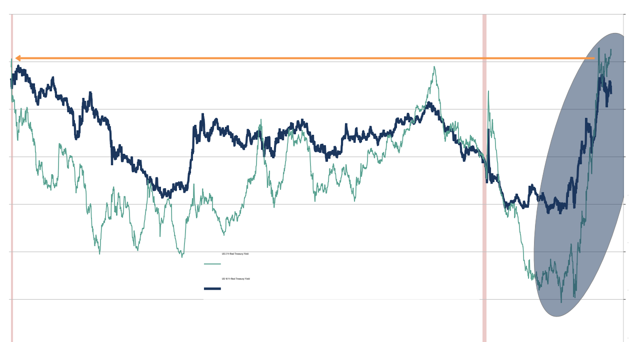
Source: Bloomberg.

Exhibit 8: Credit spreads indicate both opportunity and elevated risk



Source: Macrobond and Bloomberg.

Exhibit 9: U.S. Treasury real yields represent attractive risk/reward, particularly in short-term rates



Source: Macrobond & Bloomberg.

Investor uncertainty can often lead to elevated volatility and irrational pricing, both of which occurred in fixed income markets over the past several months. Not only did we witness interest rate volatility not seen since the global financial crisis, but bond markets are also exhibiting a material level of disagreement with the FOMC median dot plot, which projects a Fed Funds rate of between 5.0% - 5.25% at the end of 2023. Fed Funds Futures on the other hand, imply a policy rate of 4.5% at the end of 2023, in stark contrast with the Fed's repeated communication that it has no intention of cutting rates this year. (Exhibit 7)

Economic uncertainty, tight financial conditions, and growing indications of financial stress are supporting elevated credit spreads, an indication of both higher risk and higher return potential. (Exhibit 8) We have historically viewed elevated credit spreads from an opportunistic lens, however given the growing uncertainty surrounding the economy, monetary policy, and the fragile geopolitical backdrop we believe that positioning portfolios with a bias towards high-quality investmentgrade versus high-yield credit is prudent.

Real yields have also increased materially since late 2021, and are now at levels not seen since 2009. As a result, U.S. Treasury bonds now represent an attractive risk/reward opportunity, particularly in short-term bonds. (Exhibit 9) Consistent with our current preference for quality and in recognition of the increasingly attractive risk-adjusted return of government bonds, we have moved from overweight to neutral in credit versus government bonds. While risk-adjusted returns are more attractive in shorter-term bonds, we are maintaining a neutral duration posture versus our client policy benchmarks, as we expect duration to be a reasonably effective ballast to equity risk in the event of a hard landing scenario. While this is not our base case, we believe that planning for such an outcome is prudent.

Equities: Valuations are expensive when adjusting for interest rates, and while cross-sectional opportunities exist, uncertainty favors lower active risk.

Exhibit 10: Valuation multiples across global equity markets appear attractive on the surface

Shifts in Regional 12m Forward PE Ratios

	Latest	Dec 2022	Dec 2021	*% Chg from Dec 2021*
UK	**10.8**	10.2	13.5	*-20.3*
Emerging	**12.5**	14.0	15.5	*-19.5*
China A	**10.8**	10.3	13.2	*-18.0*
US	**18.4**	17.1	22.5	*-18.0*
World ex US	**12.7**	12.6	14.9	*-14.6*
Japan	**13.0**	12.4	14.4	*-9.8*
Asia Pac ex Japan	**14.1**	13.4	15.5	*-9.1*
Europe ex UK	**13.7**	12.7	15.1	*-9.1*

Source: Wilshire, FactSet, and Refinitiv.

Exhibit 11: Adjusting for interest rates, equities are 15% - 20% above long-term equilibrium valuations

US 10 Year Treasury Yield (%)

US Equity 2023 EPS ($)	2.00	2.25	2.50	2.75	3.00	3.25	3.50	3.75	4.00	4.25	4.50
250	20%	15%	10%	5%	0%	-4%	-7%	-11%	-14%	-17%	-20%
245	18%	12%	7%	3%	-2%	-6%	-9%	-13%	-16%	-19%	-21%
240	16%	10%	5%	1%	-4%	-7%	-11%	-14%	-17%	-20%	-23%
235	13%	8%	3%	-2%	-6%	-9%	-13%	-16%	-19%	-22%	-25%
230	11%	6%	1%	-4%	-8%	-11%	-15%	-18%	-21%	-24%	-26%
225	8%	3%	-1%	-6%	-10%	-13%	-17%	-20%	-23%	-25%	-28%
220	6%	1%	-4%	-8%	-12%	-15%	-18%	-21%	-24%	-27%	-29%
215	4%	-1%	-6%	-10%	-14%	-17%	-20%	-23%	-26%	-29%	-31%
210	1%	-4%	-8%	-12%	-16%	-19%	-22%	-25%	-28%	-30%	-33%
205	-1%	-6%	-10%	-14%	-18%	-21%	-24%	-27%	-29%	-32%	-34%
200	-4%	-8%	-12%	-16%	-20%	-23%	-26%	-29%	-31%	-34%	-36%
195	-6%	-11%	-15%	-18%	-22%	-25%	-28%	-30%	-33%	-35%	-37%
190	-8%	-13%	-17%	-20%	-24%	-27%	-30%	-32%	-35%	-37%	-39%
185	-11%	-15%	-19%	-22%	-26%	-29%	-31%	-34%	-36%	-39%	-41%
180	-13%	-17%	-21%	-25%	-28%	-31%	-33%	-36%	-38%	-40%	-42%

Source: Bloomberg.

Equity markets have continued to move higher since the lows of fourth quarter 2022, and in the face of declining earnings expectations, which have resulted in higher valuations since the start of the year. However, equities sit at meaningfully lower multiples relative to December 2021, particularly in the U.S., U.K. and emerging markets. (Exhibit 10)

While a U.S. equity forward P/E of 18x does not appear very expensive on the surface, investors should adjust valuations for changes in interest rates. Exhibit 11 shows a matrix of U.S. Equity 2023 EPS levels versus the U.S. 10-year Treasury yield, with each cell indicating the price movement needed to reach long-term equilibrium valuations, as measured by the equity risk premium. This exhibit indicates that U.S. equities would need to decline 15% - 20% to be consistent with long-term equilibrium valuations. This implies a richness to equity valuations; however the path to reaching fair valuations can be gradual and valuations would benefit from declining interest rates and an improving earnings outlook.

Exhibit 12 shows our global valuation heat map, which expresses fundamentals in cross-sectional terms and on a normalized basis (green indicates attractive fundamentals/valuations). While opportunities exist in non-U.S., small caps and value equities, we have chosen to neutralize most of our equity views due to the heightened uncertainty in the current environment and recognition that valuations alone may not be the primary performance driver in the short-to-intermediate term.

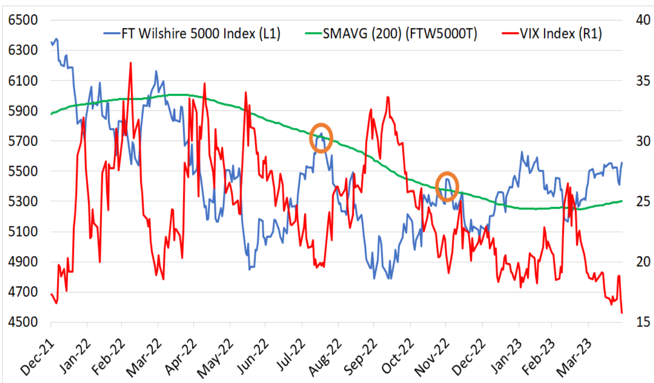
Exhibit 12: Cross-sectional valuations favor non-U.S. developed markets, small caps and value equities

	Dividend Yield			*Profit Margin*			*Price to Sales*			*Price to Book*			*TR12M P/E*			*Forward P/E*		
	Value	Z-5Y	Z-15Y	Value	Z-5Y	Z-15Y	Value	Z-5Y	Z-15Y	Value	Z-5Y	Z-15Y	Value	Z-5Y	Z-15Y	Value	Z-5Y	Z-15Y
US vs. EAFE		-0.4	-0.7		-1.2	-0.5		-1.2	0.5		-0.5	1.0		0.3	1.1		1.0	1.7
EAFE vs. EM		-1.9	-2.4		0.0	0.6		0.6	0.7		1.6	0.8		-0.3	-0.2		-1.2	-0.9
US LC vs. US SC		-0.8	-1.6		-1.6	-0.3		-0.1	1.2		1.1	2.0		0.6	1.0		0.6	1.0
US LCG vs. US LCV		0.4	-0.2		-0.9	-0.1		-0.6	0.7		-0.5	0.7		0.3	1.3		-0.2	1.1

Source: Bloomberg.

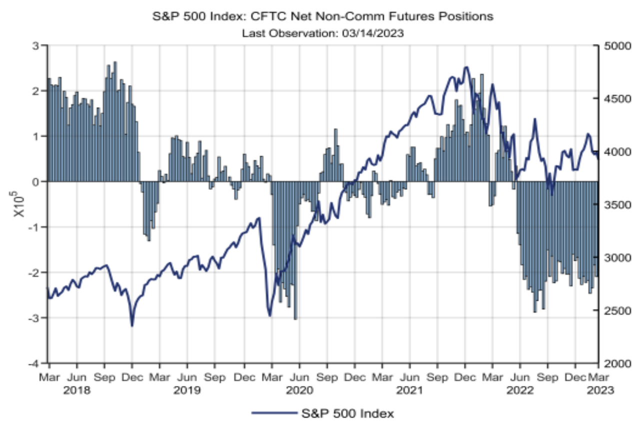
The technical picture and flows are supportive of equities, but the fundamental assessment of valuations and risk warrants a bias towards low volatility equities.

Exhibit 13: U.S. equities are showing technical strength and implied volatility continues to decline



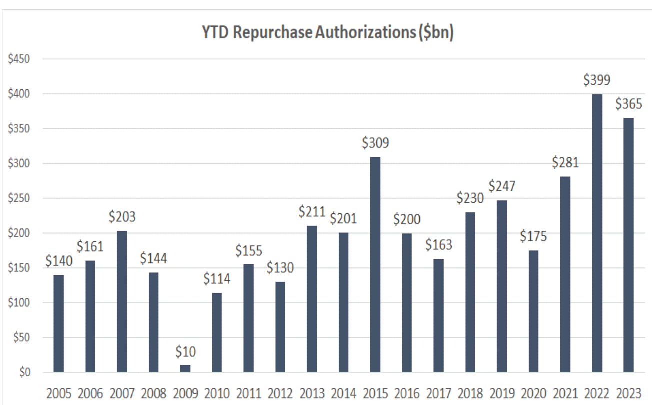
Source: Bloomberg.

Exhibit 14: Speculative investors positioned defensively in advance of regional bank stress



Source: Bloomberg.

Exhibit 15: U.S. corporate buybacks continue to be a tailwind for equities



Source: Goldman Sachs.

We seek to balance our views of market fundamentals with the technical picture, as technicals can have a significant impact on short-to-intermediate term outcomes. Despite heightened uncertainty and a deteriorating fundamental picture, U.S. equities have continued to exhibit a surprising degree of technical strength. We observed several instances throughout the course of 2022 where equities faced resistance at the 200-day moving average until finally breaking through resistance in late 2022. Following the bout of market volatility on the heels of the regional banking scare in mid-March, the market found support at the 200-day moving average and has continued to rally higher as earnings season continues to outpace expectations. At the same time, implied volatility continues to decline, as measured by the VIX Index (Exhibit 13).

The technical strength of equities and declining level of implied volatility can be partially explained by the fact that sentiment was already very negative and many investors were defensively positioned coming into 2023, with hedge funds running at low net equity risk and CFTC futures positions indicating significant net short exposure relative to history in the midst of the regional banking scare in mid-March. (Exhibit 14)

U.S. corporate buybacks have also buoyed equities, as year-to-date repurchase authorizations are already close to 2022 levels, and several large tech companies have recently announced significant buyback plans on the back of earnings that have outpaced investor expectations. (Exhibit 15)

In combining our fundamental perspectives with the technical picture and flows, we believe that maintaining neutral equity posture is appropriate in the current environment. That being said, we have a fundamental bias against risk assets today, namely equities, which is being expressed by favoring low volatility equities to position our equity posture slightly more defensively.

Summary

We normally seek to position for opportunities within asset classes where dislocations have surfaced and the return outlook appears relatively asymmetric. Unfortunately, the uncertainty of the current environment makes it challenging to confidently express significant active risk in lieu of substantial and favorable dislocations in prices and/or valuations. In the short-to-intermediate term, we are squarely focused on the following:

- **Economic growth:** We are witnessing the gradual decline in global economic growth and continue to observe considerable risk in the intermediate term, as signs of tight financial conditions are beginning to lead to fractures in the financial system, which has caused growing uncertainty regarding the correct path forward for interest rate policy.

- **Inflation:** Recent measures of inflation remain mixed, and while the labor market remains tight, we are starting to see indications that conditions may start softening modestly, as job openings are on the decline and corporations are increasingly reducing workforces or imposing hiring freezes.

- **Credit risk and opportunities:** We have historically viewed elevated credit spreads from an opportunistic lens, however given the growing uncertainty surrounding the economy, monetary policy, and the fragile geopolitical backdrop, we believe that positioning portfolios with a bias towards high quality investment grade versus high yield credit is prudent for now. We are closely monitoring the environment for a more material dislocation in credit, or abating of risk, as an indication of an improving risk/return opportunity in credit.

- **Equity risk premium:** The impacts of tightening financial conditions caused a reset of valuations in 2022 across very richly priced segments of the market. Nevertheless, given the move higher in interest rates since late 2021, equities do not present attractive valuations today. This is counterbalanced with significant technical strength. We are not underweight equities today, but we are slightly defensively biased and prepared to take greater risk upon observing dislocations or more rational pricing.

- **Relative valuations:** While we are beginning to see some cross-sectional opportunities within the equity asset class, including factor and regional pair trades, we have largely neutralized our active equity views due to the uncertainty of the current market environment. We remain stylistically neutral because we believe that secular growers serve as an effective ballast to cyclical value companies, particularly if economic growth continues to slow.

We are expressing a decrease in active risk today, as we seek balance in our portfolios during these times of uncertainty, and we will continue to prudently take risk because we recognize that uncertainty is often met with opportunity. We also seek to benefit from the idiosyncratic opportunities presented to active managers in this market environment, while continuing to adapt portfolios to evolving conditions, actively resize exposures as volatility works in our favor, and maintain effective diversification to manage portfolio volatility through this phase of the market cycle, which remains persistently uncertain.

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