OCTOBER 2022

BUMPY PATH TO THE PEAK

We have written for months about elevated volatility being a recurring issue as long as the market was uncertain about how high interest rates were going. Higher than expected inflation reports in recent months have led to increased expectations around monetary policy, pressuring stocks, credit and increasing the risk of recession in the U.S. This report's title, "Bumpy Path to the Peak," refers not to a peak in the inflation rate, but in the Fed funds rate. After all, it's the jump in interest rates and the resulting uncertainty about how high central banks will go that has unsettled markets. As shown below, headline CPI remains elevated relative to core producer prices (PPI) and the market's benign expectations of future inflation. With an eye on current inflation, and little weight on forecasted inflation, the Fed is likely to continue its aggressive hiking campaign at least through early 2023.

Significant and abrupt changes in monetary policy can have a dramatic impact not only on financial markets but also economic activity. One only has to look at the difficulties in the U.K. bond market in recent weeks. The combination of a mishandled fiscal proposal along with an inflation-fighting central bank led to a crisis for U.K. pension plans. This crisis and concurrent turmoil in the bond markets led to a dramatic intervention by the Bank of England and a reluctant U-turn by the Prime Minister's office. While the U.K. pension market has unique characteristics (greater leverage and use of derivatives than the U.S.), its negative reaction to the jump in interest rates is a warning sign. The sharp jump in global interest rates is already hurting economic activity as home prices are starting to fall and homeowners with variable rate mortgages (more prevalent outside the U.S.) face higher monthly payments along with higher energy costs. We think recession in Europe is nearly assured, and a U.S. soft landing is no better than even odds. We also expect Chinese growth to continue to disappoint as the property sector struggles and zero-Covid policy hinder a recovery.

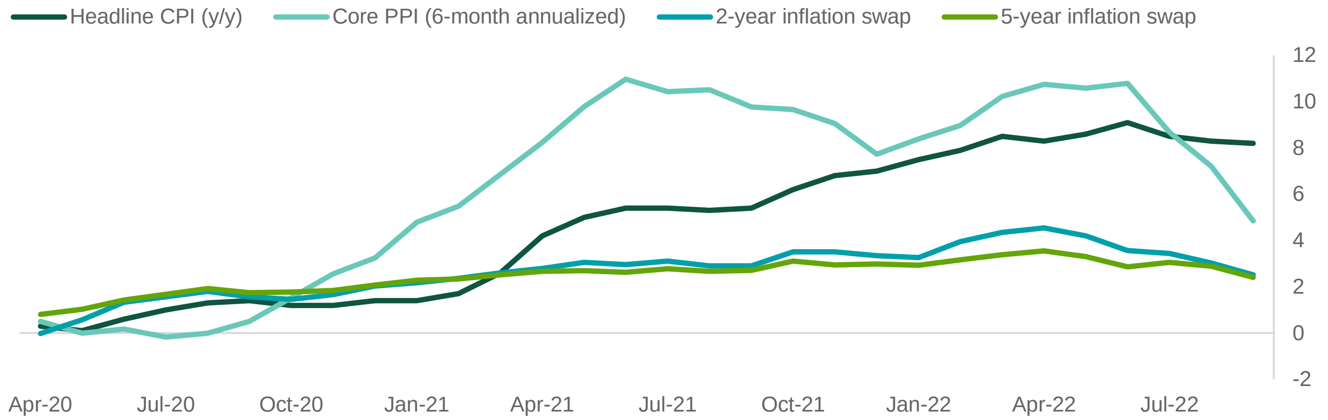
We made no changes in our global policy model (GPM) this month. Because we expect global growth to disappoint and monetary policy to keep tightening, we expect volatility to remain high. In this environment, the GPM is underweight equities and investment grade bonds, while being overweight high yield bonds and modestly overweight cash. A solid third quarter earnings season could provide some support for stocks, but clarity on the peak Fed funds rate along with the resulting economic outlook are probably necessary for a more constructive outlook for risk taking.

-Jim McDonald, Chief Investment Strategist

IS THE MARKET TOO COMPLACENT?

Inflation swaps, along with recent PPI trends, are comforting but headline CPI remains persistently high.

U.S. INFLATION METRICS (%)



Source: Northern Trust Asset Management, Bloomberg. CPI = Consumer Price Index; PPI = Producer Price Index; y/y = year-over-year. Data from 4/30/2020 through 9/30/2022.

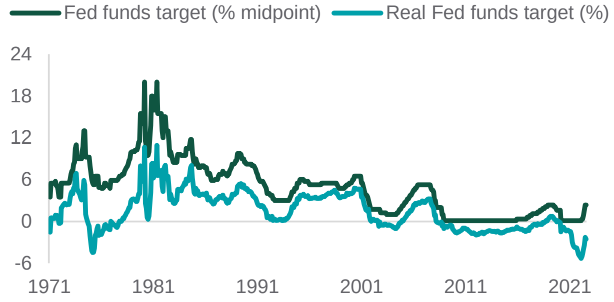
Interest Rates

After an extended period at the zero lower bound, the Federal Open Market Committee (FOMC) has raised the Federal funds rate by 300 basis points (bps) this year in an attempt to bring persistently high inflation down. As risk assets continue their slide, chatter of a "Fed pivot" has increased, but history tells us that we likely have further to go before the peak of the hiking cycle. If we examine Fed funds futures as a proxy for the expected Fed funds rate, investors anticipate the policy rate to peak around 5% in the first half of 2023. This is slightly above the median forecast in the Fed's Summary of Economic Projections.

Historically, the peak of the Fed hiking cycle does not occur unless the target Fed funds range is above core inflation (proxied here by core Personal Consumption Expenditures, or PCE). Alternatively said, the Fed is likely to keep raising rates until the real Fed funds rate is above zero. By taking the midpoint of the Fed funds rate and subtracting PCE we can estimate the real Fed funds rate. By this measure, it remains negative at -2.5%. With the market pricing in another 1.4% of hikes over the remainder of the year, inflation has further to fall before the real Fed funds rate turns positive. Our current six month Fed funds forecast is in-line with the market expectation of ~5%.

NOT SO NEGATIVE

Rate hikes have the "real" Fed funds rate closer to zero.



Source: Northern Trust Asset Management, Bloomberg. Real Fed funds target rate is the Fed funds target rate (midpoint) minus year-over-year core Personal Consumption Expenditures. Data from 1/31/1971 through 8/31/2022.

- History suggests the Fed may get the "real" Fed funds rate back to zero before ending the rate hike campaign.
- Market expectations, which we share, have the Fed topping out around 5% in the first half of 2023.
- We maintain a defensive posture on interest rate risk.

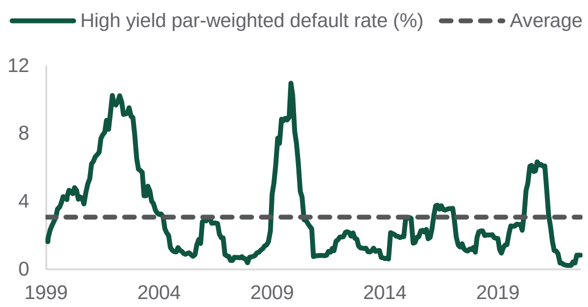
Credit Markets

With the Fed reasserting its commitment to containing inflation and continuing with aggressive rate hikes, high yield valuations have become increasingly attractive. Spreads ended last month near the widest level in the past year. Credit spreads can be deconstructed into credit default risk and "excess spread". Excess spread is the liquidity, volatility and sentiment component of credit spreads. Focusing on the default risk aspect of this framework, using historical averages and the current index dollar price of $85, the market-implied default rate is 5.2%. As seen in the chart on the right, default rates are still well below their long-term average (since 1999) of 3.1%. In the past 20 years-plus, the only three instances of default rates surpassing 5% were in 2001, 2008 and 2020.

While default rates are likely to increase from current levels, there are a number of factors that may limit future defaults. These include: 1.) limited maturities over the next two years; 2.) relatively low net leverage compared to pre-pandemic levels; and 3.) the overall quality of the high yield market being at the highest level in the past decade. Current market conditions could set the stage for high yield to go on an attractive run given the margin of safety to absorb any possible increase in default rates.

STILL ATTRACTIVE

While ticking up slightly, defaults remain historically low.



Source: Northern Trust Asset Management, JPMorgan, S&P LCD. Data from 1/31/1999 through 9/30/2022.

- Markets are pricing in a 5.2% default rate but current defaults remain far below that.
- With yields currently near 10%, high yield remains very attractively valued.
- High yield remains our biggest overweight in the Global Policy Model.

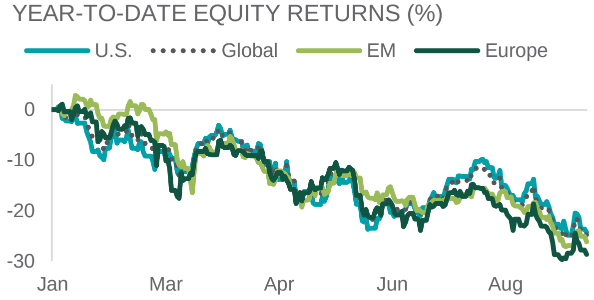
Equities

A combination of hawkish central bank rhetoric, rising interest rates, a rising U.S. dollar and slowing economic growth weighed on global equities this past month. U.K. financial market volatility, cuts to oil production from OPEC+ and worries regarding a possible escalation of the war in Ukraine did not help either. In response to these headwinds, expectations are being revised at a rapid clip. Economists are lowering growth projections, financial markets are pricing in more interest rate hikes and analysts are trimming their earnings forecasts. This puts downward pressure on global equity valuations. Regional return differences over the past month were relatively small, but rising interest rates led growth to underperform value, and the U.S. to marginally underperform non-U.S. markets.

We remain cautious on China in the context of its zero-Covid policy and property sector woes. Europe also remains a concern as we expect its energy crisis will tip the region into a recession (if it hasn't already done so). We maintained our underweight positions in both those regions, preferring U.S. equities instead. Our overall position in equities remains underweight while we monitor inflation and central bank rhetoric for signs that a pivot towards a more neutral monetary policy stance is nearing.

GOING DOWN

European equities have suffered the worst this year.



Source: Northern Trust Asset Management, Bloomberg. Data for MSCI Indexes through 10/10/2022. Past performance is not indicative or a guarantee of future results. Index performance returns do not reflect any management fees, transaction costs or expenses. It is not possible to invest directly in any index.

- The dismal year for equities continues – with non-U.S. markets falling more than U.S. equities.
- Dollar strength has put pressure on U.S. earnings, but more pressure on non-U.S. market returns.
- We remain underweight global equities with a continued preference for U.S. markets.

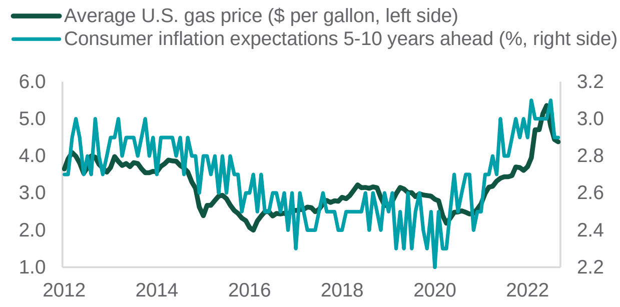
Real Assets

After some respite the past couple months, inflation expectations are once again going higher – most recently prompted by yet another discouraging inflation report (wherein core CPI increased to 6.6%, a new cycle high) . Beyond core inflation, the recent fall in gas prices has been arrested as OPEC+ tightens the oil spigots. Meanwhile, although natural gas prices have been falling, Europe's need for new natural gas sources may start to pressure U.S. prices higher as we enter the heating season.

Natural resources provides the best inflation protection but is also most susceptible to a traditional growth slowdown. That said a stagflation-type slowdown would likely result in natural resources at least outperforming broader risk assets. We remain tactically neutral for now. Listed infrastructure provides some inflation exposure and also provides market downside protection. It does have interest rate exposure (meaning it tends to outperform other risk assets when interest rates are falling and vice versa) – but we are more comfortable with that exposure at the current 4% U.S. Treasury 10-year yield than when it was lower and at greater risk of moving higher. Also, our underweight to investment grade fixed income helps to offset that rate exposure. We remain tactically overweight the asset class.

AS GO GAS PRICES...

Prices at the pump dominate inflation expectations.



Source: Northern Trust Asset Management, Bloomberg, BCA Research, American Automobile Association, University of Michigan. Data from 1/31/2012 through 9/30/2022.

- Inflation expectations started to moderate as gas prices rolled over – but gas prices are moving higher again.
- Natural resources and listed infrastructure (in that order) can help manage persistent inflation pressures.
- We maintain an overweight to listed infrastructure for its inflation exposure and downside protection.

BASE CASE EXPECTATIONS

Inflation-Focused Fed

In contrast to the post-GFC environment, today's Fed is less focused on financial market movements – and will keep hiking until inflation is contained. Recently elevated inflation reports have only further focused the Fed's attention on its inflationary mission – meaning monetary policy will remain tighter for longer.

Global Disappointment

Central bank response to elevated inflation creates financial market risks skewed to the downside, with recession nearly assured in Europe and the U.S. soft landing no better than even odds. Corporate earnings and labor markets have been resilient to date, but we expect deterioration as policy continues to tighten.

RISK CASE SCENARIOS

Central Bank Mistake

Central banks, in their focus on inflation, overdo it and cause "something" to break. Possible candidates: liquidity-driven dislocation in rates/credit, currency crisis, overleveraged borrowers.

Eastern Threats

Ukraine war produces knock-on effects (food/energy shortages) that disrupt the global economy; China struggles to deal with (in order of importance) pandemic pressures, bad debt contagion and Taiwan tensions.

GLOBAL POLICY MODEL

Strategic Allocation and Tactical Over/Underweights	RISK CONTROL			RISK ASSETS							
	FIXED INCOME				EQUITIES			REAL ASSETS			
	Cash	Inv. Grade	Infl. Linked	High Yield	U.S.	Dev. Ex-U.S.	Emerg. Markets	GLI	GRE	NR	Gold
Strategic Asset Allocation	2	34	5	5	27	13	6	2	2	4	0
Tactical Asset Allocation	4	28	5	12	28	11	2	4	2	4	0
Over/Underweight	**2**	**-6**	**0**	**7**	**1**	**-2**	**-4**	**2**	**0**	**0**	**0**

Source: Northern Trust Capital Market Assumptions Working Group, Investment Policy Committee. Strategic allocation is based on capital market return, risk and correlation assumptions developed annually; most recent model released 8/10/2022.The model cannot account for the impact that economic, market and other factors may have on the implementation and ongoing management of an actual investment strategy. Asset allocation does not guarantee a profit or protection against a loss in declining markets.

UNLESS NOTED OTHERWISE, DATA IN THIS PIECE IS SOURCED FROM BLOOMBERG AS OF OCTOBER 2022.

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