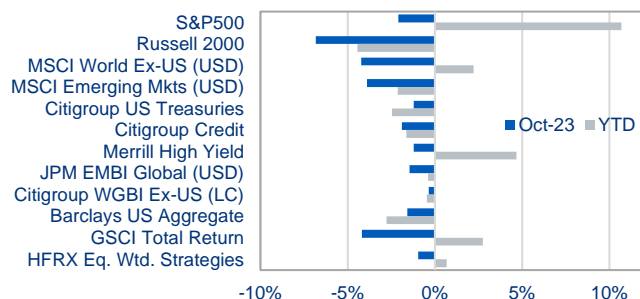


Global Market Review

The prospect of continued high interest rates is weighing on asset valuations. Global equity markets extended their decline for a third successive month in October, further eroding the heady gains of the first half of the year. In the U.S., mega-cap tech stocks continued to outshine all other market segments, despite their recent steep declines. Global bond markets also extended their losses in October. In the U.S., the yield increase was concentrated at the long end of the curve, contributing to a moderation of the yield curve's inversion. Rising real yields drove the increase, as inflation expectations were little changed. In the credit markets, prices fell across the rating spectrum, with longer dated investment grade bonds suffering the steepest price declines. Geopolitical risks sent gold prices sharply higher in October, making it one of the better performing assets so far this year. The U.S. dollar and oil prices, in contrast, have registered only modest gains so far in 2023.

Performance of Major Market Indices

Sources: S&P, MSCI, FTSE Russell, Barclays, Citigroup, Bank of America Merrill Lynch, J.P. Morgan, HFR, Bloomberg.



Global bonds and equities fell further in October.

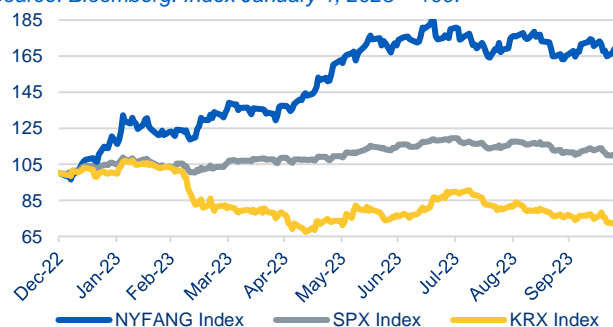
U.S. Equity Market Extends Decline from July Peak

The S&P 500 peaked this year in late July and has fallen 8.4% since. Despite this decline, the index remains up 10.7% for the year. The U.S. equity market's sell-off since its July peak has coincided with rising 10-year U.S. Treasury yields and the increasing prevalence of the view that a steep recession would be avoided, and the Fed would therefore keep rates higher for longer than previously thought. The news that U.S. GDP grew at an annualized rate of 4.9% in the third quarter reinforced this sentiment.

The market's gains this year have been largely driven by the surge in mega-cap stocks in the tech sector represented by the NYFANG index. At its July peak, the index had gained nearly 85%, before declining to a slightly less outlandish 66.5% gain through October (Exhibit 1). Regional bank stock prices, in contrast, have yet to recover from their steep declines in the wake of the March banking mini-crisis which shuttered regional banks in the U.S. and a global systemically important bank in Switzerland. The struggles of the regional banks are one manifestation of the ripple effect of rising rates on asset valuations and economic activity. The retrenchment of regional bank lending, in turn, has reduced the availability and increased the cost of capital to the real estate sector which is also under pressure from structural shifts in demand.

Exhibit 1. Mega-Cap Tech Leads; Regional Banks Lag

Source: Bloomberg. Index January 1, 2023 = 100.

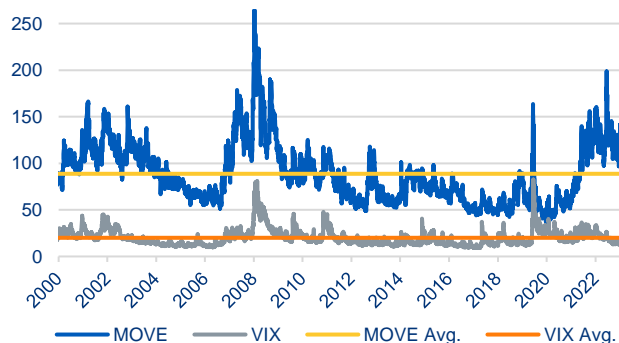


Rising yields have undercut equity and other asset valuations and pressured sectors heavily dependent on credit. Asset prices, however, despite recent declines, do not yet appear to have fully adjusted to the prospect of an extended period of higher rates. Nor do they fully reflect the possibility that a higher cost of capital could slow economic activity. Moreover,

notwithstanding the wide price swings of the largest stocks in the U.S. equity market, expected market volatility as measured by the VIX has been subdued and remains at long-term average levels (Exhibit 2). The stark disconnect between the relatively subdued volatility implied by the VIX and the elevated bond market volatility captured by the MOVE index highlights the equity market's complacency about the impact of higher yields.

Exhibit 2. Muted Implied Equity Vol. High Bond Vol.

Source: Bloomberg. The VIX index is an indicator of expectations for the near term volatility of the U.S. equity market. The MOVE index is the VIX's counterpart for the U.S. Treasury market.



Global Equity Markets Also Extend Losses

The MSCI World ex-U.S. index of advanced equity markets fell 4.2% in October, its third successive month of declines. Despite the losses of the past three months, the index remains up 2.2% so far in 2023. European bourses fell about 4% in October, after having lost similar amounts in August and September. In contrast to the heady economic growth of the U.S., activity in the eurozone contracted in the third quarter. The decline in output contributed to easing inflation, allowing the ECB to keep interest rate unchanged at 4% in its October meeting, ending a streak of 10 consecutive rate hikes.

The MSCI emerging equity market index lost 3.9% in October, bringing its decline so far this year to 2.1%. The poor performance of the Chinese economy and market, which is down 11.2% so far this year, continues to weigh heavily on the index.

Bear Steepening

As it did in its September meeting, the FOMC meeting again left the Fed funds rate target range unchanged at its November 1 meeting. Longer term yields have been far less stable, however. The 10-year U.S. Treasury yield has increased by about 110 basis points this year, driven mainly by rising real yields as inflation expectations have remained little changed. With short rates stable and longer-term yields rising sharply, the slope of the U.S. Treasury yield curve has "bear steepened" and become much less deeply inverted (Exhibit 3). While a bear steepening of the yield curve refers to the impact on the prices of longer-term bonds, which have indeed fallen sharply, the impact of this yield curve dynamic is equally bearish for the economy. It is likely to result in slowing

economic activity as the increased cost of financing dampens spending by businesses and households.

Exhibit 3. U.S. Yield Curve Inversion Moderates

Source: Bloomberg. 10-year yield minus 2-year and 3-month yields.



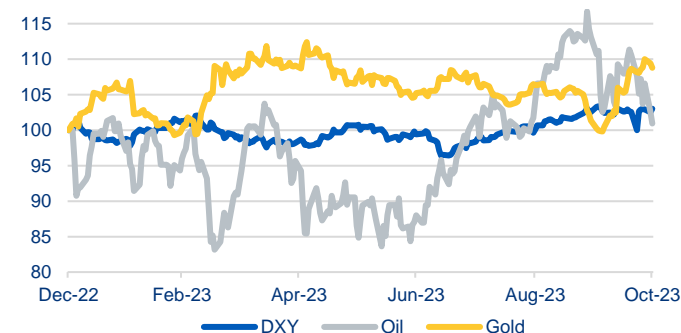
Reflecting these yield movements, the broad U.S. Treasury index lost 1.2% in October, while bonds with maturities of 10+ years fell 4.7%. For the year as a whole, these indicators are down 2.5% and 12.6%, respectively. Investment grade and high yield bonds also lost ground in October, falling 1.7% and 1.4%, respectively. So far in 2023, the investment grade sector is down 2.8% compared to a 4.7% gain for high yield.

Increased Geopolitical Risk Has Little Market Impact

The war between Israel and Hamas has so far had little impact on markets, notwithstanding the potential for the fighting to engulf the wider Middle East and beyond. Gold prices shot up in October and are 8.8% higher this year, although at least part of this gain reflects central bank purchases unrelated to the conflict. Oil and the dollar, in contrast, are up only slightly this year. Oil prices in fact fell 10.8% in October (Exhibit 4).

Exhibit 4. Geopolitical Risks Send Gold Prices Higher

Source: Bloomberg. Index January 1, 2023 = 100.



Performance of Major Market Indices through 10-31-2023

Sources: MSCI, FTSE, Barclays, Citigroup, Bank of America Merrill Lynch, J.P. Morgan, S&P GSCI, HFR, Bloomberg.

	1-Month	QTD	YTD	1-Year	3-Year	5-Year
S&P500	-2.1%	-2.1%	10.7%	10.1%	10.4%	11.0%
Russell 2000	-6.8%	-6.8%	-4.5%	-8.6%	3.9%	3.3%
MSCI World Ex-US (USD)	-4.2%	-4.2%	2.2%	12.6%	6.0%	4.3%
MSCI Emerging Mkts (USD)	-3.9%	-3.9%	-2.1%	10.8%	-3.7%	1.6%
Citigroup US Treasuries	-1.2%	-1.2%	-2.5%	-0.6%	-5.9%	-0.2%
Citigroup Credit	-1.9%	-1.9%	-1.6%	2.8%	-5.4%	0.8%
Merrill High Yield	-1.2%	-1.2%	4.7%	5.8%	1.2%	2.9%
JPM EMBI Global (USD)	-1.5%	-1.5%	-0.4%	6.9%	-4.7%	0.1%
Citigroup WGBI Ex-US (LC)	-0.3%	-0.3%	-0.5%	-2.3%	-6.1%	-1.7%
Barclays US Aggregate	-1.6%	-1.6%	-2.8%	0.4%	-5.6%	-0.1%
GSCI Total Return	-4.2%	-4.2%	2.8%	-0.4%	29.2%	5.9%
HFRX Eq. Wtd. Strategies	-0.9%	-0.9%	0.7%	1.0%	1.3%	1.7%