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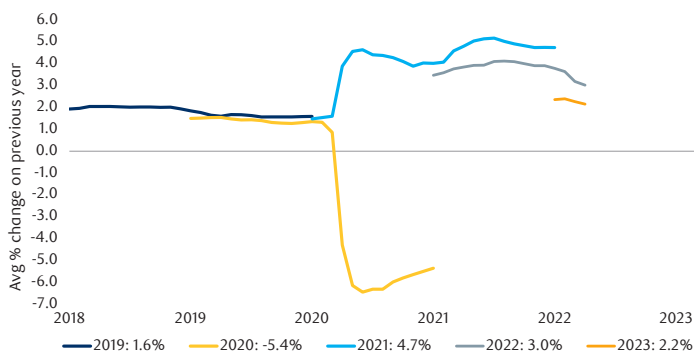
Investors on edge as central banks buckle down to fight inflation and rates rise

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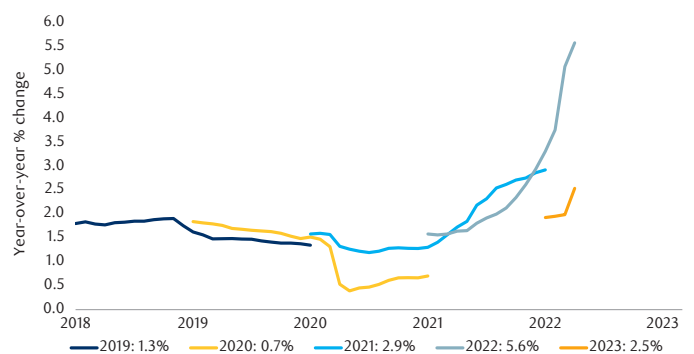
Uncertainty is more elevated than usual with inflation at multi-decade highs, the war in Ukraine persisting and the pandemic continuing to threaten public health and the economy. Supply chains are once again being disrupted, impacted by Russia’s invasion but also due to renewed lockdowns in China as a result of their zero-COVID policy. Adding to this mix of challenges for the economy and markets is that central banks are focused on tackling extremely high inflation by tightening monetary policy, perhaps at an aggressive pace. While rapid rate hikes could be successful in taming inflation, surging borrowing costs may also weigh on the confidence of consumers and investors. Our expectation is for growth to continue to slow, that the odds of recession have increased and that the range of potential outcomes is especially wide. We are maintaining our below-consensus forecast for growth and above-consensus forecast for inflation (exhibits 1 and 2).

Exhibit 1: Weighted average consensus real GDP
Growth estimates for major developed nations



Note: As of April 2022. Source: Consensus Economics

Exhibit 2: Weighted average consensus CPI
Inflation estimates for major OECD nations



Note: As of April 2022. Source: Consensus Economics

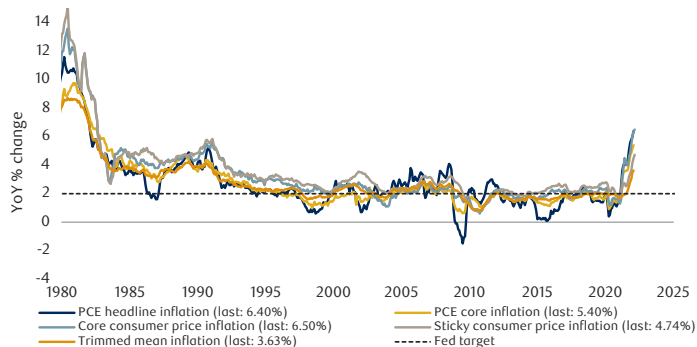
Price pressures persist and broaden

Inflation appears to be more entrenched as outsized price increases are becoming more commonplace across a broadening list of product groups. One of the main measures of inflation tracked by the U.S. Federal Reserve (Fed) is U.S. Personal Consumption Expenditures (PCE) inflation which has risen to 6.4%, its highest level since the early 1980s, and other metrics that seek to eliminate distortions are also at multi-decade highs (Exhibit 3). The fact that even the inflation measures that eliminate outliers, such as soaring used car prices, have also surged suggests that inflation pressures are becoming deeply rooted and more widespread. Adding to the price pressures could be the fact that the labour market is extremely strong, with unemployment near its lowest levels in the past half-century and U.S. wages rising at their fastest pace in four decades (exhibits 4 and 5). Although we continue to expect inflation to peak sometime this year as a result of year-over-year comparisons against a larger base, it is becoming increasingly clear that, without serious intervention by policymakers, consumer price pressures will likely remain elevated over the medium term.

Central banks consider larger-sized interest rate hikes to combat inflation

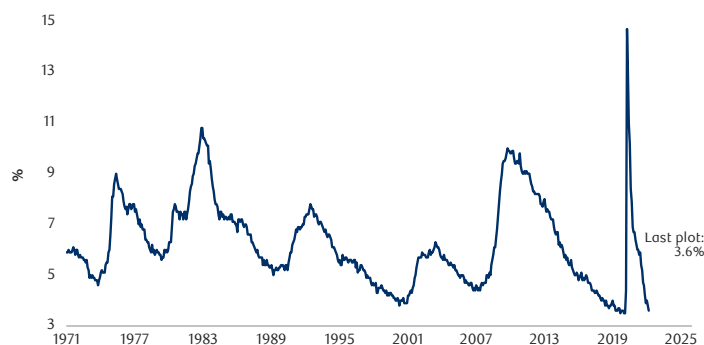
Given the extreme levels of inflation and the fact that policy rates remain near zero, central banks may need to raise interest rates at a faster pace than previously thought to stabilize consumer prices. The typical 25-basis-point hike that investors have grown used to over the past few decades may no longer be suitable in this environment. In fact, the Bank of Canada (BOC) raised its policy rate by 50 basis points on April 13, its first hike of that size in over 20 years. At 1.0%, the BOC's overnight lending rate is still historically low and many more hikes are expected. In the U.S., the Fed has also indicated 50-basis-point hikes are on the table, and the market is pricing in nearly 250 basis points in rate increases by the end of this year (Exhibit 6). These market-based expectations suggest that each of the next four Fed meetings will feature 50-basis point hikes, which represents a major upward shift in expected tightening since the start of the year when only 75 basis points to 100 basis points of tightening was expected for the entirety of 2022.

Exhibit 3: U.S. inflation measures



Note: As of April 24, 2022. Source: Bloomberg, RBC GAM

Exhibit 4: United States Unemployment rate



Note: As of March 31, 2022. Source: Bloomberg, RBC GAM

Exhibit 5: U.S. average hourly earnings



Note: As of March 2022. Source: Bureau of Labor Statistics, Haver Analytics, RBC GAM

Bonds extend sell-off, valuation risk moderates

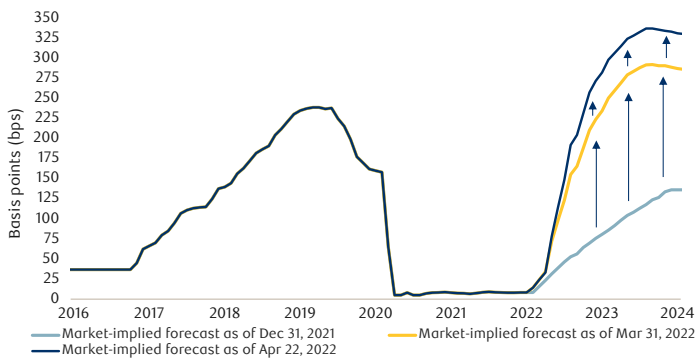
The prospect of rapidly rising short-term rates off of record low levels has caused a sell-off in the bond market of historic proportions. The ICE BofA U.S. Broad Market bond index – an index of government and investment-grade bonds – has lost 9.6% so far this year, extending its decline to 11.2% since its July 2020 peak (Exhibit 7). This latest drawdown is the largest in the past four decades and has wiped out any gains since early 2019. This sell-off occurred amid a rise in the U.S. 10-year yield to nearly 3.0%, up from 2.4% in March and 1.6% at the start of the year. At 2.9%, the U.S. 10-year yield remains below our modelled estimate of equilibrium, but valuation risk has greatly diminished as a result of the recent surge in yields (Exhibit 8). Moreover, the model’s equilibrium band is temporarily elevated due to extremely high inflation which is expected to calm over the longer term and, interestingly, the

mid-point of the band five years from now is 2.9% – the same as the current yield. What the model suggests is that even though yields could rise further in the near-term if inflation pressures persist, sustained upward pressure on bond yields may be limited.

Yield curve inverts, flagging the potential for recession on the horizon

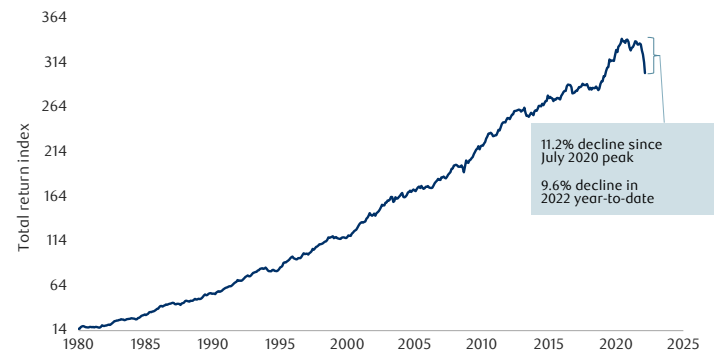
Consistent with our view that recession risks are more elevated than usual is the fact that a popular measure of the U.S. yield curve inverted. Exhibit 9 plots the U.S. yield curve as proxied by the spread between yields on 2-year and 10-year Treasuries. The line dropping below zero on the chart represents an inversion in the curve, where yields on longer-term maturities are below those of short-term maturities, a classic harbinger of recession. It could, however, be the case

Exhibit 6: Implied fed funds rate 12-months futures contracts



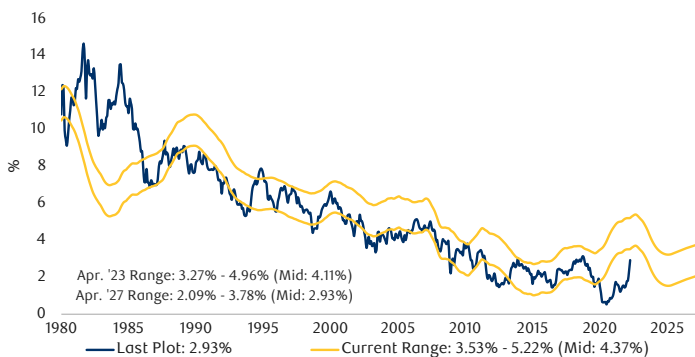
Note: As of April 22, 2022. Source: Bloomberg, U.S. Federal Reserve, RBC GAM

Exhibit 7: ICE BofA U.S. Broad Market Index Total return index



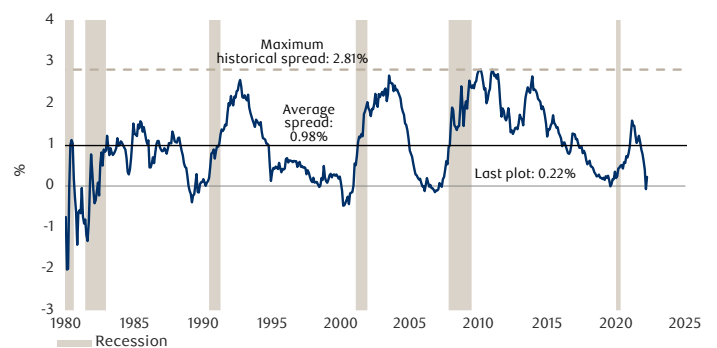
Note: As of April 22, 2022. Source: Bloomberg, RBC GAM

Exhibit 8: U.S. 10-year T-bond yield Equilibrium range



Note: As of April 22, 2022. Source: RBC GAM, RBC CM

Exhibit 9: U.S. Treasury yield curve Spread between yield on 10-year and 2-year maturities



Note: As of April 24, 2022. Source: Bloomberg, RBC GAM

that the inversion reflects the market’s expectation that the extreme levels of inflation priced into the shorter-end of the bond market may ultimately subside over the longer term. While there are often reasons to discredit the importance of inversions, each of the last six recessions on this graph have been preceded by an inversion in the yield curve. Due to its solid track record, it would be prudent to take this warning signal seriously, although it is important to note that an inversion does not necessarily indicate imminent danger. Inversions on this version of the yield curve have provided fairly generous lead times in the past, with recessions and peaks in the stock market occurring an average of 18 months and 15 months, respectively, after the warning flag has been raised. While the yield curve is no longer inverted at the time of this writing, the fact that it inverted in March means the warning signal remains in place and would suggest the possibility of recession in 2023.

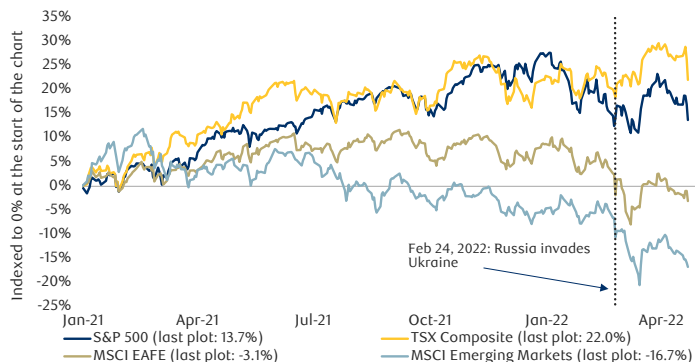
Equity markets retreat as uncertainty mounts

Concerns surrounding growth and the possibility of recession amid a tightening of monetary conditions led to a pullback in equities from their earlier rebound in March. The S&P 500 fell 7.7% from its recent high in March and is situated 11% below its all-time high from earlier this year (Exhibit 10). Canadian equities have been outperforming in recent weeks, supported by higher commodity prices, and the TSX Composite is roughly unchanged year-to-date. Outside of North America, stocks in Emerging Markets and Europe have also given back much of their gains from March as renewed lockdowns in China and the continuing war in Ukraine pose threats to growth in those regions. Even with the retracement in equities over the last few weeks, U.S. equities remain relatively expensive according to our models (Exhibit 11). The S&P 500 is close to one standard deviation above our modelled estimate of fair value and, although valuation risk has diminished as a result of the latest declines, U.S. equities could still be vulnerable to correction should macro risks intensify.

Growth stocks underperformed amid rising interest rates

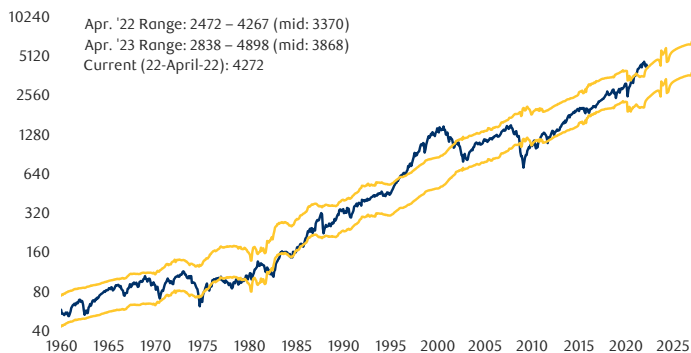
One of the major equity themes so far this year has been the underperformance of growth stocks given their heightened sensitivity to changes in interest rates. The S&P 500 growth index is down 17% year-to-date and very close to its March low, whereas the S&P 500 value index is only down 2.6% year-to-date and remains relatively close to its record high. As interest rates rise, investors are less willing to pay up for the promise of much higher profits generated by growth stocks far out into the future and prefer more attractively priced value stocks (Exhibit 12). That said, even though

Exhibit 10: Major equity market indices
Cumulative price returns indices in USD



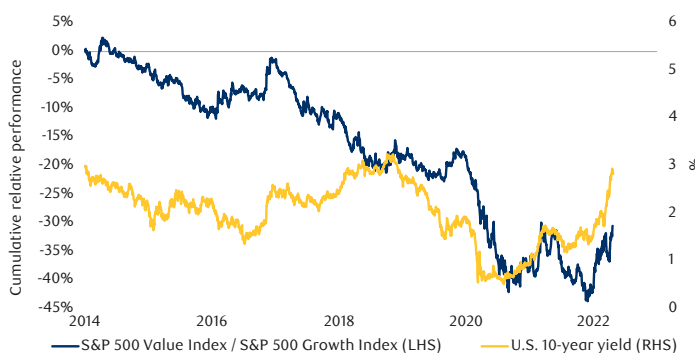
Note: As of April 22, 2022. Price returns computed in USD. Source: Bloomberg, RBC GAM

Exhibit 11: S&P 500 equilibrium
Normalized earnings & valuations



Source: RBC GAM

Exhibit 12: Value to growth relative performance
S&P 500 Value Index / S&P 500 Growth Index



Note: As of April 22, 2022. Source: Bloomberg, RBC GAM

growth stocks have faltered relative to value stocks, the recent pullback pales in comparison to the significant gains generated by growth stocks over the last several years. Growth stocks could continue to come under pressure in an environment where central banks remain hawkish, inflation proves more difficult to calm and yields push even higher.

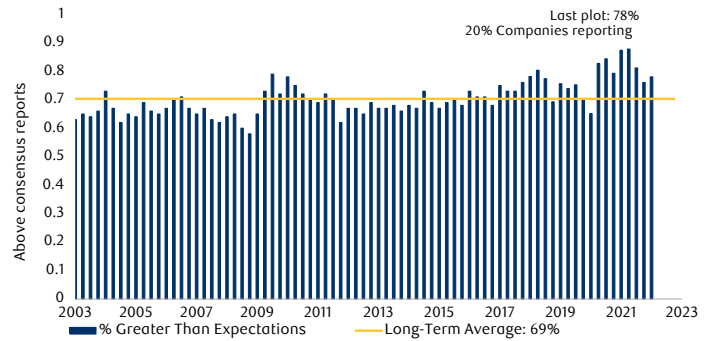
Profit growth will be critical to supporting equity prices

With valuations under pressure from high inflation and rising rates, earnings will be critical to supporting equities and generating further gains. S&P 500 profits are expected to rise 8% in 2022, supported by strong nominal GDP growth. So far, profits have continued to surpass analyst estimates. Reporting for the first quarter is underway with one fifth of companies reporting and 79% of them have exceeded expectations (Exhibit 13). Significant gains in earnings in Energy and Materials sectors as the price of oil and other commodity surged has provided an additional boost. Looking ahead, analysts project S&P 500 earnings to continue on their upward trajectory, reaching as high as \$275 by the end of 2024, which represents a roughly 33% gain from today (Exhibit 14). While an inflationary environment tends to be supportive of profit growth, margins could be at risk of shrinking from record levels if expenses rise faster than revenues (Exhibit 15). As long as corporations have the ability to raise prices enough to offset their rising costs, profits could continue higher even as inflation persists.

Asset mix – maintaining modest overweight in stocks and underweight in bonds

The global economic expansion is facing a variety of challenges including a tightening of monetary conditions, the war in Ukraine and ongoing disruptions related to the pandemic. Inflation is proving to be more persistent than initially predicted and, as a result, central banks have adopted a hawkish tone and plan to raise rates rapidly to restore consumer price stability. In this environment, recession risk is elevated, especially given the dual shocks from rising rates and soaring commodity prices against a backdrop of already-slowing growth. Asset prices have adjusted to reflect many of these concerns and the rapid rise in yields has moderated valuation risk in the bond market. At these higher levels of yields, we are now forecasting positive returns for sovereign bonds and expect that they will offer more of a cushion in a balanced portfolio. Over the longer term, stocks continue to offer superior return potential, although we recognize that the risk premium between stocks and bonds has narrowed as a result of the recent surge in

Exhibit 13: Companies reporting results above consensus forecasts



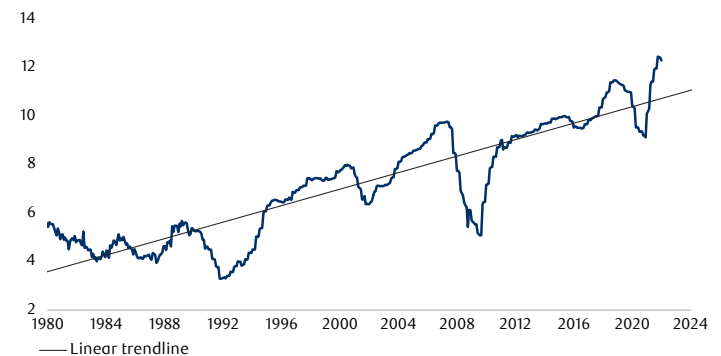
Note: As of April 22, 2022. Source: Refinitiv

Exhibit 14: S&P 500 Index 12-month trailing earnings per share



Note: Estimate is based on a consensus of industry analysts' bottom-up expectations. As of April 22, 2022. Source: Thomson Reuters, RBC GAM

Exhibit 15: S&P 500 Net Margin

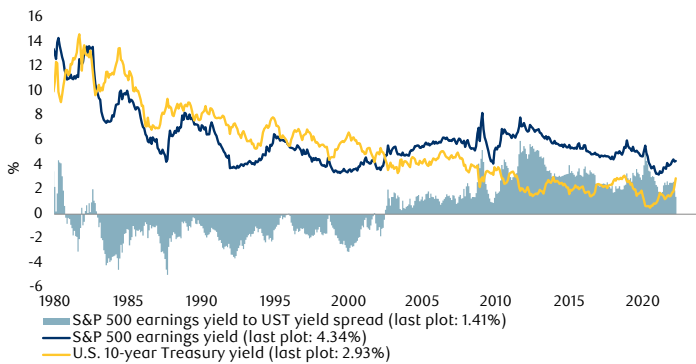


Note: As of April 21, 2022. Source: RBC GAM, RBC CM

yields (Exhibit 16). Equities are facing valuation headwinds as interest rates rise, but pricing power in an inflationary environment should provide an offset. If inflation calms to more normal levels, the return prospects for stocks could improve (Exhibit 17). At this time, we are maintaining a slight overweight to equities and underweight in bonds in our asset

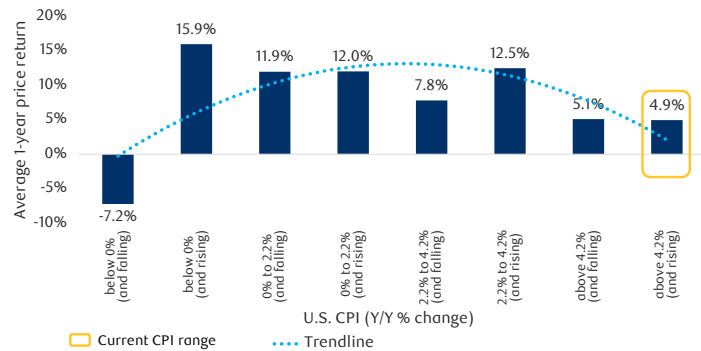
mix. However, markets are adjusting quickly to changing expectations and we are watching closely for opportunities to adjust our asset mix. Our current recommended asset mix for a global balanced investor is 63.5% equities (strategic: “neutral”: 60%), 34.5% bonds (strategic “neutral”: 38%) and 2.0% in cash.

Exhibit 16: S&P 500 earnings yield
12-month trailing earnings/index level



Note: As of April 21, 2022. Source: RBC GAM, RBC CM

Exhibit 17: S&P 500 performance and inflation backdrop – Average of 1-year trailing returns



Note: As of April 14, 2022. Based on data back to December 1928. Source: Bloomberg, RBC GAM

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