RBC Global Asset Management

The Global Investment Outlook

RBC GAM Investment Strategy Committee

SPRING 2023

The RBC GAM Investment Strategy Committee


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The RBC GAM Investment Strategy Committee consists of senior investment professionals drawn from all areas of RBC Global Asset Management. The Committee regularly receives economic and capital markets related input from internal and external sources. Important guidance is provided by the Committee's regional equity advisors (North America, Europe, Asia, Emerging Markets) and from the Global Fixed Income & Currencies sub-committee. From this, the Committee builds a detailed global investment forecast looking one year forward.

The Committee's view includes an assessment of global fiscal and monetary conditions, projected economic growth and inflation, as well as the expected course of interest rates, major currencies, corporate profits and stock prices.

From this global forecast, the RBC GAM Investment Strategy Committee develops specific guidelines that can be used to manage portfolios.

These include:

The recommended mix of cash, fixed income instruments, and equities.

The recommended global exposure of fixed income and equity portfolios.

The optimal term structure for fixed income investments.

The suggested sector and geographic make-up within equity portfolios.

The preferred exposure to major currencies.

Results of the Committee's deliberations are published quarterly in *The Global Investment Outlook*.

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Executive summary

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The economy has been resilient, and it has been this very strength, combined with inflationary pressures, that has pushed central banks to raise interest rates aggressively over the past year. The sudden and massive rise in interest rates, though, will likely push economies into recession. Although valuations are no longer at extremes, we recognize that risk assets could still be vulnerable should corporate profits falter and/or macro risks intensify.

Pressure on economy grows, recession risk rises

The macroeconomic picture has improved in recent months and our growth forecasts have been upgraded, although we continue to expect a recession over our one-year forecast horizon. Economic tailwinds exist from the strong labour market, buoyant consumer spending and, until very recently, a slight easing of financial conditions. China's reopening and Europe's resilience in the face of an energy shock have also benefitted the global economy, but investors may have become too optimistic regarding the outlook. In our view, the massive and sudden surge in interest rates over the past year is almost certain to cause economic pain. Weakness is already being seen in the housing market, rising goods inventories, diminished business confidence and scaled-back capital spending. Moreover, troubles have surfaced in a handful of U.S. regional banks. While policymakers have enacted measures to prevent widespread financial distress, the failure of Silicon Valley Bank exposes the vulnerabilities that exist for leveraged entities. We assign a 70% chance to a recession materializing and expect that it will occur in the second half of this year. That said, our GDP forecasts have been mostly upgraded for 2023, mainly due to the year's better-than-expected start, plus the fact we have pushed our expected timing of recession to the second half of 2023 from the middle of the year. The anticipated recession's depth, duration and the speed of the subsequent recovery are similar to our prior assumptions, and remain a bit more pessimistic than the consensus. For emerging markets, the expected trajectory of the economy is similar, but without an outright contraction in output.

Inflation is on a downward trajectory

The main drivers that were initially responsible for the inflation surge have all reversed. The massive commodity shock has calmed, supply-chain problems continue to improve markedly and excessive monetary and fiscal stimulus have been ratcheted down. Moreover, businesses' pricing power may be fading and home prices have begun to fall. Given these conditions, we forecast inflation to fall faster than the market anticipates, although a variety of offsetting forces could hold it uncomfortably above the Fed's 2.0% target. For one thing, the labour market is tight and inflation pressures have become widespread, affecting almost all goods and services. Service-based inflation is proving the last to turn, in part because it is at the very end of the chain of pricing decisions, and in part because people continue to embrace activities that were denied to them during pandemic lockdowns. Although we think our base-case inflation forecasts are reasonable, we acknowledge that there is an unusually wide range of possible outcomes. These range from inflation remaining too hot to, alternatively, inflation abruptly converting to temporary deflation.

U.S.-dollar weakness likely lies ahead

The tide is finally turning against the U.S. dollar. A reversal of the greenback's gains has been overdue for some time, and we have warned for several quarters that the currency's strength in 2022 had pushed it from already rich to levels of extreme overvaluation. As the dollar starts to retreat, and with a multitude of factors turning against it, we are growing increasingly confident that a multiyear period of U.S.-dollar weakness lies ahead. We expect most G10 and emerging-market currencies to benefit from this powerful cyclical shift.

Further significant central-bank tightening is becoming less warranted

Central banks continue to raise their policy rates in response to unacceptably high inflation. Some central banks, such as the Bank of Canada, believe they have reached the finish line after considerable effort, while the Fed, the European Central Bank and the Bank of England are signaling that modestly to moderately more tightening is to come. As inflation ebbs, though, central banks will eventually be in a position to take their foot off the brake. A neutral policy rate in North America is approximately 2.50%, around half the current policy setting. Interest rates are unlikely to return to prior lows, but it makes sense that a structurally low interest-rate environment gradually reasserts itself given elevated global debt levels, demographics, and a low speed limit for economic growth. More generally, the recent increase in interest rates highlights certain vulnerabilities. Countries with elevated public-debt levels such as Japan, Greece and Italy must now grapple with sharply higher debt-servicing costs. Japan merits close attention in particular because its debt burden is so much greater than its peers and because of the extraordinary actions the country took to depress borrowing costs.

Bond yields reset to long-term norms

After last year's sudden adjustment in Fed policy ravaged bond markets, yields are now situated at levels that are closer to normal in the context of history. Back in December 2021, interest rates were at extreme lows with the yield on cash at 0.1%, U.S. 10-year Treasury yields of 1.5%, investment-grade credit yielding 2.4% (i.e. a spread of 90 basis point) and high-yield bonds at 4.9% (i.e. a spread of 340 basis points). But after the massive adjustments of 2022, these numbers at the end of February were 4.6% for cash, 3.9% for the U.S. 10-year bond, 5.8% for investment-grade credit (i.e. a 166-basis-point spread) and 8.7% for high-yield bonds (i.e. a 465-basis-point spread). Remarkably, even though fixed-income markets have suffered massive losses over the past year, the adjustment in markets represented a move away from extreme lows and back to something closer to the averages of the past three decades. At current levels, our bond models suggest valuation risk has greatly diminished and the prospect for future returns has improved considerably, especially if we are right in our view that inflation will continue to moderate.

Equity valuations are reasonable, risk sits with the corporate-profit outlook

Last year's bear market in stocks addressed excessive valuations, boosting return potential according to our models. Our global composite equilibrium measure indicates that stocks are now 2% below fair value, down from a 32% overvaluation at the time of their late 2021 peak. Importantly, valuations range widely across markets, with the U.S. being the most expensive while others, especially emerging markets, are trading at compelling discounts to fair value. Given that stock market valuations have been reset and now appear consistent with the current and expected level of interest rates and inflation, we think the bigger risk to markets has to do with corporate profits. Earnings estimates have been gradually lowered over the past year amid slowing growth and rising costs, and the latest consensus of analysts' projections anticipates no growth in 2023 profits versus 2022. However, we remain concerned that earnings estimates are not fully pricing in even a mild recession.

Shifts in market leadership worth noting

Beneath the surface, several themes and trends have emerged from October 2022 to February 2023 that we think could influence financial markets for many years. Some of the big shifts that we have observed are that the U.S. dollar has started to weaken; international equities have been outperforming U.S. stocks; cyclical sectors have been leading; small and mid-cap stocks have moved ahead of large caps; and value stocks have been winning against growth stocks. More evidence is required to convince us of a wholesale and durable shift in market leadership, but this bears watching. Some of these emerging trends have stalled amid the recent troubles within the U.S. regional banking sector, but we remain open to the possibility that the next bull market, whenever it takes hold, might not be led by the key themes that dominated for the better part of the past decade.

Asset mix – trimming equities and moving allocation closer to neutral

Balancing the risks and rewards as well as weighing long-term versus nearby considerations, we remain cautiously positioned and moved our tactical positioning closer to neutral this quarter. Although we continue to expect equities to outperform bonds over the longer term, the rally in stocks from October 2022 to February 2023 diminished the risk-reward profile in equities in the near term, especially since corporate profits are vulnerable in an economic downturn. Our view has recently been modified yet again with the failure of Silicon Valley Bank and associated strain on the financial system in the United States. We were already expecting some weakness in the economic backdrop, but these recent events, we think, open the scope for further deterioration and, at the margin, reduce the odds of an optimistic outcome. As a result, early in the quarter we trimmed our equity allocation by 100 basis points, placing half the proceeds in bonds and the other half in cash. With yields at their highest level in a decade, sovereign bonds should act as ballast against any downturn in stocks within a balanced portfolio. Moreover, cash has become a more suitable holding at today's higher interest rates, providing a cushion to the portfolio in the event that inflation surprises to the upside and triggers simultaneous declines in both stocks and bonds. Reflecting heightened uncertainty in the macroeconomic backdrop and an unusually wide range of potential outcomes, our asset mix is now the closest to neutral that it has been in several years. For a balanced global investor, we currently recommend an asset mix of 61 percent equities (strategic neutral position: 60 percent) and 37.5 percent fixed income (strategic neutral position: 38 percent), with the balance in cash.

Economic & capital markets forecasts

Economic forecast (RBC GAM Investment Strategy Committee)

	United States		Canada		Europe		United Kingdom		Japan		China		Emerging markets*	
	Spring 2023	Change from New Year 2023	Spring 2023	Change from New Year 2023	Spring 2023	Change from New Year 2023	Spring 2023	Change from New Year 2023	Spring 2023	Change from New Year 2023	Spring 2023	Change from New Year 2023	Spring 2023	Change from New Year 2023
Real GDP														
2022A[1]	2.07%		3.56%		3.49%		4.02%		1.05%		3.02%		3.42%	
2023E	0.70%	1.10	0.20%	0.90	0.20%	1.30	(0.60%)	0.80	0.80%	(0.10)	5.30%	1.00	4.30%	0.35
2024E	0.50%	N/C	0.30%	N/C	0.30%	N/C	0.60%	N/C	1.10%	N/C	4.60%	N/C	4.30%	N/C
CPI														
2022A[1]	7.99%		6.78%		8.38%		9.06%		2.51%		1.88%		4.83%	
2023E	3.30%	(0.60)	3.50%	0.30	3.90%	(1.40)	5.40%	(1.10)	2.40%	0.50	1.40%	(0.50)	5.10%	(0.30)
2024E	2.40%	N/C	2.30%	N/C	2.20%	N/C	2.30%	N/C	1.30%	N/C	2.20%	N/C	5.40%	N/C

A = Actual E = Estimate *GDP Weighted Average of China, India, South Korea, Brazil, Mexico and Russia.

[1] Actual 2022 GDP for U.S., China and South Korea. All other figures represent the most recent consensus estimates for 2022 GDP.

Targets (RBC GAM Investment Strategy Committee)

	February 2023	Forecast February 2024	Change from New Year 2023	1-year total return estimate* (%)
Currency markets against USD				
CAD (USD–CAD)	1.36	1.23	N/C	10.5
EUR (EUR–USD)	1.06	1.18	0.08	9.7
JPY (USD–JPY)	136.17	116.00	(14.00)	11.3
GBP (GBP–USD)	1.20	1.29	0.09	6.4
Fixed income markets				
U.S. Fed Funds Rate	4.63	5.25	0.25	0.0
U.S. 10-Year Bond	3.92	3.75	0.05	5.4
Canada Overnight Rate	4.50	4.50	N/C	0.0
Canada 10-Year Bond	3.33	3.00	N/C	6.2
Eurozone Deposit Facility Rate	2.50	3.50	0.50	0.0
Germany 10-Year Bund	2.65	2.25	(0.15)	6.2
U.K. Base Rate	4.00	4.00	(1.25)	0.0
U.K. 10-Year Gilt	3.83	3.50	(1.00)	6.6
Japan Overnight Call Rate	(0.01)	0.10	0.20	0.0
Japan 10-Year Bond	0.51	0.75	0.50	(1.9)
Equity markets				
S&P 500	3970	3975	(275)	1.9
S&P/TSX Composite	20221	21250	(775)	8.2
MSCI Europe	155	160	5	7.0
FTSE 100	7876	8050	150	5.7
Nikkei	27446	29100	(1250)	8.2
MSCI Emerging Markets	964	1020	13	9.6

*Total returns are expressed in local currencies with the exception of MSCI Emerging Markets whose return is expressed in USD. Source: RBC GAM

Recommended asset mix

Asset mix – the allocation within portfolios to stocks, bonds and cash – should include both strategic and tactical elements. Strategic asset mix addresses the blend of the major asset classes offering the risk/return tradeoff best suited to an investor's profile. It can be considered to be the benchmark investment plan that anchors a portfolio through many business and investment cycles, independent of a near-term view of the prospects for the economy and related expectations for capital markets. Tactical asset allocation refers to fine tuning around the strategic setting in an effort to add value by taking advantage of shorter-term fluctuations in markets.

Every individual has differing return expectations and tolerances for volatility, so there is no "one size fits all" strategic asset mix. Based on a 40-year study of historical returns[1] and the volatility[2] of returns (the range around the average return within which shorter-term results tend to fall), we have developed five broad profiles and assigned a benchmark strategic asset mix for each. These profiles range from very conservative through balanced to aggressive growth. It goes without saying that as investors accept increasing levels of volatility, and therefore greater risk that the actual experience will depart from the longer-term norm, the potential for returns rises. The five profiles presented below may assist investors in selecting a strategic asset mix best aligned to their investment goals.

Each quarter, the RBC GAM Investment Strategy Committee publishes a recommended asset mix based on our current view of the economy and return expectations for the major asset classes. These weights are further divided into recommended exposures to the variety of global fixed income and equity markets. Our recommendation is targeted at the Balanced profile where the benchmark (strategic neutral) setting is 60% equities, 38% fixed income, and 2% cash.

A tactical range of +/- 15% around the benchmark position allows us to raise or lower exposure to specific asset classes with a goal of tilting portfolios toward those markets that offer comparatively attractive near-term prospects.

This tactical recommendation for the Balanced profile can serve as a guide for movement within the ranges allowed for all other profiles.

The value-added of tactical strategies is, of course, dependent on the degree to which the expected scenario unfolds.

Regular reviews of portfolio weights are essential to the ultimate success of an investment plan as they ensure current exposures are aligned with levels of long-term returns and risk tolerances best suited to individual investors.

Anchoring portfolios with a suitable strategic asset mix, and placing boundaries defining the allowed range for tactical positioning, imposes discipline that can limit damage caused by swings in emotion that inevitably accompany both bull and bear markets.

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[1] **Average return**: The average total return produced by the asset class over the period 1983 – 2023, based on monthly results.

[2] **Volatility**: The standard deviation of returns. Standard deviation is a statistical measure that indicates the range around the average return within which 2/3 of results will fall into, assuming a normal distribution around the long-term average.

Global asset mix

	Benchmark policy	Allowable range	Spring 2022	Summer 2022	Fall 2022	New Year 2023	Spring 2023
Cash	**2.0%**	0.0% – 15.0%	2.0%	1.5%	1.0%	1.0%	**1.5%**
Bonds	**38.0%**	23.0% – 53.0%	34.0%	36.0%	37.5%	37.0%	**37.5%**
Stocks	**60.0%**	45.0% – 75.0%	64.0%	62.5%	61.5%	62.0%	**61.0%**

Note: Effective June 1, 2020, we reset our strategic neutral positions to reflect long-lasting changes in economy and capital markets' dynamics. Boosting strategic neutral equity exposure by 5% and reducing fixed income by same amount in our reference balanced portfolio.

Regional allocation

Global bonds	**WGBI* February 2023**	Allowable range	Spring 2022	Summer 2022	Fall 2022	New Year 2023	**Spring 2023**
North America	**47.7%**	37.7% – 57.7%	39.4%	48.7%	45.2%	51.8%	**45.2%**
Europe	**30.0%**	20.0% – 40.0%	41.7%	39.0%	40.2%	30.7%	**32.5%**
Asia	**22.3%**	12.3% – 32.3%	18.9%	12.4%	14.6%	17.6%	**22.3%**

Global equities	**MSCI** February 2023**	Allowable range	Spring 2022	Summer 2022	Fall 2022	New Year 2023	**Spring 2023**
North America	**68.5%**	58.5% – 78.5%	68.9%	68.8%	70.0%	71.0%	**68.0%**
Europe	**15.4%**	5.4% – 25.4%	14.9%	15.4%	14.0%	13.6%	**15.5%**
Asia	**7.9%**	0.0% – 17.9%	7.9%	7.9%	8.1%	7.4%	**8.2%**
Emerging markets	**8.3%**	0.0% – 18.3%	8.3%	7.9%	7.9%	8.1%	**8.4%**

Our asset mix is reported as at the end of each quarter. The mix is fluid and may be adjusted within each quarter, although we do not always report on shifts as they occur. The weights in the table should be considered a snapshot of our asset mix at the date of release of the Global Investment Outlook.

Global equity sector allocation

	MSCI February 2023**	RBC GAM ISC New Year 2023	**RBC GAM ISC Spring 2023**	Change from New Year 2023	Weight vs. benchmark
Energy	5.18%	6.78%	6.68%	(0.09)	128.9%
Materials	4.53%	3.14%	5.53%	2.39	122.1%
Industrials	10.53%	11.74%	12.53%	0.79	119.0%
Consumer discretionary	10.77%	11.16%	10.77%	(0.39)	100.0%
Consumer staples	7.34%	7.66%	5.84%	(1.82)	79.6%
Health care	13.33%	16.19%	15.33%	(0.87)	115.0%
Financials	14.37%	13.05%	14.37%	1.33	100.0%
Information technology	21.37%	22.83%	21.37%	(1.46)	100.0%
Communication services	6.94%	5.13%	5.94%	0.80	85.6%
Utilities	2.92%	1.21%	0.92%	(0.29)	31.5%
Real estate	2.72%	1.11%	0.72%	(0.39)	26.5%

*FTSE World Government Bond Index. **MSCI World Index. Source: RBC GAM Investment Strategy Committee

At RBC GAM, we have a team dedicated to setting and reviewing the strategic asset mix for all of our multi-asset solutions. With an emphasis on consistency of returns, risk management and capital preservation, we have developed a strategic asset allocation framework for five client risk profiles that correspond to broad investor objectives and risk preferences. These five profiles range from Very Conservative through Balanced to Aggressive Growth.

Very Conservative

Asset class	Bench-mark	Range	Last quarter	Current recommendation
Cash & Cash Equivalents	2%	0-15%	1.0%	1.5%
Fixed Income	73%	68-88%	72.0%	72.5%
Total Cash & Fixed Income	75%	60-90%	73.0%	74.0%
Canadian Equities	10%	0-20%	10.8%	10.3%
U.S. Equities	8%	0-18%	8.7%	8.3%
International Equities	7%	0-17%	7.5%	7.4%
Emerging Markets	0%	0%	0.0%	0.0%
Total Equities	25%	10-40%	27.0%	26.0%

	Return	Volatility
40-year average	7.6%	4.9%
Last 12 months	-5.0%	9.5%

Very Conservative investors will seek income with maximum capital preservation and the potential for modest capital growth, and be comfortable with small fluctuations in the value of their investments. This portfolio will invest primarily in fixed-income securities, and a small amount of equities, to generate income while providing some protection against inflation. Investors who fit this profile generally plan to hold their investment for the medium to long term.

Conservative

Asset class	Bench-mark	Range	Last quarter	Current recommendation
Cash & Cash Equivalents	2%	0-15%	1.0%	1.5%
Fixed Income	58%	43-83%	57.0%	57.5%
Total Cash & Fixed Income	60%	45-75%	58.0%	59.0%
Canadian Equities	13%	3-23%	13.7%	13.2%
U.S. Equities	15%	5-25%	15.7%	15.3%
International Equities	12%	2-22%	12.6%	12.5%
Emerging Markets	0%	0%	0.0%	0.0%
Total Equities	40%	25-55%	42.0%	41.0%

	Return	Volatility
40-year average	8.1%	6.1%
Last 12 months	-3.9%	10.6%

Conservative investors will pursue modest income and capital growth with reasonable capital preservation, and be comfortable with moderate fluctuations in the value of their investments. The portfolio will invest primarily in fixed-income securities, with some equities, to achieve more consistent performance and provide a reasonable amount of safety. The profile is suitable for investors who plan to hold their investment over the medium to long term.

Balanced

Asset class	Bench-mark	Range	Last quarter	Current recommendation
Cash & Cash Equivalents	2%	0-15%	1.0%	1.5%
Fixed Income	38%	23-53%	37.0%	37.5%
Total Cash & Fixed Income	40%	25-55%	38.0%	39.0%
Canadian Equities	15%	5-25%	15.6%	15.1%
U.S. Equities	25%	15-35%	25.8%	25.3%
International Equities	15%	5-25%	15.6%	15.5%
Emerging Markets	5%	0-15%	5.0%	5.1%
Total Equities	60%	45-75%	62.0%	61.0%

	Return	Volatility
40-year average	8.5%	7.7%
Last 12 months	-3.0%	12.1%

The **Balanced** portfolio is appropriate for investors seeking balance between long-term capital growth and capital preservation, with a secondary focus on modest income, and who are comfortable with moderate fluctuations in the value of their investments. More than half the portfolio will usually be invested in a diversified mix of Canadian, U.S. and global equities. This profile is suitable for investors who plan to hold their investment for the medium to long term.

Growth

Asset class	Bench-mark	Range	Last quarter	Current recommendation
Cash & Cash Equivalents	2%	0-15%	1.0%	1.5%
Fixed Income	23%	8-38%	22.0%	22.5%
Total Cash & Fixed Income	25%	10-40%	23.0%	24.0%
Canadian Equities	18%	8-28%	18.5%	18.0%
U.S. Equities	30%	20-40%	30.8%	30.2%
International Equities	19%	9-29%	19.7%	19.6%
Emerging Markets	8%	0-18%	8.0%	8.2%
Total Equities	75%	60-90%	77.0%	76.0%

	Return	Volatility
40-year average	8.7%	9.5%
Last 12 months	-2.2%	13.4%

Investors who fit the **Growth** profile will seek long-term growth over capital preservation and regular income, and be comfortable with considerable fluctuations in the value of their investments. This portfolio primarily holds a diversified mix of Canadian, U.S. and global equities and is suitable for investors who plan to invest for the long term.

Aggressive Growth

Asset class	Bench-mark	Range	Last quarter	Current recommendation
Cash & Cash Equivalents	2%	0-15%	1.5%	1.0%
Fixed Income	0%	0-15%	0.0%	0.0%
Total Cash & Fixed Income	2%	0-17%	1.5%	1.0%
Canadian Equities	29%	19-39%	29.0%	29.1%
U.S. Equities	38%	28-48%	37.9%	38.1%
International Equities	20%	10-30%	20.9%	20.6%
Emerging Markets	11%	1-21%	10.7%	11.2%
Total Equities	98%	83-100%	98.5%	99.0%

	Return	Volatility
40-year average	9.1%	12.0%
Last 12 months	-1.1%	15.6%

Aggressive Growth investors seek maximum long-term growth over capital preservation and regular income, and are comfortable with significant fluctuations in the value of their investments. The portfolio is almost entirely invested in stocks and emphasizes exposure to global equities. This investment profile is suitable only for investors with a high risk tolerance and who plan to hold their investments for the long term.

Capital markets performance

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The U.S. dollar was largely unchanged during the three months ended February 28, 2023, with a 1.4% gain against the Canadian dollar offset by declines of about the same magnitude versus the euro and the yen. Against the pound, the greenback was flat. The U.S. dollar weakened broadly versus all major currencies in December and January as declining inflation reduced the likelihood that the U.S. Federal Reserve (Fed) would keep raising interest rates. The greenback then rallied in February, as stronger-than-expected U.S. economic growth reignited speculation that the Fed would stick with rate hikes to head off inflation. The loonie fell versus the greenback amid concern that rising borrowing costs would crimp consumer spending and thereby hurt the domestic economy. Against this backdrop, the Bank of Canada introduced the possibility that it was finished hiking interest rates, eroding the amount of relative income offered by Canadian assets. The euro gained on the U.S. dollar as a severe energy crisis was averted in Europe and the European Central Bank signaled it would be aggressive in hiking interest rates to tame inflation. Higher interest rates in Japan made Japanese assets more appealing and spurred Japanese investors to repatriate funds, boosting the yen. Over the one-year period the U.S. dollar appreciated 18.4% against the yen, 11.5% against sterling, 7.7% against the loonie and 6.0% against the euro.

Most global bond markets were flat to slightly negative in the latest quarter in U.S.-dollar terms. Bond yields rose across the major regions as better-than-expected data worried investors that interest rates would need to remain higher for longer to slow economic activity and bring down inflation. The yield on the 10-year Treasury bond ended the period at 3.92%, up from 3.61% the previous quarter, after dipping as low as 3.32%. European and Canadian bonds, as measured by the FTSE European Government Bond Index and FTSE Canada Universe Bond Index, fared the worst in the quarter, with losses of 3.4% and 2.0%, respectively. The FTSE U.S. Government Bond Index and FTSE World Government Bond Index were flat for the period, while Japanese bonds performed best with a return of 1.0% for the FTSE Japanese Government Bond Index. Over the 12-month period, all major fixed-income benchmarks recorded large declines. The FTSE European Government Bond Index's 22.9% dive was the worst in U.S.-dollar terms, while the Barclays Capital Aggregate Bond Index outperformed with a 9.7% drop.

Equities in the developed markets of Europe and Asia recorded gains, measured in U.S.-dollar terms, during the three-month period as they benefited from improving profit outlooks, offset by stock declines in the U.S. and emerging markets. European stocks like those in the MSCI France Index and the MSCI Germany Index were the biggest winners, rising

10.9% and 10.2%, respectively, as economic data was better than expected. The U.S. benchmark, the S&P 500 Index, lost 2.3% amid concern that a strong labour market and higher-than-expected inflation would accelerate Fed interest-rate hikes. In emerging markets, the boost from the removal of pandemic restrictions in China was more than offset by concern about the possibility of a global recession as the MSCI Emerging Market Index lost 0.5%. Over the one-year period, the performance ranged from a loss of 15.3% for the MSCI Emerging Markets Index to a 4.8% gain for the MSCI France Index, all in U.S.-dollar terms.

U.S. large-cap stocks lagged mid- and small-cap issues in the latest quarter, with the mid-cap S&P 400 Index up 1.3% and the small-cap S&P 600 Index gaining 0.9%. The Russell 3000 Growth Index fell 1.0% and the Russell 3000 Value Index decreased 2.5% amid continued uncertainty in the macroeconomic environment. Value stocks outpaced growth stocks by 10 percentage points over the past year, a period of rapid interest-rate hikes. The Industrials sector had the biggest gain during the three-month period, at 2.8%, while Health Care had the largest decline, at 5.8%. Over a one-year time frame, the Energy sector led with an 18.3% return, while Communication Services lagged with a 23.1% loss.

Exchange rates

Periods ending February 28, 2023

	Current USD	3 months (%)	YTD (%)	1 year (%)	3 years (%)	5 years (%)
USD–CAD	1.3645	1.44	0.78	7.65	0.55	1.24
USD–EUR	0.9454	(1.62)	1.21	6.01	1.44	2.90
USD–GBP	0.8314	0.20	0.51	11.53	2.15	2.74
USD–JPY	136.1550	(1.40)	3.75	18.43	8.07	5.00

Note: all changes above are expressed in US dollar terms

Canada fixed income markets

Periods ending February 28, 2023

	USD					CAD		
Fixed income markets: Total return	3 months (%)	YTD (%)	1 year (%)	3 years (%)	5 years (%)	3 months (%)	1 year (%)	3 years (%)
FTSE Canada Univ. Bond Index TR	(2.04)	0.26	(13.57)	(3.55)	(0.62)	(0.63)	(6.96)	(3.02)

U.S. fixed income markets

Periods ending February 28, 2023

	USD					CAD		
Fixed income markets: Total return	3 months (%)	YTD (%)	1 year (%)	3 years (%)	5 years (%)	3 months (%)	1 year (%)	3 years (%)
FTSE U.S. Government TR	(0.02)	0.53	(9.75)	(3.77)	0.55	1.42	(2.84)	(3.24)
BBg U.S. Agg. Bond Index TR[1]	(0.04)	0.41	(9.72)	(3.77)	0.53	1.40	(2.81)	(3.24)

Global fixed income markets

Periods ending February 28, 2023

	USD					CAD		
Fixed income markets: Total return	3 months (%)	YTD (%)	1 year (%)	3 years (%)	5 years (%)	3 months (%)	1 year (%)	3 years (%)
FTSE WGBI TR	(0.02)	0.06	(13.95)	(5.63)	(1.97)	1.42	(7.37)	(5.11)
FTSE European Government TR	(3.39)	(1.94)	(22.95)	(9.11)	(5.39)	(0.53)	(19.95)	(9.69)
FTSE Japanese Government TR	0.99	(2.42)	(20.60)	(10.71)	(5.92)	2.45	(17.60)	(11.31)

Canada equity markets

Periods ending February 28, 2023

	USD					CAD		
Equity markets: Total return	3 months (%)	YTD (%)	1 year (%)	3 years (%)	5 years (%)	3 months (%)	1 year (%)	3 years (%)
S&P/TSX Composite	(1.76)	3.97	(8.23)	10.22	7.49	(0.35)	(1.21)	10.83
S&P/TSX 60	(2.44)	3.80	(8.61)	10.65	8.01	(1.03)	(1.62)	11.26
S&P/TSX Small Cap	1.56	4.14	(15.27)	13.24	4.28	3.02	(8.79)	13.87

U.S. equity markets

Periods ending February 28, 2023

	USD					CAD		
Equity markets: Total return	3 months (%)	YTD (%)	1 year (%)	3 years (%)	5 years (%)	3 months (%)	1 year (%)	3 years (%)
S&P 500 TR	(2.28)	3.69	(7.69)	12.15	9.82	(0.88)	(0.63)	12.77
S&P 400 TR	1.31	7.25	(0.62)	14.47	8.58	2.76	6.98	15.10
S&P 600 TR	0.89	8.15	(3.50)	13.84	7.86	2.34	(1.23)	12.56
Russell 3000 Value TR	(2.46)	1.79	(2.92)	11.07	7.16	(1.06)	4.51	11.68
Russell 3000 Growth TR	(0.97)	7.15	(13.01)	11.69	11.11	0.46	(6.35)	12.31
NASDAQ Composite Index TR	0.11	9.61	(15.96)	11.04	10.50	1.55	(9.53)	11.65

Note: All rates of return presented for periods longer than 1 year are annualized. [1] Bloomberg U.S. Agg. Bond Index TR. Source: RBC GAM

Global equity markets

Periods ending February 28, 2023

	USD					CAD		
Equity markets: Total return	3 months (%)	YTD (%)	1 year (%)	3 years (%)	5 years (%)	3 months (%)	1 year (%)	3 years (%)
MSCI World TR *	0.06	4.50	(7.33)	9.90	6.88	0.49	(0.53)	10.42
MSCI EAFE TR *	5.93	5.84	(3.14)	6.84	2.64	6.38	3.97	7.35
MSCI Europe TR *	8.01	8.00	(1.07)	8.33	3.61	8.47	6.19	8.84
MSCI Pacific TR *	2.27	1.94	(6.62)	4.21	0.90	2.71	0.23	4.70
MSCI UK TR *	6.35	6.78	(0.08)	8.36	3.04	6.81	7.25	8.87
MSCI France TR *	10.93	11.12	4.79	10.81	5.23	11.40	12.49	11.34
MSCI Germany TR *	10.23	10.28	(4.48)	4.58	(0.76)	10.70	2.53	5.07
MSCI Japan TR *	2.41	2.14	(9.30)	3.42	0.06	2.84	(2.64)	3.91
MSCI Emerging Markets TR *	(0.52)	0.90	(15.28)	0.97	(1.87)	(0.10)	(9.07)	1.45

Global equity sectors

Periods ending February 28, 2023

	USD					CAD		
Sector: Total return	3 months (%)	YTD (%)	1 year (%)	3 years (%)	5 years (%)	3 months (%)	1 year (%)	3 years (%)
Energy TR *	(5.16)	(1.78)	18.25	20.76	6.70	(4.76)	26.93	21.33
Materials TR *	1.72	4.45	(4.30)	15.20	6.11	2.15	2.73	15.75
Industrials TR *	2.82	4.95	(0.62)	9.72	5.14	3.26	6.67	10.24
Consumer discretionary TR *	2.49	12.10	(14.68)	9.62	6.67	2.93	(8.42)	10.14
Consumer staples TR *	(2.94)	(1.30)	(3.71)	7.38	5.66	(2.53)	3.36	7.89
Health care TR *	(5.83)	(4.70)	(2.23)	10.10	8.96	(5.43)	4.94	10.62
Financials TR *	3.99	6.70	(2.09)	10.69	3.96	4.43	5.09	11.22
Information technology TR *	1.23	10.05	(12.69)	14.10	13.76	1.66	(6.28)	14.64
Communication services TR*	1.41	8.31	(23.12)	0.84	2.89	1.84	(17.47)	1.32
Utilities TR *	(4.22)	(4.38)	(5.33)	2.47	6.78	(3.82)	1.62	2.95
Real estate TR *	(0.37)	3.01	(13.96)	0.20	2.89	0.05	(7.64)	0.68

* Net of taxes. Note: all rates of return presented for periods longer than 1 year are annualized. Source: Bloomberg/MSCI

Economic outlook
A surplus of optimism?

Eric Lascelles
Chief Economist
RBC Global Asset Management Inc.

The good economic news significantly outmuscled the bad news over the past few quarters. Among the highlights, economic conditions have held up better than expected, inflation has declined (Exhibit 1) and central banks have been signaling that their peak policy rates are within sight.

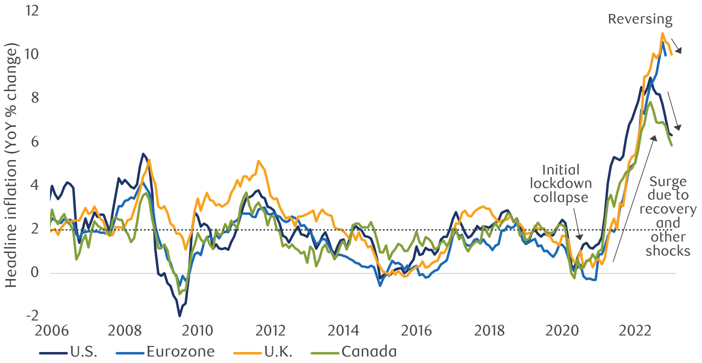
But after such a string of victories, the state of excessive pessimism that previously pervaded financial markets has now arguably been replaced by a state of excessive optimism. That optimism is now coming into question on a number of fronts, including recent stress in the U.S. banking system.

Inflation is not yet fully solved given the pressures welling up from a hot economy, especially as Chinese demand revives and the war in Ukraine intensifies. Reflecting all of this, inflation's descent has recently begun to wobble.

While recent economic resilience would seem to raise the possibility of a "no landing" scenario in which the economy defies the odds and continues to rollick forward, this scenario ultimately seems unlikely as central banks will have to continue tightening until the economy stops stirring inflation.

Reflecting recent economic resilience, we have pushed back when we think a recession will arrive to the second half of 2023, but remain more pessimistic than the consensus both with regard to the likelihood of a recession and its depth.

Exhibit 1: Inflation remains elevated in major economies, but turning lower



Note: As of Jan 2023. Source: Bureau of Labor Statistics, Office for National Statistics, Statistics Canada, Statistical Office of the European Communities, Haver Analytics, RBC GAM

Motivating the recession call are the growth-stunting effects of the interest-rate shock, which continue to cool housing markets and are having a mounting effect elsewhere including a recent sharp tightening of lending standards (Exhibit 2).

Despite a recent stutter, we still believe inflation can fall significantly in 2023, though not all the way down to normal.

With bond yields now more attractive than they have been in some time and the prospect of a recession accompanied by declining inflation, we have incrementally increased our fixed-income and cash allocations. The greater exposures to cash and bonds were sourced from equities, which are now on a more cautious footing given the potential for a recession that would temporarily erode corporate earnings.

A run of good news

There has been much to celebrate from a macroeconomic standpoint in recent months. The positives include the performance of the labour market and consumer spending, China's reopening, Europe's economic resilience in the face of an energy shock and marginally easier financial conditions.

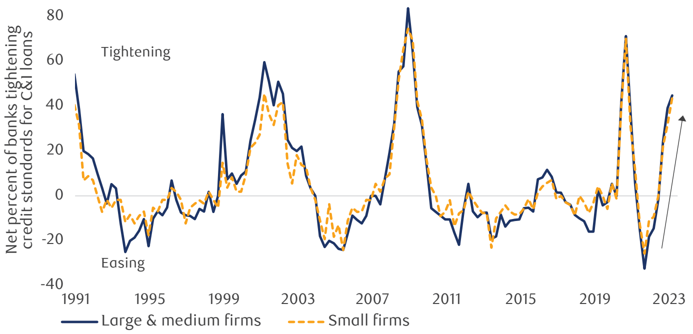
U.S. job creation continues to run at a heady pace, and even accelerated in early 2023 (Exhibit 3). It has been a similar trend in Canada, and unemployment rates across most of the developed world are plumbing depths not seen in decades.

There continues to be a serious disconnect between the intentions of consumers, who have long reported plans to spend less and eschew big-ticket purchases, and actual spending, which has remained mostly robust in the face of higher energy prices and rising borrowing costs.

China reopened its economy sooner, more abruptly and more fully than had been expected at the close of 2022, abandoning three years of on-again, off-again pandemic restrictions. China's about-face positioned the country for a significant economic rebound that is now unfolding. We forecast 5.3% real GDP growth in 2023 for China, a sizeable leap from the anemic 2.9% performance in 2022. This is a welcome counterweight to a slowing global economy elsewhere.

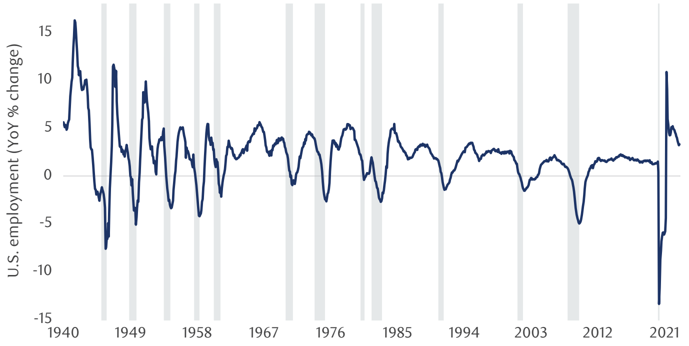
Warmer weather in Europe paired with efforts to secure alternative energy supplies have rendered the continent's

Exhibit 2: U.S. business-lending standards tightening



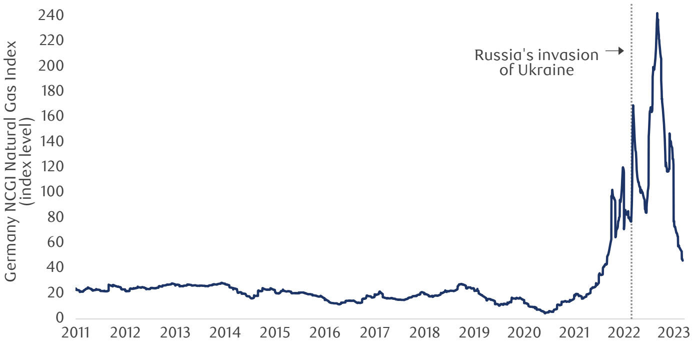
Note: January 2023 Senior Loan Officer Opinion Survey on Bank Lending Practices. Source: Federal Reserve Board, Macrobond, RBC GAM

Exhibit 3: U.S. job growth remains strong



Note: As of Jan 2023. Shaded area represents recession. Source: BLS, Macrobond, RBC GAM

Exhibit 4: Natural-gas prices fall on mild weather



Note: As of 03/06/2023. Source: Intercontinental Exchange, Macrobond, RBC GAM plight much less precarious in the face of Russian sanctions (Exhibit 4). These policy and behavioural changes have permitted the eurozone to avoid an energy-induced recession, though growth has nevertheless decelerated. The continent would almost certainly have succumbed to a recession if governments hadn't shielded their economies from spiking energy costs via nearly a trillion dollars of subsidies, converting part of the economic shock into public debt. The situation is much the same in the U.K.

Finally, financial conditions have eased slightly as financial markets celebrated these recent positive developments. It has been quite a run of good economic news.

But too much optimism now?

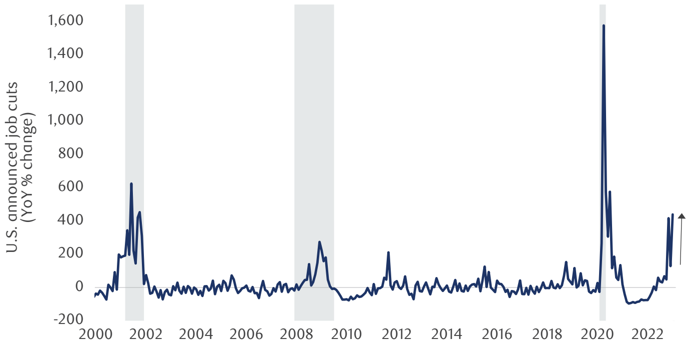
But the distinct risk is that market attitudes have now swung too far, from a state of excessive pessimism last fall to a state of excessive optimism today.

Recent trouble at a handful of U.S. regional banks illustrates the extent to which tighter monetary policy can cause worrisome financial contagion. Policymakers seem to have the problem in hand for the moment, but other problems could arise among leveraged players.

While the labour market continues to add a heroic number of positions, job creation is a lagging rather than a leading economic indicator. In the U.S., the first monthly job losses usually don't begin until a recession is already two months old. Meanwhile, there are little hints of labour-market weakness to come, such as a recent jump in announced layoffs (Exhibit 5) and falling temporary employment – a classic leading indicator for broader job losses and recession (Exhibit 6).

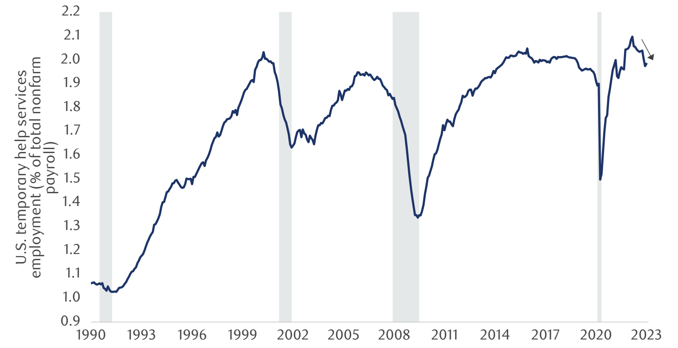
U.S. consumers may be spending stubbornly, but they give the impression of being increasingly stretched. The personal savings rate has fallen sharply and is now well below the pre-pandemic norm (Exhibit 7). While there are still residual surplus savings from the lockdown period, these are concentrated in higher income households. Meanwhile, credit-card balances have surged 15% over the past year, signaling that consumers may have to downsize their spending appetites before too long (Exhibit 8).

Exhibit 5: Announced U.S. job cuts spiked recently



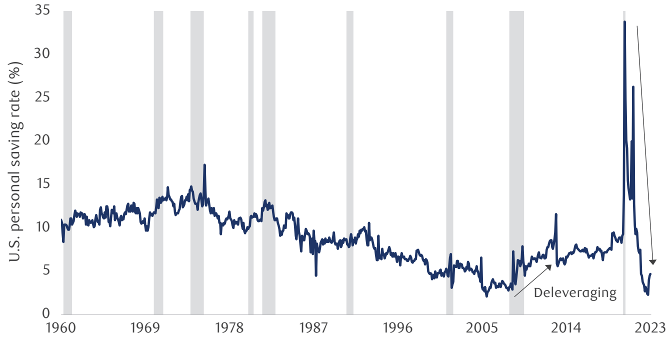
Note: As of Jan 2023. Source: Challenger, Gray & Christmas, Inc., Macrobond, RBC GAM

Exhibit 6: U.S. temporary employment share has been declining



Note: As of Jan 2023. Shaded area represents recession. Source: BLS, Macrobond, RBC GAM

Exhibit 7: U.S. personal savings rate is quite low

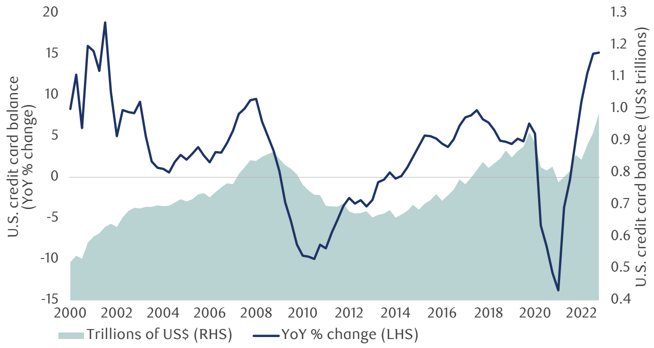


Note: As of Jan 2023. Shaded area represents recession. Source: BEA, Macrobond, RBC GAM

In China, there is probably less pent-up demand than many believe – more on that later.

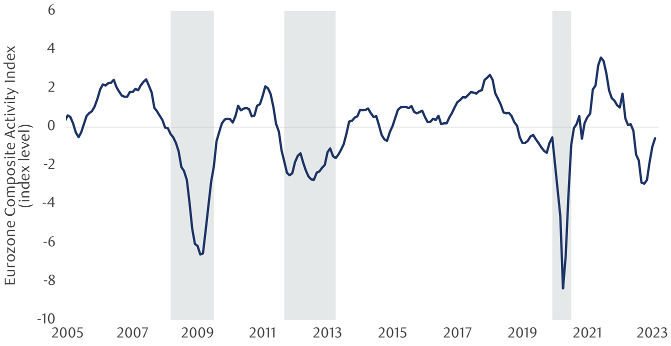
With regard to Europe, an energy-induced recession was seemingly avoided at the end of 2022 (Exhibit 9), but an interest-rate-induced recession is still probable in 2023. Furthermore, the eurozone and U.K. remain likely to underperform North America from an economic standpoint due to more intense inflation pressures there. The U.K. also grapples with widespread public strikes, simmering damage from Brexit and a large current-account deficit (Exhibit 10).

Exhibit 8: U.S. credit-card balances surging



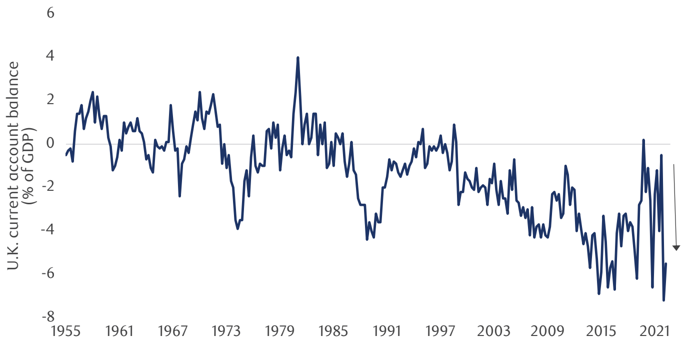
Note: As of Q4 2022. Source: Federal Reserve Bank of New York, Macrobond, RBC GAM

Exhibit 9: Eurozone economic activity temporarily rebounding



Note: As of Feb 2023. Index reflects the first principal component from PCA analysis on select indicators of eurozone economic activity. Shaded area represents recession. Source: CEPR, ZEW, Deutsche Bundesbank, IHS Markit, Macrobond, RBC GAM

Exhibit 10: U.K. current-account deficit is unsustainable



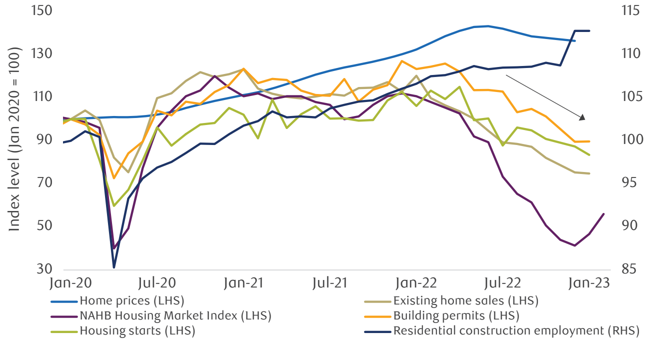
Note: As of Q3 2022. Source: ONS, Macrobond, RBC GAM

More broadly, interest rates have increased so significantly and so abruptly that it remains difficult to fathom that some measure of economic pain is not on its way. A sneak peek is already visible in the famously rate-sensitive housing market (Exhibit 11), in bulging inventories, and via diminished business expectations (Exhibit 12) and shrinking capital-expenditure plans (Exhibit 13). These foreboding signals are not restricted to the U.S. Similar signs are visible in other developed countries, such as mounting expectations among Canadian businesses that their sales are about to start falling (Exhibit 14).

Recession still expected

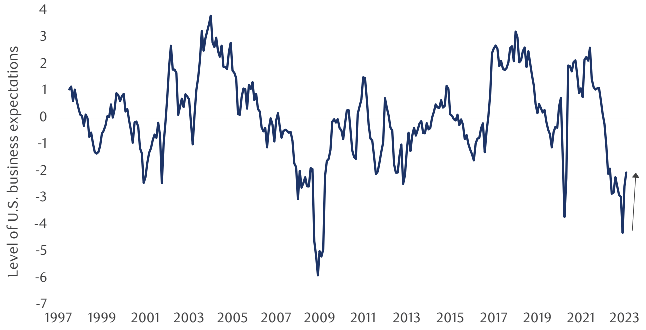
Given these economic challenges, it is unsurprising that we continue to anticipate a recession across most of the developed world, with a 70% probability. An economic contraction is now most likely to occur in the second half of the year.

Exhibit 11: U.S. housing metrics reveal weakness



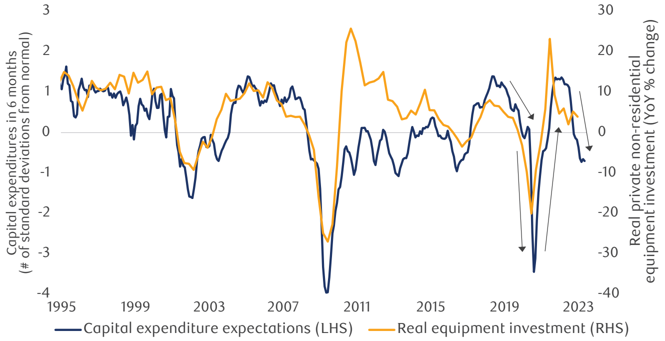
Note: Case-Shiller Home Price Index as of Dec 2022; building permits, housing starts, and existing home sales as of Jan 2023; employment and NAHB HMI as of Feb 2023. Source: BLS, Census Bureau, NAHB, NAR, S&P, Macrobond, RBC GAM

Exhibit 12: U.S. business expectations inched up recently, though still downbeat



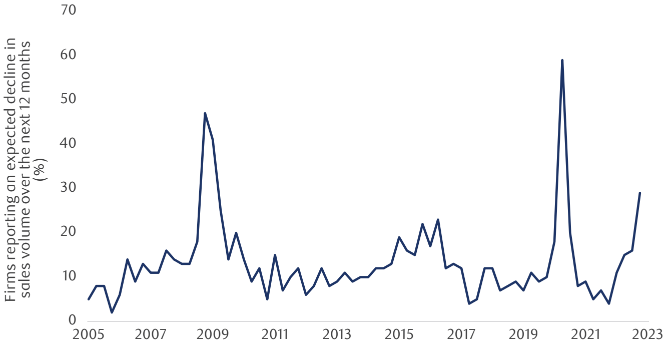
Note: As of Feb 2023. Principal component analysis using NFIB optimism and business conditions outlook, ISM Manufacturing and Services new orders, and The Conference Board CEO expectations for economy. Source: The Conference Board, ISM, NFIB, Macrobond, RBC GAM

Exhibit 13: U.S. capex expectations dropped off quickly



Note: Capital expenditures in 6 months (Feb 2023, in 3-month lead) are 3-month moving average of an aggregate of normalized indicators of future capex from surveys on manufacturing and non-manufacturing firms conducted by NFIB, the Federal Reserve Bank of Chicago, Dallas, Kansas City, New York, Philadelphia, and Richmond. Real equipment investment as of Q4 2022. Source: Haver Analytics, RBC GAM

Exhibit 14: Canadian firms increasingly expecting sales to fall



Note: As of Q4 2022. Source: Bank of Canada Business Outlook Survey, RBC GAM

Our recession scorecard continues to make the case for a U.S. recession, with fully half of the early warning signals captured by the scorecard now signaling “yes” and most of the rest signaling “likely” or “maybe” (Exhibit 15). Among the prominent inputs, inverted yield curves are traditionally recessionary, inflation spikes nearly always end in recession, and most monetary tightening cycles yield the same outcome.

Just one input still gives a clear “no” signal – the fact that the unemployment rate isn’t yet rising.

Our business-cycle scorecard makes much the same claim as a quarter ago: a plurality of the inputs say that the economy is behaving as though it is at the end of the business cycle, a condition that normally precedes a recession by no more than a few quarters (Exhibit 16).

The economy has about a 30% chance of avoiding recession, but achieving a soft landing is harder than conventionally imagined. Historically, when economies have slipped even moderately below a normal rate of growth, they usually end up stalling out into a fully fledged recession. The U.S. economy is already on the cusp of this threshold (Exhibit 17).

Despite all that, upgraded growth forecasts

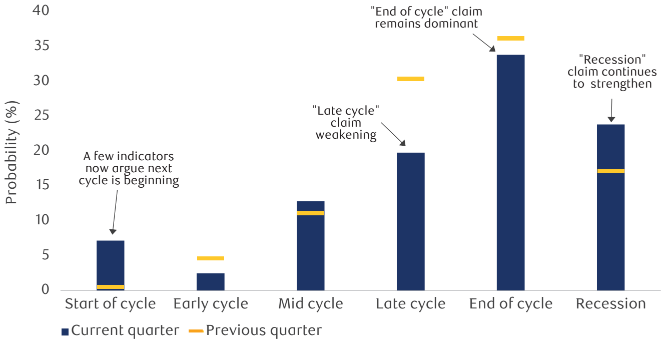
Even with expectations of a recession later this year, our GDP outlooks have mostly been upgraded for 2023 (Exhibit 18). This is mainly due to the better-than-expected start to the year, plus the assumed late onset of a recession. At the

Exhibit 15: Recession signals point mostly to “yes” or “likely”

Signal	Indicating U.S. recession?
2yr-10yr curve inverts	Yes
3m-10yr curve inverts	Yes
Fed short-term curve inverts	Yes
Inflation spike	Yes
Duncan leading indicator falls	Yes
Financial conditions tighten	Yes
Monetary tightening cycle	Likely
Google “recession” news trend	Likely
RBC GAM recession model	Likely
Oil price spike	Maybe
Jobless claims jump	Maybe
Unemployment increase	No, but trending sideways

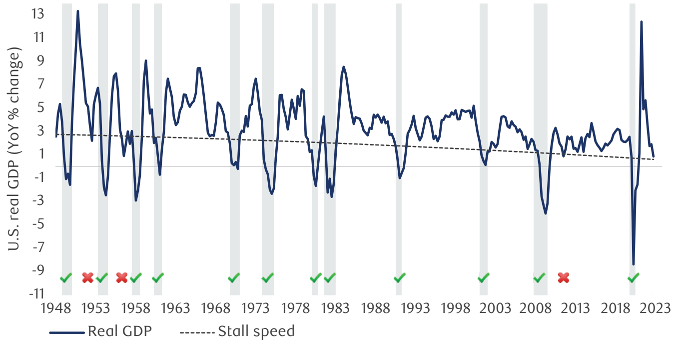
Note: As at March 3, 2023. Source: Bloomberg, RBC GAM

Exhibit 16: U.S. business cycle score



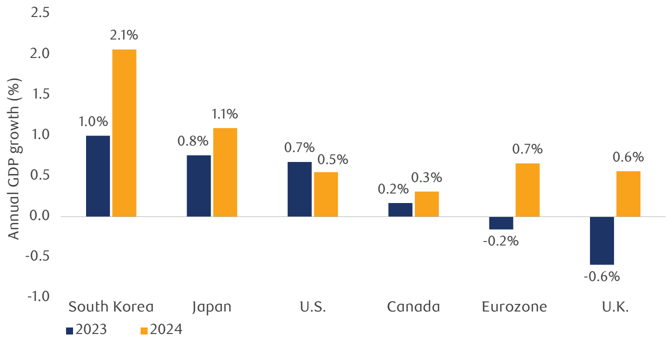
Note: As at 02/03/2023. Calculated via scorecard technique by RBC GAM. Source: RBC GAM

Exhibit 17: “Stall speed” argues against soft landing



Note: As of Q4 2022. Stall speed calculated as a smoothed function of the GDP trend growth rate minus 1.6 ppt. Shaded area represents recession. Source: BEA, Macrobond, RBC GAM

Exhibit 18: RBC GAM GDP forecast for developed markets



Note: As of 02/22/2023. Source: RBC GAM

same time, the lateness of any recession in 2023 would mean that output is significantly dimmed over the first part of 2024, making that year look bad even though we expect a fairly sprightly economic recovery to take hold over the year.

Examined on a quarter-by-quarter basis, our expectations are not actually much changed beyond a later beginning to the recession. The recession's depth, duration and the speed of the subsequent recovery are similar to prior assumptions, and remain moderately more pessimistic than the consensus even though this is obscured within the annual figures.

The anticipated growth trajectory is similar for most emerging-market nations, albeit without an outright contractions in output (Exhibit 19).

Inflation's stuttering decline

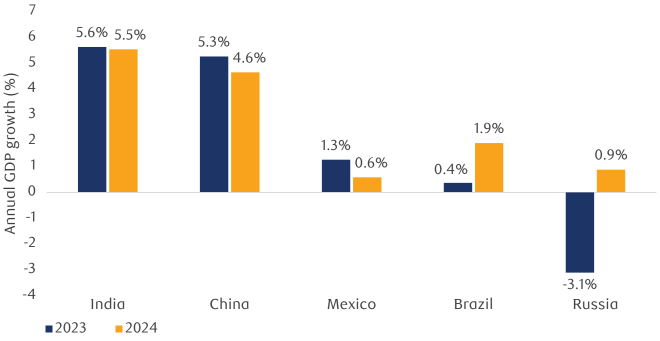
After a whirlwind ascent, inflation has now been mercifully declining for several quarters. This process is admittedly not entirely smooth – recent months have swung between happy improvements and patches of stagnation. But the underlying trend remains mostly friendly and a range of factors argue this decline can continue.

Crucially, the main drivers that initially spurred inflation higher have now all turned.

First, the massive commodity shock has significantly reversed (Exhibit 20), with energy prices and a range of other raw materials now lower than a year ago as demand has cooled and production has caught up. Prices in supermarkets have been slow to follow the lead of lower agricultural prices, but even this is seemingly starting to turn (Exhibit 21).

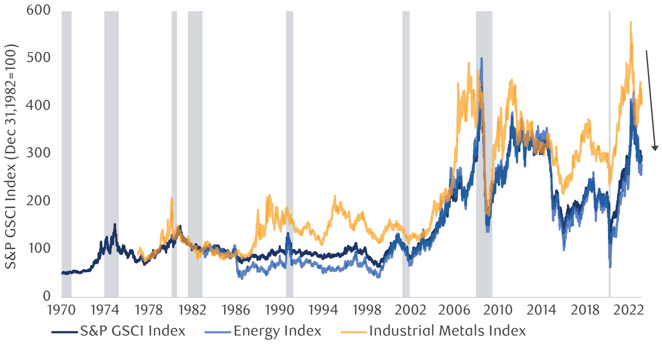
> "Although we think our base-case inflation forecasts are reasonable, it must be conceded that the outlook is more uncertain than usual."

Exhibit 19: RBC GAM GDP forecast for emerging markets



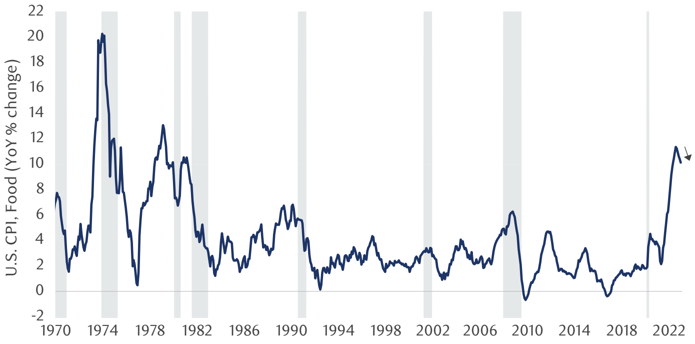
Note: As of 02/22/2023. Source: RBC GAM

Exhibit 20: Commodity prices decline amid recession concerns and warmer weather



Note: As of 03/06/2023. Shaded area represents recession. Source: S&P, Macrobond, RBC GAM

Exhibit 21: U.S. food inflation falls tentatively



Note: As of Jan 2023. Shaded area represents recession. Source: BLS, Macrobond, RBC GAM

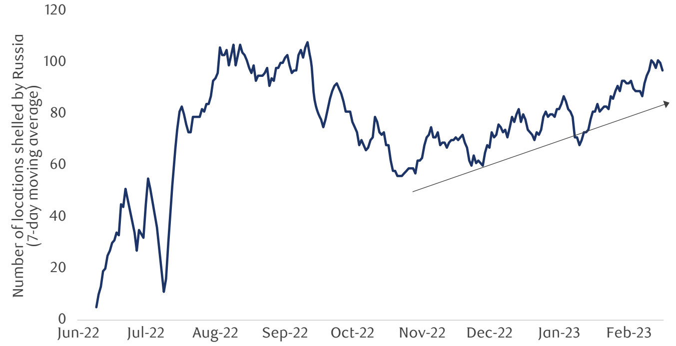
A weaker economy could send key resource prices lower still, though China's reopening and the recent intensification of the war in Ukraine (Exhibit 22) constitute upside risks.

Second, supply-chain problems continue to improve markedly (Exhibit 23). The temporarily outsized demand for goods that defined the pandemic recovery is now ebbing toward more normal proportions. The cost of shipping is nearly back to normal, port backlogs are largely resolved and Chinese factories are no longer locked down. Chinese producer prices, the starting point for many a supply chain, have plummeted from rapid growth to outright deflation. This reversal should trickle down the supply chain to consumers over time. If anything, semiconductor makers now worry more about a coming glut of chips than a shortfall.

Third, excessive monetary stimulus and excessive fiscal stimulus have been ratcheted down. In turn, there is much less money sloshing around the economy relative to a few years ago (Exhibit 24). This reversal in money-supply growth strongly suggests that inflation could descend steeply from here.

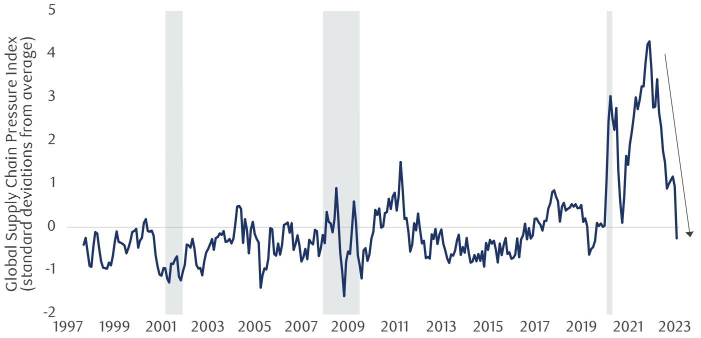
There are also other arguments for softening inflation. The prospect of economic weakness should dampen inflation somewhat. Already, businesses' pricing power is tumbling – as evidenced by greatly diminished plans to raise prices (Exhibit 25).

Exhibit 22: Russia has increased shelling since late 2022



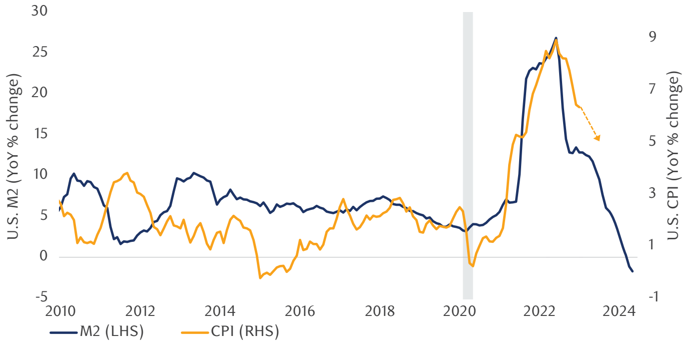
Note: As of 02/16/2023. Source: Briefings from General Staff of Ukrainian Army, Ragnar Gudmundsson, RBC GAM

Exhibit 23: Global supply-chain pressure has largely resolved



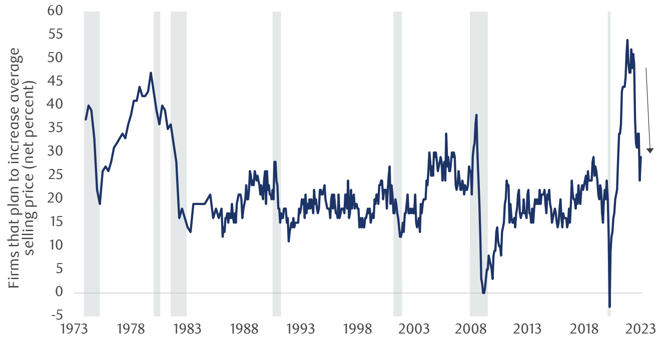
Note: As of Feb 2023. Shaded area represents U.S. recession. Source: Gianluca Benigno, Julian di Giovanni, Jan J. J. Groen, and Adam I. Noble, "A New Barometer of Global Supply Chain Pressures," Federal Reserve Bank of New York Liberty Street Economics; Macrobond, RBC GAM

Exhibit 24: U.S. money supply has collapsed, inflation has started to descend as well



Note: As of Jan 2023. M2 year-over-year % change leads by 16 months. Shaded areas represent U.S. recessions. Source: Macrobond, RBC GAM

Exhibit 25: Fraction of U.S. businesses planning to raise prices fell precipitously



Note: As of Jan 2023. Shaded area represents recession. Source: NFIB Small Business Economic Survey, Macrobond, RBC GAM

Tumbling home prices should start to weigh on the (famously lagged) shelter component of CPI around the middle of 2023.

With all of this going swimmingly, we forecast that inflation falls more quickly than the market anticipates (Exhibit 26). Still, inflation probably won't snap back to 2.0% overnight due to a variety of offsetting forces that have congealed over the past year.

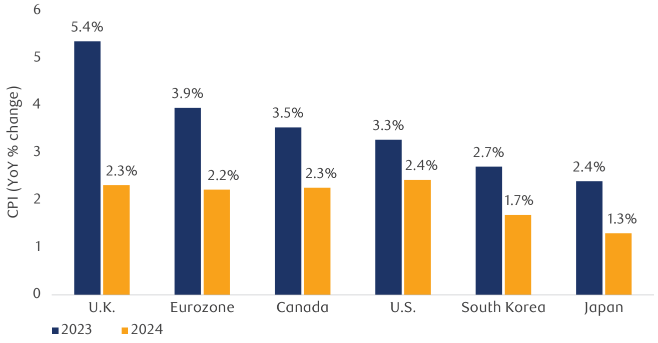
First, it is reasonable to expect some scarring to occur: this bout of higher inflation will probably leave a mark on the psyches of people and businesses in a way that inclines inflation to run a bit hotter than otherwise.

Second, the labour market is tight and workers are still keen to recover some of the purchasing power lost to inflation over the past year, and so wages will take some time to fully normalize (Exhibit 27).

Finally, high inflation became so pervasive that it infected nearly every corner of the price basket (Exhibit 28). This saturation is beginning to reverse, but has a long way to go. To illustrate, the price of gasoline has fallen fairly quickly, but it then takes time for transportation providers to cut their prices, for wholesalers to follow suit and for retailers or service providers to offer relief to consumers. Service-based inflation is proving the last to turn, in part because it is at the very end of this chain of pricing decisions, and in part because people continue to embrace activities that were impossible during pandemic lockdowns.

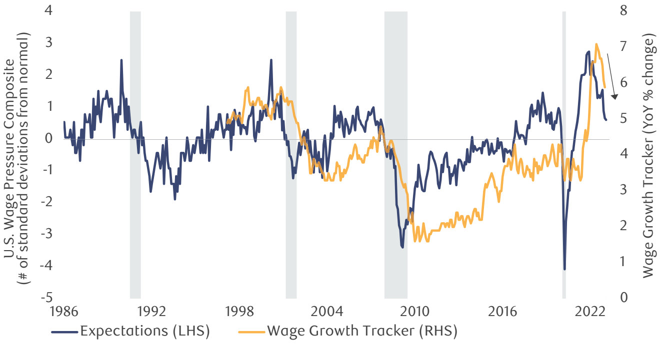
Although we think our base-case inflation forecasts are reasonable, it must be conceded that the outlook is more uncertain than usual. There remain entirely coherent alternate scenarios in which inflation remains significantly too hot, or alternatively, that inflation plummets into temporary deflation.

Exhibit 26: RBC GAM CPI forecast for developed markets



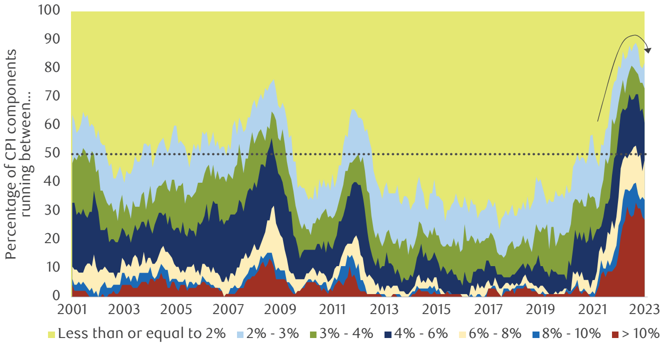
Note: As of 02/22/2023. Source: RBC GAM

Exhibit 27: Wage pressure in U.S. easing



Note: Atlanta Fed Wage Growth Tracker as of Jan 2023, wage expectations as of Feb 2023. Composite constructed using business intentions to raise wages. Shaded area represents recession. Source: Macrobond, RBC GAM

Exhibit 28: Inflation in the U.S. is quite broad, but finally narrowing



Note: As of Jan 2023. Share of CPI components with year-over-year % change falling within the ranges specified. Source: Haver Analytics, RBC GAM

Central banks on edge

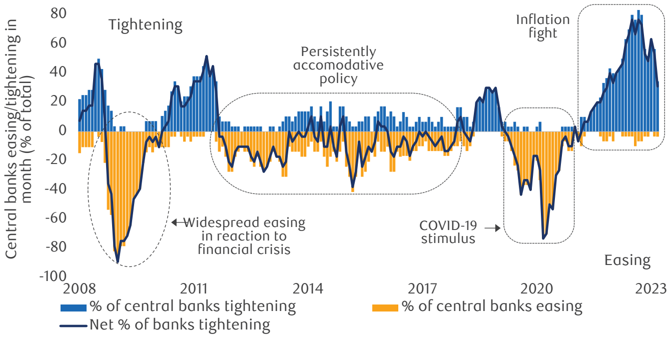
Central banks continue to raise their policy rates in response to undesirably high inflation (Exhibit 29). Some central banks, such as the Bank of Canada, believe they are at or near the finish line, while the U.S. Federal Reserve, the European Central Bank and the Bank of England are still signaling modestly to moderately more tightening to come.

Markets have recently questioned whether more tightening will actually arise (Exhibit 30). Distress among a handful of U.S. regional banks has illustrated the financial market damage that can happen when interest rates rise quickly. The situation is still in considerable flux, but we believe further incremental monetary tightening remains more likely than not.

Largely reflecting central-bank tightening over the past year, global financial conditions remain tight, and have incrementally tightened again after a period of easing last fall (Exhibit 31). A silver lining in all of this is that the prior glut of global bonds with negative yields has now all but vanished (Exhibit 32), a state of affairs that was creating undesirable distortions in the economy and financial markets.

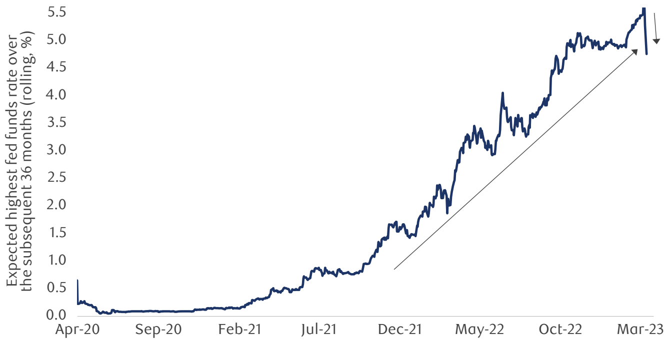
As inflation ebbs, central banks will eventually be in a position to take their foot off the brake. A neutral policy rate in North America is approximately 2.50%, around half the current emergency policy setting. Interest rates are unlikely to return to prior lows, but it makes sense that a structurally low interest-rate environment gradually reasserts itself given elevated global debt levels and a low speed limit for economic growth.

Exhibit 29: Central-bank tightening is slowing



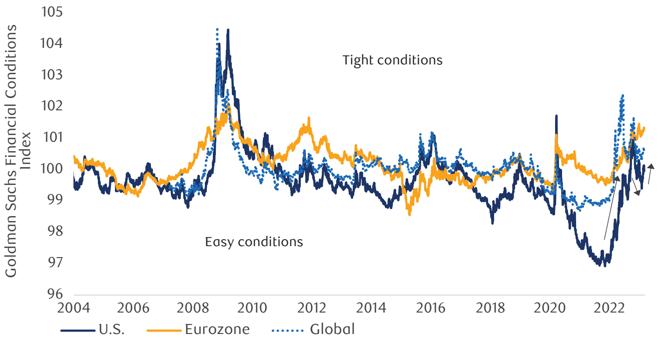
Note: As of 03/06/2023. Based on policy rates for 30 countries. Source: Haver Analytics, RBC GAM

Exhibit 30: Expected peak fed funds rate fell on latest banking system distress



Note: As of 03/13/2023. Source: Bloomberg, RBC GAM

Exhibit 31: Global financial conditions tightened again recently



Note: As of 03/03/2023. Source: Goldman Sachs, Bloomberg, RBC GAM

Exhibit 32: Share of bonds with negative yields is now close to zero

Note: As of 03/06/2023. Percentage of bonds in Bloomberg Global Aggregate Bond Index trading at negative yields. Source: Bloomberg, RBC GAM

Until then, interest-rate-sensitive sectors such as housing are being hobbled by higher interest rates. This is especially true in Canada, where stretched household-debt levels and some of the world's highest home prices have combined to materially reduce sales of existing homes and prices (Exhibit 33). We stop short of forecasting that home prices fully unwind their pandemic gains given the remarkable immigration boom now underway in the country (Exhibit 34).

More generally, the recent increase in interest rates highlights certain vulnerabilities. Countries with elevated public-debt levels such as Japan, Greece and Italy must now grapple with sharply higher debt-servicing costs (Exhibit 35). Japan merits close attention in particular because its debt burden is so much greater than its peers and because of the extraordinary actions the country long took to depress borrowing costs.

China as counterweight

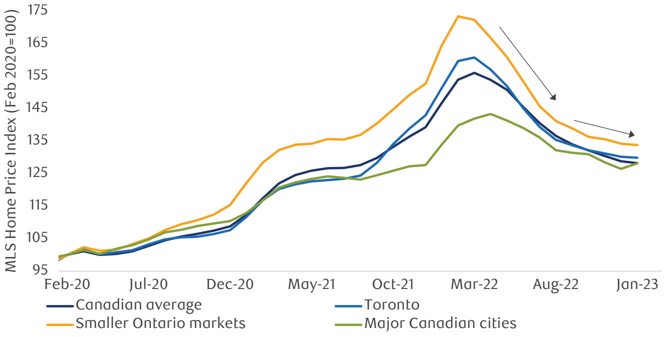
While most countries long ago moved past the point at which the COVID-19 pandemic ceased to materially hinder the economy, the same could not be said about China until quite recently.

The Chinese economy suffered mightily in 2022 as ever more contagious COVID-19 variants undermined the country's zero-tolerance policy, resulting in major recurring lockdowns in the spring, fall and winter of the year.

But everything changed a quarter ago, when China abruptly abandoned the restrictions ahead of schedule and more completely than expected. After the inevitable massive wave of infections – up to 90% of the country was infected in two months – the virus receded and economic activity is reviving.

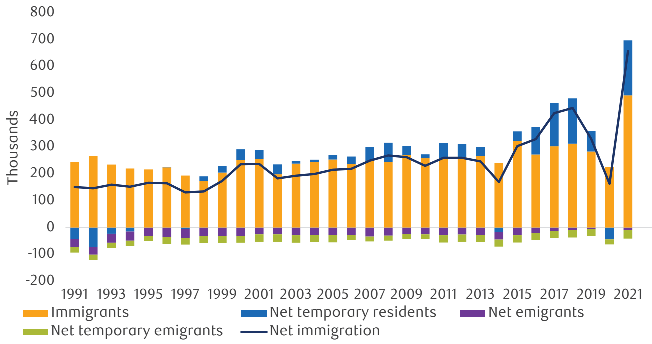
> "From an investment perspective, bond investors benefit from the most attractive interest rates in years. The bond market should also benefit if inflation does fall and recession materialize."

Exhibit 33: Canadian home prices dropped across the country



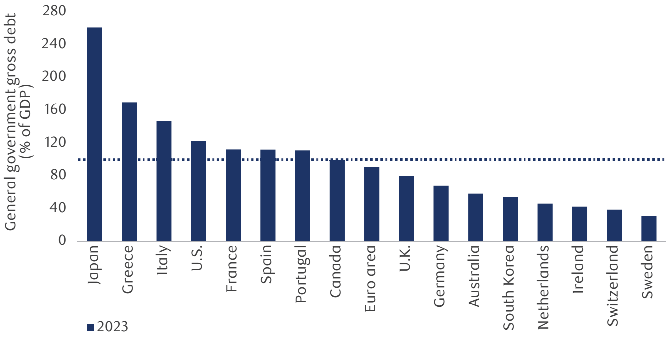
Note: As of Jan 2023. Source: CREA, Macrobond, RBC GAM

Exhibit 34: Canadian net immigration surged



Note: As of 2021. Source: Statistics Canada, Macrobond, RBC GAM

Exhibit 35: Government debt is high in many developed countries



Note: IMF projections for year 2023. Source: IMF WEO, October 2022, Macrobond, RBC GAM

Real-time economic data bounced first, including the normalization of subway traffic (Exhibit 36). More recently, traditional economic indicators such as China's purchasing managers' indexes have also leapt higher. The country is now on track for robust GDP growth of 5.3% in 2023, greatly improved from the anemic 2.9% performance in 2022.

This acceleration is helpful for the global economy, as it provides an important if incomplete counterweight to weakening economic activity elsewhere. China's reopening is not without complications as greater demand from such a large economy could send commodity prices higher.

While China's reopening is a positive development, expectations surrounding China should not be too effusive, for two reasons.

First, while consumer spending should be a source of strength, there may be somewhat less pent-up demand than many believe. China was only sporadically locked down over the past three years, and was arguably among the least restricted major economies in the world for much of the period. As a result, China's "excess" household savings accrued across the pandemic are considerable, but no greater than that accumulated in other countries (Exhibit 37).

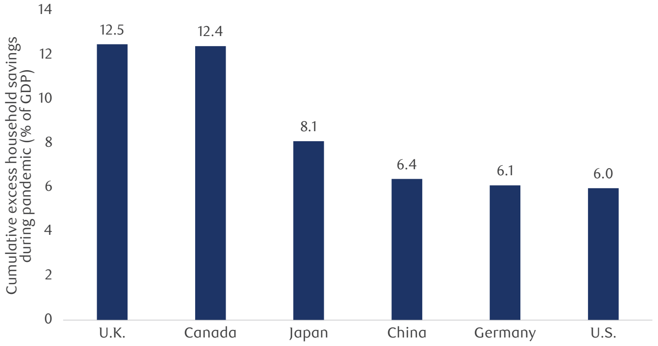
Second, it is notable that China's big rebound year is set to yield less than 6% GDP growth. Before the pandemic, that would have been considered an unremarkable growth rate. Today, it feels like a heroic rebound. This is because China's structural economic speed limit appears to be declining, perhaps to as little as 3% to 4% steady-state growth per annum, for several reasons:

- The country's housing market, while stabilizing after a tumble, is unlikely to generate the sort of bubble-driven growth that it did over the prior decade-plus.
- The Chinese government demonstrates a clear preference for state-led growth over private-sector-oriented growth. The former is unlikely to deliver the sort of productivity growth that drives economies.
- China's demographic profile is quite poor. The population is shrinking, the fertility rate is well below replacement levels and falling, and the country is aging rapidly.

Exhibit 36: Subway traffic in China highest since pandemic

Note: As of 03/06/2023. Index is the weighted 7-day rolling sum of subway trips in Beijing, Chengdu, Chongqing, Guangzhou, Nanjing, Shanghai, Suzhou, Wuhan, Xi'an, and Zhengzhou. Source: Chinese metro agencies, Macrobond, RBC GAM

Exhibit 37: Considerable excess household savings due to pandemic



Note: As of Dec 2022 for U.S, Q3 2022 for Canada, Japan, and U.K., Q4 2022 for China and Germany. Cumulative excess savings vs. 2019 average since March 2020. Source: Macrobond, RBC GAM

- Lastly, geopolitical frictions with the West stand to hinder growth. Deglobalization has accelerated, with developed countries increasingly on-shoring, near-shoring and friend-shoring their traditionally Chinese production. The U.S. ban on the export of sophisticated semiconductors to China casts a further shadow over the country.

Bottom line

In conclusion, the world enjoyed more good than bad economic news over the past several quarters. But this run of good luck is not assured of continuing, and markets may now be somewhat too optimistic.

In particular, the economy remains likely to descend into a recession as the effects of aggressive monetary tightening take hold. Inflation will probably resume its decline, but this is not a certainty given a range of viable scenarios, keeping central banks on edge.

From an investment perspective, bond investors benefit from the most attractive interest rates in years. The bond market should also benefit if inflation does fall and recession materialize. Conversely, equities may temporarily stumble in the face of declining corporate earnings, providing an attractive buying opportunity later.

Market outlook

The return of normal markets?

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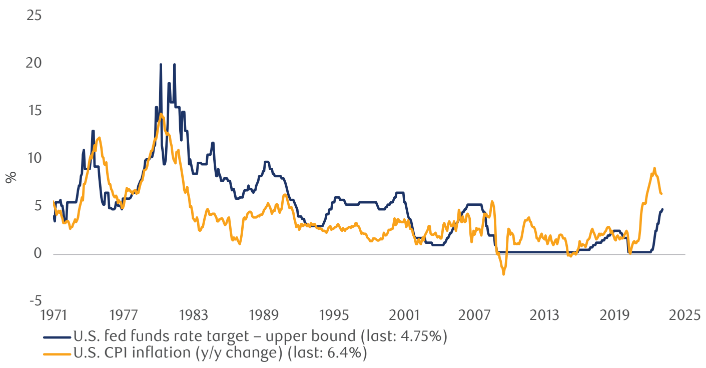
Daniel E. Chornous, CFA
Chief Investment Officer
RBC Global Asset Management Inc.

For more than a decade following the 2008 global financial crisis, investors became used to the idea of sluggish economic growth, persistently low inflation and rock-bottom or even negative interest rates. In that environment, valuations of nearly all financial assets climbed steadily and, in many cases, reached extremes, aided by unorthodox monetary accommodation turbocharged by the pandemic. By 2021, bond yields had fallen to record lows, credit spreads became unusually narrow and equity valuations, particularly those of growth stocks, had risen to their most expensive readings since the late 1990s technology bubble. But inflation finally surfaced in 2022, with consumer prices rising at the fastest pace in four decades and forcing central banks to respond with aggressive interest-rate increases. It has since been a painful period of adjustment for investors as financial markets re-calibrated to markedly higher risk-free interest rates and, although markets are likely to be volatile especially in light of recent events concerning the U.S. banking system, we think the bulk of the adjustment in valuations with respect to broader financial markets is likely behind us. Asset valuations are no longer at extremes and now rest more in line with historical averages. Return potential has improved and perhaps the traditional negative correlation in the performance of equity and fixed-income assets can be restored. That said, we recognize that a high degree of uncertainty has been injected into financial markets given the massive increase in interest rates in such a short a period.

Arguably the biggest change in the financial-market backdrop since the start of 2022 is that short-term interest rates have climbed suddenly from almost zero to their highest level since the financial crisis. In 12 short months, the U.S. Federal Reserve (Fed) has raised interest rates to 475 basis points from 25 basis points, including a few jumbo-sized increases, as inflation climbed to its highest level since the early 1980s (Exhibit 1). The good news is that such aggressive monetary tightening looks to be working. Inflation appears to have peaked in mid-2022 and the need for significant further tightening seems to have decreased as inflation gradually slows toward the Fed's 2% inflation target. Even if the Fed stops raising rates soon, however, it could take some time for the full extent of the rate increases already delivered to work their way through the economy given the lagged effect of changes in monetary policy.

Exhibit 1: U.S. federal funds rate and inflation



Note: As of February 28, 2023. Source: Bloomberg, RBC GAM

The change in the interest-rate backdrop has reverberated throughout fixed-income markets, with bond yields having surged everywhere. The U.S. 10-year yield has more than doubled to 4% from 1.5% a year ago and is sitting at its highest level in more than a decade (Exhibit 2). Our models suggest that if inflation falls as we anticipate, further increases in bond yields from here are likely limited, and yields could even decline if a recession materializes over the next year as we expect. As a result, sovereign fixed-income markets look more appealing than they have in a long time as valuation risk has been significantly reduced and total-return potential has improved.

Equity markets, too, are much more reasonably valued after last year's bear market completely erased the overvaluation that existed in late 2021 and early 2022. That said, stocks have already enjoyed a meaningful bounce from last year's lows as economic data improved and worst-case outcomes for the economy appeared less likely. The MSCI World Index rebounded 20% between mid-October and early February before giving back some of those gains toward the end of the month (Exhibit 3). Importantly, the rally featured a change in leadership in several areas within the market which we think could signal the start of durable new trends. Some of the big shifts include a weakening U.S. dollar, the outperformance of international equities versus U.S. stocks, and market leadership in cyclical sectors, small and mid-cap stocks, and value stocks. More evidence is required to convince us of a wholesale and durable shift in market leadership, but this bears watching. Some of these emerging trends have stalled amid the recent troubles within the U.S. regional banking sector, but we remain open to the possibility that the next bull market, whenever it takes hold, might not be led by the key themes that dominated for the better part of the past decade

Balancing the risks and rewards as well as weighing long-term versus near-term considerations, we remain cautiously positioned and moved our allocation closer to neutral again this quarter. Although we continue to expect equities to outperform bonds over the longer term, the rally in stocks from October 2022 to February 2023 diminished the risk-reward profile in equities in the near term, especially given that corporate profits would be vulnerable in an economic downturn. Our view has recently been modified yet again with the failure of Silicon Valley Bank and associated strain on the financial system in the United States. We were already expecting some weakness in the economic backdrop, but these recent events, we think, open the scope for further deterioration and, at the margin, reduce the odds of an optimistic outcome. As a result, early in the quarter we trimmed our equity allocation by 100 basis points, placing half the proceeds in bonds and the other half in cash. With yields at their highest level in a decade, sovereign bonds should act as ballast against a downturn in stocks within a balanced portfolio. Moreover, cash has become a more suitable holding at today's higher interest rates, providing a cushion to the portfolio in the event that inflation surprises to the upside and triggers simultaneous declines in both stocks and bonds. Reflecting heightened uncertainty in the macroeconomic backdrop and an unusually wide range of potential outcomes,

Exhibit 2: U.S. 10-year government bond yield

Note: As of February 28, 2023. Source : Bloomberg, RBC GAM

Exhibit 3: MSCI World Index

U.S. dollars

Note: MSCI World Index in U.S. dollars. As of February 28, 2023.
Source: Bloomberg, RBC GAM

our asset mix is now the closest to neutral that it has been in several years. For a balanced global investor, we currently recommend an asset mix of 61 percent equities (strategic neutral position: 60 percent) and 37.5 percent fixed income (strategic neutral position: 38 percent), with the balance in cash.

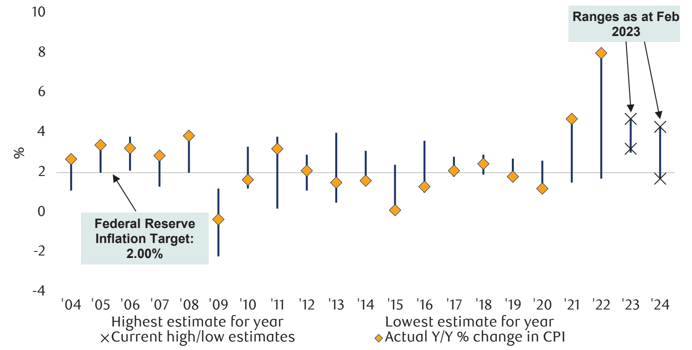
Inflation has peaked and is widely expected to continue falling

It now seems clear to us that the factors causing the past year's rapid inflation have peaked and are moving in a favourable direction. Supply-chain problems have largely been resolved, used-car prices have started to fall, and prices of energy and other commodities have plunged over the past year. In addition, higher interest rates have weighed on housing markets, where prices and rents started to decline in late 2022. Considering all of these factors, economists expect U.S. CPI inflation to drop from 8% in 2022 to somewhere between 3% and 5% in 2023 and to between 2% and 4% in 2024 (Exhibit 4). This view is reinforced by inflation expectations embedded in the pricing of inflation-linked bonds (Exhibit 5). Although these inflation expectations inched up in February, they remain consistent with the view that inflation is on a downward trajectory and that problematically high levels of inflation won't be sustained.

A big part of why inflation is likely to decline meaningfully as the year progresses is that the high inflation readings of 12 to 18 months ago are set to drop out of the 1-year measurement window as time passes (Exhibit 6). We have worked up several hypothetical scenarios to see how inflation could play out over the year ahead. Exhibit 7 plots U.S. CPI inflation

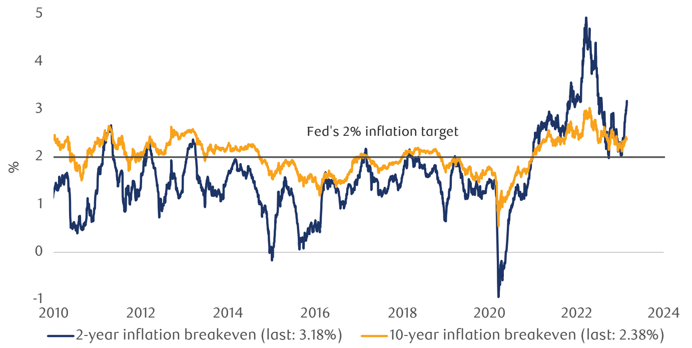
Exhibit 4: United States

Inflation estimate dispersion



Source: Consensus Economics, RBC GAM

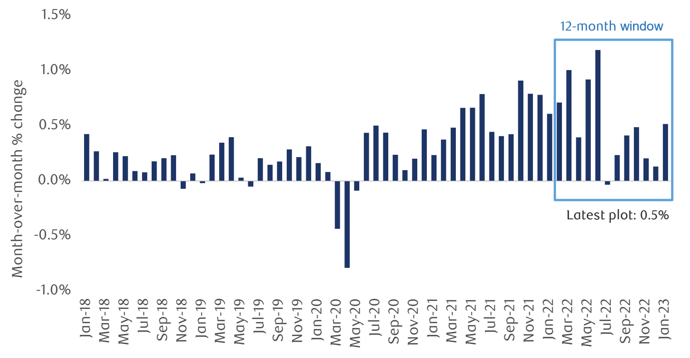
Exhibit 5: U.S. Treasuries inflation breakevens



Note: As of Feb 28, 2023. Source: Bloomberg, RBC GAM

Exhibit 6: U.S. CPI Inflation

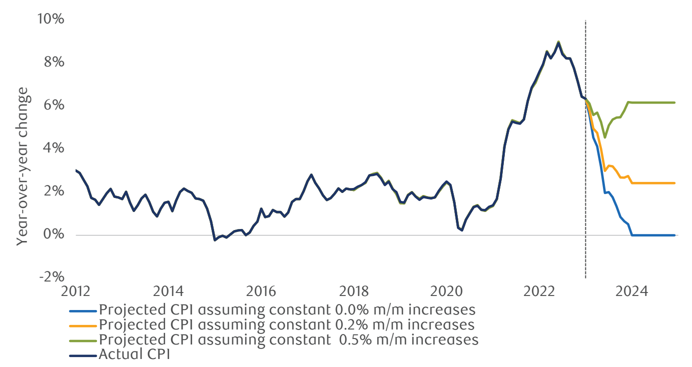
Month-over-month % change



Note: As of January 31, 2023. Source: Bloomberg, RBC GAM

Exhibit 7: U.S. CPI Inflation

Hypothetical projections in y/y % change



Note: As of January 31, 2023. Source: Bloomberg, RBC GAM on a year-over-year basis, with three separate projections assuming that the month-over-month data comes in at 0%, 0.2% or 0.5% going forward. These numbers were selected to represent the "no inflation," "low/target inflation," and "high inflation" paths, respectively. Notice that in all cases, inflation keeps falling over the months until mid-2023, when the lines begin to diverge depending on the different scenarios. It is at this point, perhaps, where central banks might have more clarity as to which path inflation will ultimately take. If the inflation data keeps coming in hot around 0.5% or higher on a month-over-month basis, the Fed's 2% target would not be achieved, keeping pressure on the Fed to continue raising interest rates.

The need for significantly further monetary tightening is becoming less obvious

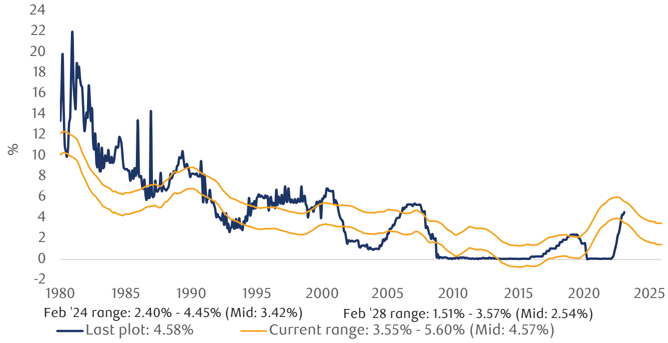
If inflation does continue to fall as we expect, the peak in short-term interest rates could be near. Our model, which estimates the appropriate level for the fed funds rate given a variety of inputs including inflation, suggests that interest-rate cuts, rather than hikes, could be warranted in the near future (Exhibit 8). Pricing in the futures market was consistent with this notion but, by the end of February, had pushed back their expectations for rate cuts until next year, a view that aligned closer with the Fed's own projections (Exhibit 9). Even if rate cuts come to fruition at that point, it seems unlikely that rates would fall back to near zero, suggesting that investors will need to become accustomed to an environment where interest rates are not quite as accommodative as had been the case in recent decades. Furthermore, any indication that inflation is not coming down as expected would likely lead the Fed to boost benchmark rates for longer than investors anticipate.

Bond market resets to long-term norms, return outlook improves

Bond pricing appears more in line with long-term history after last year's sharp adjustment in Fed policy ravaged fixed-income markets. The U.S. 10-year yield, close to 4% at the end of February, is situated in the middle of the trading range where yields spent more of their time over the past 150 years excluding the extremely high interest-rate period of the 1970s and early 1980s (Exhibit 10). The entire spectrum of fixed-income assets have also experienced an adjustment

Exhibit 8: U.S. fed funds rate

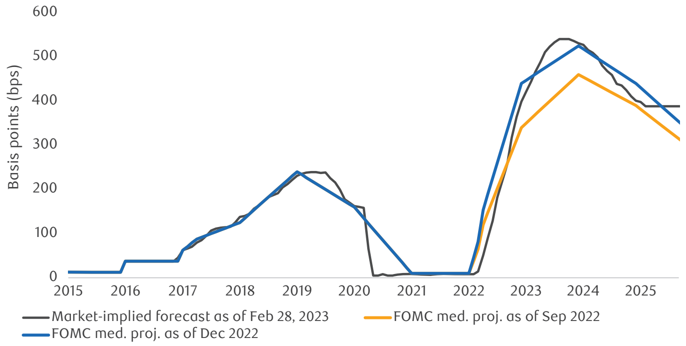
Equilibrium range



Note: As of Feb 28, 2023. Source: Federal Reserve, RBC GAM

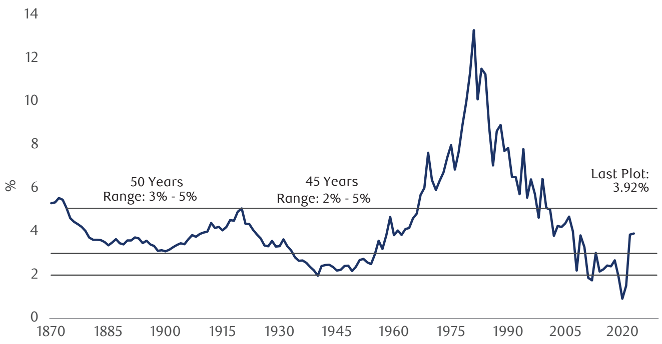
Exhibit 9: Implied fed funds rate

12-months futures contracts



Source: Bloomberg, U.S. Federal Reserve, RBC GAM

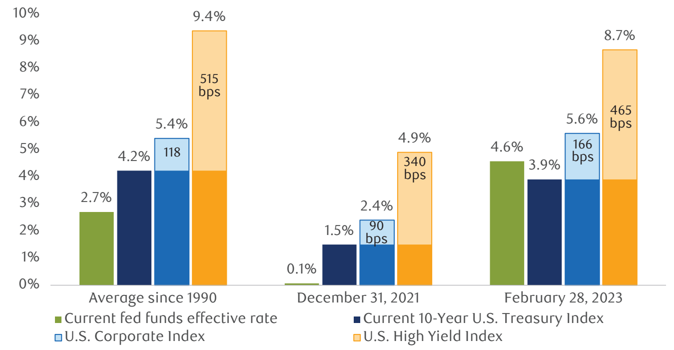
Exhibit 10: U.S. 10-year bond yield



Note: As of February 28, 2023. Source: RBC GAM

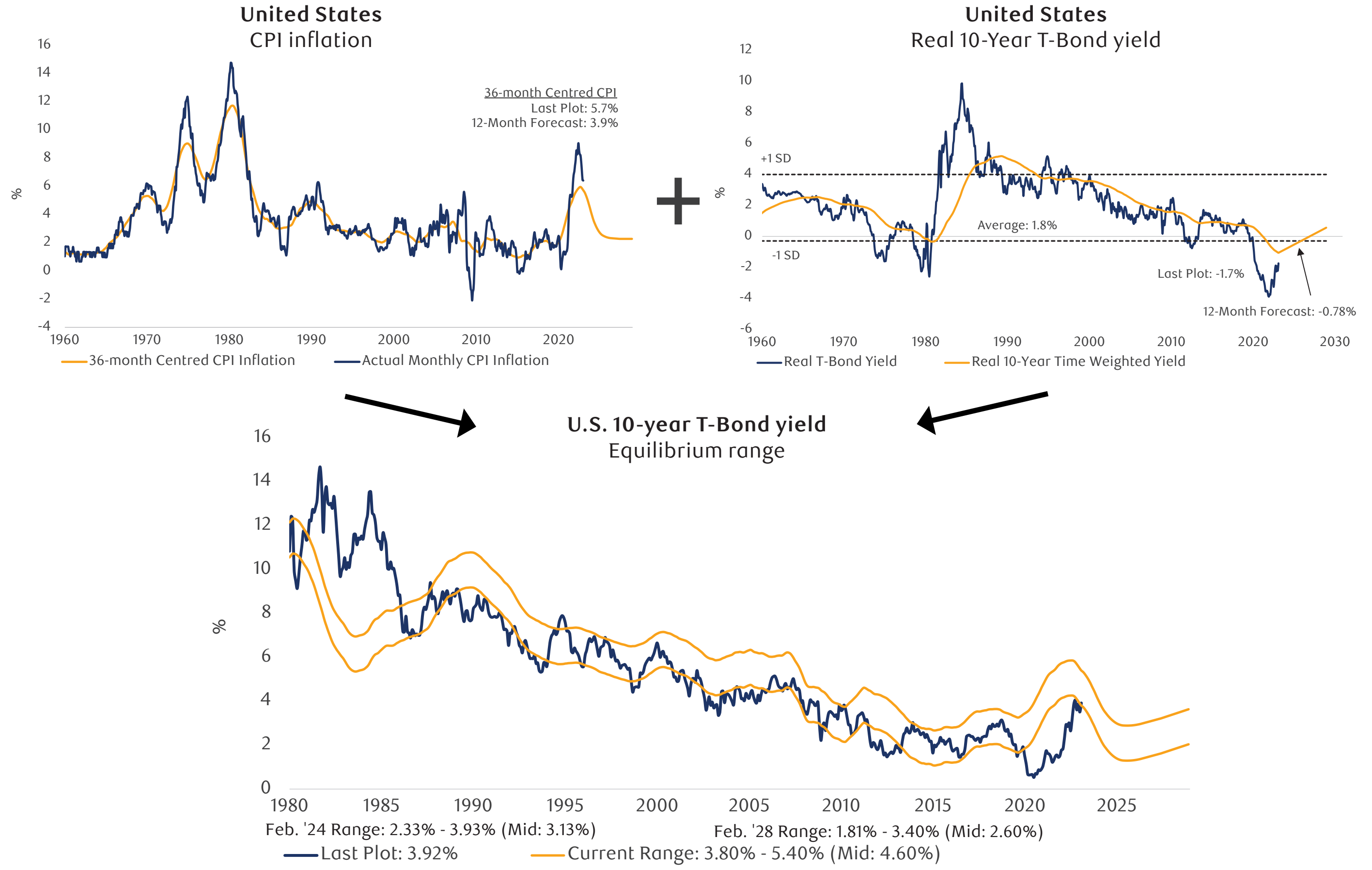
of similar magnitude in the past year. Exhibit 11 plots a comparison of yields for cash, 10-year Treasuries, investment-grade and high-yield bonds. There are three groupings on the chart, one for the average since 1990, one as of December 31, 2021, and one as of February 28, 2023. On December 31, 2021, which was around the peak for most asset classes, the yield on cash was 0.1%, 1.5% on U.S. 10-year Treasuries, 2.4% on investment-grade credit (i.e. spread of 90 bps) and 4.9% on high-yield bonds (i.e. spread of 340 bps). After the massive adjustments of 2022, these numbers at the end of February were 4.6% for cash, 3.9% for the U.S. 10-year bond, 5.8% for investment-grade credit (i.e. a 166-basis-point spread) and 8.7% for high-yield bonds (i.e. a 465-basis-point spread). Remarkably, even though fixed-income markets have suffered massive losses over the past year, yields are not at extreme

Exhibit 11: Yield to maturity



Note: Current spread as of February 28, 2023. Shaded areas within the bars indicate the yield spread versus the U.S. 10-year Treasury bond yield. Source: ICE BofA, RBC GAM

Exhibit 12: U.S. 10-year bond yield



Note: As of February 28, 2023. Source: RBC GAM

levels. Rather, the adjustment in markets had yields moving away from extreme lows and back to something closer to the averages of the past three decades.

At current levels, our bond model suggests valuation risk has greatly diminished and the prospect for future returns has improved considerably given our view that inflation will be coming down. Exhibit 12, which plots the components of our bond model, shows that most of the massive increase in bond yields over the past year has reflected the recent inflation spike. As this inflation spike eventually subsides, though, the equilibrium level for bond yields declines accordingly. Rising real, or after-inflation, interest rates offer a partial offset to the declines in inflation, but we think that offset will be relatively minor. Structural factors such as slower potential growth rates, aging populations and an increased preference for saving versus spending, we think, will ultimately limit how high real interest rates can rise. That said, the combined influence of expected changes in inflation and real interest rates in our model still suggests that the U.S. 10-year yield could fall closer to 3.1% sometime next year. As a result, valuation risk is minimal and total-return potential is appealing with yields around 4% at the time of this writing. We observe a similar fluctuations in the equilibrium bands across the fixed-income models that we track for various major regions, suggesting the course for global bond yields hinges largely on the future path of inflation. If inflation forecasts are wrong, the equilibrium bands might not come down as quickly or at all, and higher yields could be sustained (page 41).

Credit markets showed few signs of stress

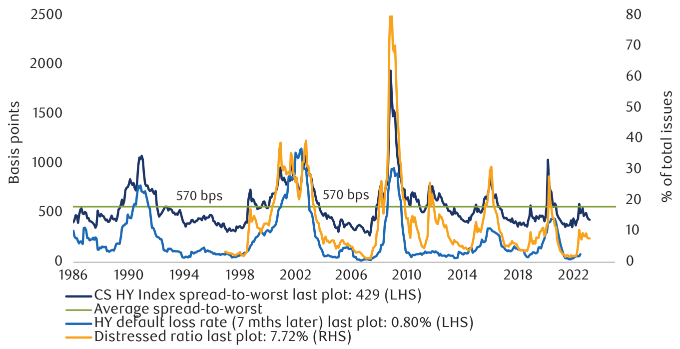
While fixed-income markets have been extremely volatile due to changes in central-bank policy rates and inflation, credit spreads were telling us, at the end of February, that there was little reason to be concerned about the health of corporations.

Exhibit 13 plots the spread for U.S. high-yield bonds, which have increased only a bit from their late 2021 low and remain below their long-term average. Moreover, the proportion of corporate bonds that trade at distressed levels (i.e. spreads in excess of 1000 basis points) and default rates remain fairly benign. Credit markets can be an early sign of trouble to come for other risk assets like stocks and, at the end of February, were not signaling much cause for concern. But spreads began widening in March following Silicon Valley Bank's failure as investors became increasingly concerned about the stability of regional banks in the United States.

Stocks waver after strong rally off last year's lows

Global equity markets rebounded strongly from the lows last fall due to better-than-expected economic data, China's re-opening and falling inflation. But stocks gave back some of those gains in February amid concern that interest rates could be higher for longer, pressuring valuations. The net result is that over the quarter, stocks were mostly flat to slightly down, with the exception being the MSCI EAFE Index which delivered a gain of 5.6% in U.S.-dollar terms for the 3-month period ending February 28, 2023 (Exhibit 14). Although stocks are off their lows from last year, they

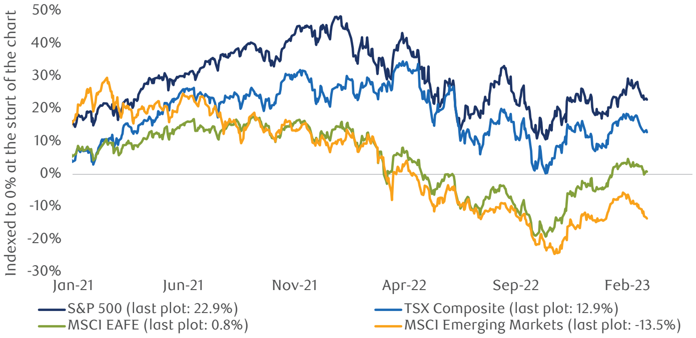
Exhibit 13: High yield bond spread



Note: As of March 3, 2023. Source: BofAML, Credit Suisse, RBC GAM

Exhibit 14: Major equity market indices

Cumulative price returns indices in USD



Note: As of February 28, 2023. Price returns computed in USD.
Source: Bloomberg, RBC GAM

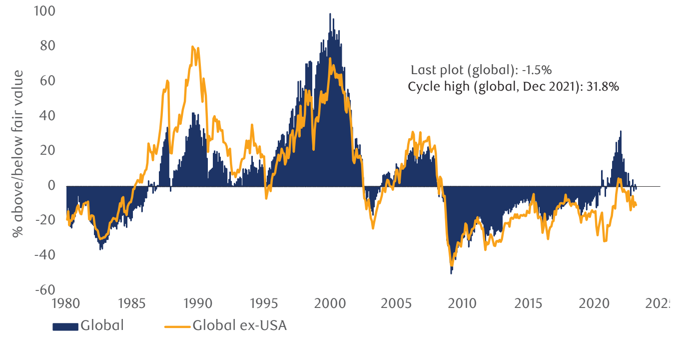
remain well below their all-time high and valuations remain reasonable on a global basis. Our global composite of fair-value models suggests that stocks are 2% below fair value, down from a 32% overvaluation at the time of their late 2021 peak. If we exclude the U.S. from the composite, stocks are closer to 10% below fair value (Exhibit 15). Valuations range widely from region to region, with the U.S. being the most expensive and other regions, especially emerging markets, trading at attractive discounts to fair value (page 42).

Equity valuations are largely influenced by changes in interest rates and inflation

Last year's bear market in stocks completely erased the overvaluation that existed, but our view that valuations are now reasonable hinges on the idea that interest rates and inflation are unlikely to rise much further. The three biggest inputs to our equilibrium price-to-earnings ratio (P/E) model are the U.S. 10-year bond yield, the U.S. 3-month yield and U.S. CPI inflation, which make up 80% of the weight in the calculation. Exhibits 16 to 18 plot the relationships with each of these variables and P/Es. Notice that each chart slopes downward and to the right, indicating that any increase in these variables results in lower valuations and vice versa. Any indication that inflation becomes stickier or that the Fed has to hike more than was previously priced in means we slide further toward the right on the graphs and that P/Es should come down. The charts also indicate that P/Es have room to rise if inflation comes down, bond yields decline and the Fed eases up on hiking rates and maybe even cuts a little bit. The charts are also a timely reminder of the important role that

Exhibit 15: Global stock market composite

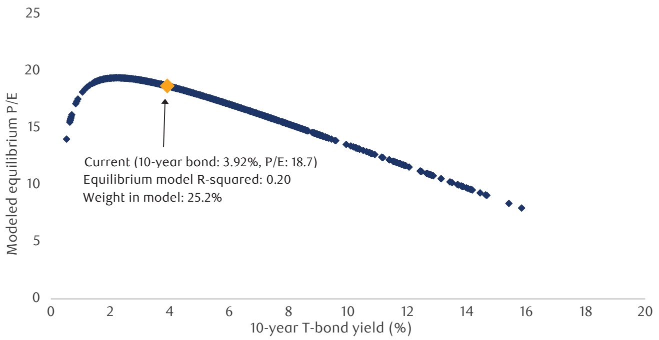
Equity market indexes relative to equilibrium



Note: As of February 28, 2023. Source: RBC GAM

Exhibit 16: S&P 500 equilibrium model

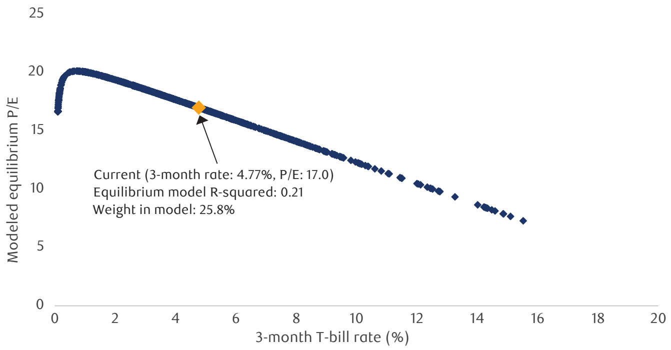
P/E factor as a function of 10-year bond yield



Note: As of February 28, 2023. Source: RBC GAM

Exhibit 17: S&P 500 equilibrium model

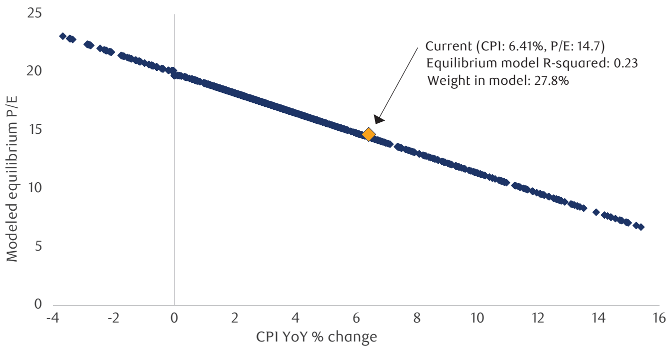
P/E factor as a function of 3-month T-Bill rate



Note: As of February 28, 2023. Source: RBC GAM

Exhibit 18: S&P 500 equilibrium model

P/E factor as a function of CPI



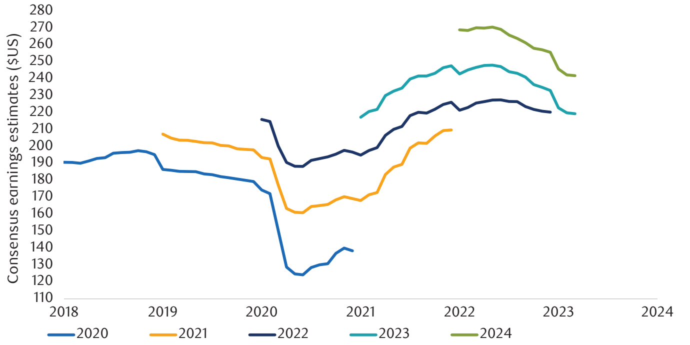
Note: As of February 28, 2023. Source: RBC GAM

changes in interest rates play in establishing the P/E that investors are willing to pay.

With asset valuations having undergone significant reductions, we think the bigger risk to financial markets has to do with corporate profits. Earnings estimates have been gradually lowered over the past year and the latest consensus of analyst projections anticipates no growth in 2023 profits versus 2022 (Exhibit 19). Slowing economic growth is part of the reason for earnings downgrades, but another headwind is that rising costs are weighing on companies' record-high profit margins (Exhibit 20). Moreover, earnings have been running far above their long-term trend and simply reverting to trend would indicate double-digit declines in profits (Exhibit 21). The downside could be even

Exhibit 19: S&P 500 Index

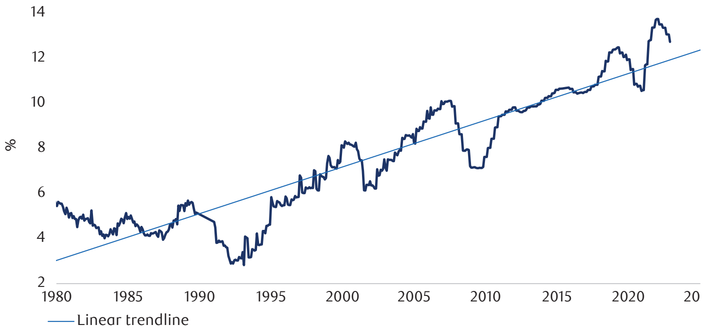
Consensus earnings estimates



Note: As of March 8, 2023. Source: Thomson Reuters, Bloomberg

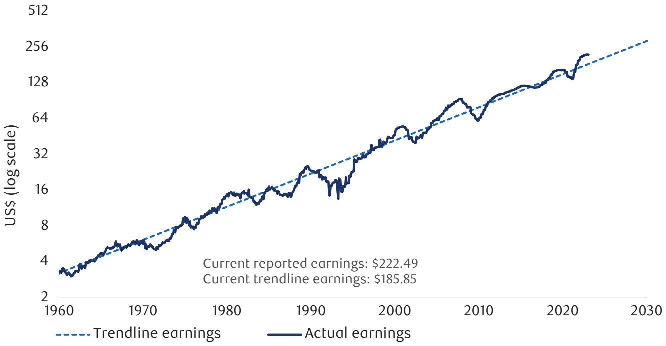
Exhibit 20: S&P 500

Net margin



Note: As of February 28, 2023. Source : RBC Capital Markets, RBC GAM

Exhibit 21: S&P 500 earnings and long-term trend



Note: As of February 28, 2023. Source: RBC GAM

Exhibit 22: S&P 500 earnings per share

Recession statistics

Recession start date	Earnings peak date	Earnings trough date	Earnings reclaim prior peak date	Earnings decline duration (months)	Earnings peak ($)	Earnings trough ($)	EPS change peak to trough	Time before earnings recover prior peak (months)	Trendline earnings (exponential trend)	Difference between actual EPS and trendline EPS at earnings trough
July 1953	Dec-50	Dec-53	Dec-54	36	2.8	2.5	-11.6%	48	2.3	10.6%
August 1957	Feb-56	Mar-59	Jul-60	37	3.6	2.8	-23.4%	53	3.2	-11.1%
April 1960	Jun-60	Jun-61	Jun-62	12	3.6	3.0	-14.6%	24	3.6	-17.4%
December 1969	Apr-69	Jun-70	Oct-72	14	6.1	5.1	-16.2%	42	6.4	-20.2%
November 1973	Jan-75	Feb-76	Dec-76	13	9.6	7.6	-21.6%	23	9.1	-16.8%
January 1980	Jul-80	Aug-81	Jan-82	13	15.6	13.7	-11.9%	18	12.9	6.0%
July 1981	Aug-82	Jul-83	Oct-84	11	16.3	12.1	-25.8%	26	14.6	-17.0%
July 1990	Aug-89	May-92	Sep-94	33	25.7	15.5	-39.7%	61	25.4	-39.0%
March 2001	Sep-00	Mar-02	Mar-04	18	55.8	41.3	-25.9%	42	47.2	-12.6%
December 2007	Aug-07	Oct-09	Nov-11	26	89.8	45.1	-49.8%	50	76.2	-40.8%
February 2020	Jan-20	Feb-21	Jun-21	12	152.5	122.8	-19.5%	16	155.6	-21.1%
Aggregate statistics										
Average				20			-23.6%			-16.3%
Median				14			-21.6%			-17.0%
Max				37			-11.6%			10.6%
Min				11			-49.8%			-40.8%

Note: As of March 3, 2023. Source: Bloomberg, RBC GAM

more severe if a recession were to unfold because, in that scenario, earnings have historically not stopped at the trend but have fallen to considerable distances below. Exhibit 22 lists statistics for S&P 500 earnings during the past 11 recessions dating back to 1953. During recessions, earnings fell an average of 24% ending up as much as 16% below the long-term trend. While we expect that the current cycle may be less damaging given our view that any recession will likely be a mild one and that higher inflation could support profits if companies are able to exert pricing power, overall we still think earnings estimates are not fully pricing in even a mild recession.

Scenario analysis suggests limited upside for stocks in near term

Stocks already rallied meaningfully from their late 2022 lows, and it seems difficult to justify a case for substantially further upside in the near term. Exhibit 23 lists combinations of earnings levels and price-to-earnings multiples for the S&P 500 to gauge where stocks could reasonably trade this year

Exhibit 23: Earnings estimates and alternative scenarios for valuations and outcomes for the S&P 500s

		Consensus				Consensus	
		2023 Top Down	2023 Bottom Up	Recessionary*		2024 Top Down	2024 Bottom Up
	P/E	$209.0	$219.4	$167.3	P/E	$249.0	$241.9
+1 Standard Deviation	22.0	4593.7	4822.9	3676.1	22.6	5627.9	5467.7
+0.5 Standard Deviation	19.7	4123.5	4329.2	3299.8	20.3	5051.8	4908.0
Equilibrium	17.5	3653.3	3835.6	2923.5	18.0	4475.8	4348.3
-0.5 Standard Deviation	15.2	3183.0	3341.9	2547.2	15.7	3899.7	3788.7
-1 Standard Deviation	13.0	2712.8	2848.2	2170.9	13.3	3323.6	3229.0

Note: *Trailing 12-Month Earnings to February 2023 less 25% (i.e. average decline in earnings through recession). As of February 28, 2023. Source: Bloomberg, Thomson Reuters, RBC GAM and next. The baseline scenario would situate the S&P 500 at 3840 by the end of the year, assuming the market trades at an equilibrium P/E of 17.5 – the level consistent with current interest rates, inflation and corporate profitability – and earns the analysts' consensus estimate of US$220 in earnings per share. This outcome would represent a 3% decline from the end of February and suggest that to generate attractive returns stocks will require better-than expected profits and/or expanding valuations. Moreover, if a recession materializes and earnings deteriorate, the S&P 500 could fall toward the lower 3000s. While the risk-reward seems less appealing in the near term, the case for higher stock prices strengthens as the time horizon is lengthened. The S&P 500 could reasonably achieve 4350 by the end of 2024, assuming the P/E rises to 18 as inflation falls and earnings achieve the projected US$242 per share. This would represent 10% upside over the next 22 months, excluding dividends. While there are many reasons to be pessimistic, positive outcomes are possible if earnings resume their rise, inflation comes down and investor confidence increases in what we would characterize as a soft landing scenario. We recognize, however, that many elements need to fall into place for this bull case to be achieved.

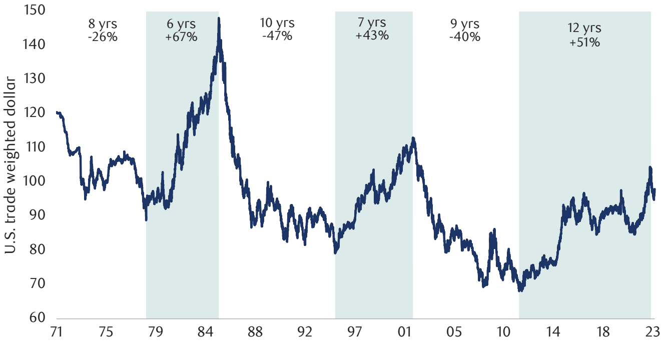
Beneath the surface, market leadership could be shifting

Themes and trends have emerged in recent quarters that we think could influence financial markets for many years. The low-economic-growth, low-inflation and low-interest-rate regime that has persisted since the global financial crisis benefited U.S. large-cap growth stocks, which had outperformed in nearly uninterrupted fashion for the better part of the past decade. That backdrop appears to be changing, possibly setting up for a period of new leadership going forward. The major changes that we've observed in the past two quarters are the likely depreciation of the U.S. dollar and the shift in leadership with regards to regions, sectors, market capitalizations and styles.

The U.S. dollar may have peaked in late 2022 and is now primed for an extended period of weakness. The likelihood of a sustained drop in the greenback is supported by the fact that the U.S. dollar tends to move in a cyclical pattern, enjoying long periods of advance followed by long periods of decline (Exhibit 24). These bull and bear periods for the U.S. dollar have lasted anywhere from six to 12 years, and changes in the trend tend to occur when the U.S. dollar reaches extreme overvaluation or undervaluation relative to a basket of global currencies. These extremes can lead to fundamental changes in business decisions such as where to locate factories or how to construct supply chains. The U.S. dollar reached extreme overvaluation late last year and, allowing for volatility, could be setting up for a prolonged bear market.

Another trend that could be ripe for a turn has been the decade-long period of U.S. equity outperformance relative to international stocks. U.S. stocks outperformed Canadian equities, European equities and emerging-market equities fairly consistently, and these moves have extended to as

Exhibit 24: U.S. trade-weighted dollar

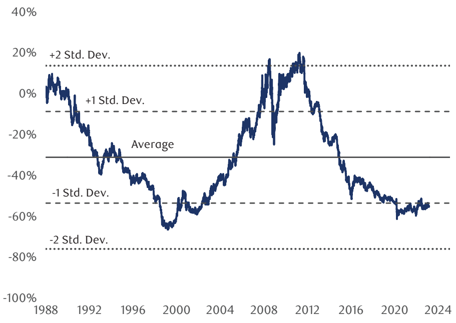


Note: As at February 24, 2023. Source: Bloomberg, U.S. Federal Reserve, RBC GAM much as one or two standard deviations from their long-term averages (exhibits 25 to 27). In the equity rally from late 2022, Canada, Europe and emerging markets outperformed the U.S. and the current macroeconomic environment leads us to believe that this outperformance is perhaps sustainable for many years, with the help of a depreciating U.S. dollar.

There has also been a shift within sectors. While technology stocks had dominated for more than a decade, the rally from October 2022 to February 2023 featured outperformance in Financials and Industrials (exhibits 28 and 29). This point is particularly interesting because these two sectors tend to do poorly during recessions but perform well at the start of an expansion. Continued outperformance of these sectors could indicate that the economic outlook is not as bad as is widely expected or that investors have appropriately priced in an economic soft patch, and are looking beyond the coming weakness and ahead to a recovery. This view has faded somewhat given the stark underperformance of financial stocks since Silicon Valley Bank's failure.

Small and mid-cap stocks have also been outperforming for the better part of the post-pandemic era after a significant stretch of large-cap outperformance. This trend is reflected in the relative strength of the S&P 500 equal-weight index, which reached its highest level versus its capitalization-

Exhibit 25: Relative Performance
S&P/TSX Composite TR USD vs S&P 500 TR USD

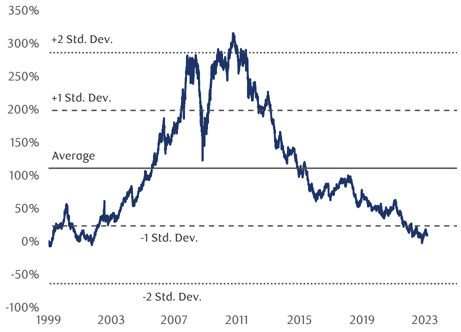


Note: As of February 28, 2023. Source: Bloomberg, RBC GAM

Exhibit 26: Relative Performance
MSCI Europe TR USD vs S&P 500 TR USD

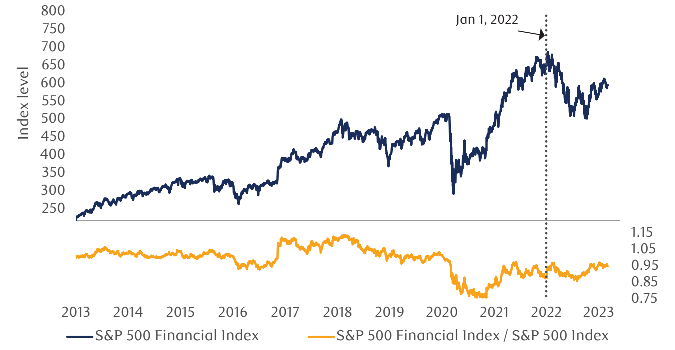
Note: As of February 28, 2023. Source: Bloomberg, RBC GAM

Exhibit 27: Relative Performance
MSCI Emerging Markets TR USD vs S&P 500 TR USD



Note: As of February 28, 2023. Source: Bloomberg, RBC GAM

Exhibit 28: S&P 500 Financial Index
Index level and relative strength



Note: As of February 28, 2023. Source: Bloomberg, RBC GAM

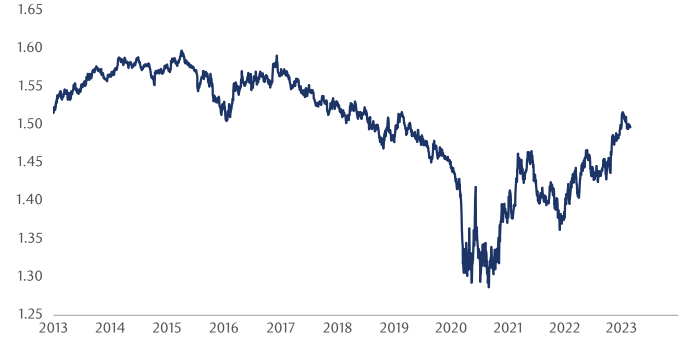
Exhibit 29: S&P 500 Industrials Index
Index level and relative strength

Note: As of February 28, 2023. Source: Bloomberg, RBC GAM weighted counterpart since early 2019 (Exhibit 30). Increasing breadth within the market and increased participation among small and mid-cap companies in the rally is often a sign that economic growth is robust and could be about to re-accelerate.

Finally, the other major trend that we have observed is that value stocks have been outperforming growth stocks in a big way. Since peaking in late 2021, the S&P 500 Growth Index has lost 30% relative to the S&P 500 Value Index, giving back the entirety of its relative gains since the start of the pandemic as yields surged (Exhibit 31). Even with this significant decline, growth stocks could have further to correct against value stocks. We performed a break-even analysis back to 2000 to determine how fast earnings of growth stocks needed to rise to justify their valuation premium (Exhibit 32). In order to be comfortable owning growth stocks over a 10-year horizon at their peak in 2021, investors were pricing in annual earnings gains of 21% for growth stocks over the next decade. This demanding growth rate was almost as high as the 24% figure reached during the early 2000s, suggesting that last year's expensiveness had almost reached the extremes that we saw during the technology bubble. Even after last year's bear market in growth stocks, this measure, at 16%, is still at an extremely ambitious level considering that, historically, earnings of growth stocks have never risen at an annualized rate exceeding 12% over a decade and that the long-term average increase over a 10-year period is just 8% (Exhibit 33). While it isn't impossible for growth stocks to achieve

Exhibit 30: S&P 500 Index

Equal-weighted index / cap-weighted index



Note: As of February 28, 2023. Source: Bloomberg, RBC GAM

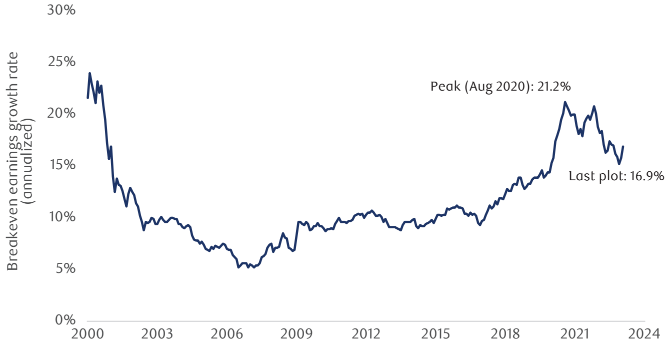
Exhibit 31: Value to growth relative performance

S&P 500 Value Index / S&P 500 Growth Index

Note: As of Feb 28, 2023. Source: Bloomberg, RBC GAM

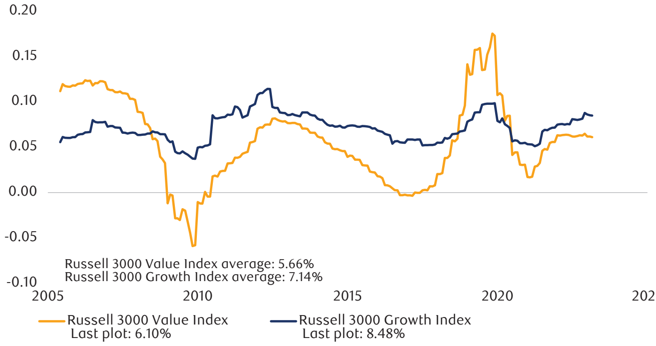
Exhibit 32: Breakeven earnings growth

Between Russell 3000 Growth and Russell 3000 Value



Note: As of February 28, 2023. Chart shows the annualized earnings growth required from the Russell 3000 Growth index to generate the same cumulative profits, discounted back to present values, as the Russell 3000 Value index over a 10-year horizon. Source: RBC GAM

Exhibit 33: Historical 10-year rolling earnings growth rate



Note: As of Feb 28, 2023. Source: Bloomberg, RBC GAM the 16% per-year earnings gains needed to justify their current premium relative to value stocks, we think it's worth acknowledging that doing so would be a an unprecedented and truly impressive feat.

Asset mix – trimming equities and moving closer to neutral allocation

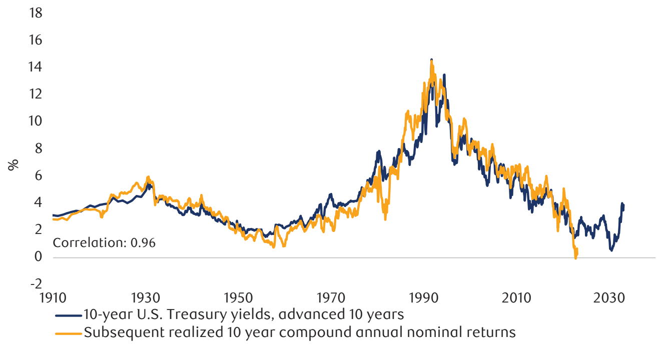
In evaluating how to position our asset mix in this environment, we consider where we are at the stage of the economic cycle and its implications for financial markets. We recognize that the economic expansion is mature, growth is slowing and recession is likely over our one-year forecast horizon. Inflation is elevated but is coming down, and while the Fed has raised interest rates aggressively, we think policymakers could be close to the end of the tightening cycle. Rate cuts could, in fact, arrive earlier than expected if the economy weakens abruptly or if the Fed deems it necessary to avoid a banking crisis. Additional risks to our outlook include geopolitical fallout from the war in Ukraine and the economic impact of tighter monetary policy.

Against this backdrop, the prospect for sovereign fixed income looks much better than it has in a long time. At today's currently elevated yields, bonds offer much greater potential for decent returns than they have in decades as well as ballast against a downturn in the economy and corporate profits. A good guess for bonds' return expectations is their current yield to maturity which, at about 4% at the end of February, is the highest since the global financial crisis (Exhibit 34). For these reasons we have been adding to our fixed-income positions in recent quarters as yields have risen, narrowing the bond underweight in our asset mix.

We continue to expect that stocks offer superior return potential over the longer term. Equity valuations are reasonable and return potential has improved meaningfully versus late 2021/early 2022. Shiller's CAPE offers a sound estimate for what returns could be over the next decade. At the beginning of 2022, the estimate based on the CAPE would have been for 3% annualized returns for the S&P 500 Index over the next 10-year period, and that number has now risen closer to 8% (Exhibit 35). In the near term, however, we recognize that the risk-reward has worsened, particularly relative to fixed income given substantially higher yields. And if recession were to materialize and/or if the rout from Silicon Valley Bank extends beyond just a small group of regional banks, stocks could suffer losses as the corporate profit outlook would almost certainly deteriorate.

Taking it all together and balancing the risks and opportunities in the near term as well as the longer-term view, we decided this quarter to further trim our equity allocation and move our asset mix closer to a neutral positioning. We reduced our equity allocation by 100 basis points and moved half to bonds and half to cash. Our asset mix is closer to neutral than we've been in many years, reflecting higher uncertainty than usual and the improved appeal of fixed income. Our asset weighting sits at 61% stocks versus a 60% neutral setting, with 37.5% in bonds versus 38.0% neutral, and 1.5% in cash.

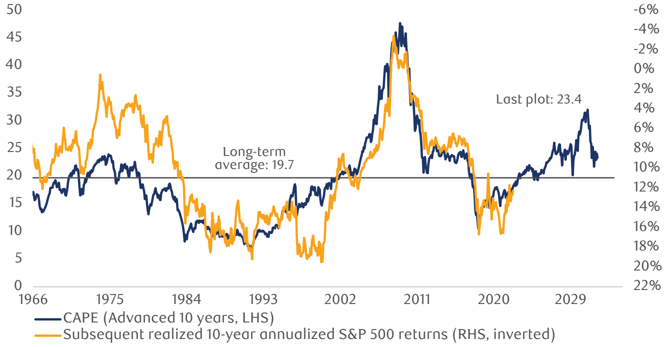
Exhibit 34: U.S. 10-year Treasury note and returns



Note: As of February 28, 2023. Source: Deutsche Bank, Macrobond, RBC GAM

Exhibit 35: Shiller's CAPE

Real S&P 500 Index / 10-year average of real EPS

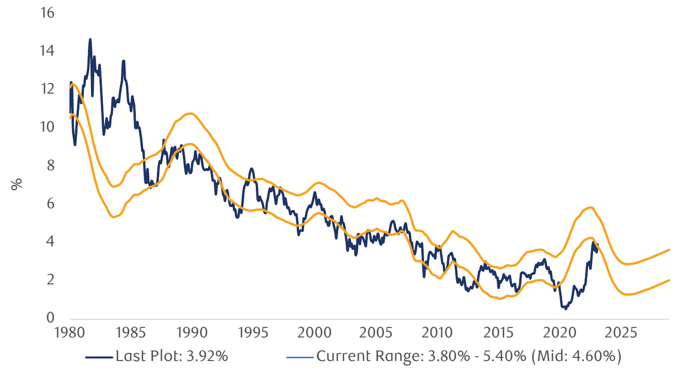


Note: As of Feb 28, 2023. Source: Macrobond, Bloomberg, RBC GAM

Global fixed income markets

U.S. 10-Year T-Bond Yield

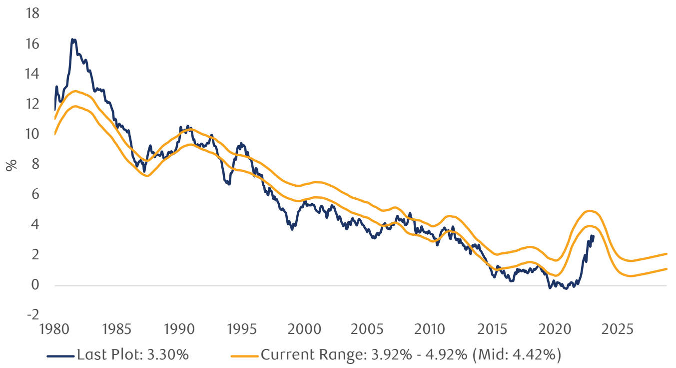
Equilibrium range



Note: As of February 28, 2023. Source: RBC GAM, RBC CM

Eurozone 10-Year Bond Yield

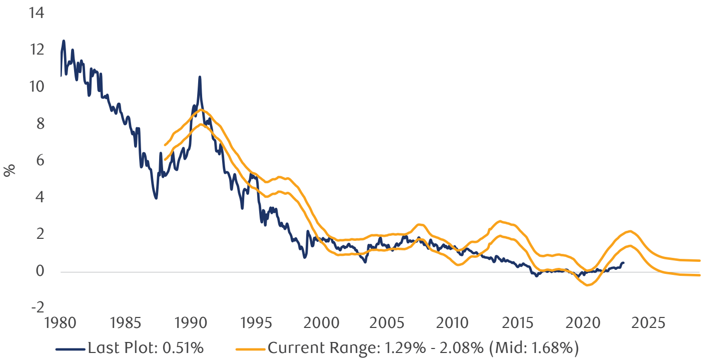
Equilibrium range



Note: As of February 28, 2023. Source: RBC GAM, RBC CM

Japan 10-Year Bond Yield

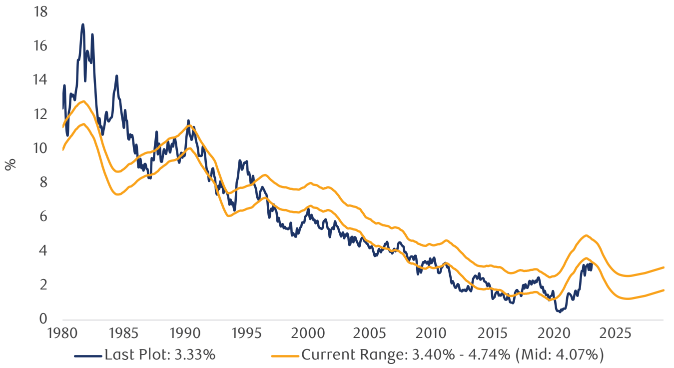
Equilibrium range



Note: As of February 28, 2023. Source: RBC GAM, RBC CM

Canada 10-Year Bond Yield

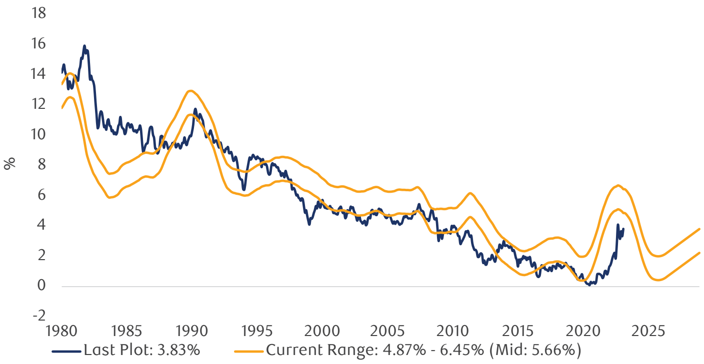
Equilibrium range



Note: As of February 28, 2023. Source: RBC GAM, RBC CM

U.K. 10-Year Gilt

Equilibrium range

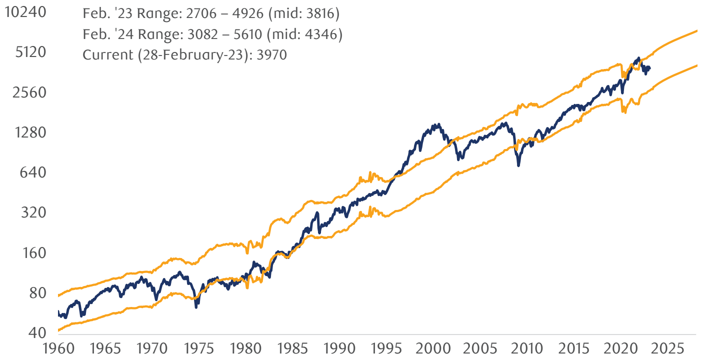


Note: As of February 28, 2023. Source: RBC GAM, RBC CM

> “The course for global bond yields hinges largely on the future path of inflation. If inflation forecasts are wrong, the equilibrium bands might not come down as quickly or at all, and higher yields could be sustained.”

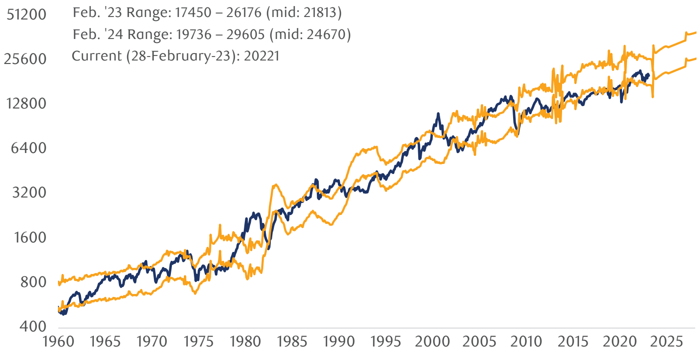
Global equity markets

S&P 500 Equilibrium
Normalized earnings and valuations



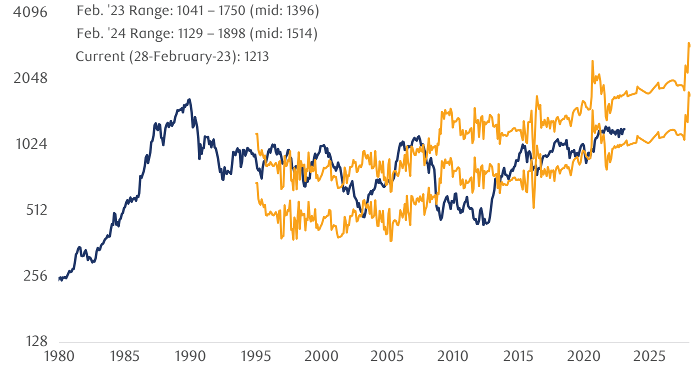
Note: As of February 28, 2023. Source: RBC GAM

S&P/TSX Composite Equilibrium
Normalized earnings and valuations



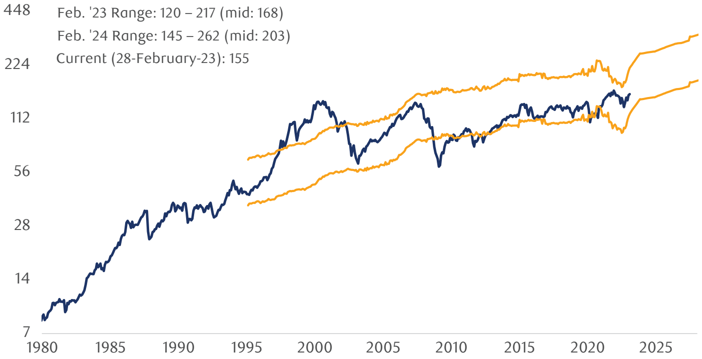
Note: As of February 28, 2023. Source: RBC GAM

MSCI Japan Index
Normalized earnings and valuations



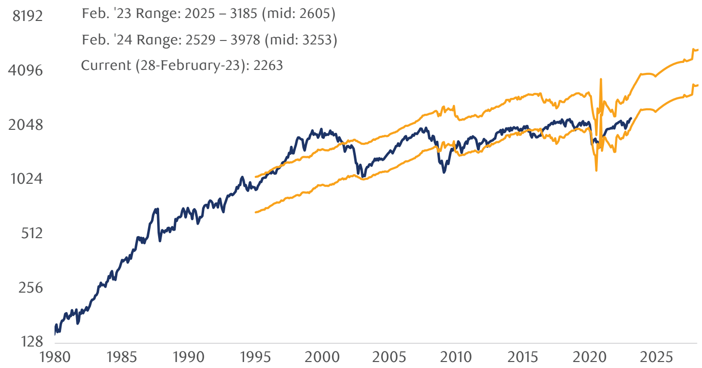
Note: As of February 28, 2023. Source: RBC GAM

MSCI Europe Index
Normalized earnings and valuations



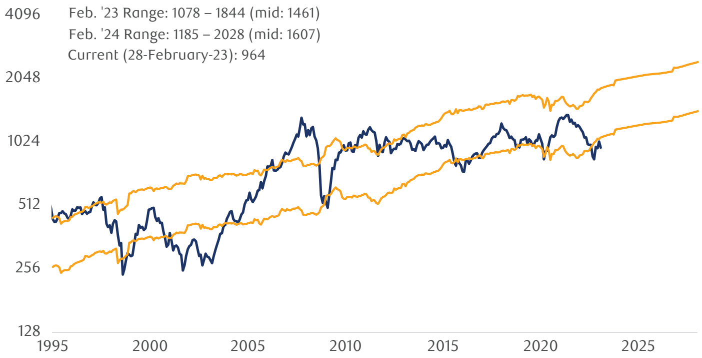
Note: As of February 28, 2023. Source: RBC GAM

MSCI U.K. Index
Normalized earnings and valuations



Note: As of February 28, 2023. Source: RBC GAM

MSCI Emerging Markets Index
Normalized earnings and valuations



Note: As of February 28, 2023. Source: RBC GAM

Global fixed income markets

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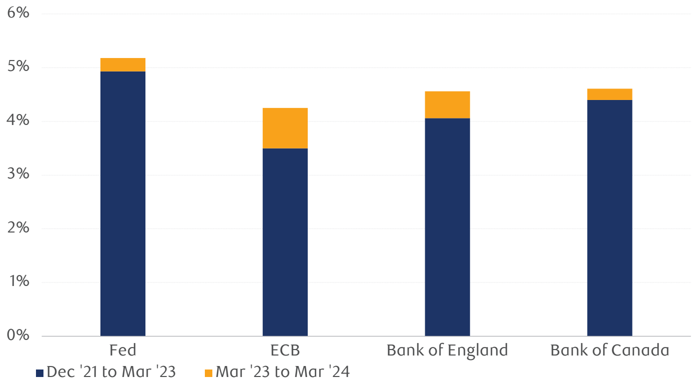
After a bright start to the year, government bonds have been coming under pressure from rising yields, as economic growth and inflation are proving much more resilient than expected. In response, central banks are likely to continue hiking interest rates through at least the middle of this year to cool still-too-high inflation and a remarkably strong labour market. That said, we expect central banks to hike policy rates much less than they did in 2022. The economy has shifted down a gear, and price rises are less rapid. We expect that inflation will slow towards 2% through the medium term and therefore believe that yields today compensate investors generously. Even with further increases in policy rates and a string of recent U.S. bank failures, we expect mid-single-digit returns from government bonds over the next 12 months, as the highest yields in over a decade should provide a buffer against losses.

The U.S. recently experienced its largest bank run since 2008 – with Silicon Valley Bank (SVB) entering receivership. In response, investors flocked to the relative safety of government bonds, driving down yields. We do not believe that SVB's failure portends a system-wide crisis as policymakers responded quickly to avoid contagion risks. Moreover, the nature of the events so far differ considerably from the catastrophic losses of 2008, when the major concern was the quality of the banking industry's assets. In SVB's case, the problems were rooted in U.S. government bonds - assets of the highest quality whose values were hit by rising interest rates rather than any real risk that the debts wouldn't be repaid.

We are reasonably confident that 2023 will not mark a third straight year of negative returns for bonds. One reason is that yields are much higher. Last year's fixed-income returns were particularly poor due in part to the rapid and unexpected rise

Exhibit 1: Policymakers are expected to hike only a bit more – Historical and expected changes in central bank interest rate



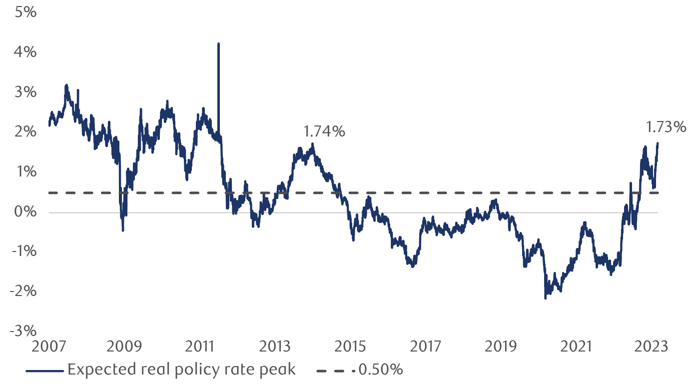
Note: As of March 2, 2023 and based on historical changes and overnight-indexed swap rates. Source: RBC GAM in interest rates that could not be offset by low starting yields. The effect of higher yields is particularly notable on short-maturity bonds: investors in a newly issued 2-year Treasury bond would experience losses over a one-year holding period only if the yield on the security more than doubled to 10.0% from the current 4.8%.

The market expects 50 to 75 basis points of hikes over the next 12 months from most central banks, a stark contrast to the hundreds of basis points of tightening delivered last year (Exhibit 1). While the year-over-year pace of inflation is still far above target in most countries, increases in prices have slowed markedly over the past six months. In the U.S., prices have been rising by a paltry 1% per year after excluding hikes in residential rents. Over the next year, we expect rent inflation to cool significantly. The impact of last year's rapid climb in energy prices due to Russia's invasion of Ukraine and supply-chain disruptions from the pandemic will also fade.

In addition to falling price pressures, economic activity has clearly downshifted. By our calculations, inflation-adjusted policy rates are as restrictive as they have been since before the global financial crisis (Exhibit 2). We also believe the full effect of the massive amount of tightening is yet to be felt in the economy. Traditional harbingers of economic downturns are signaling agreement with our assessment, as short-term bond yields have significantly exceeded those on longer-term bonds since the middle of last year. This inversion of the yield curve historically portends a recession sometime over the ensuing two years, and we expect most of the world to fall into a mild recession by late 2023 or early 2024 - suggesting support for bond prices.

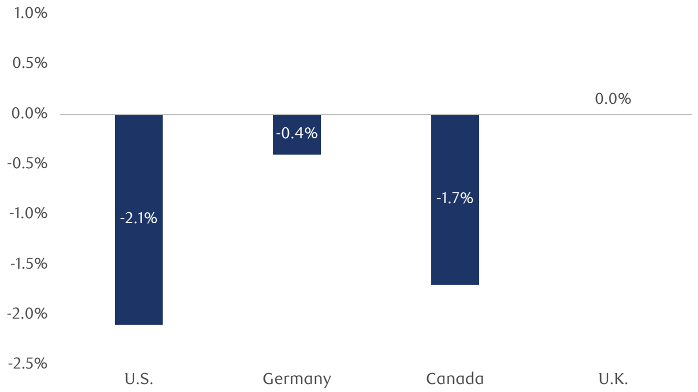
In the meantime, resilient economic activity could keep policy rates and yields higher for longer than many investors had expected even just a few months ago, as many thought the economy would be well on its way to recession by now. The economic tailwinds include remarkably strong U.S. consumer spending in the face of steeply rising borrowing costs, the positive impact on Europeans' wallets of a warm winter and energy subsidies representing more than 5% of GDP, and China's earlier-than-expected abandonment of the economy-limiting zero-COVID policy. While disinflation has gripped most of the world in the past six months (Exhibit 3), worries about inflation becoming entrenched well above target are very real. The vast majority of the inflation slowdown is due to falling energy prices and the partial unclogging of supply chains – over which policymakers have little control. Meanwhile, the effects of the expansive fiscal and monetary response to the pandemic are taking longer to relinquish their inflationary impact. Labour markets have shown little response to aggressive central-bank policy actions over the past year. Wage inflation is near 5% in most economies, which is above levels consistent with 2% inflation over the long

Exhibit 2: Expected real policy rates are very restrictive – Expected peak in inflation-adjusted U.S. policy rates



Note: As of March 2, 2023. Source: Bloomberg, University of Michigan and RBC GAM calculations

Exhibit 3: Inflation is falling in most markets
6-month decline in annual inflation rates, selected markets



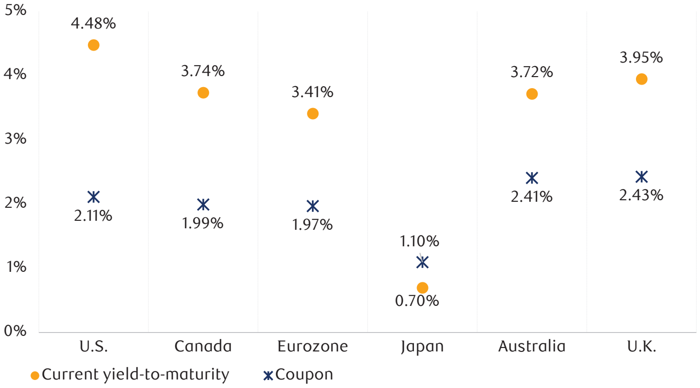
Note: From July 2022 to January 2023. Source: Bloomberg term. In Europe and Japan, workers are set to bank their best pay raises in decades. A re-acceleration of price pressures amid a still-strong job market would present a troubling scenario for bonds as it would indicate that more rate hikes are needed than is currently expected.

Bond investors are also grappling with questions over the sustainability of government finances in the presence of much higher yields. For more than a decade, central banks have supported government-debt markets by both cutting interest rates and purchasing vast amounts of bonds. But those measures are being forcefully reversed.

Central banks are now reducing their massive balance sheets. For Europe, this year marks the largest increase in bonds outstanding, excluding central-bank purchases, since the launch of the single currency in the early 2000s. In the U.S., burgeoning tax receipts have reduced the need to issue new debt, but worries about how future deficits will be financed are intensifying. These concerns are not restricted to the U.S. Fiscally weak members of the euro area such as Italy and Spain are facing higher levels of investor scrutiny.

In most fixed-income markets, the average coupon on existing debt is still much lower than prevailing yields (Exhibit 4). As outstanding debt matures and new bonds are issued, government coupon payments will rise significantly. This process will happen faster in some markets than others. In the U.S. and Canada, for example, about 25% of the countries' outstanding debt will roll over by the end of 2024 since their governments have relatively more short-term debt. In Japan and the U.K., by contrast, that figure is barely above 10%, giving those countries a much longer period to adjust to higher financing costs. Under current policy, the share of the U.S. federal government's annual expenditures taken up by interest payments could double over the next decade to 12% from 6% now, according to the Congressional Budget Office. While borrowing costs are also expected to climb in Canada, the relatively healthy fiscal picture means that debt-to-GDP ratios are projected to decline even in fairly negative economic scenarios. Towards the end of the summer, the U.S. Congress approaches another budget showdown over the debt ceiling. We are fairly sanguine regarding the odds of a government shutdown, but the event could bring attention to just how poor the long-run fiscal position of the U.S. government is.

Exhibit 4: Government bond yields are much higher than coupons – Current coupon rate versus prevailing market yields



Note: As of March 2, 2023. Source: Bloomberg, RBC GAM calculations

Overall, we expect that a combination of strengthening economic activity, a resilient labour market and modest disinflation will prompt central bankers to continue hiking interest rates through the middle of this year, and then pause. In our view, policy rates in most markets are already high enough to dampen growth, and with price pressures easing, the risks to overtightening versus letting inflation become entrenched are more finely balanced than they were in 2022. Growth and inflation are already much slower than a year ago, and we expect that most economies will eventually slip into recession. As investors shift their attention from inflation and aggressive tightening to flagging growth, bonds should do well.

Direction of rates

We expect the Fed to hike at least two more times this year, to 5.25% from the current level of 4.75%, before going on an extended pause.

United States

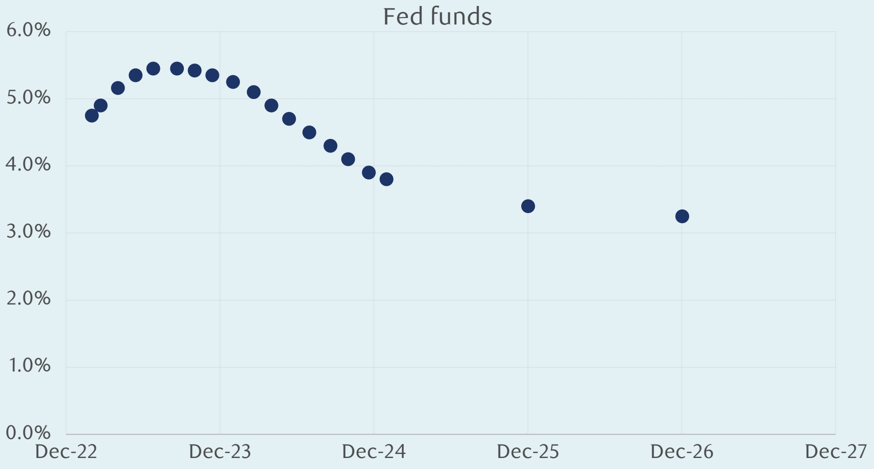
Resilient consumer demand and a still-tight labor market are upsetting widely held predictions that the U.S. would be in a recession in the first half of 2023. Prices also continue to climb uncomfortably quickly, recording a 6.4% annual rise in January. With price rises appearing to be stuck at a high level and the economy performing much better than expected, investor expectations for how much the U.S. Federal Reserve (Fed) might have to raise policy rates have reached new highs, hitting 5.40% in early February. What's more, expectations for when the Fed would begin cutting rates have also moved further into the future. Policymakers are now expected to remain on hold at above 5% for 12 months or more (Exhibit 5). Meanwhile, the Fed continues to shed substantial quantities of Treasury bonds and mortgage-backed securities from its balance sheet.

Most of the main drivers of inflation such as pandemic-related supply-chain snarls, and bursts of energy and food inflation due to the war in Ukraine are fading. The primary driver of measured inflation in the U.S. is currently rents, but these are now falling too, and we expect this factor to provide a significant downdraft to inflation as 2023 progresses.

With inflation falling and policy rates in restrictive territory, the Fed will likely be much more cautious with policy changes over the next year. We expect the Fed to hike at least two more times this year, to 5.25% from the current level of 4.75%, before going on an extended pause. We also expect the 10-year Treasury yield to be around 3.75% in a year's time, near where it is now.

Exhibit 5: Rates are expected to remain high for some time

Expected future values of the fed funds rate



Note: As of March 2, 2023. Source: Bloomberg, RBCGAM calculations

Eurozone

The eurozone, somewhat improbably, avoided what was once considered a near-certain recession to end 2022 as a land war on its borders and a crushing increase in energy costs were offset by large-scale fiscal spending and a very warm winter. At this point, it is tough to say whether the outcome is a triumph of European economic dynamism or another indictment of the folly of economic forecasting. The region's inflation levels are among the highest in the developed world, reaching 8.6% in January, and labour markets are tight. Growth in Europe should be further bolstered by the opening of the economy in China, its largest trading partner. As a result, the European Central Bank's (ECB) remit seems straightforward over the next 12 months – hike rates. Policymakers in the single-currency area are expected to deliver the most policy tightening of any major developed-market central bank over the next 12 months with the benchmark interest rate expected to reach 3.90% by this time next year from 2.50% now. The tightening of monetary policy will extend to the balance sheet in 2023, adding to downward pressure on the eurozone economy.

Looking ahead, we believe that investors' expectations for the eurozone economy are too rosy. We think policy rates are already tight, leading us to believe that the ECB will hike fewer times than many investors think. The most aggressive tightening cycle ever from the ECB seems to be filtering quickly through the banking system. Further hikes by the ECB will likely push the German yield curve into a deep inversion – with short-term bond yields rising well above long-term ones – and this is reflected in our forecasts. We expect the ECB to hikes rates to 3.50% and the 10-year German bund yield to reach 2.25% sometime over the next year.

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Japan

Japanese monetary policy is undergoing a sea change. Not only is inflation at multi-decade highs, with prices rising 4.3% year-over-year in January, but the architect of the Bank of Japan's (BOJ) current policy of near-zero interest rates, massive bond purchases and yield-curve control (YCC), Hurohiko Kuroda, is about to be replaced after 10 years at the helm of the bank. The new governor, Kazuo Ueda, is a former member of the BOJ's board and a supporter of the current policy stance. For now, policymakers remain convinced that the bulk of the current inflation pressures in Japan will pass, as they are primarily related to the legacy of last year's collapse in the yen versus the dollar. The yen's fall pushed up the costs of production for businesses that rely heavily on imported raw materials.

Our year-ahead forecast for the policy rate in Japan is 0.10% and we expect the 10-year bond yield to be 0.70%, up from the current -0.10% and 0.50%, respectively.

While this is not the first time that pronounced yen weakness has raised input costs, it is the first time in recent memory that higher input costs have had such a marked inflationary impact on consumer prices and wages. After surprising markets by raising the top of its target band for the 10-year Japanese government-bond yield in December, the BOJ will in our view make further adjustments before abandoning attempts to control bond yields altogether. Eventually, we expect that the central bank will raise policy rates above zero for the first time since 2016. Our year-ahead forecast for the policy rate in Japan is 0.10% and we expect the 10-year bond yield to be 0.70%, up from the current -0.10% and 0.50%, respectively.

Canada

The Bank of Canada (BOC) raised its policy rate by 0.25% to 4.50% in January, and Governor Tiff Macklem signaled at the time that it would likely leave rates where they were for at least several months. The view of the BOC, and one that we share, is that a slowdown in the pace of rate hikes is warranted. Economic activity and inflation slowed meaningfully over the course of last year, and policymakers feel more comfortable erring on the side of caution now that the risks of raising rates too much versus raising them too little have become more balanced. Macklem said it's too early to begin contemplating rate cuts and that further rate hikes should be expected if inflation or economic activity prove more resilient than forecast. While some of the most disruptive effects of the pandemic are easing, businesses continue to pass on significant cost increases to consumers. As in most countries, the Canadian labour market remains very tight, raising the risk that businesses will have to offer bigger wage increases in order to attract and retain workers. We forecast the policy rate will remain at 4.50% over the balance of the year, and expect the Canadian 10-year government bond will yield 3.00% over the next 12 months.

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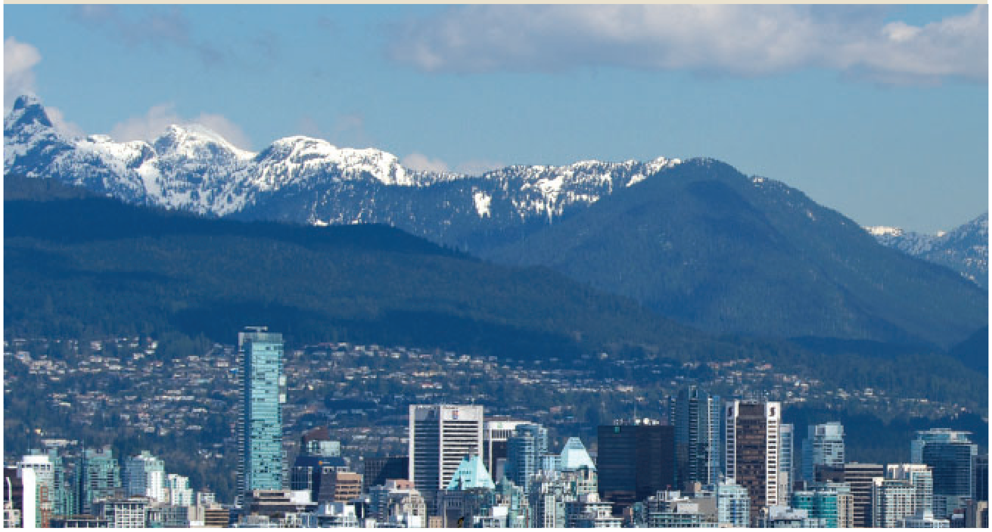

We expect the Bank of England's policy rate to be unchanged a year from now, at 4.00%. We also forecast 10-year gilt yields at 3.50%, down from around 3.80% at the time of writing.

United Kingdom

The U.K. economy has outperformed our expectations, mirroring the unexpected upturn in activity seen on the continent. Inflation is a particularly pernicious problem in the U.K., which has been buffeted by Brexit aftershocks and a weaker pound. Shortages of labour are as acute as anywhere in the developed world and mean that businesses are hiking wages at the fastest pace in over 20 years. The average worker's pay packet is growing at nearly 7%, easily exceeding a level consistent with 2% inflation over the long term. Thankfully, the BOE has been among the most aggressive central banks over the past year in both raising interest rates and reducing its balance sheet. Doing so has increased borrowing costs for the government, businesses and consumers – likely curtailing an even more vicious upturn in price pressures.

Over the year ahead, we expect the U.K. economy to lag most of its peers. The U.K. is the only G7 economy that has failed to regain its pre-COVID size. The economy is much weaker than it would have been had it remained in the EU, the government faces a persistent credibility gap and inflation is crushing household purchasing power. We expect the Bank of England's policy rate to be unchanged a year from now, at 4.00%. We also forecast 10-year gilt yields at 3.50%, down from around 3.80% at the time of writing.

Regional outlook

We recommend that investors be overweight German bunds and U.S. Treasuries, and underweight Japanese government bonds. Policy normalization is very advanced in both the U.S. and Europe, leaving limited room for yields to continue rising on a relative basis. We expect Japan, meanwhile, to continue its nascent adjustment, which should weigh on bond prices.

We expect Japan, to continue its nascent adjustment, which should weigh on bond prices

Underweight Japanese bonds

vs.

Overweight German bunds U.S. Treasuries

Interest rate forecast: 12-month horizon

Total Return calculation: February 28, 2023 – February 28, 2024

U.S.

	3-month	2-year	5-year	10-year	30-year	Horizon return (local)
Base	5.25%	4.50%	4.10%	3.75%	3.80%	4.76%
Change to prev. quarter	0.25%	(0.25%)	0.00%	0.05%	0.20%	
High	6.00%	6.00%	5.50%	5.00%	4.95%	(1.30%)
Low	3.00%	2.75%	2.50%	2.25%	2.55%	13.40%

Expected Total Return US$ hedged: 5.0%

Germany

	3-month	2-year	5-year	10-year	30-year	Horizon return (local)
Base	3.50%	3.00%	2.60%	2.25%	2.20%	5.47%
Change to prev. quarter	0.50%	0.25%	(0.20%)	(0.15%)	0.00%	
High	4.50%	4.00%	3.25%	3.00%	2.40%	2.21%
Low	2.00%	1.80%	1.40%	1.25%	1.25%	21.44%

Expected Total Return US$ hedged: 8.4%

Japan

	3-month	2-year	5-year	10-year	30-year	Horizon return (local)
Base	0.10%	0.25%	0.50%	0.75%	1.75%	(3.57%)
Change to prev. quarter	0.20%	0.15%	0.40%	0.50%	0.10%	
High	0.25%	0.50%	0.80%	1.25%	2.50%	(12.23%)
Low	(0.10%)	(0.10%)	0.20%	0.40%	1.40%	1.41%

Expected Total Return US$ hedged: 1.1%

Canada

	3-month	2-year	5-year	10-year	30-year	Horizon return (local)
Base	4.50%	3.50%	3.00%	3.00%	3.00%	5.30%
Change to prev. quarter	0.00%	(0.50%)	(0.30%)	0.00%	0.00%	
High	5.50%	5.50%	4.70%	4.50%	4.30%	(3.35%)
Low	2.50%	2.25%	2.00%	2.00%	2.20%	12.04%

Expected Total Return US$ hedged: 5.5%

U.K.

	3-month	2-year	5-year	10-year	30-year	Horizon return (local)
Base	4.00%	3.50%	3.25%	3.50%	3.95%	6.28%
Change to prev. quarter	(1.25%)	(1.25%)	(1.75%)	(1.00%)	(0.05%)	
High	5.50%	4.75%	4.25%	4.00%	3.75%	5.80%
Low	3.00%	2.60%	2.50%	2.50%	3.00%	17.40%

Expected Total Return US$ hedged: 8.0%

Source: RBC GAM

Currency markets

G10 and emerging market currencies to benefit from U.S. dollar's decline

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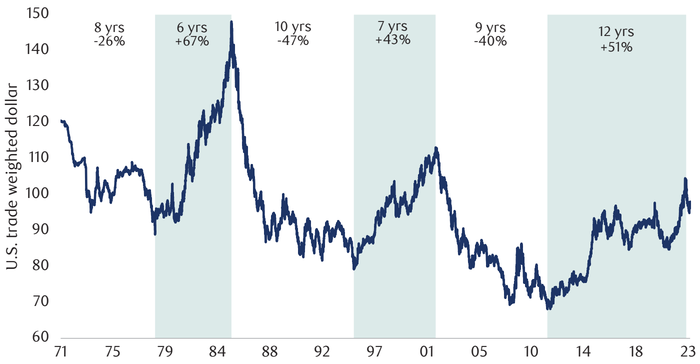
RBC Global Asset Management Inc.

Daniel Mitchell, CFA
V.P. & Senior Portfolio Manager
RBC Global Asset Management Inc.

The tide is finally turning against the U.S. dollar. A reversal of the greenback's gains has been overdue for some time, and we have warned for several quarters that the currency's strength in 2022 had pushed it from already rich to levels of extreme overvaluation. As the dollar starts to retreat, and with a multitude of factors turning against it, we are growing increasingly confident that a multiyear period of U.S.-dollar weakness lies ahead. We expect most G10 and emerging-market currencies to benefit from this powerful cyclical shift.

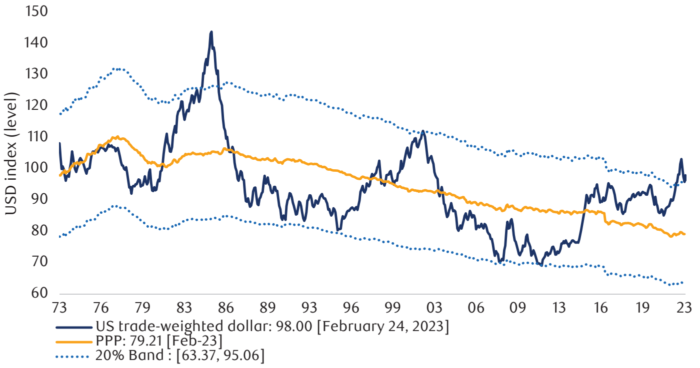
The greenback's decade-long upswing (Exhibit 1) had been extended by supply constraints during the pandemic and Russia's invasion of Ukraine, both of which increased the need for the U.S. Federal Reserve (Fed) to step up the fight against inflation. These developments provided temporary support for the greenback, stretching the U.S.-dollar bull market beyond what was seen in prior cycles both in duration and in magnitude. The trade-weighted dollar index last year reached levels that historically have capped the currency based on purchasing power parity models (Exhibit 2). Not only was the currency's valuation extreme at the trade-weighted level, it was also fairly broad-based (Exhibit 3),

Exhibit 1: U.S. trade-weighted dollar



Note: As at Feb 24, 2023. Source: Bloomberg, U.S. Federal Reserve, RBC GAM

Exhibit 2: PPP Valuation

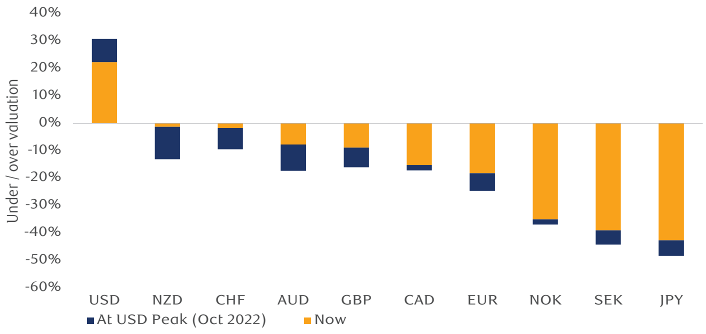


Note: As at Feb 24, 2023. Uses new Fed USD index from Dec 31, 2019 onward (USTWAFE Index). Source: U.S. Federal Reserve, Bloomberg, RBC GAM and currently exceeds extreme thresholds against several developed-market currencies (Exhibit 4). The historical record shows that once a currency rises to such lofty levels, its strength tends to reverse in a matter of months rather than years, and this is precisely what played out over the last few months of 2022.

The dollar reached its peak in mid-October. At the time, the Fed was tightening monetary policy in 75-basis-point increments and investors had little or no grasp on when U.S. interest rates would stop rising. This state of affairs boosted the attractiveness of the greenback, both because it offered higher yields and because traders tend to flock to the safety and liquidity associated with the primary reserve currency during times of uncertainty. Between November and January, however, the greenback declined by 12% before stabilizing in early February. The final straws that sealed the dollar's decline include:

- At around the time of the dollar's peak in October, an easing of inflation and expectations that the Fed would slow the pace of rate hikes chipped away at the dollar's exuberance.
- In November, it became apparent that inventories of natural gas in Europe would likely be sufficient for the coming winter, and forecasts suggested that a warmer-than-average winter lay ahead. These developments offered hope that the impact of the energy crisis could be dulled and gave a boost to the euro through an improved economic outlook.
- In December, Chinese authorities announced that they would end virtually all restrictions imposed during the pandemic. Expectations of a resulting boost to global growth encouraged greater capital movement away from the U.S. to areas including Europe and the rest of Asia - two regions with strong economic links to China.
- Finally, in January, the market's focus turned to an increasingly hawkish bent from major central banks other than the Fed. The European Central Bank (ECB), which had only begun hiking rates in July, began to take a much more aggressive tone, setting the stage for interest-rate hikes in larger, 50-basis-point increments (Exhibit 5). Mostly, however, the dollar was pushed lower by the Bank of Japan's (BOJ) December surprise announcement to tighten policy by increasing the allowable trading range on 10-year Japanese government bonds to +/-0.50% from +/-0.25%.

Exhibit 3: G10 currency valuations



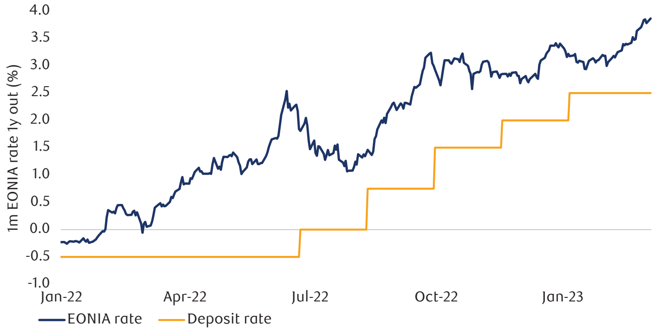
Note: As at February 24, 2023. Source: Bloomberg, RBC GAM

Exhibit 4: Currencies do not remain in extreme territory for long

Currency	% bands within which more than 90% of observations lie	Average number of months out of 20% band	Foreign currency valuation
US TW$	17.6%	5	22.3%
JPY vs. USD	34.0%	19	-42.6%
EUR vs. USD	25.4%	6	-18.2%
GBP vs. USD	22.5%	6	-8.9%
CHF vs. USD	24.7%	7	-1.7%
CAD vs. USD	19.5%	5	-15.2%
AUD vs. USD	37.0%	22	-7.7%
NZD vs. USD	33.6%	11	-1.3%
SEK vs. USD	36.8%	16	-39.0%
NOK vs. USD	24.3%	6	-35.0%

Note: As at February 24, 2023. Boxes denote currency pairs whose valuation exceeds the 90% bands. Source: Deutsche Bank, U.S. Federal Reserve, Bloomberg, RBC GAM

Exhibit 5: : Eurozone rate expectations ticked higher in 2022



Note: As at March 6, 2023. Source: Bloomberg, RBC GAM

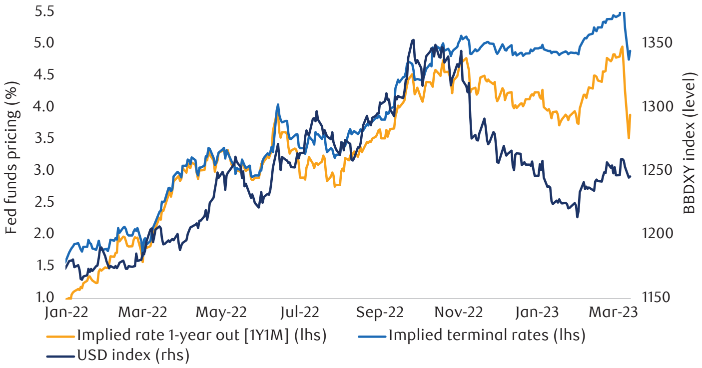
This was seen as a possible precursor to an abandonment of the six-year policy of anchoring interest rates at low levels and turned attention to who would take over as BOJ governor when Haruhiko Kuroda's term ends in the spring.

The most important themes for foreign-exchange markets last year were the Russia-Ukraine war, its impact on inflation and, ultimately, the necessary response from the Fed. It's clear, however, that the story so far in 2023 is much less focused on a single driving factor. Exhibit 6 highlights that, for most of 2022, the greenback traded largely in line with the interest rate at which the Fed was expected to stop hiking (the terminal rate). Since October, the dollar has fallen by much more than is implied by interest-rate expectations – even those that account for what happens after the Fed stops raising rates. The 12% fall in the dollar is evidence that other factors are beginning to weigh on the greenback. Even as yields shot higher in February, the dollar did not follow with enthusiasm. While the dollar's initial reaction to the failure of Silicon Valley Bank has been to weaken, it has done so by much less than the massive move in interest rates would suggest.

The early stages of the greenback's cyclical sell-off have removed some of its extreme overvaluation, but there is lots of room for the currency to fall further. Exhibit 7 puts this scope for further declines into context by aligning past cycle peaks at an index level of 100. From this perspective, the sell-off to date looks tiny, and the roadmap for the long-term U.S.-dollar bear market suggests another 25% to 30% in declines over the next few years. Counter-trend rallies, like the one in February, do occur, but they tend to be small and fleeting relative to the longer-term cyclical moves. The broader downward trend will prevail, we think, partly because other central banks are catching up to the Fed's hawkishness and partly because the improved global growth outlook adds appeal to foreign assets.

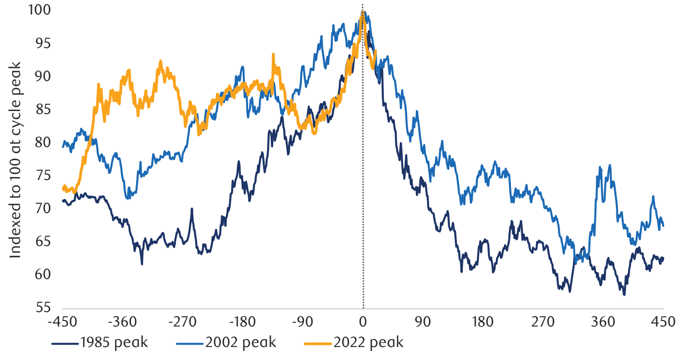
Complementing these drivers are the more traditional dollar-negatives: budget shortfalls, trade deficits and debt-ceiling concerns. Also adding weight to the dollar downtrend is the idea that global usage of the dollar is waning because of deglobalization and a lower volume of trade that is conducted in U.S. dollars. The greenback's falling share of foreign-exchange reserves hints that overall trust in the dollar is waning, a move likely accelerated by U.S. efforts to block Russia, Iran and North Korea from global payments systems. China, the largest foreign holder of Treasuries, would no doubt have regarded America's seizure of Russian foreign-exchange reserves as a threat.

Exhibit 6: Market is looking beyond terminal rates



Note: As at March 14, 2023. Source: Morgan Stanley, Bloomberg, RBC GAM

Exhibit 7: U.S. dollar can still fall further



Note: As at March 1, 2023. Source: Bloomberg, RBC GAM

With so many arguments stacking up against the dollar, we have grown more confident in our call that the currency's long-term downtrend has begun. We forecast stronger currencies in G10 and in emerging-markets, as both would benefit from a falling U.S. dollar.

The USD "Smile" Framework

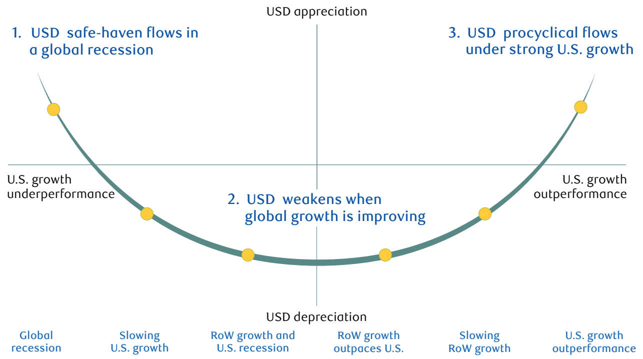
The "U.S. Dollar Smile" describes the dollar's tendency to rally either when things are very good or when they're very bad. On one side of the smile we find superior U.S. economic performance and equity-market returns, while the other side involves capital flight to the safety of Treasuries and the greenback. It is the period in between where the dollar weakens (Exhibit 8). This framework can aid in forecasting the direction of the dollar in different economic environments and can help answer the question of how the greenback might react to the economy entering a recession. A hard landing would likely result in a stronger dollar (very bad) while a mild recession would result in dollar depreciation (not too bad). The so-called “no landing” scenario, where economic growth remains strong, is more difficult to handicap. In this case, the dollar’s direction would likely depend on whether a strong economy (very good) is accompanied by persistent inflation – which would prompt the Fed to start another round of aggressive interest-rate hikes. This is the biggest threat to our call for a weaker dollar, as another repricing higher of U.S. short-term interest rates would tend to support the greenback. This outcome looks much less likely in light of the recent bank failures in the U.S.

In any case, it is not just the U.S. economic situation that matters. In fact, it is the state of economic activity abroad that’s more important in determining the dollar’s direction. Exhibit 9 demonstrates how the greenback falls most when expectations for global growth are rising. Analysis shows that dollar weakness is also the most consistent result during those times. Capital flows support the idea that global growth helps drive the direction of the dollar. European investors, which until last year had bought trillions worth of foreign assets to avoid negative interest rates imposed by the ECB, have started to repatriate some of that money now that yields in Europe are positive and the economy has improved. A similar dynamic exists in Japan, and it is one that will accelerate dramatically if the Bank of Japan (BOJ) abandons its efforts to keep interest rates low within a tight band. U.S. investors have begun to move money abroad given the improved economic situation in Europe and in China. U.S.-listed ETFs that invest in European equities, for instance, have started to report that inflows have picked up notably (Exhibit 10) – a vote of confidence in the European economy.

Emerging markets

Emerging-market currencies fared much better than the euro or the yen last year, even though Fed hikes and dollar strength would typically spell trouble for assets in developing nations. A few currencies, including those of Mexico, Brazil and Peru, even managed to deliver double-digit returns

Exhibit 8: U.S. dollar smile



Source: Credit Suisse, RBC GAM

Exhibit 9: U.S. dollar performance in various economic regimes

		Change in RoW growth forecast	
		Down	Up
change in U.S. growth forecasts	Down	0.88%	-1.27%
	Up	0.52%	-1.17%

Note: As at February 8, 2023. Includes data from 2002 onwards.
Source: JP Morgan

Exhibit 10: Inflows into ETFs that invest in European equities

Note: As at March 3, 2023. Data from 5 ETFs VGK, EZU, FEZ, EWG, IEV.
Source: Bloomberg, RBC GAM

last year. Others have outperformed developed-market currencies since the U.S. dollar turned lower this past fall. The principal reason for the resilience was that emerging-market central banks were quicker and more aggressive even than the Fed in raising interest rates to combat rising prices (Exhibit 11). Monetary conditions are being kept tight across emerging markets even as inflation begins to ebb, pushing inflation-adjusted yields higher and attracting capital in the process. We think emerging-market currencies are set to keep outperforming given a combination of cheap valuations, better growth prospects (thanks to China and Europe), a weaker dollar and a less threatening Fed outlook. After a long period where emerging-market currencies were under-owned, positioning indicators now suggest that investors are starting to increase their allocations to emerging-market assets as risk sentiment improves.

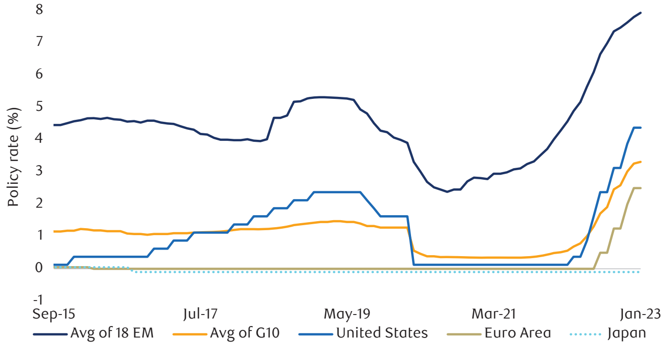
Canadian dollar

The Canadian dollar was the best performing G10 currency versus the U.S. dollar for most of 2022, but has ceded that relative strength as other currencies have caught up since the U.S. dollar peaked in late October. Part of the blame for the Canadian dollar's recent weakness was the Bank of Canada's January announcement that it would keep rates steady at 4.5%, diminishing the loonie's interest-rate advantage as its peers continue hiking. This pause in rate hikes has likely been cemented by a weaker GDP report for 2022's fourth quarter, and the loonie has declined against the greenback in recent weeks as the market ramps up speculation that the Fed might continue raising rates beyond 5%.

Also to blame for the Canadian dollar's underperformance are concerns about the negative impact of interest-rate hikes on the Canadian housing market. Last year's aggressive monetary tightening will take time to reverberate through the economy as mortgages are reset at higher rates, and will undoubtedly act as a headwind this year. We don't expect a large-scale crisis to cripple the economy, though. The gradual pace at which Canadian mortgages are reset means that the reduction in disposable income due to higher loan payments should take time to play out and thus be more muted than what is anticipated by investors.

The state of the U.S. economy is also highly relevant for the loonie's prospects. Some investors, fretting over the risk of a U.S. recession, have sold the Canadian dollar and

Exhibit 11: Emerging market policy rates have been consistently higher than in the G10



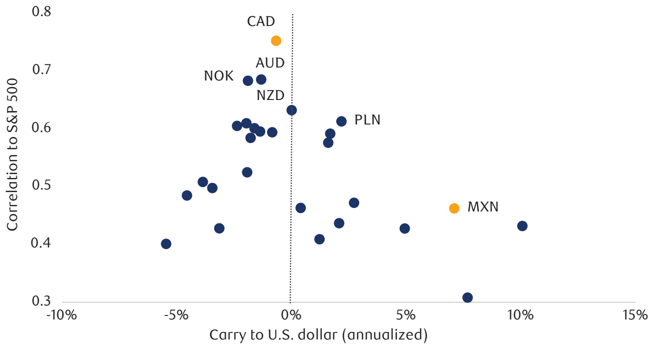
Note: As March 1, 2023. Source: Macrobond, RBC GAM

the Mexican peso to profit in the event that economic data worsens. Both currencies have strong trade ties with the U.S. and both are positively correlated to risk sentiment, but the Canadian dollar is seen as the cleaner bet because it offers a higher sensitivity to stocks and a much cheaper cost of hedging (lower interest rates than in Mexico, Exhibit 12). Even still, the loonie seems to be holding within its six-month-old range between 1.32 and 1.40 per U.S. dollar, helped by the avoidance of big declines in stock markets and the surprisingly robust U.S. economic data. Continued improvement in the economic performances of Europe and China would be supportive for commodities and raise the possibility that short-Canadian-dollar positions are abandoned.

Capital flows are perhaps another reason why the loonie hasn't weakened more. The net basic balance, the broadest measure of capital flows, remains supportive for the loonie at 3% of GDP (Exhibit 13). Arguably the most important component of this measure is the current account, which recently begun to post surpluses thanks to improvement in trade and income categories. The one area of weakness is negative foreign direct investment, where deterioration has mostly been driven by Canadian firms investing abroad rather than foreign firms retreating from Canada. This reflects preferences for business investment in the U.S. as well as large global infrastructure investments by Canadian pension funds (Exhibit 14). Early signs suggest that this net outflow may subside as oil and gas producers in Canada work together to reduce emissions to zero by 2050. The joint plan is expected to drive $75 billion of investment over the next few decades, which would not only boost economic activity but also help correct the perception that Canada's oil sands are a source of dirty energy.

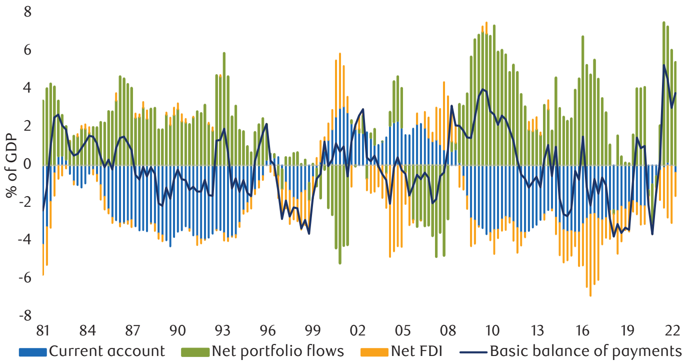
The loonie's near-term underperformance should prove limited, we think, so long as a hard landing in the U.S. is avoided. Supportive flows, strong immigration and elevated commodity prices should help the Canadian dollar keep pace with its peers over the next 12 months. At some point within the coming year, we forecast that the loonie will touch C$1.23 per U.S. dollar.

Exhibit 12: Loonie closely tied to stocks and has low carry vs. U.S. dollar



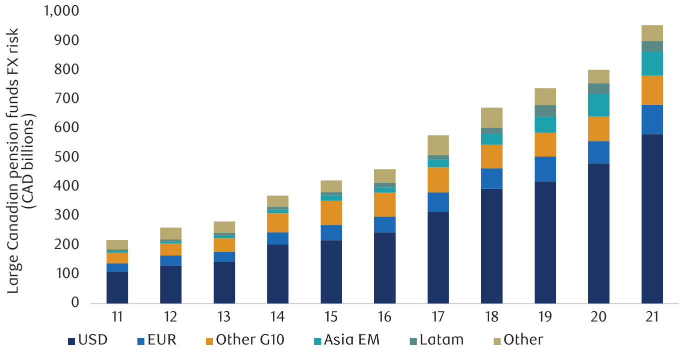
Note: As at March 3, 2023. Source: Bloomberg, RBC GAM

Exhibit 13: Canada basic balance of payments



Note: As at December 31, 2022. Source: Statistics Canada, RBC GAM

Exhibit 14: FDI outflows from Canadian pensions



Note: As at year end 2021. Data from pension fund annual reports. Source: UBS, RBC GAM

Regional outlook – United States

Brad Willock, CFA
V.P. & Senior Portfolio Manager
RBC Global Asset Management Inc.

U.S. stocks, measured by the S&P 500 Index, extended their bumpy ride into winter, finishing the three months ended February 28, 2023, down 2.3%. Stocks have been under pressure since the U.S. Federal Reserve (Fed) responded to the fastest inflation in 40 years with a commitment to end it. The Fed, led by Chair Jerome Powell, is in the midst of the speediest rate-hiking cycle since the early 1980s. U.S. policymakers have taken the policy rate from about zero to almost 4.75% in just under a year, and investors expect them to lift the rate to 5.50% by June, based on market indicators.

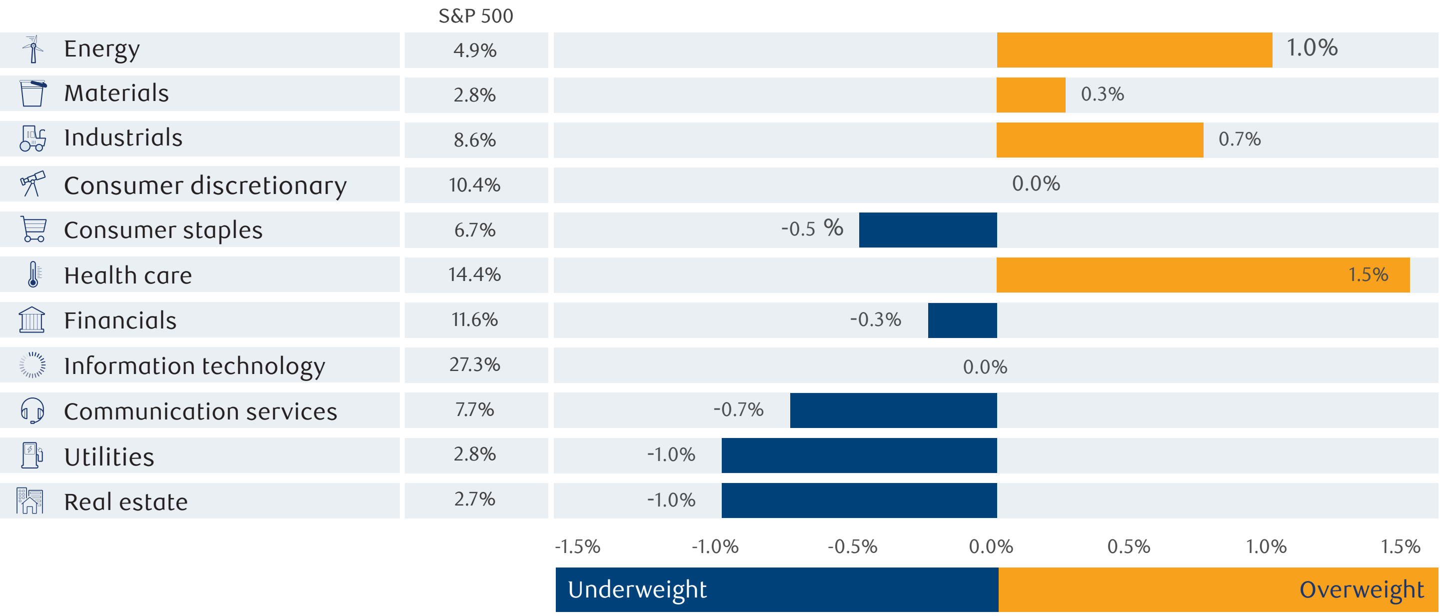
The good news is that the pace of inflation does appear to be slowing. Consumer inflation probably peaked last summer at 9.1% and moved down to 6.4% in January as prices for goods and gasoline are now in retreat. However, wage growth – currently the main driver of inflation – is running at roughly 5% and remains too fast to be consistent with the Fed's 2% target.

The question is whether today's wage inflation is due to longer-term forces or unusual cyclical factors arising from the pandemic. It appears that above-trend wage inflation is driven primarily by a decline in the workforce, as roughly 3 million Baby Boomers have retired in recent years. Moreover, COVID-related factors have kept many service-industry employees from returning to work, and there has been a huge reduction in the number of available part-time workers willing to work for less than a full-time wage. The bottom line is that the labour market is legitimately tight, and inflation has been high enough for long enough that the Fed will have to hold rates higher for longer to stabilize prices at acceptable levels.

In addition to inflation, investors have been focused on the outlook for the economy and whether it would experience a hard or soft landing (or no landing at all) as a result of the Fed's actions. These forecasts are extremely hard to make with precision and are subject to significant revisions. For example, last fall, most forecasters were fairly certain about three things: Europe would experience a recession during the winter due to high energy prices resulting from Russia's invasion of Ukraine; the U.S. would also dip into recession in late 2022 or early 2023; and China would keep its COVID-zero policies in place until early spring 2023, hampering global growth. Given these forecasts, it's no wonder investor sentiment was negative and stocks were in retreat last fall.

Pessimism peaked last year on October 12, when higher-than-expected September inflation raised the odds that the Fed would continue to hike interest rates and push the economy into a recession. The confirmation of investors' fears sent the S&P 500 sliding to a new cycle low just below 3500. In hindsight, we know that Europe has experienced a much warmer-than-expected winter, and falling energy prices have helped avoid a recession for now. The U.S. has also managed to sidestep, or at least delay, a recession thanks to the incredible resilience of its economy. China ended its

United States – Recommended sector weights

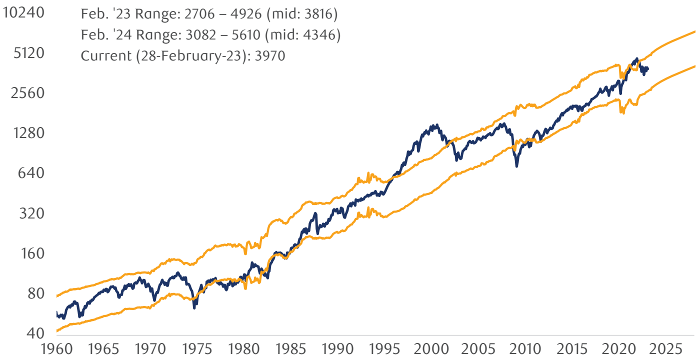


Note: As of February 28, 2023. Source: RBC GAM

> “We still believe the most likely economic outcome is that the U.S. experiences a recession, although we have reduced the odds of a severe recession.”

S&P 500 Equilibrium

Normalized earnings and valuations



Source: RBC GAM

COVID-zero policy abruptly and unexpectedly and reopened its economy in mid-December. The actions of China's leaders immediately boosted the outlook for global growth. All three forecasts that seemed so certain in the fall turned out to be way off the mark.

There is a lesson for investors in this story. First, we need to recognize that the future is highly uncertain and that forecasts of macroeconomic variables are fraught. It is far more useful to focus on the range of outcomes and imagine how markets would likely behave if certain things happened. To start, one should assign a probability to each scenario based on how likely it is to occur, and then compare the price or level of the market to evaluate the potential risk/reward available at that moment.

Flexibility is the key: investors must be open to changing their assessments of scenarios, probabilities and risk/reward analyses as circumstances warrant. For example, last fall, when the S&P plunged through 3600, the index traded at an attractive valuation of less than 15 times the consensus 2023 earnings estimate and about 17.5 times our estimate of what the market's earnings might be in a typical recession. At those levels, investors appeared to be pricing in a high probability that there would be recessions in Europe and the U.S., and that China's economy would remain locked down until spring.

In our opinion, the risk/reward had improved because a recession had become the base case for the majority of investors and was priced into stocks. History told us that, for stocks to go down significantly from that point, the U.S. economy would have to experience a worse-than-average recession, and, while that outcome was certainly possible, the odds of it happening over the medium term were pretty low. The action we took at the time was to decrease some overvalued positions in the defensive Utilities sector and increase exposure to the Industrials sector and semiconductors, which had improving outlooks or already appeared to discount a lot of bad news.

That brings us to where we stand today. The S&P trades in the middle of the 3600-4400 range that it has occupied over the past 10 months, based on a valuation multiple of 18 and aggregate S&P earnings per share of US$223 that are down 11% from May. In terms of our scenarios, we still believe the most likely economic outcome is that the U.S. experiences a recession, although we have reduced the odds of a severe recession. The current market multiple of 18 times the 2023 consensus earnings estimate leads us to anticipate a mild economic downturn, with minimal further downside to earnings over the next year. As a result, we are left with little to do with respect to portfolio positioning. We maintain a relatively balanced position with a slightly defensive bias toward Health Care and a preference for high-quality companies that generate plenty of free cash flow.

Regional outlook – Canada

Sarah Neilson, CFA
V.P. and Senior Portfolio Manager
RBC Global Asset Management Inc.

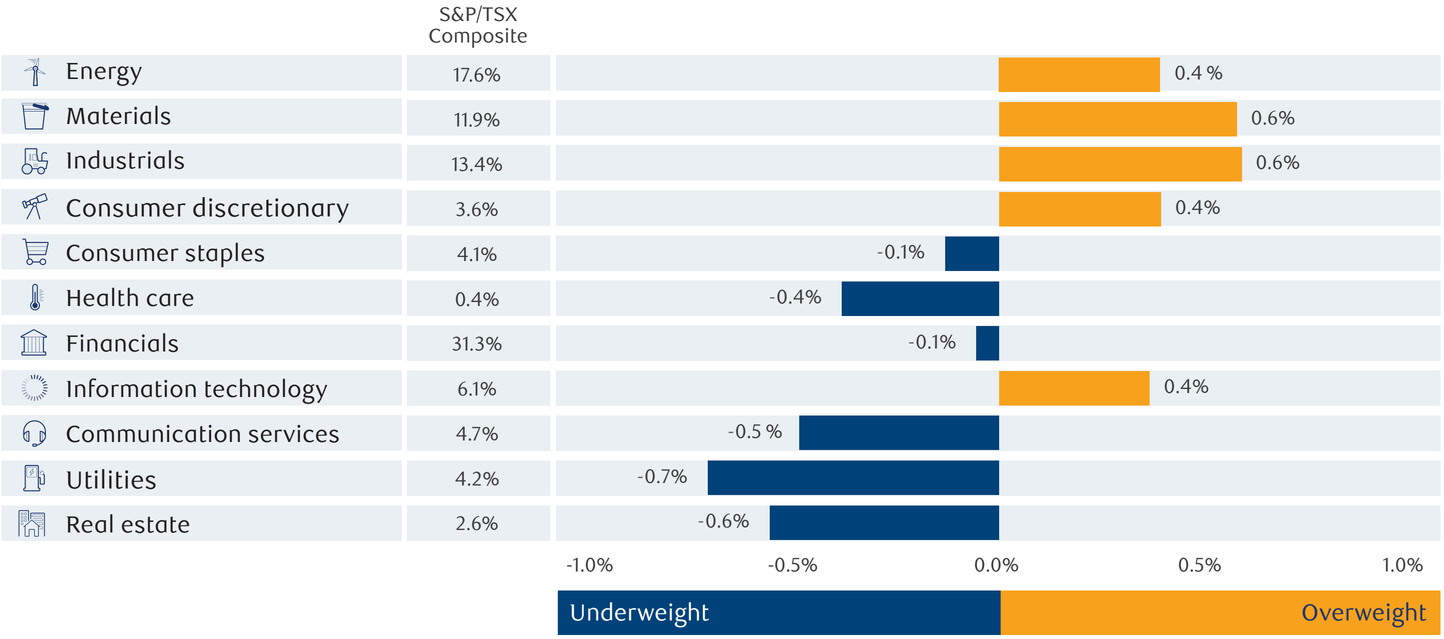
Irene Fernando, CFA
V.P. and Senior Portfolio Manager
RBC Global Asset Management Inc.

Equity markets were little changed over the three-month period ended February 28, 2023, as declines in December were offset by gains in January. Investors and policymakers continue to monitor inflation and economic data for indications in the hope central banks will be able to halt interest-rate hikes. The S&P/TSX Composite Index fell 1.8% in U.S.-dollar terms during the period. The S&P 500 Index dropped 2.3% and the MSCI World Index was flat. Following equity-market weakness to end 2022, early 2023 was marked by optimism and a shift in investor preference back to sectors that underperformed last year. So far in 2023, the Canadian benchmark is up 4.0% in Canadian-dollar terms.

Energy, which led the market in 2022, was the worst-performing sector during the three-month period. Meanwhile, last year's laggards - Information Technology, Health Care and Real Estate - drove the market higher to start the year as big valuation drops made them more appealing to investors. The Consumer Staples sector climbed overall during the period as investors continue to be attracted to companies that perform well when stock markets are in decline or stagnating. While the Materials sector benefited from strong gold prices to start the year, recent challenges in the financial performance of gold-related companies have driven these equities into negative territory. Financials, the largest sector in the S&P/TSX, fared well to start the year as the odds of a severe recession in 2023 decreased. However, Canadian bank stocks came under pressure recently after two U.S. regional banks failed. Canada's banking system, with a small number of large, diversified banks, has stronger regulatory capital requirements and stringent liquidity oversight, which should provide greater protection to shareholders.

Inflation, while stubbornly high, has fallen to about 6% from more than 8%. At these levels, however, inflation remains well above the Bank of Canada's (BOC) target of 2%. As a result, the BOC took its benchmark interest rate up to 4.5% in January from 0.50% just one year ago, and said it will monitor the economy's response to this restrictive stance before contemplating another hike. The BOC is projecting that inflation will fall to 3% by mid-2023 due to lower energy prices, clearing supply chains and the impact of higher interest rates. A persistently tight labour market and strong consumer demand for services is in focus for investors forecasting the path of inflation. Data that confirms central-banks actions are tempering inflation by cooling employment and wages will be seen by investors as a positive. However, equity returns will ultimately depend on the severity and length of a recession if one materializes. The consensus forecast for Canada's GDP growth this year is in line with expected U.S. growth. Economists anticipate that Canada's economy will expand 0.7% in 2023, down from 2022 growth of 3.6%, and then rise to 1.5% in 2024. The BOC is slightly more optimistic with its estimates of 1% growth this year and 1.8% in 2024.

Canada – Recommended sector weights

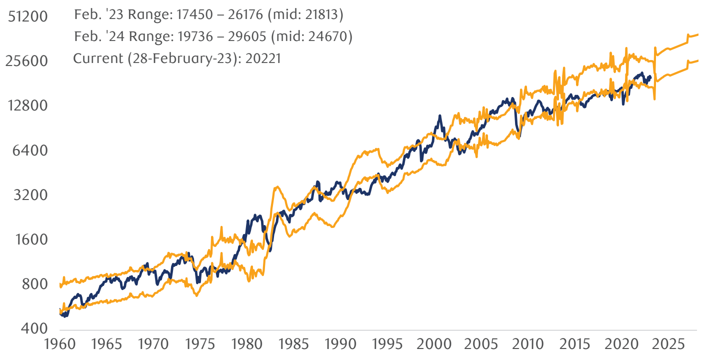


Note: As of February 28, 2023. Source: RBC GAM

> “Predictions that the economy will slow this year are tempering expectations for earnings growth.”

S&P/TSX Composite Equilibrium

Normalized earnings and valuations



Source: RBC GAM

In response to the higher borrowing rates, Canada's once hot housing market has cooled significantly. The pace of home sales continued to slide in January and is now well below pre-pandemic levels. Home prices fell almost 2% from the prior month and are down 12.6% from the year-earlier period. The degree to which mortgage rates have risen has made home purchases less affordable for borrowers - even with the drop in prices.

Predictions that the economy will slow this year are tempering expectations for earnings growth. Earning-growth forecasts have been lowered by 4% over the past three months and profits are now forecast to grow by only 3% in 2023. The Financials and Industrials sectors are expected to show earnings increases, while profits in the Energy and Materials sectors are forecast to drop.

The S&P/TSX currently trades at 12.9 times forward earnings, an 11% discount to its 14.5 long-term average. The Canadian index also remains at a significant multiple discount to the S&P 500 valuation multiple of 18, which is slightly above its long-term average. The discount for the Canadian market reflects, we believe, the composition of an index in which energy and materials companies represent almost one-third of the market capitalization. Commodity-price volatility has increased as uncertainty about economic growth intensifies, pressuring valuations of these economically sensitive sectors. Financials make up 32% of the index's capitalization and valuations in this sector remain subdued amid looming recession risks.

Bank stocks were flat in the three-month period, slightly outperforming the S&P/TSX. The group of banks currently trades at 10.1 times forward earnings, or a 9% discount to the longer-term average, reflecting the potentially negative impact of economic uncertainty on loan demand and credit provisions. The consensus is that bank earnings will increase 4% in the fiscal year ending in October. This figure reflects provisions for credit losses trending higher and closer to pre-pandemic levels. Analysts project revenue growth that is benefiting from higher interest rates offset by increased costs on deposits. Capital has been in focus after OSFI, Canada's bank regulator, increased minimum capital requirements in December. All large six banks are in compliance with the minimum 11% common equity Tier 1 capital threshold and have laid out plans to increase their capital to 12% by the end of this year. Bank valuations reflect a mild domestic recession, and the sector should continue to trade at a discount to history absent any change in the macroeconomic outlook.

Energy equities dropped 6.9% over the past three months, reflecting price declines for both crude oil and natural gas. The outlook for crude oil is supported by a recovery in demand following COVID-related slowdowns and anticipation that Chinese demand for crude will recover as the country's economy recovers. Demand for oil will be hurt if a global recession unfolds. The supply of crude oil remains resilient as Russia has found ways to sidestep many of the export sanctions, keeping prices around US$75 per barrel. Producers are limiting investment in new supplies, helping to balance persistent demand with the potential for economic weakness.

On the other hand, North American natural-gas prices have dropped 60% over the past three months due largely to overproduction in 2022, which filled storage levels ahead of what turned out to be a warm winter and lower-than-expected demand. Increasingly, North American natural gas is being drawn upon to fill global demand in the form of liquefied natural gas. More export capacity should come on line over the next few years, significantly increasing the draw on natural gas. Current commodity prices, coupled with restricted capital programs, provide energy producers with excess free cash flow that supports shareholder returns through share buybacks and dividends.

Regional outlook – Europe

Siddhi Purohit
Portfolio Manager
RBC Global Asset Management (UK) Limited

European equities enjoyed their best ever start to a year, with the Euro Stoxx 50 Index up 9% in the first 10 trading days of 2023. In local-currency terms, the European index outperformed the U.S., and the European economic-surprise index rose to its highest level in 18 months. Valuations of companies whose performance tends to depend on the pace of economic growth fell for most of 2022, but recovered somewhat in the fourth quarter on the opening of China's economy, lower-than-expected U.S. inflation and falling natural-gas prices in Europe.

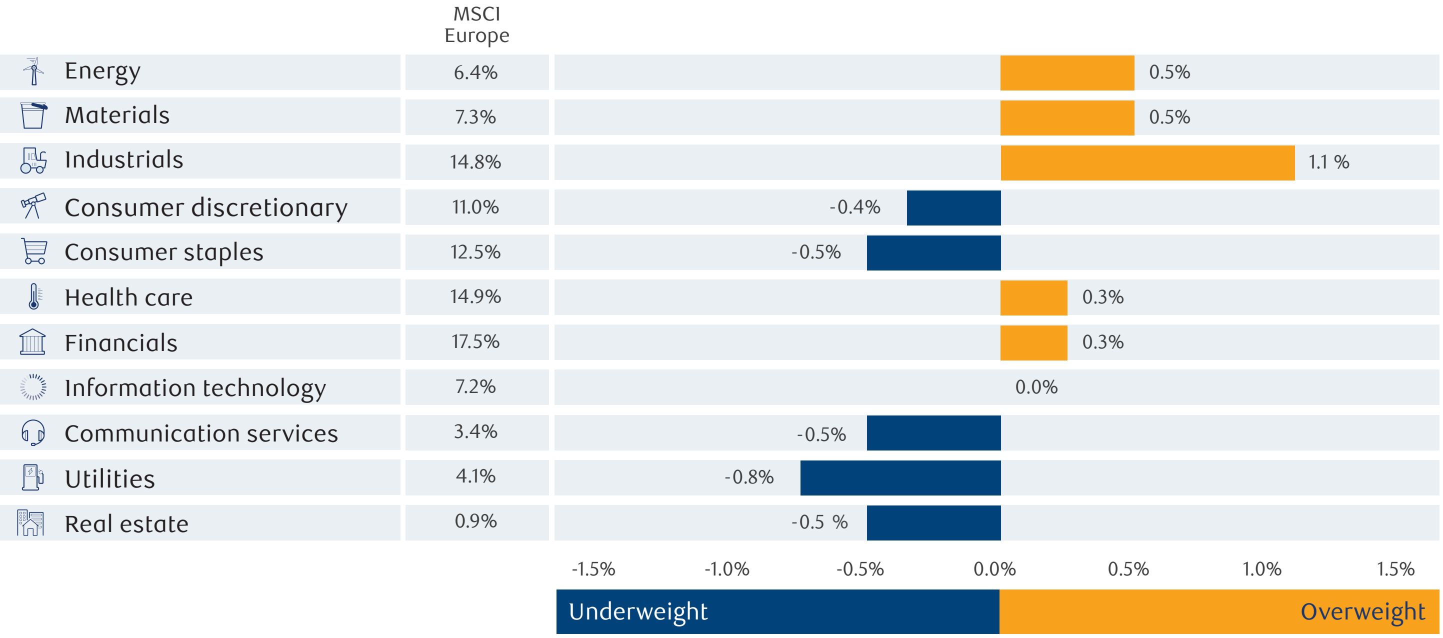
The consensus view is that there will be a eurozone recession in 2023 as suggested by slowing money-supply growth, which often precedes weakness in purchasing managers' indexes (PMI) and significant reductions in economic activity. Central banks continue to raise interest rates and take steps to push up longer-term bond yields, which could undermine the expansion later this year. Offsetting the cloudier outlook and buoying financial markets are easing supply constraints, which allowed companies to work through order backlogs built during the pandemic. Banks' balance-sheet strength should prevent another financial crisis.

Last year's movements in financial markets were determined mainly by macroeconomic events and a jump in interest rates after inflation surged. We believe that the focus is likely to shift to eurozone earnings, which have been resilient compared with other regions. Even with the recent improvements in eurozone economic growth and PMIs, several macroeconomic indicators are pointing to earnings weakness. Profit downgrades have already started, sending earnings projections for 2023 down 8% from last year's peak. Moreover, these forecasts do not reflect the impact of revenues swelled by rising prices: adjusted for inflation, earnings are forecast to fall 5.3% this year.

Profit margins will be hurt if companies are unable to raise prices to offset increasing expenses, especially for wages, and orders for goods are set to slow as inventories have been rebuilt and supply-chain snags have eased. While prior recessions have resulted in earnings declines of around 30%, we don't believe the decreases would be as extreme in the event of a recession later this year. The positive impact on growth of falling fuel prices and China's economic re-opening should be sufficient to offset risks associated with the Russia-Ukraine war and more general concerns around energy security.

Support for the European economy is coming from consumers, who continue to spend down savings accumulated during the pandemic, and an unemployment rate that sits at record lows. Wages are likely to continue

Europe – Recommended sector weights

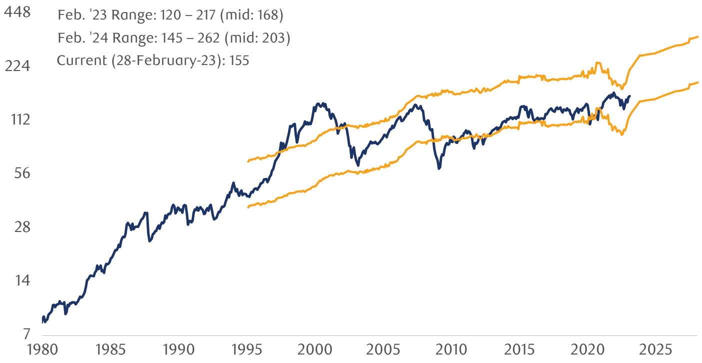


Note: As of February 28, 2023. Source: RBC GAM

> “At the regional level, valuations look cheap in Germany and Italy, but less so in France and Spain. German equities are no longer seen as the eurozone’s safe haven.”

MSCI Europe Index Equilibrium

Normalized earnings and valuations



Source: RBC GAM

increasing in the coming months, helping to soften the consumer impact if a recession unfolds.

Companies also appear to be in decent shape. Balance sheets are cash-rich, and leverage levels look healthy and closer to cycle bottoms. Default rates are likely to be lower than during past downturns as many companies used the favourable market conditions of the past few years to refinance debt at low rates and lengthen their maturities.

Europe's energy crunch has abated, with European natural-gas prices down 80% from their August peak and below levels before Russia's invasion of Ukraine. A mild winter combined with bigger-than expected stockpiles of natural gas have curbed forecasts of severe shortages. However, China's re-opening will boost demand for energy and may help resurrect energy-security issues for Europe as next winter approaches.

We expect Chinese economic growth to rebound later this year after the late-2022 lifting of COVID restrictions, although the country's troubled property market, and its impact on the overall economy, will be a consideration for investors in European equities. That's because eurozone exports to China account for almost 2% of the currency bloc's GDP, and for Germany the figure is 3%. By comparison, the number is a little over 0.5% for the U.S.

Even with recent stock gains, European equity multiples are 7% below the long-run average and now closer to fair value. The market remains more attractive than the U.S. on a valuation basis, and also given that energy prices have moderated that Europe will benefit more from the changes in China. A concern for investors could be if inflation remains entrenched and forces central banks to keep interest rates higher for longer than investors foresee. A quick end to the Russia-Ukraine war would provide a tailwind for European stocks and relieve some of investors' fears about energy security.

At the regional level, valuations look cheap in Germany and Italy, but less so in France and Spain. German equities are no longer seen as the eurozone's safe haven.

U.K. valuations have fallen significantly since the 2016 Brexit vote. However, while U.K. equities performed the best among developed markets in 2022, they still trade at a record discount versus other countries and near the lowest forward-P/E level versus peers in three decades. Profits for U.K. companies are holding up reasonably well relative to other markets. Earnings estimates for U.K. benchmark stock index have risen 20% since 2022, the most among major indexes. Even excluding the Energy sector, U.K. stocks have had the most earnings upgrades since January 2022. Moreover, the U.K. market has one of the highest dividend yields of any equity market, and exporters are benefiting significantly from weak sterling.

Regional outlook – Asia

Chris Lai
Portfolio Manager, Asian Equities
RBC Global Asset Management(Asia) Limited

Asian equities were broadly flat in the three months ended February 28, 2023, after financial markets rebounded early in the year amid optimism about the lifting of China's stringent COVID-19 restrictions and continued strength in the U.S. economy. Stocks retreated somewhat in February on concern that the U.S. Federal Reserve would extend interest-rate hikes given the stronger-than-expected expansion. China outperformed as consumption surged, while India underperformed on worries that rising interest rates in developed markets would erode global growth.

Asia's economic growth is forecast to rise to 4.1% in 2023 from 3.0% last year, driven mainly by a rebound in China. Economic growth will weaken in the first half of 2023 given that expected slowdowns in the U.S. and European expansions will lead to slower increases in exports and a regional deceleration in capital expenditures. Central banks in Taiwan, South Korea and Indonesia are likely finished hiking interest rates, and India is likely near the end of its own rate-hike cycle. Thailand and Malaysia, which were slow to begin raising interest rates in response to inflation, may need to keep going with rate increases.

Japan

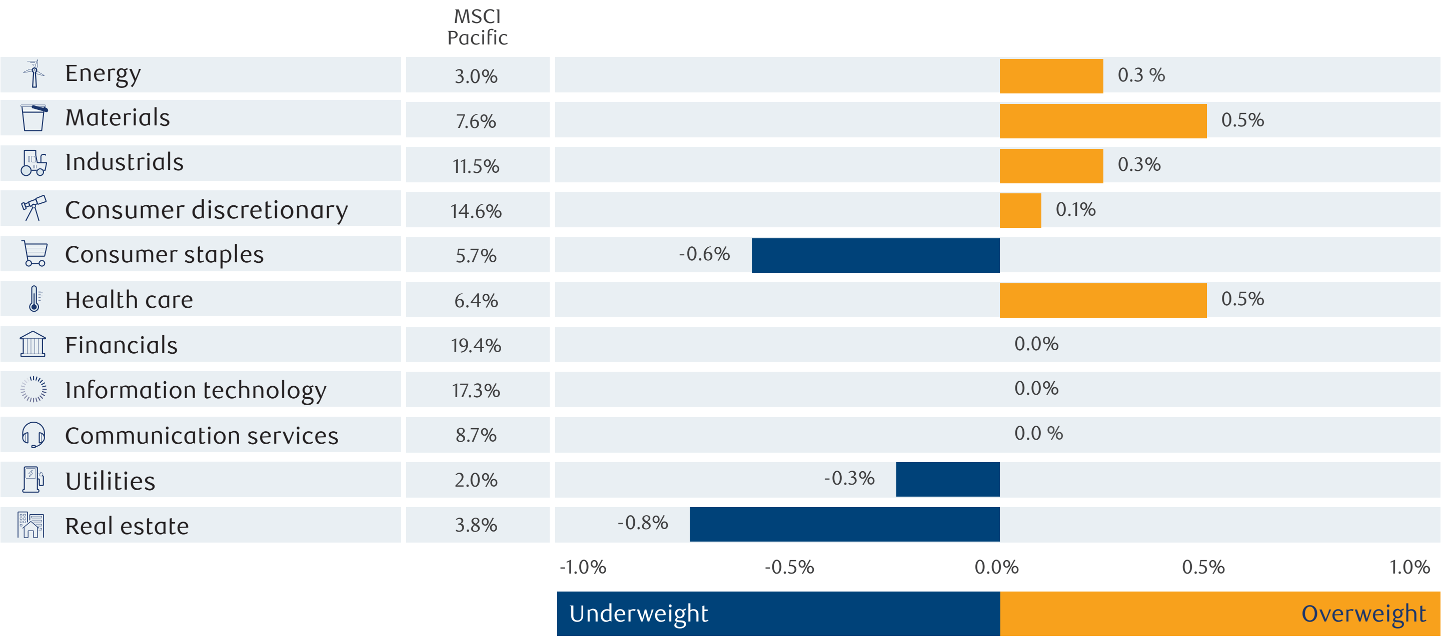
The consensus estimate for Japanese economic growth this year is 1.3%, up slightly from last year's 1.2% GDP increase. Earlier this year, the government relaxed border controls and introduced a program to support travel both domestically and from abroad. A recovery in domestic and foreign demand should help to balance external headwinds, assuming a relatively mild recession in the U.S. Also bolstering growth is a monetary policy that remains loose relative to other major economies. Employment has held up well, with the unemployment rate forecast to remain unchanged at 2.6% in the first quarter of 2023 from the previous quarter. The Japanese yen has appreciated to about 130 per U.S. dollar as the Bank of Japan takes gradual steps to let interest rates rise.

Inflation remains under control, with 2023 CPI forecasts between 2.0% and 2.5%, and the spike in consumer prices to 4% in January 2023 was, in our view, a temporary blip. Larger-than-usual wage hikes will arrive for workers to offset the recent erosion of household purchasing power. We expect 2% salary growth, which is in line with the growth in the economy's productivity.

Rest of Asia

We expect the Chinese economy to expand about 5% in 2023, up from 3% in 2022. China's recovery could serve as an antidote for investors fearful of a global recession. The government of Chinese President Xi is eager to restart the economy as his administration begins its latest five-year term, removing a major bottleneck to economic activity. The

Asia – Recommended sector weights

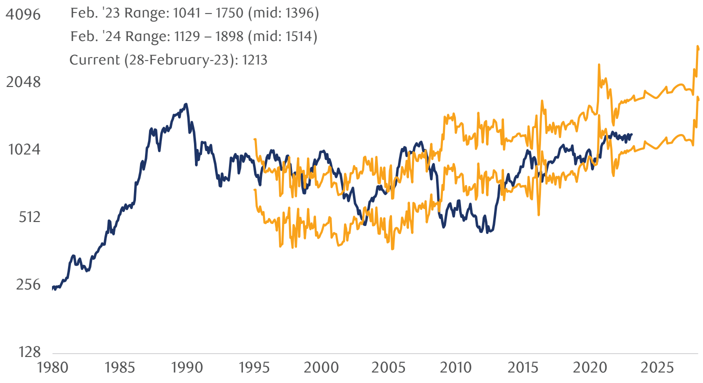


Note: As of February 28, 2023. Source: RBC GAM

> “In Australia, as the economy tips into recession and inflation pressures slowly ease, we forecast rate cuts beginning in early 2024.”

MSCI Japan Index Equilibrium

Normalized earnings and valuations



Source: RBC GAM

government also appears determined to engineer a recovery in the troubled property market. We expect a cyclical recovery led by domestic demand owing to these tailwinds, with consumption being a major growth driver. We estimate that Chinese households hold excess savings equal to 6% of GDP.

Consumer spending, especially on services, will likely snap back as pent-up demand is released. As a result, we forecast that retail sales will grow about 11% in 2023.

Three years of COVID-related financial rescues have largely exhausted fiscal policy as a useful stimulus lever. However, our view is that massive stimulus is no longer necessary at this time. We forecast China's budget deficit to reach 3.4% of GDP this year. The Chinese central bank may remain accommodative in the early stages of the reopening, but is likely to take into account the impact of inflation as the economy strengthens.

India's economy is losing steam as global growth slows, pent-up domestic demand fades and financial conditions tighten. We expect GDP growth to slow to 5% in 2023 from last year's 7%. Inflation fell to 7% in 2022 and is expected to fall further to 5.5% this year due to the deflationary impact of the growth slowdown and lower commodity prices. India's central bank raised interest rates 25 basis points in February to 6.50%, and we believe this is will be the last hike of the current cycle given that CPI is falling. We expect the government to meet its fiscal deficit target of 6.4% of GDP for the current fiscal year, but reductions will be tough to achieve in the year ahead given lower nominal growth and increased spending ahead of elections.

In Australia, economic growth in the fourth quarter rose 0.3% quarter over quarter, revealing a weakening in momentum. We expect this trend to continue as interest rates rise further and low fixed-rate mortgages reset at higher levels, leading to a consumer-led recession from early 2023. We anticipate little support from fiscal policy, with the government keen to build its reputation for fiscal prudence and unwilling to add to inflationary pressures. We anticipate a notable rise in unemployment from today's historically low level of 3.5%, taking pressure off the tight labour market.

Australia's central bank delivered a modest 0.25% rate hike in early December, taking the benchmark rate to 3.10%. We forecast hikes of a quarter point in February, March and May due to stronger earnings growth and uncomfortably high inflation. As the economy tips into recession and inflation pressures slowly ease, we forecast rate cuts beginning in early 2024.

Regional outlook – Emerging markets

Laurence Bensafi
Portfolio Manager and Deputy Head,
RBC Global Asset Management (UK) Limited

Emerging-market equities rose in January but fell back in February, and we expect stocks to remain volatile. The positive outlook for Chinese equities, due to a renewed focus on economic growth, is offset by uncertainties about the global macroeconomic environment, notably the likelihood and extent of a global recession. A difficult 2022 meant that a rebound in equities was to be expected, especially given that inflation appeared to be easing from a very high level. However, a resurgence of inflation could lead to higher interest rates, slower global growth and a new sell-off.

We believe that the outlook for emerging-market equities is brighter compared with developed markets for several reasons. These include a view that maximum pessimism was reached at the end of October of last year, when Chinese financial markets were considered largely uninvestable. At that point, the Chinese government surprised investors by announcing that it would do away with COVID-19 restrictions, leading to a large rally in stocks. We expect further upside for Chinese equities due to pent-up domestic consumption, and the Chinese property market should stabilize now that the focus on an economic recovery has been made apparent by the government.

The Chinese economy could get a hand from the significant savings of its citizens. Private savings increased by 15 trillion yuan (US$2 trillion) in the first 10 months of 2022, and came on top of the 10 trillion saved in both 2020 and 2021. Savings rates are high in China due to a lack of social safety nets such as pensions and health insurance, but we still estimate that about US$3 trillion of those savings will be pumped into the economy over the coming years. As was the case with people when other parts of the world emerged from pandemic lockdowns, many Chinese will direct their spending to travel, either for tourism or family visits in other provinces or abroad.

Another reason to be positive are attractive equity valuations. Chinese equities trade at 1.4 times book value, below the long-term median of 1.8. From a positioning standpoint, foreign investors have relatively low exposure to Chinese equities, and we expect flows into Chinese equities to ramp up in the coming months. Another bullish sign is the decision by officials in December to broaden the scope of the Hong Kong Connect program to include large companies such as Alibaba, Baidu and Samsonite (Tencent and Meituan were already accessible). The expansion of the program should enable mainland China investors to buy these companies on the Hong Kong Stock Exchange by the end of 2023's first quarter and further stimulate stock investments.

China's U-turn on COVID led to a consensus that favours emerging markets versus developed markets in 2023. The growth outlook is much clearer in emerging markets, valuations are very attractive and China's recovery will help the global economy, but especially growth in China's neighbours. We expect the gap in economic growth between emerging markets and developed markets to widen to 2.6 percentage points this year, up from an expected 1.2 points in 2022 and the largest since 2016. Emerging markets tend to outperform developed markets when this margin widens.

Another trend favouring emerging-market stocks is the expected depreciation of the U.S. dollar, which is strongly associated with emerging-market outperformance. Our view is that the U.S. dollar has peaked after a 12-year bull market, and that the greenback's overvaluation is starting to catch up with it.

We are also entering a new inflation regime after a dozen years of emerging-market underperformance. Left behind will be a period of low inflation, low commodity prices and historically low interest rates. In our view, emerging markets are better equipped to deal with periods of higher interest rates due to their long experience with them.

Countries

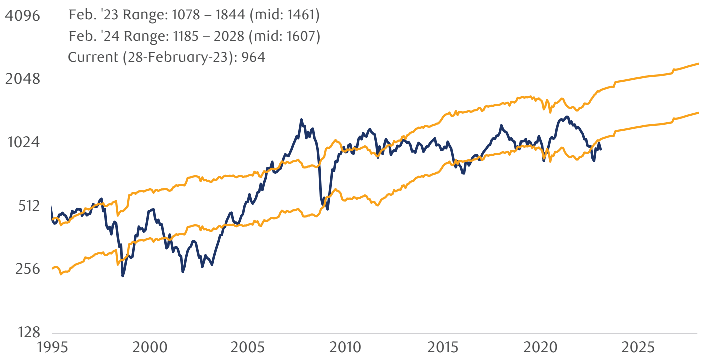
Over the coming months, the best positioned countries will be China, South Korea, Taiwan and the Philippines, while India, Saudi Arabia and Indonesia look unattractive. We are cautious on Latin America due mainly to political instability and the emergence of populist regimes in several countries. We note that valuations are attractive.

Sectors

We expect the Information Technology sector to rebound due to long-term growth in digitalization. However, this growth will be cyclical and we may not have seen the worst for the sector. Consumer Discretionary stocks are still expensive despite sell-offs in 2021 and 2022. The outlook for retail is particularly murky because this area is home to ecommerce companies, whose earnings growth will be lower in the next few years.

Valuations in the Real Estate sector are off their lows but still in the 90th percentile on a historical basis. There are still many uncertainties on steps that the Chinese government will take to assist private developers. The sector is small in terms of weight in the index but crucial for the Chinese economy. The way listed developers are treated will send signals to foreign investors on how China intends to deal with problematic segments of the economy.

MSCI Emerging Markets Index Equilibrium
Normalized earnings and valuations



Source: RBC GAM

The Financials sector is still attractively valued, and these companies should benefit if interest rates stabilize at higher levels. Valuations in the Industrials and Materials sectors are cheap and both sectors are exposed to deglobalization and decarbonisation. We expect these sectors to continue to outperform in the coming years.

Styles

Value stocks should continue to outperform due to their large underperformance since the financial crisis of 2008-2009 and cheap valuations. There has been a large change in the composition of the emerging-market index since the end of 2020, with fewer Chinese and new-economy companies, and more representation from the Materials and Industrials sectors.

High-quality stocks are extremely cheap and medium-quality stocks trade at a similar valuation to low-quality ones. Both anomalies should correct, especially as higher interest rates mean that companies with strong returns and healthy balance sheets are rewarded.

RBC GAM Investment Strategy Committee Members

Daniel E. Chornous, CFA

Chief Investment Officer
RBC Global Asset Management Inc.
Chair, RBC GAM Investment Strategy Committee

Dan Chornous is Chief Investment Officer of RBC Global Asset Management Inc., which has total assets under management of approximately $543.7 billion*. Mr. Chornous is responsible for the overall direction of investment policy and fund management. In addition, he chairs the RBC Investment Strategy Committee, the group responsible for global asset-mix recommendations and global-fixed income and equity portfolio construction for use in RBC Wealth Management's key client groups including retail mutual funds, International Wealth Management, RBC Dominion Securities Inc. and RBC Phillips, Hager & North Investment Counsel Inc. He also serves on the Board of Directors of the Canadian Coalition for Good Governance and is Chair of its Public Policy Committee. Prior to joining RBC Asset Management in November 2002, Mr. Chornous was Managing Director, Capital Markets Research and Chief Investment Strategist at RBC Capital Markets. In that role, he was responsible for developing the firm's outlook for global and domestic economies and capital markets as well as managing the firm's global economics, technical and quantitative research teams.

*AUM in CAD as of February 28, 2023

Soo Boo Cheah, MBA, CFA

Senior Portfolio Manager
RBC Global Asset Management (UK) Limited

Based in the U.K., Soo Boo is responsible for managing global fixed-income allocations. He specializes in assessing the impact of central bank policies and global macroeconomic trends on developed-market bonds. In his role as a senior portfolio manager, he integrates a wide range of investment strategies involving interest rates, currencies, and derivatives. Soo Boo started his career in the investment industry in 2000 and holds an MBA from University of New Brunswick.
Soo Boo has been a CFA charterholder since 2002.

Dagmara Fijalkowski, MBA, CFA

Head, Global Fixed Income & Currencies
RBC Global Asset Management Inc.

As Head of Global Fixed Income and Currencies, Dagmara leads a team of 40+ investment professionals in Toronto, London and Minneapolis with almost $100 billion in assets under management. In her duties as a portfolio manager, Dagmara leads management of several bond funds, including the RBC Bond Fund, and manages foreign-exchange hedging and active overlay programs. She leads the Fixed Income Strategy Committee which determines appropriate level of risk taking given market opportunities. Dagmara is a member of the RBC Investment Policy Committee, which determines the asset mix for balanced products; and the RBC Investment Strategy Committee. In 2016, she was appointed to the RBC GAM Executive Committee. Dagmara, who began her investment career in 1994, holds an MBA from the Richard Ivey School of Business at the Western University in Canada and a Master's degree in economics from the University of Lodz in Poland. Dagmara has been a CFA charterholder since 1997.

Stuart Kedwell, CFA
Senior Vice President and
Senior Portfolio Manager
RBC Global Asset Management Inc.

Stu co-leads the North American Equity team and is a member of the RBC GAM Investment Strategy Committee, which is responsible for establishing the firm-wide global asset mix for mutual funds and for institutional and high net worth private clients. Stu began his career in 1996 with RBC Dominion Securities in the firm's Generalist program, a two-year internship in which participants rotate through different areas of the firm. In 1998, he joined the RBC Investments Portfolio Advisory Group, which provides investment ideas and recommendations to RBC DS Investment Advisors. He was also a member of the RBC DS strategy & focus list committees. Stu has been with the firm since 2002 and is a CFA charterholder.

Eric Lascelles
Chief Economist
RBC Global Asset Management Inc.

Eric is the Chief Economist for RBC Global Asset Management Inc. (RBC GAM) and is responsible for maintaining the firm's global economic forecast and generating macroeconomic research. He is also a member of the RBC GAM Investment Strategy Committee, the group responsible for the firm's global asset-mix recommendations. Eric is a frequent media commentator and makes regular presentations both within and outside RBC GAM. Prior to joining RBC GAM in early 2011, Eric spent six years at a large Canadian securities firm, the last four as the Chief Economics and Rates Strategist. His previous experience includes positions as economist at a large Canadian bank and research economist for a federal government agency.

Scott Lysakowski, CFA
Vice President and Senior Portfolio Manager
Head of Canadian Equities (Vancouver)
RBC Global Asset Management Inc.

Scott is Head of the Vancouver-based Canadian Equity Team. He is primarily responsible for overseeing equity research and portfolio management of the firm's core Canadian equity strategies. Scott also serves as lead manager for the Canadian income strategies. Scott began his investment management career with the firm in 2002 as a senior research analyst and portfolio manager within the Toronto-based Canadian Equity Team. He transitioned to the Vancouver team seven years later and assumed his current leadership role in 2012. During his 15-year tenure with the organization, he has conducted research for and managed a broad spectrum of Canadian equity portfolios, specializing in dividend and income mandates.

Hanif Mamdani
Head of Alternative Investments
RBC Global Asset Management Inc.

Hanif Mamdani is Head of both Corporate Bond Investments and Alternative Investments. He is responsible for the portfolio strategy and trading execution of all investment-grade and high-yield corporate bonds. Hanif is Lead Manager of the PH&N High Yield Bond and Alternative strategies, including a multi-strategy hedge fund. He is also a member of the Asset Mix Committee. Prior to joining the firm in 1998, he spent 10 years in New York with two global investment banks working in a variety of roles in Corporate Finance, Capital Markets and Proprietary Trading. Hanif holds a master's degree from Harvard University and a bachelor's degree from the California Institute of Technology.

Bryan Mascoe, CFA
Senior Portfolio Manager
Co-head, Fixed Income (Vancouver)
RBC Global Asset Management Inc.

Bryan is co-Head and a senior portfolio manager on the PH&N Fixed Income Team. He co-manages the investment-grade credit research effort. As part of this role, he manages our dedicated corporate bond portfolios and is responsible for performing credit analysis on investment-grade issuers. He also assists with the strategy and trade execution of corporate bonds held in broader short, universe, and long fixed-income mandates. Bryan has a Bachelor of Commerce degree from the University of British Columbia and is a Leslie Wong Fellow as a graduate of the UBC Portfolio Management Foundation. He has been a CFA charterholder since 2005.

Sarah Riopelle, CFA
Vice President and Senior Portfolio Manager
Investment Solutions
RBC Global Asset Management Inc.

Since 2009, Sarah has managed the entire suite of RBC Portfolio Solutions. Sarah is a member of the RBC GAM Investment Strategy Committee, which sets global strategy for the firm, and the RBC GAM Investment Policy Committee, which is responsible for the investment strategy and tactical asset allocation for RBC Funds' balanced products and portfolio solutions. In addition to her fund management role, she works closely with the firm's Chief Investment Officer, ensuring that all aspects of the investment management function at RBC GAM are running smoothly. She is a member of the RBC Wealth Management Diversity Leadership Committee. Sarah joined RBC Global Asset Management in 2003 as a Senior Analyst within Investment Strategy. From there, she moved to the Canadian Equity team as an analyst and then a portfolio manager. She began her career in the investment industry in 1996 after graduating from the University of Ottawa with a Bachelor of Commerce degree, majoring in Finance and International Management. She was awarded the Chartered Financial Analyst designation in 2001.

Martin Paleczny, CFA
Vice President and
Senior Portfolio Manager
RBC Global Asset Management Inc.

Martin Paleczny, who has been in the investment industry since 1994, began his career at Royal Bank Investment Management, where he developed an expertise in derivatives management and created a policy and process for the products. He also specializes in technical analysis and uses this background to implement derivatives and hedging strategies for equity, fixed-income, currency and commodity-related funds. Since becoming a portfolio manager, Martin has focused on global allocation strategies for the full range of assets, with an emphasis on using futures, forwards and options. He serves as advisor for technical analysis to the RBC GAM Investment Strategy Committee.

Kristian Sawkins, CFA
Vice President and Senior Portfolio Manager
PH&N Fixed Income
RBC Global Asset Management Inc.

Kristian is co-Head and a senior portfolio manager on the PH&N Fixed Income team, specializing in universe and short-term bond mandates. He is also a member of the PH&N IM Asset Mix Committee. Kristian joined Phillips, Hager & North Investment Management in 2002 as an associate analyst with the Canadian Equities Team and moved to the Fixed Income Team in 2005. Prior to joining the organization, Kristian spent three years at a major investment bank in New York across a few different roles. Kristian has a Bachelor of Commerce degree from the University of British Columbia and is a Leslie Wong Fellow as a graduate of the UBC Portfolio Management Foundation. He has been a CFA charterholder since 2002.

Jaco Van der Walt, DCom

Vice President and
Global Head of Quantitative Research & Investments
RBC Global Asset Management Inc.

As Head of Quantitative Investments, Jaco leads an experienced team that is driven to continually innovate across all its capabilities, including research, portfolio management, data and systems to leverage the combination of human and machine in investment decision-making. He previously held an executive role at one of South Africa's largest financial services companies, leading the Investment Management Office, with experience spanning pensions, insurance, banking and wealth management. As asset owner, he also chaired the boards and investment committees of several of the company's pension plans, promoting investment excellence and driving transformational change to ensure members reach their retirement goals. Jaco began his investment career in 1996 and holds a Master's degree in Economics from the University of Toronto and a Doctorate from the University of Pretoria.

Milos Vukovic, CFA

Vice President, Investment Policy
RBC Global Asset Management Inc.

Milos, who joined RBC in 2003, oversees investment-management activities including new-fund launches, performance analytics and trade-cost analysis. He is also responsible for developing and monitoring investment mandates and implementing tactical asset allocation for the RBC GAM investment solutions. Milos earlier worked for a Big 4 accounting firm and two top-tier securities firms. He earned an MBA at the Schulich School of Business and has held the CFA designation since 2004. He is a board member of both the Canadian Buy-Side Investment Management Association and the Canadian Advocacy Council for Canadian CFA Institute Societies, and recently joined IIROC's Market Structure Advisory Committee.

Brad Willock, CFA

Vice President and
Senior Portfolio Manager
RBC Global Asset Management Inc.

Brad Willock joined RBC Global Asset Management in July 2002 and is a Senior Portfolio Manager and CFA charterholder. In his current role, Brad has responsibility for RBC Global Asset Management's core and income-oriented U.S. equity strategies. He joined RBC in May 1996 after receiving a bachelor's of commerce degree with distinction from the University of Calgary. Prior to that, Brad obtained a bachelor's of science degree at the University of British Columbia and represented Canada at the 1992 Barcelona Summer Olympics in volleyball.

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