

RBC Global Asset Management

The Global Investment Outlook

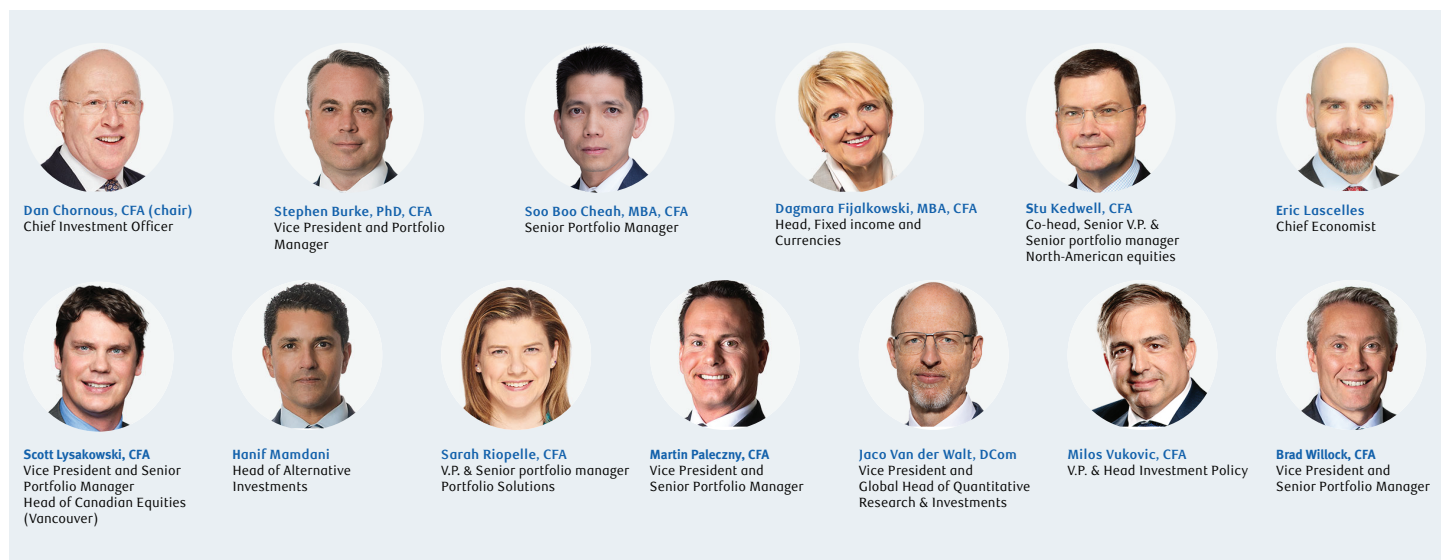
RBC GAM Investment Strategy Committee



SUMMER 2022



The RBC GAM Investment Strategy Committee



The RBC GAM Investment Strategy Committee consists of senior investment professionals drawn from all areas of RBC GAM. 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:

<p>The recommended mix of cash, fixed income instruments, and equities.</p>	<p>The recommended global exposure of fixed income and equity portfolios.</p>	<p>The optimal term structure for fixed income investments.</p>	<p>The suggested sector and geographic make-up within equity portfolios.</p>	<p>The preferred exposure to major currencies.</p>

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

Contents

2 Executive summary

The Global Investment Outlook

Eric Savoie, MBA, CFA – Investment Strategist,
RBC Global Asset Management Inc.

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

5 Economic & capital markets forecasts

RBC GAM Investment Strategy Committee

6 Recommended asset mix

RBC GAM Investment Strategy Committee

11 Capital markets performance

Milos Vukovic, MBA, CFA –
V.P. & Head of Investment Policy,
RBC Global Asset Management Inc.

Aaron Ma, CFA – Senior Analyst,
Investment Strategy,
RBC Global Asset Management Inc.

Global Investment Outlook

15 Economic outlook

Stormy weather

Eric Lascelles – Chief Economist,
RBC Global Asset Management Inc.

30 Market outlook

Persistent inflation grips financial markets

Eric Savoie, MBA, CFA – Investment Strategist,
RBC Global Asset Management Inc.

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

47 Global fixed income markets

Soo Boo Cheah, MBA, CFA – Senior Portfolio Manager,
RBC Global Asset Management (UK) Limited

Suzanne Gaynor – V.P. & Senior Portfolio Manager,
RBC Global Asset Management Inc.

Taylor Self, MBA – Associate Portfolio Manager,
RBC Global Asset Management Inc.

55 Currency markets

U.S. dollar has benefitted from risk aversion;
weakness likely to materialize

Dagmara Fijalkowski, MBA, CFA – Head,
Global Fixed Income and Currencies,
RBC Global Asset Management Inc.

Daniel Mitchell, CFA – Senior Portfolio Manager,
RBC Global Asset Management Inc.

Regional equity market outlook

62 United States

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

65 Canada

Sarah Neilson, CFA – Portfolio Manager,
RBC Global Asset Management Inc.

Irene Fernando, CFA – Portfolio Manager,
RBC Global Asset Management Inc.

68 Europe

Siddhi Purohit – Associate Portfolio Manager,
European Equities,
RBC Global Asset Management (UK) Limited

71 Asia

Chris Lai – Portfolio Manager,
Asian Equities,
RBC Investment Management (Asia) Limited

74 Emerging markets

Guido Giammattei – Portfolio Manager,
Emerging Market Equities,
RBC Global Asset Management (UK) Limited

76 RBC GAM Investment Strategy Committee



Executive summary



Eric Savoie, MBA, CFA
Investment Strategist
RBC Global Asset Management Inc.



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

Economic headwinds continue to mount, inflation remains problematically high and financial conditions are tightening. Asset prices have experienced a sharp decline in the face of rapidly rising interest rates, slowing growth and greater uncertainty in the macro outlook than usual.

Downgrading growth forecasts as headwinds intensify

Our GDP forecasts have been below consensus for several quarters as we anticipated deceleration in economic growth for 2022. This quarter we have further reduced our forecast and now expect growth to be particularly weak in 2023. The key headwinds to the economy include unacceptably high inflation, aggressive central-bank tightening, a global commodity shock, the continuation of supply-chain challenges and damage from China's zero-tolerance COVID-19 policy. Because of this combination of headwinds, we gauge that the risk of recession is heightened over the next two years. For the developed world, this outlook translates to a forecast of 2.5% GDP

growth in 2022, less than half the 5.2% rate achieved in 2021, followed by just 1.2% growth in 2023. With the exception of 2020's pandemic shock, the 2023 forecast would represent the weakest annual performance in more than a decade. We have also downgraded our emerging-market growth outlook and are now anticipating overall growth of just 3.3% in 2022 and 3.7% in 2023 for developing nations. The acceleration from one year to the next in large part reflects Russia's economic collapse in 2022. These growth rates remain well below historical levels for emerging markets.

Unacceptably high inflation persists

Inflation sitting at multi-decade highs is the dominant challenge for this economic cycle. Our own inflation forecasts are above the consensus and we expect pricing pressures to remain elevated in the short to medium term before eventually falling back toward longer-term norms. In the short term, high commodity prices, supply-chain challenges, a housing boom and lingering tailwinds from monetary and fiscal stimulus are likely to keep inflation hot. We look for inflation of 6% to 8% in 2022 across

most of the developed world and expect it to remain above normal in 2023, albeit meaningfully lower. Inflation pressures are broadly based but we expect them to calm as monetary and fiscal stimulus are being dialed back, commodity prices are unlikely to continue rising at the pace that they have over the past year and as housing prices feel the weight of higher interest rates. Over the longer term, we expect inflation to continue falling as long-term structural factors such as demographics

limit consumer price pressures. But we also recognize that forces such as climate change, a partial reversal of globalization and a rebalancing of powers between employers and employees may provide offsets. As a

result, we expect that inflation may ultimately settle a bit higher than 2% over the long term, versus slightly below 2% over the decade prior to the pandemic.

U.S. dollar has benefited from risk aversion, weakness likely to materialize

The greenback has benefited from risk aversion amid Russia's invasion of Ukraine, as well as from expectations that the U.S. Federal Reserve (Fed) will hike interest rates faster than its peers. Although we have pushed back the timing for when we think U.S.-dollar weakness might return, we still expect the greenback to decline in the medium to longer term given that the dollar is meaningfully above its purchasing power parity with other world currencies and that much of the Fed hawkishness

and expected economic weakness abroad are already priced in. Key markers that would strengthen our conviction that the U.S. dollar may have peaked include a slowdown in U.S. economic activity, a hawkish shift in tone from the European Central Bank, signs that Asian policymakers may step in to support their currencies and/or a de-escalation of the war in Ukraine. Our forecasts are for the U.S. dollar to depreciate against a basket of major developed-world currencies over the year ahead.

Interest rates are on the rise, quickly

With inflation elevated and economic conditions tight, central banks have been forced to act urgently. They started tightening earlier than initially planned and are raising rates in 50-basis-point increments instead of the usual 25. Market expectations and central-bank guidance point to significantly more monetary tightening ahead, with policy rates in North America reaching neutral levels and potentially a bit beyond. With central banks highly focused on taming inflation, they will be reluctant to turn to monetary easing even if the economy encounters a

downturn. Other central-bank priorities such as creating conditions for full employment, ensuring financial-market stability, reducing inequality and limiting climate change do not appear to be a focus at this time. Pricing in futures markets suggests investors expect the fed funds rate to rise to 2.80% one year from now, which would require at least two more 50-basis-point hikes followed by several 25-point hikes. Our own forecast is in line with market pricing as we look for a 2.75% fed funds rate one year from now.

Bond yields surge, valuation risk has been greatly alleviated

The rapid and significant re-alignment of interest-rate expectations caused a fixed-income sell-off of historic proportions over the past year. As the U.S. 10-year yield soared above 3.0% from 1.5%, broad U.S. bond benchmarks lost more than 10% for the largest decline since the early 1980s. The speed and depth of the decline was highly unusual and we do not expect a similar experience to be repeated going forward. Valuation risk has been significantly reduced and yields are now at much more reasonable levels, according to our models, which suggests that once the near-term distortions related to inflation pass, there is little need for yields to rise much beyond current levels. We have also noted that in past tightening cycles the U.S. 10-year yield has

peaked around the same level as the fed funds rate. Investors are currently anticipating that the fed funds rate will peak around 3%, which matches recent levels in the 10-year Treasury. For this reason, we have been increasingly comfortable adding to sovereign fixed-income positions and especially as 10-year Treasury bond yields trade above 3%. Although yields could continue to rise if extremely high inflation persists, our base case that inflation ultimately moderates means that the bulk of the needed adjustment in yields has already occurred. We forecast 2.75% for the 10-year Treasury yield 12 months from now, which would mean no further sustained capital losses for bond holders over the year ahead.

Equity rout deepens and profit outlook is vulnerable amid slowing growth

Fear of inflation, aggressive monetary tightening and the increased risk of recession sent stocks lower in the past quarter, dragging several major indexes into bear markets. The Nasdaq Composite Index, heavily concentrated in technology stocks, fell as much as 36% from its peak and the S&P 500 Index reached 20% below its peak on an intraday basis. Emerging markets were also down nearly 30% from their prior highs. The outperformer has been Canadian equities, helped by heavy weightings in energy and other resource companies that are benefiting from the high-inflation environment. So far, the decline in stocks has been mostly due to a fall in equity valuations that

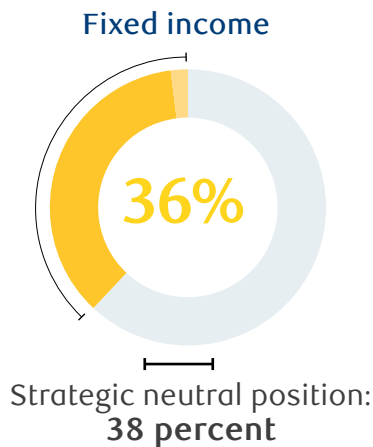
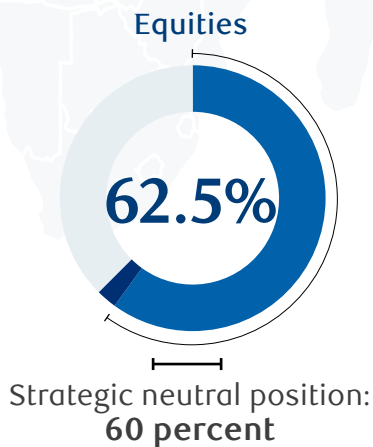
had approached extremes, especially in high-priced technology stocks that were most sensitive to interest rates. With valuation levels having adjusted meaningfully, the focus now is on whether earnings expectations need to be lowered. Consensus estimates are for low double-digit profit gains over the year ahead. In an environment where those profits come through, inflation pressures subside and investor confidence rebounds from extreme pessimism, stocks could be set up to deliver double digit gains over the year ahead. But should a downturn or recession play out, history suggests that earnings could be vulnerable to declines of more than 20%, sending stocks lower still.

Asset mix – shifting allocation closer to neutral given elevated uncertainty, higher yields

Taking into account the risks and opportunities, and balancing the long-term outlook against near-term challenges, we took steps to de-risk the portfolios during the past quarter. We added two percentage points to our fixed-income allocation as yields rose, which boosted return potential for bonds while also providing more cushion to a balanced portfolio in the event of a downturn in risk assets. We also reduced our equity allocation by 1.5 percentage points, recognizing that the risk/reward has diminished in an environment where corporate profits could be vulnerable to a slowdown. These shifts leave

our recommended asset mix with a slight overweight in stocks and slight underweight in bonds. Our positioning is much closer to neutral than it had been at earlier points in the cycle, reflecting a higher degree of uncertainty in the outlook and wider range of potential outcomes than usual. For a balanced, global investor, we currently recommend an asset mix of 62.5 percent equities (strategic neutral position: 60 percent) and 36.0 percent fixed income (strategic neutral position: 38 percent), with the balance in cash.

Recommended asset mix



Economic & capital markets forecasts

Economic forecast (RBC GAM Investment Strategy Committee)

	United States		Canada		Europe		United Kingdom		Japan		China		Emerging markets*	
	Summer 2022	Change from Spring 2022	Summer 2022	Change from Spring 2022	Summer 2022	Change from Spring 2022	Summer 2022	Change from Spring 2022	Summer 2022	Change from Spring 2022	Summer 2022	Change from Spring 2022	Summer 2022	Change from Spring 2022
Real GDP														
2021A ¹	5.67%		4.56%		5.37%		7.44%		1.71%		8.42%		7.45%	
2022E	2.60%	(0.50)	3.50%	0.40	2.50%	(0.50)	3.60%	(0.30)	0.80%	(1.40)	4.30%	(0.40)	3.30%	(0.80)
2023E	1.40%	(1.20)	1.10%	(1.80)	0.90%	(1.50)	0.80%	(2.10)	1.20%	(0.70)	4.70%	(0.70)	3.70%	(1.00)
CPI														
2021A ¹	4.69%		3.40%		2.60%		2.59%		(0.23%)		0.86%		3.08%	
2022E	7.70%	1.80	6.50%	1.70	7.10%	2.50	8.30%	2.90	2.10%	N/C	2.70%	(0.40)	5.77%	1.17
2023E	2.90%	0.60	2.80%	0.60	2.40%	0.40	3.30%	1.20	1.20%	0.10	2.90%	0.70	3.79%	0.99

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

Targets (RBC GAM Investment Strategy Committee)

	May 2022	Forecast May 2023	Change from Spring 2022	1-year total return estimate* (%)
Currency markets against USD				
CAD (USD-CAD)	1.26	1.19	N/C	6.5
EUR (EUR-USD)	1.07	1.16	N/C	5.8
JPY (USD-JPY)	128.70	118.00	8.00	6.3
GBP (GBP-USD)	1.26	1.35	(0.04)	6.3
Fixed income markets				
U.S. Fed Funds Rate	0.88	2.75	1.50	0.0
U.S. 10-Year Bond	2.84	2.75	0.50	3.7
Canada Overnight Rate	1.00	2.50	1.00	0.0
Canada 10-Year Bond	2.89	2.60	0.60	5.5
Eurozone Deposit Facility Rate	(0.50)	0.00	0.50	0.0
Germany 10-Year Bund	1.12	0.50	0.35	7.2
U.K. Base Rate	1.00	2.00	0.50	0.0
U.K. 10-Year Gilt	2.10	2.25	0.70	0.8
Japan Overnight Call Rate	(0.03)	(0.10)	N/C	0.0
Japan 10-Year Bond	0.24	0.25	N/C	0.2
Equity markets				
S&P 500	4132	4400	(175)	8.0
S&P/TSX Composite	20729	21500	(400)	6.6
MSCI Europe	148	153	(5)	6.6
FTSE 100	7608	7780	130	6.3
Nikkei	27280	28050	150	5.0
MSCI Emerging Markets	1078	1100	(120)	5.2

*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 returns¹ and the volatility² 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.

¹**Average return:** The average total return produced by the asset class over the period 1982 – 2022, 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	Summer 2021	Fall 2021	New Year 2022	Spring 2022	Summer 2022
Cash	2.0%	0.0% – 15.0%	1.0%	2.5%	3.0%	2.0%	1.5%
Bonds	38.0%	23.0% – 53.0%	35.0%	33.5%	33.5%	34.0%	36.0%
Stocks	60.0%	45.0% – 75.0%	64.0%	64.0%	63.5%	64.0%	62.5%

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							
	WGBI* May 2022	Allowable range	Summer 2021	Fall 2021	New Year 2022	Spring 2022	Summer 2022
Global bonds							
North America	46.2%	36.2% – 56.2%	41.7%	39.7%	46.1%	39.4%	48.7%
Europe	36.5%	26.5% – 46.5%	46.2%	41.0%	42.5%	41.7%	39.0%
Asia	17.4%	7.4% – 27.4%	12.1%	19.3%	11.5%	18.9%	12.4%

Note: Past Range reflects historical allocation from Fall 2002 to present.

	MSCI** May 2022	Allowable range	Summer 2021	Fall 2021	New Year 2022	Spring 2022	Summer 2022
Global equities							
North America	69.2%	59.2% – 79.2%	65.7%	66.8%	67.8%	68.9%	68.8%
Europe	14.7%	4.7% – 24.7%	16.2%	16.2%	15.5%	14.9%	15.4%
Asia	7.8%	0.0% – 17.8%	9.4%	8.4%	8.2%	7.9%	7.9%
Emerging markets	8.3%	0.0% – 18.3%	8.8%	8.6%	8.6%	8.3%	7.9%

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** May 2022	RBC GAM ISC Spring 2022	RBC GAM ISC Summer 2022	Change from Spring 2022	Weight vs. benchmark	
Energy	4.60%	5.67%	6.60%	0.93	143.5%	
Materials	4.62%	4.22%	4.62%	0.40	100.0%	
Industrials	10.02%	9.01%	10.02%	1.01	100.0%	
Consumer discretionary	11.12%	10.05%	9.12%	(0.93)	82.0%	
Consumer staples	7.71%	8.69%	8.71%	0.02	113.0%	
Health care	13.37%	12.39%	15.37%	2.99	115.0%	
Financials	13.55%	16.35%	13.55%	(2.80)	100.0%	
Information technology	21.61%	22.54%	21.61%	(0.93)	100.0%	
Communication services	7.40%	7.11%	6.40%	(0.70)	86.5%	
Utilities	3.06%	2.76%	2.06%	(0.71)	67.3%	
Real estate	2.93%	1.21%	1.93%	0.72	65.9%	

*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	Benchmark	Range	Last quarter	Current recommendation
Cash & Cash Equivalents	2%	0-15%	2.0%	1.5%
Fixed Income	73%	68-88%	69.2%	71.0%
Total Cash & Fixed Income	75%	60-90%	71.2%	72.5%
Canadian Equities	10%	0-20%	11.5%	11.0%
U.S. Equities	8%	0-18%	9.2%	8.6%
International Equities	7%	0-17%	8.1%	7.9%
Emerging Markets	0%	0%	0.0%	0.0%
Total Equities	25%	10-40%	28.8%	27.5%
			Return	Volatility
40-year average			8.2%	5.0%
Last 12 months			-5.6%	6.1%

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	Benchmark	Range	Last quarter	Current recommendation
Cash & Cash Equivalents	2%	0-15%	2.0%	1.5%
Fixed Income	58%	43-83%	54.1%	56.0%
Total Cash & Fixed Income	60%	45-75%	56.1%	57.5%
Canadian Equities	13%	3-23%	14.3%	13.8%
U.S. Equities	15%	5-25%	16.4%	15.7%
International Equities	12%	2-22%	13.2%	13.0%
Emerging Markets	0%	0%	0.0%	0.0%
Total Equities	40%	25-55%	43.9%	42.5%
			Return	Volatility
40-year average			8.6%	6.2%
Last 12 months			-4.2%	6.7%

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	Benchmark	Range	Last quarter	Current recommendation
Cash & Cash Equivalents	2%	0-15%	2.0%	1.5%
Fixed Income	38%	23-53%	34.0%	36.0%
Total Cash & Fixed Income	40%	25-55%	36.0%	37.5%
Canadian Equities	15%	5-25%	16.0%	15.6%
U.S. Equities	25%	15-35%	26.6%	25.8%
International Equities	15%	5-25%	16.1%	16.1%
Emerging Markets	5%	0-15%	5.3%	5.0%
Total Equities	60%	45-75%	64.0%	62.5%
			Return	Volatility
40-year average			9.0%	7.6%
Last 12 months			-2.9%	7.6%

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%	2.0%	1.5%
Fixed Income	23%	8-38%	18.9%	21.0%
Total Cash & Fixed Income	25%	10-40%	20.9%	22.5%
Canadian Equities	18%	8-28%	19.0%	18.6%
U.S. Equities	30%	20-40%	31.6%	30.7%
International Equities	19%	9-29%	20.1%	20.2%
Emerging Markets	8%	0-18%	8.4%	8.0%
Total Equities	75%	60-90%	79.1%	77.5%
			Return	Volatility
40-year average			9.2%	9.4%
Last 12 months			-1.9%	8.2%

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%	1.0%	1.0%
Fixed Income	0%	0-15%	0.0%	0.0%
Total Cash & Fixed Income	2%	0-17%	1.0%	1.0%
Canadian Equities	29%	19-39%	29.3%	29.3%
U.S. Equities	38%	28-48%	38.2%	37.9%
International Equities	20%	10-30%	20.3%	21.0%
Emerging Markets	11%	1-21%	11.2%	10.8%
Total Equities	98%	83-100%	99.0%	99.0%
			Return	Volatility
40-year average			9.7%	12.0%
Last 12 months			0.7%	9.4%

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



Milos Vukovic, MBA, CFA
V.P. & Head of Investment Policy
RBC Global Asset Management Inc.



Aaron Ma, CFA
Senior Analyst, Investment Strategy
RBC Global Asset Management Inc.

The U.S. dollar appreciated against most major currencies during the quarter ended May 31, 2022. The rise in the greenback was primarily attributable to the firm commitment of the U.S. Federal Reserve (Fed) to hike interest rates to combat inflation, and risk-off sentiment that led investors to pile into the safety of the dollar. The U.S. dollar gained 12.0% against the Japanese yen, 6.5% against the British pound and 4.4% against the euro. The Canadian dollar was resilient against broader greenback strength, up 0.2%, as strong commodity prices, a robust economy and an equally hawkish central bank supported the loonie. The yen was particularly weak due to the Bank of Japan's steadfastly dovish monetary-policy stance and the yen's tendency to depreciate against the greenback when U.S. bond yields rise as was the case in the latest quarter. Concern about softer consumption and the effect of higher energy prices dimmed the economic outlook for the U.K. and Europe, weighing on their currencies. Over the one-year period, the U.S. dollar strengthened 17.6% against the yen, 13.9% against the euro, 12.8% against sterling and 4.8% against the Canadian dollar.

All major fixed-income indexes declined significantly in the latest quarter in U.S.-dollar terms. Losses ranged from 5.9% for the Barclays Capital Aggregate Bond Index to 12.3% for the FTSE European Government Bond Index. The abysmal

bond performance was a product of sharply higher bond yields across all regions in response to soaring inflation levels not seen since the early 1980s. Central banks were initially surprised by the degree and persistence of inflation and have since shifted to a much more hawkish tone, communicating a willingness to raise rates aggressively to tame it. The yield on the 10-year Treasury bond surged as high as 3.20% on May 9 before settling at 2.84% by month-end as investors were heartened by early signs that inflation may have peaked. Over the past latest 12 months, all major benchmark indexes were down at least 8%, with the FTSE European Government Bond Index's 21.9% plunge made worse by the euro's weakness against the dollar.

Equity markets also experienced substantial volatility during the quarter, with some major markets falling, at least temporarily, into a bear market as defined by a decline exceeding 20%. High inflation, rising interest rates and concerns about slowing economic growth weighed on investor sentiment, especially for relatively expensive growth stocks. The S&P 500 Index had at one point fallen as much as 20% while the decline in the technology-heavy Nasdaq Composite Index from its peak reached 36%. Emerging markets were not exempt, decreasing nearly 30% from their prior top. Stocks pared some of their losses toward the end of the quarter but all major indexes recorded

declines, with the Nasdaq index falling the most, down 12.0%. Canadian indexes such as the S&P/TSX Composite Index fared best, down, 0.9% in U.S.-dollar terms, thanks to relative strength in the Energy and Materials sectors. Over the one-year period, performance ranged from losses of 21.9% for the FTSE Europe and 21.8% for the MSCI Germany Index, to a 3.0% gain for the S&P/TSX Composite.

U.S. equities performed poorly across market capitalizations in the latest quarter, with the S&P 500, S&P 400 and S&P 600 indexes all posting losses of 5% to 6%. As volatility rose and the stock market rout deepened, investors turned away from high valued growth stocks, leading to a decrease of 10.9% for the Russell 3000 Growth Index, compared with a 1.3% decline for the Russell 3000 Value Index. The Energy sector was the best-performer in the May quarter with a return of 20.3%. The worst-performing sector was Consumer Discretionary, which dropped 13.5%. Over a one-year time frame, the gap between the best and worst performing sectors was about 81 percentage points, bookended by a 59.0% gain for the Energy sector and 21.7% loss for the Communication Services sector. The only three other sectors with gains since June 1, 2021, were defensive sectors – Utilities, Health Care and Consumer Staples.



Exchange rates
Periods ending May 31, 2022

	Current USD	3 months (%)	YTD (%)	1 year (%)	3 years (%)	5 years (%)
USD–CAD	1.2649	(0.21)	0.03	4.79	(2.19)	(1.31)
USD–EUR	0.9315	4.44	5.98	13.91	1.34	0.91
USD–GBP	0.7936	6.46	7.36	12.75	0.11	0.45
USD–JPY	128.7350	11.98	11.86	17.58	5.91	3.06

Note: all changes above are expressed in US dollar terms

Canada fixed income markets
Periods ending May 31, 2022

	USD					CAD		
	3 months (%)	YTD (%)	1 year (%)	3 years (%)	5 years (%)	3 months (%)	1 year (%)	3 years (%)
<i>Fixed income markets: Total return</i>								
FTSE Canada Univ. Bond Index TR	(6.25)	(10.30)	(12.73)	0.93	1.72	(6.44)	(8.55)	(1.28)

U.S. fixed income markets
Periods ending May 31, 2022

	USD					CAD		
	3 months (%)	YTD (%)	1 year (%)	3 years (%)	5 years (%)	3 months (%)	1 year (%)	3 years (%)
<i>Fixed income markets: Total return</i>								
FTSE U.S. Government TR	(5.92)	(9.12)	(8.37)	0.01	1.18	(6.12)	(3.98)	(2.17)
BBG U.S. Agg. Bond Index TR ¹	(5.86)	(8.92)	(8.22)	0.00	1.18	(6.06)	(3.82)	(2.18)

Global fixed income markets
Periods ending May 31, 2022

	USD					CAD		
	3 months (%)	YTD (%)	1 year (%)	3 years (%)	5 years (%)	3 months (%)	1 year (%)	3 years (%)
<i>Fixed income markets: Total return</i>								
FTSE WGBI TR	(8.24)	(11.58)	(13.96)	(1.80)	(0.12)	(8.43)	(9.83)	(3.95)
FTSE European Government TR	(12.34)	(16.25)	(21.86)	(3.51)	(1.39)	(12.53)	(18.12)	(5.62)
FTSE Japanese Government TR	(11.62)	(13.03)	(17.22)	(6.85)	(3.05)	(11.80)	(13.25)	(8.89)

Canada equity markets
Periods ending May 31, 2022

	USD					CAD		
	3 months (%)	YTD (%)	1 year (%)	3 years (%)	5 years (%)	3 months (%)	1 year (%)	3 years (%)
<i>Equity markets: Total return</i>								
S&P/TSX Composite	(0.94)	(1.30)	2.97	14.74	10.88	(1.15)	7.91	12.23
S&P/TSX 60	(0.88)	(1.43)	4.37	15.27	11.58	(1.09)	9.37	12.75
S&P/TSX Small Cap	(4.82)	(0.89)	(4.54)	16.33	7.97	(5.01)	0.04	13.78

U.S. equity markets
Periods ending May 31, 2022

	USD					CAD		
	3 months (%)	YTD (%)	1 year (%)	3 years (%)	5 years (%)	3 months (%)	1 year (%)	3 years (%)
<i>Equity markets: Total return</i>								
S&P 500 TR	(5.16)	(12.76)	(0.30)	16.44	13.38	(5.36)	4.48	13.89
S&P 400 TR	(5.12)	(10.98)	(6.52)	13.28	9.56	(5.31)	(2.04)	10.80
S&P 600 TR	(5.74)	(11.37)	(8.73)	13.22	9.78	(5.94)	(4.35)	10.75
Russell 3000 Value TR	(1.29)	(4.76)	0.35	12.71	9.38	(1.49)	5.16	10.24
Russell 3000 Growth TR	(10.92)	(22.06)	(7.60)	17.51	15.50	(11.11)	(3.17)	14.94
NASDAQ Composite Index TR	(11.96)	(22.53)	(11.53)	18.44	15.34	(12.14)	(7.29)	15.85

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 May 31, 2022

	USD					CAD		
	3 months (%)	YTD (%)	1 year (%)	3 years (%)	5 years (%)	3 months (%)	1 year (%)	3 years (%)
<i>Equity markets: Total return</i>								
MSCI World TR *	(5.72)	(12.97)	(4.82)	12.65	9.72	(5.98)	(0.34)	10.18
MSCI EAFE TR *	(5.16)	(11.34)	(10.38)	6.43	4.17	(5.42)	(6.17)	4.09
MSCI Europe TR *	(5.14)	(12.04)	(9.75)	7.13	4.10	(5.41)	(5.51)	4.78
MSCI Pacific TR *	(5.03)	(9.83)	(11.58)	5.15	4.33	(5.29)	(7.42)	2.84
MSCI UK TR *	(1.90)	(0.24)	2.53	6.01	3.70	(2.17)	7.34	3.68
MSCI France TR *	(5.48)	(13.13)	(10.57)	7.70	5.17	(5.74)	(6.37)	5.34
MSCI Germany TR *	(8.06)	(17.57)	(21.82)	3.11	(0.05)	(8.32)	(18.15)	0.85
MSCI Japan TR *	(7.78)	(13.43)	(13.32)	5.10	3.67	(8.03)	(9.25)	2.79
MSCI Emerging Markets TR *	(7.29)	(11.76)	(19.83)	5.00	3.80	(7.54)	(16.06)	2.69

Global equity sectors
Periods ending May 31, 2022

	USD					CAD		
	3 months (%)	YTD (%)	1 year (%)	3 years (%)	5 years (%)	3 months (%)	1 year (%)	3 years (%)
<i>Sector: Total return</i>								
Energy TR *	20.28	45.88	59.03	14.01	8.53	19.95	66.50	11.51
Materials TR *	0.28	(2.31)	(2.09)	16.61	10.73	0.01	2.51	14.05
Industrials TR *	(6.82)	(14.59)	(12.65)	8.38	6.32	(7.08)	(8.54)	6.01
Consumer discretionary TR *	(13.48)	(24.25)	(17.11)	12.11	10.00	(13.72)	(13.22)	9.65
Consumer staples TR *	(2.91)	(6.57)	0.11	8.20	5.26	(3.17)	4.81	5.82
Health care TR *	0.45	(7.38)	3.97	14.72	11.05	0.18	8.86	12.20
Financials TR *	(6.01)	(8.00)	(5.85)	9.76	6.80	(6.26)	(1.42)	7.35
Information technology TR *	(10.61)	(22.02)	(4.30)	22.62	19.13	(10.86)	0.19	19.93
Communication services TR*	(12.12)	(21.91)	(21.66)	7.68	5.21	(12.36)	(17.98)	5.32
Utilities TR *	4.63	0.75	7.70	9.32	7.69	4.34	12.76	6.92
Real estate TR *	(3.09)	(13.11)	(2.32)	4.51	5.51	(3.36)	2.27	2.21

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



Economic outlook

Stormy weather



Eric Lascelles
 Chief Economist
 RBC Global Asset Management Inc.

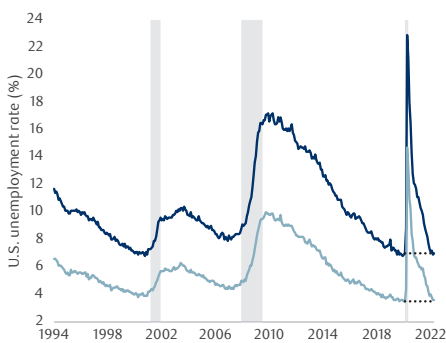
Happily, the economic damage from the pandemic has now largely vanished (Exhibit 1). Labour markets are even tighter than they first look, with quit rates and job openings having soared to unprecedented heights (Exhibit 2). Admittedly, the pandemic itself has not been fully eradicated, but infection rates are tame and the lingering economic effects outside of China are minimal (Exhibit 3).

Far less happily, the economic recovery is now sputtering. Headwinds to growth continue to mount, with the pace of expansion set to slow from here. The risk of recession over the next two years is considerable.

Our economic forecasts have been below the consensus for several quarters and have long anticipated a material deceleration in 2022. Even so, we have been compelled to

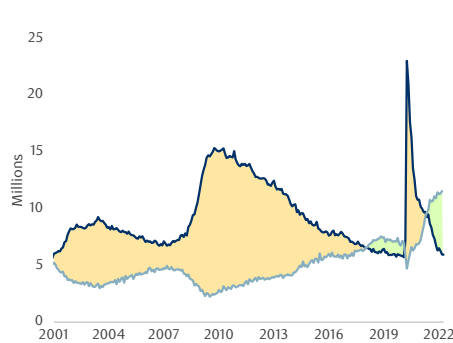
reduce our forecasts further, with the economy set to be particularly anemic in 2023.

Exhibit 1: U.S. unemployment rates return to pre-pandemic levels



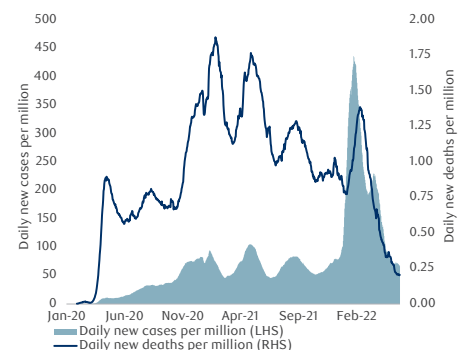
Note: As of Apr 2022. Broad unemployment rate defined as U-6 unemployment rate. Shaded area represents recession. Source: BLS, Macrobond, RBC GAM

Exhibit 2: U.S. labor-market shortage – far more job openings than unemployed



Note: Unemployment as of Apr 2022, job openings as of Mar 2022. Source: BLS, Macrobond, RBC GAM

Exhibit 3: Global COVID-19 infections have declined



Note: As of 5/25/2022. 7-day moving average of daily new cases and new deaths. Source: Our World In Data, Macrobond, RBC GAM

Prominent economic headwinds include extremely high inflation, the undertaking by central banks of aggressive tightening campaigns, a global commodity shock caused by Russian sanctions, the negative impact of continuing supply-chain problems and the damage from China's zero-tolerance COVID-19 policy.

Financial markets have weakened in response to this adversity. Bond yields and credit spreads are higher while risk assets such as equities are lower. All of this has tightened financial conditions, imposing a further weight on economic growth (Exhibit 4). As the outlook dimmed and downside risks mounted over the past quarter, we reduced the amount of investment risk carried in our portfolios. Financial markets have now tumbled to the extent that their risks are no longer so heavily skewed to the downside, though the remaining economic headwinds are still significant.

Inflation woes continue

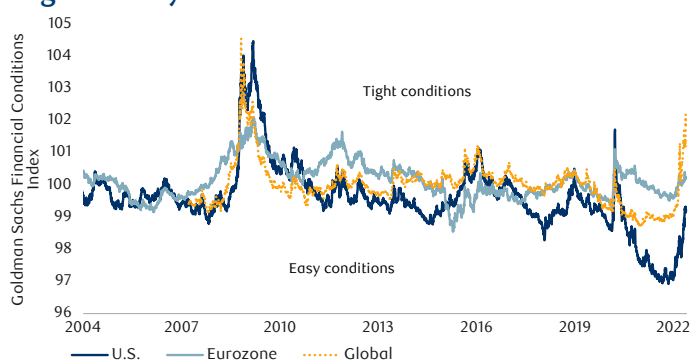
High inflation is the great problem this economic cycle, and the great differentiator versus the prior several cycles. It radically changes the calculus on multiple levels, most visibly in the urgency with which central banks are

tightening, and their future reluctance to cut rates until inflation has been fully tamed, even if the economy suffers.

Periods of high inflation tend to depress real economic growth and make it harder for people to make ends meet, but there are winners and losers. Some of the biggest losers include borrowers with variable interest rates, companies with weak pricing power, retirees on fixed incomes and owners of long-term bonds. The winners can include holders of real estate and other hard assets, resource producers, companies with strong pricing power, retirees with indexed pensions and borrowers locked in to fixed interest rates. The stock market occupies a middle ground. It normally performs OK in environments where inflation is elevated but not extremely high, as nominal earnings are supported by higher inflation but valuations frequently decline due to rising discount rates.

The rate of inflation has only increased over the past quarter, reaching multi-decade highs. Our own inflation forecasts remain above the consensus, mainly for the fundamental reasons discussed next, but also because inflation over the past year has exceeded expectations time after time (Exhibit 5).

Exhibit 4: Global financial conditions tightened significantly



Note: As of 5/23/2022. Source: Goldman Sachs, Bloomberg, RBC GAM

Exhibit 5: Global inflation continues to exceed expectations



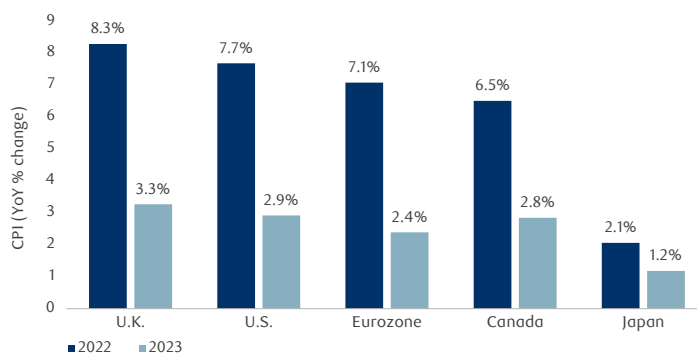
Note: As of Apr 2022. Source: Citigroup, Bloomberg, RBC GAM

We look for inflation of 6% to 8% in 2022 across most of the developed world, followed by a significant though incomplete retreat in 2023 (Exhibit 6).

Short-run inflation to remain very high

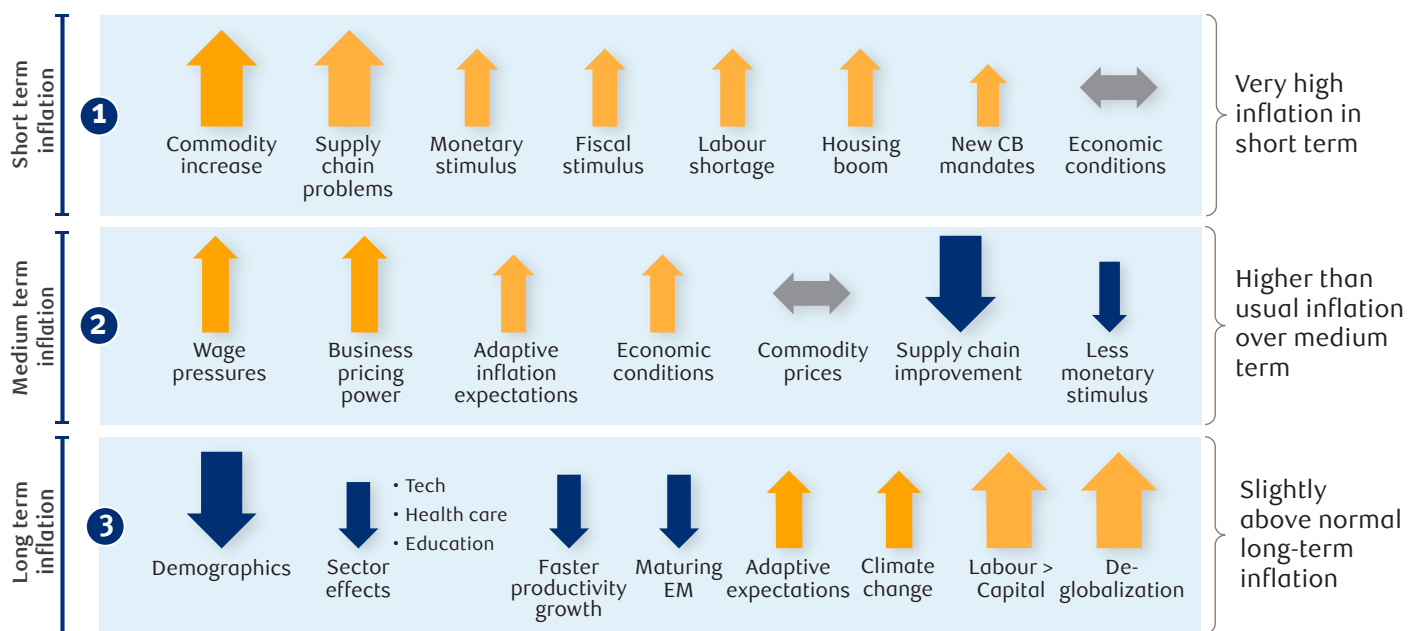
A significant number of inflationary drivers should persist over the next several months (Exhibit 7). The most prominent are higher commodity prices and problematic supply chains. The former is primarily the result of sanctions applied to Russian exports plus the sheer rapidity of the post-pandemic economic revival. There remains some upside risk to energy prices given the possibility of a further reduction in the flow of Russian oil and gas (Exhibit 8).

Exhibit 6: RBC GAM CPI forecast for developed markets



Note: As of 05/25/2022. Source: RBC GAM

Exhibit 7: Inflation to be very high in short term, fairly high in medium term, a bit high in long term



Note: As at 05/03/2022. Source: RBC GAM

Supply-chain inflation has been driven by a mix of factors. Factory production and transportation nodes have been occasionally impeded by the pandemic, limiting supply. But, in truth, the main problem has been unusually strong demand for goods over the past two years (Exhibit 9), in large part because many services were less available than usual during the pandemic.

Other short-run inflationary pressures arise from monetary stimulus, fiscal stimulus, a labour shortage and the housing boom. But these are less powerful influences. Interest rates near zero, as they were for much of the pandemic, shouldn't theoretically increase inflation nearly as much as they have. Fiscal stimulus certainly contributed to the economic revival, but little about the economy's rejuvenated state suggests that inflation should be four times higher than normal. The same goes for the labour shortage and rising home prices: these have contributed, but are not the primary drivers.

Medium-run inflation to be heated but less high

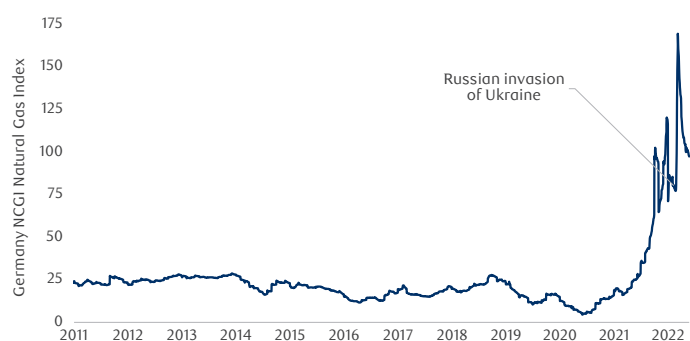
Turning to inflation over the medium run – the next year to two years – it seems reasonable to expect several of the short-term drivers to become less intense or even to reverse, but nevertheless inflation is expected to remain higher than normal as a second set of factors enters the equation.

Commodity prices are hard to forecast, but the prospect of slower economic growth argues that commodity prices are unlikely to advance as much over the coming year as they did over the past 12 months – a requirement for maintaining the same pressure on inflation.

Supply-chain problems are not easily resolved, especially as China's proclivity to lock down and Russian sanctions create additional complications, but the excessive demand for goods should ease as people pivot back to service spending (Exhibit 10), as the enthusiasm to spend eases more generally, and as some logistical snarls are addressed (Exhibit 11).

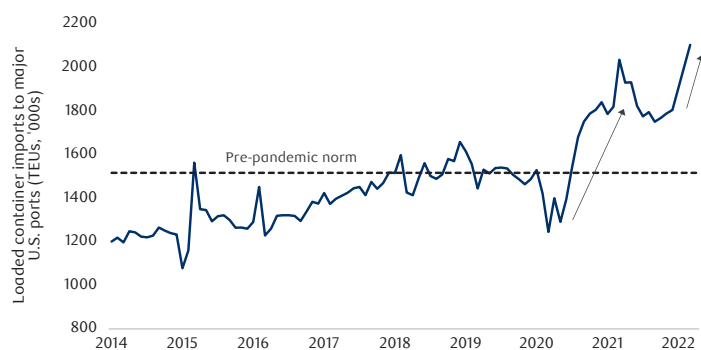
Monetary stimulus is, of course, now being removed at a gallop and fiscal stimulus has become an economic drag as government outlays becomes less generous. As rates rise, the housing boom is seemingly beginning to end. That removes three sources of inflation.

Exhibit 8: Natural-gas prices in Europe elevated on Russian invasion



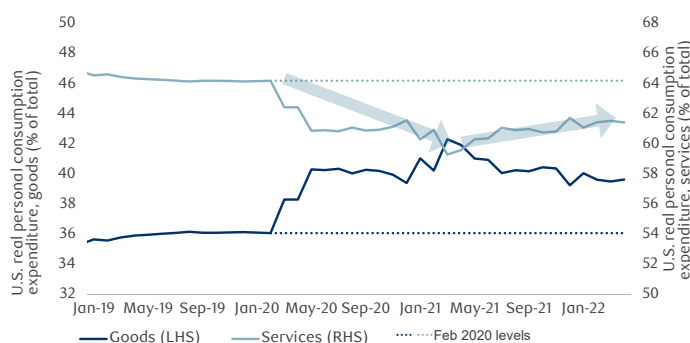
Note: As of 05/23/2022. Source: Intercontinental Exchange, Macrobond, RBC GAM

Exhibit 9: Imports surge as people buy more things than usual during the pandemic



Note: As of Mar 2022. 2019 average shown as pre-pandemic norm. Major U.S. ports included are the ports of Los Angeles, Long Beach, New York & New Jersey, Savannah, Houston, Virginia, Oakland and Boston. Source: Macrobond, RBC GAM

Exhibit 10: U.S. consumer spending shift to goods from services should reverse



Note: As of Apr 2022. Source: Macrobond, RBC GAM

So why won't inflation tumble back to normal if most of the existing inflationary forces are set to fade? The answer is that a number of other inflationary pressures are only now starting to manifest themselves.

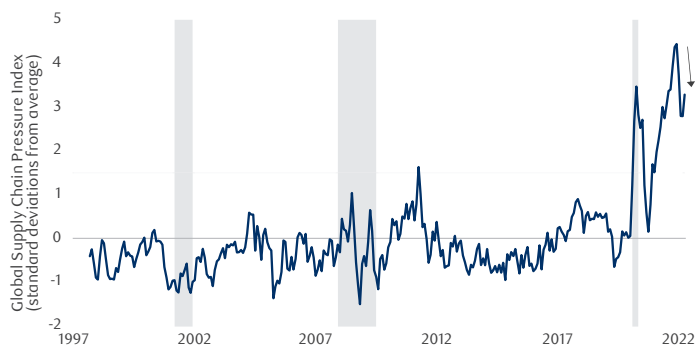
Economic conditions are now quite tight, meaning that inflation will tend to run at above-normal levels absent other forces. In particular, the job market has become so strong that workers are increasingly able to negotiate large wage increases, and are highly incentivized to do so given that inflation has eroded their purchasing power over the past year (Exhibit 12). While higher wages do not always result in higher inflation, businesses continue to indicate that they intend to pass along any cost increases that they encounter.

Meanwhile, inflation has now broadened significantly. It is no longer just car and chip and bicycle prices that have surged. Today, the prices of fully half of the products in the U.S. spending basket are rising at 5% or more per year (Exhibit 13). This includes products and services minimally affected by Russian sanctions or supply chains, such as citrus fruits and dry cleaning. This broadening reflects a change in mentality among businesses and consumers as they become resigned to high inflation. It is much harder to tame broad inflation than to narrow its scope.

To be sure, monetary tightening and an economic slowdown are likely to start removing significant inflation pressure toward the end of this year and into 2023. But it may be some time before inflation fully normalizes.

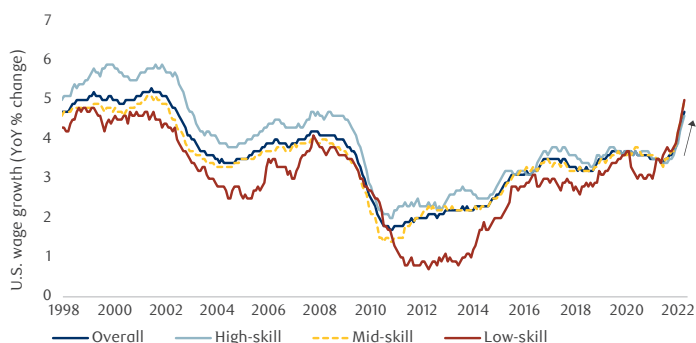
“Central banks are arguably better positioned today – more focused on inflation, more transparent and more cognizant of the lessons of the 1970s.”

Exhibit 11: Global supply-chain pressure has eased but is still elevated



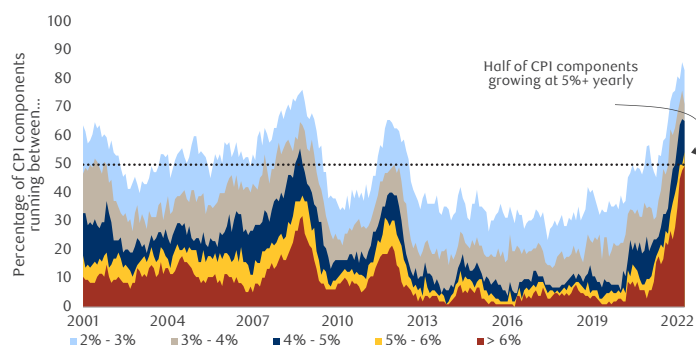
Note: As of Apr 2022. Shaded area represents U.S. recession. Source: Gianluca Benigno, Julian di Giovanni, Jan J. J. Groen, and Adam I. Noble, “A New Barometer of Global Supply Chain Pressures,” Federal Reserve Bank of New York Liberty Street Economics; Macrobond, RBC GAM

Exhibit 12: Wage growth accelerates



Note: As of Apr 2022. 12-month moving average of median wage growth. Source: Federal Reserve Bank of Atlanta, Haver Analytics, RBC GAM

Exhibit 13: Inflation in the U.S. has broadened significantly



Note: As of Apr 2022. Share of CPI components with year-over-year % change falling within the ranges specified. Source: Haver Analytics, RBC GAM

Inflation over the long run

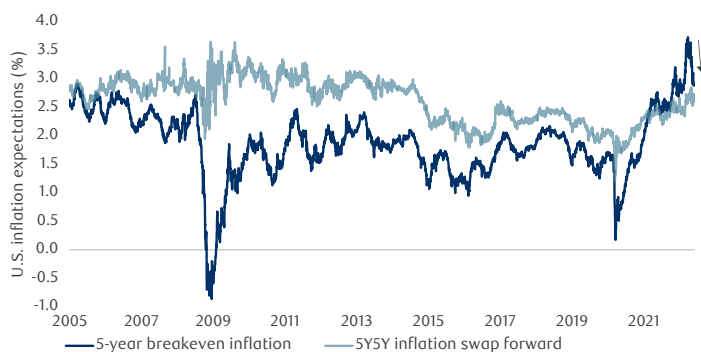
Over the long run, inflation is likely to return most of the way to normal readings.

It is heartening that long-term inflation expectations never rose beyond the historically normal range, and medium-term inflation expectations have begun to decline back toward normal territory (Exhibit 14). Similarly, the attitude of today's consumers to high inflation – that it discourages them from spending – is helpful (Exhibit 15).

There are still important downward forces that should help to cap long-run inflation, none more important than the demographic forces that endeavor to lead many developed countries down Japan's deflationary path.

However, some new structural pro-inflationary pressures are now presenting themselves, including the effects of climate change and the end of globalization. Finally, we believe workers may be starting to gain greater clout – not just cyclically but also structurally – with the effect that wages and thus inflation could be slightly higher than before. All of this is to say that inflation might tend toward slightly higher than 2% readings over the long run, versus slightly below 2% readings over the decade prior to the pandemic.

Exhibit 14: U.S. inflation expectations high but falling



Note: As of 5/25/2022. Source: Bloomberg, RBC GAM

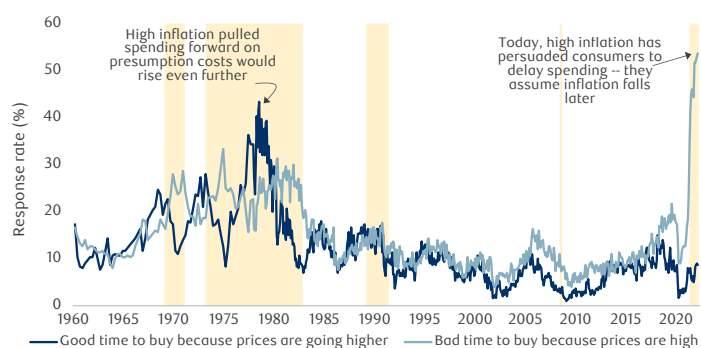
Inflation in context

There are some parallels between the inflation of the 1970s and today's experience. These include monetary-policy errors, expansive fiscal policy, economic booms and a dose of bad luck. In the 1970s, the bad luck came in the form of crop failures and OPEC embargoes. Today, it's the pandemic and, more recently, the war in Ukraine.

But, thankfully, there are also some important differences between the two periods. Central banks are arguably better positioned today – more focused on inflation, more transparent and more cognizant of the lessons of the 1970s. The skew of economic shocks tilted more toward impeded supply in the 1970s – a bad thing – versus unusually strong demand now. Unlike today, inflation in the 1970s accelerated subtly over the better part of a decade, making it harder to subsequently halt. The gold standard had also just ended and the U.S. dollar was in free-fall (versus appreciation today), and union membership was higher then – baking high inflation into the cake via indexed wages.

Perhaps of greatest relevance, the demographic environments could not be more different. The 1970s featured a young and growing population, versus today's aging population and slowing population growth. The former is inflationary while the latter is not.

Exhibit 15: So far, consumers are acting like high inflation is temporary - unlike in the late 1970s



Note: As of Mar 2022. Shaded areas represent episodes of high inflation (inflation > 5%). Source: University of Michigan, Macrobond, RBC GAM

War in Ukraine

The war in Ukraine continues, albeit in a more concentrated form than at the beginning of the conflict, with military actions now focused in the east and south of the country. Russia continues to gain more territory than it cedes, though at a slow and seemingly decelerating rate. There is the real possibility that Ukraine could begin to reverse these gains as Western nations continue to furnish the country with munitions, while Russian military hardware is gradually being destroyed. But the end of the war does not appear to be near, based on insights from betting markets that assign just a 19% likelihood of a cease-fire by December. In March, that figure was 87%.

Even when the war ends, sanctions on Russia are unlikely to be lifted. Historically, sanctions last for many years, and Western companies will be slow to return to Russia even when these are lifted. As a result, it seems reasonable to budget for a lengthy period of economic disruption – with the accordant impediment of commodity supplies and the economy.

Economic disruptions are more likely to intensify than to ease from here. The European Union (EU) is now beginning the process of blocking Russian oil imports, while Russia is halting natural-gas exports to a growing list of countries.

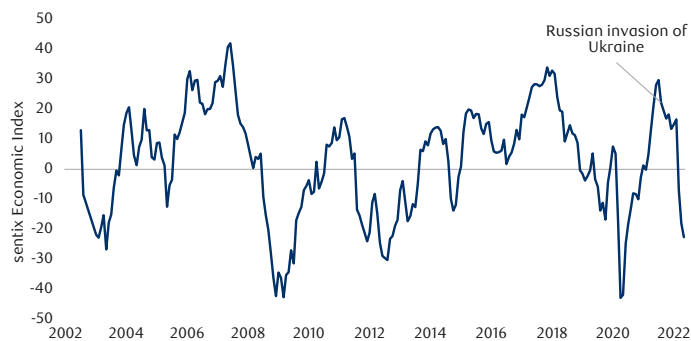
We continue to budget for global economic growth of 0.5 to 1.0 percentage point less than otherwise due to the war, with damage to the EU potentially up to triple that figure. The hit to European growth is already becoming visible (Exhibit 16). The economic impact on North America should be considerably less given the region's substantial commodity resources.

Global inflation is set to be as much as 2 percentage points higher than it would otherwise have been due to the war. In addition to the acute damage from higher energy prices, surging food prices are particularly worrying (Exhibit 17). The implications are potentially calamitous for the world's poorest nations. As food security concerns intensify, some countries, prominently including India, have begun banning the export of certain food products, exacerbating the global problem.

Monetary tightening

With inflation so high and economic conditions tight, central banks have been forced into urgent action. They have begun their tightening cycle far earlier than initially planned and are proceeding at an unusually rapid rate – with 50-basis-point rate increases at one go increasingly the norm, and with rate increases occurring at consecutive meetings.

Exhibit 16: Euro-area economic sentiment falls on Russia-Ukraine war



Note: As of May 2022. Source: sentix GmbH, Macrobond, RBC GAM

Exhibit 17: Food prices skyrocket as Russia's invasion of Ukraine threatens global food supply



Note: As of Apr 2022. Source: World Bank, Macrobond, RBC GAM

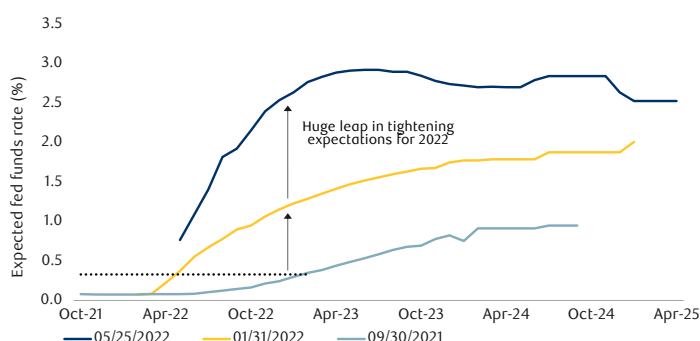
“Canada’s housing market is among the world’s more vulnerable due to its particularly strong price increases, deteriorating affordability and recent regulatory measures to limit demand and boost supply.”

Market expectations and central-bank guidance point to significantly more monetary tightening yet to come – far more than had been anticipated in 2021 or even in early 2022 (Exhibit 18). Central banks are now expected to reach at least neutral levels for their policy rates (in the realm of 2.0% to 3.0% for the U.S. and Canada), and potentially to venture modestly beyond, into restrictive territory.

Even the European Central Bank is now preparing to raise its policy rate to thwart inflation, despite the considerable economic damage inflicted by sanctions on Russia.

Normally, one might expect central banks to pivot back to rate cuts as soon as the economy begins to wobble. But central banks today have a laser-like focus on inflation. Other central-bank objectives such as sustaining strong economic growth and financial-market stability, and limiting inequality and climate change are no longer priorities. Unless inflation starts to rapidly wane, policymakers will hold their noses and continue to tighten.

Exhibit 18: Market expectations for Fed hikes over time



Note: As of 05/25/2022. Source: Bloomberg, RBC GAM

Housing exposure

No sector is more exposed to rising interest rates than housing. Already, there are signs of weakness in North America, and expectations of a slowdown in Europe and Britain. Fortunately, there are few parallels to the carnage of the global financial crisis of 2008, which had more to do with poor lending and borrowing practices than affordability or the rate of home sales. But home prices and activity have ascended to a remarkable degree over the past two years, leaving some room for decline.

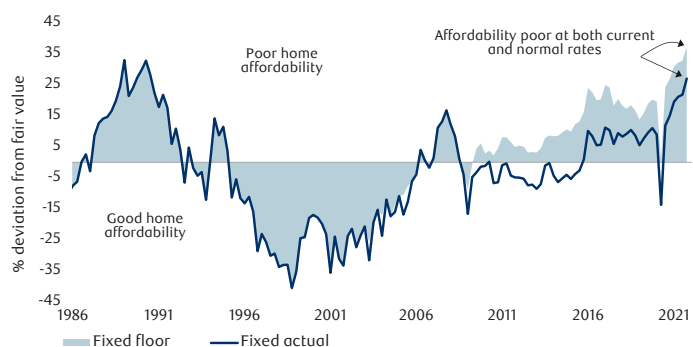
Canada’s housing market is among the world’s more vulnerable due to its particularly strong price increases, deteriorating affordability (Exhibit 19) and recent regulatory measures to limit demand and boost supply. It is unlikely that strong immigration over the next few years – a key determinant of housing demand – will be enough to fully offset these factors, and it is therefore a good bet that Canadian home prices will decline somewhat.

Silver linings

While interest-rate increases slow economic growth, they should not be viewed as a purely negative development. It is critical that inflation be tamed for our long-term prosperity. Thus, to the extent that rate increases accomplish that objective, there is great benefit in them, in spite of the short-term economic pain.

Furthermore, higher interest rates are good for savers. Mathematically, there is as much money being lent as

Exhibit 19: Canadian housing has poor affordability



Note: As of Q4 2021. Fixed floor imposes a minimum 'normal' mortgage rate in the affordability calculations, and so reveals how affordability would look at "normal" mortgage rates. Source: CREA, Statistics Canada, Haver Analytics, RBC GAM

borrowed. It certainly feels like a good thing that the fraction of the world's bonds trading at a negative interest rate has already plummeted from a startling 30% at its worst to just 4% today (Exhibit 20). Negative yields were not just bad for savers, but had a distortionary effect on economic activity.

Elevated recession risk

The risk of recession is high over the next two years due to the number and intensity of economic headwinds. Extremely high inflation is corrosive to economic growth and may yet elicit a buyer's strike from households. The commodity shock emanating from Russia is further compromising pocketbooks, and central banks are undertaking their most aggressive tightening cycle in several decades. Add to this the fact that supply chains remain snarled, Chinese growth has stumbled and financial conditions have now tightened severely, and it is not a stretch to reach a recessionary conclusion, even if the range of conceivable outcomes is unusually wide.

It is also useful to examine a variety of time-tested signals that have historically helped predict recessions. Most of these indicators suggest a recession is likely, though not all.

Recession signals include:

- Over the past 60 years, inflation at current levels has always been followed by a recession as central banks strive to stabilize prices.

- Ten of 13 monetary tightening cycles in the U.S. since 1955 were followed by recessions. A new monetary tightening cycle has now begun.
- The recession risk from monetary tightening is arguably higher than normal in this tightening cycle given that central banks made a policy error in not tightening earlier, that they are now moving quite quickly to address the mistake and that they are focusing on inflation at the possible expense of growth.
- An oil shock that raises crude prices by more than 50% above the one-year moving average is generally followed by a recession. This threshold was reached earlier this year.

As always, there is nuance to the recession analysis:

- A more careful assessment of what happens after monetary-tightening cycles yields the conclusion that recessions are not guaranteed. For instance, several of the recessions that followed monetary-tightening cycles were influenced by other factors. If these are excluded, one might go so far as to argue that just seven of 13 tightening cycles created recessions – a probability that is within the realm of a coin toss.
- While the oil shock did send the aforementioned recessionary signal, the price of crude oil is no longer more than 50% above its one-year average. Furthermore, the energy intensity of the economy has declined over the decades, making this signal less relevant today.

Exhibit 20: Share of bonds with negative yields has dropped substantially



Note: As of 5/23/2022. Percentage of bonds in Bloomberg Barclays Global Aggregate Bond Index trading at negative yields. Source: Bloomberg, RBC GAM



- While the yield on the U.S. 2-year Treasury did briefly rise above the yield on the 10-year Treasury – a so-called yield-curve inversion that is a classic recession signal – it has since un-inverted. Two other portions of the yield curve used to assess recession risk remain not just positive, but have actively shifted away from signaling a recession (Exhibit 21).
- Our U.S. business-cycle scorecard indicates that we are still in the middle of the economic cycle, though it does appear that changes are occurring fast enough that “late cycle” readings could arrive before too long (Exhibit 22).

A soft landing, whereby the economy manages to keep growing despite significant challenges, is therefore quite possible. To achieve this, a stroke or two of good luck is necessary. Supply-chain issues resolving with unanticipated haste might work. An early end to the commodity shock or an unexpectedly rapid resolution to China’s COVID-19 lockdown might also suffice. Anything that would bring inflation down faster than expected would take pressure off central banks and prove enormously helpful to economic growth. Simultaneously, businesses and consumers will need to remain firm in their robust spending plans, despite wavering corporate and household confidence.

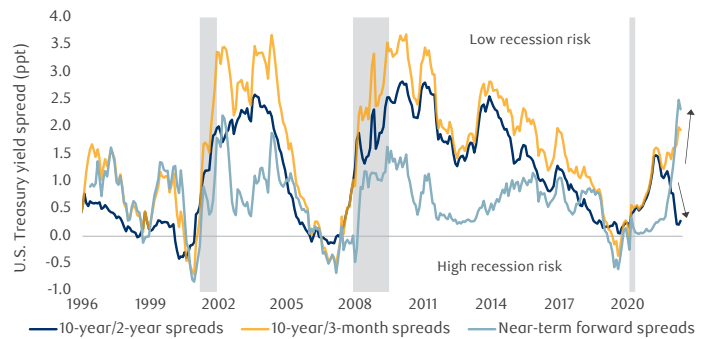
The challenge is that economies become quite slippery once even a hint of weakness surfaces. To illustrate, there is no time in modern history when the 3-month average of the U.S. unemployment rate has risen by more than 0.4 percentage point without a recession being triggered (Exhibit 23). To be clear, for the moment, the unemployment rate continues to fall. But there isn’t much room for the economy to stumble without the expansion expiring altogether.

Fortunately, recessions can occasionally be useful. In the present situation, it would be far better to succumb to recession in 2023 and, in so doing, fix the inflation problem, than to totter along with sustained growth but be stuck with increasingly embedded high inflation. Taming inflation should be viewed as a good-news story even if it inflicts some temporary economic damage.

Recession hypotheticals

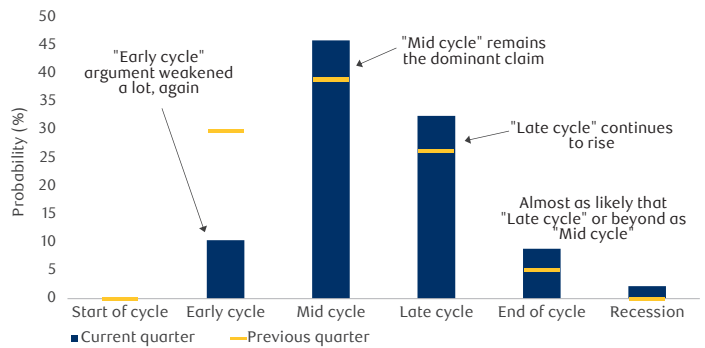
It is worth exploring the contours of a hypothetical recession in case one does occur. Would it be mild or deep?

Exhibit 21: Mixed message on recession risk from yield-curve indicators



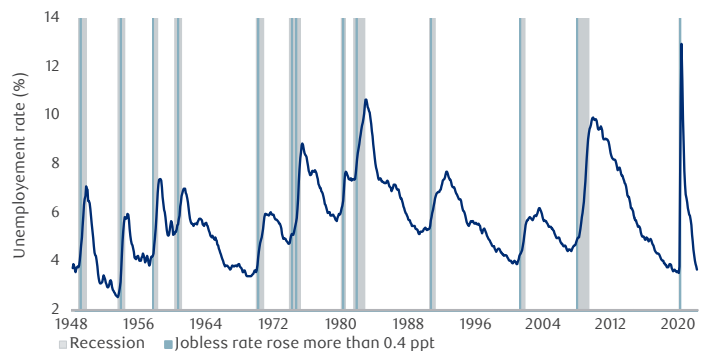
Note: As of 5/25/2022. Near-term forward spread measured as forward rate of 3-month Treasury bill six quarters from now minus spot 3-month Treasury yield. Shaded area represents recession. Source: Engstrom and Sharpe (2018). FEDS Notes. Washington: Board of Governors of the Federal Reserve System, Bloomberg, Haver Analytics, RBC GAM

Exhibit 22: U.S. business-cycle score



Note: As of 04/29/2022. Calculated via scorecard technique by RBC GAM. Source: RBC GAM

Exhibit 23: Not much room for cooling the economy without triggering a recession



Note: As of Apr 2022. Unemployment rate is 3-month moving average. Source: Bureau of Labor Statistics, NBER, Haver Analytics, RBC GAM

How long would it last? Which countries would be most affected?

On the matter of recession timing, the window is fairly large. To the extent that confidence metrics are plummeting, recent economic signals are beginning to sour and economic surprises have now shifted from positive to quite negative territory, a recession could happen as early as late summer (Exhibit 24). But the consensus thinking is that any recession would more likely arrive in the first half of 2023, once additional monetary tightening has occurred and the lagged impact on the economy becomes visible.

With regard to the depth of a hypothetical recession, multiple scenarios are conceivable. Unusually aggressive monetary tightening, high inflation and various growth shocks have created the possibility of deep recession. Additionally, it is notable that mild to moderate recessions failed to permanently quell high inflation in 1969, 1974 and 1980, lending support to an argument that a deeper recession might be necessary to achieve this goal. Lastly, the labour market is so tight at present that a mild recession might not be sufficient to reset the economy into a lower level of inflation.

On the other hand, the economy was set to grow quickly before recent headwinds arose, so a sizeable negative shock doesn't assure a large decline. There are no acute economic

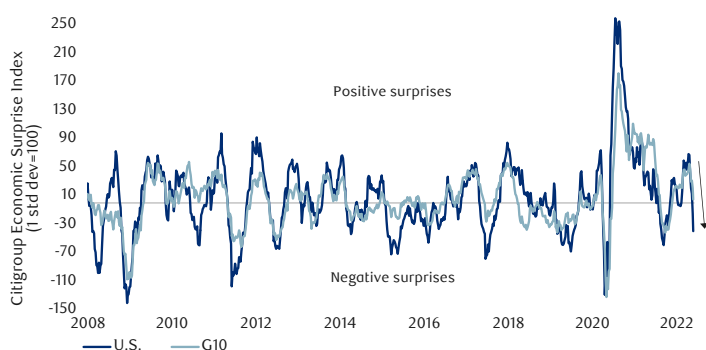
or financial excesses that need correcting – unlike with most deep recessions. Some pent-up demand still exists for newly available services and back-ordered goods, and households have accumulated a significant nest egg of liquid savings that they could deploy in difficult circumstances. It is also possible that a mild recession would suffice to change inflation psychology since high inflation has not yet become entrenched.

From a geographic perspective, the U.S. is likely to be among the less damaged countries and Canada somewhat more so given its housing overhang. The U.K. and Eurozone seem most vulnerable due to their greater exposure to the commodity shock.

Further economic downgrades

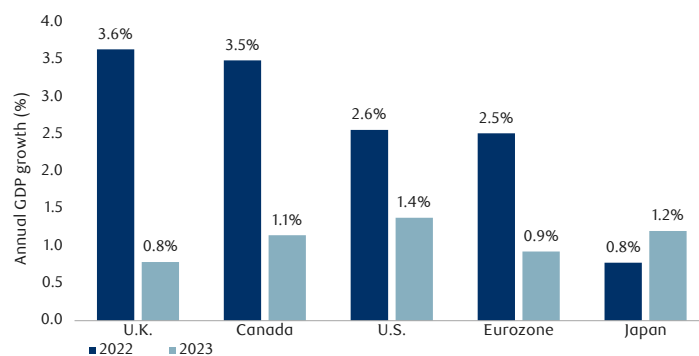
Our base-case economic forecast anticipates a further deceleration in growth across 2022 and into 2023, with the economy presumed to be at its nadir in early to mid-2023 (Exhibit 25). For the developed world, this translates into GDP growth of 2.5% for 2022, less than half the outsized 5.2% rate achieved in 2021, followed by just 1.2% growth in 2023. With the exception of 2020's pandemic shock, that is the weakest annual performance in more than a decade. These forecasts have been downgraded from a quarter ago, and remain weaker than the consensus.

Exhibit 24: Global economic surprises plunge, U.S. in negative territory



Note: As of 5/25/2022. Source: Citigroup, Bloomberg, RBC GAM

Exhibit 25: RBC GAM GDP forecast for developed markets



Note: As of 5/25/2022. Source: RBC GAM

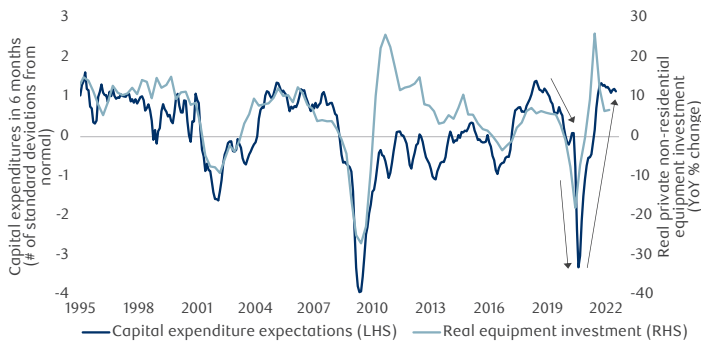
The challenges to growth have already been well documented. Providing at least a partial counter to those challenges, pandemic restrictions have eased excluding China, companies maintain robust capital expenditure (Exhibit 26) and hiring plans, household finances are resilient, and supply-chain problems may be easing slightly. The key question is the extent to which these positive forces hold. Fortunately, pandemic restrictions are unlikely to return barring a significantly more severe variant. But the outlook for business and consumer spending is somewhat more fluid, as deteriorating confidence, higher borrowing costs and rising fuel prices could yet undermine current plans. Already, businesses are scaling back their inventory-accumulation plans (Exhibit 27).

The magnitude of the downgrade to the emerging-market growth outlook is similar. We now anticipate overall emerging-market growth of just 3.3% in 2022 and 3.7% in 2023, well short of the emerging-market norm (Exhibit 28). The acceleration from one year to the next is somewhat illusory, reflecting in large part Russia’s economic collapse in 2022.

Chinese weakness

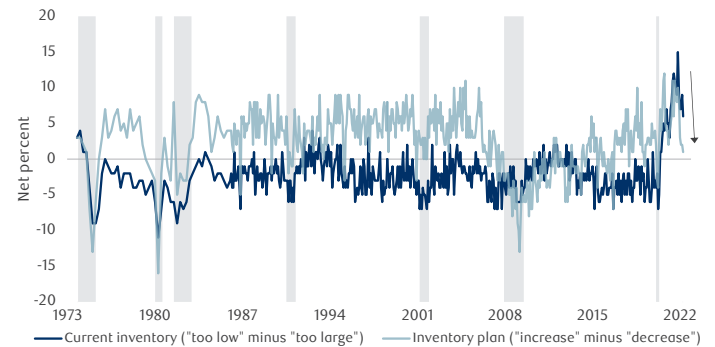
China is the one country that has not significantly lifted its pandemic restrictions. To the contrary, the curbs intensified in recent months as China experienced its most intense wave of COVID-19 infections since the beginning of the pandemic (Exhibit 29). In pursuit of a “zero tolerance” policy,

Exhibit 26: U.S. capex expectations robust, but potentially in flux



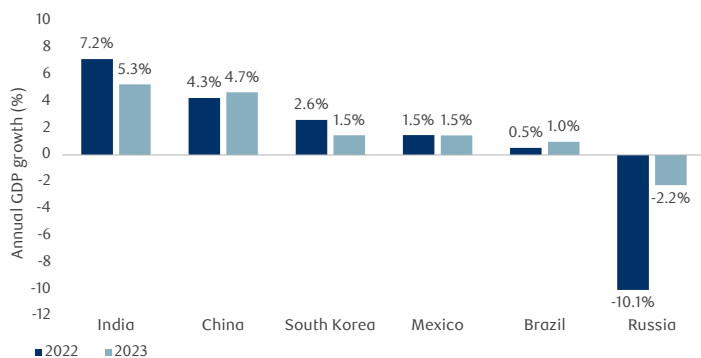
Note: Capital expenditures in 6 months (Apr 2022, in 3-month lead) are 3-month moving average of an aggregate of normalized indicators of future capex from surveys on manufacturing and non-manufacturing firms conducted by NFIB, the Federal Reserve Bank of Chicago, Dallas, Kansas City, New York, Philadelphia, and Richmond. Real equipment investment as of Q1 2022. Source: Haver Analytics, RBC GAM

Exhibit 27: U.S. businesses are paring back inventory-investment plans



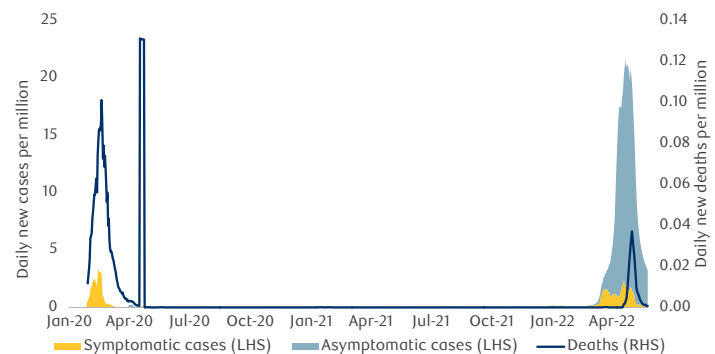
Note: As of Apr 2022. Shaded area represents recession. Source: NFIB Small Business Economic Survey, Haver Analytics, RBC GAM

Exhibit 28: RBC GAM GDP forecast for emerging markets



Note: As of 5/25/2022. Source: RBC GAM

Exhibit 29: China’s latest COVID-19 wave was the largest yet



Note: As of 5/25/2022. 7-day moving average of daily new cases and new deaths. Source: Johns Hopkins University, Macrobond, RBC GAM

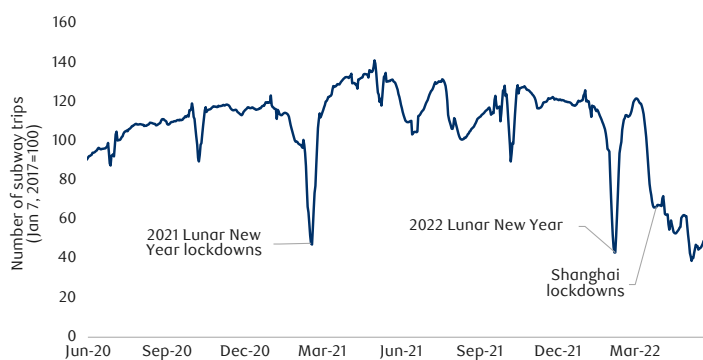
some of the country’s largest cities, including Shenzhen and Shanghai, almost completely locked down for extended periods.

The restrictions are doing considerable short-term damage to the Chinese economy. Retail sales and auto sales are now lower than a year ago – a rare occurrence for China’s normally super-charged economy, and real-time metrics such as subway traffic have plummeted (Exhibit 30).

China’s pandemic strategy is arguably incompatible with the highly contagious virus variants that now circulate. Even as Shanghai reopens and as Beijing seemingly fends off being inundated with COVID cases – potentially providing a short-term economic boost – there remains the risk of outbreaks in other locations. In the meantime, people are behaving more cautiously than normal, impeding the economy.

The Chinese economy is juggling a number of other challenges, including housing-market weakness, a corporate crackdown on technology companies and an aging population. Should global consumers pivot back to purchasing services from goods – as anticipated – that would represent a significant blow to Chinese exporters. Finally, China is a major importer of natural resources and so is particularly affected by the recent commodity spike. Collectively, this points to Chinese economic growth of just 4.3% in 2022 – well below the country’s 5.5% target and the 6.7% average of the past decade.

Exhibit 30: Subway traffic in major Chinese cities plummeted amid COVID lockdowns



Note: As of 5/23/2022. Index is the weighted 7 day rolling sum of subway trips in Beijing, Guangzhou, Nanjing, Shanghai, Suzho, and Zhengzhou. Source: Chinese metro agencies, Macrobond, RBC GAM

Long-term themes

With so many swirling forces at work in the short run and major questions about the path forward for inflation and the economy, it is easy to overlook important long-term macroeconomic forces that move at a glacial pace (Exhibit 31). That would be a mistake. Let us review several of importance to investors.

The pandemic has changed society and the economy in enduring ways. For one thing, downtowns appear set to be diminished for quite some time and working from home will remain far more prevalent than before the pandemic. People will also spend more of their time online, both for shopping and entertainment, and business travel should remain well below prior levels now that video conferencing has gone mainstream.

The world has long been heavily indebted, with the situation worsening during the pandemic and unlikely to reverse anytime soon. Most of the accumulation of debt over the past decade has been amassed by governments, meaning particular challenges for public finances. As interest rates rise, governments’ debt-servicing burden will increase. Interest rates will likely have to remain low over the long run to sustain such high debt loads.

On a related note, the developed world appears to have transitioned to an era of big government. The past two recessions, in particular, have led to enormous increases

Exhibit 31: Long-term macro themes

Post-COVID changes	Downtowns / work from home / online / travel
High debt	Low rates, less fiscal flexibility
Government	Era of big government
Workers > Businesses	Higher wages, flat profit margins
Multipolar world	China’s ascension, Russia, de-globalization
Demographics	Aging + low fertility = Slow growth / lower inflation
Productivity	Faster innovation?
Climate	Growth neg. / inflation pos. / massive sector effects
Inflation	>=2% in the future versus <=2% over prior decade

Note: As at 05/03/2022. Source: RBC GAM

in government spending, as politicians committed to devoting resources to bolstering unemployment insurance and support for hard-hit groups. While reducing inequality and stabilizing economic growth are desirable, long-term commitments to such government outlays will add to the public debt and could reduce the dynamism of the economy.

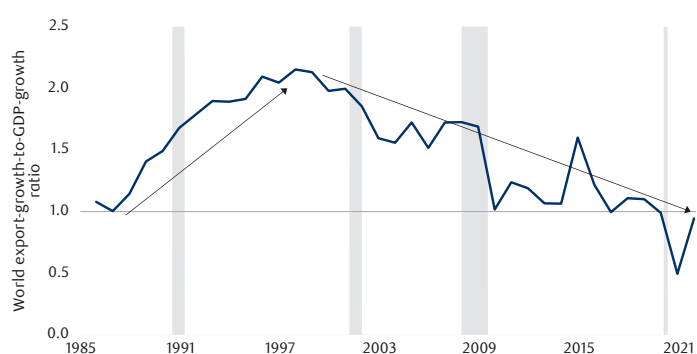
Workers appear to be gaining clout at a time that businesses are becoming less influential. While there are cyclical aspects to this trend, it could prove a structural force as well. Unions are again expanding, minimum wages have leapt higher over the past several years and governments are increasingly sympathetic to the desires of workers. Meanwhile, the exit of baby boomers from the workforce could oblige businesses to pay higher wages to ensure a sufficient supply of labour. Conversely, businesses now face the imposition of a global minimum corporate tax, a growing inclination by governments to tax sectors perceived to be faring better than they should, additional regulations and a greater focus on antitrust matters. All of this may allow wages to rise a bit more quickly over the coming decades and halt rising profit margins.

It is certainly now a multipolar world. China has ascended to the point that it now vies with the U.S. for global supremacy in economic and military matters, and Russia has allies representing as much as one-third of global economic output. This geopolitical reality complicates international trade and the functioning of multinational institutions. Globalization was already ebbing, but is now suffering an additional blow as sanctions and tariffs mount (Exhibit 32).

The theme of deteriorating demographics is well known but still enormously important. The combination of an aging population and lower fertility across much of the world materially reduces the sustainable rate of economic growth, is bad for government finances and will tend to damp inflation, all else being equal.

Whereas demographic forces are set to weigh on growth, some reprieve could come from productivity gains. We

Exhibit 32: Trade growth is decelerating as globalization fades



Note: Ratio of 5-year growth of real export of goods and services to that of real GDP. Ratio for 2021 based on OECD forecast. Shaded area represents U.S. recession. Source: OECD, Haver Analytics, RBC GAM

budget for faster-than-normal productivity growth over the long run, motivated by impressive scientific advances, a substantial amount of capital expenditures and research and development, China's arrival at the technological frontier and a variety of technological advances wrung from the pandemic.

Climate change is set to have a palpable effect on the economy for the foreseeable future. For a variety of reasons including the direct damage done by climate change, it applies a modestly negative force to economic growth and a modestly positive force to inflation. But the real story is at the sector level, where many industries are set to be reshaped by climate change, none more so than the fossil-fuel industry.

Finally, and as discussed earlier, we budget for inflation to be a little higher over the coming decade than it was over the prior decade. This is partially because inflation happened to be very low over the 2010s, but also because of new forces including climate change, the growing clout of workers and de-globalization.

Bottom line

This is a tricky time. There are many moving forces buffeting the global economy, with more exerting a malign influence than a positive one right now. Economic growth is likely to continue slowing and will probably underperform the current consensus forecast. The risk of recession is elevated over the next two years, and is reflected in our more cautious investment allocation. A soft landing remains achievable, but requires several things to go right.

At times such as this, it may be useful to think with a longer-term perspective. The key goal is to tame elevated inflation, preventing it from becoming structurally high and resulting in a lost decade like in the 1970s. Central banks appear up to the task. A recession could result from their actions, but this would be temporary, with the economy and markets capable of recovering lost ground subsequently. In contrast, the spoils of success would be permanent, leaving a solid foundation for economic growth and positive market returns for years to come.





Market outlook

Persistent inflation grips financial markets



Eric Savoie, MBA, CFA
Investment Strategist
RBC Global Asset Management Inc.



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

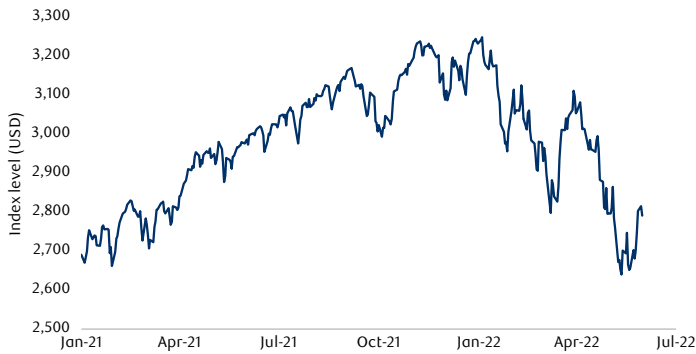
A long list of challenges threatens the macroeconomic landscape. Inflation has surged far beyond the most aggressive forecasts, the brutal invasion of Ukraine shows no signs of letting up and lockdowns in China reveal that the virus continues to hinder economic activity. Leading indicators of the economy have been moderating since early 2021 as the initial recovery from the pandemic transitioned to a maturing expansion and the extraordinary stimulus that had been in place began to fade. Although consumers and businesses are in relatively healthy financial positions, confidence has been declining in the face of surging fuel costs, tightening financial conditions and an increasingly uncertain outlook. In this environment, we expect that growth will continue to slow, that inflation, even if peaking, will remain elevated and that the odds of an adverse outcome for the economy and capital markets are higher than usual.

Unacceptably high inflation is the number one focus for central bankers at the moment and they are committed to doing whatever is necessary to restore consumer-price stability. The U.S. Federal Reserve (Fed) has already begun raising interest rates and may have to continue hiking aggressively for the remainder of the year and into 2023. What makes the current situation precarious is the Fed appears intent on tightening into an already slowing economy and risks causing a recession with rapid rate hikes. But with the labour market on solid footing, the Fed appears willing to push the envelope on interest rates in order to satisfy the inflation portion of its mandate even if that means economic growth may suffer.

This investment environment has been difficult so far this year as both equity and fixed-income markets have been

selling off at the same time, which is a rare phenomenon but a logical outcome given the unique set of circumstances that transpired. Prior to the sell-off, valuations for bonds and stocks were both situated at extremes, supported by indiscriminate central-bank asset purchases, the resulting rock-bottom interest rates and by low inflation. But as these tailwinds quickly turned to headwinds and with the path for short-term interest rates being much steeper than previously expected, valuations underwent a hasty reset. From its peak, the MSCI World declined nearly 20% and the U.S. 10-year yield surged briefly above 3.0% from 1.5% at the start of the year (exhibits 1 and 2). While financial markets have endured significant pain so far this year, the overvaluation that existed in both the stock and bond markets before the sell-off has now been greatly reduced.

Exhibit 1: MSCI World Index U.S. dollars



Note: MSCI World Index in U.S. dollars. As of May 31, 2022. Source: Bloomberg, RBC GAM

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



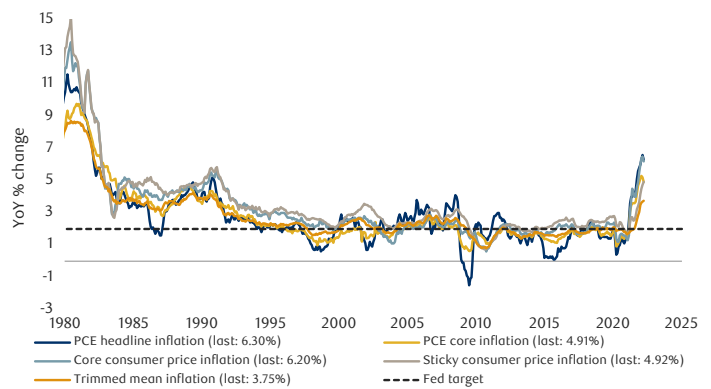
Note: As of June 1, 2022. Source : Bloomberg, RBC GAM

The intense market volatility during the past quarter afforded us opportunities to make several adjustments to our asset mix. We added two percentage points to our fixed-income allocation throughout the period as yields surged, resulting in a narrowing of our underweight position in bonds, although we remain slightly below our strategic neutral allocation. Our view is that central banks will continue raising short-term interest rates over our one-year forecast horizon but that long-term bond yields have likely priced in the extent of the rate hikes that are needed to temper inflation concerns. We expect that any further increase in yields from here may be limited and that at the current higher level of yields bonds offer better ballast against equities in a balanced portfolio in the event of a downturn. Our base case scenario sees stocks outperforming bonds over our one-year forecast horizon but we recognize that risks are elevated, that the range of potential outcomes is especially large and that further downside would accompany a fall into recession. We lowered our exposure to equities by 1.5 percentage points during the quarter but maintain a small overweight position. The equity-risk premium still exists but the risk/reward is less attractive than it had been at earlier points in the cycle. For a balanced global investor, we currently recommend an asset mix of 62.5 percent equities (strategic neutral position: 60 percent) and 36.0 percent fixed income (strategic neutral position: 38 percent), with the balance in cash.

Higher interest rates are coming, fast

Alarmed by the persistence of high inflation, the Fed has initiated rate hikes and appears willing to continue raising interest rates so long as labour markets remain on solid footing. The Fed has a dual mandate to ensure full employment *and* price stability. Right now, inflation is an acute problem, as it has risen to its highest levels since the 1980s across a variety of metrics and is well above the Fed’s 2.0% target (Exhibit 3). On the other hand, the labour market is in good shape, with the unemployment rate near its lowest level in several decades and wages rising at

Exhibit 3: U.S. inflation measures



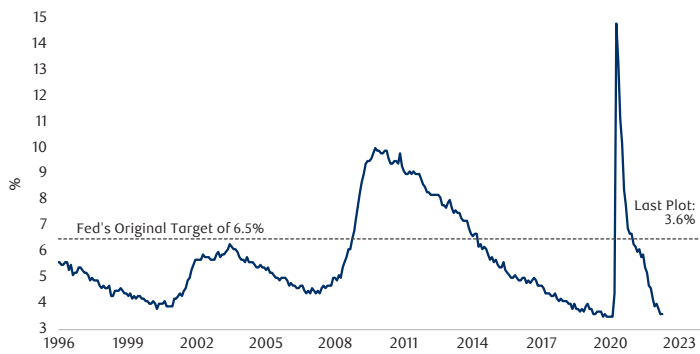
Note: As of April 30, 2022. Source: Bloomberg, RBC GAM

their fastest pace in 40 years (exhibits 4 and 5). The labour market is sufficiently robust to withstand some degree of rate hiking, so the Fed will likely use that to its advantage to raise rates enough to curb price pressures and dampen expectations.

The large gap between where interest rates are and where they likely should be means that central banks may have a lot of hiking to complete in a relatively short period. The Koenig Taylor Rule, which estimates an appropriate level for the fed funds rate based on the labour market, growth and

inflation currently suggests 5.1% is an appropriate level for the fed funds rate, far above the current rate of 1.0% (Exhibit 6). Central banks acknowledge that rates need to rise quickly and that more 50-basis-point hikes may be needed. Pricing in the futures market suggests investors expect the Fed to raise the fed funds rate to 2.80% one year from now. That would require at least two more 50-basis-point hikes followed by several hikes of 25 basis points (Exhibit 7). Our own forecast is in line with market pricing as we look for a 2.75% fed funds rate one year from now.

Exhibit 4: U.S. unemployment rate



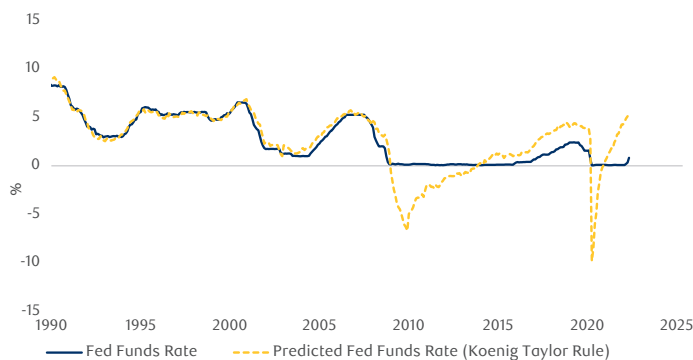
Note: As of Apr 2022. Source: Bloomberg, RBC GAM

Exhibit 5: U.S. average hourly earnings



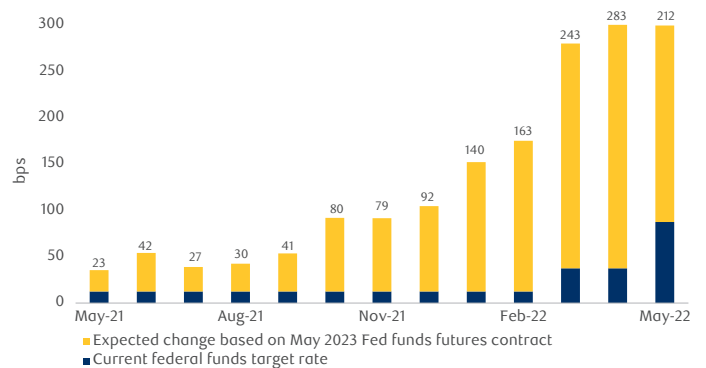
Note: As of Apr 2022. Source: Bureau of Labor Statistics, Haver Analytics, RBC GAM

Exhibit 6: Koenig Taylor rule and fed funds rate



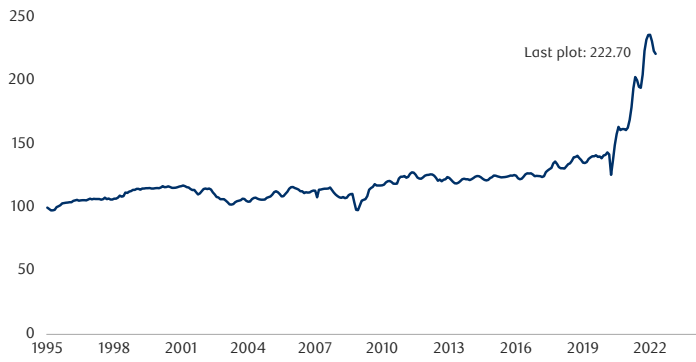
Note: As of Apr 2022. The Taylor Rule estimates the appropriate level for the fed funds rate by adjusting the 'neutral rate' to reflect the degree to which current expected growth and inflation lie above or below their long term norm. Source: Federal Reserve Bank of Dallas, RBC GAM

Exhibit 7: Fed funds rate and implied expectations 12-month futures contract



Note: As of May 31, 2022. Source: RBC GAM

Exhibit 8: Manheim Used Vehicle Value Index



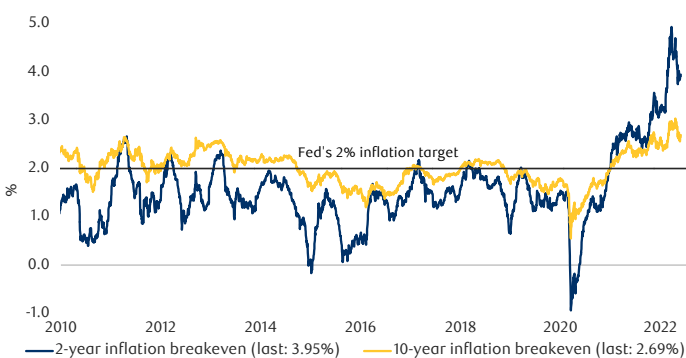
Note: As of May 31, 2022. Source: Bloomberg, RBC GAM

Exhibit 9: Bloomberg Commodity Index



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

Exhibit 10: U.S. Treasuries inflation breakevens



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

Inflation surge could already be peaking

In addition to slowing growth and tighter financial conditions, prices within specific problem categories are now rolling over and could suggest that inflation pressures may already be peaking. In particular, prices for used cars and commodities stalled since the spring after their unusually large increases over the past year (exhibits 8 and 9). Whether it is improvement in supply chains or simply that consumers are pulling back their spending amid high inflation, it appears prices may be reaching a plateau in certain segments. Importantly, inflation expectations, be it over a 2-year or 10-year horizon, also appear to be coming down after peaking in March/April (Exhibit 10). These charts are consistent with our own view that inflation will likely decline in the second half of this year and into 2023 though we continue to believe that even if inflation is peaking, that it will remain above normal over the medium term.



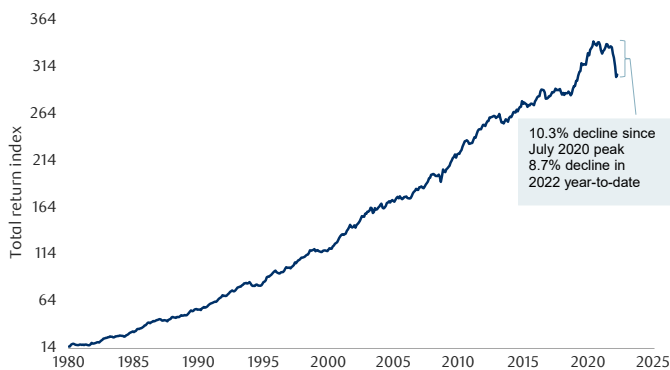
Historic sell-off in bonds reset yields to reasonable levels

The transition away from a period of extreme monetary easing to one that features interest-rate increases and above-average inflation has resulted in a rapid and significant re-rating in fixed-income assets which caused a sell-off of historic proportions. As the U.S. 10-year yield soared above 3.0% from 1.5% earlier in the year, U.S. universe bonds lost more than 10% for the largest drawdown since the early 1980s (exhibits 11 and 12). Although the bond sell-off has been intense so far this year, valuation risk has been significantly reduced and yields are now at much more reasonable levels, according to our models (page 44).

Our model for the U.S. 10-year yield suggests that once the near-term distortions related to inflation pass, there is little need for yields to rise much beyond current levels. Exhibit 13 plots the inputs to our bond model, which consists of an inflation premium and a real, or after-inflation, rate of interest. The model's inflation component is being pulled higher by the current spike in the CPI but is expected to fall back toward the 2% level targeted by central bankers within two to three years. As a result, the kink in the final model, which is due to this inflation spike, ultimately fades away over time. The model's other component, the real interest rate, remains too low and we continue to believe that savers

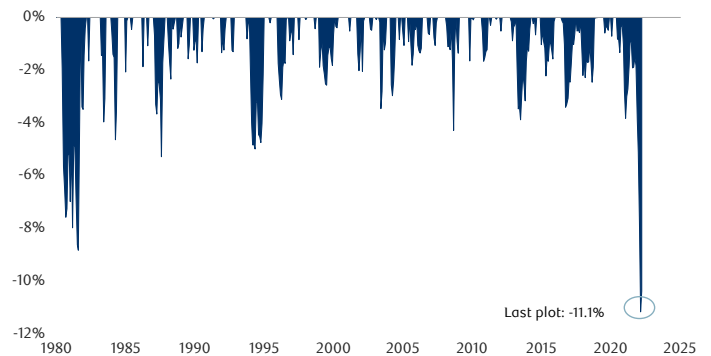
will eventually need to be rewarded for saving versus spending. Structural forces such as aging populations and slowing potential economic growth around the world should limit the rise in the real rate to about 0.5% to 1.0% over the next five years. That said, the net of these expectations for inflation and real interest rates is that our model suggests the U.S. 10-year yield should be 3.19% in five years' time, which is not far from where it is at the time of this writing. In previous editions of the *Global Investment Outlook* we mentioned our expectation that sovereign-bond yields would rise gradually over an extended period and this would lead to low or even negative returns for bonds perhaps for many years. While we were right on the direction of yields, the timing ended up being much more sudden. As a result, we think at least some of those losses have been front-loaded and our expectation for total returns from here is now much more constructive. Although yields could continue to rise if extremely high inflation persists, our base case that inflation ultimately moderates means that the bulk of the needed adjustment in yields has already occurred and any further increases will likely be limited. We forecast 2.75% for the 10-year Treasury yield 12 months from now, which would mean no further sustained capital losses for bond holders over the next year.

Exhibit 11: ICE BofA U.S. Broad Market Index Total return index



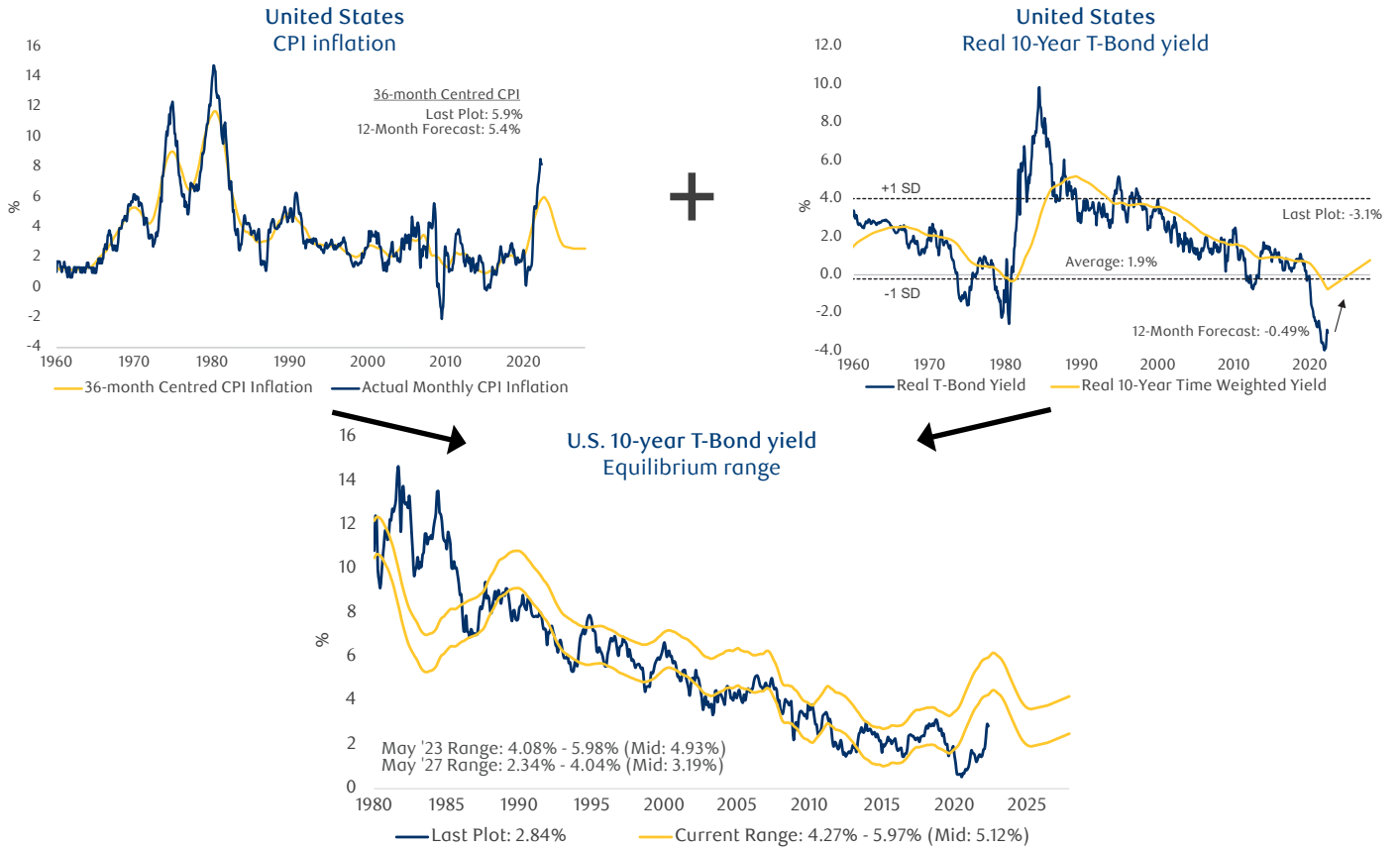
Note: As of May 30, 2022. Source: Bloomberg, RBC GAM

Exhibit 12: ICE BofA U.S. Broad Market Index Drawdowns (total return index)



Note: As of May 30, 2022. Chart indicates declines from new highs, based on monthly closes in the total return index of the ICE BofA U.S. Broad Market Index. Source: Bloomberg, RBC GAM

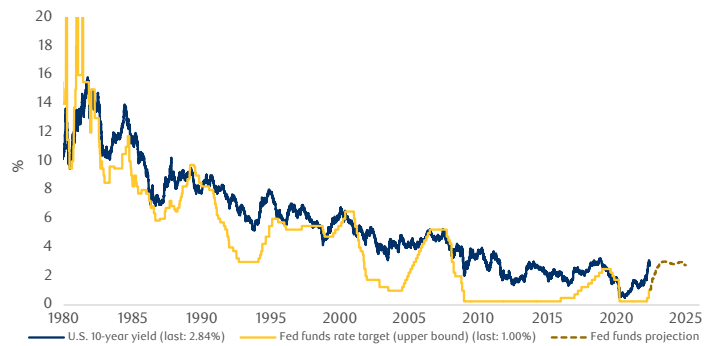
Exhibit 13: U.S. 10-year bond yield Fair-value estimate composition



Note: As of May 31, 2022. Source: RBC GAM, RBC CM

Another reason we think that further increase in yields may be limited is that, in past tightening cycles, the 10-year yield has peaked around the same level as the fed funds rate. Exhibit 14 plots the 10-year yield alongside the fed funds rate over the past four decades. Notice that both lines on the chart tend to top out around similar levels in every tightening cycle. The dotted line toward the end of the chart indicates the expected fed funds rate based on current pricing in the futures market. Also notice that investors anticipate the fed funds rate to peak around 3% this cycle which, based on the history captured in this chart, would be consistent with the U.S. 10-year yield peaking around 3% as well. For this reason we have been comfortable adding to sovereign fixed-income positions with yields on 10-year Treasuries approaching the 3% mark.

Exhibit 14: U.S. 10-year yield and federal funds rate



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

Stocks extend sell-off, valuation risk moderates

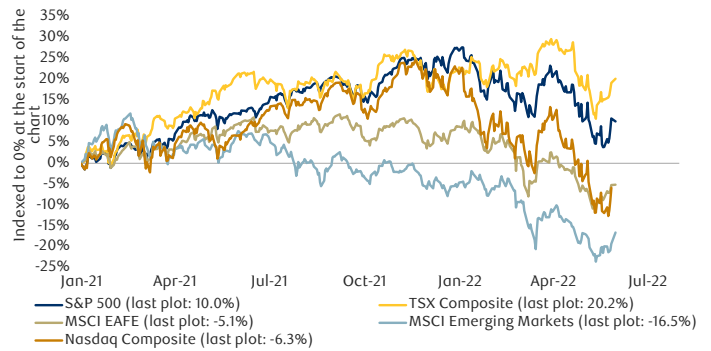
Fear of inflation, aggressive monetary tightening and the increased risk of recession sent stocks lower in the past quarter and several major markets have fallen into bear markets. The NASDAQ Composite Index, heavily concentrated in technology stocks, fell as much as 36% from its peak and the S&P 500 Index reached 20% below its peak on an intra-day basis (Exhibit 15). Emerging markets also were down nearly 30%. The outperformer has been Canadian equities, helped by heavy weightings in energy and resource companies that are benefitting from the high inflation environment. As a result, our composite of global equity valuations has corrected a significant degree of its prior overvaluation (Exhibit 16). This GDP-weighted composite suggests valuations are 10% above fair value, down from 35% at the end of 2021. As a whole, equities are now much more reasonably valued, though they are not yet cheap, at least not in aggregate. We still observe a significant discrepancy between regions, where the U.S. remains toward the more expensive end of the spectrum while equity markets outside North America are more fairly valued or even becoming particularly attractive in areas like emerging markets (page 45).

Higher inflation and rising rates weigh on lofty valuations

Part of the reason valuations have declined is because higher inflation and bond yields are naturally consistent with lower price-to-earnings ratios (P/Es). Our models incorporate the historical relationships between valuations and key variables in markets and the economy into the calculation of an appropriate (or equilibrium) P/E. Exhibits 17 and 18 plot the past relationships between inflation and P/E (using standard statistic techniques), as well as the U.S. 10-year yield and P/E. These two variables account for 57% of the overall model so they are fairly important to the final result. Notice that both relationships slope downward to the right, indicating that increasing inflation and bond yields weigh on the equilibrium P/E embedded in our models.

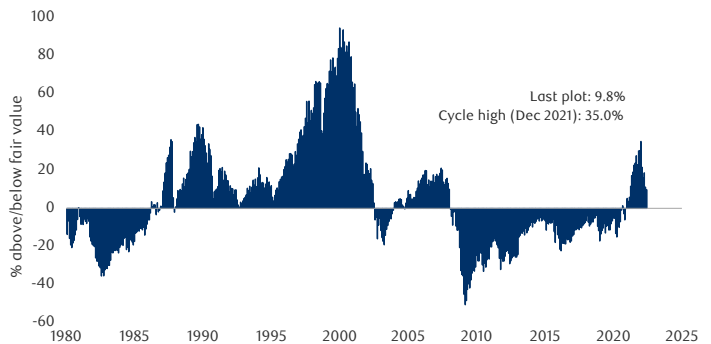
Interestingly, the modelled impact from the change in inflation and yields has actually been fairly minimal but it still helps explain what has happened to valuations over the past year and what we could expect going forward. Not only have valuations moved from extremes toward our modelled equilibrium level, but our modelled equilibrium level has

Exhibit 15: Major equity market indices
Cumulative price returns indices in USD



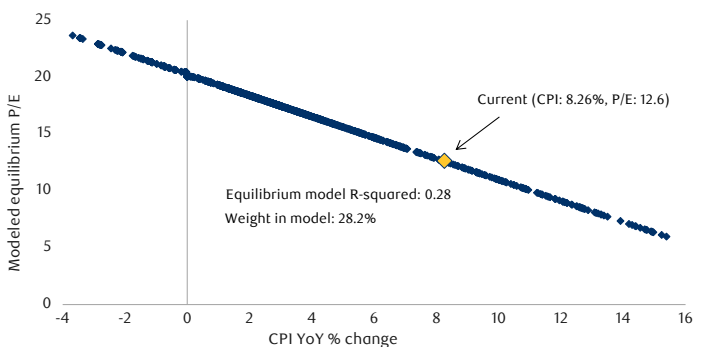
Note: As of May 31, 2022. Price returns computed in USD. Source: Bloomberg, RBC GAM

Exhibit 16: Global stock market composite
Equity market indexes relative to equilibrium



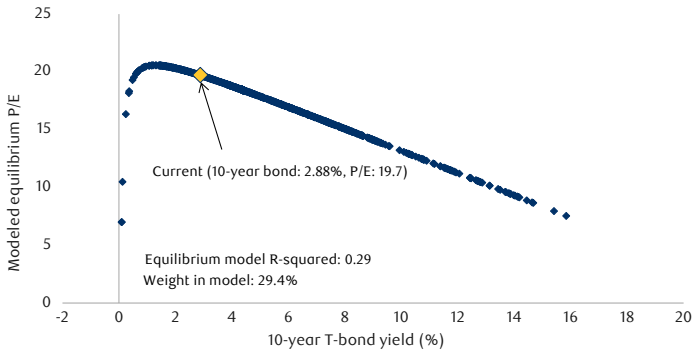
Note: As of May 30, 2022. Source: RBC GAM

Exhibit 17: S&P 500 equilibrium model
P/E factor as a function of CPI



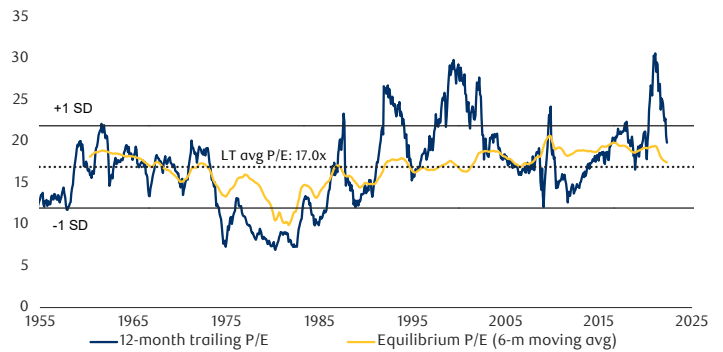
Note: As of May 31, 2022. Source: RBC GAM

Exhibit 18: S&P 500 equilibrium model P/E factor as a function of 10-year bond yield



Note: As of May 31, 2022. Source: RBC GAM

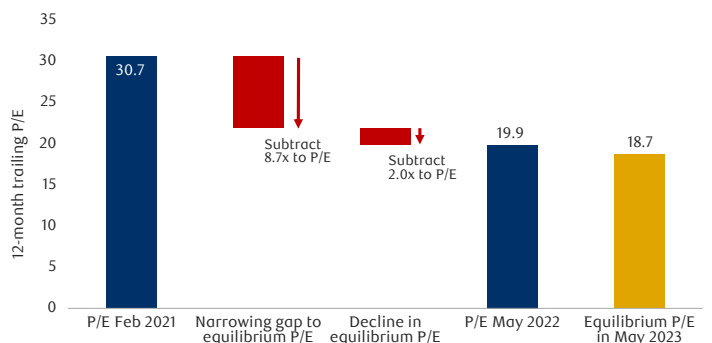
Exhibit 19: S&P 500 Index 12-month trailing P/E and modelled equilibrium



Note: As of May 31, 2022. Source: RBC GAM

also shifted lower during the year so far (Exhibit 19). The S&P 500 12-month trailing P/E peaked at 30.7x in February 2021 and declined to 19.9x by the end of May 2022. Of that 10.7x reduction, 8.7x came from the P/E falling back toward equilibrium and an additional 2.0x was shaved from the equilibrium P/E as inflation and yields – key components of our P/E model – surged (Exhibit 20). Looking ahead one year and based on our expectations for inflation and interest rates, our model suggests the equilibrium P/E should fall by an additional 1.2x to 18.7x. With the bulk of the overvaluation in stocks relative to equilibrium having been corrected, any further decline in valuations from here might be rather mild unless we continue to see meaningful upward pressure on interest rates and inflation.

Exhibit 20: S&P 500 Index Change in P/E since February 2021



Note: As of May 24, 2022. Source: RBC GAM



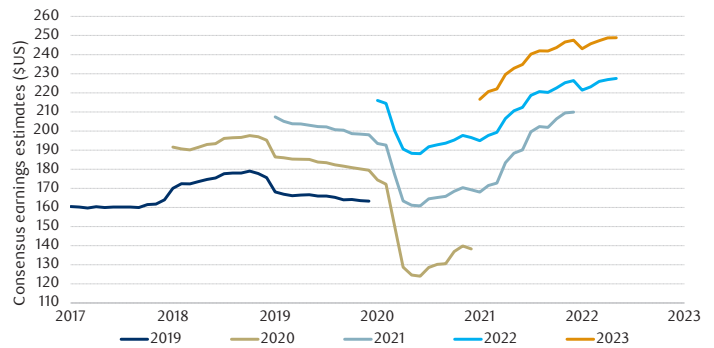
Earnings expectations remain optimistic, vulnerable to downgrades

Corporate earnings form the other half of our fair-value equation for stocks. Although many investors are worried about a possible recession, earnings estimates continue to suggest a favourable profit outlook. Exhibits 21 and 22 plot the month-by-month progression of consensus earnings estimates for the S&P 500 and TSX Composite indices. Although estimates are no longer rising in the U.S. at a pace anywhere near that of the intense recovery period of the past 18 months, analysts continue to look for low double-digit gains over the next year. In Canada, earnings estimates for the TSX Composite have been revised meaningfully higher, but forecasts still look for over 20% gains for the year ahead as higher prices for oil and other commodities boost the profit outlook for energy and materials companies in particular. We recognize that these projections are fairly optimistic and, should a recession or significant slowdown take place, these estimates would likely be severely downgraded and could lead to another leg lower in stocks.

Earnings could be vulnerable to a meaningful check back as they are currently running well above their long-term trend. If a significant slowdown or recession materialized, earnings could have a long way to drop (Exhibit 23). We looked at how earnings behaved in each of the past 11 recessions since 1953 and listed the results in Exhibit 24. Earnings declines ranged from 11% to 50% and on average profits fell 24%. That means that from the current earnings of \$208 for the S&P 500, an average recessionary experience could pull earnings down to US\$158, bringing them slightly below their long-term trendline. While a recession is not our baseline forecast, it is worth acknowledging that if it did occur, the current consensus for earnings is not at all reflective of where profits could actually end up in a negative scenario.

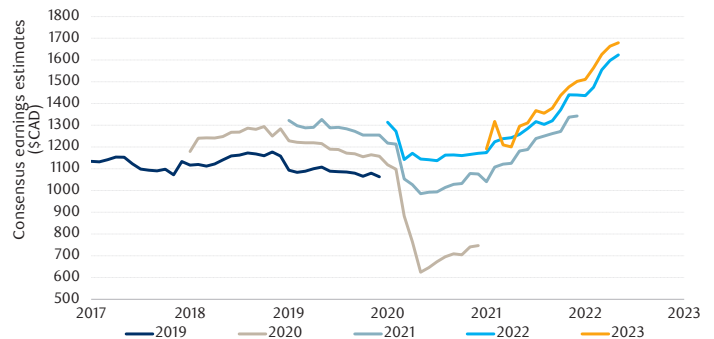
“Normally we would expect value to outperform growth when the economy is accelerating but what has happened so far this year is that the re-rating in valuations has dominated any view on the economy.”

Exhibit 21: S&P 500 Index
Consensus earnings estimates



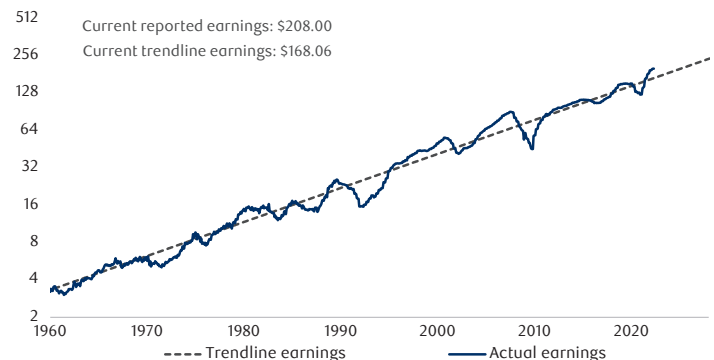
Note: As of May 31, 2022. Source: Thomson Reuters, Bloomberg, RBC GAM

Exhibit 22: S&P/TSX Composite Index
Consensus earnings estimates



Note: As of May 31, 2022. Source: Thomson Reuters, Bloomberg, RBC GAM

Exhibit 23: S&P 500 earnings comparison



Note: As of May 31, 2022. Source: RBC GAM

Exhibit 24: Earnings estimates & alternative scenarios for valuations and outcomes for the S&P 500

Recession start date	Earnings peak date	Earnings trough date	Earnings decline duration (months)	Earnings peak (\$)	Earnings trough (\$)	EPS change peak to trough
July 1953	Dec-50	Dec-53	36	2.8	2.5	-11.6%
August 1957	Feb-56	Mar-59	37	3.6	2.8	-23.4%
April 1960	Jun-60	Jun-61	12	3.6	3.0	-14.6%
December 1969	Apr-69	Jun-70	14	6.1	5.1	-16.2%
November 1973	Jan-75	Feb-76	12	9.6	7.6	-21.6%
January 1980	Jul-80	Aug-81	13	15.6	13.7	-11.9%
July 1981	Aug-82	Jul-83	11	16.3	12.1	-25.8%
July 1990	Aug-89	May-92	33	25.7	15.5	-39.7%
March 2001	Sep-00	Mar-02	18	55.8	41.3	-25.9%
December 2007	Aug-07	Oct-09	26	89.8	45.1	-49.8%
February 2020	Jan-20	Feb-21	12	152.5	122.8	-19.5%
Aggregate statistics						
Average			20	34.7	24.7	-23.6%
Median			14	15.6	12.1	-21.6%
Max			37	152.5	122.8	-11.6%
Min			11	2.8	2.5	-49.8%

Note: As of June 1, 2022. Source: Bloomberg, RBC GAM

Potential scenarios for the S&P 500

The range of potential outcomes for stocks spans an unusually large range and a scenario analysis is, in our view, a good way to establish reasonable guideposts for what could be possible. Exhibit 25 plots several different scenarios for the S&P 500 based on combinations of earnings and price-to-earnings ratios. Our model suggests

a P/E of 18.7x is appropriate for the S&P 500 one year from now given our forecast levels for interest rates, inflation and corporate profitability. At that P/E, scenarios for the S&P 500 range from 2950 in the recessionary scenario to 4400 in the most favourable outcome. On a total-return basis, these returns would range from a 27% loss in the worst case to an 8% positive total return in the best case. It's possible,

Exhibit 25: Earnings estimates & alternative scenarios for valuations and outcomes for the S&P 500
Hypothetical projections for May 31, 2023

	P/E	Consensus EPS	Flat 0% EPS growth	Slowdown 10% EPS decline	Recession 24% EPS decline*
		\$235.6	\$208.0	\$187.2	\$158.1
+1 Standard Deviation	23.4	5513.5	4867.2	4380.5	3699.1
+0.5 Standard Deviation	21.1	4959.8	4378.4	3940.6	3327.6
Equilibrium	18.7	4406.1	3889.6	3500.6	2956.1
-0.5 Standard Deviation	16.4	3852.4	3400.8	3060.7	2584.6
-1 Standard Deviation	14.0	3298.7	2912.0	2620.8	2213.1

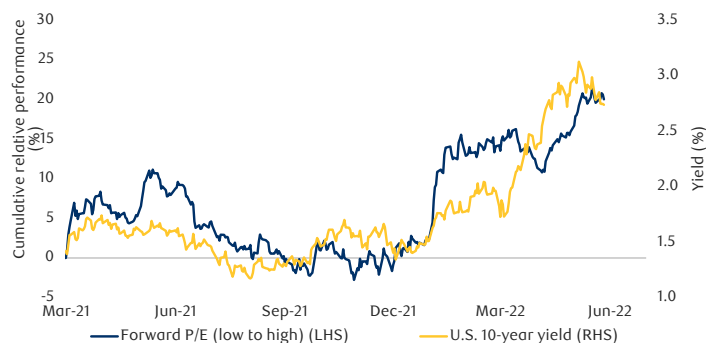
Note: *Earnings have fallen an average of 24% in past recessions since 1950. Source: Bloomberg, Thomson Reuters, RBC GAM

however, that in an environment where inflation subsides, yields prove to have peaked, and investor confidence is restored we could see the P/E trade above equilibrium. If it traded at just 0.5 standard deviation above equilibrium, which it has for much of the last five years, then the S&P 500 could trade as high as 4950 one year from now under the most favourable scenario, and this would represent a 12-month total return of 21% from the close at the end of May 31, 2022. These scenarios suggest the risk is somewhat tilted to the downside should a recessionary scenario play out but that investors may also want to consider the upside potential in the event that current growth and inflation concerns were to subside.

Value leadership strengthened alongside rising yields

One of the key themes in the past six months has been the significant reset in valuations for stocks and bonds and particularly for expensive assets which tend to be more vulnerable to rising rates. Exhibits 26 and 27 plot the performance of low P/E stocks relative to high P/E stocks in the S&P 500 as well as U.S. value stocks relative to U.S. growth stocks. The U.S. 10-year yield is overlaid on both charts. Notice that, in tandem with rising yields, cheaper stocks outperformed expensive stocks and value stocks outperformed growth stocks, both by meaningful amounts of roughly 20% each since December 2021. It's worth pointing out that the S&P 500 Value Index is down a mere 3.5% year-to-date while the S&P 500 Growth Index is down 22% over the same period. Normally we would expect value to outperform growth when the economy is accelerating but so far this year the re-rating in valuations resulting from surging inflation and a reset in interest rates has dominated any view on the economy. That said, given how much growth stocks have suffered relative to value so far this year, should inflation fears subside and yields moderate it would likely be supportive of the equity market as a whole, but with leadership likely shifting back to growth stocks.

Exhibit 26: Factor performance
S&P 500 sector-neutral low P/E to high P/Es



Note: as of May 27, 2022. Factor performance plots the cumulative performance of the lowest P/E stocks (5th quintile) relative to the highest P/E stocks (1st quintile) within the S&P 500, on a sector-neutral basis. Source: Piper Sandler, Bloomberg, RBC GAM

Exhibit 27: Value to growth relative performance
S&P 500 Value Index / S&P 500 Growth Index



Note: As of May 27, 2022. Source: Bloomberg, RBC GAM

“In an environment of higher interest rates and firming commodity prices, indices outside the U.S. with more exposure to energy, materials and financials could be well-positioned to benefit.”

Non-U.S. equity markets firm up relative to the S&P 500

After a long period of underperformance, equity markets outside of the U.S. have been holding up against the S&P 500 and could be setting up for a period of sustained relative gains. With smaller weightings in high-priced technology stocks, the TSX Composite and MSCI Europe have outperformed the S&P 500 in the past quarter and this comes after more than a decade of losing ground on a relative basis (exhibits 28 and 29). In an environment of

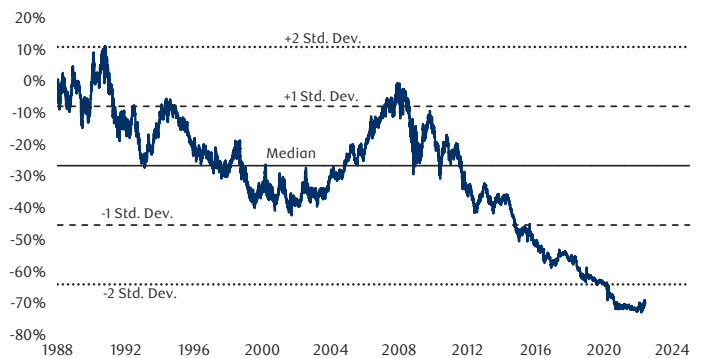
higher interest rates and firming commodity prices, indices outside the U.S. with more exposure to energy, materials and financials could be well-positioned to benefit. While investors may have grown used to the idea that U.S. equities generate superior returns over the long term, these charts show that there have been extended periods in the past where the U.S. equities have lagged other markets. A shift in leadership from U.S. large-cap stocks to international equities, if sustained, could be a positive signal that the bull market in global equities could resume with new leaders.

Exhibit 28: TSX vs. S&P 500 in CAD
Relative performance



Note: As of Jun 1, 2022. Source: RBC GAM

Exhibit 29: MSCI Europe vs. MSCI U.S. in USD
Relative performance



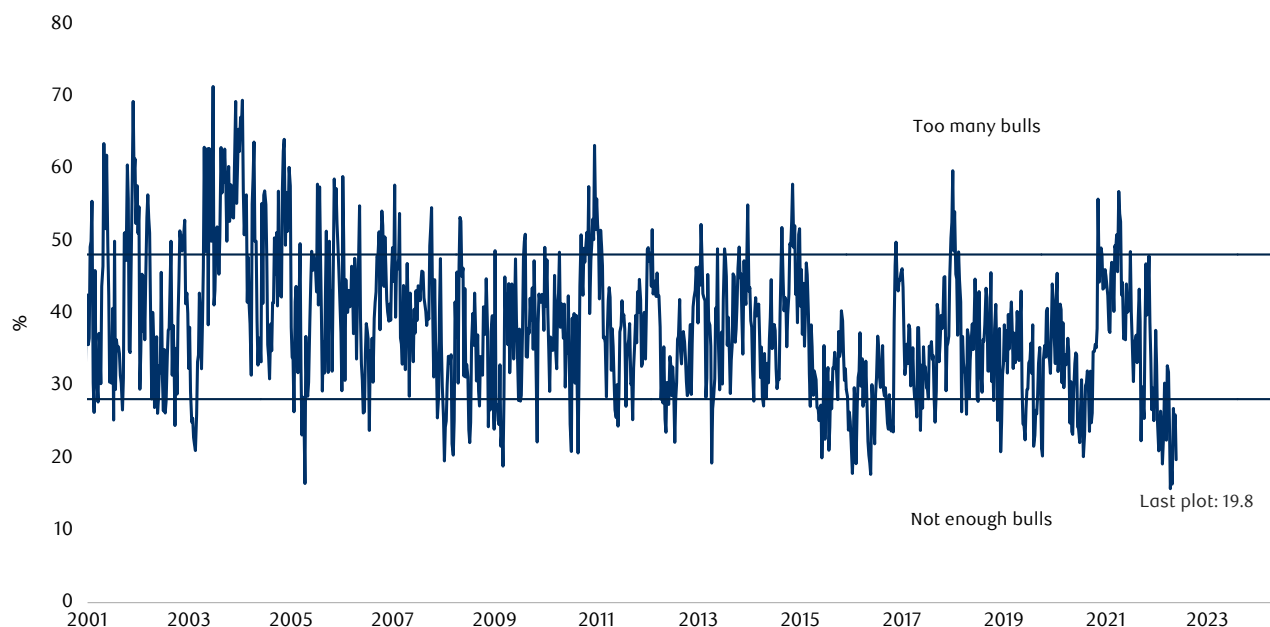
Note: As of May 30, 2022. Source: RIMES, RBC GAM

Extreme investor pessimism could provide fuel for a rally

Should the outlook show signs of improvement, stocks could be ripe for a bounce given that investors have become extremely pessimistic. The American Association of Individual Investors (AAII) polls their members on a weekly basis to see what proportion of them expect stocks to be higher six months from now. The percentage of respondents who were bullish on stocks recently fell to a level not seen since the early 1990s (Exhibit 30). Typically, when investors are extremely pessimistic, returns tend to be superior on a go-forward basis. We've run performance statistics on the

S&P 500 based on this sentiment measure's starting point to compare the differences between starting from points of extreme pessimism versus points of extreme optimism. From levels of extreme pessimism (i.e. percentage of bulls below 28%), the S&P 500 generated gains averaging 15.1% over subsequent 1-year periods. This compares to average gains of only 7.6% over 1-year periods starting from points of extreme optimism (i.e. percentage of bulls over 48%). Although these sentiment indicators rarely signal exact tops or bottoms, these stats suggest investors who go against the herd, when sentiment reaches extremes, tend to be rewarded more often than not.

Exhibit 30: AAI sentiment survey Percent bullish



Note: As of May 27, 2022. Source: Bloomberg, American Association of Individual Investors (AAII), RBC GAM

S&P 500 median forward returns based on AAI sentiment

	Lower bound	Upper bound	Observations	1-month	3-month	6-month	1-year	2-year	3-year
Extremely low percent bull		28.01	70	1.84%	3.16%	7.64%	15.15%	12.83%	12.42%
Normal percent bull	28.01	47.93	278	1.09%	2.58%	4.98%	10.57%	8.78%	8.72%
Extremely high percent bull	47.93		71	0.71%	2.54%	3.72%	7.57%	8.18%	8.45%

Note: based on monthly data since July 1987. Periods greater than 1 year are annualized. As of May 31, 2022. Source: Bloomberg, RBC GAM

Asset mix – narrowed underweight in fixed income and trimmed overweight in stocks

The global economy is moderating amid a variety of headwinds and the outlook is highly uncertain. The combination of aggressive monetary tightening, surging commodity prices and already slowing economic growth presents a challenging backdrop for the economy. In this environment, the risk of recession or a meaningful slowdown is clearly elevated.

The significant adjustment in the expected course for Fed policy since the start of the year has pushed yields significantly higher to a point where they have become meaningfully more appealing to investors. For many quarters, we had forecast negative returns for bonds, but the recent surge in yields has greatly alleviated valuation risk and our expected returns on sovereign bonds are now positive for the year ahead. Interestingly, a fairly accurate way to forecast returns on sovereign bonds has been to

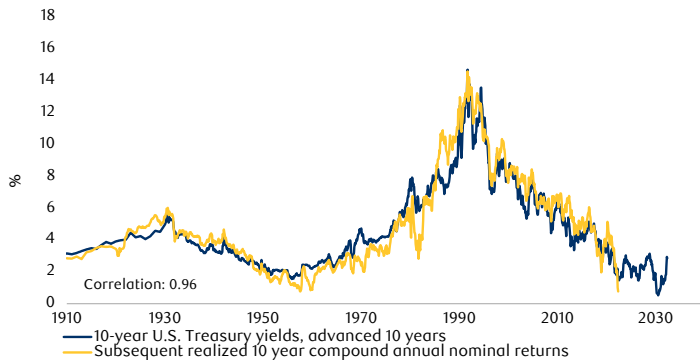
simply use the current yield to maturity. Exhibit 31 plots the 10-year yield alongside the subsequent realized 10-year compound returns. Notice that the two lines track closely. This relationship suggests the current yield of 2.84% is a reasonable expectation for the annualized return over the next decade, representing a marked improvement over the 1.50% indicated at the start of the year.

The recent sell-off in stocks has also boosted their return potential over the longer term. Exhibit 32 plots Shiller’s Cyclically Adjusted P/E (CAPE) along subsequent realized returns for the S&P 500 (which are reversed on the chart). A fairly strong link appears to exist as stocks have delivered stronger forward returns when starting from cheaper levels and weaker returns when starting from more expensive levels. Based on this relationship, over the year so far return potential has increased to 6% from 3%, still a relatively modest return but certainly better than it was. While the return potential has improved over the longer term, we also recognize that near-term challenges exist given uncertainty around the outlook for corporate profits and potential for recession. In that scenario, stocks would probably see another leg lower before resuming their long-term upward trajectory. Recession is not our base case, but we do believe

the current environment is sufficiently fluid to elevate the risk of our negative scenario unfolding. Exposure to risk assets have been adjusted to reflect this.

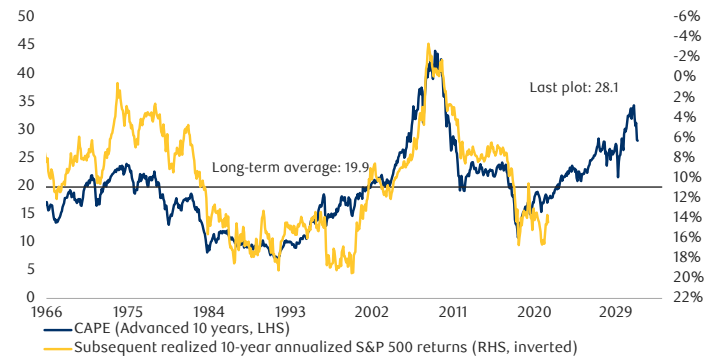
Taking into account the risks and opportunities and balancing the long-term outlook against near-term challenges, we have taken steps to de-risk the portfolios during the past quarter. We added two percentage points to our fixed-income allocation as yields rose, which boosted return potential for bonds while also providing more cushion to a balanced portfolio in the event of a downturn in risk assets. We also reduced our equity allocation by 1.5 percentage points, recognizing that the risk/reward has diminished in an environment where corporate profits could be vulnerable to a slowdown. This leaves our recommended asset mix with a slight overweight in stocks and slightly underweight in bonds, but our positioning is much closer to neutral than it has been at earlier points in the cycle, reflecting the higher degree of uncertainty in the outlook and wider range of potential outcomes than usual. For a balanced global investor, we currently recommend an asset mix of 62.5 percent equities (strategic neutral position: 60 percent) and 36.0 percent fixed income (strategic neutral position: 38 percent), with the balance in cash.

Exhibit 31: U.S. 10-year Treasury note and returns



Note: As of June 1, 2022. Source: Deutsche Bank, Haver Analytics, RBC CM, RBC GAM

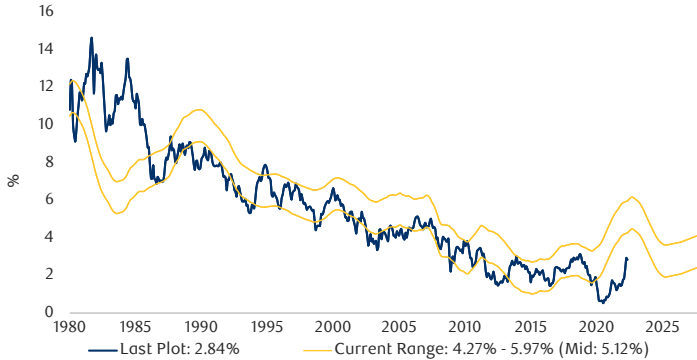
**Exhibit 32: Shiller’s CAPE
Real S&P 500 Index / 10-year average of real EPS**



Note: As of May 27, 2022. Source: Macrobond, Bloomberg, RBC GAM

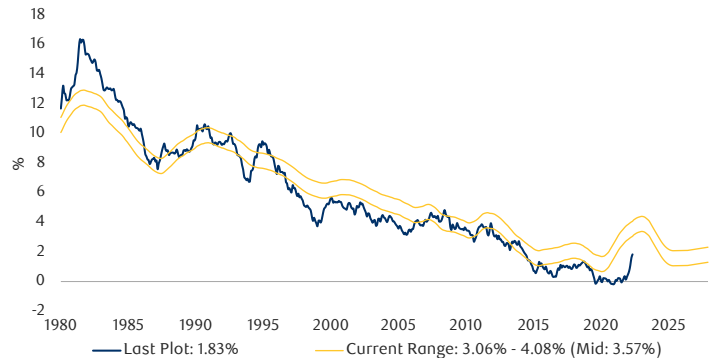
Global fixed income markets

U.S. 10-Year T-Bond Yield
Equilibrium range



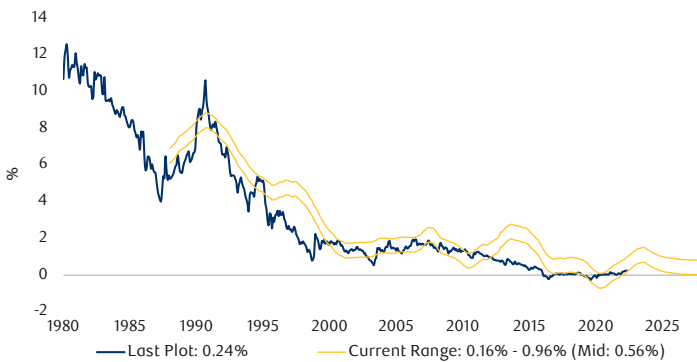
Note: May 31, 2022. Source: RBC GAM

Eurozone 10-Year Bond Yield
Equilibrium range



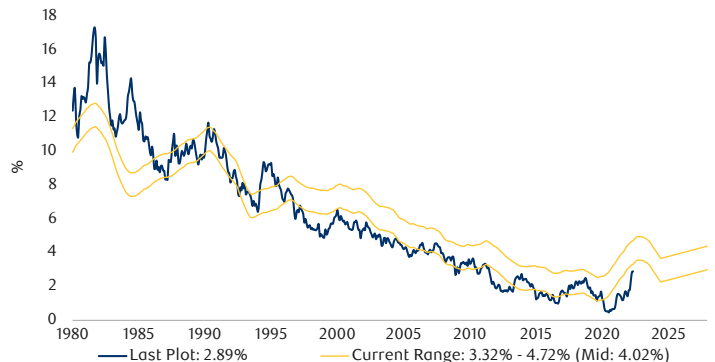
Note: May 31, 2022. Source: RBC GAM

Japan 10-Year Bond Yield
Equilibrium range



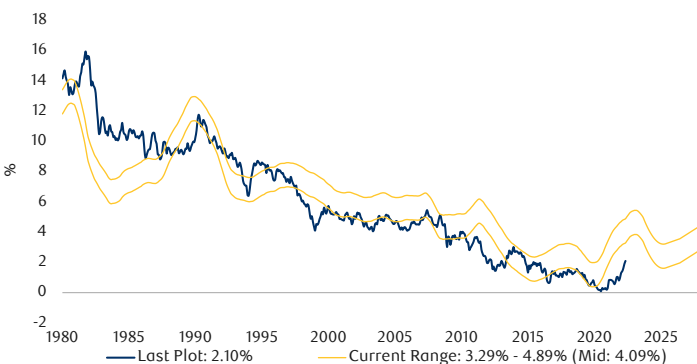
Note: May 31, 2022. Source: RBC GAM

Canada 10-Year Bond Yield
Equilibrium range



Note: May 31, 2022. Source: RBC GAM

U.K. 10-Year Gilt
Equilibrium range

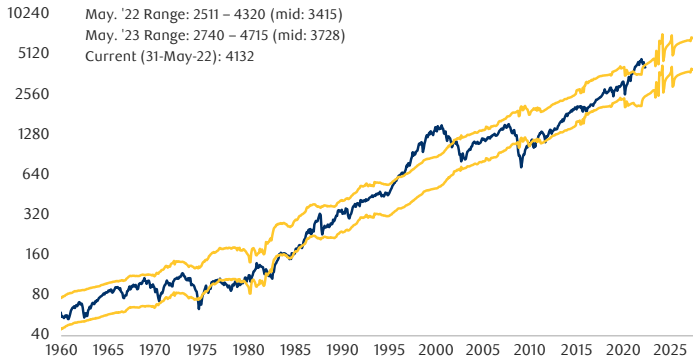


Note: May 31, 2022. Source: RBC GAM

“Although the bond sell-off has been intense so far this year, valuation risk has been significantly reduced and yields are now at much more reasonable levels according to our models.”

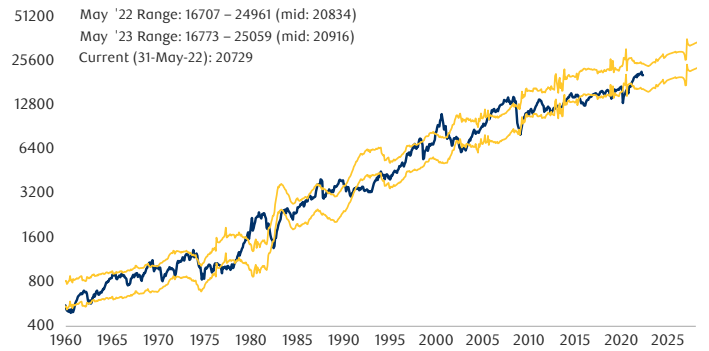
Global equity markets

S&P 500 Equilibrium
Normalized earnings and valuations



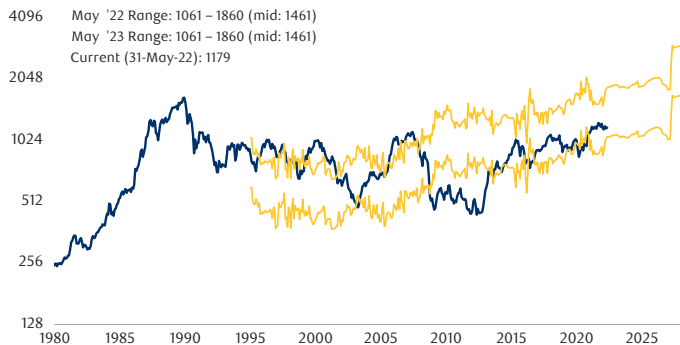
Source: RBC GAM

S&P/TSX Composite Equilibrium
Normalized earnings and valuations



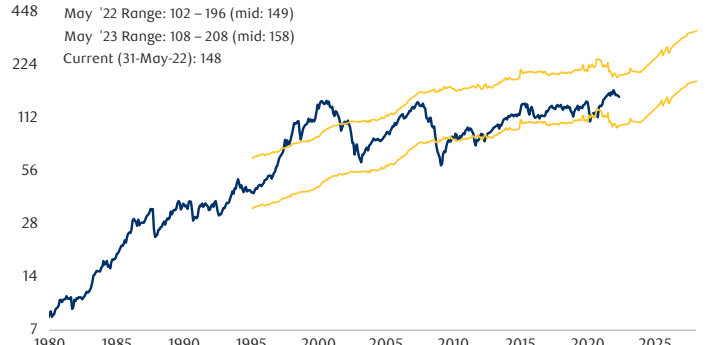
Source: RBC GAM

MSCI Japan Index
Normalized earnings and valuations



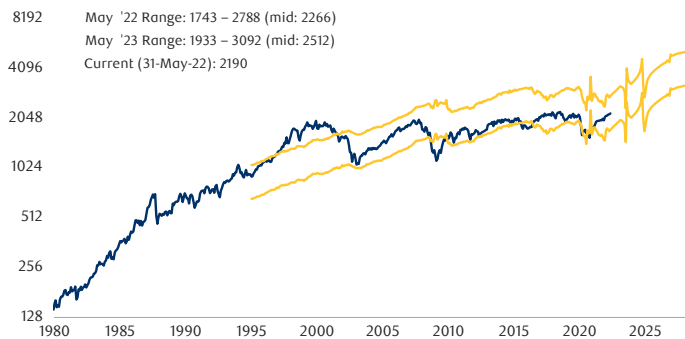
Source: RBC GAM

MSCI Europe Index
Normalized earnings and valuations



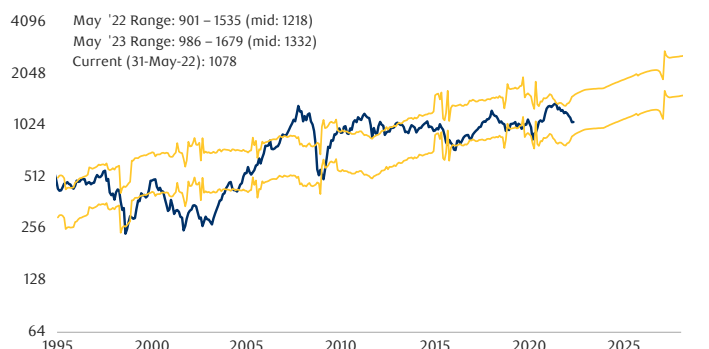
Source: RBC GAM

MSCI U.K. Index
Normalized earnings and valuations



Source: RBC GAM

MSCI Emerging Markets Index
Normalized earnings and valuations



Source: RBC GAM

Note: The fair value estimates are for illustrative purposes only. Corrections are always a possibility and valuations will not limit the risk of damage from systemic shocks. It is not possible to invest directly in an unmanaged index.

This page intentionally left blank.



Global fixed income markets



Soo Boo Cheah, MBA, CFA
Senior Portfolio Manager
RBC Global Asset
Management (UK) Limited



Suzanne Gaynor
V.P. & Senior Portfolio Manager
RBC Global Asset
Management Inc.



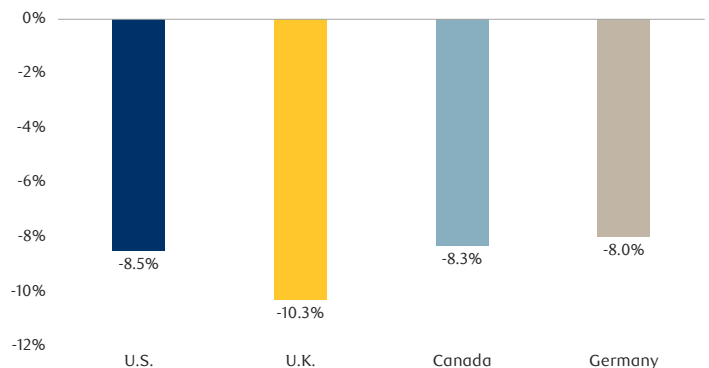
Taylor Self, MBA
Associate Portfolio Manager,
RBC Global Asset
Management Inc.

Government bonds posted their worst start to the year since the early 1980s, with major markets declining by at least 8% (Exhibit 1). Worse still, fixed income provided none of the expected ballast to balanced portfolios - prices for both equities and bonds fell. Bond yields rose sharply as inflation surged to its highest level in 40 years and the market priced in aggressive interest-rate hikes to curb price rises.

In this environment, the most important question for investors is whether central banks will tighten policy enough over the next year to stamp out excess inflationary pressures before they become entrenched. Our view is that policymakers will be successful, but at the expense of economic activity and substantial risk of a recession. A cooling economy and slower price rises mean that we are forecasting government bond yields to be largely unchanged 12 months from now, with a forecast that the 10-year U.S. Treasury bond will yield 2.75% sometime in the middle of next year.

Over the next several months, however, rampant price pressures will be the key focus for bondholders, given that leading central banks have committed to tightening policy aggressively. While bond yields have risen significantly since late last year, they remain low relative to history.

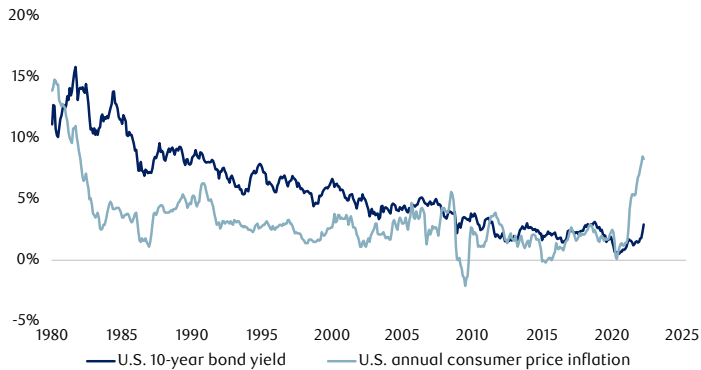
Exhibit 1: Government-bond markets have posted particularly poor returns



Note: Return period December 31, 2021 to April 29, 2022. Source: Bloomberg Fixed Income Indices

Bond yields appear particularly paltry compared with the last time inflation was so problematic. In 1981, the U.S. 10-year government bond yield rose to nearly 16% alongside consumer-price inflation that exceeded 15% (Exhibit 2). We don't think bond yields are at risk of rising to such levels over the next year thanks to the inflation-fighting credibility that central banks have built up since then, but upward pressure on bond yields will remain significant.

Exhibit 2: U.S. bond yields and inflation

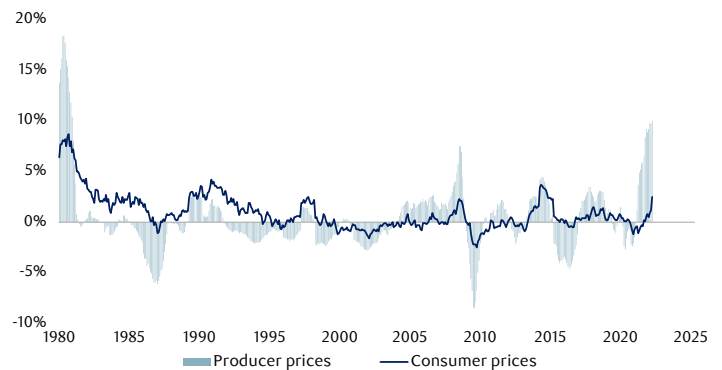


Note: As of May 26, 2022. Source: Bloomberg, U.S. Bureau of Labor Statistics

Inflation has accelerated and spread beyond areas of the economy most affected by supply-chain disruptions. Moreover, inflation expectations have risen markedly and workers are now starting to demand larger pay increases to offset the rising cost of living. A shortage of workers is another factor pushing up wages. In the U.S. and the U.K., businesses have more open job positions than there are people looking for work, suggesting that workers will continue to hold the upper hand in salary negotiations. As long as labour markets remain so competitive, central banks will likely seek to deliver substantially tighter policy. Investors expect the U.S. Federal Reserve (Fed) to hike its benchmark interest rate by 0.50% at the next three meetings in June, July and September, and the Bank of Canada (BOC) is likely to be just as aggressive.

Even Europe and Japan, which had managed to avoid damaging inflation, now face surging price pressures that have forced the hands of central banks that had stood pat on interest rates for at least a decade. Investors are betting that the European Central Bank (ECB) will soon raise interest rates for the first time since 2010. The Bank of Japan (BOJ)'s commitment to extra-loose policy is also being questioned by investors. Japanese inflation, at just above 2%, (Exhibit 3) is much lower than its developed peers but still at the highest level in several years, and leading indicators suggest even higher inflation is on the horizon. Actions by the ECB and BOJ are important because Japanese and euro-area

Exhibit 3: Japanese producer prices suggest more inflation



Note: As of April 2022. Source: Bloomberg, U.S. Bureau of Labor Statistics

government bonds together account for just shy of 50% of the global government-bond market, an even larger share than the U.S. A shift to more hawkish policy stances by the ECB or BOJ, or both, will only add to the pressures pushing up yields on government bonds around the globe.

In addition to rate hikes, shrinking central-bank balance sheets could add to the upward pressure on government-bond yields over the coming year. The Fed has said it will begin reducing the size of its balance sheet in June, with the BOC and Bank of England (BOE) following suit. We don't expect the ECB to pare its balance sheet in the next year, but it has said it will significantly curtail asset purchases as it begins to hike rates.

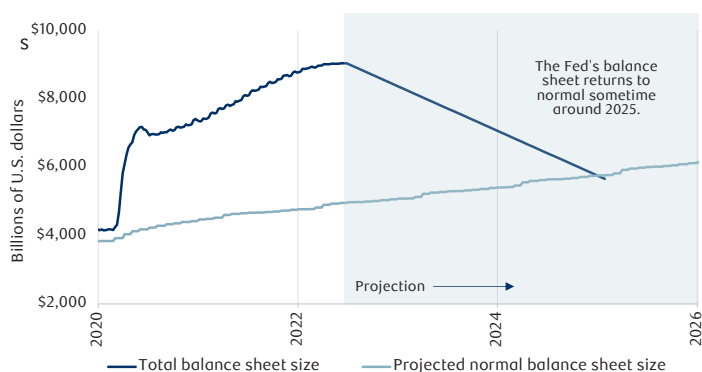
Why should shrinking balance sheets matter? For years, substantial and persistent purchases of government bonds by central banks have helped push down global bond yields. A rough rule of thumb indicates that Fed bond purchases equal to 1% of GDP lower the yield on the 10-year bond by roughly 0.05%. Since March 2020, the Fed has purchased bonds equal to 14% of U.S. GDP. In other words, absent the Fed's bond purchases, 10-year bond yields might be 0.70% higher than they are today. So bondholders who have benefited from central-bank bond purchases must now consider what will happen when the footprint of these participants shrinks. There is a strong possibility that the retreat of central banks poses a multi-year headwind for

bond prices, as the unwinding of bloated balance sheets will take several years if the process is completed (Exhibit 4).

There is some good news that comes with falling bond prices: the long-term outlook for fixed-income returns is as good as it has been since the onset of the pandemic. Bond returns have been particularly poor due to a retreat from exceptionally low levels of expected policy rates and inflation. Long-run expectations for policy rates are now much higher and consistent with interest rates that we believe should prevail in normal conditions. Inflation expectations have also risen sharply, but are consistent with the 2%-or-so inflation period that prevailed from the late 1990s until 2015 (Exhibit 5). The normalization of long-run expectations for inflation and policy rates, combined with a Fed that is on track to hike rates aggressively over the next year, have pulled U.S. 10-year bond yields into the upper end of our fair-value range of 1.5% to 3.5%. For yields to continue rising at the breakneck pace of the past year, there would need to be a much larger surge in inflation coupled with an ineffective policy response.

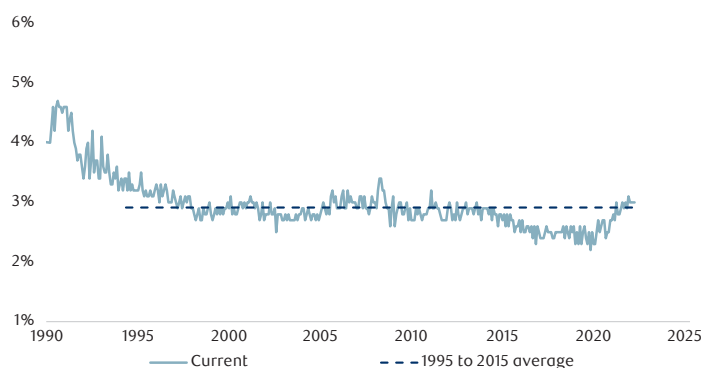
This is not our outlook. We expect tighter monetary policy to slow global economic activity and inflation before the end of the year, relieving some pressure for bond yields to keep rising. High inflation should also prove to be its own cure, as rampant price increases are destroying the purchasing power of households. As the economy slows and demand for labour eases, the ability of workers to offset inflation via wage demands will be curtailed, and as the macroeconomic backdrop becomes more challenging, expectations for aggressive central-bank hiking should moderate. In turn, the upward pressure on bond yields should ebb. If yields are unchanged a year from now, as we expect, bond investors should expect single-digit returns.

Exhibit 4: Balance-sheet shrinkage is a multi-year process – Federal Reserve balance-sheet projection

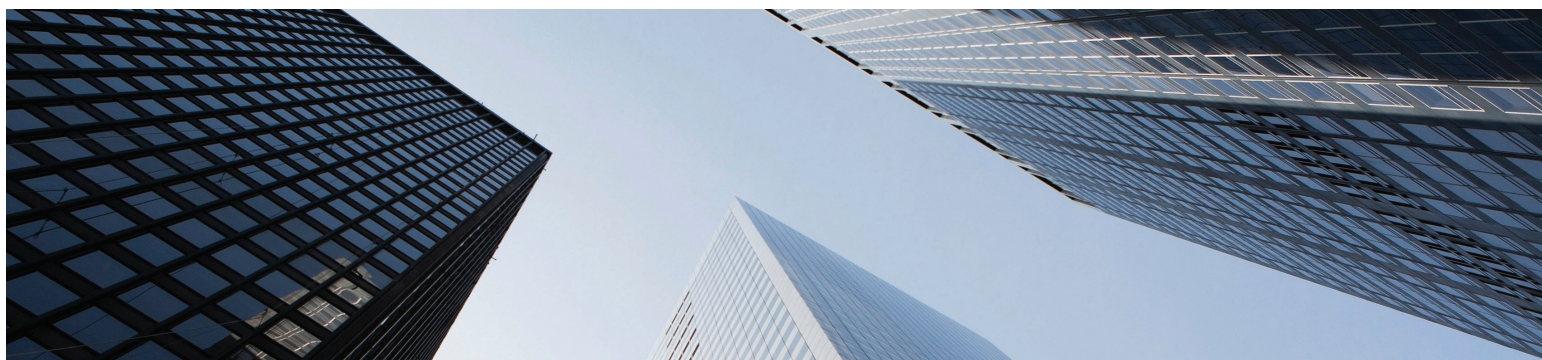


Note: As of May 26, 2022. Source: Bloomberg, U.S. Bureau of Labor Statistics

Exhibit 5: Inflation expectations have risen to the prior period average – Consumers’ median long-run inflation expectations



Note: As of March 2022. Source: Bloomberg, U.S. Bureau of Labor Statistics



Direction of interest rates



We expect the Fed to hike the fed funds rate to 2.75% by the middle of next year. We expect the U.S. 10-year Treasury yield to rise to 2.75% over the next 12 months, an increase of 50 basis points over our prior one-year forecast.

U.S.

As is the case in most other markets, inflation in the U.S. is at multi-decade highs. Unlike other markets, however, a substantial portion of the inflation seems to be related to excess demand stemming from extremely generous government programs related to the pandemic. Moreover, a very tight labour market suggests that the prospect of inflation expectations becoming more entrenched is much higher for the U.S. than elsewhere. Wage growth is running at nearly 6%, much faster than the 3%-4% that is typical even for a tight labour market. The strong demand side of the economy could mean the Fed has room to tighten policy without weighing too heavily on the economy.

In addition to rate hikes, which we expect to proceed at a pace of 50 basis points per meeting until the fall, the Fed will begin shrinking its balance sheet in June. The amount of balance-sheet reduction expected is equivalent to about 70 basis points of hikes. Overall, market expectations as they stand today would mark the most aggressive policy-tightening cycle since the early 1980s.

Yet growth and inflation are already showing signs of flagging, which we believe means the Fed is unlikely to tighten as much as investors expect. Surveys of consumer confidence are consistent with an extremely poor outlook for economic growth, and insofar as workers have been demanding more generous pay rises, they have still failed to fully offset the rise in prices – leading to declines in real incomes. The yield curve is also presaging an economic slowdown: the brief inversion of the 2-year and 10-year yield signals that a recession might be a year or two away. While we are not forecasting a recession, policymakers seem resigned to the risk of a significant slowdown through their efforts to curb inflation. It is likely that a firm commitment by central bankers in response to roughly a year's worth of above-target inflation will reduce the need for more tightening later.

We expect the Fed to hike the fed funds rate to 2.75% by the middle of next year. We expect the U.S. 10-year Treasury yield to rise to 2.75% over the next 12 months, an increase of 50 basis points over our prior one-year forecast.





Over the next 12 months, we expect 10-year yields to rise to 2.60% and the BOC to raise the benchmark overnight interest rate to 2.50%.

Canada

With persistently elevated inflation, the BOC raised its policy interest rate in April by 50 basis points to 1.00%, the biggest hike in more than two decades. The BOC also ended its policy of reinvesting proceeds from maturing bonds and began quantitative tightening. As a result, the BOC's balance sheet will shrink as maturing Government of Canada bonds are no longer replaced. The BOC's view is that the resulting increase in the supply of bonds not held by the central bank will work in tandem with rising benchmark interest rates to cool the economy. The current backdrop of high inflation is expected to ease as high energy prices and global supply-chain disruptions start to abate, putting a lid on higher yields going forward.

Over the next 12 months, we expect 10-year yields to rise to 2.60% and the BOC to raise the benchmark overnight interest rate to 2.50%.



Our forecast is for bank rate to peak at 2.00%, an upward revision of 50 basis points from the previous quarter. Our 10-year gilt yield forecast is also higher, at 2.25%

U.K.

The U.K.'s annual inflation rate is expected to reach double digits before the end of the year, and the country's inflation problem appears more pernicious than in its developed-market peers. Unlike the U.S., where high inflation has been tied to particularly generous pandemic-spending programs, the U.K.'s problems appear linked to its 2020 exit from the European Union, compounding the impact of surging food and energy prices. There is little that the BOE can do to combat these issues.

Nevertheless, the BOE is doing what it can to ward off the possibility of inflation becoming entrenched. The central bank started hiking interest rates both earlier and more aggressively than other developed-market central banks, and policymakers have laid out aggressive plans for winding down the balance sheet, particularly through sales of the BOE's substantial holdings of corporate bonds.

The assuredness of the BOE's fast start has faded considerably. While inflation and economic activity in late 2021 suggested that a new rate-hiking cycle was prudent, surging energy costs and rising prices for food already seem to be hurting demand. In response, gilt yields have failed to match the rise in developed-market peers and expectations for future hikes in the policy rate have been reduced. Our forecast is for the bank rate to peak at 2.00%, an upward revision of 50 basis points from the previous quarter. Our 10-year gilt yield forecast is also higher, at 2.25%.



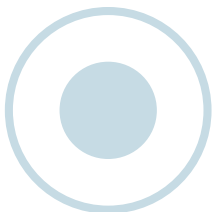
Our expectations for the 10-year bund yield is to see it falling towards 0.50%, from around 0.90% at the time of writing.

Eurozone

Investors expect the ECB to start hiking interest rates in July, and anticipate at least three 25-basis-point increases by year-end, bringing the central bank's seven-year-long experiment with negative interest rates to an end. Market attention has centered on surging inflation, but we believe the drag of much higher energy costs on economic activity will be a bigger concern for the ECB. To be sure, the ECB is still likely to hike interest rates, but not as much as many investors believe.

The hiking of policy rates will also coincide with the reduction or end of important policy supports for European bond markets. Weaker sovereign issuers, such as Italy and Spain, have benefitted from lower borrowing costs due to large-scale ECB asset purchases. As these programs are wound down, borrowing costs should rise. The extra compensation that investors demand for purchasing Italian bonds has already risen from remarkably low levels, and we expect this to continue for some time.

Overall, our forecast for Europe is for the ECB to exit negative interest rates over the next year, from a current level of -0.50%. Our expectations for the rise in the policy rate are more conservative than those being priced in by the market, and this has a large impact on our expectations for the 10-year bund yield, which we see falling towards 0.50% from around 0.90% at the time of writing.



Our forecast for the 10-year government bond yield is 0.25%, an increase of 10 basis points from last quarter. We expect no change to the policy rate.

Japan

The most important factor for any Japanese bond forecast is whether the BOJ will continue with its policy of yield-curve control, which keeps the policy rate below zero and the yield on the 10-year government bond in a range of +/- 25 basis points around a target of 0%.

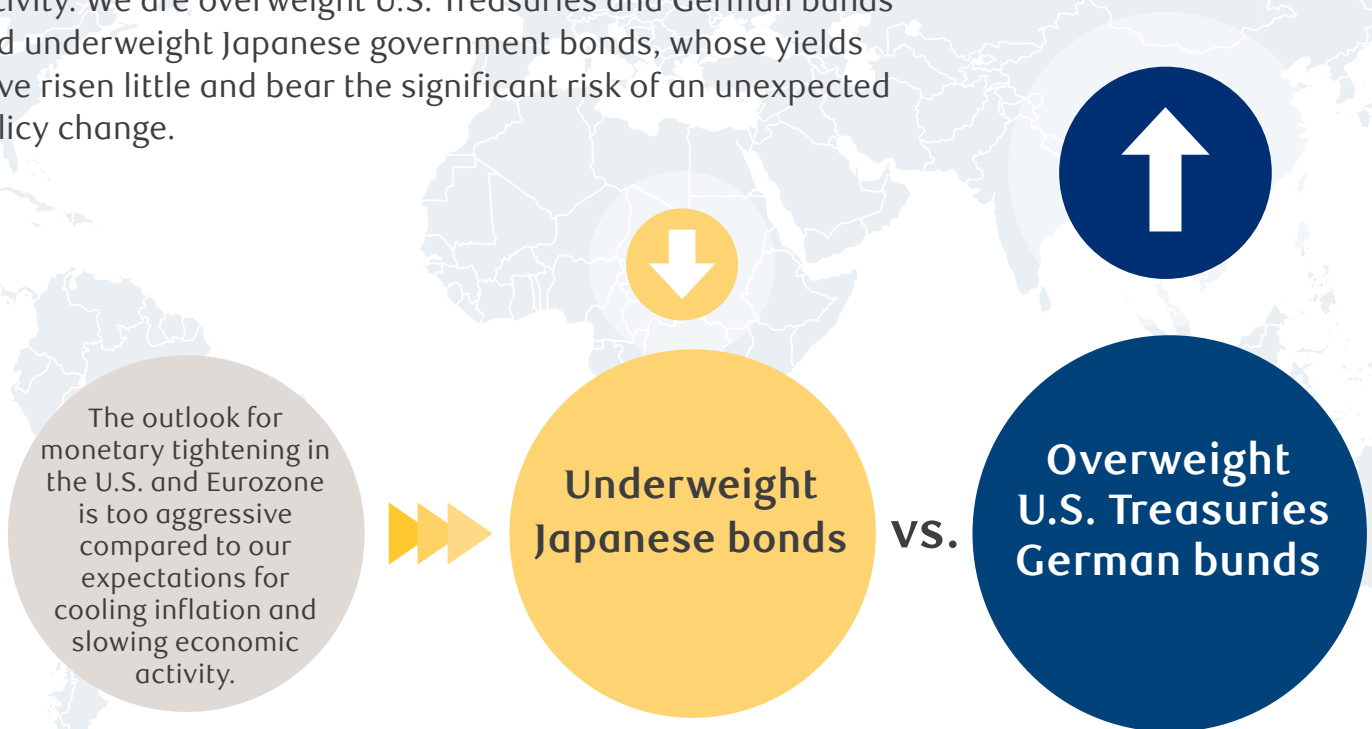
A likely surge in inflation over the next 12 months would present the largest challenge that Japanese policymakers have faced since launching their yield-curve-control monetary framework in September 2016. Inflation is running at a multi-year high, and leading indicators such as producer prices and yen weakness signal that even greater price pressures may be in store. Domestic inflation and the remarkable re-evaluation of expected policy rates in other developed markets suggest that investors will start to question whether a similar policy shift might be in the cards for the BOJ.

Investors are betting on a possible re-run of the scenario that faced Australia's government bond market, when the country's central bank unexpectedly decided to abandon its own yield-curve-control policy in November 2021, several years ahead of previous guidance, and sent bond yields surging higher.

Our view is that that the BOJ is unlikely to abandon yield-curve control over our forecast horizon. Economic growth in Japan has remained downbeat, even during the COVID recovery. What’s more, while inflation has risen, the vast majority stems from rising energy and food prices, which are unlikely to persist. Policymakers have also been consistent in their defense of the current policy framework, going so far as to offer to buy unlimited amounts of Japanese government bonds every day in order to protect the top of the 0.25% target yield range. Our forecast for the 10-year government bond yield is 0.25%, an increase of 10 basis points from last quarter. We expect no change to the policy rate.

Regional outlook

We believe that the outlook for monetary tightening in the U.S. and Eurozone is too aggressive compared to our expectations for cooling inflation and slowing economic activity. We are overweight U.S. Treasuries and German bunds and underweight Japanese government bonds, whose yields have risen little and bear the significant risk of an unexpected policy change.



Interest rate forecast: 12-month horizon

Total Return calculation: May 31, 2022 – May 31, 2023

U.S.						
	3-month	2-year	5-year	10-year	30-year	Horizon return (local)
Base	2.8%	3.0%	3.0%	2.8%	2.7%	3.9%
Change to prev. quarter	1.5%	1.3%	1.0%	0.5%	0.2%	
High	3.3%	3.5%	3.8%	3.8%	3.5%	(1.0%)
Low	1.3%	1.5%	1.6%	1.8%	2.0%	10.6%
Expected Total Return US\$ hedged: 0.2%						

Germany						
	3-month	2-year	5-year	10-year	30-year	Horizon return (local)
Base	0.0%	0.3%	0.5%	0.5%	0.6%	11.0%
Change to prev. quarter	0.5%	0.6%	0.6%	0.4%	0.3%	
High	0.8%	1.0%	1.0%	1.0%	0.9%	5.0%
Low	(0.5%)	(0.4%)	(0.1%)	(0.1%)	0.1%	16.3%
Expected Total Return US\$ hedged: 2.0%						

Japan						
	3-month	2-year	5-year	10-year	30-year	Horizon return (local)
Base	(0.1%)	0.1%	0.2%	0.3%	1.0%	1.3%
Change to prev. quarter	0.0%	0.0%	0.1%	0.1%	0.2%	
High	(0.0%)	0.2%	0.4%	0.5%	1.1%	(0.6%)
Low	(0.1%)	(0.1%)	(0.1%)	0.0%	0.5%	9.1%
Expected Total Return US\$ hedged: 2.6%						

Canada						
	3-month	2-year	5-year	10-year	30-year	Horizon return (local)
Base	2.5%	2.5%	2.5%	2.6%	2.6%	5.0%
Change to prev. quarter	1.0%	1.0%	0.7%	0.6%	0.4%	
High	3.0%	3.5%	3.5%	3.5%	3.4%	(1.4%)
Low	1.3%	1.5%	1.6%	1.8%	1.9%	11.6%
Expected Total Return US\$ hedged: 5.0%						

U.K.						
	3-month	2-year	5-year	10-year	30-year	Horizon return (local)
Base	2.0%	2.1%	2.3%	2.3%	2.1%	5.4%
Change to prev. quarter	0.5%	0.8%	0.9%	0.7%	0.5%	
High	2.8%	2.6%	2.6%	2.5%	2.3%	2.5%
Low	1.3%	1.3%	1.4%	1.5%	1.8%	11.2%
Expected Total Return US\$ hedged: 5.8%						

Source: RBC GAM



Currency markets

U.S. dollar has benefitted from risk aversion; weakness likely to materialize



Dagmara Fijalkowski, MBA, CFA
Head, Global Fixed Income & Currencies
RBC Global Asset Management Inc.



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

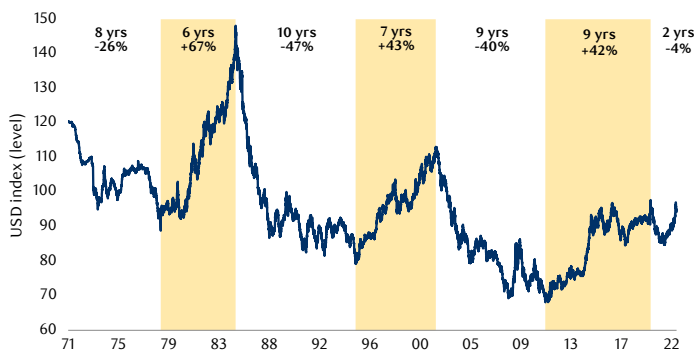
Reverting to its safe-haven status, the U.S. dollar has enjoyed a stellar run, gaining an impressive 8% against the euro in the 12 weeks since Russia invaded Ukraine. The greenback has benefited not only from risk aversion, as investors flee risky assets in other countries, but also from expectations that the U.S. Federal Reserve (Fed) will hike rates faster than its peers. In response to recent developments in Ukraine and the increasingly hawkish leanings of the Fed, we have pushed back the timing for when we think U.S.-dollar weakness might return.

Our change in outlook was prompted in part by a broadening out of the U.S. dollar's gains. We had not been altogether surprised that the dollar outperformed low-yielding currencies such as the euro and yen, because there was little prospect that central banks in those regions would be hiking rates imminently, let alone match what is currently anticipated to be nine Fed rate hikes this year. For several quarters, our calls for dollar weakness were instead focused on the outperformance of cyclical and emerging-market currencies, which would be supported by hawkish central banks, stronger economic growth and high commodity prices. These currencies had indeed performed well in the first few months of 2022, and a few even delivered double-digit gains against the U.S. dollar. More recently, however, cyclical currencies have begun to show some vulnerability. The combination of a quick rise in Treasury yields, greater volatility in equity markets and the broadening out of U.S. dollar strength have caused us to become more cautious in

our positioning and trim back some of our cyclical-currency exposure after a period of healthy gains.

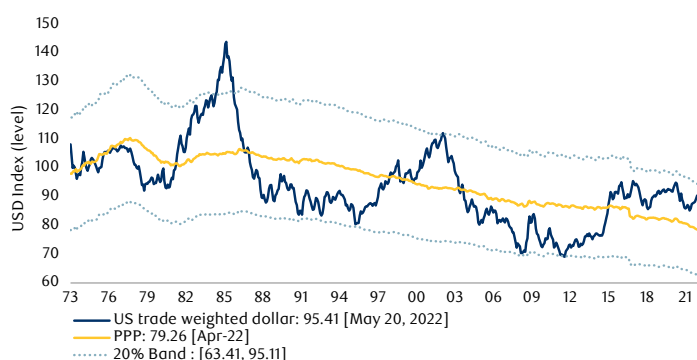
We still expect the greenback to weaken in the medium to longer term, and there is little doubt that the currency has lots of room to fall. Recent strength has brought the dollar close to its highs in the early days of the pandemic (Exhibit 1), when uncertainty around global growth was at its peak. By most valuation metrics, the dollar is also now extremely expensive. Purchasing power parity models show the greenback to be 20% too rich, levels rarely seen and which typically cannot be sustained for very long (Exhibit 2). We suspect that U.S.-dollar strength is now mostly behind us and that it has little more to gain from an already hawkish central bank and investor positioning that is already quite long (Exhibit 3). Pessimism around the economic-growth outlook for Europe and China now also seem well priced in by markets, at the same time that concerns about a

Exhibit 1: Long term cycles in the U.S. trade-weighted dollar



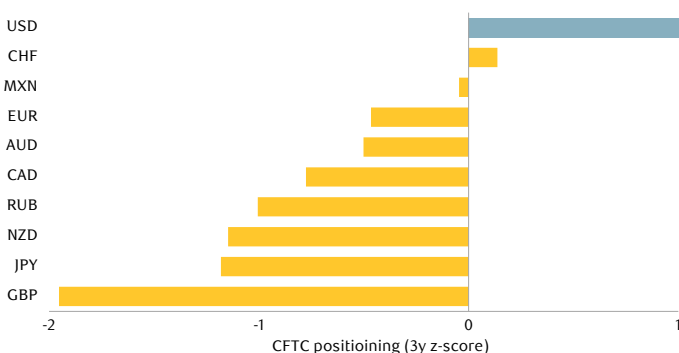
Note: As at May 31, 2022. Source: Bloomberg, U.S. Federal Reserve, RBC GAM

Exhibit 2: U.S. trade-weighted dollar PPP Valuation



Note: Uses new Fed USD index from Dec 31, 2019 onward (USTWAFE Index). As at May 30, 2022. Source: U.S. Federal Reserve, Bloomberg, RBC GAM

Exhibit 3: Investors are long U.S. dollars



Note: As at May 27, 2022. Source: CFTC, RBC GAM

“We still expect the greenback to weaken in the medium to longer term, and there is little doubt that the currency has lots of room to fall.”

looming recession in the U.S. threaten to take the wind out of the dollar’s sails. Bond markets are already reacting to this dynamic, with yields on 10-year Treasuries declining to 2.70% from their 3.20% highs in the month of May. Inflation expectations are also starting to moderate, which, if validated by a reduced pace of actual inflation, might at the minimum confirm that the expected peak in the current cycle’s fed funds rate is already priced in.

While the dollar has started to soften in recent days, it is not certain that we have reached a decisive turning point lower. There remains a possibility that further declines in equity markets push the greenback higher still – a move that would be compounded if a further rise in rate-hike expectations were to materially threaten economic growth. We are now

watching for several developments that would raise our conviction that the U.S. dollar peak has passed:

- A significant slowdown in U.S. economic activity, which would put the Fed’s path of rates hikes into question.
- A shift in tone from the European Central Bank (ECB) officials that they might begin to follow in the Fed’s footsteps by hiking interest rates.
- Concrete signs from Chinese and Japanese policymakers that they might act more forcefully to arrest the decline in the renminbi and the yen.
- De-escalation of the Russian offensive in Ukraine, signs of a waning in Putin’s power or an end to the war.

Japanese yen

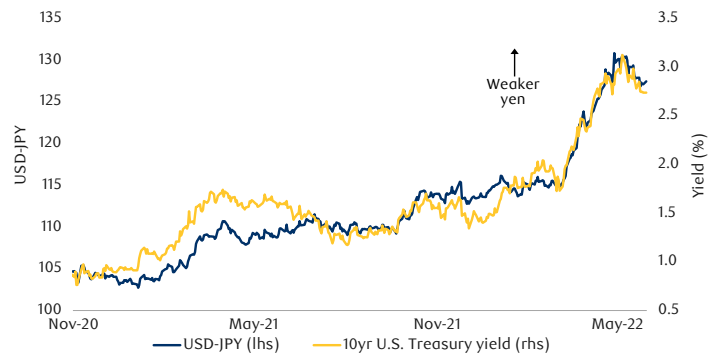
For those with longer-term investment horizons, we would advise using recent strength in the greenback as an opportunity to reduce U.S.-dollar exposure. This is especially true for investors domiciled in Japan, as the yen has fallen sharply against the dollar to new lows and is most undervalued versus the greenback. The yen is especially sensitive to movements in the U.S. bond market, and tends to weaken when bond yields abroad look more attractive than those in Japan. This has certainly been the case over the past several months, as Treasury yields have risen in response to mounting expectations for Fed rate hikes and rising U.S. inflation expectations (Exhibit 4). Now that the Japanese yen has weakened so much, we have become more positive on the currency for several reasons.

First, it tends to perform well during times of risk aversion, when Japanese investors are most active in repatriating foreign investments. The prevailing uncertainty and rising fluctuations in equity markets warrant some portfolio protection by holding the Japanese yen. Adding potency to this safe-haven status is that severe risk aversion would likely be accompanied by a partial reversal of Fed rate-hike expectations, from which the yen would have more to gain than other global currencies given its tight link to changes in Treasury yields.

Second, there are some hints that Japanese policymakers are becoming more concerned with yen weakness, with officials at the Ministry of Finance and Bank of Japan (BOJ) ratcheting up threats to intervene if the currency continues its slide. While interventions are unlikely to have lasting influence on currency markets without the support of other central banks, they can have a pronounced influence over short periods of time, especially by wrong-footing investors who have bet heavily against the yen (Exhibit 5).

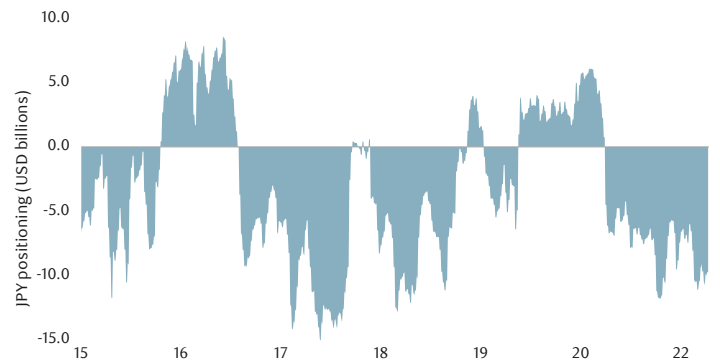
Third, we expect that the BOJ may finally exit its uber-dovish yield-curve-control framework, where it has anchored both short-term and long-term bond yields within a tight range. Rising global inflation has prompted

Exhibit 4: Treasury yields drive yen movement



Note: As at May 30, 2022. Source: Bloomberg, RBC GAM

Exhibit 5: Investors are substantially short the yen



Note: As at May 27, 2022. Source: CFTC, Bloomberg, RBC GAM

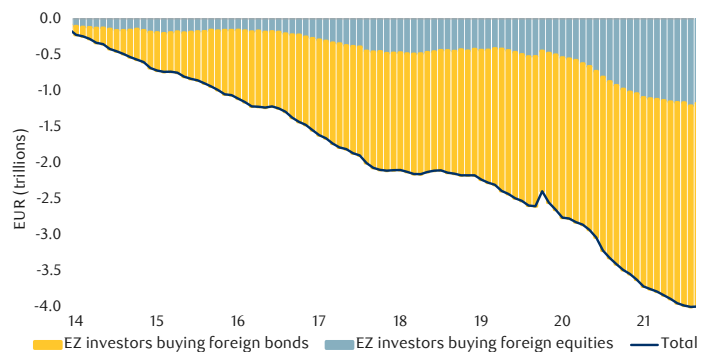
other central banks to tighten policy while the BOJ has remained firm in its easy monetary-policy stance. In essence, the BOJ has prioritized stability in interest rates over stability in the currency – an approach that will quickly help the central bank achieve its 2% inflation target as the weakening yen elevates prices for imported goods. Few would consider this method of achieving inflation targets to be a success, however, as higher import prices and rising energy costs simply leave households with less disposable income to spend on goods produced domestically. At some point, the BOJ will relax the cap on Japanese government-bond yields and the currency will likely rally as a result. Our forecast for 12 months ahead is for the yen to strengthen to 118 per dollar.

“Our forecast for 12 months ahead is for the yen to strengthen to 118 per dollar.”

Euro

Plagued by higher energy prices after Russia’s invasion of Ukraine, the outlook for Eurozone economic growth has been meaningfully dented, even though increased government spending in Europe contrasts with fiscal drag in the U.S. Weaker growth gives the ECB leeway to keep policy loose for longer than other central banks and will have the Frankfurt-based institution hiking more slowly after asset purchases have ended. With so much focus on relative monetary policy, the euro will have trouble sustaining gains until the ECB makes a move on interest rates. Any ECB move to raise rates would be an important signal for bond investors and a sign that the tide has turned on capital flight from Europe. Trillions of euros of investment capital have been shifted abroad by European investors looking to avoid negative yields (Exhibit 6). With yields in Europe beginning to rise, support should re-emerge for the euro as a portion of the expatriated money returns. How swiftly capital returns to Europe once rates climb above zero is a topic of much debate, with some expecting a more energetic reaction from investors once the important zero-threshold is crossed. With the euro having tested and bounced from its cycle lows at US\$1.0350, we now have more comfort in our call that the single currency can rally to our 12-month forecast of US\$1.16.

Exhibit 6: Negative yields are driving portfolio outflows



Note: As at Mar. 31, 2022. Source: ECB, Macrobond, RBC GAM

British Pound

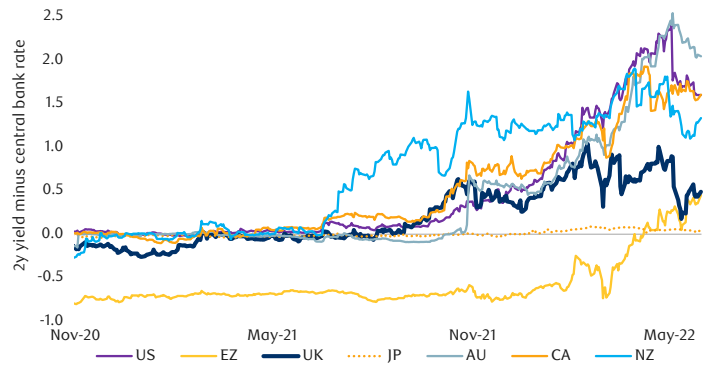
The U.K. is among the most self-sufficient of energy importers and relies less on Russia for natural gas and oil than does the rest of Europe. But the smaller economic shock from the war does not necessarily translate into a bullish outlook for the pound. While recent hikes by the Bank of England (BOE) strengthened the pound somewhat, it has become clear that the BOE won't hike interest rates as much or as quickly as many of its peers (Exhibit 7). As U.K. inflation rises beyond levels in other developed nations, the BOE has been signaling concerns about the negative impact that higher interest rates will have on economic growth and perhaps suggesting fewer rate hikes. Also feeding investor perceptions that the central bank is less focused on inflation than its peers are the BOE's reiterations that it expects the impact of supply-chain disruptions and geopolitical events to be temporary.

The currency trades slightly rich to the euro and is weighed down by persistent current-account deficits. We are also concerned about a decline in household spending, as lower real incomes, tax increases and rate hikes pose a threat to one of the main engines of U.K. economic growth: consumption. Our 12-month forecast for the pound was lowered this quarter to US\$1.35 from US\$1.39, reflecting this increased concern.

Chinese renminbi

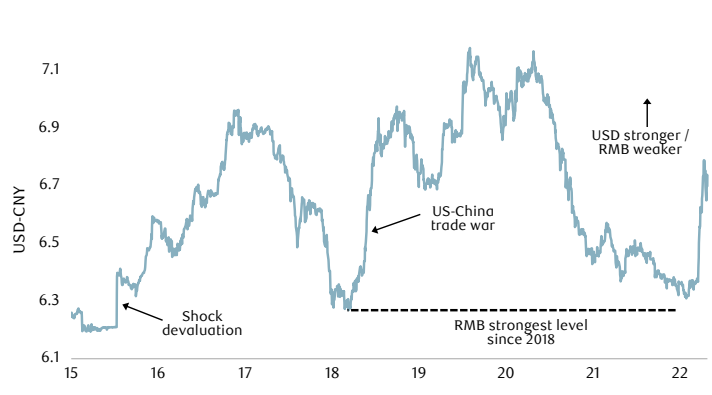
Having kept to a tight 10-point trading range for the first few months of the year (between 6.30 and 6.40), the Chinese renminbi weakened quickly to 6.85 per U.S. dollar in a few short weeks (Exhibit 8). Lockdowns in major Chinese cities and the associated impact on Chinese economic activity was largely to blame for the currency's decline. Also important was a rise in U.S. Treasury yields, which undermined China's interest-rate advantage (Exhibit 9), causing investors to accelerate the exodus from Chinese markets. Foreign investors had already been selling Chinese assets due to an increasingly challenged outlook for the country's technology companies. Capital outflows from China amounted to US\$35 billion in March, reversing roughly two-thirds of the total capital accumulated during the entirety of 2021. While some

Exhibit 7: Bank of England unlikely to keep pace with other central banks



Note: As at May 27, 2022. Source: Bloomberg, RBC GAM

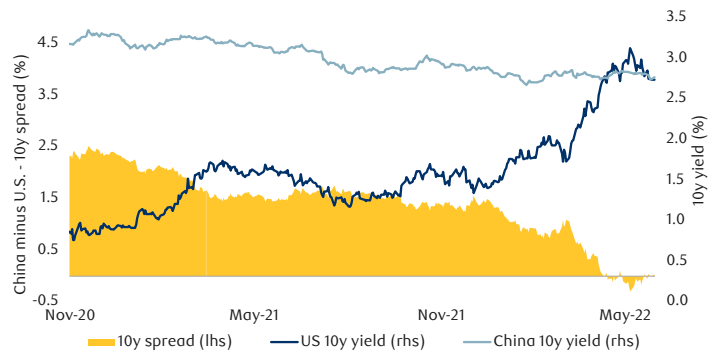
Exhibit 8: Renminbi has seen a sharp sell off



Note: As at May 27, 2022. Source: Bloomberg, RBC GAM

press commentators are forecasting that the renminbi will fall further to 7.00 per dollar, investors don't seem to be positioned for such a move. Weakness in the Chinese currency could have far-reaching implications for other emerging markets, which rely on China for much of their trade and are therefore highly sensitive to fluctuations in the renminbi. The potential for instability caused by a renminbi decline is another reason we have become more cautious on cyclical currencies, though recent moves by policymakers to stimulate the Chinese economy and stem further weakness in the renminbi partly address those concerns. A more forceful approach by policymakers and/or an easing of restrictions in Beijing and Shanghai would have us upgrade our view on the currency.

Exhibit 9: China no longer has a yield advantage over Treasuries



Note: As at May 27, 2022. Source: Bloomberg, RBC GAM

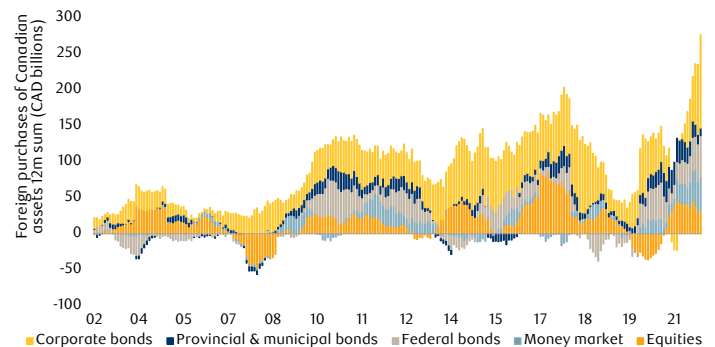
Canadian dollar

The Canadian dollar has largely kept to a tight trading range of \$1.25-\$1.30 per U.S. dollar this year, pushed lower, on one hand, by a strong U.S. dollar and pulled higher, on the other hand, by high commodity prices. In recent weeks, the loonie declined as a result of a third signal, a decline in equities, which caused the loonie to fall to the bottom of the recent range of \$1.30. We remain positive on the loonie despite the test of this key chart point, and prefer owning the Canadian dollar to many of the world's other cyclical and low-yielding currencies. There are three main reasons for our positive outlook on the Canadian dollar:

Unlike central banks in Europe, Japan or China, the Bank of Canada (BOC) is set to match the Fed's pace of interest-rate hikes. The BOC got an early start to tightening policy by ending its quantitative easing prior to the Fed and is expected to hike rates another seven times beyond the 125 basis points already delivered.

Canada's balance of trade and capital flows remain supportive for the loonie, not only from the improvement in terms of trade as commodity prices rally, but also from an increase in volumes traded in non-commodity exports and from general demand for Canadian assets. The country's current-account balance has registered its first annual surplus in 13 years and foreigners have hoovered up more than \$275 billion of Canadian assets over the past 12 months (Exhibit 10) – the highest levels on record and more than 2.5 times the average over the past decade.

Exhibit 10: Strong foreign demand for Canadian assets



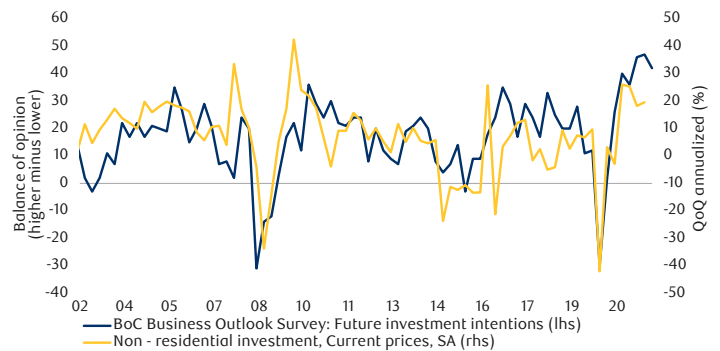
Note: As at March 31, 2022. Source: Statistics Canada, RBC GAM

“We forecast that the Canadian dollar will strengthen to \$1.19 per U.S. dollar in 12 months’ time.”

The Canadian economy is in good shape and is expected to be one of the strongest performers in 2022, according to RBC GAM forecasts and the consensus of international economists. Canadian economic growth remains supported by a strong labour market and aggressive immigration targets that were raised to 431,000 new entrants for 2022, representing an additional boost to population growth of roughly 1%. One additional item that we're watching closely is capital spending, which could begin to pick up after years of underinvestment. We have pointed out in the past that high oil prices only truly benefit economic growth when firms decide to hire additional workers and invest in new plants and equipment. Canada has lagged in this regard for many years, though there are signs that companies in both resources and non-commodity sectors are starting to commit to capital expenditures, perhaps spurred by the rising cost of labour. One survey by the BOC found that the number of firms planning investments outstripped those that were not by 40% (Exhibit 11).

There are, of course, risks to the positive Canadian-dollar outlook. We are mindful of heavily leveraged households and the impact on the housing market of the central bank's steep rate-hiking path. But we find more arguments to be positive on the Canadian dollar than not (Exhibit 12) and our valuation models show that the loonie remains particularly cheap at current levels. We forecast that the Canadian dollar will strengthen to \$1.19 per U.S. dollar in 12 months' time.

Exhibit 11: Canadian investment intentions



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

Exhibit 12: Factors favouring loonie strength

PROS	CONS
<ul style="list-style-type: none"> ✓ BoC keeping pace with Fed hikes ✓ Strong WTI crude prices ✓ Benefits from scarcity pricing in base metals ✓ CAD is cheap on most valuation metrics ✓ Strong labour market ✓ Trade balance at 13-year high ✓ Population growth leadership via strong immigration ✓ Large foreign asset position reduces CAD's vulnerability ✓ Long term USD bear market to resume ✓ Larger oil export capacity with restart of line 3 & Trans Mountain ✓ High vaccination rates make lockdowns less likely 	<ul style="list-style-type: none"> x Hawkish Fed / strong USD x Shakier risk sentiment x Larger fiscal drag than other G10 x Higher household leverage as rates rise x Negative foreign direct investment flows x Long term underinvestment in productive assets x Oil sands controversial in an increasingly green-conscious world x Vulnerability to crop yields from climate variability x Global warming may increase geopolitical risks for Canada (Northwest Passage)

Note: As at May 31, 2022. Source: RBC GAM

Conclusion

The greenback has benefited from risk aversion amid Russia's invasion of Ukraine, as well as expectations that the Fed will hike interest rates faster than its peers. Although we have pushed back the timing for when we think U.S.-dollar weakness might return, we still expect the greenback to weaken in the medium to longer term given that the dollar is now extremely expensive and that much of the Fed hawkishness and expected economic weakness abroad is

already priced in. Key markers that would strengthen our conviction that the U.S. dollar may have peaked include a slowdown of U.S. economic activity, a hawkish shift in tone from the ECB, signs that Asian policy makers may step in to support their currencies and/or a de-escalation of the war in Ukraine. Our forecasts look for the U.S. dollar to depreciate against a basket of major developed-world currencies over the year ahead.



Regional outlook – U.S.



Brad Willock, CFA

V.P. & Senior Portfolio Manager
RBC Global Asset Management Inc.

It has been a nasty start for U.S. stocks in 2022, with the S&P 500 Index falling 12.8% in the five months ended May 31, 2022, and down 5.2% in the latest three-month period. The S&P 500 actually traded at an all-time high on the first trading day of 2022 but by May 20 had declined just shy of the 20% required to label the drop a bear market. As of that date, over half the index's members were down more than 25% from their 52-week highs. The weakness in stocks was driven by concerns about a 50-year high in inflation and the U.S. Federal Reserve's (Fed) singular focus on bringing inflation down by raising short-term interest rates and reducing the size of its balance sheet. The Fed has promised to raise short-term rates "expeditiously" to slow economic growth such that the price level as measured by the Personal Consumption Expenditure (PCE), the Fed's favoured measure of inflation, decelerates from just over 5% in March toward the central bank's long-run target of 2%. The Fed has also said that it believes it can bring inflation under control without causing a recession. The weakness in stock prices, particularly of cyclical companies, suggests many investors are skeptical. The Fed has a poor track record of achieving a so-called soft landing for the economy: in the last 11 Fed rate-hike cycles, eight have ended in recession. Investors have good reason to be anxious, and it seems like a good time to evaluate where we stand.

The consistent macroeconomic backdrop that existed since the end of 2009 until the end of 2021 is fading. That period was characterized by low inflation – core PCE at 1.8% on average; slow economic growth – U.S. nominal GDP averaging less than 4%; and central-bank policy that was supportive and predictable. Contrast that data with what we see today: PCE in April came in at 4.9%, a level not seen since the 1970s, and nominal economic growth in the first quarter was 10.6%. Inflation at these levels has forced central-bank policy to become restrictive and less predictable, and the impact of this new environment on markets has been stark, as many of the trends in place for the last 13 years reverse. So far this year, commodities are outperforming stocks, cash is outperforming bonds and non-U.S. stocks are outperforming U.S. equities. While this period has been challenging, it is not a trauma-induced bear market but an unwinding of extreme valuations created by years of accommodative Fed policy and massive policy support during the pandemic.

In the past two years, U.S. fiscal and monetary authorities pumped roughly US\$10 trillion into the economy and consumer net worth increased by over US\$34 trillion as the value of real estate and investment portfolios surged. People who feel wealthier tend to spend more and so the economy has been growing fast of late. The problem is that

all of the stimulus created a situation where demand far exceeds supply, helping to account for much of the inflation problem we have today. The bottom line is that the Fed is offside on its mandate to maintain price stability and is taking swift and aggressive action to bring inflation down. The bad news is that the Fed has barely begun to get rates back to a level that can curtail inflation. The good news is that the process is well underway as seen by the 1.25-point rise in the 10-year Treasury yield, the 2.0-point increase in the 30-year mortgage rate and a 1.66-point rise in yields on the lowest-yielding investment-grade bonds. The higher cost of borrowing for governments, households and corporations is an obvious drag on economic activity and negatively affects stocks by reducing valuations and often shrinking earnings.

First, let's consider valuations. The S&P 500 ended 2021 trading at 21 times estimated earnings for the next 12 months compared with a historical average of 15 to 16. Even after the decline so far this year, stocks trade at just over 17 times forward earnings. Valuations have been declining since late fall, when it became clear that inflation would be sticking around, and that the Fed would have to scale back bond purchases and begin hiking interest rates much sooner than expected. In addition, Russia's invasion of Ukraine and COVID-related shutdowns in China have amplified geopolitical risks and put pressure on valuations. The Fed is now expected to increase short term interest rates by another 1.5 to 2.0 percentage points this year, which would put the fed funds rate at roughly 2.75% by year-end. If inflation decelerates quickly and appears to be on a

path to less than 3% next year, the Fed would likely be less aggressive and the economy would likely avoid recession. In that case, valuations might not have much further to fall. However, if inflation remains persistently high, the Fed would be forced to be more aggressive, raising the risk of recession and resulting in substantially lower equity valuations. In contrast to valuations, which have been under pressure, corporate earnings have been resilient up until very recently, when several major retailers and a few big technology companies released disappointing financial results. We believe there is further risk to earnings over the next several quarters as higher costs for labour, debt, raw materials and energy work their way through the system.

For the past several months we have been adding exposure to more defensive sectors such as Utilities, Consumer Staples and Health Care, while reducing allocations to cyclical sectors such as Consumer Discretionary, Industrials and Information Technology. We have a favourable view toward the Energy sector given our view that chronic underinvestment over the past several years will keep the oil market tight and push prices higher. As of this writing, the price of oil is approaching US\$120/barrel and the prospect of US\$6/gallon gasoline this summer is likely to weigh on consumer spending. While the path of inflation remains key to the outlook, investors' attention is shifting toward the outlook for economic growth. Over the next several months, we expect growth to slow and earnings estimates to be cut. Our strategy will be to add to our favourite holdings of high-quality companies amid market declines as the Fed continues normalizing policy.





Regional outlook – Canada



Sarah Neilson, CFA
Portfolio Manager
RBC Global Asset Management Inc.



Irene Fernando, CFA
Portfolio Manager
RBC Global Asset Management Inc.

Global equity markets have been volatile this year, giving back most of the gains made in 2021. The Canadian stock benchmark, the S&P/TSX Composite Index, has been a bright spot even with its slight decline, outperforming other global equity markets by more than 10 percentage points between January and May. The index briefly reached new highs in April, as its exposure to rising commodity prices offset a macroeconomic backdrop of high inflation, rising interest rates and slowing global economic growth. The S&P/TSX fell 1.1% in the three months ended May 31, 2022, and lost 0.9% in U.S.-dollar terms. Canadian stocks were supported by a 56% year-to-date rise in the price of crude oil and natural-gas prices that have more than doubled. The Energy and Materials sectors, which together represent about one-third of the Canadian benchmark, have been the best performing sectors in 2022. Utilities, Communication Services and Consumer Staples also performed well as investors sought out sectors that tend to outperform in periods of slowing economic growth. The Information Technology sector has performed worst so far this year given concerns about the pace of revenue growth, profitability and valuation. In Canada, the sector dropped 51% between January and May of this year, due largely to Shopify's 72% decline. The Financials sector slightly underperformed amid weakness in asset managers.

Economic growth has recovered from the pandemic low, with consensus forecasts calling for Canadian GDP to rise 4.1% in 2022 and moderate to 2.6% in 2023. Economists expect Canada's economy to outpace the U.S., where analysts expect GDP growth of 2.7% in 2022 and 2.0% in 2023. The Bank of Canada (BOC) sees higher-than-consensus growth for Canada based on the country's healthy labour market, strong business investment and higher immigration levels. As global economies continue to recover from the impact of the pandemic, central banks are removing the monetary stimulus used to support the economy. Improving consumer demand, higher wages, rising commodity prices and supply disruptions have pushed up inflation and caused central banks to focus on reining in the rise in prices. With a backdrop of persistently high inflation, the BOC increased its benchmark rate to 1% in April, marking its first 50-basis-point increase in 20 years. The BOC remains focused on achieving its 2% inflation target by using monetary-policy tools and boosted its key rate by another 50 basis points this month. A key concern for investors is whether central banks can thread the needle by removing liquidity to control inflation without tipping the economy into a recession.

Canada's housing prices are beginning to moderate amid the impact of rising interest rates: home resales are dropping and prices falling for the first time in two years.

The S&P/TSX carries a forward P/E multiple of 13.2, which is well below its historical average and remains at a significant multiple discount to the S&P 500's 17.4. The S&P/TSX failed to close the valuation gap with the S&P 500, in part because of investors' reluctance to pay as much for energy stocks as they have in previous decades. Also, the S&P/TSX has relatively high exposure to financial companies, which tend to have low valuations, and less exposure to highly valued technology companies, which make up a much larger portion of the S&P 500. Looking at sector valuations, 75% of the Canadian market trades either in line or below historical averages, while only the Utilities, Industrials, Communication Services and Consumer Staples sectors are trading at premiums to their historical valuations. This is a shift from prior quarters, again exhibiting the flight to defensive sectors amid the current market backdrop.

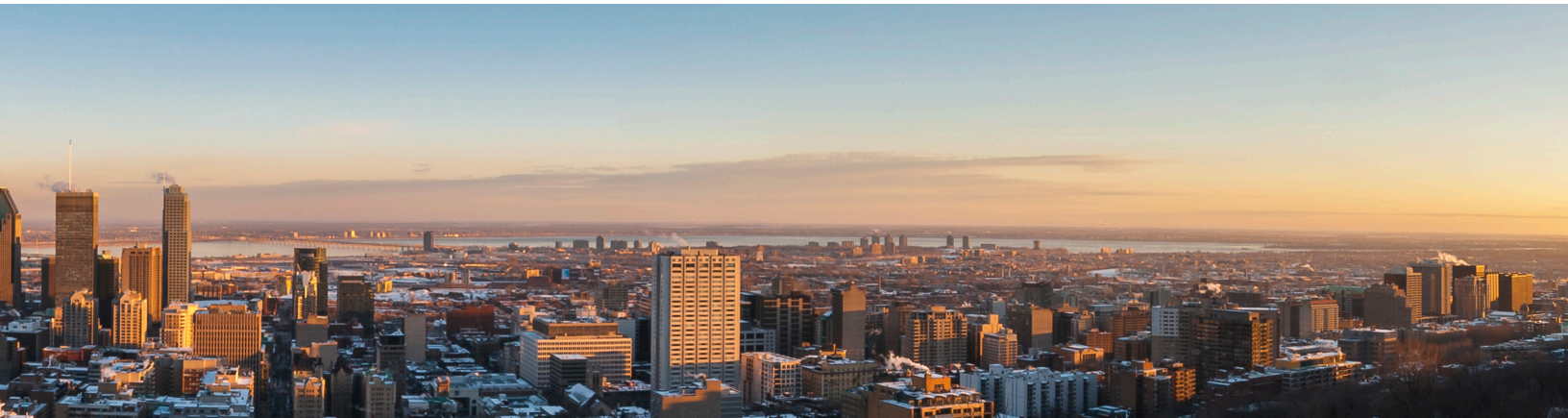
The slower pace of expected earnings growth coupled with fair valuations will make it challenging for equities to achieve their historical returns in the near term. For the S&P/TSX to continue to outperform other markets, energy prices will need to stay relatively high.

The basket of Canadian banks fell 1.8% between January and May of this year, as the macroeconomic outlook dimmed somewhat. Investors' focus shifted from earnings growth to recession assessments and the impact of any growth slowdown on banks' credit quality. Analysts are currently expecting bank earnings to grow 5% and 4% in 2022 and 2023, respectively. Achieving next year's forecast could prove optimistic if provisions for credit losses are higher than expected and rising costs crimp profit margins.

The change in the narrative leads us to believe that bank valuations could be capped in the near term.

The war in Ukraine has highlighted the tight-supply situation in energy markets. Crude-oil prices have gained amid supply-chain disruptions and limitations on Russian energy supplies at the same time that leisure travel ramped up. Natural-gas prices surged due to low inventories, especially in Europe, which had relied on Russia for 40% of its supply. Under-investment in crude-oil development and production will support higher prices for longer. However, today's elevated prices will curtail demand, which could be evident later in 2022. Energy producers, which are the clear beneficiaries of higher prices, will generate significant free cash flow, which is being used to reduce debt, boost dividends and buy back shares. Valuations remain low for the Energy sector in part due to questions about the sustainability of these higher prices and the longer-term outlook for demand given requirements to address emissions reductions.

Gold prices have increased as the metal's safe-haven allure increased after the Russian invasion of Ukraine. Volatility in the price of gold has increased with influence from increasing inflation concerns, Fed rate hikes and the potential for dampened economic growth. Investors are focused on the duration and magnitude of higher costs and how they will affect decisions about where to invest capital. Rising energy and fixed costs could put a drag on financial results and prompt companies to scale back capital expenditures.





Regional outlook – Europe



Siddhi Purohit

Associate Portfolio Manager
RBC Global Asset Management (UK) Limited

The downdraft in stocks triggered by Russia's invasion of Ukraine in late February extended into the latest quarter on concern about the impact of higher interest rates and commodity prices on global economic growth. Within three weeks of the invasion, European and other major stocks were down at least 10% but have since rebounded. In the three months ended May 31, 2022, European stocks slightly outperformed U.S. stocks given Europe's smaller exposure to lagging technology and other growth stocks.

Eurozone real GDP in 2022 is expected to expand by 2.9%, down from prior estimates of 4.0%. The bulk of the downward revision mostly reflects the impact of the war in Ukraine, but is also a consequence of worsening supply-chain logjams due to regional Chinese COVID lockdowns.

Russia/Ukraine conflict

Europe's economic exposure to Russia is relatively low in terms of GDP, market capitalization and company revenues. At the stock level, the exposure is concentrated in a few names. However, Europe's dependence on Russia for energy imports is acutely felt, as Russia accounts for 40% of Europe's natural-gas imports and 24% of its crude-oil imports.

A ceasefire in Ukraine is plausible in the short to medium term. However, the establishment of a genuine peace between Russia and Ukraine would seem to be out of reach, and an unsatisfactory frozen conflict is the most probable outcome. In such circumstances, sanctions on Russia will doubtless remain in place and may even tighten further. We are hopeful that Europe will find a way to manage elevated energy prices in a way that avoids the need to curtail economic production. In any case, Europe's energy transition will accelerate by force of necessity given that the percentage of GDP that the continent is slated to spend on energy this year will exceed 9%, versus 4.5% for the U.S. It is likely that this transition will be accompanied by increased fossil-fuel production.

Businesses throughout Europe are being forced to consider how to respond to the possibility that energy may have to be rationed. In the latest IFO business-climate survey, companies said their expectations for future output declined by the most on recent record. The divergence between current conditions and future expectations is so dramatic that the gap constitutes a warning that Germany could soon be in recession. That said, precedent tells us that the immediate negative impact of geopolitical crises on equity markets typically presents investors with good long-term buying opportunities.

Supply shortages and inflation

Towards the second half of last year, an argument could have been made that inflationary pressures were transitory and the result of a sharp and unexpected rebound in economic activity created by a short-term supply-demand imbalance. However, the Ukraine conflict has broken that argument as a commodity bull market has now become a major energy-commodity shock.

Supply issues are not improving much, but they are not worsening, either. Our worry is that inflation linked to supply restrictions will eventually lead to significant falls in both business and consumer demand. For consumers, the decline in real disposable income produced by surging inflation has already begun. In most major economies, household real disposable incomes are set to fall this year by 1% to 3%.

Consumers and corporations

The news is not all bad in Europe. To help counter the impact of energy-price inflation and rising interest rates, the EU is ramping up fiscal support, and we are likely to see increased investments in defense and energy independence. Thirty percent of the European recovery fund is earmarked to fight climate change.

The economic reopening from the pandemic is still on. Consumers continue to shift their spending from goods to services, and appear to be splashing out even in the face of price pressures. Unemployment rates are at fresh lows, also bolstering the economy.

On the corporate side, balance sheets are cash-rich and debt ratios remain healthy. Although manufacturing activity is slowing, the outlook for capital expenditures is still positive because corporate fixed assets are aging. Equity returns will likely get a boost this year from dividends and stock buybacks.

Earnings are the key driver of long-term equity returns, and we believe that earnings are still destined to rise in 2022, supported by above-trend GDP growth. The main points of concern are rising commodity and labour costs, which threaten profit margins if companies can't raise prices enough to offset them. Profit margins have historically been resilient in the initial stages of an inflation spike but have tended to narrow when high inflation overlaps with an economic slowdown. Valuations offer some support. Eurozone P/Es are near 30-year lows relative to the U.S., on par with the worst points of the Eurozone debt crisis.

In an environment of high inflation and weakening economic growth, companies that can raise prices and which aren't unduly exposed to the rising cost of capital expenditures will likely be among the best investments. Commodity-sensitive stocks can also offer a respite for investors seeking shelter, as they tend to perform well during times of high inflation.

Given today's geopolitical uncertainty and inflationary pressures, we are more comfortable in high-quality stocks that have less exposure to a slowdown in economic growth. Bear markets with teeth are announced by deflation when output and profits fall, and we are especially watchful for this scenario during these times.



Regional outlook – Asia



Chris Lai

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

Asian equities pulled back over the three-month period ended May 31, 2022, with a significant divergence in performance among markets. Equity markets in Southeast Asia continued to outperform as their economies gradually re-opened. China's stock markets have underperformed: economic growth has weakened visibly since the third quarter of 2021 and rests at the lowest levels in several decades. We believe that Chinese growth will keep decelerating until the fourth quarter of this year, at which point the government may consider launching larger-scale financial support. Across Asia, an export downturn is likely starting, as the impact of the Russia-Ukraine war has weakened global demand. Inflation is likely to rise further in the region. Higher commodity prices should benefit Australia, Malaysia and Indonesia, while Thailand, India and the Philippines will be hurt by them.

A combination of shocks including the Russia-Ukraine war, weaker Chinese economy and a hawkish U.S. Federal Reserve are the big risks facing equity markets, and the optimal policy response is unclear. If the rising cost of living dampens demand and inflation, policymakers may be able to breathe easy, but if demand holds up and high inflation is tolerated for too long, a required tightening in monetary policy could pummel financial markets. We expect inflation to constrain consumption but not derail growth. Targeted fiscal support is necessary to offset the impact of tighter monetary policy.

Japan

The global economic impact of the Russia-Ukraine war will likely crimp Japan's economic growth for the remainder of this year. Economists are predicting 2.2% real GDP growth in 2022, up from 1.6% in 2021 but down from forecasts of 3.2% earlier this year, due to global uncertainty.

The main driver of Japan's economic growth has been exports, and consumer spending is also holding up quite well. Japan's consumer price index is showing an uptick in inflation, with CPI expected to be at 2.4% in the third quarter of 2022, within the Bank of Japan's (BOJ) comfort zone. The U.S. dollar has traded broadly stronger, backed by an increase in long-term U.S. interest rates. As a result, the Japanese yen has depreciated to around 127 from the 115 level three months ago. Nonetheless, we do not expect Prime Minister Kishida to make any significant changes in economic policy, and nor do we think that the BOJ is quite ready to tighten what remains a relatively accommodative monetary policy.

Japan's industrial production remains strong, driven by an increase in automobile production, as supply constraints for semiconductors have gradually eased. Production forecasts for telecommunications and electrical machinery are positive, but we note that supply-chain constraints haven't been fully resolved. Japan's jobs market has been holding up well, with unemployment forecast to fall to 2.6% in the second quarter of 2022 from 2.8% in the first quarter.

loan growth. We also expect the PBC to accelerate foreign-currency purchases in coming months to counter appreciation in the renminbi and raise reserves to assuage fears linked to the possibility of U.S.-dollar bond defaults. Beijing will also likely allow more local governments to ease local property curbs.

India's GDP growth, at 7%, is expected to be the highest in the region in 2022. However, there are rising macroeconomic risks. Inflation and a growing budget deficit are starting to dent confidence, and a weakening global economy is starting to have an impact on domestic growth. Continued monetary-policy accommodation has become increasingly untenable. As COVID-19 becomes endemic, mobility has rapidly picked up, with a recovery in economic activities that require close personal contact, resulting in a sharp recovery in business. However, there are headwinds from higher fuel prices, with a broad-based rise in inflationary pressures weighing on demand as evidenced by weak retail trends in March auto sales. Disrupted global supply chains and weaker global-growth prospects from the Russia-Ukraine conflict have also weighed on the recovery. CPI inflation at 8% is higher than the Reserve Bank of India's (RBI) upper bound of 6%. As a result, the RBI in April made fighting inflation a priority over facilitating economic growth. We expect further rate hikes after the RBI raised rates earlier this month. Higher fertilizer and food costs increase the odds that the fiscal 2023 budget deficit will be higher than the 6.4% target.

In Australia, strong retail sales and higher personal mobility are expected to drive economic growth in the second quarter of 2022. Greater-than-expected fiscal spending in the March budget and the positive terms-of-trade benefit of higher commodity prices should also support growth this year. However, these factors, combined with higher inflation, are now expected to result in additional rate hikes that could lead to slower growth in 2023. Inflation is settling at the top of the Reserve Bank of Australia's comfort range of 2% to 3%. As a result, we expect a more aggressive tightening cycle. Economists are forecasting a rate hike in June, and a series of further increases could push the benchmark interest rate to 2.00% from 0.35% at the end of May.

In Thailand, 2022 GDP growth is forecast at 3.7%, implying economic output will not return to pre-pandemic levels before the third quarter of 2022. Tourism arrivals from abroad are forecast at 5 million, which equates to just 13% of pre-pandemic levels, even with the resumption of quarantine-free travel. Combined with rising oil prices and elevated freight costs, the 2022 current-account deficit is forecast at 2.3% of GDP, widening from 2.1% in 2021. The policy rate remains low at 0.5% given that consumer inflation is forecast at 5% for 2022, as the central bank emphasizes that support for the economy remains its top priority.





Regional outlook – Emerging markets



Guido Giammattei

Portfolio Manager
Emerging Market Equities
RBC Global Asset Management (UK) Limited

All major equity benchmarks have recorded relatively large losses so far in 2022, buffeted by rising interest rates, the negative economic impact of Russia's invasion of Ukraine and continued economic weakness in China after COVID-19 lockdowns in some of the country's largest cities. Emerging-market equities have traded largely in line with those in developed markets against a backdrop where they might have been expected to underperform, as emerging markets were supported by stronger corporate cash flows, resilient currencies and attractive valuations.

Excluding Russia, China was the weakest-performing emerging market, down 10.7% during the three months ended May 31, 2022. Emerging markets excluding China performed better, with a 5.7% decline, as commodity-exporting countries posted positive results.

China, whose economy has been battered by the COVID-related lockdowns, finds itself in a difficult position. The country's economic situation requires the government to loosen monetary and fiscal policy at a time when the U.S. Federal Reserve and other major central banks are tightening. As a result, any efforts on the monetary front to counter the negative impact of the lockdowns on growth are limited by concerns over capital outflows.

There are four factors that are likely to shape the performance of Chinese equities for the remainder of the year, three of which are potential positives.

First, China appears to be less of an immediate threat to geopolitical stability than many analysts had assumed at the beginning of the year, as evidenced by ebbing Chinese support for Russia's invasion of Ukraine. It is likely that the strong Western sanctions imposed on Russia have forced Beijing to reconsider the potential economic impact of a similar response should China launch an invasion of Taiwan. Our view is that China's goal of becoming the world's largest economy – a key aspect of President Xi's plan to extend the country's geopolitical influence – requires a conciliatory stance. This is because the path towards economic supremacy is based in part on maintaining a non-hostile global environment and avoiding isolation or sanctions that would jeopardize the technological and financial transfers necessary to maximize China's self-sufficiency over the longer term.

The second supporting factor is valuations. China earnings estimates have been cut by analysts for 15 consecutive months and the current level of equity valuations in terms of price to book value is at the lowest relative to the MSCI World Index in the past 20 years. A lot of negative news has been priced in.

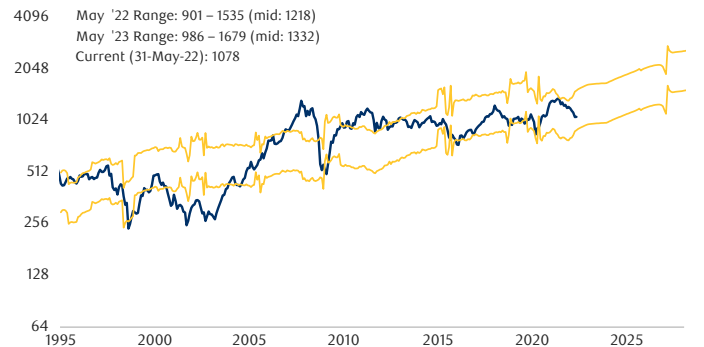
The third supporting factor is that fiscal policy is becoming more accommodative. While Chinese authorities may not have the same leeway as they have in the recent past, there are signs that government spending is having more

of an economic impact. Historically there has been a strong positive relationship between growth in government spending (known as “total social financing”) and credit and profit growth.

The negative factor in the short term is the re-emergence of COVID-19 cases in the country and the government’s strategy for managing outbreaks. China’s approach since the onset of the pandemic has been one of “zero COVID,” meaning draconian lockdowns even if they stifle the economy. Attention remains focused on Shanghai, a city of 26 million people, where authorities have started to ease restrictions as cases appear to have peaked. Clearly a repeat of a similar lockdown in other Chinese cities would crush economic growth. China will have to find ways to deal with the fact that its vaccine has proven ineffective and that the country’s failure to prioritize the elderly for inoculations has worsened what might have been a more manageable situation. As long as Chinese officials retain their hard-line COVID policies, growth will be hampered and equities will have difficulty rebounding – even as valuations become more attractive.

In terms of how we position our funds, the key phrase at the moment is “pricing power.” One very important area to consider is inflation, and food inflation in particular. Food is a special concern because Ukraine and Russia are the largest producers and exporters of wheat, barley and other key agricultural commodities. Secondly, Belarus is the largest producer of fertilizers, the prices of which have skyrocketed, as sanctions curb supply and extraordinarily high fuel prices raise production costs elsewhere. Many farmers around the world are not able to afford fertilizer at current prices, reducing crop yields. The FAO Food Price Index is now higher than it was in 2011 at the time of the Arab Spring. We are seeing economic instability and social

MSCI Emerging Markets Index Equilibrium Normalized earnings and valuations



Source: RBC GAM

unrest in more fragile emerging economies such as Sri Lanka, Pakistan, Peru and Egypt. The step from social unrest to political revolution can be a short one, and if supply is not restored, we could see famines unfolding in emerging markets, where food accounts for about 35% of consumer expenditures versus 10% in the developed world.

After a decade of almost no inflation, the next 10 years may be characterized by a higher level of inflation. In this environment, it’s important to be positioned in businesses with strong pricing power. We therefore favour businesses with low leverage, cost structures that have low exposure to commodity prices, high market shares, relatively few fixed assets and products that are not easily replaceable. A sector that generally tends to have pricing power is Consumer Staples. The technology sectors have been very weak and their valuations are becoming more attractive, so they could offer investment opportunities later this year.

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 \$553 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 May 31, 2022



Stephen Burke, PhD, CFA

Vice President and Portfolio Manager
RBC Global Asset Management Inc.

Stephen is a fixed-income portfolio manager and Head of the Quantitative Research Group, the internal team that develops quantitative research solutions for investment decision-making throughout the firm. He is also a member of the PH&N IM Asset Mix Committee. Stephen joined Phillips, Hager & North Investment Management in 2002. The first six years of his career were spent at an investment-counselling firm where he quickly rose to become a partner and fixed-income portfolio manager. He then took two years away from the industry to begin his Ph.D. in Finance and completed it over another three years while serving as a fixed-income portfolio manager for a mutual-fund company. Stephen became a CFA charterholder in 1994.



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.



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.



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.



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.


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.



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.

Global equity advisory committee

> Philippe Langham

Head & Senior Portfolio Manager,
Emerging Market Equities
RBC Global Asset Management (UK)
Limited

> Brad Willock, CFA

V.P. & Senior Portfolio Manager,
North American Equities
RBC Global Asset Management Inc.

> Mayur Nallamala

Head & Senior V.P., Asian Equities
RBC Global Asset Management (Asia)
Limited

> Martin Paleczny, CFA

V.P. & Senior Portfolio Manager,
Asset Allocation & Derivatives
RBC Global Asset Management Inc.

> Dominic Wallington

Head, European Equities &
Senior Portfolio Manager,
RBC Global Asset Management (UK)
Limited

Global Fixed Income & Currencies advisory committee

> Dagmara Fijalkowski, MBA, CFA

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

> Soo Boo Cheah, MBA, CFA

Senior Portfolio Manager,
Global Fixed Income & Currencies
RBC Global Asset Management (UK)
Limited

> Suzanne Gaynor

V.P. & Senior Portfolio Manager, Global
Fixed Income & Currencies
RBC Global Asset Management Inc.

> Eric Lascelles

Chief Economist
RBC Global Asset Management Inc.

Disclosure

This document is provided by RBC Global Asset Management (RBC GAM) for informational purposes only and may not be reproduced, distributed or published without the written consent of RBC GAM or its affiliated entities listed herein. This document does not constitute an offer or a solicitation to buy or to sell any security, product or service in any jurisdiction; nor is it intended to provide investment, financial, legal, accounting, tax, or other advice and such information should not be relied or acted upon for providing such advice. This document is not available for distribution to investors in jurisdictions where such distribution would be prohibited.

RBC GAM is the asset management division of Royal Bank of Canada (RBC) which includes RBC Global Asset Management Inc., RBC Global Asset Management (U.S.) Inc., RBC Global Asset Management (UK) Limited, RBC Global Asset Management (Asia) Limited, and BlueBay Asset Management LLP, which are separate, but affiliated subsidiaries of RBC.

In Canada, this document is provided by RBC Global Asset Management Inc. (including PH&N Institutional) which is regulated by each provincial and territorial securities commission with which it is registered. In the United States, this document is provided by RBC Global Asset Management (U.S.) Inc., a federally registered investment adviser. In Europe this document is provided by RBC Global Asset Management (UK) Limited, which is authorised and regulated by the UK Financial Conduct Authority. In Asia, this document is provided by RBC Global Asset Management (Asia) Limited, which is registered with the Securities and Futures Commission (SFC) in Hong Kong.

Additional information about RBC GAM may be found at www.rbcgam.com.

This document has not been reviewed by, and is not registered with any securities or other regulatory authority, and may, where appropriate and permissible, be distributed by the above-listed entities in their respective jurisdictions.

Any investment and economic outlook information contained in this document has been compiled by RBC GAM from various sources. Information obtained from third parties is believed to be reliable, but no representation or warranty, express or implied, is made by RBC GAM, its affiliates or any other person as to its accuracy, completeness or correctness. RBC GAM and its affiliates assume no responsibility for any errors or omissions.

Opinions contained herein reflect the judgment and thought leadership of RBC GAM and are subject to change at any time. Such opinions are for informational purposes only and are not intended to be investment or financial advice and should not be relied or acted upon for providing such advice. RBC GAM does not undertake any obligation or responsibility to update such opinions.

RBC GAM reserves the right at any time and without notice to change, amend or cease publication of this information.

Past performance is not indicative of future results. With all investments there is a risk of loss of all or a portion of the amount invested. Where return estimates are shown, these are provided for illustrative purposes only and should not be construed as a prediction of returns; actual returns may be higher or lower than those shown and may vary substantially, especially over shorter time periods. It is not possible to invest directly in an index.

Some of the statements contained in this document may be considered forward-looking statements which provide current expectations or forecasts of future results or events. Forward-looking statements are not guarantees of future performance or events and involve risks and uncertainties. Do not place undue reliance on these statements because actual results or events may differ materially from those described in such forward-looking statements as a result of various factors. Before making any investment decisions, we encourage you to consider all relevant factors carefully.

RBC Global Asset Management

® / ™ Trademark(s) of Royal Bank of Canada. Used under licence.
© RBC Global Asset Management Inc. 2022

Publication date: June 10, 2022

100537 (06/2022)

GIO_SUMMER_2022_EN 06/10/2022

