RBC Global Asset Management

The Global Investment Outlook

RBC GAM Investment Strategy Committee

SPRING 2022

The RBC GAM Investment Strategy Committee


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

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

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

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Executive summary

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The two-week-old war between Russia and Ukraine and the global response to the conflict are evolving rapidly, and in a way that suggests the trajectories of economic growth and financial-market performance have been significantly altered from just a month ago. Although we continue to think that the most likely outcome is for the global economy to continue expanding, we now expect slower growth and higher inflation, and we presume that the odds of recession have increased.

Geopolitical tensions flare up

Russia delivered on its threat to go to war with Ukraine and the invasion has opened up the possibility of a drawn-out period of uncertainty. While there are potential paths to a resolution if Ukraine and NATO agree to Russia's demands, an agreement seems unlikely at the time of writing. From an economic perspective, Ukraine's economy has been devastated and Russia is being subjected to harsh sanctions limiting flows of money, goods and technology. Aside from shock and revulsion from this unprovoked aggression, the main near-term impact on the rest of the world is through lower supplies and higher prices for commodities, which will be most harmful to European countries given their reliance on Russian energy. We project a 0.7% reduction in the eurozone's 2022 GDP growth to 3.0% and a 0.3% decrease in U.S. growth to 3.1%. From a long-term perspective, the Russian-Ukraine war brings a range of potential implications including a new Cold War, increased military spending, nuclear proliferation and a heightened motivation to shift energy supplies toward renewables.

Economic recovery slows

Although the pandemic continues to recede and consumer and business spending is rising, their impact on growth is much less pronounced than it was a year ago. Moreover, a tightening of financial conditions, slowing Chinese growth, reduced U.S. government spending and elevated inflation were already working to undermine the economic expansion as the Ukraine conflict began. As a result, our forecasts for 2022 have moved somewhat lower from last quarter, and remain below the consensus. Global growth is set to decelerate to 3.6% in 2022 from 6.2% in 2021. Developed-world growth should fall to 3.0% from 5.1%, while growth in emerging markets is set to slow to 4.1% from 7.3%. It's worth noting the significant uncertainty around these assumptions given that the damage from sanctions on Russia is particularly unclear. As a result, we believe the risk of U.S. recession in 2022 is significantly higher, at somewhere between 25% and 50%.

Higher inflation for longer

Inflation is running at its highest levels in several decades, now above 7% in the U.S. and approaching 6% in other nations. The main drivers are surging commodity prices and supply-chain problems, but smaller factors include stimulative central banks, labour shortages and a housing boom in much of the world. Inflation is likely to rise even further in the short run due to the war in Eastern Europe. Offsetting some of these inflationary forces over the next year might be an easing in supply-chain pressures and the economy-dampening impact of central-bank rate hikes. Taken together, we anticipate high and above-consensus inflation for 2022, but with a decelerating trend during the second half of the year. We continue to believe that inflation will, over a longer-term horizon, eventually fully revert to normal, with aging populations and slower population growth even bringing inflation down below historical norms.

Currency landscape altered by Russia-Ukraine conflict

The currency landscape has been altered by the freezing of Russian foreign-exchange reserves following the country's invasion of Ukraine. The short-term impact of the conflict has been a rise in the U.S. dollar as investors seek the safety, security and liquidity associated with U.S. assets. But the longer-term consequences of the war, which include higher commodity prices and a reluctance among countries to accumulate reserve assets, will create headwinds for the greenback. In this environment, we expect that commodity currencies will be the clear winners.

Central banks respond to inflation pressures

The war may ultimately reduce the amount of monetary tightening that would have otherwise taken place, but this year is still expected to be one when most developed-world central banks move ahead with rate hikes to temper inflation. We look for four 25-basis-point rate increases from the U.S. Federal Reserve (Fed), the Bank of England and the Bank of Canada (after having hiked once on March 2) this year and none by the European Central Bank. We estimate that four rate increases theoretically reduces a country's economic growth by 0.5% over the following 18 months – far from a recessionary impact. But the speed at which central banks flipped to tightening mode presents at least some risk to economic growth and markets.

Recent jump in yields moderated near-term valuation risk, but the long-term direction for yields likely remains up

Rising rates and higher inflation pushed bond yields sharply higher at the start of the year. The U.S. 10-year yield rose more than 50 basis points to above 2.00% between the end of November and early February. But the potential hit to growth from the war boosted demand for safe-haven assets and pulled yields lower toward the end of the quarter. Our models continue to suggest that the long-term direction for yields is higher, mostly due to the fact that real, or after-inflation, interest rates are unsustainably low at -2.8%, their lowest level in 60 years. While there have been a variety of global GDP headwinds to real rates ranging from aging global demographics to lower potential growth rates to an increased preference for saving versus spending, even placing them at 0% would provide substantial upward pressure on nominal bond yields. We recognize there are some war–related risks to economic growth that could temporarily limit the increase in yields, but our expectation for higher nominal yields over the longer term sets up a scenario where sovereign-bond returns are low or even slightly negative for many years.

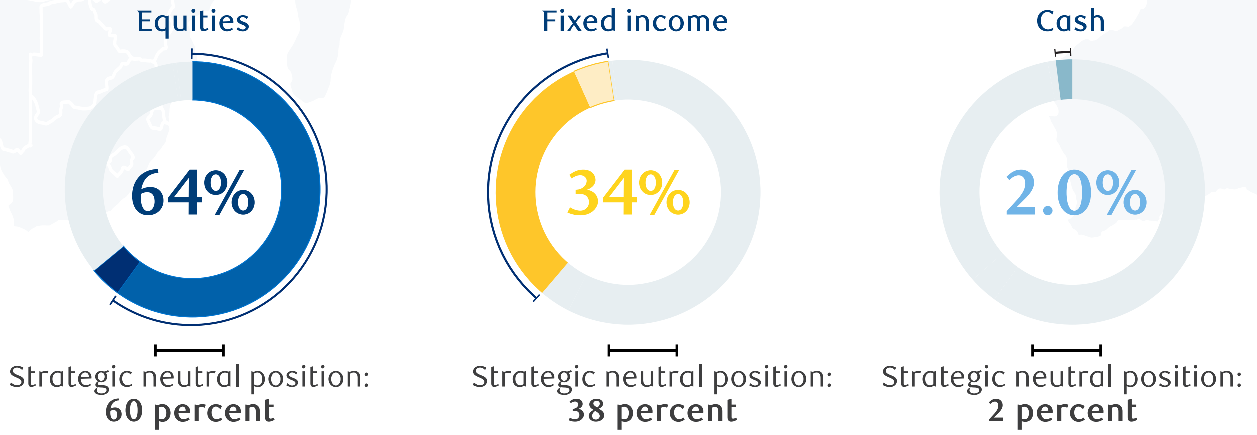
Stocks enter correction, improving return potential as long as earnings come through

After a strong 2021, global equity markets tumbled in the first two months of 2022 as major indexes experienced declines of 10% to 20% from their recent peaks. The major concern for equity investors at the start of the year was the prospect of tighter Fed policy, prompting a significant cut to the valuations of the market's most expensive companies, in particular. While the war in Ukraine is causing stock-market volatility, economic growth and earnings are forecast to continue rising, albeit at a slower pace. We have cut our estimate of nominal U.S. GDP growth to 9.0%, which still translates to relatively strong earnings growth of 16.4%, based on our regression model. The consensus of analysts' estimates is for just 8% profit growth this year, so there is still a decent cushion against the uncertainty created by the war in Ukraine. Moreover, given that measures of investor sentiment are extremely pessimistic and valuations have come down, any indication that the outlook is improving could result in a significant positive swing in investors' attitude toward stocks.

Asset mix – re-deployed cash to bonds and stocks at more attractive levels

The distribution of potential outcomes spans an unusually wide range as a result of the war, surging commodity prices and a tightening of financial conditions, and we recognize that the odds of a negative scenario have increased meaningfully. Within the spectrum of possibilities, our base case continues to look for an extension of the global economic expansion, a peak in inflation by the end of the year and central-bank rate hikes. The significant re-pricing in assets since the start of the year has provided us with an opportunity to re-commit some of the cash we had built up over the past two quarters. We added 0.5% to our fixed-income allocation in recognition that the recent rise in yields reduces near-term valuation risk and provides a better cushion against a downturn in the economy. But we remain underweight fixed income overall given our longer-term view that they will deliver low to slightly negative returns as yields rise. We also added 0.5% to our equity allocation as stocks sold off in the early days of Russia's invasion of Ukraine, which reduced valuations and boosted return potential under the assumption that solid nominal GDP growth will continue to support gains in corporate profits. We have retained a 2% cash reserve should further opportunities present themselves. For a balanced, global investor, we currently recommend an asset mix of 64.0 percent equities (strategic neutral position: 60 percent) and 34.0 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*	
	Spring 2022	Change from New Year 2022	Spring 2022	Change from New Year 2022	Spring 2022	Change from New Year 2022	Spring 2022	Change from New Year 2022	Spring 2022	Change from New Year 2022	Spring 2022	Change from New Year 2022	Spring 2022	Change from New Year 2022
Real GDP														
2021A[1]	5.68%		4.56%		5.18%		7.45%		1.74%		8.42%		7.33%	
2022E	3.10%	(0.40)	3.10%	(0.50)	3.00%	(0.50)	3.90%	(0.70)	2.20%	(0.10)	4.70%	0.10	4.10%	(0.50)
2023E	2.60%	N/C	2.90%	N/C	2.40%	N/C	2.90%	N/C	1.90%	N/C	5.40%	N/C	4.70%	N/C
CPI														
2021A[1]	4.69%		3.40%		2.60%		2.59%		(0.23%)		0.86%		3.08%	
2022E	5.90%	2.10	4.80%	1.80	4.60%	2.10	5.40%	1.90	2.10%	1.20	3.10%	0.60	4.60%	1.04
2023E	2.30%	N/C	2.20%	N/C	2.00%	N/C	2.10%	N/C	1.10%	N/C	2.20%	N/C	2.80%	N/C

A = Actual E = Estimate *GDP Weighted Average of China, India, South Korea, Brazil, Mexico and Russia. [1]Awaiting actual Q4 2021 GDP release for Brazil and Russia. As a result, the Emerging Markets real GDP growth figure for 2021 is a forecast.

Targets (RBC GAM Investment Strategy Committee)

	February 2022	Forecast February 2023	Change from New Year 2022	1-year total return estimate* (%)
Currency markets against USD				
CAD (USD–CAD)	1.27	1.19	0.02	6.9
EUR (EUR–USD)	1.12	1.16	(0.08)	1.9
JPY (USD–JPY)	114.98	110.00	3.00	3.5
GBP (GBP–USD)	1.34	1.39	(0.01)	3.9
Fixed income markets				
U.S. Fed Funds Rate	0.13	1.25	0.88	0.0
U.S. 10-Year Bond	1.83	2.25	0.45	(2.0)
Canada Overnight Rate	0.25	1.50	0.75	0.0
Canada 10-Year Bond	1.81	2.00	N/C	0.1
Eurozone Deposit Facility Rate	(0.50)	(0.50)	N/C	0.0
Germany 10-Year Bund	0.14	0.15	0.20	(0.0)
U.K. Base Rate	0.50	1.50	1.15	0.0
U.K. 10-Year Gilt	1.41	1.55	0.30	0.1
Japan Overnight Call Rate	(0.01)	(0.10)	N/C	0.0
Japan 10-Year Bond	0.19	0.15	0.05	0.6
Equity markets				
S&P 500	4374	4575	(150)	6.1
S&P/TSX Composite	21126	21900	200	6.5
MSCI Europe	152	158	(4)	7.6
FTSE 100	7458	7650	300	6.6
Nikkei	26527	27900	(1900)	7.2
MSCI Emerging Markets	1171	1220	(80)	7.4

*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	Spring 2021	Summer 2021	Fall 2021	New Year 2022	**Spring 2022**
Cash	**2.0%**	0.0% – 15.0%	1.0%	1.0%	2.5%	3.0%	**2.0%**
Bonds	**38.0%**	23.0% – 53.0%	34.5%	35.0%	33.5%	33.5%	**34.0%**
Stocks	**60.0%**	45.0% – 75.0%	64.5%	64.0%	64.0%	63.5%	**64.0%**

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

Regional allocation

Global bonds	**WGBI* February 2022**	Allowable range	Spring 2021	Summer 2021	Fall 2021	New Year 2022	**Spring 2022**
North America	**44.4%**	34.4% – 54.4%	40.8%	41.7%	39.7%	46.1%	**39.4%**
Europe	**39.2%**	29.2% – 49.2%	36.9%	46.2%	41.0%	42.5%	**41.7%**
Asia	**16.4%**	6.4% – 26.4%	22.3%	12.1%	19.3%	11.5%	**18.9%**

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

Global equities	**MSCI** February 2022**	Allowable range	Spring 2021	Summer 2021	Fall 2021	New Year 2022	**Spring 2022**
North America	**69.0%**	59.0% – 79.0%	65.3%	65.7%	66.8%	67.8%	**68.9%**
Europe	**14.9%**	4.9% – 24.9%	15.4%	16.2%	16.2%	15.5%	**14.9%**
Asia	**7.7%**	0.0% – 17.7%	10.4%	9.4%	8.4%	8.2%	**7.9%**
Emerging markets	**8.3%**	0.0% – 18.3%	8.9%	8.8%	8.6%	8.6%	**8.3%**

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

Global equity sector allocation

	MSCI February 2022**	RBC GAM ISC New Year 2022	**RBC GAM ISC Spring 2022**	Change from New Year 2022	Weight vs. benchmark
Energy	3.97%	3.27%	5.67%	2.40	142.8%
Materials	4.22%	2.59%	4.22%	1.64	100.0%
Industrials	10.01%	10.22%	9.01%	(1.21)	90.0%
Consumer discretionary	11.85%	13.93%	10.05%	(3.88)	84.8%
Consumer staples	7.09%	5.72%	8.69%	2.97	122.6%
Health care	12.39%	12.45%	12.39%	(0.06)	100.0%
Financials	14.35%	15.76%	16.35%	0.58	113.9%
Information technology	22.54%	24.45%	22.54%	(1.91)	100.0%
Communication services	8.11%	8.75%	7.11%	(1.64)	87.7%
Utilities	2.76%	1.18%	2.76%	1.59	100.0%
Real estate	2.71%	1.67%	1.21%	(0.46)	44.6%

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

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

Very Conservative

Asset class	Bench-mark	Range	Last quarter	Current recommendation
Cash & Cash Equivalents	2%	0-15%	3.0%	2.0%
Fixed Income	73%	68-88%	68.7%	69.2%
Total Cash & Fixed Income	75%	60-90%	71.7%	71.2%
Canadian Equities	10%	0-20%	11.3%	11.5%
U.S. Equities	8%	0-18%	8.8%	9.2%
International Equities	7%	0-17%	8.2%	8.1%
Emerging Markets	0%	0%	0.0%	0.0%
Total Equities	25%	10-40%	28.3%	28.8%

	Return	Volatility
40-year average	8.4%	4.9%
Last 12 months	1.1%	4.8%

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

Conservative

Asset class	Bench-mark	Range	Last quarter	Current recommendation
Cash & Cash Equivalents	2%	0-15%	3.0%	2.0%
Fixed Income	58%	43-83%	53.6%	54.1%
Total Cash & Fixed Income	60%	45-75%	56.6%	56.1%
Canadian Equities	13%	3-23%	14.0%	14.3%
U.S. Equities	15%	5-25%	15.9%	16.4%
International Equities	12%	2-22%	13.5%	13.2%
Emerging Markets	0%	0%	0.0%	0.0%
Total Equities	40%	25-55%	43.4%	43.9%

	Return	Volatility
40-year average	8.9%	6.1%
Last 12 months	3.4%	5.4%

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

Balanced

Asset class	Bench-mark	Range	Last quarter	Current recommendation
Cash & Cash Equivalents	2%	0-15%	3.0%	2.0%
Fixed Income	38%	23-53%	33.5%	34.0%
Total Cash & Fixed Income	40%	25-55%	36.5%	36.0%
Canadian Equities	15%	5-25%	15.7%	16.0%
U.S. Equities	25%	15-35%	25.9%	26.6%
International Equities	15%	5-25%	16.5%	16.1%
Emerging Markets	5%	0-15%	5.4%	5.3%
Total Equities	60%	45-75%	63.5%	64.0%

	Return	Volatility
40-year average	9.2%	7.6%
Last 12 months	5.5%	6.2%

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%	3.0%	2.0%
Fixed Income	23%	8-38%	18.4%	18.9%
Total Cash & Fixed Income	25%	10-40%	21.4%	20.9%
Canadian Equities	18%	8-28%	18.6%	19.0%
U.S. Equities	30%	20-40%	30.7%	31.6%
International Equities	19%	9-29%	20.7%	20.1%
Emerging Markets	8%	0-18%	8.6%	8.4%
Total Equities	75%	60-90%	78.6%	79.1%

	Return	Volatility
40-year average	9.4%	9.4%
Last 12 months	7.1%	6.8%

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%	29.0%	29.3%
U.S. Equities	38%	28-48%	37.4%	38.2%
International Equities	20%	10-30%	21.1%	20.3%
Emerging Markets	11%	1-21%	11.5%	11.2%
Total Equities	98%	83-100%	99.0%	99.0%

	Return	Volatility
40-year average	9.8%	11.9%
Last 12 months	11.1%	7.9%

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

Capital markets performance

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The value of the U.S. dollar remained relatively stable against major currencies in the quarter ended February 28, 2022, given a backdrop of financial-market volatility, uncomfortably high inflation, hawkish central banks and Russia's invasion of Ukraine. The greenback appreciated 1.7% against the yen and 1.1% against the euro but depreciated 0.9% against the British pound and 0.8% against the Canadian dollar. Expected interest-rate hikes by the U.S. Federal Reserve (Fed) supported the dollar, offset by actual rate hikes in the U.K., Canada and many emerging-market central banks, a rotation out of U.S. equities and an increased risk of recession. The yen depreciated against the dollar as the Bank of Japan left interest rates unchanged and investors expected U.S. rates to rise more than those in Japan. Likewise, the euro depreciated against the dollar due to the European Central Bank's more dovish monetary-policy stance and the persistence of negative yields in many European countries. Over the one-year period, the U.S. dollar strengthened 7.9% against the yen, 7.6% against the euro and 3.9% against sterling but was relatively unchanged against the Canadian dollar.

All major fixed-income indexes experienced losses in the latest quarter in U.S.-dollar terms. Bond yields climbed in all key markets as inflation continued to rise. The Fed acknowledged that it would need to be more aggressive in tightening policy to achieve price stability. The yield on the 10-year Treasury bond rose as high as 2.06% on February 16, before settling at 1.83% by month-end on concerns of slowing economic growth, exacerbated by the war in Ukraine. The FTSE European Government Bond Index was the biggest loser with a 5.1% decline, hurt by a weaker euro, while the FTSE Canada Universe Bond Index held in best with a 1.7% decrease. European yields rose slightly more than Canadian yields, but the primary difference in returns came from U.S.-dollar exchange rates. Over the past 12 months, U.S. and Canadian benchmark bond indexes were both down 2.6% while the European index and the FTSE Japanese Government Bond Index dropped 10.6% and 7.8%, respectively, mostly as a result of currency weakness against the dollar.

Equity markets encountered significant volatility during the quarter as expectations that interest rates are heading higher dragged down valuations, especially for companies with the highest price-to-earnings ratios. While many major indexes experienced a correction, defined by a drop of 10% or more from recent highs, the richly valued Nasdaq market fell into a bear market, which is a decline of at least 20%. Stock-market indexes regained some lost ground to close the quarter, with the Nasdaq Composite Index's 11.4% decline being the worst among key indexes. The MSCI U.K.

Index was by far the best performing index, with a 9.1% return in U.S.-dollar terms thanks to its large weighting in the Financials and Energy sectors, which benefited from the rise in interest rates and energy prices. Over the one-year period, Canadian equities had the biggest gains, with the S&P/TSX Composite Index up 20.6%, while the MSCI Emerging Markets Index performed worst with a 10.7% decline.

The large-cap S&P 500 Index, with a decline of 3.9%, trailed its mid- and small-cap counterparts, which lost 1.4% and 1.7%, respectively, in the three-month period amid falling valuations for large-cap stocks. Similarly, investors fled from relatively expensive growth stocks, leading to the outperformance of the Russell 3000 Value Index, which gained 2.4%, versus a 10.7% decline for the Russell 3000 Growth Index. While stocks fell overall, five of the 11 global sectors recorded gains. The variance in returns between sectors was large, with the Energy sector up 26.0%, a 38 percentage point difference from the 12.0% drop in the Consumer Discretionary sector. Over a one-year time frame, the Energy sector gained the most at 42.7%, compared with a 3.2% decline in Communication Services, which was the worst performing sector.

Exchange rates

Periods ending February 28, 2022

	Current USD	3 months (%)	YTD (%)	1 year (%)	3 years (%)	5 years (%)
USD–CAD	1.2675	(0.78)	0.24	(0.40)	(1.24)	(0.93)
USD–EUR	0.8919	1.15	1.47	7.61	0.48	(1.13)
USD–GBP	0.7454	(0.86)	0.85	3.85	(0.38)	(1.55)
USD–JPY	114.9650	1.71	(0.11)	7.85	1.04	0.46

Note: all changes above are expressed in US dollar terms

Canada

Periods ending February 28, 2022

	USD					CAD		
Fixed income markets: Total return	3 months (%)	YTD (%)	1 year (%)	3 years (%)	5 years (%)	3 months (%)	1 year (%)	3 years (%)
FTSE Canada Univ. Bond Index TR	(1.73)	(4.33)	(2.65)	3.55	3.24	(2.50)	(3.04)	2.26

U.S.

Periods ending February 28, 2022

	USD					CAD		
Fixed income markets: Total return	3 months (%)	YTD (%)	1 year (%)	3 years (%)	5 years (%)	3 months (%)	1 year (%)	3 years (%)
FTSE U.S. Government TR	(3.70)	(3.41)	(2.64)	3.35	2.74	(4.45)	(3.03)	2.07
BBg U.S. Agg. Bond Index TR[1]	(3.49)	(3.25)	(2.64)	3.30	2.71	(4.25)	(3.03)	2.02

Global

Periods ending February 28, 2022

	USD					CAD		
Fixed income markets: Total return	3 months (%)	YTD (%)	1 year (%)	3 years (%)	5 years (%)	3 months (%)	1 year (%)	3 years (%)
FTSE WGBI TR	(3.92)	(3.64)	(6.19)	1.87	2.23	(4.67)	(6.56)	0.60
FTSE European Government TR	(5.06)	(4.46)	(10.65)	0.98	2.45	(5.80)	(11.01)	(0.27)
FTSE Japanese Government TR	(3.63)	(1.60)	(7.79)	(1.56)	(0.30)	(4.38)	(8.16)	(2.78)

Canada

Periods ending February 28, 2022

	USD					CAD		
Equity markets: Total return	3 months (%)	YTD (%)	1 year (%)	3 years (%)	5 years (%)	3 months (%)	1 year (%)	3 years (%)
S&P/TSX Composite	3.73	(0.37)	20.57	14.48	10.81	2.92	20.09	13.06
S&P/TSX 60	3.91	(0.55)	22.98	15.24	11.54	3.10	22.48	13.80
S&P/TSX Small Cap	6.46	4.13	14.61	15.03	7.56	5.63	14.15	13.61

U.S.

Periods ending February 28, 2022

	USD					CAD		
Equity markets: Total return	3 months (%)	YTD (%)	1 year (%)	3 years (%)	5 years (%)	3 months (%)	1 year (%)	3 years (%)
S&P 500 TR	(3.89)	(8.01)	16.39	18.24	15.17	(4.64)	15.92	16.78
S&P 400 TR	(1.41)	(6.18)	7.98	13.40	10.71	(2.18)	7.54	11.99
S&P 600 TR	(1.71)	(5.97)	4.22	12.17	10.78	(2.48)	3.80	10.77
Russell 3000 Value TR	2.43	(3.52)	14.42	12.11	9.34	1.63	13.96	10.72
Russell 3000 Growth TR	(10.73)	(12.50)	10.31	22.21	19.56	(11.43)	9.87	20.69
NASDAQ Composite Index TR	(11.36)	(12.01)	4.92	23.25	19.86	(12.05)	4.50	21.72

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

Periods ending February 28, 2022

	USD					CAD		
Equity markets: Total return	3 months (%)	YTD (%)	1 year (%)	3 years (%)	5 years (%)	3 months (%)	1 year (%)	3 years (%)
MSCI World TR *	(3.74)	(7.69)	10.74	14.44	12.05	(4.83)	10.95	13.01
MSCI EAFE TR *	(1.73)	(6.52)	2.83	7.78	7.16	(2.84)	3.02	6.44
MSCI Europe TR *	(1.15)	(7.27)	6.82	8.49	7.79	(2.26)	7.01	7.13
MSCI Pacific TR *	(2.83)	(5.06)	(3.98)	6.46	6.07	(3.92)	(3.80)	5.13
MSCI UK TR *	9.11	1.69	16.60	5.66	5.82	7.88	16.81	4.34
MSCI France TR *	(1.60)	(8.10)	7.96	9.24	9.84	(2.71)	8.16	7.88
MSCI Germany TR *	(5.34)	(10.34)	(5.69)	5.46	4.03	(6.40)	(5.51)	4.15
MSCI Japan TR *	(4.36)	(6.13)	(5.00)	7.22	6.13	(5.43)	(4.83)	5.88
MSCI Emerging Markets TR *	(3.04)	(4.83)	(10.69)	6.04	6.99	(4.13)	(10.52)	4.71

Global equity sectors

Periods ending February 28, 2022

	USD					CAD		
Sector: Total return	3 months (%)	YTD (%)	1 year (%)	3 years (%)	5 years (%)	3 months (%)	1 year (%)	3 years (%)
Energy TR *	25.98	21.28	42.71	4.64	3.85	24.56	42.98	3.34
Materials TR *	4.42	(2.58)	10.90	14.78	11.11	3.24	11.10	13.35
Industrials TR *	(3.35)	(8.34)	5.16	9.96	9.11	(4.44)	5.36	8.59
Consumer discretionary TR *	(12.01)	(12.45)	3.11	17.37	14.78	(13.00)	3.30	15.90
Consumer staples TR *	4.37	(3.77)	16.55	10.27	7.38	3.19	16.77	8.89
Health care TR *	(1.01)	(7.80)	12.35	12.96	11.92	(2.13)	12.56	11.55
Financials TR *	2.06	(2.12)	15.57	11.07	8.24	0.91	15.79	9.68
Information technology TR *	(10.50)	(12.77)	12.55	27.97	24.20	(11.51)	12.76	26.38
Communication services TR*	(9.43)	(11.14)	(3.19)	13.30	8.56	(10.45)	(3.01)	11.89
Utilities TR *	4.29	(3.70)	13.52	8.03	8.48	3.11	13.73	6.69
Real estate TR *	(3.32)	(10.34)	13.82	6.71	6.68	(4.41)	14.03	5.38

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

Economic outlook

Fragile recovery ahead

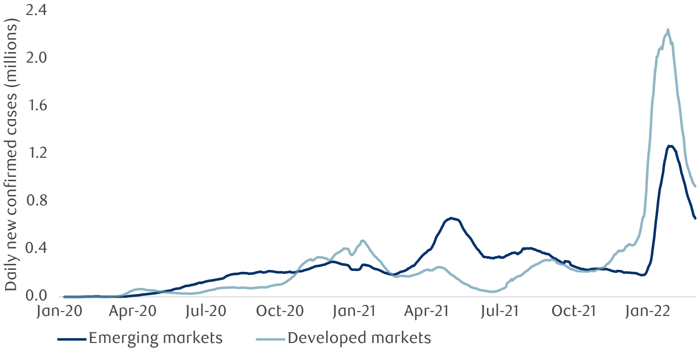
Eric Lascelles
Chief Economist
RBC Global Asset Management Inc.

The past few years have made for rough but rapid sailing. Repeated waves of pandemic infections have interrupted the normal rhythm of economic activity and daily life. But beneath this choppiness, the trend rate of economic growth has been powerfully positive.

This year feels somewhat different. In one way, the difference is good: the pandemic is becoming less worrying as the Omicron wave fades and high levels of immunity hopefully limit the danger of future variants (Exhibit 1). Economic activity has been rebounding in recent months as the latest batch of restrictions ease (Exhibit 2).

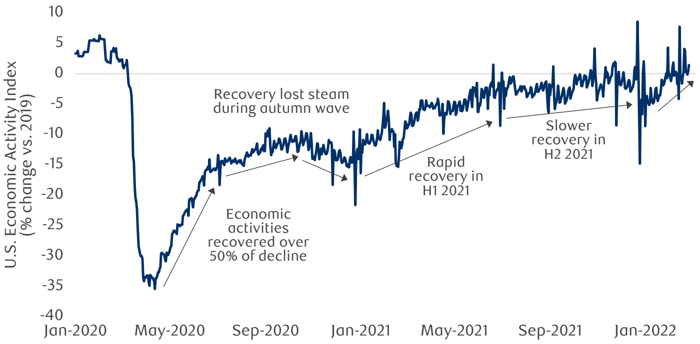
However, another change is less welcome. There are now significant non-COVID growth headwinds for 2022. These include ebbing growth as economies near their potential (Exhibit 3), economic friction due to the highest inflation in four decades, a monetary drag as central banks begin to raise rates, slower-than-usual Chinese economic growth, and, now, a Russia-Ukraine conflict with global consequences.

Exhibit 1: Omicron wave is retreating globally



Note: As of 3/1/2022. Calculated as the 7-day moving average of daily infections. Source: WHO, Macrobond, RBC GAM

Exhibit 2: Economy recovers from Omicron attack and returns to pre-pandemic levels



Note: As of 02/26/2022. Economic Activity Index is the average of nine high-frequency economic data series measuring the percentage change versus the same period in 2019. Source: Bank of America, Goldman Sachs, OpenTable, Macrobond, RBC GAM

Understandably, economic growth is set to slow in 2022. That said, this adversity needs to be put into perspective. While there are undeniably significant new downside risks to the outlook, it remains more likely than not that growth will exceed the pre-pandemic norm, and be sufficient to restore economies to their full potential over time.

Financial markets have become glummer in recent months as they process the new headwinds. We have nevertheless been inclined to take incrementally more investment risk rather than less.

A dampened recovery

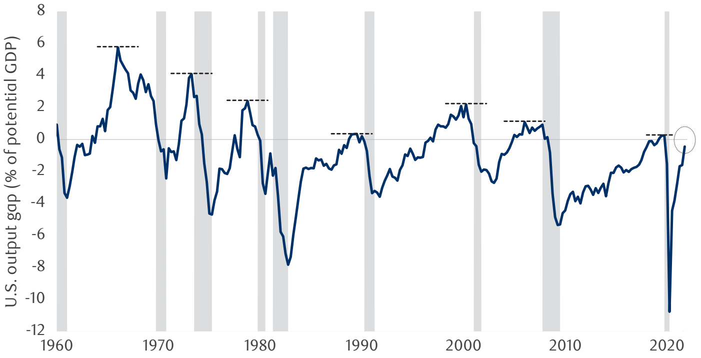
A wide range of economic forces is set to operate on the global economy in 2022 (Exhibit 4).

While tailwinds continue to exist, several are becoming less forceful. The fading of the pandemic is helpful, but most of the resultant boost has already been realized. A bit of economic buoyancy remains as a handful of lagging sectors and prospective workers endeavor to revert to pre-pandemic norms, but this is much less than a year ago (Exhibit 5).

Businesses continue to plan for a robust increase in capital expenditures, though the expected growth isn't as strong as it was a year ago. Meanwhile, the outlook for consumer spending, while still good, isn't as impressive as it was a few quarters ago. Although household finances remain exceptionally healthy and hiring is good, the U.S. personal-savings rate has retreated to its pre-pandemic level, interest rates are rising and consumer confidence has been shaken by high inflation. It is a similar situation in other countries.

> "Our forecasts simultaneously predict below-consensus growth and above-consensus inflation. Is this "stagflation" – an unusual situation in which inflation is high while growth is low?"

Exhibit 3: U.S. output gap just about closed



Note: As of Q4 2021. Shaded area represents recession. Source: CBO, Macrobond, RBC GAM

Exhibit 4: Key economic forces for 2022

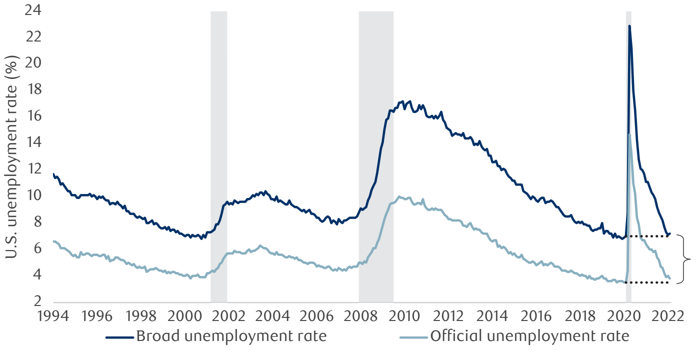
Positive forces ▲
- Pandemic ebbs
- Natural buoyancy
- Cap ex plans
- Inventory building
- Resilient household finances
- Supply chain problems to fade

Negative forces ▼
- Omicron damage; future waves
- Diminishing buoyancy
- Monetary drag
- Fiscal drag
- China drag
- Inflation drag
- Geopolitical drag

We anticipate a decelerating, below-consensus economic recovery

Note: As of 02/24/2022. Source: RBC GAM

Exhibit 5: U.S. unemployment rates approaching pre-pandemic levels



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

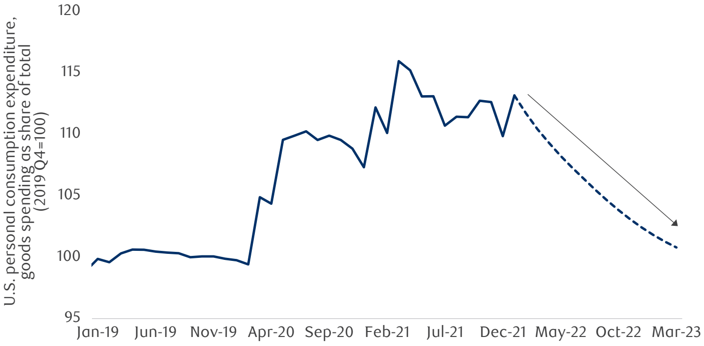
Incidentally, goods spending is likely to retreat to more normal levels after a white-hot pandemic, whereas service spending should rise as people resume high-touch service activities (Exhibit 6).

One undiminished tailwind is the desire of many companies to build up their inventories (Exhibit 7). It also seems reasonable to expect a temporary burst of pent-up demand for certain products when supply-chain troubles ease.

But the headwinds pitted against those favourable forces are significant, and, in general, strengthening. As discussed in more detail later, central banks are now in rate-hike mode and financial conditions are tightening more broadly (Exhibit 8), China's economy has lost momentum, high inflation leaves a mark on growth and geopolitical problems have flared. Additionally, although governments continue to run significant budget deficits, government spending is set to be sharply lower than in the prior two years.

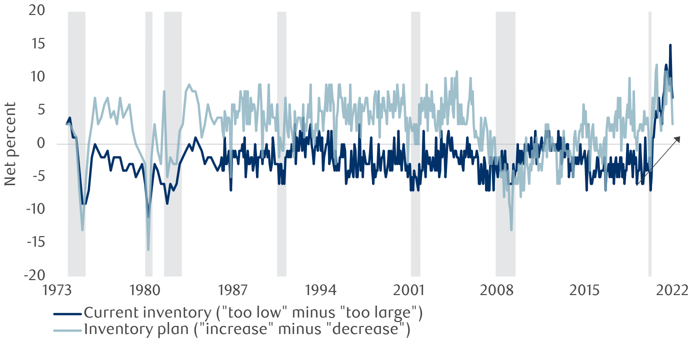
All of this adds up to a prospective rate of economic growth that is not nearly as impressive as that of 2021 (Exhibit 9). Our forecasts for 2022 have moved somewhat lower relative to a quarter ago, and remain below the

Exhibit 6: U.S. consumer spending on goods to retreat to pre-pandemic levels eventually



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

Exhibit 7: U.S. businesses still plan significant inventory investments



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

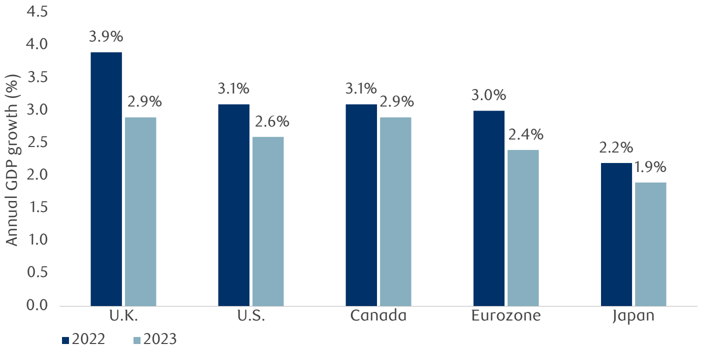
Exhibit 8: Financial conditions have started to tighten

Note: As of 3/2/2022 for U.S., 3/1/2022 for global. Source: Goldman Sachs, Bloomberg, RBC GAM

Exhibit 9: Global economic growth deteriorated but ticked up recently

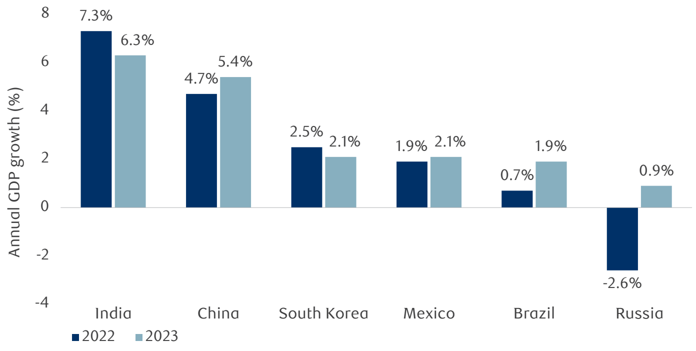
Note: As of 3/3/2022. Shaded area represents U.S. recession. Source: Citigroup, Bloomberg, RBC GAM

Exhibit 10: RBC GAM GDP forecast for developed markets



Note: As of 3/1/2022. Source: RBC GAM

Exhibit 11: RBC GAM GDP forecast for emerging markets



Note: As of 3/1/2022. Source: RBC GAM

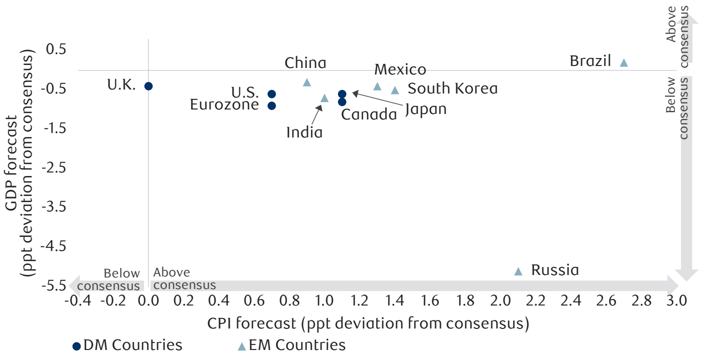
consensus (Exhibit 10). Global growth is set to decelerate to 3.6% in 2022 from 6.2% in 2021. Developed-world growth should fall to 3.0% from 5.1%, while growth in emerging markets is set to slow to 4.1% from 7.3% (Exhibit 11). These forecasts are not bad in an absolute sense, but they do represent a significant deceleration.

Our forecasts simultaneously predict below-consensus growth and above-consensus inflation (Exhibit 12). Is this "stagflation" – an unusual situation in which inflation is high while growth is low? We believe not. The inflation critique is entirely valid, but 3%-plus growth can hardly be called stagnation.

There is significant uncertainty around these prognostications. The precise amount of damage set to be inflicted by Russian sanctions is particularly unclear, with the risk of a significantly worse outcome. Similarly, there is a wide range of views on how much central banks will tighten and the impact that the tightening will have. Accordingly, the risk of U.S. recession in 2022 is significant, at no less than a 25% chance.

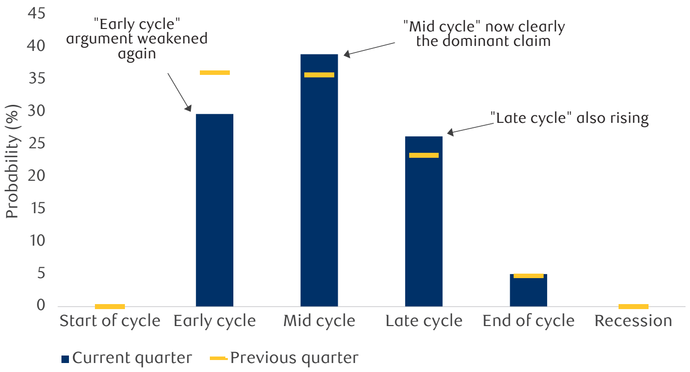
Our business-cycle analysis continues to deliver a "mid cycle" diagnosis (Exhibit 13). This is unchanged from last quarter and has benign implications for the immediate economic and market outlook. But a closer analysis reveals that of the many inputs that go into our scorecard, a falling number are now making "early cycle" counterclaims versus a rising number making "late cycle" counterclaims. In other words, the cycle is still moving forward, and fairly briskly.

Exhibit 12: GAM forecasts vs. consensus for 2022



Note: Deviation measured as difference between RBC GAM forecast (3/1/2022) and consensus forecast (Feb 2022). Source: Consensus Economics, RBC GAM

Exhibit 13: U.S. business-cycle score



Note: As at 02/04/2022. Calculated via scorecard technique by RBC GAM. Source: RBC GAM

Should the rapid clip continue, this could be a cycle with a lifespan of merely five or so years – half as long as the prior two cycles. That would leave several years of growth left, but not an endless runway.

Geopolitical complications

After months of posturing, Russia has delivered on its threats and attacked Ukraine. It appears so far that the war is proving more challenging than Russia or many analysts had anticipated. That said, it still seems likely that Russia will manage to capture a large part of Ukraine, although holding onto it could prove costly.

To end hostilities, Russia demands that Ukraine demilitarize and that it recognize the independence of the country's disputed eastern provinces and Crimea. Further, Russia wants NATO to promise that it will stop expanding into nations adjacent to Russia, and that NATO military installations be moved further from Russia. Ukraine and NATO are unlikely to acquiesce to these demands, suggesting the possibility of an exceptionally bloody conflict and drawn-out period of uncertainty. There is a real chance that President Putin will try to permanently absorb Ukraine into Russia, and then set his sights on other former Soviet Bloc nations.

> "From a long-term perspective, the Russian-Ukraine war brings a wide range of other implications."

From an economic standpoint, Ukraine is being devastated by wartime destruction and Russia is being badly damaged by a barrage of western sanctions that limit the flow of money and importation of key technologies, and impose a range of other restrictions on the country.

The economic impact of the war on the rest of the world is being expressed primarily through the supply and price of commodities. Russia is a major producer of oil, natural gas, wheat, potash, aluminum and copper. Most sanctions do not explicitly limit Russian exports, but access to these commodities is more precarious than before. We budget for some reduction in Russian commodity exports – partially as a Russian response to sanctions, and partially because the West is seeking to reduce its Russian exposure.

The effect this has on the availability and price of commodities will be most damaging for European nations given their particular reliance on Russian energy (Exhibit 14). The damage should be more moderate elsewhere. We project a 0.7% reduction in eurozone 2022 GDP growth (to 3.0%) and a 0.3% reduction in U.S. growth (to 3.1%). There is an undeniable risk that the damage could be greater.

From a long-term perspective, the Russian-Ukraine war brings a wide range of other implications.

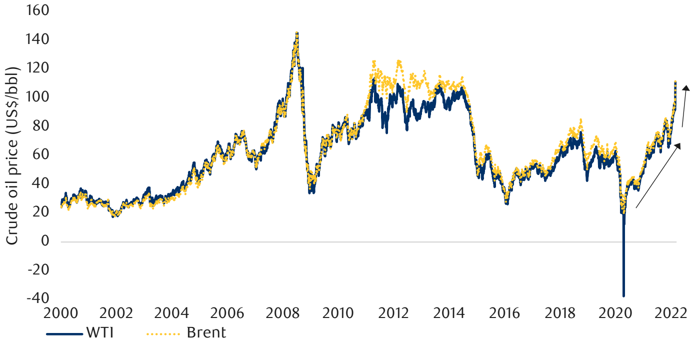
A new Cold War, recalling a lengthy period of elevated East-West hostility that stopped short of outright combat, has clearly resumed. One might argue there was already a milder version underway between Western nations and China. Such tensions result in countries forming military and economic blocs and a weakening of international institutions, both of which are bad for global trade and economic growth over the long run.

Military spending is clearly set to rise, with Germany in particular pivoting sharply. Slightly larger fiscal deficits are probable as a result. Nuclear proliferation may also increase.

Europe is now heavily incentivized to shift its energy supply away from Russia and will rely more on coal and nuclear power. Over the long term, renewable-fuel sources are likely to benefit.

Other geopolitical matters pale in comparison to events in Ukraine. But they should not be ignored. The U.S.-China

Exhibit 14: Oil prices surge on robust demand recovery, Russian invasion



Note: As of 3/2/2022. Source: Bloomberg, Haver Analytics, RBC GAM relationship is challenging and still likely to prove the most important global relationship over the coming decades.

The U.S. November mid-term elections are beginning to come into focus, and it appears that they are likely to issue a rebuke to President Biden. In turn, little legislation will be passed over the ensuing two years. More generally, political polarization continues to grow (Exhibit 15), and one wonders how it will all end.

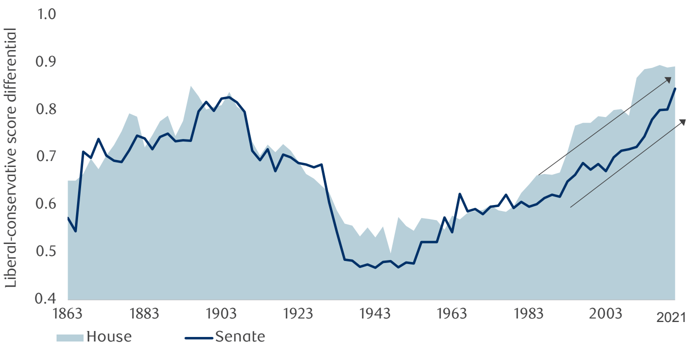
Pandemic fades

The latest pandemic wave – driven by the hyper-contagious Omicron variant – has significantly retreated (Exhibit 16).

Moreover, the wave wasn't quite as bad as it looked. Despite record infection levels, there were fewer hospitalizations and deaths relative to earlier waves because the variant was slightly less severe and many more people had greater protection due to vaccines and the natural immunity won during prior waves.

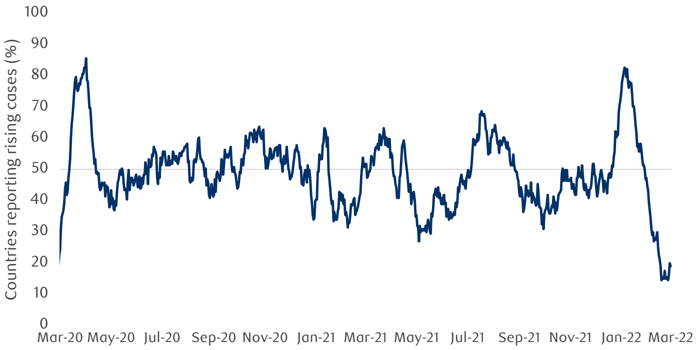
The sheer number of sick individuals during the latest wave overwhelmed testing capacity in many countries, making infection estimates much more uncertain than usual. Fortunately, other metrics unperturbed by this constraint such as hospitalizations (Exhibit 17) and test-positivity rates (Exhibit 18) are also clearly falling.

Exhibit 15: U.S. Congress partisan polarization intensifies



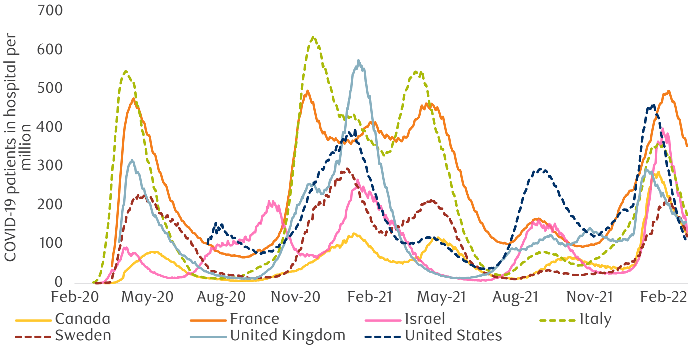
Note: As of 03/03/2022. Measured as the difference between median scores for the Democratic and Republican members in the House of Representatives and Senate. Source: Voteview.com, RBC GAM

Exhibit 16: COVID-19 is in retreat in most countries



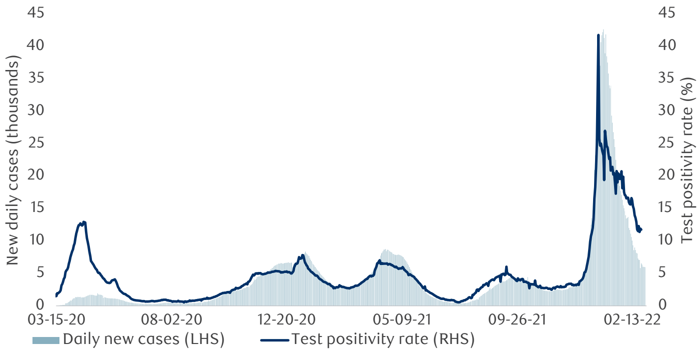
Note: As of 3/1/2022. Change in cases measured as the 7-day change of 7-day moving average of daily new infections. Source: WHO, Macrobond, RBC GAM

Exhibit 17: COVID-19 hospitalizations in developed countries have been declining



Note: Based on latest data available as of 3/2/2022. Source: Our World in Data, Macrobond, RBC GAM

Exhibit 18: COVID-19 cases and positivity rates in Canada continue to fall



Note: As of 3/1/2022. 7-day moving average of daily new cases and test positivity rates. Source: Our World in Data, WHO, Macrobond, RBC GAM

The latest wave inflicted some economic damage, as evidenced by a range of real-time and traditional indicators. However, it is becoming apparent that the damage may not have been quite as great as initially thought, and even more importantly, that a robust recovery is underway now that restrictions are being lifted (Exhibit 19). U.S. office-occupancy rates are rising again in a sign that a return to normality is coming (Exhibit 20).

Our forecasts from a quarter ago had already factored in damage from the Omicron wave and a subsequent economic revival, so no major adjustments are required on that front. A key remaining question is whether future significant waves will arise, and what implications they would have.

Another highly contagious virus variant, called BA.2, has been circulating for several months and has become the dominant strain in countries including Denmark, the U.K., South Africa and India. And yet it is notable that none of those countries is experiencing a significant rise in infections. It may simply be that the Omicron variant infected so many people that there isn't much room for BA.2 to take hold.

Looking further out, it is extremely hard to predict the twists and turns of the pandemic with any confidence. One need only think of the consensus expectation for the pandemic outlook at this point in each of the past two years: both were badly wrong. In the spring of 2020, COVID-19 was expected to vanish after several weeks of lockdown, much as it had in China. In the spring of 2021, COVID-19 was expected to disappear once vaccines had been administered. These expectations were not unreasonable, but neither panned out. The West proved incapable of matching the vigour with which China locked down, thereby allowing the virus to continue spreading. In 2021, more contagious variants radically changed the calculus for reaching herd immunity, pushing the required vaccination rate beyond attainable levels.

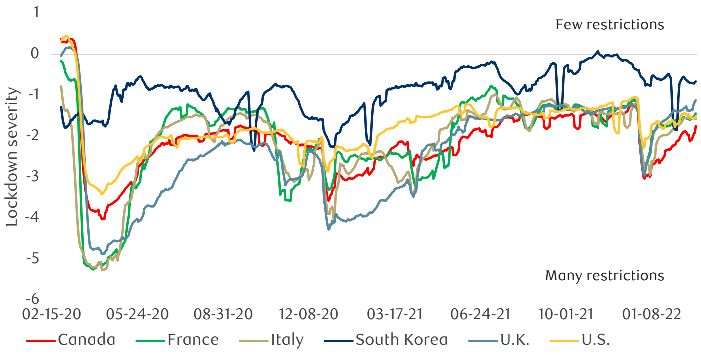
Thus, while it is reasonable as a base-case forecast to expect further variants and waves of COVID-19 to result in fewer deaths and require fewer economic restrictions, there is a range of alternative scenarios that could emerge. These possibilities range from the virus becoming feeble to the point of irrelevance, to it mutating in a way that undermines existing immunity and sets the world back to square one.

Supply chains to improve

Supply chains have been snarled for more than a year, creating headaches for businesses and consumers, and adding significantly to inflation.

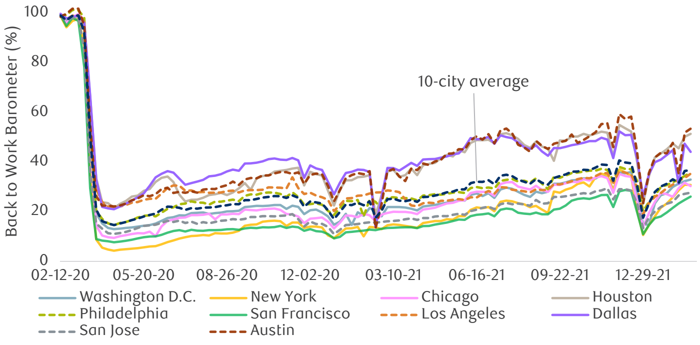
The supply-chain problems are rooted primarily in unusually strong demand, as evidenced by a remarkable increase in

Exhibit 19: COVID-19 restrictions easing in most countries



Note: Based on latest data available as of 2/28/2022. Deviation from baseline, normalised to U.S.and smoothed with a 7-day moving average. Source: Google, University of Oxford, Macrobond, RBC GAM

Exhibit 20: Workers are slowly returning to office



Note: As of the week ending 2/23/2022. The Barometer represents the weekly office occupancy based on swipes of access controls. Source: Kastle Systems, Bloomberg, RBC GAM

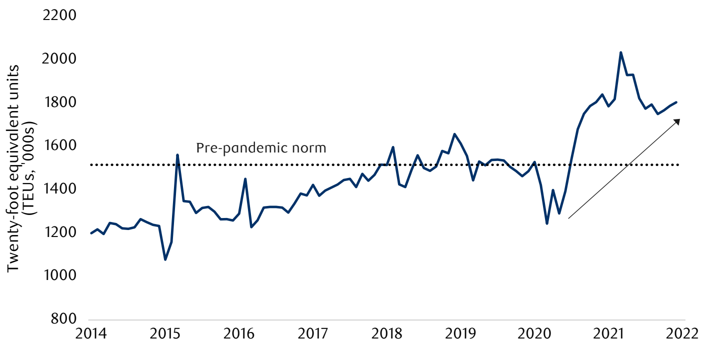
U.S. container imports (Exhibit 21). Supply-side problems have also had an impact, albeit less so. Factory production has in some cases been limited by viral outbreaks and workers have been harder to find than usual, but these are secondary considerations.

The problems related to supply chains remain intense, as evidenced by extremely high shipping costs (Exhibit 22). But there is clear evidence of incremental improvement. The number of ships waiting to unload at Southern California ports has finally begun to fall (Exhibit 23) and manufacturers are complaining slightly less about supplier deliveries (Exhibit 24).

We believe that supply-chain problems will improve somewhat further over 2022. The passage of time allows for producers and transportation companies to further refine their processes. As life returns to normal, demand for goods should ease as the appetite for previously unavailable high-touch services rises. Additionally, demand is normally weaker after Christmas and Chinese New Year, and the next few months offer producers the chance to catch up with demand.

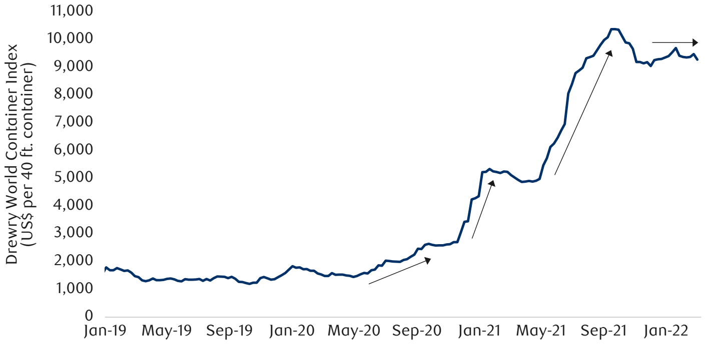
That said, not all supply-chain problems will vanish in 2022. It seems likely that demand for electronics will remain structurally higher and require a permanent increase in

Exhibit 21: Demand for goods in U.S. ports is higher than normal



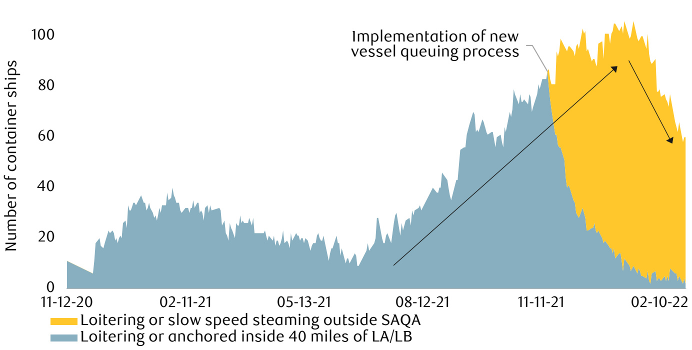
Note: As of Dec 2021. 2019 average shown as pre-pandemic norm. Major U.S. ports included are the ports of Los Angeles, Long Beach, New York & New Jersey, Savannah, Houston, Virginia, Oakland and Boston. Source: Macrobond, RBC GAM

Exhibit 22: Shipping costs remain elevated



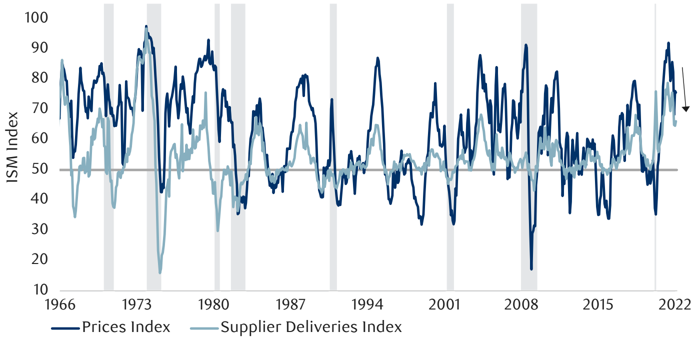
Note: As of the week ended 03/03/2022. Source: Drewry Supply Chain Advisors, RBC GAM

Exhibit 23: Container ship backlog in Southern California has improved recently



Note: As of 03/2/2022. Source: American Shipper, Marine Exchange of Southern California, RBC GAM

Exhibit 24: U.S. manufacturers complain less about suppliers and prices



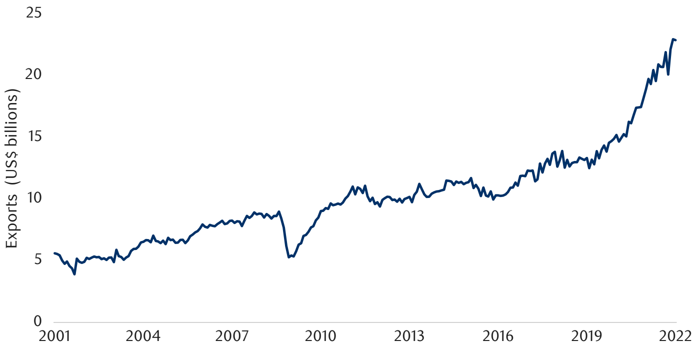
Note: As of Feb 2022. Shaded area represents recession. Source: ISM, Haver Analytics, RBC GAM chip production (Exhibit 25). Russian frictions will also exacerbate supply-chain problems for commodities, and there is no way to know how long this distortion will last.

Inflation high for longer

Inflation is extraordinarily high at 7.5% in the U.S., and is approaching 6% in other developed nations. These are the loftiest levels in several decades, and inflation is more likely to rise than fall over the next few months as the fallout from the Russian-Ukrainian conflict gets reflected. Inflation figures have not just risen, but reliably exceeded consensus expectations (Exhibit 26).

The two most important inflation drivers have been surging commodity prices and the aforementioned supply-chain problems. A variety of more minor inflation drivers include stimulative central banks, labour shortages and a housing boom in much of the world (Exhibit 27).

Exhibit 25: Taiwan exports of electronics grow quickly during the pandemic

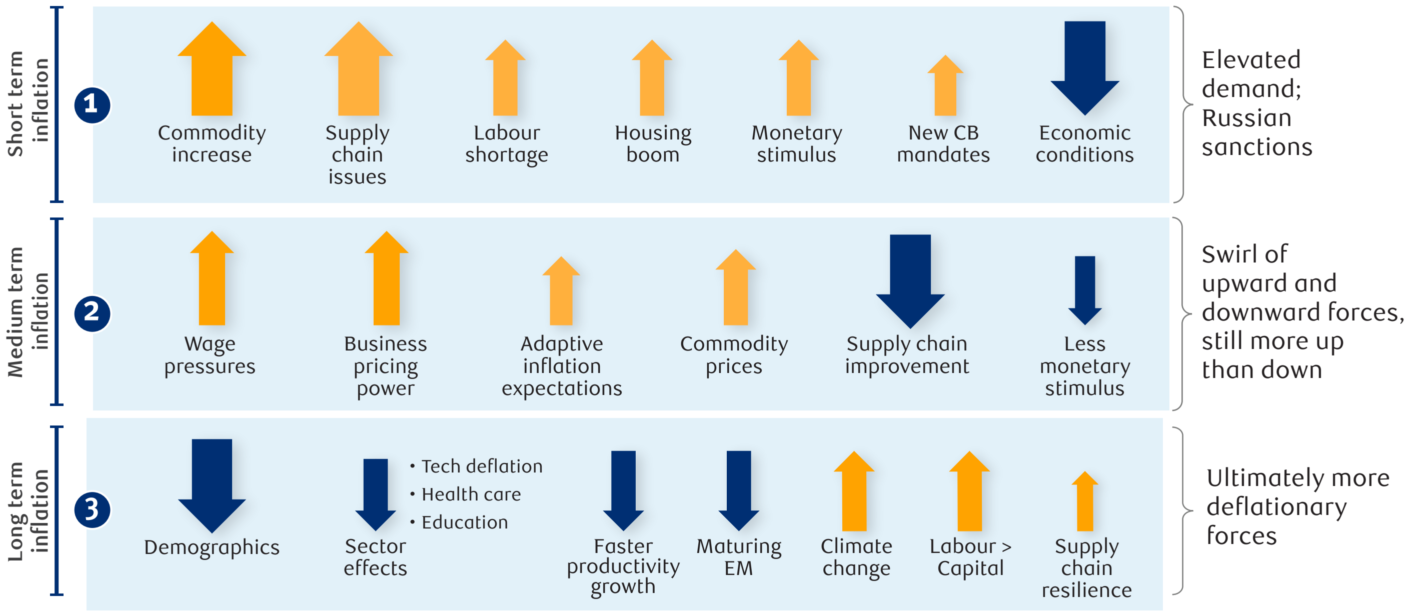


Note: As of Jan 2022. Source: Taiwan Ministry of Finance, Macrobond, RBC GAM

Exhibit 26: Global inflation continues to exceed expectations

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

Exhibit 27: Inflation is quite high in short term, to be elevated in medium term, normal to low in long term

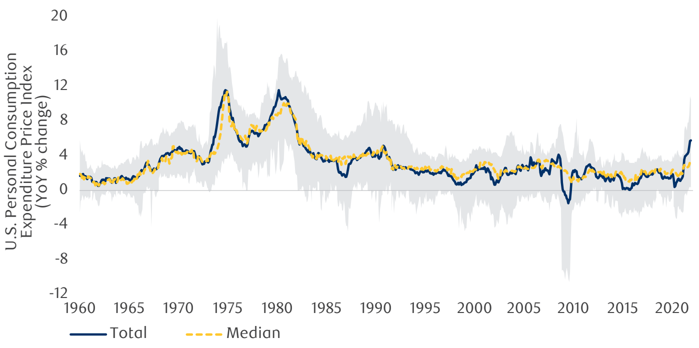


Note: As at 03/03/2022. Source: RBC GAM

Whereas high inflation was initially concentrated in a small number of products – used cars, microchips and energy – the pressures have broadened considerably (Exhibit 28). This breadth makes it more difficult and lengthens the time needed to put the inflation genie back in the bottle.

Turning to the outlook for the coming year, commodity-price pressures may persist somewhat longer than previously imagined given a prospective shortfall in key Russian commodity exports. Resolution of the supply-demand mismatch will take time as other suppliers ramp up and demand destruction occurs.

Exhibit 28: Inflation pressure mounts across a wide array of goods and services



Note: As of Dec 2021. Shaded area represents the range of the 10th to the 90th percentile of YoY % change of PCE Price Index. Source: Federal Reserve Bank of San Francisco, Haver Analytics, RBC GAM

We expect wage pressures to persist and potentially even intensify in 2022 given tight labour markets and a significantly increased cost of living (Exhibit 29). Higher wages may further spark inflation given that businesses intend to pass through the bulk of their cost increases to customers.

Conversely, as mentioned earlier, we anticipate that the most intense supply-chain pressures will ease over the coming year. This reversal is not to be underestimated: supply-chain pressures have arguably generated more inflation over the past year than any other force.

Central banks are also now edging into interest-rate increases, providing a further modest dampener on inflation.

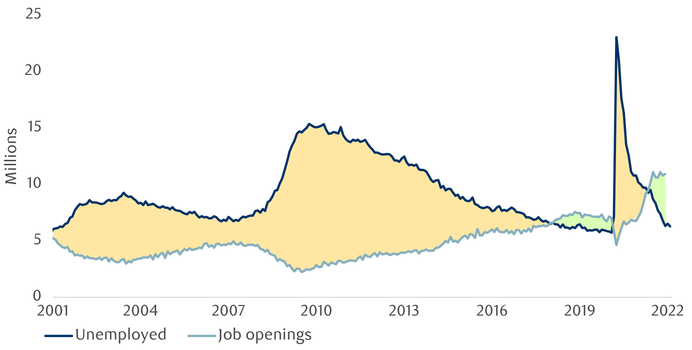
All of this is to say that we anticipate high and above-consensus inflation for 2022, but with a decelerating trend over the second half of the year (Exhibit 30). Real-time inflation measures have already begun to flatten, though events in Ukraine suggest another leap is likely first.

While most analysis about the detrimental impact of high inflation focuses on the monetary-tightening channel, it must also be highlighted that high inflation has a corrosive effect on economic growth all by itself. Historically, functioning in a 6% inflation environment rather than with a more benign rate subtracts up to half a percentage point from the rate of economic growth. Let us hope we are not in a high-inflation environment for long.

If afforded the luxury of a long-term vantage point, we continue to believe that inflation will eventually fully revert to normal, with aging populations and slower population growth even tempting inflation toward a below-normal clip. Even though medium-term inflation expectations have increased to high levels, long-term inflation expectations remain within the normal range (Exhibit 31).

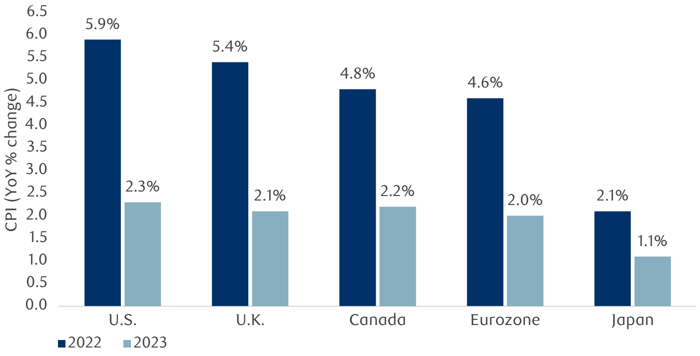
We also believe that this period of high inflation is likely to be less enduring than that of the problematic 1970s (Exhibit 32). The demographic setup is quite different, the current high inflation has more to do with a positive demand shock than a negative supply shock, and the gold standard didn't recently end. But it must be conceded that if the supply of Russian commodities is significantly restricted for an extended period, there will be an additional sniff of the 1970s in the form of a new negative supply shock joining the mix.

Exhibit 29: U.S. labour-market shortage puts workers in strong position



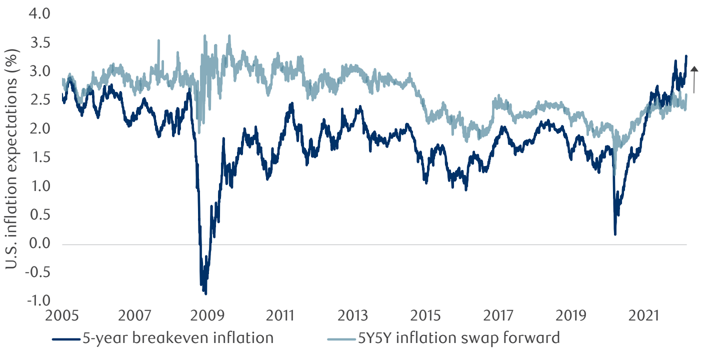
Note: Unemployment as of Feb 2022, job openings as of Dec 2021.
Source: BLS, Macrobond, RBC GAM

Exhibit 30: RBC GAM CPI forecast for developed markets



Note: As of 3/1/2022. Source: RBC GAM

Exhibit 31: U.S. inflation expectations rising though relatively calm about long term



Note: As of 3/2/2022. Source: Bloomberg, RBC GAM

Central banks turn to tightening

Central banks delivered unprecedented monetary stimulus over the past two years (Exhibit 33). This undoubtedly helped reduce the economic damage accumulated across the pandemic.

Until fairly recently, central banks were in no great hurry to unwind that support: Remember that, just a year ago, the U.S. Federal Reserve (Fed) was claiming that its first rate increase might not occur until 2024.

But inflation has since vastly exceeded central-bank forecasts. Initially, central banks viewed the additional inflation as a temporary distortion. But as high inflation has persisted, they have come to recognize that certain aspects of it will not soon depart. In turn, 2022 has become the year in which most developed-world central banks begin their journey back to more normal interest rates (Exhibit 34).

Central banks are acting with a sense of urgency, and rapid-fire rate increases at adjacent meetings may occur in the early going. That said, the Russia-Ukraine conflict and its associated economic damage has seemingly reduced the likelihood of 50-basis-point rate increases, and could yet reduce the amount of tightening delivered later. Central banks should temper their pace of rate increases later in the year as growth slows, inflation peaks and their balance sheets begin to shrink.

We budget for four 25-basis-point rate increases by the Fed this year. The U.K. is on track for a similar amount of tightening, albeit one that began in late 2021. The Bank of Canada is likely to deliver additional tightening, and the European Central Bank somewhat less (and possibly none at all).

As to the final destination for policy rates, we figure the North American neutral policy rate is no more than about 2.00%. This doesn't guarantee that central banks won't opt to surpass that level if inflation remains pressing in 2023, but it is a reasonable target to have in mind for late 2023. This calculation puts modest upward pressure on bond yields. The neutral policy rate is the benchmark interest rate at which economic activity is neither stimulated nor restrained by monetary policy.

Exhibit 32: Inflation – 1970s versus today

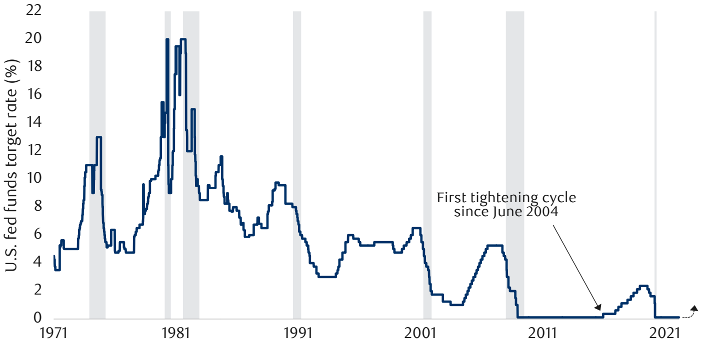
Similarities
- Politicization of central banks
- Large fiscal outlays

Differences
- Central banks target inflation now, more transparent
- Negative supply shock in 1970s/ stagflation
- Positive demand shock now
- End of gold standard in 1970s
- Lower unionization now
- Very different demographics
- Giant central bank balance sheets today

Conclusion: high inflation less likely to become structural this time

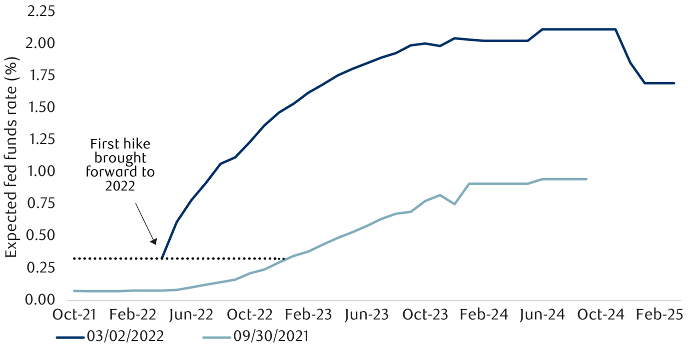
Note: As of 2/14/2022. Source: RBC GAM

Exhibit 33: U.S. Fed on cusp of new tightening cycle



Note: As of 3/3/2022. Shaded area represents recession. Source: Federal Reserve Board, Macrobond, RBC GAM

Exhibit 34: Fed now expected to raise rates fairly quickly



Note: As of 3/2/2022. Source: Bloomberg, RBC GAM

There is no reason that risk assets must tumble when central banks raise interest rates. After all, the very intent of rate hikes is to prevent the economy from overheating and thereby extend the cycle. Four rate increases should theoretically subtract around half a percentage point from a country's economic growth over the subsequent 18 months – hardly a recessionary impact. But given the haste with which central banks have pivoted, the brisk rate at which they intend to proceed and the fact that their actions are motivated by too much inflation rather than too much growth, there is undeniably some risk to economic growth and markets.

China to stabilize

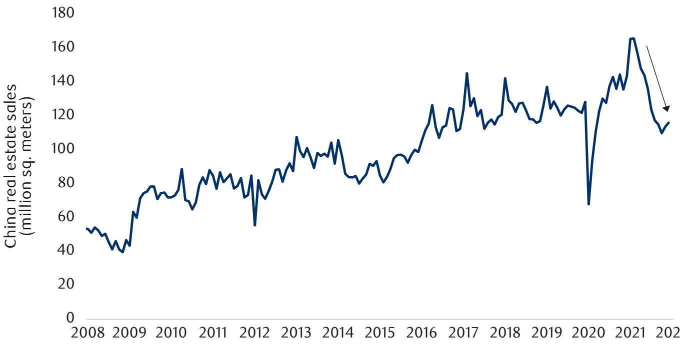
China has fallen out of the economic spotlight but continues to merit attention. It remains the world's most important contributor to global growth, and vies with the U.S. for the status of largest economy.

China dealt with several serious challenges over the past year, and some continue to exert an influence on the economy. Regulators cracked down on technology-sector excesses, softening a key business sector (though potentially to the long-term benefit of the country). Tighter housing-market rules drained some of the excesses from a sector that had previously been a key driver of the Chinese expansion (Exhibit 35). Global supply-chain problems have occasionally limited China's economic production.

China is also now nearly alone in retaining a zero-tolerance policy toward COVID-19 infections. This strategy, paired with the high level of contagiousness of the Omicron variant and the low efficacy of Chinese vaccines, has required the country to substantially shut down entire cities for periods of weeks. Lastly, China's demographics have turned, with the country's working-age population now in permanent decline.

It should be conceded that some of these headwinds are beginning to blow less fiercely. China has not been as busy on the regulatory front recently, and the housing market is no longer being constricted quite so tightly. The fact that global supply-chain problems are beginning to ease is also a positive, but introduces a new risk: Chinese exports could moderate as their strength in recent years has been due in part to outsized global demand for goods. Venturing forward, as demand pivots back to services, China could suffer a significant exports setback.

Exhibit 35: China's real estate market plunged under latest reforms, may be bottoming



Note: As of Dec 2021. Floor space sold monthly in square meters. Source: Haver Analytics, RBC GAM

In the end, what really matters is what the Chinese government wants for the economy over the coming year, and Beijing has been signalling that economic "stability" will be a focus. Thus, while we look for sub-5% GDP growth in China in 2022, it is unlikely that growth decelerates much more than that, and there is the scope for some revival over the year as the central bank bucks the trend with rate cuts and the country's credit impulse turns in a positive direction (Exhibit 36). By any standard other than that of China, this would constitute quite rapid growth.

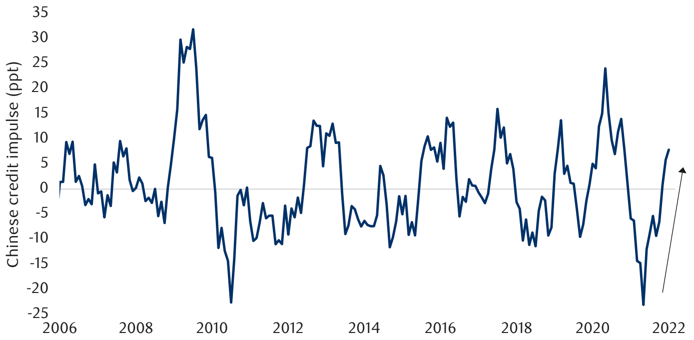
From a geopolitical standpoint, the U.S.-China relationship is likely to remain frosty, with an inclination to grow colder yet if China allies itself more clearly with Russia or strengthens its Taiwan claims.

Bottom line

In conclusion, we continue to anticipate another year of economic recovery, albeit deceleration, and with forecasts that rest moderately below the consensus. Businesses and consumers are still in a position to spend, the pandemic is likely to do less damage in 2022 than 2021, and supply chains are capable of at least partially unsticking.

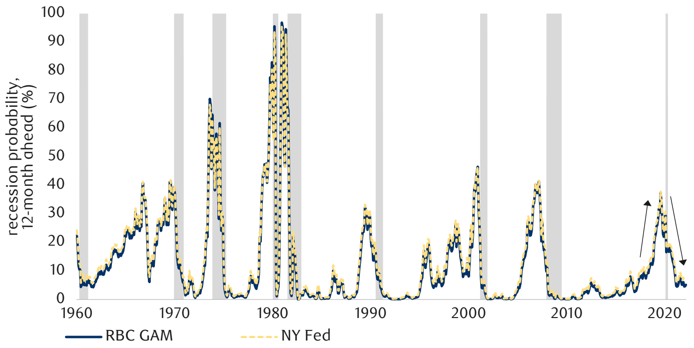
We find ourselves in a time of high uncertainty and perhaps even a degree of danger given the combination of the war in Ukraine, a fresh monetary-tightening cycle and exceedingly high inflation. Economic risks clearly tilt more downward than upward. While traditional recession models continue to assign a recession risk of no more than 10% (Exhibit 37), we assign a probability of at least 25% for the year ahead given this suite of adversities. These numbers mean, of course, that the continuation of this economic expansion is still the most likely outcome.

Exhibit 36: Chinese credit impulse turned supportive for growth



Note: As of Jan 2022. Measured as year-over-year change of 3-month rolling average of sum of total social financing excluding equities and local government bond issuance as % of GDP. Source: Haver Analytics, RBC GAM

Exhibit 37: Yield-curve-based U.S. recession risk remains modest



Note: As of Jan 2022 for NY Fed model, RBC GAM estimates as of 3/2/2022. Probabilities of a recession twelve months ahead estimated using the difference between 10-year and 3-month Treasury yields. Shaded area represents recession. Source: Federal Reserve Bank of New York, Haver Analytics, RBC GAM

Market outlook

Equity markets stumble as outlook becomes highly uncertain

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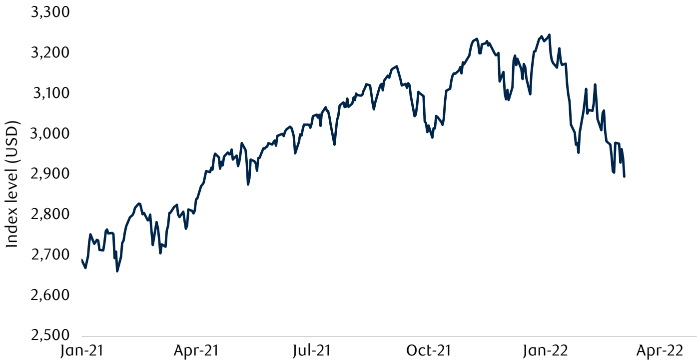
Financial assets have undergone a significant repricing in the past quarter. Global growth is slowing, inflation is stubbornly high, financial conditions are tightening and Russia's invasion of Ukraine introduces significant geopolitical instability. In the near term, punitive sanctions on Russia have led to gains in commodity prices that will push inflation even higher and weigh on consumer confidence. From a geopolitical standpoint, there is a good chance that Russia's recent actions will cause long-lasting changes to the post-1989 world order. Financial markets are adjusting to reflect these heightened risks. Stock markets fell and government-bond yields retraced part of their earlier increase, reflecting investor demand for safe-haven investments (exhibits 1 and 2).

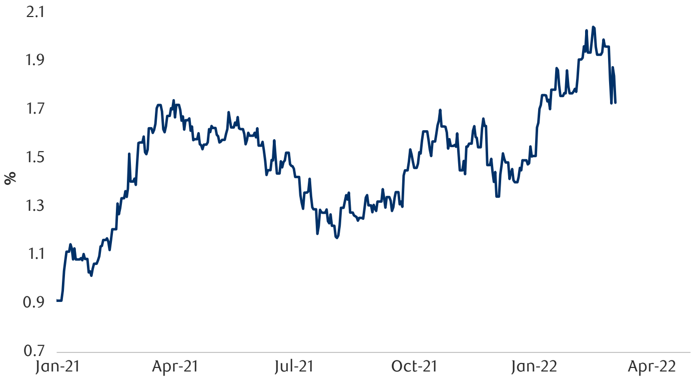
The situation in Russia and Ukraine is evolving rapidly and in a way that suggests that the trajectories of economic growth and financial-market performance have been significantly altered from just a month ago. As a result, we have reduced our global GDP forecast and recognize that the risk of

Exhibit 1: MSCI World Index
U.S. dollars



Note: MSCI World Index in U.S. dollars. As of March 4, 2022.
Source: Bloomberg, RBC GAM

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



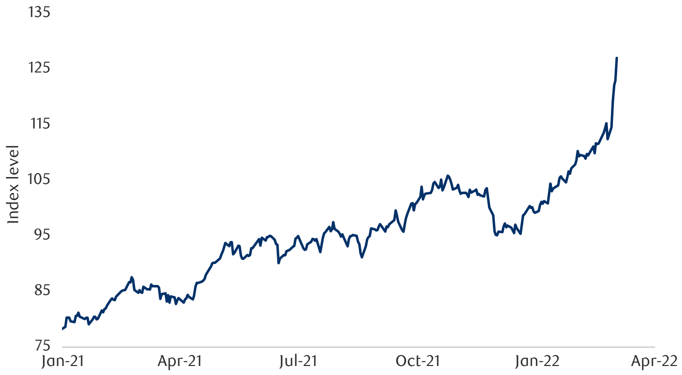
Note: as of March 4, 2022. Source : Bloomberg, RBC GAM recession has increased. Moreover, while we continue to expect inflation to peak sometime in the second half of 2022, that peak now looks to be higher than we previously anticipated given surging commodity prices (Exhibit 3).

The Russian invasion of Ukraine comes at a tricky time for central bankers as they are in the process of dialing back stimulus and/or raising interest rates to tame inflation just as the war threatens an expansion that had already been losing momentum. We believe that U.S. Federal Reserve (Fed) policymakers will proceed with their planned rate hikes, but it's unlikely they will be able to hike as much as the market had previously priced in. Over the longer term, our expectation is that yields will continue to rise, but we recognize that the surge earlier in the quarter mitigated much of the valuation risk and that the increased uncertainty related to the war likely limits how much they can rise in the near term.

Major stock indices fell 10% to 20% from their recent highs as investors weighed a variety of potential outcomes. The sell-off actually began in January amid concern that valuations had in many cases climbed too much given expectations of tighter central-bank policy, and the decline accelerated in recent weeks amid worries that earnings will now take a meaningful hit. The war in Ukraine and sanctions on Russia are causing significant disruptions to energy and commodity markets and could impact corporate profits as supply chains are further challenged and consumers reduce spending because of higher gasoline and food prices. Some of these fears are already baked into stock prices, and the recent sell-off has reduced valuation risk to some degree. We are not yet convinced that our base case expectation for the economy is wrong, though we realize a benign outcome is becoming less likely and that the odds of a negative scenario have increased. That said, the bull market could resume from today's more attractive levels if a recession is avoided and the economy grows in line with our base case expectation.

The significant market adjustment provided us with an opportunity to recommit some of the cash that we built up in the past two quarters, when we reduced bond and stock allocations because we thought yields were unsustainably low and equity-market valuations were demanding. In the past quarter, we added a total of 0.5% to the fixed-income allocation in two stages as yields rose to their highest levels since before the pandemic. This move reduced but did not eliminate our underweight position in fixed income, as we still expect government bonds to generate low to negative returns over the medium to long term. We also added 0.5% to our equity position as stock markets sold off on the news of Russia's invasion of Ukraine. We remain overweight stocks, though our allocation remains below this cycle's peak exposure, and we expect that equities will continue to outperform bonds over the longer term. For a balanced global investor, we currently recommend an asset mix of 64.0 percent equities (strategic neutral position: 60 percent) and 34.0 percent fixed income (strategic neutral position: 38 percent), with the balance in cash.

Exhibit 3: Bloomberg Commodity Index



Note: as of March 4, 2022. Source: Bloomberg, RBC GAM

Financial markets tend to quickly recover from this type of crisis, unless it has a sustained impact on the economy

By definition, shocks occur irregularly. These typically trigger only a minor market reaction followed by a swift recovery. In rare cases, however, financial markets have endured severe and long-lasting damage when an event significantly alters the course of the economy. We have maintained a list of major crisis events dating back to the Second World War and tracked market performance for these (Exhibit 4). The table contains 88 shocks sorted into a variety of categories including acts of war, natural disasters, assassinations and global health scares. The median experience for U.S. equities coincident with these events is a 2.9% decline over the course of six days and a full recovery within 15 days. The events considered "acts of war" had a

Exhibit 4: The market through crisis – median experience
Dow Jones Industrial Average

		Decline		Recovery Days	Reaction Period	Return						
	Count	Days	%			1 day	1 week	1 month	3 months	1 year	3 years	5 years
Acts of war	28	6.0	-2.7	4.0	13.0	-0.2%	-0.5%	1.8%	1.9%	10.5%	22.1%	46.1%
Disasters	11	9.5	-3.8	11.5	21.0	0.0%	-0.4%	-1.7%	1.3%	7.8%	30.1%	55.6%
Administrative	28	7.0	-4.2	14.0	21.0	-0.2%	0.1%	0.9%	3.2%	2.1%	19.4%	31.7%
Economic policy shocks	13	4.0	-1.8	5.5	10.5	-0.4%	0.9%	4.1%	-0.5%	11.6%	15.0%	36.1%
Assassinations	4	1.0	-0.7	1.5	2.5	-0.6%	1.2%	3.5%	1.9%	4.0%	6.4%	19.2%
Global health scares	6	19.5	-6.5	8.0	27.5	-0.1%	-0.5%	-3.8%	4.4%	3.0%	31.0%	55.5%
All events	88	6.0	-2.9	6.0	15.0	-0.2%	0.1%	1.6%	1.9%	7.8%	22.7%	44.2%
Recession	33	5.5	-2.9	10.0	20.0	-0.7%	-0.1%	0.9%	1.1%	-0.8%	18.6%	41.9%
No-recession	55	10.0	-4.0	7.0	16.0	0.0%	0.0%	1.6%	2.2%	11.5%	27.4%	51.3%

Note: As of February 28, 2022. Table shows the median decline, recovery and total reaction period for the U.S. stocks in response to crisis events as well as return stats for a variety of timeframes from the initial date of the crisis. The Dow Jones Industrial Average was the stock market index used for this analysis. Source: RBC GAM

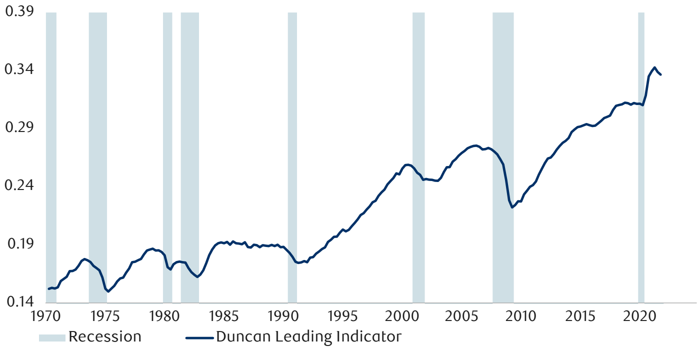
slightly smaller market reaction and recovered more quickly. But the range of outcomes is especially large. For example, the Japanese bombing of Pearl Harbor in 1941, which led to the U.S. entering the Second World War, was followed by an 8% decline over 12 days. But markets took eight months to fully recover. So while more often than not the damage to markets from these kind of events has been brief, we should recognize that the Russia-Ukraine conflict is the kind of event that could result in a very negative outcome for stocks.

Economy was on a slowing trajectory even before invasion

It is clear in hindsight that leading economic indicators were slowing even before the Russian invasion. The Duncan Leading Indicator (DLI), a measure of durable-goods spending, residential investment and capital expenditures relative to GDP, peaked in the second quarter of 2021 (Exhibit 5). The DLI, which has a good track record of signaling recessions, has historically peaked an average of four quarters ahead of economic contractions, so its peak in mid-2021 opened up the possibility of a recession by mid-2022. That said, the pandemic may have distorted durable-goods spending, so it's possible that the indicator

> "We don't expect high inflation to last indefinitely, and most forecasters agree that pricing pressures will likely subside later this year and into 2023."

Exhibit 5: Duncan Leading Indicator



Note: as of February 24, 2022. Source: Duncan Wallace, Morgan Stanley Research, Haver Analytics is less reliable this time around. Consistent with the view that growth is slowing and the expansion is maturing are purchasing managers' indexes (PMIs), which have also been trending lower after peaking in late 2020/early 2021 (Exhibit 6). The threat of recession becomes more and more acute when PMI readings dip into the 40s, but they remain above 50 in almost all major regions and are therefore consistent with relatively good growth. Taken together, these leading indicators suggest the economy is slowing, the expansion is maturing and that while a recession has grown as a possibility, it remains unlikely.

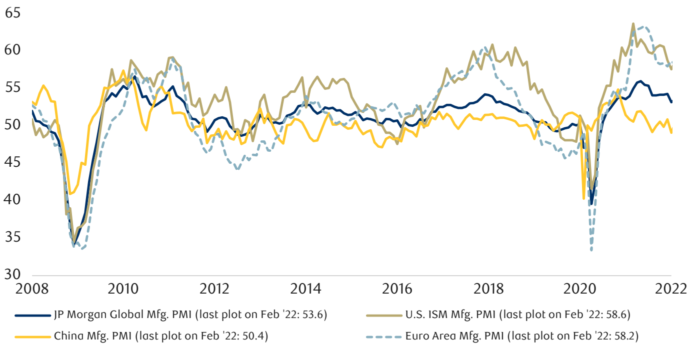
Inflation pressures persist

Another major challenge facing economies and investors is that inflation has risen to uncomfortably high levels and has yet to show signs of abating. In fact, sanctions on Russia caused a surge in prices for oil and a variety of other commodities, which will add further near-term upward pressure on consumer prices. That said, we don't expect high inflation to last indefinitely, and most forecasters agree that pricing pressures will likely subside later this year and into 2023. Exhibit 7, which plots economists' estimates for inflation year by year, shows a range of outcomes for 2022 spanning 4% to 6%. But the numbers drop dramatically in 2023 to more reasonable levels ranging from 2% to 4%. Our general view is that the inflation spike we are seeing is unlikely to be sustained, and that heading into the second half of the year we should start to see indications that inflation is coming down as distortions from the pandemic begin to roll out of the year-over-year comparisons. Moreover, market-based measures of inflation expectations remain well anchored and, while they are higher than a year ago, they are only a bit above the 2% level targeted by central bankers in the U.S., Canada and Europe (Exhibit 8). Financial markets would respond favourably should inflation come down as we expect. However, a meaningful rise would place pressure on central banks to respond more aggressively.

Markets have adjusted to the need for higher interest rates

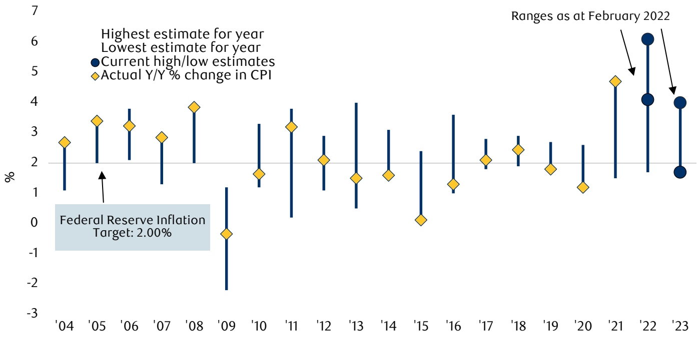
Although the outlook is increasingly uncertain, the current economic backdrop is not one that obviously requires extraordinarily accommodative monetary policy. The Taylor Rule, which determines an appropriate policy rate based on inflation, economic growth and unemployment rates,

Exhibit 6: Global purchasing managers' indices



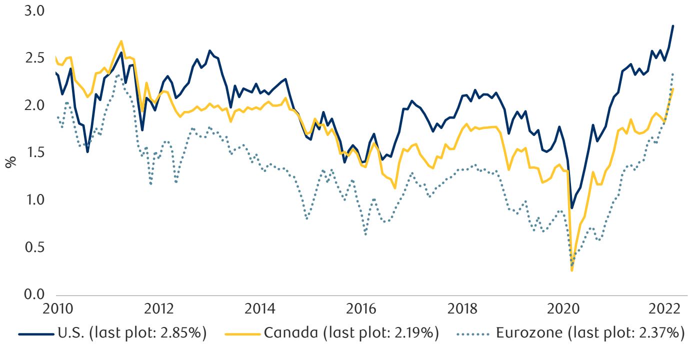
Note: as of March 4, 2022. Source: Haver Analytics, RBC GAM

Exhibit 7: United States
Inflation estimate dispersion



Note: as of February 28, 2022. Source: Consensus Economics, RBC GAM

Exhibit 8: Implied long-term inflation premium
Breakeven inflation rate: nominal vs 10-year real return bond



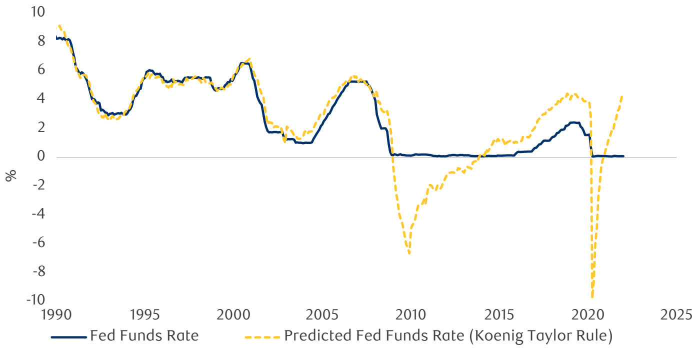
Note: As of March 4, 2022. Eurozone represents GDP-weighted breakeven inflation of Germany, France and Italy. Source: Bloomberg, RBC CM, RBC GAM suggests the fed funds rate should be as high as 4.3%, well above the current 0.13% (Exhibit 9). Central banks have responded to the need for tighter monetary conditions by largely winding down bond-purchase programs and have either begun raising rates or hinted that rate hikes are imminent and that they could be fairly aggressive. While it may seem prudent to delay rate hikes due to heightened uncertainty stemming from the war in Eastern Europe, the large gap between where rates are and where they likely should be suggests it's probably better to raise rates sooner rather than later. Markets have subscribed to this view and are pricing in as many as six Fed rate hikes over the year ahead, which is a major shift in expectations since the start of the year (Exhibit 10). Our own forecast is for only four rate hikes. We would point out that financial conditions have already tightened quite a bit, even before the Fed actually raises rates, due to the rise in yields earlier this year and financial stress caused by the invasion of Ukraine (Exhibit 11).

Rise in yields has moderated near-term valuation risk in bonds

Global bonds have experienced significant volatility during the quarter as investors weighed tighter central-bank policy against the potential hit to growth from Russia's invasion of Ukraine. The U.S. 10-year yield rose more than 50 basis points to above 2.00% between the end of November and early February, before falling back as the war boosted demand for safe-haven assets. Bond yields remain unsustainably low and our models indicate the long-term direction is higher, but we recognize that the increase earlier in the quarter moderated the near-term valuation risk (page 41).

Even if inflation pressures subside, we see a path to higher yields as a result of an increase in real, or after-inflation, interest rates. Exhibit 12 plots the composition of our 10-year Treasury-bond model, which consists of an inflation premium and a real rate of interest. These two pieces are combined to arrive at an equilibrium level for nominal bond yields. There is a kink in the equilibrium band as a result of an expected inflation spike that will work its way through the model over the next few years. If instead inflation levels remain high, bond yields could move a lot higher. Rising real interest rates represent a second threat to yields. At -280 basis points, the current real interest rate is extremely negative and at its lowest level in 60 years. At some point,

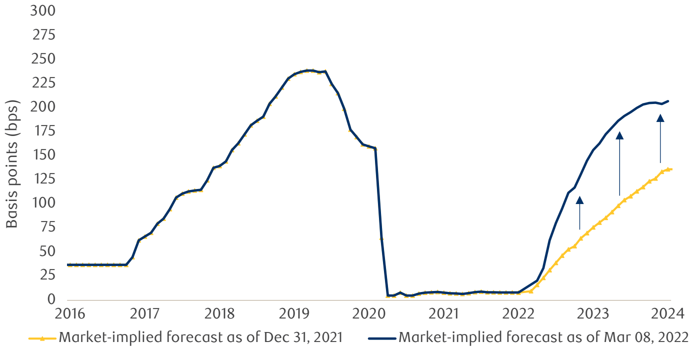
Exhibit 9: Koenig Taylor rule and fed funds rate



Note: as of February 28, 2022. Source: Federal Reserve Bank of Dallas, RBC GAM

Exhibit 10: Implied fed funds rate

12-months futures contracts

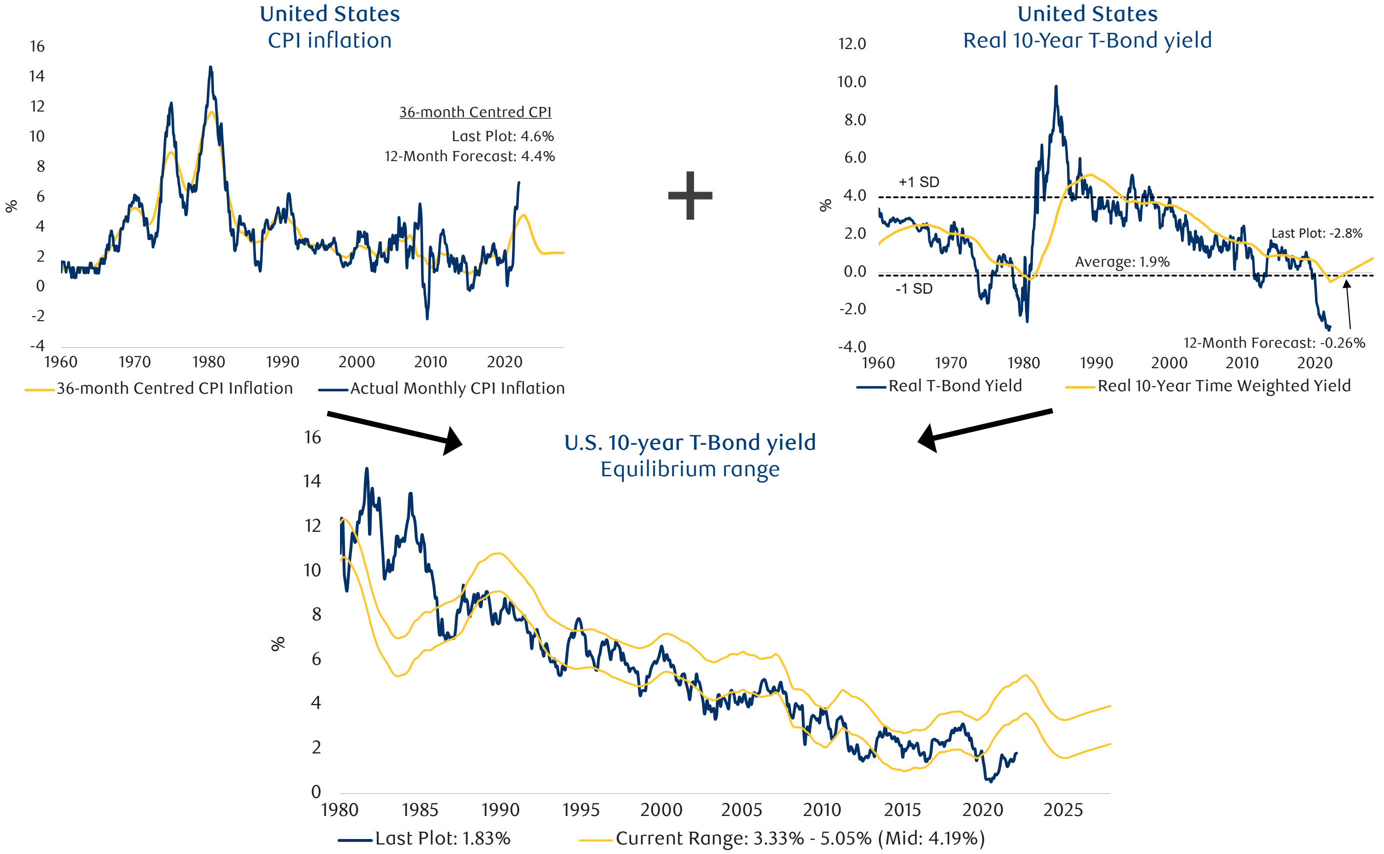


Note: as of March 8, 2022. Source: Bloomberg, U.S. Federal Reserve, RBC GAM

Exhibit 11: Bloomberg U.S. Financial Conditions Index

Note: as of March 4, 2022. Source: Bloomberg, RBC GAM

Exhibit 12: U.S. 10-year bond yield
Fair-value estimate composition



Note: As of February 28, 2022. Source: RBC GAM, RBC CM

savers will need to be rewarded for saving rather than spending, and the recovery in real rates even to the zero bound will force rates higher. There have been a variety of sustained headwinds to real rates ranging from aging global demographics to lower potential growth rates to an increased preference for saving versus spending. As a result of these secular forces, we don't expect real interest rates to rise back to their long-term average of around 2%. However, even placing real rates at 0% would provide substantial upward pressure on nominal bond yields. Our forecast of 2.25% for the U.S. 10-year yield one year from now would only situate yields at the lower boundary of our equilibrium band. We recognize there are some near-term risks to economic growth due to the war that could temporarily limit the increase in yields, but we expect higher nominal yields over the longer term. This is not just a U.S. phenomenon. We observe that bond yields are unsustainably low and below their own equilibrium bands in many regions, setting up a possible scenario of low or slightly negative returns in the sovereign-bond market for many years ahead.

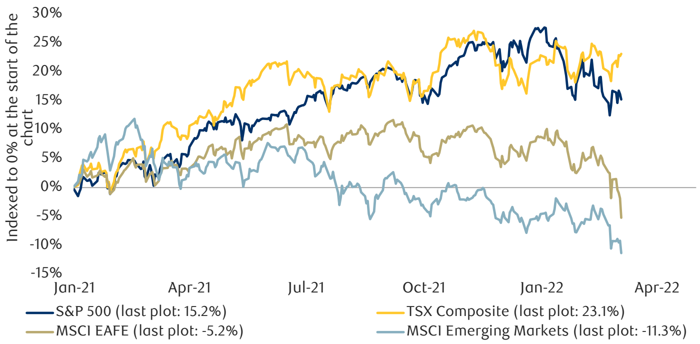
Stocks enter correction, volatility surges

Global equity markets tumbled in the first two months of 2022 and volatility spiked as investors grappled with the prospect of rising interest rates, slowing growth and the onset of war in Ukraine. Emerging-market and European stocks underperformed U.S. equites, and Canada's resource-heavy TSX Composite outperformed all three (Exhibit 13). It's worth acknowledging that the weakness in global equity markets in early 2022 followed a period of extremely strong performance since March 2020. During a 20-month period, the S&P 500 more than doubled, leading our GDP-weighted composite of global equity markets to 36% above fair value at the end of 2021, the highest level since the late 1990s/early 2000s technology bubble (Exhibit 14). Clearly the re-rating tailwind that had existed for the better part of the past decade was going to diminish. According to our measure, stocks began the post-financial-crisis bull market at nearly 50% below fair value, and then enjoyed a 12-year period during which they went from being extremely cheap to expensive. The latest correction amid Russia's invasion of Ukraine has moderated valuation risk somewhat, pulling our global composite to 14% above fair value, but stocks are still somewhat expensive on this basis. Note that the chart is heavily weighted towards U.S. equities given its sizeable GDP influence, but looking beyond U.S. equities we see very different and more attractive valuation underpinnings (page 42).

Sell-off was primarily driven by a re-rating of expensive companies

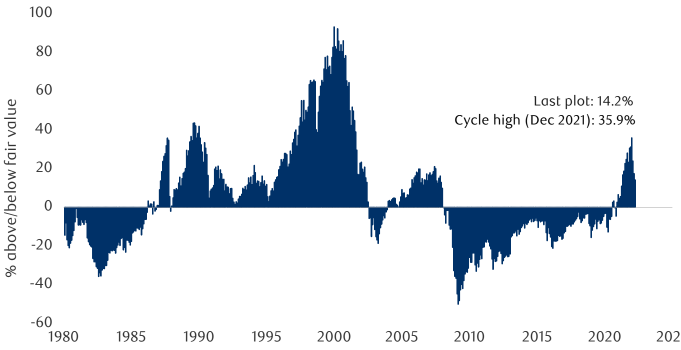
The major concern for equity investors at the start of the year was the prospect of tighter Fed policy, which caused a significant rise in bond yields and prompted investors to re-calibrate how much they were willing to pay for the market's most expensive companies. Companies with the highest price-to-earnings ratios were sold aggressively, while companies with cheaper valuations held up reasonably well from the start of the year through February. Exhibit 15 plots the difference in performance between stocks with low price-to-earnings ratios (P/Es) and stocks with high P/Es, alongside the U.S. 10-year bond yield. Note the strong relationship between the two lines on the chart, which suggests that cheaper stocks outperformed as yields rose and vice versa. This trend has been observed across all major markets to varying degrees. Exhibit 16 plots the

Exhibit 13: Major equity market indices
Cumulative price returns indices in USD



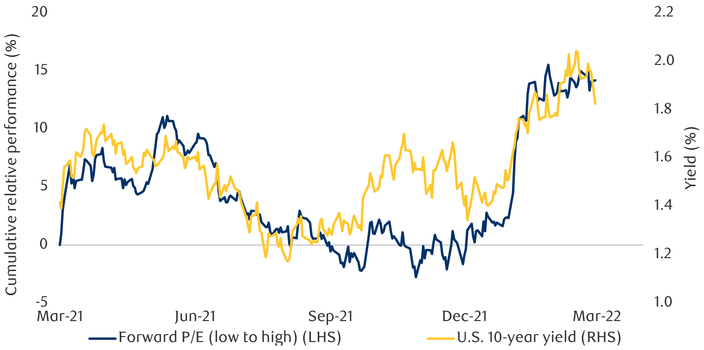
Note: As of March 4, 2022. Price returns computed in USD.Source: Bloomberg, RBC GAM

Exhibit 14: Global stock market composite
Equity market indexes relative to equilibrium



Note: As of March 8, 2022. Source: RBC GAM

Exhibit 15: Factor performance
S&P 500 sector-neutral low P/E to high P/E



Note: as of February 28, 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 performance of major equity indexes, teasing out the returns for expensive stocks and cheap stocks for each market. Cheap stocks outperformed expensive stocks in each of these markets by a wide margin, and in some cases the lower P/E stock baskets actually generated positive year-to-date returns.

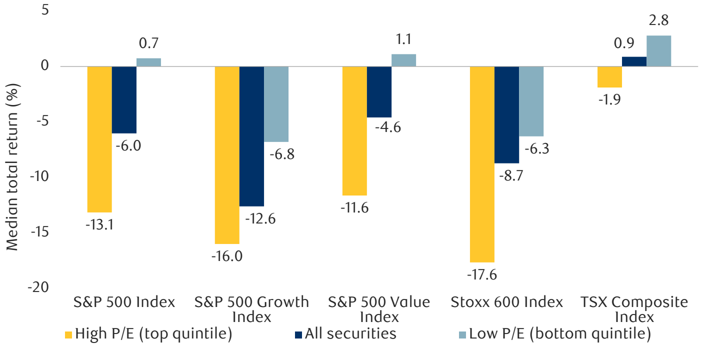
Another recent and interesting development has been a meaningful shift in leadership away from growth stocks and into value stocks. Since the start of December, the S&P 500 Value Index has outperformed the S&P 500 Growth Index by 15 percentage points (Exhibit 17). Typically we see value outperformance ahead of a re-acceleration in economic growth. But given that economic growth is slowing and risks to the outlook are mounting, this correlation seems questionable. A more plausible explanation is likely related to the idea that growth stocks tend to be more sensitive to changes in interest rates than value stocks, because growth valuations largely reflect future earnings discounted to account for uncertainty. Even a minor increase in the interest-rate assumption in a traditional discounted cash-flow model can cause a massive decline in the theoretical value for these expensive high-growth stocks. So the correction in high P/E stocks and the shift into value may have simply been a mathematical adjustment to valuations from rising interest rates irrespective of the outlook for the economy and/or corporate profits.

Assuming recession is avoided, our base case scenario suggests earnings could still rise a decent amount this year

Although markets have been volatile, the earnings outlook has remained stable, supported by strong nominal GDP growth so far. Economic output has rebounded substantially from the pandemic lows, resulting in a surge in revenues as business activity snapped back, volumes improved and inflation enabled companies to raise prices (Exhibit 18). It's true that moderating economic growth signals lower revenue and profit growth for companies, but even with these lowered expectations our base case estimate of 9.0% nominal U.S. GDP growth in 2022 would translate to 16.4% earnings growth, according to our regression model (Exhibit 19). The consensus of analysts' estimates is for just 8% profit growth this year, so there is still a decent cushion for earnings in the event that economic growth expectations are not met.

Exhibit 16: Index performance by P/E grouping

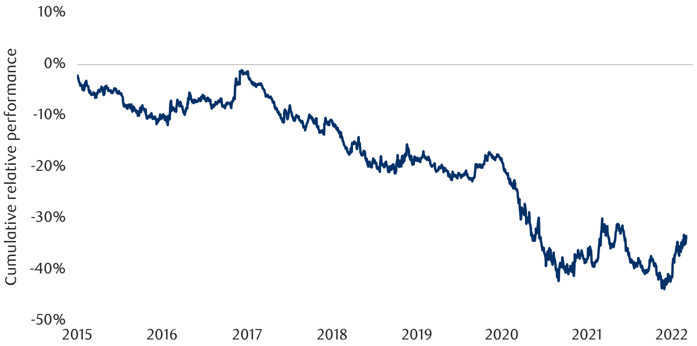
Year-to-date total returns (local currencies)



Note: as of February 25, 2022. Chart shows the median return of securities for each index in either high P/E (top quintile stocks, ranked by P/E), all securities (all index constituents) or low P/E (bottom quintile stocks, ranked by P/E). Source: Credit Suisse, Bloomberg, RBC GAM

Exhibit 17: Relative style performance

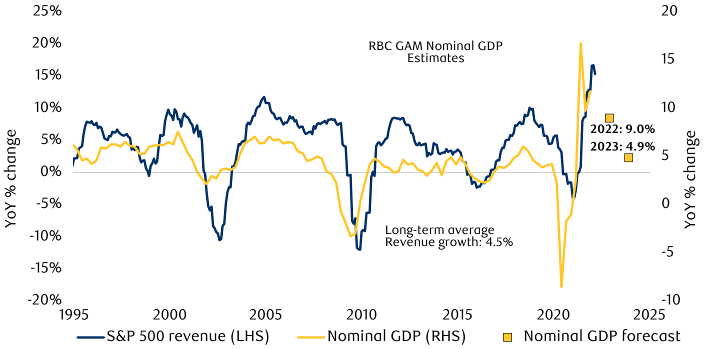
S&P 500 value / S&P 500 growth



Note: as of March 4, 2022. Source: Bloomberg, RBC GAM

Exhibit 18: United States

S&P 500 revenue and nominal GDP



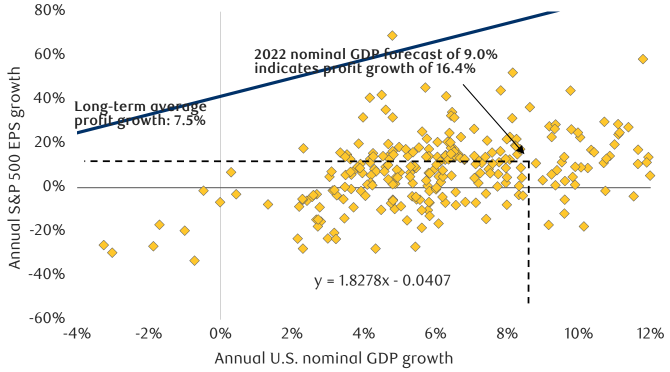
Note: as of March 4, 2022. Source: RBC CM, RBC GAM

That said, the Russia/Ukraine situation adds uncertainty to the outlook and should the economic damage from the war prove greater than our initial estimates, earnings are likely to be revised lower. Moderating growth in the economy is reflected in a rising disinclination among analysts to raise their earnings estimates. This trend follows a period during which estimates were constantly ratcheted up after it became clear that the recovery from the pandemic had proceeded much quicker and more powerfully than expected. While companies continue to beat estimates almost 80% of the time, this rate has been gradually declining over the past several quarters and, in fact, earnings estimates have stopped rising since the start of the year (exhibits 20 and 21).

Earnings and investor confidence will be critical to a recovery in stocks

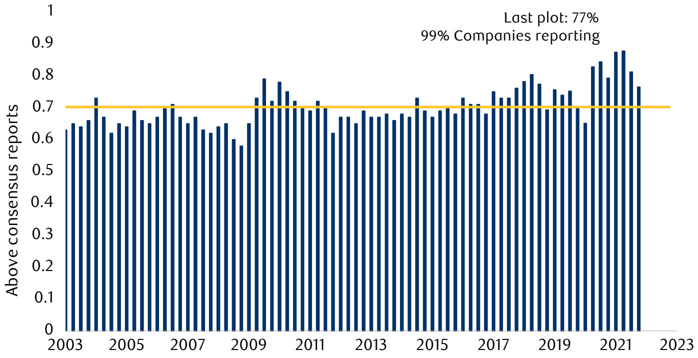
While the recent sell-off has reduced valuations, the P/E on the S&P 500 is still high relative to history and suggests that earnings gains will remain critical in providing support for stocks. The strong bull market during the pandemic, stoked by significant stimulus and low interest rates, pushed the P/E on the S&P 500 to more than two standard deviations above our modelled estimate of equilibrium (Exhibit 22). We compute equilibrium as the level consistent with current interest rates, inflation and corporate profitability based on historical relationships. The decline in stocks since the start of the year has pulled the P/E down to just one standard deviation above equilibrium. To be clear, the U.S. equity

Exhibit 19: S&P 500 EPS vs U.S. nominal GDP growth



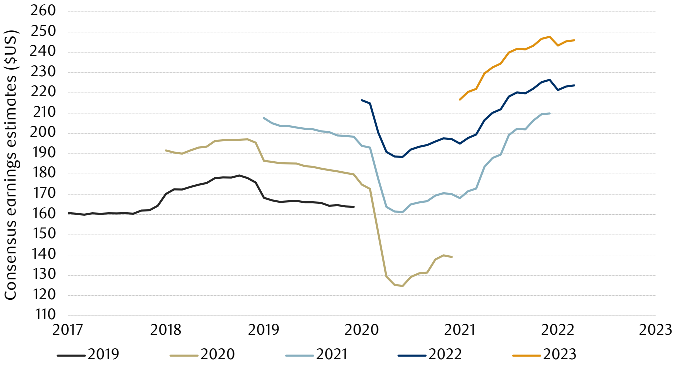
Note: as of February 28, 2022. Based on quarterly data back to January 1990. Source: Bloomberg, RBC GAM

Exhibit 20: Companies reporting results above consensus forecasts



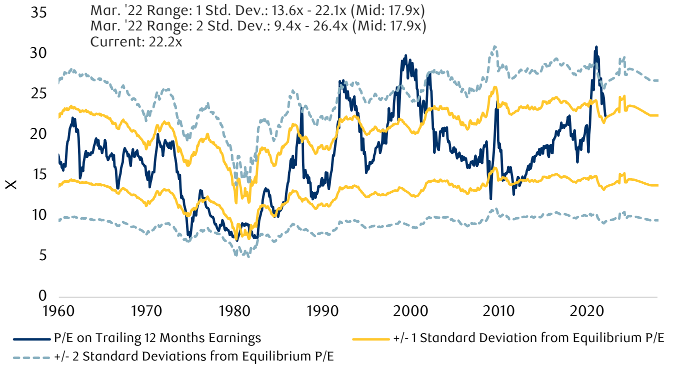
Note: as of March 8, 2022. Source: Refinitiv

Exhibit 21: S&P 500 Index
Consensus earnings estimates



Note: as of March 8, 2022. Source: Thomson Reuters, Bloomberg

Exhibit 22: S&P 500 Index
Normalized (Equilibrium) Price/Earnings Ratio



Note: as of March 4, 2022. Source: Bloomberg, RBC GAM

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

		Consensus				
		2022 Top down	2022 Bottom up	2023 Top down	2023 Bottom up	Recessionary*
	P/E	$225.7	$223.6	$247.9	**$245.9**	**$153.8**
+1 Standard Deviation	24.4	5503.2	5453.5	6046.0	**5997.1**	**3749.2**
+0.5 Standard Deviation	22.0	4974.1	4929.2	5464.7	**5420.6**	**3388.7**
Equilibrium	19.7	4445.0	4404.9	4883.5	**4844.0**	**3028.3**
-0.5 Standard Deviation	17.4	3915.9	3880.6	4302.2	**4267.4**	**2667.8**
-1 Standard Deviation	15.0	3386.9	3356.3	3720.9	**3690.9**	**2307.4**

Note: as of February 28, 2022.*Trailing 12-Month Earnings to January 2022 less 25% (i.e. average decline in earnings through recession).
Source: Bloomberg, Thomson Reuters, RBC GAM

market is no longer extremely expensive, but it is still far from cheap. We continue to consider the possibility that valuations will fall further given rising interest rates and high inflation, but these factors could be at least partially offset if economies continue to expand and earnings carry along their upward trajectory.

We have combined a variety of possibilities for P/E ratios with expected earnings levels to establish a range of outcomes for the S&P 500 over the next two years (Exhibit 23). Should the S&P 500 generate US$225 in earnings per share in 2022 (consensus estimate at time of writing) and trade at our modelled equilibrium P/E of 19.7, the S&P 500 would deliver a total return of just 3% from the end of February. But if investor confidence is restored and valuations stay above equilibrium, say at 0.5 standard deviations above or 22.0x, the market could trade as high as 4,972 and generate a total return of 15% by year-end. Looking to next year, the same math could generate returns between 10% and 23% over the next 22 months. To be clear, such attractive returns would require earnings to come in at or above expectations and for investors to remain confident and comfortable paying at least our modelled equilibrium P/E for stocks. In the event that interest rates stay low and inflation moderates, there are limited liquid investment options for investors outside of equities, and these outcomes wouldn't be unreasonable - especially if geopolitics moves in a favourable direction. Of course, if the war's impact is bigger than expected, a recessionary scenario becomes more likely and earnings could take a meaningful hit.

Sentiment and price momentum are often good counter-indicators

The outlook is highly uncertain, but the good news for contrarians is that investors are extremely pessimistic and that price-momentum has reached oversold conditions (exhibits 24 and 25). These indicators are not necessarily great for timing market tops but they do offer better signals around market lows. Investor sentiment and price momentum are approaching levels that tend to be consistent with markets forming some sort of bottom, if only a temporary one. If nothing else, the indicators reveal how much negativity has been baked into stock prices. Any indication that the outlook is not the worst imaginable could result in a significant and positive swing in investors' attitude toward stocks.

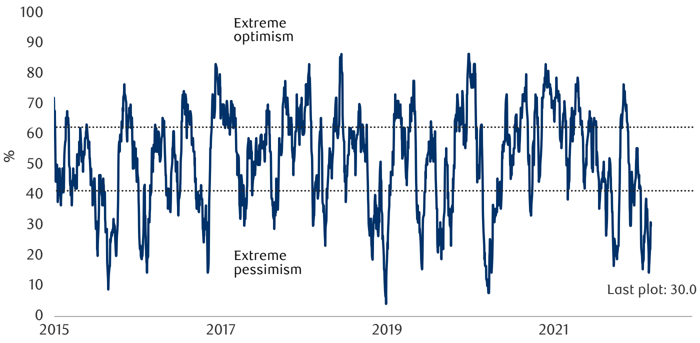
Asset mix – re-deployed some cash into stocks and bonds at more attractive levels

The outlook has become increasingly uncertain over the past several weeks as a result of war, surging energy and commodity prices, and a tightening in financial conditions given expectations for higher interest rates and a significant pick-up in financial-market volatility. The distribution of potential outcomes spans an unusually wide range, and while our base case scenario looks for a continuation of the economic expansion, we recognize that the odds of a negative outcome have increased meaningfully. In our base case scenario, we expect the Russia/Ukraine conflict to subtract about 0.25% to 0.75% from global growth, but for recession to be avoided. Inflation will likely remain high for longer than we originally expected and central banks are now more likely to proceed with raising interest rates at a measured pace to temper inflation pressures.

In this environment, rising rates would act as a headwind to fixed-income returns. Our forecasts look for low to slightly negative returns for sovereign bonds over the year ahead. That said, the increase in yields since the start of the year has moderated near-term valuation risk to some degree, and safe-haven sovereign bonds should provide ballast in the event of a downturn in the economy.

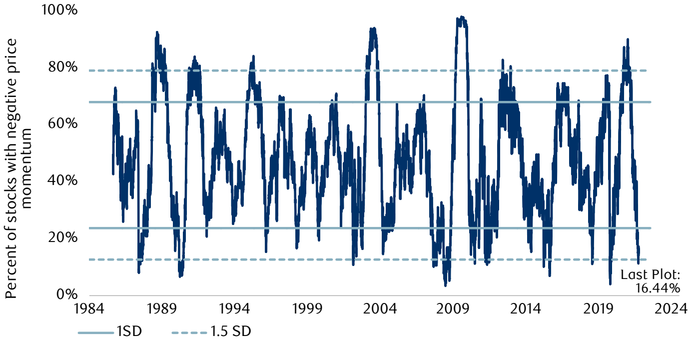
In our view, stocks continue to offer better upside potential, particularly over the longer term. Although the outlook for corporate profits is now much more uncertain, valuations have declined to a point where stocks are no longer extremely expensive. Stocks can realistically generate mid-single-digit returns in our base case scenario, and offer the possibility of double-digit returns if a better-than-expected

Exhibit 24: Ned Davis Research Daily Trading Sentiment Composite – Percent bulls



Note: as of March 4, 2022. Source: Ned Davis Research, RBC GAM

Exhibit 25: S&P 500 Index Monthly price momentum



Note: as of March 4, 2022. Source: RBC GAM scenario unfolds. On a regional basis, markets outside the U.S. are more attractive from a valuation perspective, but Europe in particular faces greater economic challenges from the Russia/Ukraine situation. Canadian equities offer reasonable valuations, and their significant exposure to the Energy and Materials sectors may bode well in an environment of surging commodity prices and high demand for energy. Canada's S&P/TSX Composite Index is near its lowest valuation levels relative to the S&P 500 in 60 years and could be set up for an extended period of outperformance (Exhibit 26). Given this outlook, we boosted our exposure to North American equities in the past quarter and reduced allocations to the developed markets of Asia and Europe, as well as emerging markets.

Balancing the risks and opportunities, we continue to underweight bonds and overweight stocks in our asset mix, and we have taken advantage of the significant volatility in markets in the past quarter to re-deploy some of the cash that we had built up over the past several quarters. We added 0.5% to our fixed-income allocation in two steps during the quarter as the yield on 10-year Treasuries approached 2.00%. We also added 0.5% to our equity allocation as stocks sold off in the early days of Russia's invasion of Ukraine. We still have a 2% cash reserve available should further opportunities present themselves. For a balanced global investor, we currently recommend an asset mix of 64.0 percent equities (strategic neutral position: 60 percent) and 34.0 percent fixed income (strategic neutral position: 38 percent), with the balance in cash.

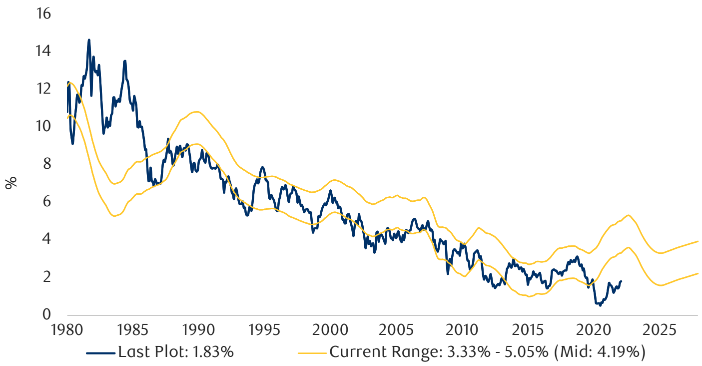
Exhibit 26: TSX relative to S&P 500 (in Canadian dollars)

Note: as of March 4, 2022. Source: RBC GAM

Global fixed income markets

U.S. 10-Year T-Bond Yield

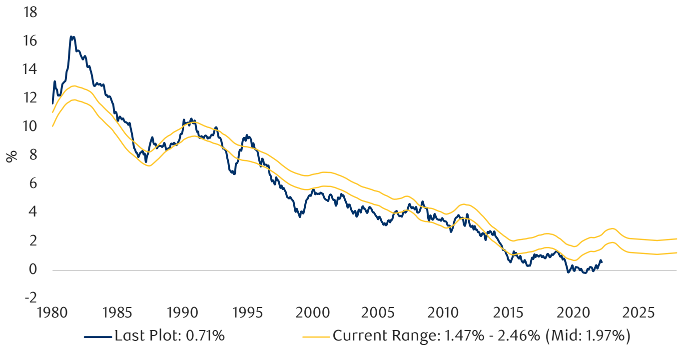
Equilibrium range



Note: February 28, 2022. Source: RBC GAM, RBC CM

Eurozone 10-Year Bond Yield

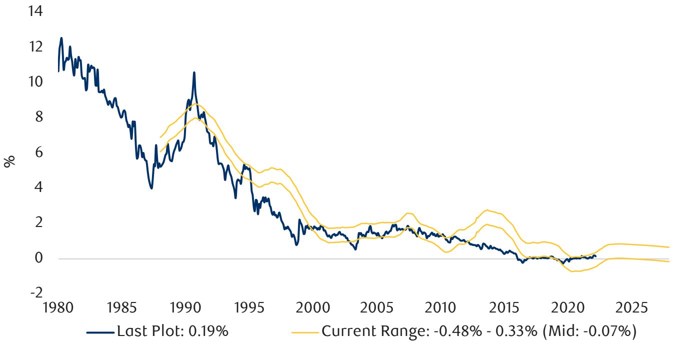
Equilibrium range



Note: February 28, 2022. Source: RBC GAM, RBC CM

Japan 10-Year Bond Yield

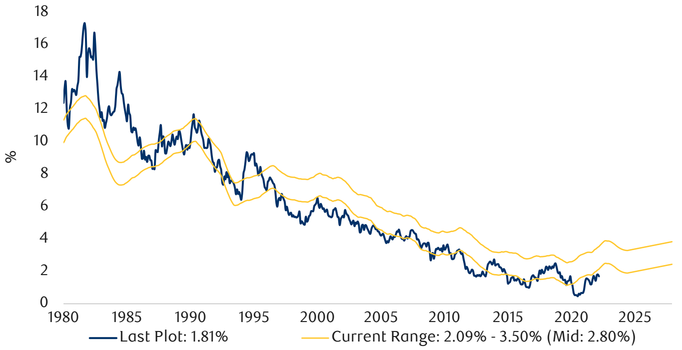
Equilibrium range



Note: February 28, 2022. Source: RBC GAM, RBC CM

Canada 10-Year Bond Yield

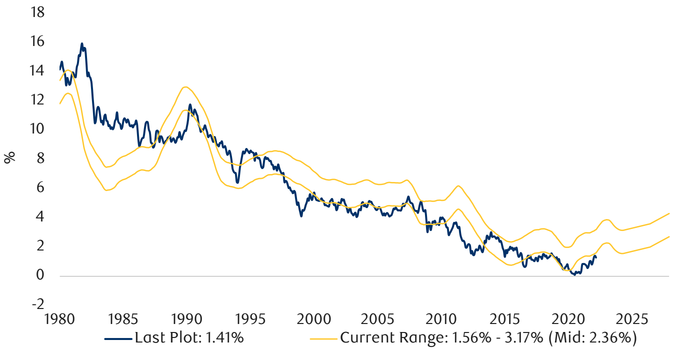
Equilibrium range



Note: February 28, 2022. Source: RBC GAM, RBC CM

U.K. 10-Year Gilt

Equilibrium range



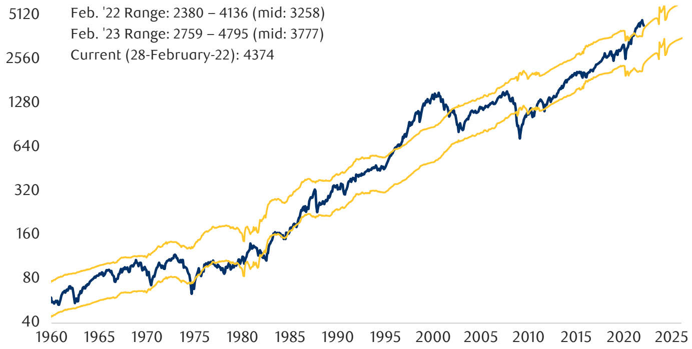
Note: February 28, 2022. Source: RBC GAM, RBC CM

> “Bond yields remain unsustainably low and our models indicate the long-term direction is higher, but we recognize that the increase earlier in the quarter moderated the near-term valuation risk.”

Global equity markets

S&P 500 Equilibrium

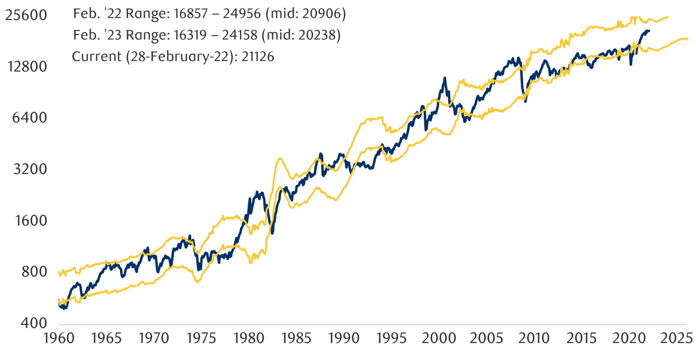
Normalized earnings and valuations


Feb. '22 Range: 2380 – 4136 (mid: 3258)
Feb. '23 Range: 2759 – 4795 (mid: 3777)
Current (28-February-22): 4374

Source: RBC GAM

S&P/TSX Composite Equilibrium

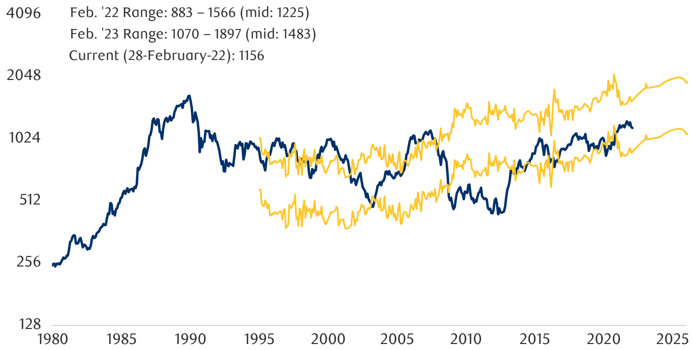
Normalized earnings and valuations


Feb. '22 Range: 16857 – 24956 (mid: 20906)
Feb. '23 Range: 16319 – 24158 (mid: 20238)
Current (28-February-22): 21126

Source: RBC GAM

MSCI Japan Index

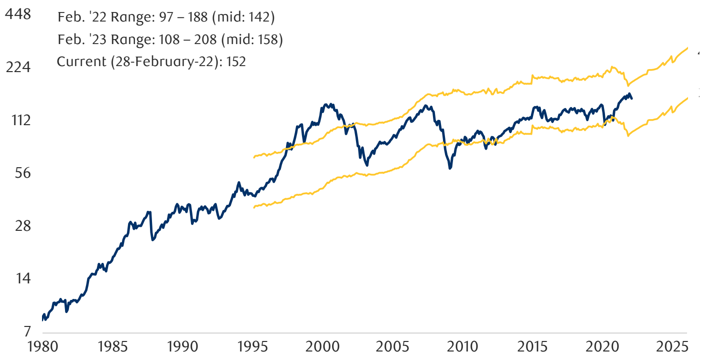
Normalized earnings and valuations


Feb. '22 Range: 883 – 1566 (mid: 1225)
Feb. '23 Range: 1070 – 1897 (mid: 1483)
Current (28-February-22): 1156

Source: RBC GAM

MSCI Europe Index

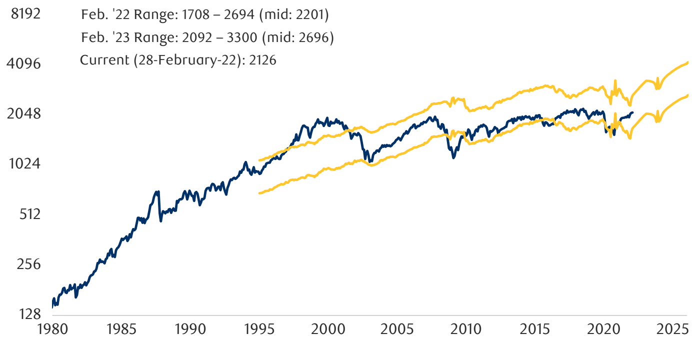
Normalized earnings and valuations


Feb. '22 Range: 97 – 188 (mid: 142)
Feb. '23 Range: 108 – 208 (mid: 158)
Current (28-February-22): 152

Source: RBC GAM

MSCI U.K. Index

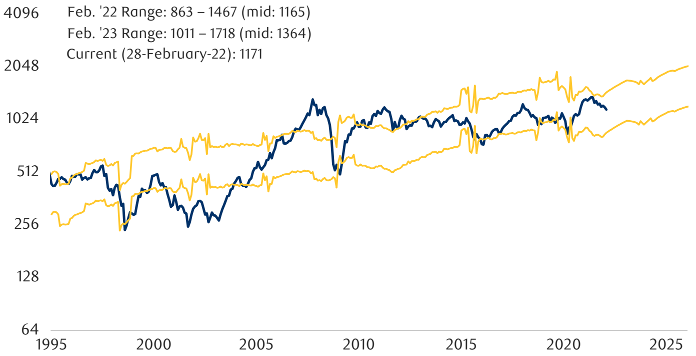
Normalized earnings and valuations


Feb. '22 Range: 1708 – 2694 (mid: 2201)
Feb. '23 Range: 2092 – 3300 (mid: 2696)
Current (28-February-22): 2126

Source: RBC GAM

MSCI Emerging Markets Index

Normalized earnings and valuations


Feb. '22 Range: 863 – 1467 (mid: 1165)
Feb. '23 Range: 1011 – 1718 (mid: 1364)
Current (28-February-22): 1171

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.

Global fixed income markets

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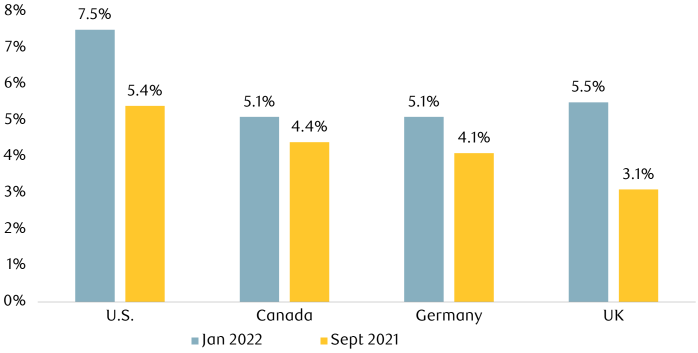
RBC Global Asset
Management Inc.

For the first time in over a decade, bond investors face a concurrent tightening of monetary policy in most major markets. Market indicators suggest that every major central bank except the Bank of Japan will raise interest rates over the next year, although Russia's invasion of Ukraine could dampen the case for higher yields if the conflict escalates. Even the European Central Bank (ECB), which has kept its policy rate negative since 2016, could lift rates at least once by the end of the year. As part of this concerted money-tightening effort, central banks will also be paring asset purchases. We believe that the U.S. Federal Reserve (Fed) will begin shrinking its balance sheet in the second half of this year. We have raised our bond-yield forecasts across markets and expect the U.S. 10-year Treasury yield to rise to the highest level since mid-2019 within the next 12 months.

Central bankers have played a key part in the changing outlook for the bond market. In early January, the Fed surprised investors by admitting that faster-than-expected inflation would require it to take a more aggressive approach to tightening policy. The inflation risk was now sufficient, the Fed said, that asset purchases would have to be cut back so as to actually reduce the size of its balance sheet rather than just slow the speed at which it would rise. Raising interest rates would not be enough.

Exhibit 1: Global consumer-price inflation
Selected year-on-year inflation rates



Note: As of February 2022. Source: National statistical offices, Bloomberg

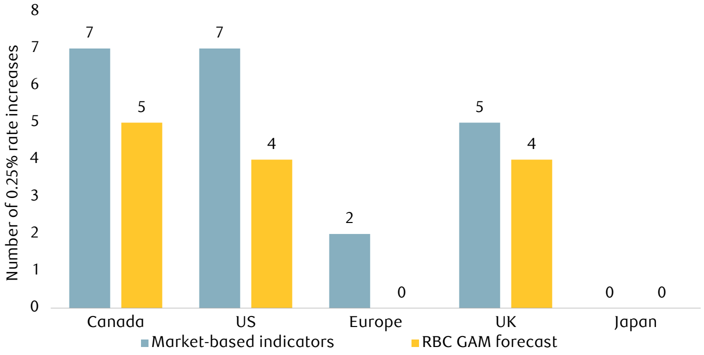
Inflation is becoming increasingly widespread (Exhibit 1). Disruption to supply chains from the pandemic has lasted much longer and the rest of the economy has recovered much more quickly than anticipated. In what is now a historically tight U.S. labour market, workers are demanding higher wages to offset the general rise in prices. In some sectors, wages are rising as quickly as 10% a year, ahead of year-over-year inflation currently running around 7.5%.

In response, investors are pricing in as many as seven Fed interest-rate hikes this year. Against this backdrop of still-high inflation and tightening monetary policy, the most likely outcome over the next year is higher bond yields. We expect the U.S. 10-year bond yield to rise to 2.25% over the next year, compared to around 1.90% at the time of writing.

While we expect the Fed to deliver a series of interest-rate hikes, our view is that the actual number is likely to be closer to four. We expect global economic activity to slow over the next year, removing some of the urgency with which central banks will need to raise rates. The tailwind of pandemic-related spending will fall firmly into the rear-view mirror in 2022, presenting a drag on growth. Moreover, the absorption of excess capacity in the economy and labour market was likely completed in the final months of 2021, meaning that the rate of economic growth will likely fall back toward its pre-pandemic potential. In this environment, we expect that central banks will hike rates less aggressively than expected based on market indicators (Exhibit 2). In Canada, we expect four rate hikes from the Bank of Canada before the end of this year, compared with market expectations of at least seven.

We also believe that the effect of reduced central-bank asset purchases on government bond yields will be modest. While asset purchases can push down long-term bond yields by signaling that policy rates will remain low for a long period, a shrinking balance sheet does not indicate the opposite. In fact, we think that balance-sheet shrinkage could substitute for interest-rates hikes and may reduce pressure on the central bank to raise rates.

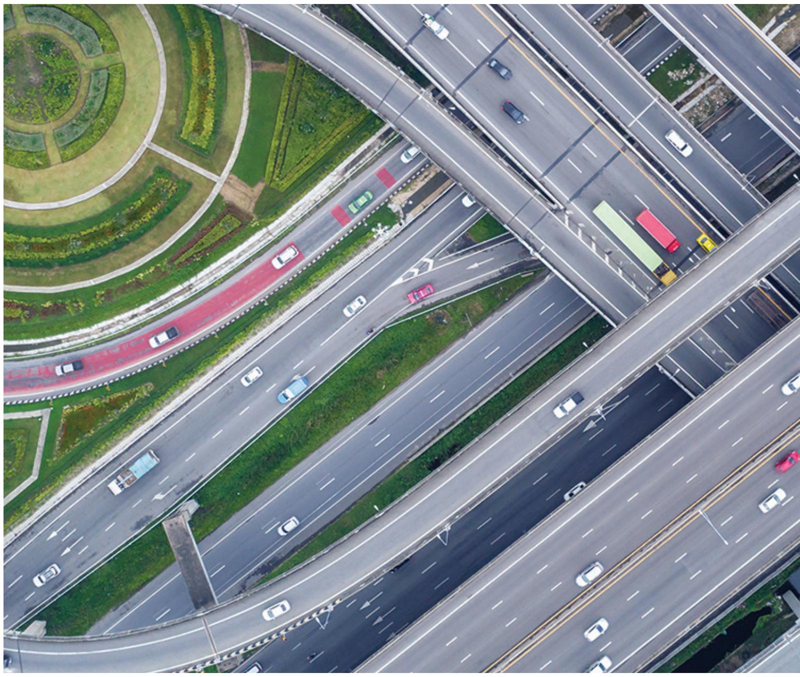
Exhibit 2: Expected central-bank interest-rate hikes – Interest-rate increases expected between March and December



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

The gap between short-term and long-term bond yields, known as the yield curve, has narrowed considerably and is now remarkably flat, suggesting that economic momentum will slow. Interest-rate hikes increase the probability of a deeper slowdown in growth or even a recession. We therefore expect the yield curve will continue to flatten over the next year.

While high inflation and rising benchmark rates make a strong case for bond yields to rise, we believe that long-run trends in the bond market still play an important role as the world emerges from the pandemic. We have long highlighted the impact of higher global debt loads, demographics, income inequality and technological change on bond markets. These are trends that predate the pandemic, in many cases have been exacerbated by it, and are likely to persist for the foreseeable future. So while yields are likely to be higher in the next year, we expect these rises to be relatively modest. In turn, bond-market investors should expect returns in the low single digits.



Direction of interest rates

We expect the U.S. 10-year Treasury yield to rise to around 2.25% over the next 12 months, from around 1.90% at the time of writing.

U.S. – With inflation spreading beyond pandemic-affected sectors and into the broader economy, as well as a very hot labour market, the U.S. Federal Reserve (Fed) should gradually move away from emergency levels of policy accommodation. We expect the Fed to hike interest rates at least four times by December. In addition, the Fed is likely to begin shrinking its balance sheet in the summer. The bond market is pricing in at least six hikes by December. We believe that cooling economic activity and price pressures over the course of this year will remove some of the need for aggressive monetary-policy tightening and therefore expect fewer hikes than market indicators would suggest. Moreover, a more aggressive approach to balance-sheet reduction could be pursued in lieu of hiking the policy rate. We expect the U.S. 10-year Treasury yield to rise to around 2.25% over the next 12 months, from around 1.90% at the time of writing.

Over the next 12 months we expect the BOC to raise the overnight rate four times to 1.50%, and 10-year yields to rise to 2.25%.

Canada – The Bank of Canada (BOC) has begun raising interest rates after nearly two years of holding them as low as practically possible. A tight labour market and a feverish housing market indicate that higher rates are warranted. However, increased geopolitical risk following Russia's invasion of Ukraine in late February could favour a more cautious approach. The BOC has indicated that it is likely to become more "data dependent" after the first few rates hikes, but the wild card will be the BOC's approach to reducing its balance sheet. The BOC has said only that rate hikes will precede efforts to reduce the balance sheet, known as quantitative tightening, and policymakers have said they do not plan to sell bonds to achieve balance-sheet reduction. We expect a cautious approach, with balance sheet run-off starting gradually in April. Investors are pricing in seven 25-basis-point hikes over the next 12 months, which we think is unlikely. Over the next 12 months we expect the BOC to raise the overnight rate four times to 1.50%, and 10-year yields to rise to 2.25%.

We expect the BOE to hike rates to 1.50% by year-end, and the 10-year gilt yield to hit 1.55% over the same period, from 1.45% at the time of writing.

U.K. – The Bank of England (BOE) hiked its benchmark interest rate to 0.50% at its February meeting, and we expect policymakers to continue raising the bank rate over the course of this year. Inflation accelerated to 5.5% in January as the economy struggles with surging energy prices and higher business costs due to Brexit. The BOE also appears poised to substantially reduce the size of its balance sheet later this year. Unlike peers, the BOE's balance-sheet reduction will likely involve sales of longer-maturity government bonds. We think this could put upward pressure on medium- and long-term bond yields. In addition, we expect that the BOE's plan to quickly unwind its sizeable corporate-bond holdings could increase the yield premium that investors require to hold them. We expect the BOE to hike rates to 1.50% by year-end, and the 10-year gilt yield to hit 1.55% over the same period, from 1.45% at the time of writing.

We forecast no change to the ECB's policy rate this year, and yields on German 10-year to be around 0.15% within the next year.

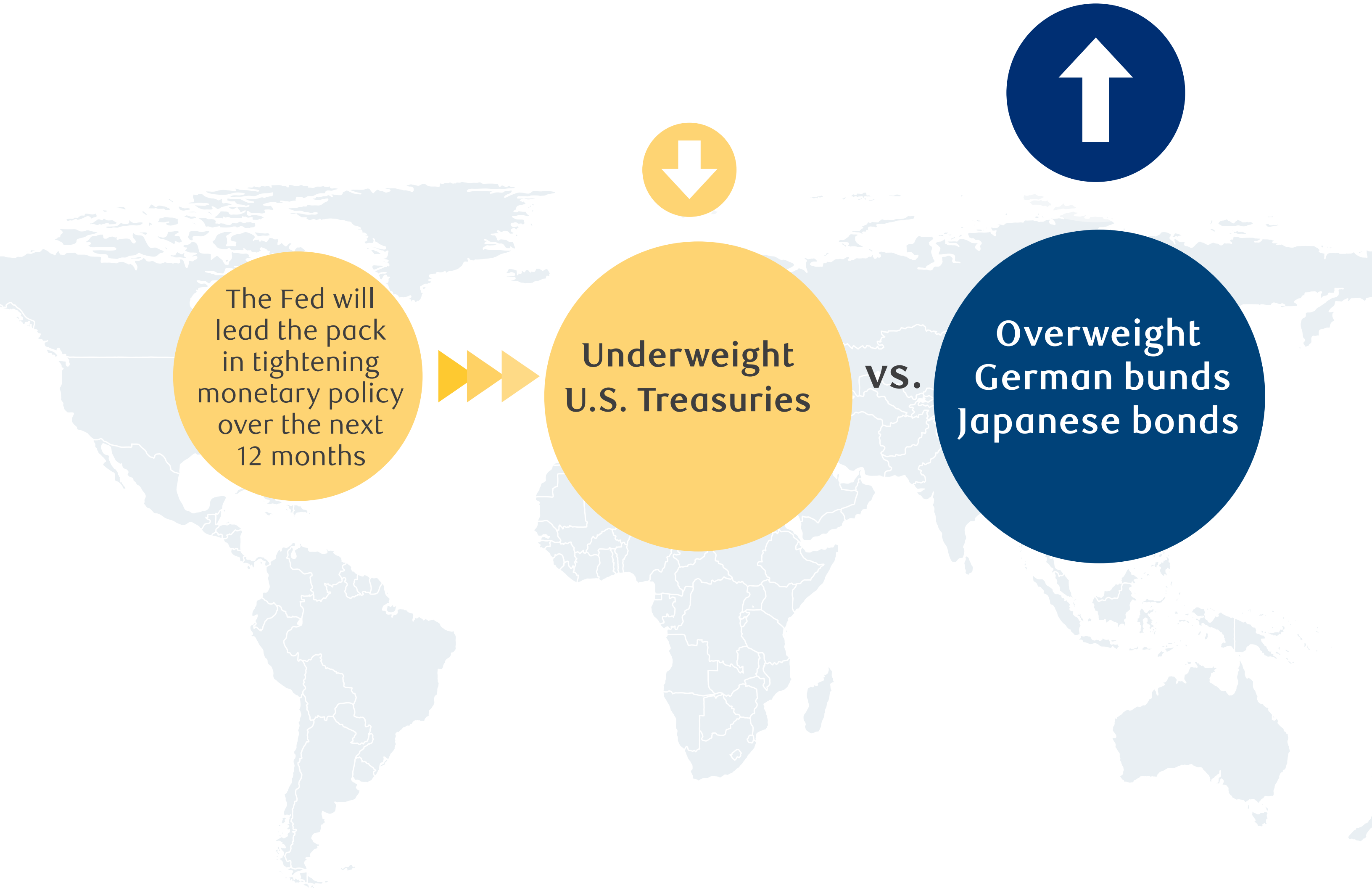
Eurozone – Alongside its developed-market peers, the eurozone appears poised to remove monetary-policy accommodation over the next year. Inflation in the eurozone rose to 5.1% in January, the highest level in a quarter-century, boosted by higher energy prices. Continued fiscal expansion should support growth that has been higher than in recent years. Our expectations for the eurozone's economy are most affected by the Russo-Ukraine war. Russia is the largest supplier of energy to the eurozone, and any disruptions would increase already high levels of inflation. What's more, the wide use of inflation-indexation in European wage contracts means at least some of this inflation is likely to feed into higher wages. We think that most of this year's adjustment in monetary policy by the European Central Bank (ECB) will come through reduced asset purchases rather than interest-rate hikes. While we would not be surprised to see rate hikes before the end of 2022, we think they are more likely to start in 2023. We forecast no change to the ECB's policy rate this year, and yields on German 10-year to be around 0.15% within the next year.

We forecast the 10-year government bond yield at 0.15% in a year's time.

Japan – The inflation plaguing much of the developed world seems to have mostly bypassed Japan. We think that the Japanese economy will struggle to generate meaningful sustained inflation through the long term, and do not expect a meaningful change in monetary policy over the next 12 months. At the same time, rising global bond yields will tend to push up Japanese yields, albeit less than elsewhere due to the Bank of Japan's efforts to cap the 10-year yield at 0.25%. We forecast the 10-year government bond yield at 0.15% in a year's time.

Regional outlook

We believe that the Fed will lead the pack in tightening monetary policy over the next 12 months, increasing the attractiveness of eurozone and Japanese government securities. We are underweight U.S. Treasuries and overweight German bunds and Japanese government bonds.



Interest rate forecast: 12-month horizon

Total Return calculation: February 28, 2022 – February 28, 2023

U.S.

	3-month	2-year	5-year	10-year	30-year	Horizon return (local)
Base	1.25%	1.75%	2.00%	2.25%	2.50%	(0.29%)
Change to prev. quarter	0.88%	1.00%	0.50%	0.45%	0.30%	
High	1.75%	2.50%	2.65%	2.75%	2.90%	(3.45%)
Low	0.63%	0.80%	1.00%	1.10%	1.30%	8.22%

Expected Total Return US$ hedged: 0.2%

Germany

	3-month	2-year	5-year	10-year	30-year	Horizon return (local)
Base	(0.50%)	(0.30%)	(0.10%)	0.15%	0.30%	1.20%
Change to prev. quarter	0.00%	0.00%	0.15%	0.20%	0.05%	
High	(0.25%)	0.00%	0.30%	0.45%	0.70%	(3.21%)
Low	(0.50%)	(0.40%)	(0.25%)	(0.10%)	0.10%	3.54%

Expected Total Return US$ hedged: 2.0%

Japan

	3-month	2-year	5-year	10-year	30-year	Horizon return (local)
Base	(0.10%)	0.00%	0.10%	0.15%	0.80%	2.38%
Change to prev. quarter	0.00%	0.10%	0.15%	0.05%	0.05%	
High	(0.10%)	0.05%	0.15%	0.30%	0.90%	0.70%
Low	(0.10%)	(0.10%)	(0.10%)	(0.10%)	0.40%	8.84%

Expected Total Return US$ hedged: 3.5%

Canada

	3-month	2-year	5-year	10-year	30-year	Horizon return (local)
Base	1.50%	1.50%	1.80%	2.00%	2.20%	0.85%
Change to prev. quarter	0.75%	0.00%	0.00%	0.00%	(0.10%)	
High	2.00%	2.10%	2.30%	2.50%	2.80%	(3.66%)
Low	0.75%	0.80%	1.00%	1.00%	1.25%	9.41%

Expected Total Return US$ hedged: (1.3%)

U.K.

	3-month	2-year	5-year	10-year	30-year	Horizon return (local)
Base	1.50%	1.30%	1.40%	1.55%	1.60%	0.98%
Change to prev. quarter	0.90%	0.70%	0.40%	0.30%	0.10%	
High	1.50%	1.80%	2.00%	2.25%	2.15%	(7.44%)
Low	0.50%	0.60%	0.80%	1.00%	1.25%	7.30%

Expected Total Return US$ hedged: (1.0%)

Source: RBC GAM

Currency markets

Currency landscape altered by Russia-Ukraine conflict

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RBC Global Asset Management Inc.

Right up until February 24, when Russia invaded Ukraine, currency markets had been unusually quiet, unfazed by expectations that central banks would hike interest rates, the related uptick in bond-market volatility or jittery equity markets. The greenback was held back by powerful long-term headwinds that are likely to prevail. On the day of the invasion, all of the normal elements that might be considered in a currency outlook were set aside as investors bought the U.S. dollar in search of safety, security and liquidity. The question is how long this scramble for such safe-haven currencies will persist. The war in Ukraine has changed expectations for growth and inflation, and at least temporarily, has changed the relative winners and losers in currency markets.

We had not expected Russia to launch a full-scale war on Ukraine, and neither had we expected that global sanctions would include a freezing of Russia's foreign-exchange reserves. These events have shocked markets. While we still expect that U.S.-dollar weakness will materialize over the longer term, we have set aside our normal long-term framework for evaluating currencies and instead evaluate this new reality through a shorter-term lens.

Below are a few immediate structural changes shaping this new environment and some associated currency-market implications:

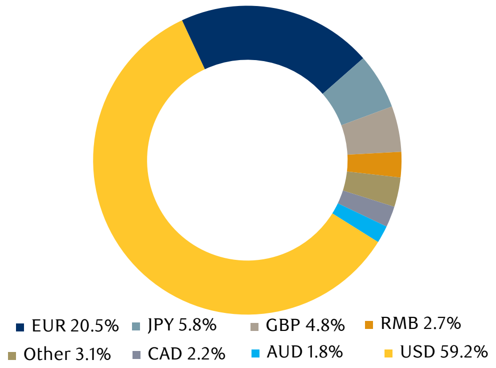
1. Freezing FX reserves

Developed nations took the unprecedented step of sanctioning Russia's central bank and freezing the country's foreign-exchange reserves so that they could not be used to fund military aggression or buffer the impact of economic sanctions. Such extreme steps must have caused policymakers' jaws to drop in Russia as well as in China, the largest holder of currency reserves. Without the implicit guarantee of safety and security for those national savings, the world's owners of reserve assets are likely to shrink their holdings.

While the knee-jerk currency reaction has been U.S.-dollar positive, this development is a significant negative for the greenback in the longer term. For years, the U.S. has been reliant on reserve-related capital inflows to fund its fiscal and current-account deficits. Without this inflow of capital, the greenback could very well be pressured lower by the persistent negative effect of the twin deficits.

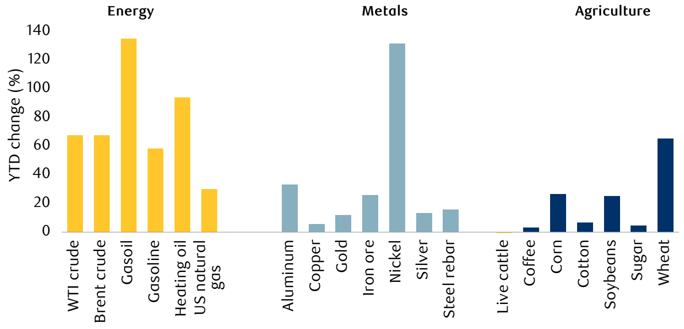
Moreover, there's a good chance that these long-term reserve holders re-orient their reserve portfolios away from the greenback, which currently accounts for about 60% of total reserves (Exhibit 1), toward a more diversified basket of currencies. There is certainly room for the Chinese renminbi's 2.7% share to rise, especially given that the bulk of foreign-exchange reserves belong to Asian countries that have increasing economic and political links to China. We question, however, whether China would be any less likely than the U.S. to weaponize foreign-exchange reserves to advance its geopolitical ambitions. Investors who are looking for non-fiat alternatives could also turn to gold and cryptocurrencies as their use is more difficult to restrict in the event of geopolitical or economic conflict.

Exhibit 1: Global FX reserve composition



Note: As at Sep. 30, 2021 (Quarterly data). Source: COFER, RBC GAM

Exhibit 2: Commodities have rallied sharply



Note: As at Mar. 8, 2022. Source: Bloomberg, RBC GAM

2. The commodity / currency relationship

Investors usually associate commodity strength with U.S.-dollar weakness, but the notion of an inverse relationship between the two is being challenged in the short term. Commodity prices have spiked to impressive heights (Exhibit 2) and the dollar has risen simultaneously. To some extent, this relationship was already present before war broke out in Ukraine, in part due to strong demand as economies recovered from the pandemic, and in part from a transition to clean-energy alternatives that rely heavily on certain industrial metals. But in much the same way that access to global payment systems can be withdrawn or foreign-exchange reserves frozen, the reaction to Russia's invasion heightens concerns about export bans on key industrial and technological inputs to production. China's reluctance to denounce Russia's military incursion threatens the creation of fault lines and additional tension with the West, hinting that an accelerated retreat from globalization is underway. To prevent being locked out of key industries, countries will increasingly be looking to secure long-term interests in key commodities.

While the U.S. dollar may get a short-term boost from the geopolitical situation, the lasting effect of the Ukraine war may be to solidify the appeal of commodity currencies in this new environment of hoarding and scarcity. We have been bullish on cyclical currencies for the past year – including those with rising interest rates and higher exposure to global growth. But we are narrowing the list of attractive currencies to those that are also naturally endowed with resources. The Canadian dollar, Norwegian krone, Australian dollar should outperform within the developed world, while the currencies of Colombia, Chile, Brazil and Mexico will fare better than those of commodity importers in Asia and Eastern Europe.

3. Central banks will still hike

In the days following the February 24 invasion, market focus quickly shifted away from the U.S. Federal Reserve's (Fed) campaign to raise interest rates toward the more pressing issue of energy-price gains and the related shock to global economic growth. We note, however, that the inflationary impact of the war will only increase the urgency for the Fed to act. As the war began, fears of weaker growth drove a reduction in the number of U.S. interest-rate hikes expected in 2022 to five from seven, but this sentiment quickly reversed as markets realized that the Fed will still need to hike if it is to contain inflation expectations.

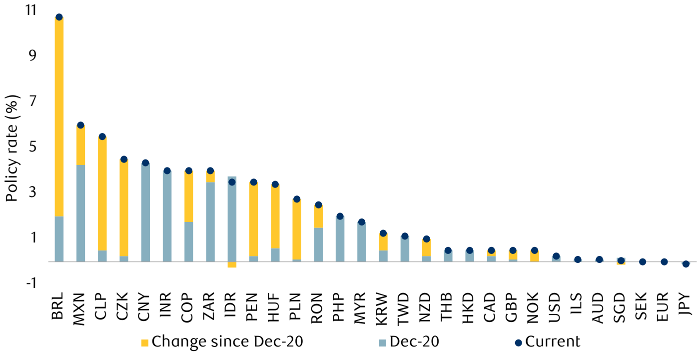
The Fed will not be the first central bank to raise interest rates. The Bank of Canada hiked by a quarter percentage point in early March and central banks in Norway, New Zealand and the U.K. have also done so. The list of emerging-market currencies with hawkish central banks is much longer, and these have been more aggressive. Brazil, for example, has raised its benchmark interest rate by a whopping 8.25 percentage points to 10.75% in just the past year, and at least 10 others have hiked over the past six months to fight inflation and support their currencies (Exhibit 3).

The term "currency wars" was coined over a decade ago in reference to countries seeking to weaken their currencies as a way of boosting export competitiveness. These days, monetary authorities are experiencing more currency weakness than they'd like. In fact, the "currency wars" label could be used to describe a battle for stronger currencies as a way of boosting purchasing power and reducing imported inflation. Several emerging-market countries have intervened directly in support of their currencies, and we expect this to become a more common occurrence as long as geopolitical risks and strong oil prices exert upward pressure on inflation. Currency intervention does not typically have a meaningful impact on the broader direction of foreign-exchange markets unless the largest central banks coordinate efforts to achieve a desired outcome. Owing to the strong signalling effect and the combined firepower of central banks, co-ordinated interventions do tend to meaningfully shift investor sentiment. It was this type of effort that altered the trajectory of the U.S. dollar in in the mid-1980s and again in the early 2000s (Exhibit 4).

Implications for the U.S. dollar

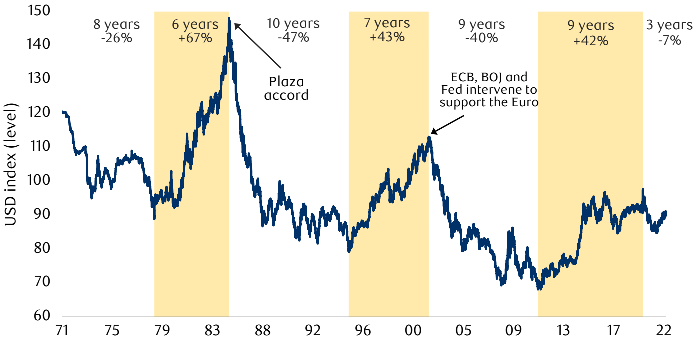
Our usual framework for evaluating the currency outlook has been voided by short-term developments in Ukraine and the imposition of harsh sanctions on Russia. The sanctions are likely to persist well beyond any end in the fighting, so we're focusing on what we know and on understanding the structural shifts that are likely to result from this new investment landscape. The U.S. dollar has strengthened as investors flock to more liquid U.S. assets and the safe-haven currency, so the resumption of the long-term dollar bear market could be delayed by at least several months. But the elements of this regime shift introduce additional challenges for the greenback and support our view that the dollar will weaken in the long term.

Exhibit 3: High (and rising) policy rates in emerging markets



Note: As at: Mar. 5, 2022. Source: Macrobond, RBC GAM

Exhibit 4: Long-term cycles in the U.S. trade-weighted dollar

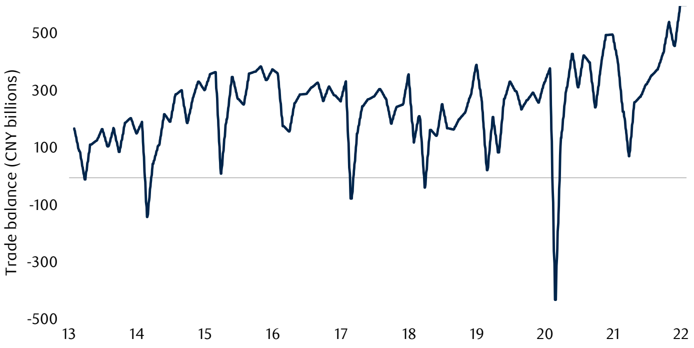


Note: As at Mar. 01, 2022. Source: Bloomberg, U.S. Federal Reserve, RBC GAM

Chinese renminbi

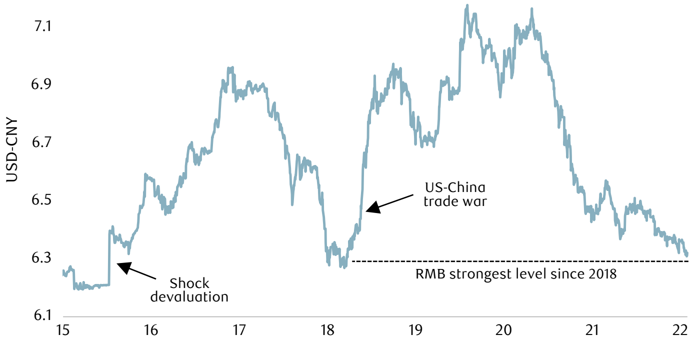
The Chinese renminbi is one of the few emerging-market currencies to outperform the greenback over the past year. Chinese policymakers have always kept a firm grip on the currency's value, but the renminbi's relative stability has puzzled investors because it means that the currency is strengthening against those of China's other trading partners. We don't yet see evidence of waning competitiveness as the trade balance remains in surplus (Exhibit 5), but Chinese authorities have begun to gently push back against currency gains through commentary in state-owned media and more direct methods of influencing the currency. We have become more cautious on the renminbi as the currency nears its highest levels since the 2018 trade war (Exhibit 6), and are closely monitoring how the central bank uses its tools to influence exchange rates. A global drop in COVID cases suggests that China will at some point roll back its restrictions, leading to increased domestic economic activity and a resumption of international travel by Chinese citizens. Such easing would likely lead to currency weakness by raising imports and reducing the country's trade surplus. Given the country's ever-expanding global influence, these risks to the renminbi are also important for the broader outlook on emerging-market currencies. On the other hand, renminbi may benefit from the determination of some Asian countries to diversify their reserves away from the dollar and the euro.

Exhibit 5: China trade balance



Note: As at Mar. 02, 2022. 30 day smoothing applied to the data.
Source: Customs General Administration, Bloomberg, RBC GAM

Exhibit 6: Renminbi approaching important levels



Note: As at Mar. 02, 2022. Source: Bloomberg, RBC GAM

Euro

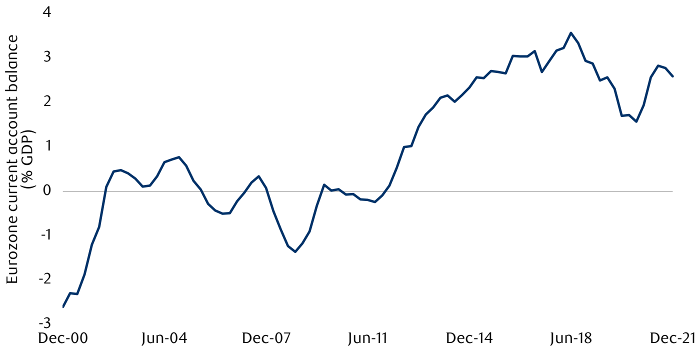
We are lowering our forecast for the euro to US$1.16 from US$1.24 to acknowledge elevated geopolitical risks and the deterioration in the eurozone's economic prospects. Our longer-term outlook is for the euro to regain its footing, but we expect commodity currencies to benefit more from dollar weakness than the euro in coming months. Gains in the single currency will be capped by concerns about high energy prices and their impact on economic growth and trade balances. The combination of a weaker euro and higher crude-oil prices have pushed oil to record highs in euro terms (Exhibit 7), eating into households' disposable incomes and potentially wiping out the currency bloc's large and persistent current-account surpluses (Exhibit 8). The upward pressure on energy prices could be further exacerbated should Russia shut off the supply of natural gas to Europe in response to economic sanctions. This becomes a bigger threat as major developed-market leaders restrict Russia's access to the financial-payments system.

If there is a positive to be found, it is that Europe has been united by the crisis and is now more emboldened to engage in fiscal stimulus. In early March, Germany announced 100 billion euros of emergency defense spending and committed to lifting annual defense expenditures above 2% of GDP. This is just the beginning as Europeans usually require a crisis to act decisively. There are hints that the EU is considering large-scale joint issuance of bonds to fund eurozone-wide investment in energy with the aim of weaning the region away from its dependence on Russian gas. Such a step would leave Europe with a much more growth-supportive fiscal backdrop at a time when government spending elsewhere, particularly in the U.S., is on the decline.

Exhibit 7: Brent in euro terms is at a multi-decade high

Note: As at Mar. 8, 2022. Source: Bloomberg, RBC GAM

Exhibit 8: Eurozone current-account surplus

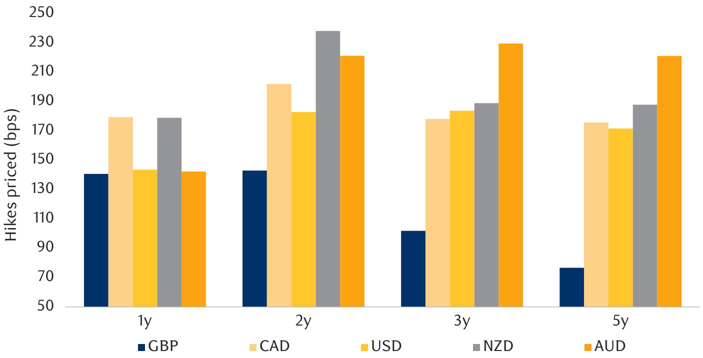


Note: As at: Dec. 31, 2021. Quarterly data. Source: Bloomberg, RBC GAM

British pound

The U.K. will be the first developed nation to emerge from the winter COVID-19 wave, and, barring any new and more transmissible variants, the economy will be free of restrictions and lockdowns. This development bodes well for economic activity and the outlook for rate hikes in the near term, though we note that the Bank of England has already hiked twice and is not expected to keep up with its global peers beyond this year (Exhibit 9). The pound outperformed the euro last year, and it appears that the two rate hikes and other sterling-positive factors are already priced in. Moreover, households face a tougher environment given lower real incomes, rate hikes and tax increases; and inflation-adjusted bond yields in the U.K. are the lowest in the G10, making it harder to attract the capital needed to finance the country's persistent budget and current-account deficits.

Exhibit 9: Bank of England will not raise rates along with peers



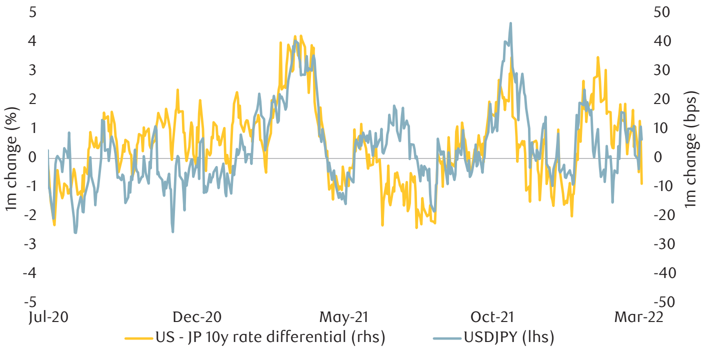
Note: As at Mar. 01, 2022. Source: Bloomberg, RBC GAM

Japanese yen

Speculation that the Bank of Japan would shift to a more hawkish monetary-policy stance led to a temporary rise in the yen, but the most recent monetary-policy meeting dashed those hopes. The central bank's inflation forecasts remain below the 2% target, though inflation may have a chance of reaching that level given global supply-chain constraints.

While the values of most major currencies are determined largely by short-term rates, the yen is typically driven by movements in yields on 10-year U.S. Treasury bonds (Exhibit 10). Given the inability of U.S. 10-year yields to push materially above 2%, it's difficult to see any significant yen weakness ahead – especially given the currency's undervaluation, Japan's current-account surplus and a large overhang of short positions.

Exhibit 10: Rate differentials remains the main driver for the yen



Note: As at Mar. 6, 2022. Source: Bloomberg, RBC GAM

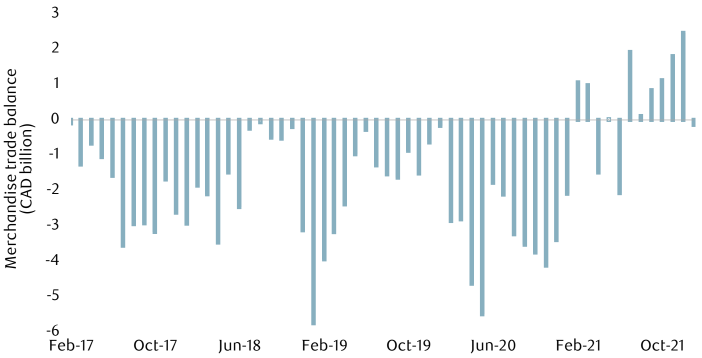
Canadian dollar

The direction of the Canadian dollar seems torn between two of its main driving factors – oil prices and global equity markets. Supporting the loonie are elevated crude-oil prices, which are benefiting from strong demand and fears that Russian output will be taken offline. At the same time, the Ukraine war has raised the kind of geopolitical risks that are often associated with a decline in the loonie and weaker global equity markets. Also limiting loonie gains is skepticism that the Bank of Canada will live up to expectations of an aggressive round of rate hikes, allowing the U.S. interest-rate advantage to weaken the loonie over the past few months.

Outside of short-term developments, we see a lot of Canadian-dollar positives that should help the currency outperform over a longer horizon:

- Strong commodity prices should support Canadian economic growth. Industrial metals such as copper, zinc and aluminum are essential ingredients in the transition to cleaner electricity generation and energy storage.
- Canada has begun posting a trade surplus in goods after a long stretch of deficits (Exhibit 11), helping to pull the broader current-account balance into surplus. Improvement in the current account will partly reverse as Canadians begin to travel abroad, but this segment of spending won't fully offset the upward trend.
- Canada leads the G7 in population growth (Exhibit 12) after 1.9 million newcomers arrived over the past five years. The welcoming attitude of Canada, with a total population of 38 million, results in labour force growth that stands in stark contrast to the U.S. (Exhibit 13).
- The Canadian labour market has experienced a faster recovery than its peers, with a rebound that has brought total employment back above pre-COVID highs.

Exhibit 11: Canada – merchandise trade balance

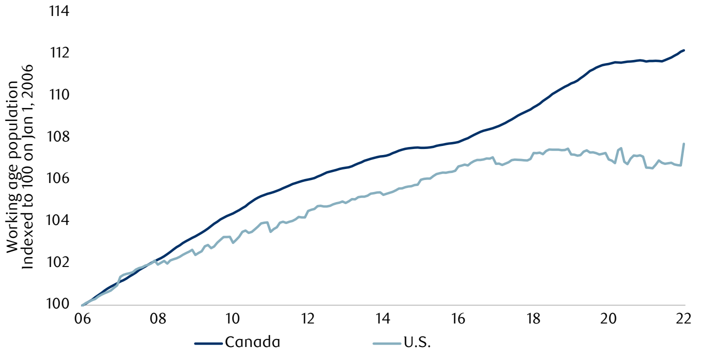


Note: Data is seasonally adjusted. As at Dec. 31, 2021 (Quarterly data). Source: Statistics Canada, RBC GAM

Exhibit 12: Canada's population growth was fastest among G7 in 2021

Note: As at Dec. 31, 2021. Source: Statistics Canada, U.S. Census Bureau, World population review, National Bank, RBC GAM

Exhibit 13: Canada vs. U.S. working-age population



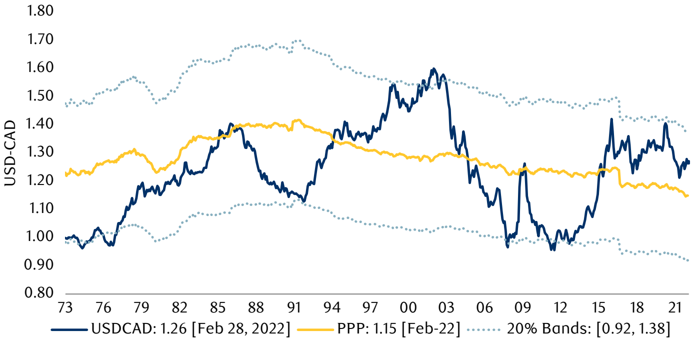
Note: As at Jan. 31, 2022. Source: OECD, RBC GAM

- The loonie is cheap based on models that measure relative purchasing power (Exhibit 14).

The Canadian dollar has stayed in a relatively tight range of $1.20 to $1.30 per U.S. dollar since late 2020 and an even tighter range of $1.25 to $1.30 over the past three months. This stability is unusual given that commodities prices are so strong. We expect the positive longer-term factors listed above will keep the market focused on prospects for Canadian-dollar appreciation and forecast a $1.19 exchange rate in 12 months' time.

Exhibit 14: USDCAD

PPP Valuation



Note: As at Feb. 28,2022. Source: Bloomberg, RBC GAM

Regional outlook – U.S.

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

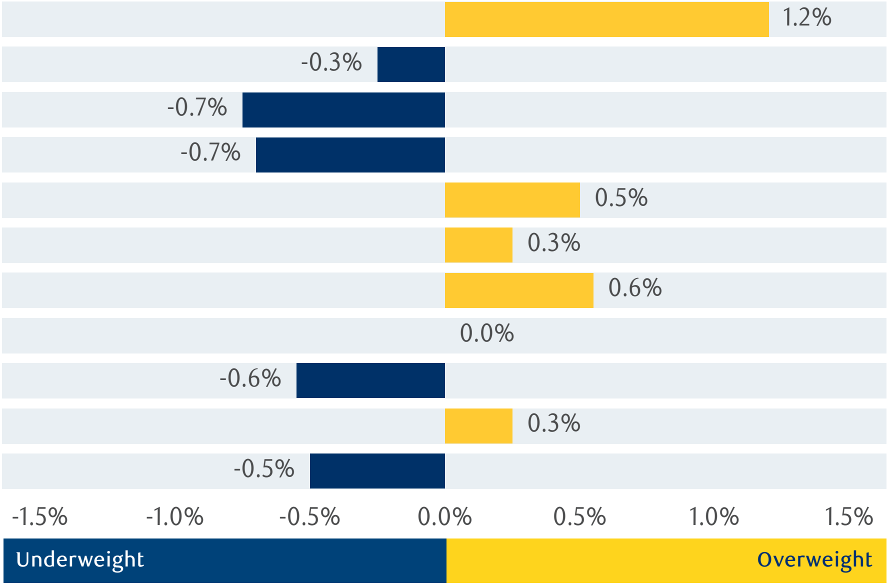
It has been an ugly start to 2022 in the stock market. This year was always going to be a challenging one for investors, with stocks at all-time highs, valuations well above historical averages and interest rates on the rise. But Russia's attack on Ukraine in late February has made the investment backdrop even more complicated. The S&P 500 Index began the year at an all-time high on the first trading day of the year but then declined 14% driven by concerns about inflation and speculation about whether Russia would actually attack Ukraine. The market recorded a nine-month low on the day the invasion began and finished the three months ended February 28, 2022, down 3.9%. With investors focused on geopolitics, inflation and rising interest rates, the COVID-19 pandemic has for now receded as their primary concern. Given the changing investment landscape and the geopolitical emergency, it seems like an ideal time to evaluate where we stand.

Let's start by recognizing how spectacular the performance of the S&P 500 has been. Over the past three calendar years, the S&P 500 has produced an average return of 24%, making it the second best three-year period since 1950 and exceeded only by the 26% average in the 1997-1999 period leading up to the technology bubble. For perspective, the S&P 500's average annual return since 1957 is just over 10%. Clearly, the performance of the S&P 500 through the end of 2021 was extraordinary, especially when one considers that there was a pandemic raging.

To better understand the likely path for the stock market, it is helpful to consider the two major drivers of stock prices – corporate earnings and valuations. From a big-picture perspective, corporate earnings are driven by the rise and fall of economic activity. Currently, investors expect the U.S. economy to grow slightly less than 4% this year and for the S&P 500 to generate earnings growth of roughly 8%. Both estimates seem reasonable to us, and it is important to note that they are both above the long-term trends of roughly 2% for U.S. economic growth and 7% for S&P earnings growth. The main sources of continued earnings increases would come from any fall in energy prices; improvement in supply-chain efficiency; higher labour-force participation; and a continued decline in COVID-19 cases. On the other hand, earnings are likely to prove disappointing if economic activity slows more than expected due to persistently high inflation, energy prices climb even further and there is a resurgence in COVID-19 or unforeseen military steps related to the war in Ukraine. Since the invasion, the odds of earnings falling short of expectations have certainly increased. The bottom line is that earnings are likely to grow at a mid to high single-digit rate, but the path of inflation and the outcome of the war in the Ukraine will likely determine whether the outcome strays from the consensus.

United States – Recommended sector weights

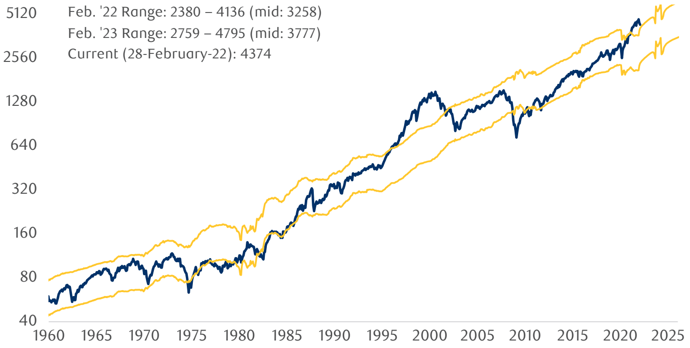
	S&P 500	
Energy	3.8%	1.2%
Materials	2.6%	-0.3%
Industrials	7.9%	-0.7%
Consumer discretionary	11.9%	-0.7%
Consumer staples	6.2%	0.5%
Health care	13.5%	0.3%
Financials	11.4%	0.6%
Information technology	28.0%	0.0%
Communication services	9.6%	-0.6%
Utilities	2.6%	0.3%
Real estate	2.7%	-0.5%



Note: As of February 2022. Source: RBC GAM

> “The bottom line is that inflation and the Fed’s response to it are the biggest threats to a positive outlook for markets.”

S&P 500 equilibrium
Normalized earnings and valuations



Source: RBC GAM

Let’s next consider valuations. While estimating earnings consumes the energies of countless clever people aided by powerful computers, estimating what investors will be willing to pay for those earnings lies outside their control. If risks are rising, valuations will likely be lower. When risks are falling, valuations will tend to rise. Unfortunately, the S&P 500 ended 2021 trading at 21 times estimated earnings for the next 12 months compared with a historical average of 15-16. Even after the decline so far this year, stocks trade at roughly 19 times forward earnings. Valuations have been declining since late fall, when it became clear that inflation was not temporary and that the Fed would have to scale back bond purchases and begin hiking interest rates much sooner than expected. The bottom line is that inflation and the Fed’s response to it are the biggest threats to a positive outlook for markets. The Fed is expected to increase short term interest rates by 1.5 percentage points this year, which would put the fed funds rate at 1.75%, and could be forced to raise rates even more aggressively if inflation remains persistently high. This path would increase the risk of recession and result in lower stock valuations. The conflict in Ukraine presents a risk to U.S. stocks principally through its impact on the oil price (higher inflation) and, more specifically, the price of gasoline (lower consumer spending). We should also expect that European growth will slow as a result of the conflict through higher energy prices and as its significant trade ties with Russia are strained through sanctions.

For the past several months we have been adding exposure to more defensive areas of the market such as Consumer Staples and Health Care, while reducing allocations to cyclical sectors such as Industrials and Information Technology. We have maintained an overweight allocation to 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 the price of oil moves above US$100 a barrel, we will have to begin to worry about a decrease in demand, although the danger zone is probably closer to US$120 a barrel given improvements in fuel efficiency. It is clear that Europe will have to lessen its dependence on Russian oil and natural gas as quickly as possible, and that such steps will likely mean greater investment in renewables and non-Russian sources of traditional energy as well as a reconsideration of the retreat from nuclear energy. Finally, the use of sanctions against Russia has the potential to cripple its economy, but at a cost to the rest of the world. Growth will slow, inflation will pick up and firms with business or debts in Russia won’t be able to get their money. Supply-chain issues may worsen. As long as it seems likely that we will avoid a recession in the next 12 months, we will continue to add attractive stocks amid market declines.

Regional outlook – Canada

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

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

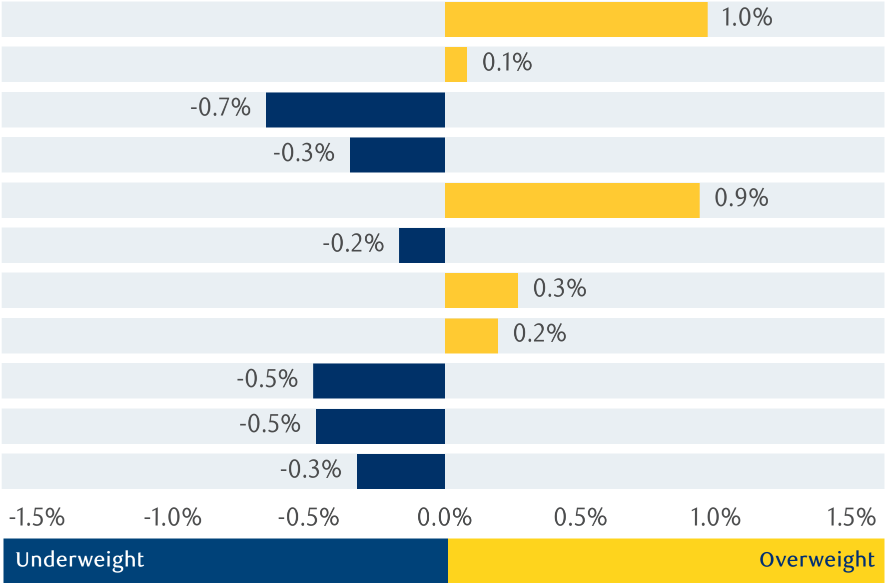
Equity markets have had a volatile start to the year on concern that higher interest rates and inflation will hurt economic growth and corporate earnings, weighing on equity valuations. However, the commodity-heavy Canadian stock benchmark, the S&P/TSX Composite Index, climbed 2.9% in the three months ended February 28, 2022, outperforming many other global markets given rising oil and gold prices. In U.S.-dollar terms, the S&P/TSX gained 3.7% due to modest weakness in the U.S. dollar. Global equity markets, with more exposure to highly valued technology companies, fared worse, with both the S&P 500 Index and the MSCI World Index falling 3.9% and 3.7%, respectively, during the period in U.S.-dollar terms.

Economists have looked past the latest wave of COVID-19 infections with expectations that the effects of the pandemic will soon diminish significantly and extend economic growth at a healthy pace this year and into next. Following a year of strong demand growth for goods, services are expected to drive economic growth this year. Inflation has been running faster than expected as supply-chain disruptions, tight labour markets and elevated commodity prices are flowing through to consumers. Higher prices could limit consumer spending and restrain economic growth. The Bank of Canada (BOC) recently reiterated its belief that Canada's economy has fully recovered as evidenced by the labour market, recovering business sentiment and higher inflation. The BOC expects Canada's economy to expand 4% in 2022 and 3.5% in 2023 and began reducing monetary stimulus with a 25-basis-point interest-rate hike on March 2 to 0.50%, lifting the policy rate from a record low. Russia's invasion of Ukraine has already had global economic ramifications, notably in the form of higher commodity prices, given that Russia is a large global supplier of crude oil, natural gas, copper and fertilizers among others. The rise in commodity prices could keep global inflation rates elevated, and in the absence of a near-term resolution of the crisis in Europe, the outlook for global economic growth is likely to diminish. Any setbacks for the economy could lead central banks to slow the pace at which they raise interest rates.

As investors chart a course through choppy economic waters, the strength in commodity prices and equities tied to them continues to be a bright spot for the Canadian equity market. Energy, the S&P/TSX index's biggest sector gainer so far this year, has benefited from rising prices for crude oil and natural gas, and as the globe emerges from pandemic-driven restrictions demand for fuel can only increase. Meanwhile, lagging investment in fossil-fuel production and geopolitical turmoil have depleted inventories, further bolstering prices.

Canada – Recommended sector weights

	S&P/TSX Composite
Energy	16.0%
Materials	12.9%
Industrials	11.7%
Consumer discretionary	3.3%
Consumer staples	3.6%
Health care	0.7%
Financials	32.7%
Information technology	6.8%
Communication services	5.0%
Utilities	4.5%
Real estate	2.8%

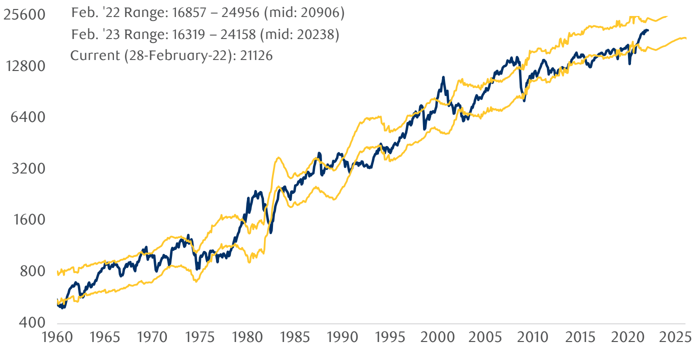


Note: As of February 2022. Source: RBC GAM

Stocks in the Materials sector have risen on higher prices for copper, iron ore, fertilizers and more recently, gold, which has gained on demand for safe-haven investments. Financials is another sector that has contributed to the performance of the Canadian stock benchmark, with the improving macroeconomic backdrop supporting bank earnings. Information Technology was the hardest-hit sector during the three-month period, as stocks with relatively high valuations began to reflect moderating growth expectations. Shopify, once the largest company in the Canadian index, has lost over 50% of its market value since early December after investors' faith in the e-commerce company's ability to sustain its blistering growth pace waned.

S&P/TSX Composite Equilibrium

Normalized earnings and valuations



Source: RBC GAM

The healthy economic recovery, reduced pandemic-related restrictions, and elevated commodity prices are expected to support continued earnings growth for companies that comprise the S&P/TSX index. Forecasters are calling for S&P/TSX earnings to climb 8% in 2022 and a further 5% in 2023. Not surprisingly, the biggest sector contributors to earnings growth are expected to be Energy, Industrials and Materials, while earnings in the Financials sector are expected to decline modestly this year. While a pullback in commodity prices would have a negative impact on producers' earnings, the damage might be limited because analysts' estimates do not fully reflect the recent rise in commodity prices.

The S&P/TSX carries a P/E multiple of 14.1, which is below its historical average and remains a significant multiple discount to the S&P 500, which has a forward P/E of 19.2. While the composition of the Canadian market explains the lower valuations, the S&P/TSX could close the discount in a cyclical recovery.

Canadian bank stocks were strong performers over the past three months, and continue to be the biggest contributors to S&P/TSX earnings. A recovery in loan growth, the benign credit environment, excessive capital positions and a positive economic outlook supported the move higher. While earnings comparisons will be flat at best and valuations are full, we continue to see the potential for further gains driven by rising earnings estimates due to interest-rate increases, rising loan growth, good cost management and continued share buybacks. We note that the geopolitical backdrop in Europe could dampen consumer sentiment or delay interest-rate increases in North America.

At the time of writing, global oil prices had briefly broken above US$100 per barrel. Supply and demand are tight and the Russia–Ukraine situation can only lead to further short-term disruptions. Natural-gas prices are also surging due to low inventory levels, especially in Europe, which relies on Russia for 40% of its supply. Energy producers, which are clear beneficiaries of these higher prices, will generate significant free cash flow, which is being used to reduce debt and boost dividends and share buybacks. Valuations remain low for the Energy sector in part due to questions about the sustainability of higher prices and the longer-term outlook for demand given requirements to address emissions reductions.

Regional outlook – Europe

Elma de Kuiper
Portfolio Manager,
RBC Global Asset Management (UK) Limited

After performing strongly for most of 2021, European equities fell during the three-month period ended February 28, 2022, due mostly to declines recorded in January. The early-year decreases followed signals that major central banks including the European Central Bank would begin raising interest rates to counter the fastest inflation in 25 years. The Bank of England raised rates in December and again in February. Russia's invasion of Ukraine also dampened investor sentiment as the period came to a close.

Even with the less rosy outlook, European leading indicators remain robust. Economists' GDP forecasts, while down slightly from a few months ago, are still above 4%, and upgrades to earnings-per-share estimates continue to exceed downgrades. However, the most urgent matter under consideration in Europe is inflation running at about 5%, which has implications for European equity markets, government policy and the performance of factor investors assessing the impact of value, growth and momentum on portfolios.

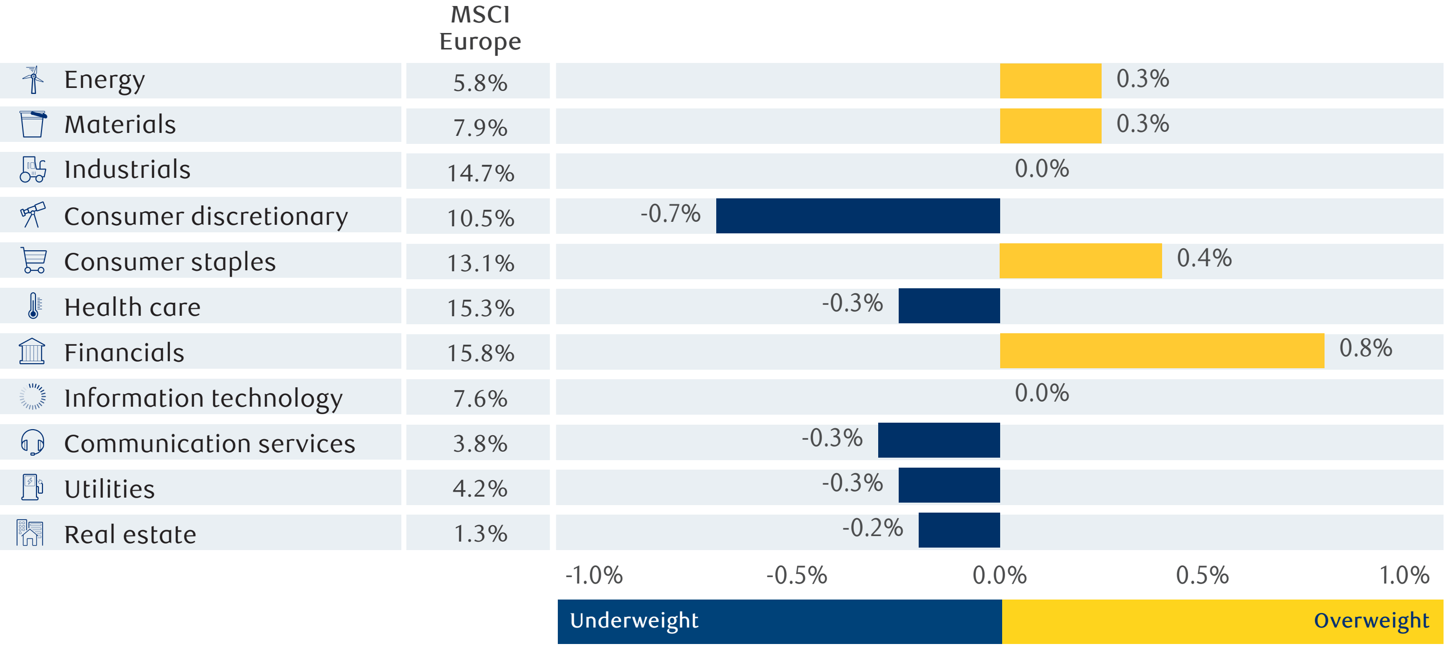
In a recent *Global Investment Outlook*, we reflected on the relationship between equities and interest rates, and explored the relative performance of cyclical and defensive businesses in that context. The inquiry proved particularly timely given the scale of the stock-market rotation seen this year. Cyclical stocks outperformed defensive stocks by 11 percentage points in the three-week period ended January 21, 2022, as the Energy, Financials and Materials sectors strongly outperformed the more defensive Information Technology, Health Care and Industrials sectors. Energy was particularly strong, returning close to 10% during the three-week period, as relatively low stockpiles stoked concern that supply would fall even further if Russia proceeded with an invasion of Ukraine.

The strong returns posted by value stocks expressed itself in the outperformance of stock markets in the U.K., Norway and Spain, which have higher concentrations of value stocks than do underperformers such as Denmark, Sweden and Switzerland. The U.K. has a large value tilt to the Financials, Energy and Materials sectors, and Norway to Energy, while Sweden has significantly more exposure to growth stocks. We also note that the U.K. was one of the first countries to start reopening from the Omicron coronavirus wave and is particularly well positioned economically: the OECD predicts that the U.K. economy will be the fastest growing in the G7 for the second year in a row.

Inflation and valuation – the impact on defensive and cyclical businesses

As for the relationship between interest rates and valuations, we have found that correlations between rates and share-price returns have not been stable over time. We posit that interest rates are accompanied by

Europe – Recommended sector weights

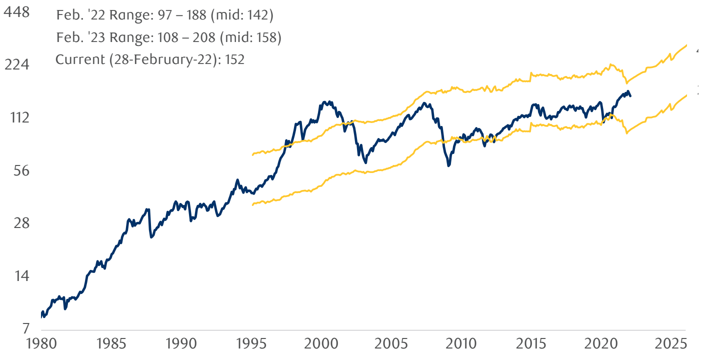


	MSCI Europe	
Energy	5.8%	0.3%
Materials	7.9%	0.3%
Industrials	14.7%	0.0%
Consumer discretionary	10.5%	-0.7%
Consumer staples	13.1%	0.4%
Health care	15.3%	-0.3%
Financials	15.8%	0.8%
Information technology	7.6%	0.0%
Communication services	3.8%	-0.3%
Utilities	4.2%	-0.3%
Real estate	1.3%	-0.2%

Note: As of February 2022. Source: RBC GAM

> “Geopolitical risks have climbed dramatically in the past few weeks and it may be that they overshadow fundamentals in the short term.”

MSCI Europe Index Equilibrium
Normalized earnings and valuations



Source: RBC GAM

changes in growth/inflation expectations that affect future expected cash flows. Companies in high-growth areas such as technology tend to have greater sensitivity to interest-rate hikes as a greater portion of their valuation comes from future cash flows, which are discounted at a rate derived from interest rates. As interest rates rise, the value attributed to those future cash flows declines, and valuations are reduced. We have seen that just a small increase in the discount rate is required to hit valuations of the highest rated stocks – as the sharp equity correction of January showed.

Based on current valuations, European equities are cheaper than other major markets. They remain expensive, however, in historical terms, and corporate profit margins are near all-time highs. This environment is not typically the best launch pad for sustained multi-year equity gains. On a 12-month forward P/E ratio, Europe trades at 18.3 (84th percentile over 35 years), and net profit margins are at 9.2%, not far below the 9.7% peak in 2007 and 9.4% as recently as 2018. Combined, these two measures have never been higher than current levels, but given the positive economic backdrop and strong economic growth predicted across the Continent, the fundamentals for corporate profits remain strong.

The case for high-growth companies as a defence against inflation

Which sectors tend to be more inflation-proof? The orthodox view is that sectors with the most exposure to raw materials and the positive impact of rising interest rates will outperform. For example, banks tend to earn more when interest rates go up, as they can charge more on the loans they write. Energy is also a beneficiary, with most of any rise in oil and gas prices falling directly to the bottom line. However, this analysis is a little too neat. Capital-light businesses outside these areas also tend to weather inflationary environments well because they do not have to maintain large manufacturing bases, allowing them to expand profits at a pace exceeding inflation.

In an inflationary environment, we find that companies in the Consumer Staples sector will have greater latitude to raise prices than they would when inflation is low. While there are limits to how far these companies can go before depressing demand, some companies in this area have in recent months been able to increase prices enough to largely keep them whole with inflation. In any event, investors' best bet is to find companies that can raise prices easily and don't require heavy capital investment. This consideration should be weighed against the aforementioned valuation concerns.

The strong jobs market has been one of the reasons for the surge in inflation. As inflation rises to uncomfortable levels, wages tend to rise. In the event that wages rise more than companies can raise prices, we could see workforce reductions.

Conclusion

The rotation back into cyclical stocks is pronounced after a 15-year cycle of defensive outperformance. Europe's markets are particularly bountiful in large-cap defensive stocks, which offer direct exposure to the Continent's strong economic backdrop and some offset to the negative impact of rate hikes. While an environment of rising rates tends to most directly affect the valuations of "growth" companies, we challenge how well this orthodoxy holds through an economic cycle: companies that are able to grow in real terms over and above inflation are better positioned to offer the best long-term returns.

We remain especially watchful because recent volatility in asset prices might herald the start of a weaker period for the economy. We view the situation as not immediately precarious, but certainly market risks have risen. Geopolitical risks have climbed dramatically in the past few weeks and it may be that they overshadow fundamentals in the short term.

Regional outlook – Asia

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

Asian equities pulled back during the latest three-month period amid a wide divergence in performance among countries, with declines accelerating in late February after Russia's invasion of Ukraine created concern that the conflict would inhibit economic growth and lead to skyrocketing fuel prices. Imports account for about 60% of China's oil needs, about three-quarters of Japan's, and almost all of South Korea's.

Equity markets in the Southeast Asian markets of Thailand, Indonesia and Malaysia outperformed for the first time since 2018. Chinese equities underperformed, as growth momentum has weakened since the third quarter of 2021. We believe that Chinese growth will continue to lag into the second half of 2022, when the government may feel it must launch larger-scale measures to support the economy. Across Asia, an export downturn is likely from mid-2022 due to the lagged effects of a slowing China, and decelerating demand for technology and U.S. consumer goods.

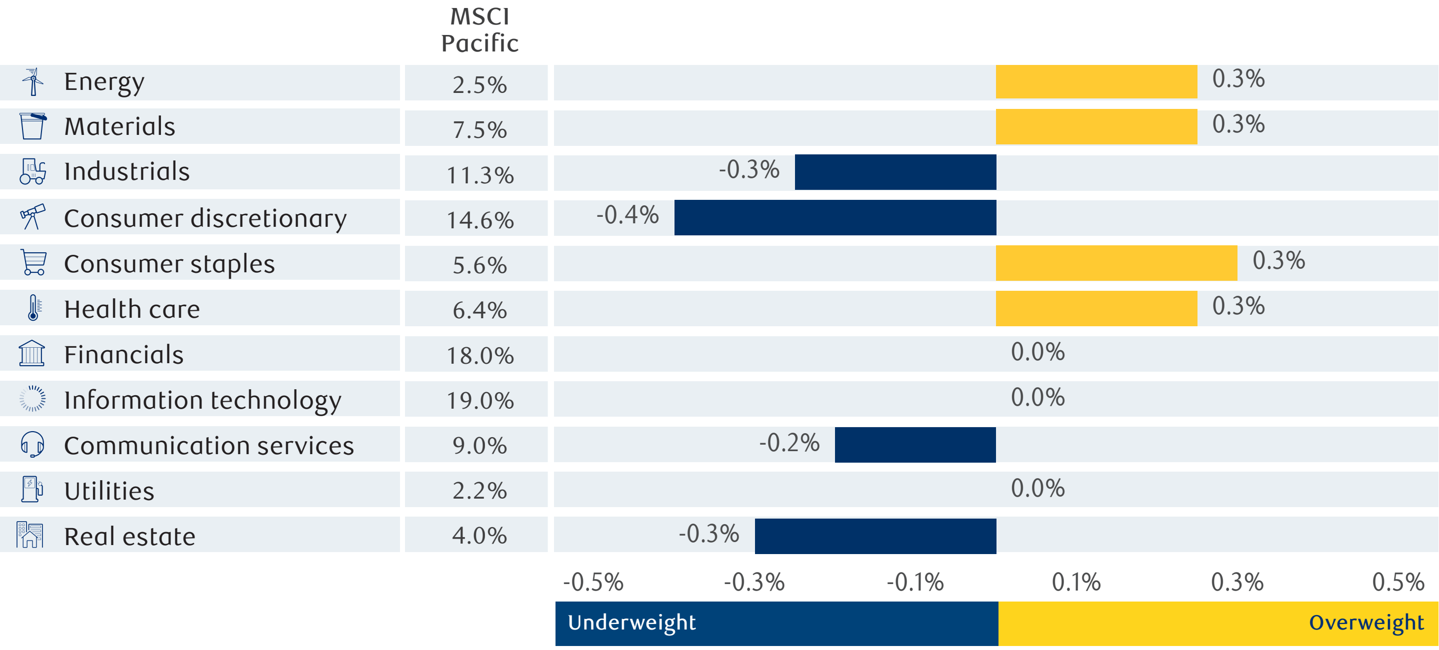
Asian growth is trending higher and is likely to become more broad-based across exports and given a recovery in domestic demand. Developed markets in Asia have reached high COVID-19 vaccination rates, and developing markets are catching up, leading to a snapback in consumption. Inflation drivers will likely shift from a lack of supply to rising demand, but regional inflation remains broadly within central-bank targets. We expect that monetary policy will be gradually tightened in many Asian markets, but also point out that inflation will worsen in the short term because of the war-related spike in oil prices.

Japan

We expect Japanese economic growth to remain strong. Economists are predicting inflation-adjusted 3.5% GDP growth in 2022, which is a marked increase from 1.4% in 2021. The main driver of growth is exports, but private consumption is also holding up quite well. Japanese consumer inflation remains low, with a rate of 1.2% forecast for 2022, well within the comfort range for the Bank of Japan (BOJ). We do not expect Prime Minister Fumio Kishida to make any significant changes to economic policy or the BOJ to make changes to its accommodative monetary policy. The U.S. dollar has traded higher backed by rising longer-term U.S. interest rates. As a result, the Japanese yen has depreciated to the 115-per-U.S.-dollar level, down from 110 level six months ago.

Japanese industrial production remains strong, driven by an increase in automobile production, as supply-chain constraints for semiconductors have gradually eased. Production forecasts for telecommunications and electrical machinery for the first half of 2022 are improving, but we are concerned that the supply issues have not been fully resolved.

Asia – Recommended sector weights



Note: As of February 2022. Source: RBC GAM

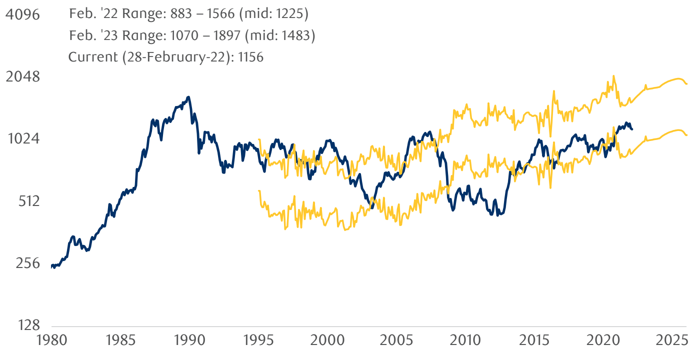
We expect higher energy and food prices to be reflected in the consumer price index, but Japanese inflation should remain lower than in the U.S. and many other countries. The BOJ will continue to focus on maintaining easy financial conditions through asset purchases and lending facilities. Employment has been holding up well, with the unemployment rate forecast to be 2.7% in the second quarter of 2022, compared with 2.8% in the most recent period.

Rest of Asia

In China, we expect growth to deteriorate until the summer of 2022, at which point the government may take more decisive action to arrest the downward spiral. As a result, we expect growth to bottom out in the second half of 2022.

MSCI Japan Index Equilibrium

Normalized earnings and valuations



Source: RBC GAM

Four factors are hurting the Chinese economy: a 'zero-COVID' strategy, which triggers immediate lockdowns and monitoring of individuals; cooling property markets; slowing exports; and measures to reduce pollution and promote a 'green' economy. We expect Chinese GDP growth to fall to 4.7% in 2022 from 8.4% last year, with first-quarter growth at 3.0%.

Economic growth in India is forecast at 7% for 2022, the highest in Asia. However, this year's first-quarter GDP will likely be weaker as India is dealing with another wave of COVID-19 cases, resulting in the re-imposition of curfews and curbs on services that require close human contact. Although the impact on GDP growth should be smaller than in previous waves, more restrictions will likely keep health-care systems from being overwhelmed. The Reserve Bank of India has been slowly tightening monetary policy while downplaying inflation risks due to the uneven recovery. We expect the government to meet its deficit target of 6.8% as a percentage of GDP, with higher tax collections accompanied by more fiscal spending.

In Indonesia, the economic re-opening remains challenging amid low vaccination rates, while government-debt purchases remain a risk to external balances amid tighter global financial conditions. We forecast 2022 GDP growth of 4.4%, up from 3.2% in 2021 but well below the government's forecast of 5.0%-5.5%. The percentage of fully vaccinated Indonesians was relatively low at 54% as of late February, which suggests that further re-opening is unlikely to be smooth and domestic demand subdued.

In South Korea, GDP growth is slowing amid moderating export growth and a weak recovery in consumption. The recent surge in COVID-19 hospitalizations led to the government re-imposing social-distancing rules to contain the spread of the coronavirus, and these steps are likely to hit consumption in the coming months. Consumer inflation declined to 3.6% year over year in January from 3.7% in December, but remained higher than in recent periods owing to supply-side issues. Most of the recent rise in inflation was driven by higher prices for food and energy, but inflation in services also rose. However, we expect the COVID restrictions and lower oil prices to drop inflation back to the 2%-3% historical trend. The Bank of Korea (BOK) hiked interest rates in January, likely to be followed by a pause, as it awaits more clarity regarding the growth and inflation path following the presidential election to take place on March 9. We believe that the January rate increase marked the end of the Bank of Korea's rate-hiking cycle in the near term.

Regional outlook – Emerging markets

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Portfolio Manager and Deputy Head,
Emerging Market Equities
RBC Global Asset Management (UK) Limited

Emerging-market equities dropped 2.5% in U.S.-dollar terms in 2021, underperforming developed- market equities by close to 25 percentage points and delivering the second largest underperformance versus developed markets since the MSCI Emerging Markets Index was created in 1999. In the three-month period ended February 28, 2022, emerging-market stocks lost 3.0%.

China was the main contributor to the poor performance during 2021, notably as a stricter regulatory environment hit the large internet sector. Latin America was another region that weighed on returns, and excluding China the emerging-market benchmark was up 11%. Emerging markets with lower rates of vaccination suffered from rising rates of COVID-19, and lockdowns continued to lead to lower-than-expected economic growth in many countries.

After about 10 years of underperformance, investors have started to question the need to own emerging-market equities. We believe that emerging-market assets offer both diversification and superior economic growth, which should translate into stronger equity returns over the long term.

Since the beginning of the year and despite the weakness in Russian stocks, we have started to see better relative performance from emerging-market equities. Between January 1, 2022, and February 28, 2022, emerging-market equities as measured by the MSCI Emerging Markets Index have fallen 4.8%, compared with declines of 7.7% for the MSCI World Index and 8.1% for the S&P 500 Index.

A major risk for 2022 is the zero-COVID policy pursued by the Chinese government. We may see large lockdowns in China, which could lead to weaker growth in the country and affect global growth and demand for commodities.

A policy mistake by the U.S. Federal Reserve (Fed) could also lead to a sell-off in equity markets, and emerging markets would probably underperform in this scenario. Finally, the situation in Ukraine brings the prospect of even higher inflation and the risk that more countries could be involved in the conflict.

A major headwind is the very small gap in growth between emerging markets and developed markets forecast for 2022. At about 1%, this difference would be the smallest in 20 years. Traditionally, outperformance in emerging-market equities is highly correlated with the relative economic performance of emerging markets compared with developed markets. We believe, however, that this bleak number had already been priced into valuations.

Emerging-market valuations are very attractive with the largest discount to developed markets in 20 years at 45%, compared with a long-term average of 25%. Furthermore the economic picture is fairly positive for emerging markets, and continued strong global economic growth driven by higher-than-expected consumer demand, increased capital expenditures and inventory rebuilding as COVID fades away are all positive for emerging-market equities.

Other positive data points are:

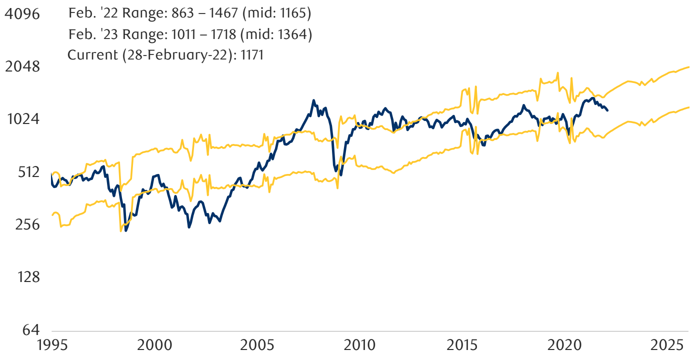
- Wage pressures are contained in emerging markets, where we haven't seen the same increase in demand for goods during the pandemic as in the developed world.
- For the same reason, inflation should generally remain within central-banks targets and has probably peaked now that economies have re-opened.
- Interest rates are already higher in emerging markets than in developed markets, giving credibility to emerging-market policymakers in the fight against inflation. China is actually easing rather than tightening, supporting economic growth in the country.
- Current accounts for Asia have considerably improved since the last round of tightening, while currencies are attractively valued apart from a few exceptions. This situation is very different from the one that was in place at the time of the Fed tapering in 2013.

We expect that a weaker U.S. dollar will lead to the outperformance of emerging-market equities in 2022, as emerging-market stocks tend to rise when the U.S. dollar falls. We have called for a depreciation of the U.S. currency for a few years, but major U.S.-dollar indexes now stand at roughly the same level as they did at the end of 2019. We would expect to finally see a lower U.S. dollar in the months ahead.

In 2022, we may continue to see weakness in the Chinese internet sector. We believe, however, that the sell-off won't be as severe as last year, and the impact of any decline would be smaller as the sector's weighting in the index has dropped significantly since February 2021. But growth stocks may face further pressure as expensive stocks are still too expensive compared to their fundamentals, and only part of the growth bubble has been deflated. The 10% of the most expensive stocks in the emerging-market equity benchmark still trade at 15 times their price-to-book value for a return on equity of 25% - a number that we believe is excessive.

MSCI Emerging Markets Index Equilibrium

Normalized earnings and valuations



Source: RBC GAM

In terms of quality, we find that the middle segment trades at multiples that are too low. These stocks generate a median return on equity of almost 13%, but at a median price-to-book value of only 1.7, just above the lowest-quality companies at 1.5 times. We would expect valuations of low-quality stocks to fall in the coming months and valuations of middle-quality companies to rise.

Value stocks could continue to outperform growth stocks, as the valuation gap is still too wide. Only half of the underperformance of value in 2020 was closed in 2021, and, as economies re-open, we would expect the gap to narrow further from the current 70% level closer to 50%. Value stocks will be driven by the trend toward decarbonization, inventory rebuilding and higher interest rates. However, we believe that there will be a wide divergence in performance between value stocks that are most exposed to an economic slowdown, which look overvalued, and less cyclical value companies, which look the most attractive.

In terms of countries, we believe that the strong underperformance of China should come to an end. We expect Chinese financials, cyclical and decarbonization-centred companies to perform best.

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 $599.1 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 January 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.

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RBC Global Asset Management

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