RBC Global Asset Management

The Global Investment Outlook

RBC GAM Investment Strategy Committee

SPRING 2020

The RBC GAM Investment Strategy Committee

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

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

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

These include:

- 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*.

Contents

Executive Summary

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

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

New sources of uncertainty have disrupted financial markets and undermined economic growth prospects. There is no question that many different pathways now exist for the global economy, and some of these could lead to recession. However, a coordinated response by central banks and politicians, the fact that past health scares have proven temporary, and the massive repricing of assets that has occurred over the last few weeks encourages us to maintain a moderately constructive outlook.

Economic growth disrupted by Covid-19

The recent decline in risk assets followed several quarters of financial-market gains amid stable economic growth, supported by improved financial conditions and central-bank stimulus. An assortment of geopolitical risks remain, but the sudden spread of the Covid-19 virus, closely followed by the collapse in oil prices are the main culprits disrupting economic growth and investor confidence. We must recognize the growing presence of these risks and their potential adverse impact on near-term growth. As a result, we have reduced our outlook for global growth to 2.9% from 3.25%, which would be the lowest in more than a decade. This updated forecast leads us to anticipate subdued global growth in 2020, but we expect a recovery in 2021 as fears of Covid-19 diminish.

Macroeconomic risks escalate

Several geopolitical risks had faded near the end of 2019, including the U.S.-China trade dispute and Brexit uncertainty, creating a favourable environment for risk assets. However, a collection of new challenges has reversed this positive trend and increased uncertainty for economies and global financial markets. Most turbulent of all is the Covid-19 virus, whose negative impact continues to propagate through the economic system, disproportionately affecting the poorer emerging-market economies. The steep decline in the price of oil, while a near-term benefit to consumers, has directed investor's attention to the vulnerability of energy and other sectors facing lower cash flows, especially where balance sheets have been significantly leveraged through the past decade. Tensions remain in relations between the U.S. and Iran, and the upcoming U.S. presidential election poses another potential source of volatility for markets. The socialist candidate, Bernie Sanders, continues to mount a serious claim for the Democratic nomination and uncertainty remains regarding the effectiveness of his policies. Overall, we believe that the macroeconomic risks facing investors are more severe than they were a quarter ago.

Central banks provide additional stimulus

Central banks including those in Canada, the U.S. Australia and China have recently bolstered monetary accommodation by reducing interest rates in a coordinated effort to combat the risks to economic growth. While further monetary stimulus is expected, its implementation and effectiveness have become worrisome as policymakers continue to move rates toward zero. Some central banks have lowered rates into negative territory and the potential for unintended consequences from such unorthodox monetary policies is a concern. While fiscal spending is more cumbersome and takes longer to implement than rate cuts, governments may find that it is the next logical – and perhaps more effective – step for supporting economic growth.

Late-business-cycle concerns

Our assessment of the U.S. business cycle using a scorecard approach continues to indicate that we are at a late stage in the cycle. At nearly 11 years, the economic expansion is lengthy by historical standards and the labour market is extremely tight. Within our framework, the odds of a recession have risen due in part to changes in the yield curve. In contrast to the previous quarter, when recession risks were moderating, the yield curve has flattened again, signaling an increased risk of recession following the Covid-19 outbreak.

Expecting U.S.-dollar weakness ahead

Currency markets whipsawed on concerns that Covid-19 will have a detrimental impact on growth and push the global economy into a recession. Initial concerns led to a U.S. dollar rally in a safe haven scenario, but heavy flows into U.S. Treasuries changed the narrative for the dollar. It became obvious that the spread beyond China will lead the Fed to cut rates aggressively eroding the interest rate advantage the dollar held. This may be the last straw that was needed to resolve and accelerate the toppy dollar range to the downside. With these developments our confidence in calling the start of the new dollar cycle is increasing. When we consider valuations and the ability to benefit from global fiscal measures we expect the euro and Japanese yen to outperform the Canadian dollar and the pound.

Bond yields plunge to unsustainably low levels

In this environment of heightened uncertainty, investors have flocked to safe-haven government bonds, sending yields to historically low levels that are unlikely to be sustained. Even considering secular headwinds that are depressing real interest rates, our models suggest that the U.S. 10-year yield is well below our modeled estimate of equilibrium and represents significant valuation risk. While yields are being suppressed more recently due to the virus's impact on investor confidence in a time of stress, we expect that investors will eventually demand a real, or after-inflation, return on their savings. For that to occur, yields would need to rise from current levels, leading to low or even negative returns for bonds.

Sharp sell-off in stocks reduces valuation risk

Global equities have declined sharply as the Covid-19 outbreak and the collapse in the oil price pose a new threat to corporate profits and damaged investor confidence. The S&P 500 Index has declined significantly from its record high, erasing solid gains from earlier in the year. Historically, market reaction to crisis events tend to be short-lived as long as the shock doesn't cause sustained and meaningful harm to the economy. While the sell-off has lowered equity prices and alleviated valuation concerns, a lack of clarity surrounding corporate profits means a wide range of potential outcomes is possible. However, in the event that worst-case outcomes for the economy and highly leveraged companies are avoided, the recent sell-off in stocks could provide for attractive returns in equity markets.

Asset mix – capturing the equity risk premium

Our asset mix reflects the fact that economies are likely to continue growing over the longer term, though we recognize that the Covid-19 outbreak may have delayed progress anywhere from two to four quarters. Prior to the outbreak, we had trimmed our equity allocation by one percentage point amid concerns of stretched valuations, excessive investor optimism and the fact that economies were stabilizing but not accelerating meaningfully. Since then, the valuation risk in stocks has diminished, especially outside of the U.S., and the plunge in bond yields has boosted the relative attractiveness of stocks versus bonds to its most appealing level in many years. As a result, we added back the one percentage point to our equity allocation and sourced the funds from fixed income. For a balanced, global investor, we currently recommend an asset mix of 59 percent equities (strategic neutral position: 55 percent) and 39 percent fixed income (strategic neutral position: 43 percent), with the balance in cash.

Economic & Capital Markets Forecasts

Economic forecast (RBC GAM Investment Strategy Committee)

	United States		Canada		Europe		United Kingdom		Japan		China		Emerging markets*	
	Spring 2020	Change from New Year 2020	Spring 2020	Change from New Year 2020	Spring 2020	Change from New Year 2020	Spring 2020	Change from New Year 2020	Spring 2020	Change from New Year 2020	Spring 2020	Change from New Year 2020	Spring 2020	Change from New Year 2020
Real GDP														
2019A[1]	2.33%		1.64%		1.17%		1.40%		0.75%		6.13%		4.69%	
2020E	1.90%	0.15	1.30%	(0.20)	0.90%	(0.10)	1.10%	0.10	(0.20%)	(0.45)	5.00%	N/C	4.30%	(0.70)
2021E	2.00%	N/C	1.70%	N/C	1.20%	N/C	1.40%	N/C	0.80%	N/C	6.75%	N/C	5.50%	N/C
CPI														
2019A	1.81%		1.96%		1.19%		1.79%		0.49%		2.90%		3.19%	
2020E	2.30%	0.30	2.10%	0.35	1.40%	0.15	1.50%	(0.50)	1.10%	(0.15)	3.60%	N/C	4.10%	1.10
2021E	2.20%	N/C	2.00%	N/C	1.60%	N/C	2.10%	N/C	1.00%	N/C	2.40%	N/C	2.90%	N/C

A = Actual E = Estimate *GDP Weighted Average of China, India, South Korea, Brazil, Mexico and Russia. [1]Awaiting actual Q4 2018 GDP release for Brazil and Russia. As a result, the Emerging Markets real GDP growth figure for 2019 is a forecast.

Targets (RBC GAM Investment Strategy Committee)

	February 2020	Forecast February 2020	Change from New Year 2020	1-year Total Return estimate* (%)
Currency Markets against USD				
CAD (USD–CAD)	1.34	1.34	(0.03)	0.2
EUR (EUR–USD)	1.10	1.17	(0.03)	4.6
JPY (USD–JPY)	108.11	103.00	5.00	3.8
GBP (GBP–USD)	1.28	1.28	N/C	(0.6)
Fixed Income Markets				
U.S. Fed Funds Rate (Upper Bound)**	1.75	1.00	(0.75)	N/A
U.S. 10-Year Bond	1.15	1.60	(0.15)	(3.0)
Canada Overnight Rate**	1.75	1.00	(0.50)	N/A
Canada 10-Year Bond	1.13	1.50	(0.10)	(2.3)
Eurozone Deposit Facility Rate	(0.50)	(0.60)	(0.10)	N/A
Germany 10-Year Bund	(0.61)	(0.25)	0.05	(4.2)
U.K. Base Rate	0.75	0.50	(0.25)	N/A
U.K. 10-Year Gilt	0.44	0.60	N/C	(1.1)
Japan Overnight Call Rate	(0.03)	(0.20)	N/C	N/A
Japan 10-Year Bond	(0.15)	(0.10)	0.10	(0.7)
Equity Markets				
S&P 500	2954	3275	(25)	13.0
S&P/TSX Composite	16263	17500	(375)	10.9
MSCI Europe	126	140	(8)	15.4
FTSE 100	6581	7450	(475)	18.4
Nikkei	21143	23750	(1600)	14.4
MSCI Emerging Markets	1006	1120	10	14.6

*Total returns are expressed in local currencies with the exception of MSCI Emerging Markets whose return is expressed in USD. **The U.S. Federal Reserve and Bank of Canada each cut interest rates by 50-basis-points to 1.25% on March 3, 2020 and March 4, 2020, respectively. Source: RBC GAM

Recommended Asset Mix

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

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

Each quarter, the RBC GAM Investment Strategy Committee publishes a recommended asset mix based on our current view of the economy and return expectations for the major asset classes. These weights are further divided into recommended exposures to the variety of global fixed income and equity markets. Our recommendation is targeted at the Balanced profile where the benchmark setting is 55% equities, 43% fixed income, 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 1979 – 2019, 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	Past range	Spring 2019	Summer 2019	Fall 2019	New Year 2020	Spring 2020
Cash	**2.0%**	1.0% - 16%	1.0%	2.5%	3.0%	1.0%	**2.0%**
Bonds	**43.0%**	25.0 - 54.0	41.0%	40.0%	40.0%	40.0%	**39.0%**
Stocks	**55.0%**	36.0 - 65.0	58.0%	57.5%	57.0%	59.0%	**59.0%**

Note: Effective September 1, 2014, we revised our strategic neutral positions within fixed income, lowering the 'neutral' commitment to cash from 5% to 2%, and moving the difference to bonds. This takes advantage of the positive slope of the yield curve which prevails over most time periods, and allows our fixed income managers to shorten duration and build cash reserves whenever a correction in the bond market, or especially an inverted yield curve, is anticipated.

Regional Allocation

Global Bonds	WGBI* Feb. 2020	Past range	Spring 2019	Summer 2019	Fall 2019	New Year 2020	Spring 2020
North America	**44.2%**	18% – 48%	46.7%	40.3%	48.3%	43.8%	**44.2%**
Europe	**37.7%**	32% – 56%	36.5%	43.3%	32.9%	37.7%	**37.7%**
Asia	**18.2%**	16% – 35%	16.9%	16.5%	18.8%	18.5%	**18.2%**

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

Global Equities	MSCI** Feb. 2020	Past range	Spring 2019	Summer 2019	Fall 2019	New Year 2020	Spring 2020
North America	**65.6%**	51% – 63%	61.5%	61.9%	63.1%	62.5%	**63.6%**
Europe	**17.3%**	18% – 35%	19.1%	19.1%	18.2%	18.6%	**17.8%**
Asia	**9.9%**	9% – 18%	11.9%	11.6%	11.2%	11.4%	**11.1%**
Emerging Markets	**7.3%**	0% – 8.5%	7.5%	7.5%	7.5%	7.5%	**7.5%**

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** Feb. 2020	RBC GAM ISC New Year 2020	RBC GAM ISC Spring 2020	Change from New Year 2020	Weight vs. Benchmark
Energy	4.40%	3.03%	2.40%	(0.63)	54.6%
Materials	4.17%	2.40%	2.17%	(0.23)	52.0%
Industrials	10.93%	12.23%	11.93%	(0.30)	109.2%
Consumer Discretionary	10.25%	12.48%	12.25%	(0.22)	119.5%
Consumer Staples	8.24%	6.50%	8.24%	1.75	100.0%
Health Care	12.98%	13.66%	14.98%	1.33	115.4%
Financials	15.43%	15.71%	14.43%	(1.29)	93.5%
Information Technology	18.33%	18.76%	19.33%	0.57	105.5%
Communication Services	8.47%	8.44%	8.47%	0.03	100.0%
Utilities	3.54%	3.47%	2.54%	(0.92)	71.8%
Real Estate	3.25%	3.33%	3.25%	(0.09)	100.0%

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

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

Very Conservative

Asset Class	Bench-mark	Range	Last quarter	Current recommendation
Cash & Cash Equivalents	2%	0-15%	1.1%	2.0%
Fixed Income	78%	55-95%	75.2%	74.2%
Total Cash & Fixed Income	80%	65-95%	76.3%	76.2%
Canadian Equities	10%	5-20%	11.6%	11.6%
U.S. Equities	5%	0-10%	5.7%	5.8%
International Equities	5%	0-10%	6.4%	6.4%
Emerging Markets	0%	0%	0.0%	0.0%
Total Equities	20%	5-35%	23.7%	23.8%

	Return	Volatility
40-Year Average	8.7%	5.4%
Last 12 Months	8.3%	3.5%

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

Conservative

Asset Class	Bench-mark	Range	Last quarter	Current recommendation
Cash & Cash Equivalents	2%	0-15%	1.0%	2.0%
Fixed Income	63%	40-80%	60.1%	59.1%
Total Cash & Fixed Income	65%	50-80%	61.1%	61.1%
Canadian Equities	15%	5-25%	16.3%	16.2%
U.S. Equities	10%	0-15%	10.8%	10.9%
International Equities	10%	0-15%	11.8%	11.8%
Emerging Markets	0%	0%	0.0%	0.0%
Total Equities	35%	20-50%	38.9%	38.9%

	Return	Volatility
40-Year Average	9.0%	6.4%
Last 12 Months	7.7%	4.1%

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

Balanced

Asset Class	Bench-mark	Range	Last quarter	Current recommendation
Cash & Cash Equivalents	2%	0-15%	1.0%	2.0%
Fixed Income	43%	20-60%	40.0%	39.0%
Total Cash & Fixed Income	45%	30-60%	41.0%	41.0%
Canadian Equities	19%	10-30%	19.8%	19.6%
U.S. Equities	20%	10-30%	20.9%	21.1%
International Equities	12%	5-25%	13.9%	13.9%
Emerging Markets	4%	0-10%	4.4%	4.4%
Total Equities	55%	40-70%	59.0%	59.0%

	Return	Volatility
40-Year Average	9.2%	7.7%
Last 12 Months	7.1%	5.6%

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

Growth

Asset Class	Bench-mark	Range	Last quarter	Current recommendation
Cash & Cash Equivalents	2%	0-15%	1.0%	2.0%
Fixed Income	28%	5-40%	24.9%	23.9%
Total Cash & Fixed Income	30%	15-45%	25.9%	25.9%
Canadian Equities	23%	15-35%	23.6%	23.4%
U.S. Equities	25%	15-35%	25.7%	25.9%
International Equities	16%	10-30%	18.3%	18.3%
Emerging Markets	6%	0-12%	6.5%	6.5%
Total Equities	70%	55-85%	74.1%	74.1%

	Return	Volatility
40-Year Average	9.2%	9.4%
Last 12 Months	6.5%	7.1%

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%	0.5%
Fixed Income	0%	0-10%	0.0%	0.0%
Total Cash & Fixed Income	2%	0-20%	1.0%	0.5%
Canadian Equities	32.5%	20-45%	31.9%	31.7%
U.S. Equities	35.0%	20-50%	34.4%	34.8%
International Equities	21.5%	10-35%	23.4%	23.6%
Emerging Markets	9.0%	0-15%	9.3%	9.4%
Total Equities	98%	80-100%	99.0%	99.5%

	Return	Volatility
40-Year Average	9.0%	12.0%
Last 12 Months	5.3%	10.2%

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

Capital Markets Performance

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

The U.S. dollar appreciated against the British pound and the Canadian dollar during the quarter ended February 29, 2020, while depreciating versus the Japanese yen and the euro. The U.S. dollar had appreciated against the yen and euro for most of the period. The greenback retreated, however, when the worsening coronavirus outbreak prompted safe-haven flows and raised anticipation of more interest-rate cuts from the U.S. Federal Reserve (Fed). Although the risk of a no-deal Brexit has diminished greatly from last fall, the uncertainty around the final relationship between the U.K. and EU remained a drag on the U.K. economy and currency, with sterling falling 0.9% against the greenback. The loonie declined 1.1% versus the U.S. dollar as oil prices fell and concerns about economic growth grew.

Global bond markets rallied in the latest quarter as yields tumbled in the wake of news that the coronavirus, formally known as Covid-19, was spreading rapidly outside China. The yield on the 10-year U.S. Treasury bond fell to 1.15% from 1.78% three months ago. The global FTSE WGBI Index returned 2.6% in U.S.-dollar terms during the three-month period, propelled by the 3.7% rise in the Bloomberg Barclays U.S. Aggregate Bond Index. The FTSE Canada Universe Bond Index was the laggard, rising 1.3%. Fixed-income returns in major markets have been exceptionally strong over the past year, ranging between 6.4% for the FTSE Japanese Government Bond Index and 11.8% for the FTSE U.S. Government Bond Index.

Many major stock markets rose steadily to all-time highs during the quarter before the virus-induced sell-off took numerous indexes down over 10% in just six trading days. This correction at the end of February marked the fastest 10% drop from a record high in the history of the S&P 500 Index. The sudden appearance and rapid growth in the number of Covid-19 cases outside China depressed economic-growth expectations and investor sentiment. The S&P 500 Index finished the latest three-month period with a 5.5% loss while the MSCI World Index finished down 6.3% in U.S.-dollar terms. The MSCI Europe Index and MSCI Japan Index fared worse, registering 8.1% and 8.5% declines, respectively. Global bonds outperformed global stocks over the latest one-year period as the global sovereign FTSE WGBI Index returned 8.2% versus the MSCI World Index's 4.6% return.

As a risk-off mood set into the markets, investors preferred the relative safety of large-cap stocks, which outperformed their smaller counterparts in the latest quarter. The small-cap S&P 600 Index recorded a loss of 10.6%, which was more than 5 percentage points below the return of the large-cap S&P 500 Index. Growth stocks led value stocks by a margin of over 7 percentage points, based on the return gap between the Russell 3000 Growth Index and the Russell 3000 Value Index, in the latest three-month period. Growth stocks are especially appealing to investors in the current low-economic growth-environment given their proven ability to generate superior earnings gains.

All sectors except Utilities fell in the quarter ended February 29, 2020. The defensive Utilities sector, which performed well during the late-February market turmoil, logged a 1.3% gain while the cyclical Energy and Materials sectors suffered losses of 17.6% and 11.4%, respectively. Over the one-year time frame, the fast-growing Information Technology sector returned 23.2% and the Energy sector languished, falling 23.1%.

Exchange Rates
Periods ending February 29, 2020

	Current USD	3 months (%)	YTD (%)	1 year (%)	3 years (%)	5 years (%)
USD–CAD	1.3423	1.05	3.37	2.00	0.35	1.43
USD–EUR	0.9058	(0.20)	1.61	3.03	(1.36)	0.27
USD–GBP	0.7799	0.87	3.31	3.45	(1.09)	3.78
USD–JPY	107.8600	(1.46)	(0.73)	(3.23)	(1.35)	(2.05)

Note: all changes above are expressed in US dollar terms

Canada
Periods ending February 29, 2020

	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	1.34	0.26	6.96	4.16	1.55	2.40	9.10	4.52

U.S.
Periods ending February 29, 2020

	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	3.63	3.72	11.81	5.05	3.60	4.72	14.05	5.28
BBgBarc U.S. Agg. Bond Index TR[1]	3.69	3.76	11.68	5.01	3.58	4.78	13.91	5.38

Global
Periods ending February 29, 2020

	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	2.59	2.15	8.23	4.57	2.94	3.67	10.40	4.80
FTSE European Government TR	1.70	0.94	5.69	5.03	1.88	2.77	7.80	5.40
FTSE Japanese Government TR	2.72	2.26	6.41	3.20	4.26	3.80	8.54	3.56

Canada
Periods ending February 29, 2020

	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	(4.82)	(7.38)	2.83	4.62	2.95	(3.83)	4.89	4.98
S&P/TSX 60	(4.80)	(6.89)	3.22	5.21	3.49	(3.81)	5.28	5.58
S&P/TSX Small Cap	(8.71)	(15.31)	(11.18)	(5.65)	(1.67)	(7.75)	(9.41)	(5.32)

U.S.
Periods ending February 29, 2020

	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	(5.50)	(8.27)	8.19	9.87	9.23	(4.51)	10.36	10.25
S&P 400 TR	(9.38)	(11.86)	(3.39)	3.29	5.49	(8.43)	(1.46)	3.65
S&P 600 TR	(10.60)	(13.20)	(7.68)	2.96	6.01	(9.66)	(5.84)	3.32
Russell 3000 Value TR	(9.35)	(11.82)	(0.16)	3.46	5.38	(8.40)	1.84	3.82
Russell 3000 Growth TR	(2.13)	(4.95)	13.95	15.10	11.97	(1.10)	16.22	15.51
NASDAQ Composite Index TR	(0.90)	(4.37)	14.94	14.94	12.80	0.14	17.24	15.35

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

Global
Periods ending February 29, 2020

	USD					CAD		
Equity Markets: Total Return	3 months (%)	YTD (%)	1 year (%)	3 years (%)	5 years (%)	3 months (%)	1 year (%)	3 years (%)
MSCI World TR *	(6.28)	(9.01)	4.63	7.24	5.88	(5.29)	6.65	7.72
MSCI EAFE TR *	(8.05)	(10.94)	(0.57)	3.92	1.96	(7.07)	1.34	4.39
MSCI Europe TR *	(8.10)	(11.56)	(0.64)	4.23	1.27	(7.13)	1.28	4.70
MSCI Pacific TR *	(8.01)	(10.00)	(0.43)	3.47	3.35	(7.03)	1.49	3.94
MSCI UK TR *	(10.91)	(15.28)	(7.37)	1.39	(1.12)	(9.96)	(5.59)	1.84
MSCI France TR *	(9.36)	(11.97)	0.40	7.18	3.95	(8.40)	2.33	7.66
MSCI Germany TR *	(10.34)	(12.03)	(2.05)	0.58	(0.28)	(9.39)	(0.17)	1.03
MSCI Japan TR *	(8.51)	(10.38)	1.07	3.35	3.65	(7.54)	3.01	3.82
MSCI Emerging Markets TR *	(2.95)	(9.69)	(1.88)	4.89	2.73	(1.92)	0.01	5.36

Global Equity Sectors
Periods ending February 29, 2020

	USD					CAD		
Sector: Total Return	3 months (%)	YTD (%)	1 year (%)	3 years (%)	5 years (%)	3 months (%)	1 year (%)	3 years (%)
Energy TR *	(17.63)	(21.81)	(23.07)	(6.75)	(5.47)	(16.76)	(21.59)	(6.33)
Materials TR *	(11.43)	(14.93)	(5.36)	1.96	1.64	(10.49)	(3.54)	2.42
Industrials TR *	(9.31)	(10.20)	0.02	5.17	5.45	(8.34)	1.95	5.65
Consumer Discretionary TR *	(5.92)	(8.63)	4.72	8.87	6.67	(4.92)	6.73	9.36
Consumer Staples TR *	(6.86)	(8.81)	4.26	3.56	3.91	(5.87)	6.27	4.02
Health Care TR *	(5.03)	(8.16)	5.56	8.75	5.25	(4.02)	7.59	9.23
Financials TR *	(9.57)	(12.22)	(1.10)	2.36	3.81	(8.61)	0.81	2.82
Information Technology TR *	(0.31)	(4.29)	23.17	20.21	16.29	0.75	25.55	20.75
Communication Services TR*	(4.47)	(6.31)	9.04	4.17	3.07	(3.46)	11.14	4.64
Utilities TR *	1.28	(2.51)	10.94	9.74	7.06	2.36	13.08	10.24
Real Estate TR *	(5.17)	(6.25)	3.92	5.73	NA	(4.16)	5.92	6.20

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

Economic Outlook

Economic stabilization disrupted

Eric Lascelles
Chief Economist
RBC Global Asset Management Inc.

This is a critical moment for economies and financial markets. Risk assets spent the past several quarters happily ascending, only to stumble badly in late February. Economic growth was finally stabilizing (Exhibit 1) thanks to helpful financial conditions (Exhibit 2), but that growth trajectory has now been at least temporarily disrupted.

The main reason behind this sudden souring is the spread of the Covid-19 virus beyond Chinese shores – a massively consequential development to the extent it could, in a worst-case scenario, require widespread quarantines that grind the global economy to a halt.

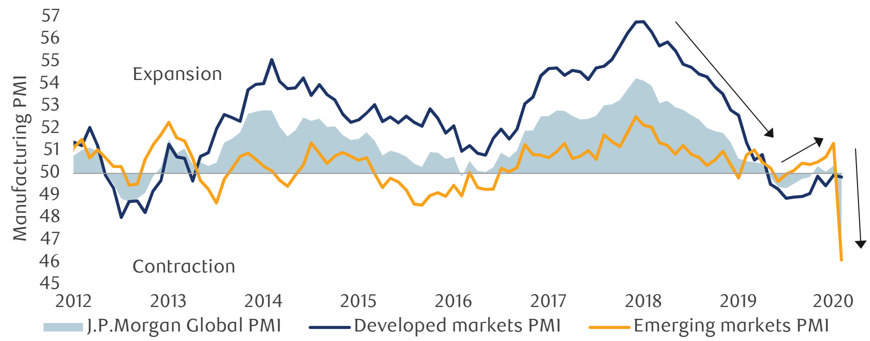
A medley of other risks that under more normal circumstances would have captured top billing are also relevant, including the significant chance of a far-left Democratic Party nominee in the U.S. and troubled relations between Iran and the U.S.

For all of these woes, let us remember that the global economy has been through innumerable scares over the past decade, and while it has occasionally bent, it has thus far refused to break. This is a promising thought given the new challenges ahead. Furthermore, the economy and financial markets can usually count on policymakers to lend a timely hand. Indeed, central banks are already coming to the rescue, and we suspect that fiscal policy will also engage should the viral outbreak prove persistent.

That said, the very length of the current economic expansion – nearly 11 years – highlights the fact that the economy is increasingly breathing rarefied air. Our scorecard indicates that the business cycle is now quite far along, and recession models are again pointing to elevated risks (Exhibit 3).

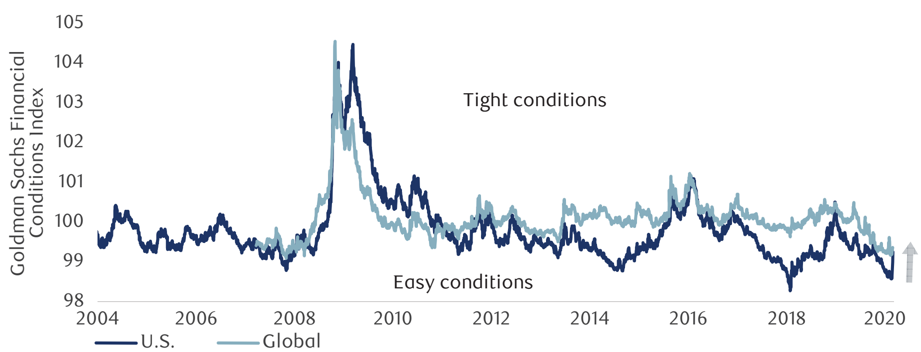
In a financial market context, the lateness of the cycle argues against extreme risk-taking, but the recent decline in stocks and rally in bonds nevertheless presents an attractive tactical opportunity to take on incrementally more risk. This view is motivated not only for valuation reasons, but also because past modern pandemics have been short-lived and the bulk of any damage that does occur should be mainly via temporary work stoppages rather than something more permanent.

Exhibit 1: Global manufacturing recovery disrupted by coronavirus outbreak



Note: As of Feb 2020. PMI refers to Purchasing Managers Index for manufacturing sector, a measure for economic activity. Source: Haver Analytics, RBC GAM

Exhibit 2: Global financial conditions tighten amid risk-asset sell-off



Note: As of 2/27/2020 for U.S., 2/26/2020 for global. Source: Goldman Sachs, Bloomberg, RBC GAM

New risks rise

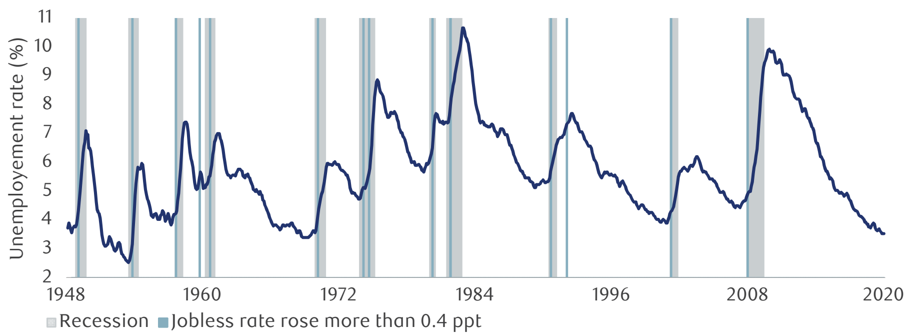
The degree of economic uncertainty has oscillated between extremes over the past six months. Last fall, there was enormous trepidation about the escalating trade war between the U.S. and China, fear that Brexit might be careening toward a “no deal” outcome and anxiety about a slowing Chinese economy. Fortunately, each of these risks lessened in severity into the end of 2019, allowing risk assets to surge and permitting a brief interlude of diminished uncertainty (Exhibit 4).

Periods of tranquility rarely last for long, however, and 2020 has brought a host of new risks that again skew to the negative side of the ledger (Exhibit 5). First, U.S.-Iran relations soured as the two countries scuffled, highlighting the fact that an oil shock could occur at any moment. Then, Covid-19 began its rapid spread within China, and now beyond. More recently, socialist candidate Bernie Sanders staged a serious run in the U.S. Democratic presidential field, unnerving financial markets. In response to all of this, the yield curve has re-flattened, signaling that the recession risk is rising again. We discuss each of these issues later.

Optimists can take solace in the fact that downside risks rarely manifest to their fullest potential. More often, as was the case last year, these risks are ultimately dodged, or at least prove manageable. Risk assets frequently enjoy among their strongest performances as downside risks shrink.

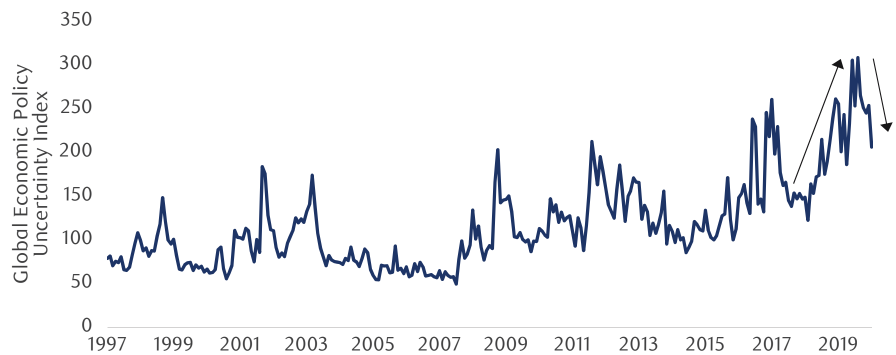
Finally, we would be remiss if we didn’t also flag the existence of upside risks. Most prominently, monetary and fiscal

Exhibit 3: U.S. unemployment setting new lows



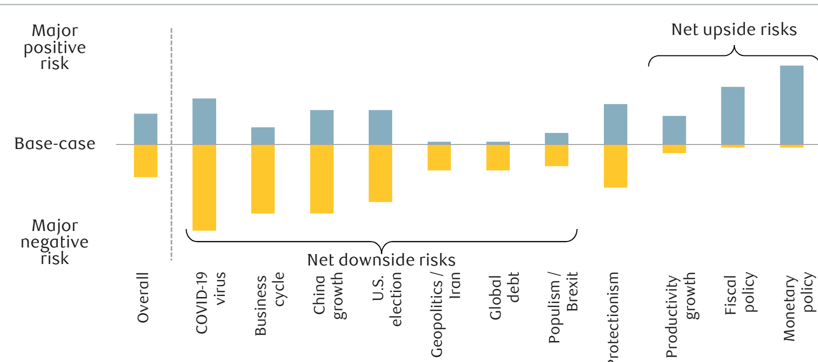
Note: As of Jan 2020. Unemployment rate is 3-month moving average. Source: Bureau of Labor Statistics, NBER, Haver Analytics, RBC GAM

Exhibit 4: Global economic policy uncertainty abated for a moment



Note: As of Jan 2020. Mean of current price GDP-weighted index from 1997 to 2015 = 100. Source: www.policyuncertainty.com, Macrobond, RBC GAM

Exhibit 5: Key global macro risks over the next year



Note: As of 02/25/2020. Size of each bar reflects probability-weighted impact of bull-case/bear-case scenario. Source: RBC GAM policy are already working hard to avoid worst-case outcomes. But even such nasty problems as Covid-19 could well resolve more benignly than is assumed in our base-case forecast.

Stabilization story proves short-lived

Covid-19 is temporarily overwhelming nearly all other economic considerations, but it is still worth understanding the factors that were allowing the global economy to stabilize before the virus appeared.

The tentative stabilization achieved over the past few quarters was largely the result of friendlier financial conditions, owing to central-bank stimulus in 2019 (Exhibit 6). Declining uncertainty was also emboldening business activity.

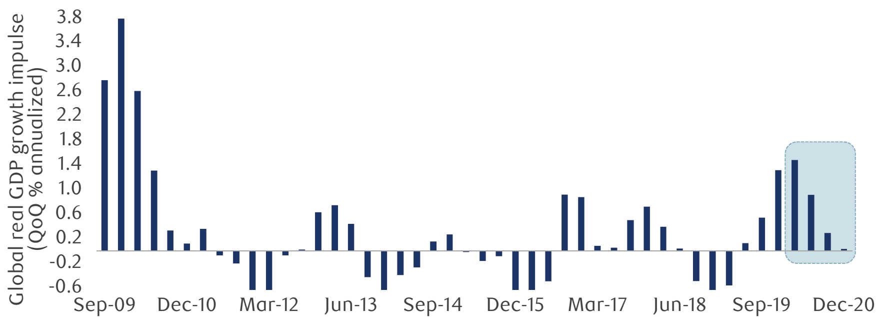
On the other side of the ledger, lingering protectionism and a U.S.-specific fiscal drag (Exhibit 7) made an outright economic acceleration unlikely. Nevertheless, stabilization was eagerly cheered after nearly two years of slowing growth.

Although survey-based "soft" economic data has rebounded much more impressively than the arguably more important "hard" data such as GDP and employment, this is logical: the "hard" data never deteriorated as badly to begin with. Both categories have reverted to much more normal readings (Exhibit 8). Of course, both are now likely to dip in the near term.

Forecasts downgraded

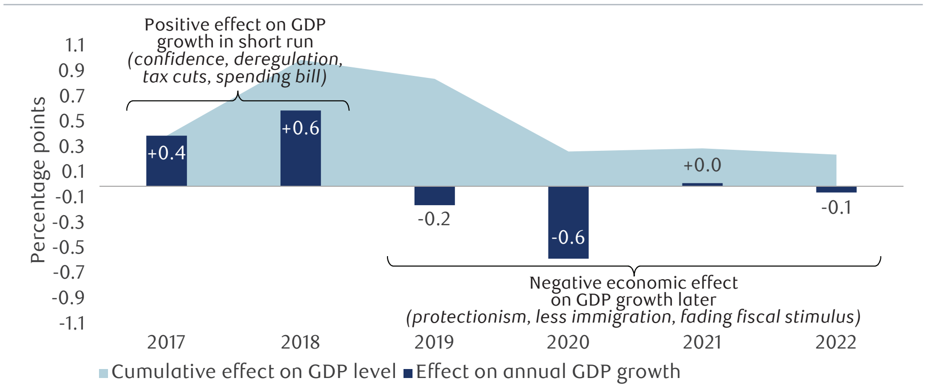
The consensus global growth forecast for 2020 is now trending downward as Covid-19 takes hold (Exhibit 9). This

Exhibit 6: Easier financial conditions were starting to support growth



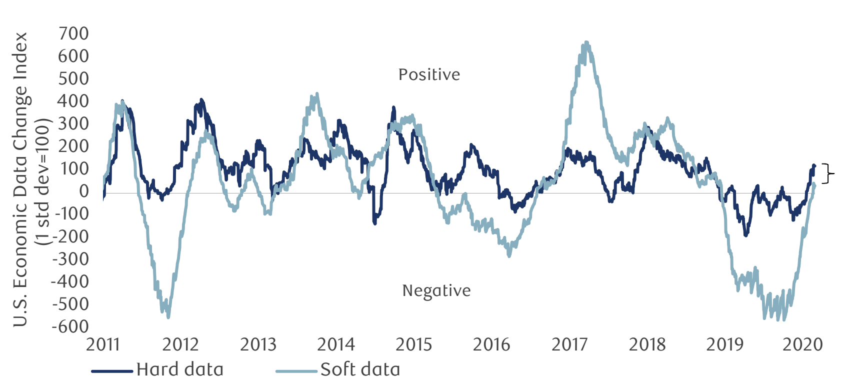
Note: As of 2/26/2020. Real GDP growth impulse from Goldman Sachs (GS) World Financial Conditions Index based on GS estimates of impact of FCIs on GDP growth, with the assumption that financial conditions remain the same for the rest of the year and the following 4 quarters. Source: Goldman Sachs, Bloomberg, RBC GAM

Exhibit 7: Effect of Trump policies on U.S. GDP



Source: RBC GAM assumptions and calculations

Exhibit 8: U.S. economic data was getting better



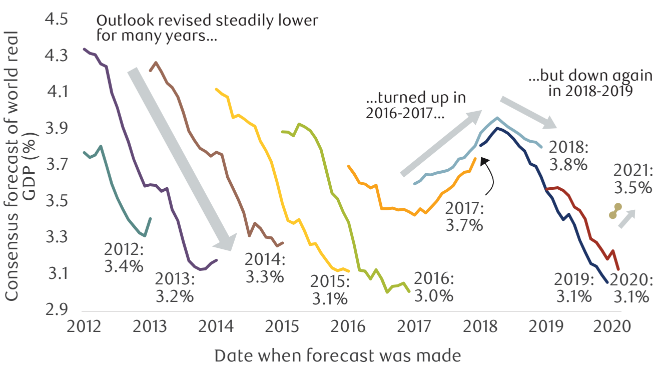
Note: As of 2/25/2020. Source: Citigroup, Bloomberg, RBC GAM negative momentum has historically provided a powerful signal that below-consensus forecasts are well advised. Indeed, inspired by this fact (though ultimately informed by our macroeconomic modelling), the majority of our national growth forecasts do now land below the consensus for 2020 (Exhibit 10). We now anticipate just 1.25% developed-world growth in 2020 and 2.9% growth globally. These represent the slowest rates of growth in seven and 11 years, respectively.

We then anticipate a notable rebound in 2021, in large part because Covid-19 is unlikely to still be dampening the economy at that point (Exhibit 11).

Emerging-market economies are naturally expected to grow more quickly than developed economies (Exhibit 12). Additionally, the IMF continues to call for this emerging-market growth advantage to expand further over the coming years (Exhibit 13). That said, in the very short run, poorer emerging-market economies could struggle to contain Covid-19 given more limited health resources than their wealthier brethren.

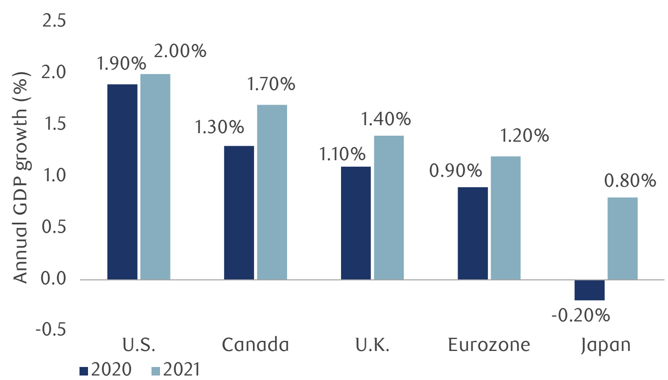
As the epicenter for Covid-19, China is set to suffer a particularly sharp economic slowdown in 2020, discussed in detail later. India, the world's second-most populous country, also merits mention. The country's economy had a bad year in 2019, suffering an abrupt 2.4-percentage-point deceleration relative to 2018 growth (Exhibit 14). While India still suffers from a weak financial sector, its future nevertheless appears fairly

Exhibit 9: Consensus global forecast revised up for 2021, but down for 2020



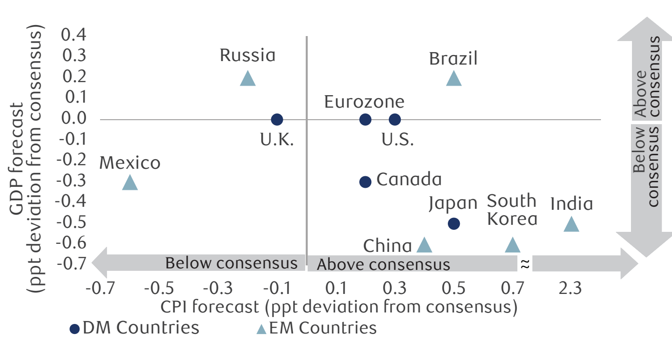
Note: As of Feb 2020. Source: Consensus Economics, IMF, RBC GAM

Exhibit 10: RBC GAM GDP forecast for developed markets



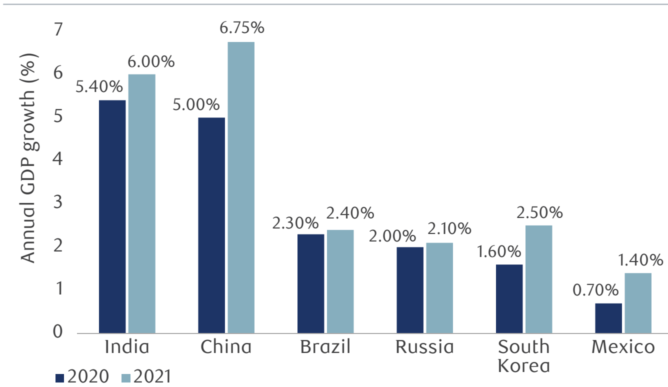
Source: RBC GAM

Exhibit 11: GAM forecasts vs. consensus for 2020



Note: Deviation measured as difference between RBC GAM forecast and consensus forecast. Consensus forecast as of February 2020.
Source: Consensus Economics, RBC GAM

Exhibit 12: RBC GAM GDP forecast for emerging markets



Source: RBC GAM

bright, with accelerating growth likely this year and next.

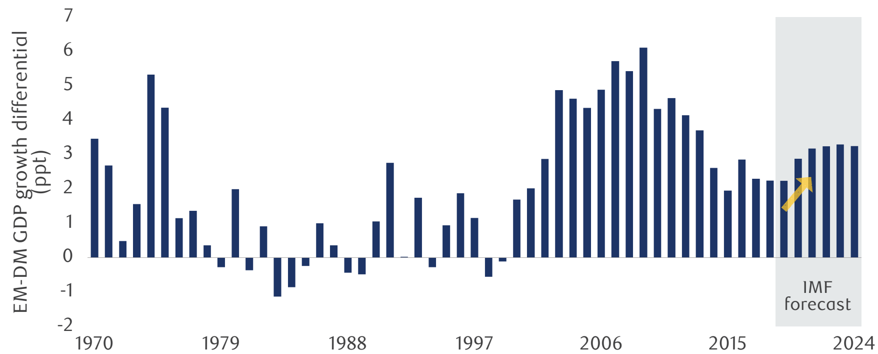
Covid-19 breaks loose

Covid-19 is foremost a human tragedy, tallying three thousand deaths and nearly 90,000 infections as of early March. The disease has striking parallels to the SARS outbreak of 2003; both are coronaviruses and each originated in China, – though the Covid-19 outbreak has proven more challenging. While Covid-19's fatality rate of roughly 3% is several times lower than the 10% estimated for SARS, the new virus appears to spread much more easily, possibly due to a long gestation period and frequently mild symptoms. The number affected is already more than 10 times what it was for SARS.

China's aggressive quarantining efforts appear to have tamed the spread of the disease within the country. The number of new daily cases has diminished greatly, such that the disease is plausibly on track for containment within China (Exhibit 15). That said, as the country's leadership now pushes to restart the economy, the infection could well regain a foothold.

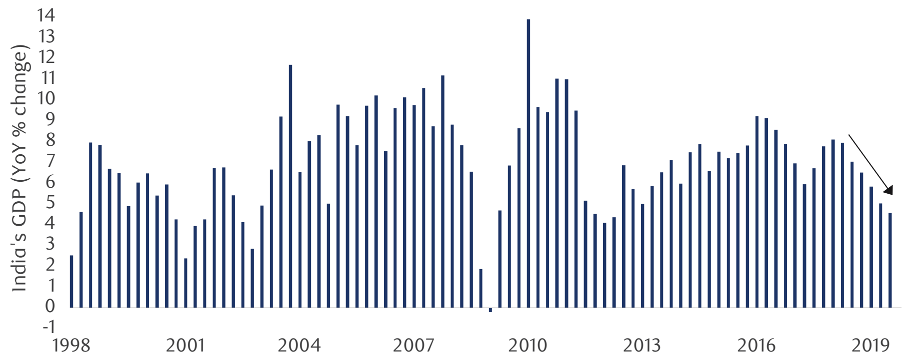
Unfortunately, while the number of cases outside China is much smaller, the spread of the new coronavirus continues to accelerate (Exhibit 16). Outbreaks in South Korea, Iran and Italy are particularly prominent and demonstrate the speed at which far-flung countries can be inundated by the disease. It seems reasonable to expect the disease to continue spreading in at least the immediate future. A worst-case scenario would

Exhibit 13: Emerging-market growth advantage to increase



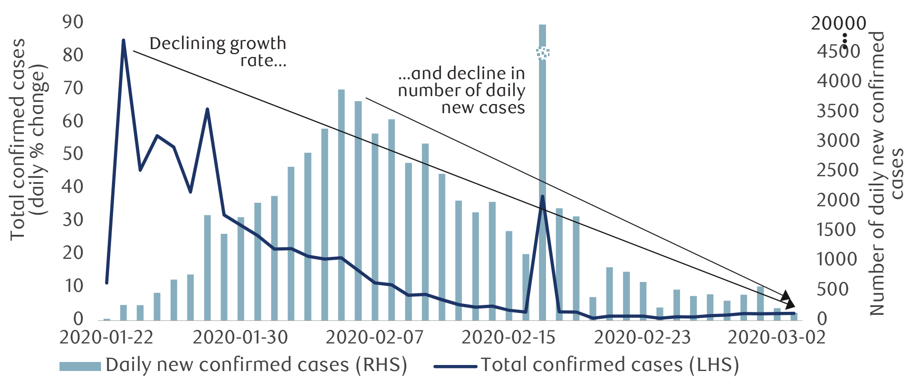
Note: Real GDP growth differential measured as the difference between annual real GDP growth of developed and emerging countries. Source: IMF World Economic Outlook, Oct 2019, Macrobond, RBC GAM

Exhibit 14: India's economic growth has slowed in recent years



Note: As of Q3 2019. Source: Ministry of Statistics & Programme Implementation, Macrobond, RBC GAM

Exhibit 15: The spread of Covid-19 within China is slowing



Note: As of 3/3/2020. Spike on 2/17/2020 due to change in reporting methodology. Source: WHO, RBC GAM have Covid-19 continuing to spread for a lengthy period, resulting in large-scale mortality and forcing worldwide quarantining and a deep recession.

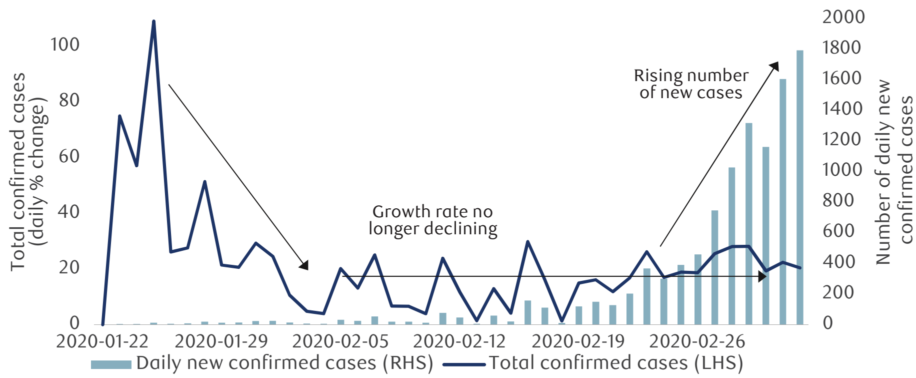
The world's poorest nations are clearly the most vulnerable to the disease given their limited health-care capabilities. On the other hand, developed countries are in a much better position due not only to their advanced healthcare but also perhaps because more people have jobs that would allow them to work from home while under quarantine.

For all of the focus on the insidious advance of the disease, it is important to recognize that it is not preordained that it reaches every nook and cranny of the world. A more moderate scenario would require only selective quarantining, while an optimistic scenario would see the virus fail to gain sustained traction outside of China.

How might these less dire scenarios prove possible? The ideal outcome would be the rapid development of a vaccine, though it is admittedly hard to fathom this happening within the next several months, and mass production would take longer still. In the meantime, the onset of spring in the northern hemisphere could ease the spread of the disease, in line with the diminished virulence of colds and flu at that time of year.

China has already demonstrated that the virus can be contained – approximately 90% of the country's cases remain centered in Hubei province where the outbreak began, whereas there are scant few new cases elsewhere in the country despite the initial spread of the disease to nearly

Exhibit 16: Increasing Covid-19 global cases (ex-China)



Note: As of 3/3/2020. Source: WHO, RBC GAM

every province. The fact that the country has felt sufficiently confident to reopen businesses even before the number of cases has fallen to zero suggests the administration believes it is possible to limit the disease at the same time that people go about their regular lives. South Korea is now also experiencing a decline in the number of new cases.

The fatality rate of the disease also remains subject to debate. Some epidemiologists believe the true fatality rate – with proper treatment – could wind up being as low as 0.5%, not drastically worse than the flu. It is already the case that the fatality rate for those under the age of 40 has thus far been just 0.2%, and the rate for those without prior health problems is even lower.

Turning to the economic and financial-market implications of the disease, countries are faced with a choice between sacrificing economic growth by forcing workers to self-quarantine at home, as in China, and endangering lives by permitting citizens to go about their usual daily activities. Financial markets have been highly attuned to this debate as concern about the virus grows (Exhibit 17).

In China, the economic hit from widespread business shuttering has been considerable. We have subtracted nearly a percentage point from the country's 2020 growth forecast, and the first quarter should be truly abysmal. Fortunately, there is already evidence that the Chinese economy is beginning to re-start, with many businesses projecting a return to nearly normal activity by the end of March. Chinese policymakers have also been pressing on the accelerator, with credit growth continuing to lend a helpful hand (Exhibit 18).

Outside of China, the economic implications of the virus remain more speculative. Global policymakers have already begun providing support. If the rest of the world manages to avoid the scale of infections and breadth of quarantining that China has experienced, the damage may be less extreme. This is our base-case scenario.

For the moment, we have subtracted 0.3 percentage point from the 2020 growth outlook for most countries – a significant hit worth several hundred billion dollars of foregone output. Globally, that translates into GDP growth of 2.9% in 2020, 0.4 percentage point below what might have been achieved without Covid-19. But the risk is growing that the hit will be moderately greater than this.

It is enormously important to recognize that the bulk of any economic damage should – at least initially – be temporary in nature, due mainly to the fact that quarantines prevent people from working only temporarily. Whenever quarantines are lifted, output should rebound. Accordingly, we now assume that 2021 economic growth will be somewhat better than otherwise as economies will be coming off an artificially depressed base.

Past modern viral outbreaks offer a consistent theme: they have been surprisingly short-lived, lasting no more than several months, with only temporary economic and financial-market damage that quickly reversed. While this latest episode seems more serious than it was with SARS, it is equally the case that science has made great leaps since then.

It is only if the outbreak persists for a lengthy period of time that more enduring economic damage is done via lower consumer and business confidence, cash-flow problems and supply-chain issues.

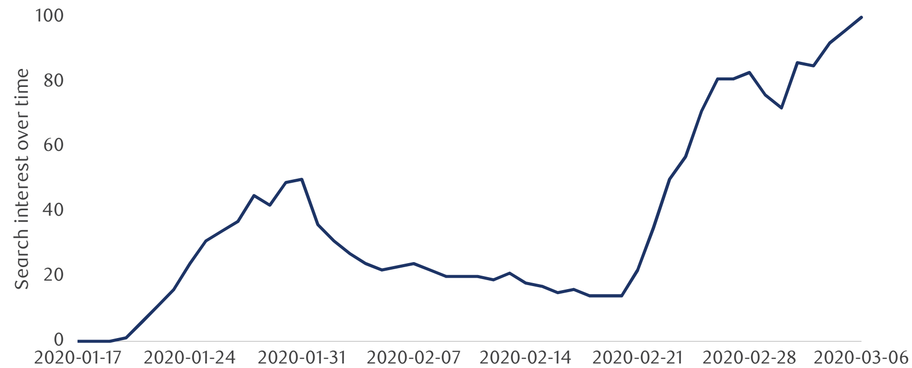
Still late cycle

Our U.S. business cycle scorecard continues to reach a familiar "late cycle" conclusion (Exhibit 19). The scorecard also surfaces a number of "end-of-cycle" claims, including the fact that the U.S. economy is now technically overheating, according to four out of five statistical estimates (Exhibit 20). Of relevance, the Duncan Leading Indicator has also turned lower (Exhibit 21).

Previously popular claims that the labour market is less mature than it first looks no longer hold up to scrutiny. Our calculations suggest that, even adjusting for discouraged job seekers and the like, the unemployment rate remains extremely low (Exhibit 22). Furthermore, there are now tentative indicators that the labour market is starting to wobble when more sophisticated metrics are examined (Exhibit 23).

In discussing the business cycle, we naturally care most about the "recession" portion of the cycle. This risk was quite elevated last fall, but declined into year-end as growth stabilized and risks shrank. Of course, as new risks have presented

Exhibit 17: Google search topic: 'Coronavirus,' interest globally



Note: As of 3/6/2020. Interest over time represents search interest relative to the highest point for the time period shown (100 = peak interest). Source: Google Trends, RBC GAM

Exhibit 18: Chinese credit impulse now on an uptrend

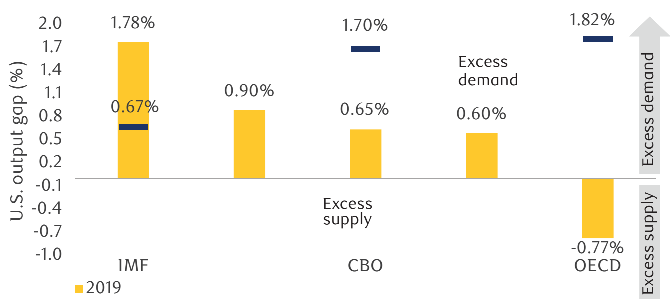
Note: As of Q3 2019. Credit impulse measured as year-over-year change in year-over-year change in credit outstanding as percentage of GDP. Source: IIF, RBC GAM

Exhibit 19: U.S. is still most likely "late cycle," with significant "end of cycle" claims

	Start of cycle	Early cycle	Mid cycle	Late cycle	End of cycle	Recession
Equities						
Leverage						
Prices						
Consumer						
Employment						
Business investment						
Housing						
Credit						
Sentiment						
Corporate profitability						
Economic slack						
Inventories						
Economic trend						
Cycle age						
Volatility						
Bonds						
Monetary policy						
Allocation to each stage of cycle	0%	2%	16%	40%	34%	7%

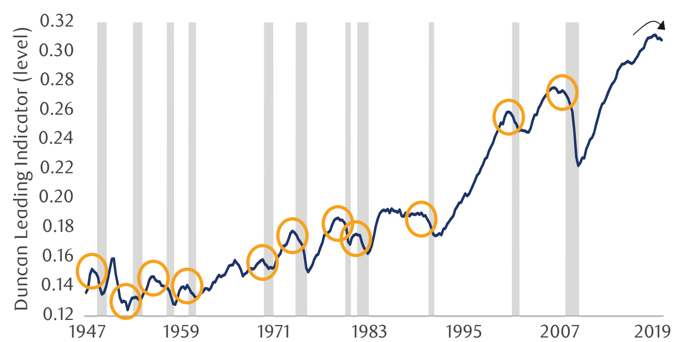
Note: As at 01/30/2020. Darkness of shading indicates the weight given by each input for each phase of the business cycle. Source: RBC GAM

Exhibit 20: U.S. output gap - historical peak vs. now



Note: Historical average of peak output gap during each expansion estimated based on CBO data from 1950, IMF data from 1980, and OECD data from 1991. RBC GAM estimates of output gaps based on Okun's law using reported acutal and demographics adjusted unemployment. Source: CBO, IMF, OECD, Macrobond, RBC GAM

Exhibit 21: Duncan Leading indicator turned lower



Note: As of Q4 2019. Shaded area represents recession. Source: BEA, Haver Analytics, RBC GAM themselves and Covid-19 undermines growth, the recession risk has again begun to increase. Our yield curve-based recession model confirms this assessment, rising from 22% at the start of the year to 33% today (Exhibit 24).

Protectionism still a subtle drag

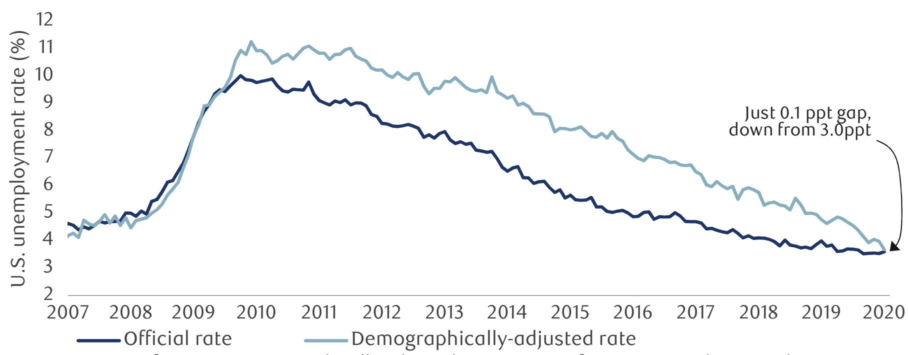
Concerns about tariffs have faded into the background after the U.S. and China managed to de-escalate their dispute late in 2019. In addition to the preliminary Phase One trade deal between the two countries, North America's USMCA pact is also nearing implementation.

Remaining items on the trade agenda for 2020 include the U.S.-European relationship and the treatment of auto imports into the U.S. The former looks set to be contentious, though we believe a watered-down deal can be struck with only mild EU agricultural concessions, in line with the examples set by Japan and Canada. The threat of auto tariffs is not trivial, but given that the U.S. has already reached or is pursuing broader accords with its major auto-trading partners, we are hopeful this will prove unnecessary.

Additional reason for cautious optimism on the trade file is that as other growth challenges emerge, the U.S. administration may shy away from pursuing further trade disputes. Reflecting all of this, we now budget for a "slightly negative" scenario going forward, a slight improvement relative to the central assumption last year (Exhibit 25).

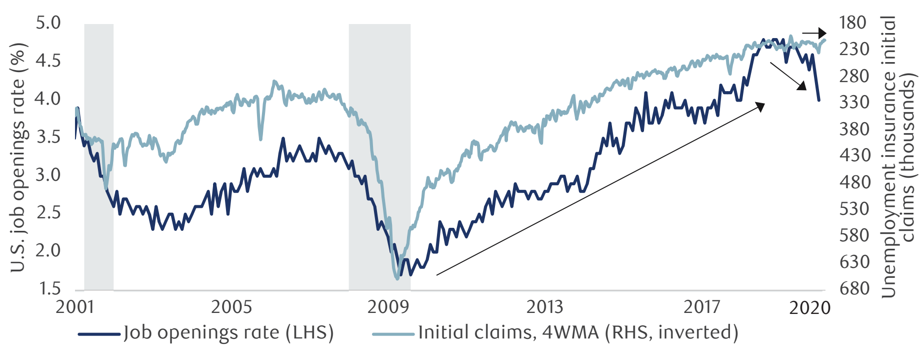
This is not to say that protectionism is set to vanish from the economic

Exhibit 22: U.S. unemployment rate is almost as good as it looks



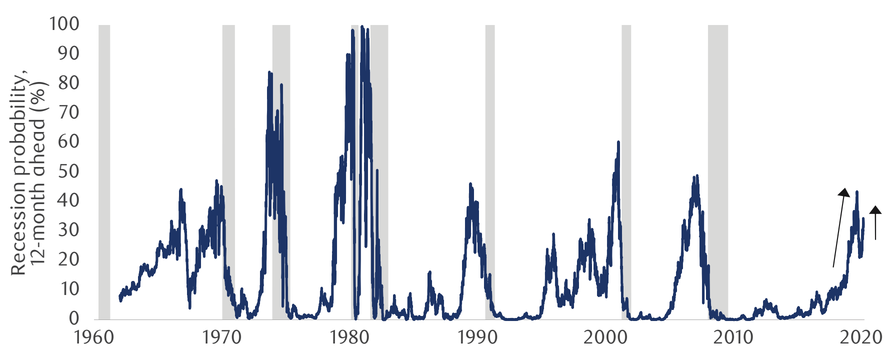
Note: As of Jan 2020. Demographically-adjusted rate accounts for ageing population via lower unemployment rate and participation rate. Source: Haver Analytics, RBC GAM

Exhibit 23: U.S. job market takes a turn lower



Note: Job openings rate as of Dec 2019, initial jobless claims as of the week ending Feb 22, 2020. Shaded area represents recession. Source: BLS, DOL, Haver Analytics, RBC GAM

Exhibit 24: Yield-curve based U.S. recession risk rising amid Covid-19 outbreak



Note: As of 2/28/2020. RBC GAM estimates of probabilities of a recession twelve months ahead calculated using the difference between 10-year and 3-month Treasury yields. Shaded area represents recession. Source: Federal Reserve Bank of New York, Bloomberg, Haver Analytics, RBC GAM figures. While tariffs have recently declined, the effective U.S. rate remains much higher than in the past (Exhibit 26). Furthermore, because tariffs rose substantially over the second half of 2019, the average tariff drag in 2020 is likely to be somewhat worse than in 2019. Lastly, a slew of non-tariff barriers remains in place, including restrictions on the foreign operations of certain Chinese and U.S. companies (Exhibit 27).

Looking further out, we continue to budget for persistent U.S.-China frictions as the two superpowers jockey with each other economically and geopolitically.

Inflation increase merely temporary

The recent increase in inflation does not worry us unduly since we expect it will be temporary. Persistently tame inflation expectations support this view (Exhibit 28).

In emerging markets, the inflation spike is mostly due to higher food prices, which compose a large fraction of the price basket in developing economies. Surging pork prices in China have been particularly prominent, but are only the temporary result of a supply shortage. More importantly, we continue to believe that emerging-market inflation has undergone an important transition over the past decade, with chronically high inflation countries like India and Brazil now capable of running structurally lower inflation over the long run.

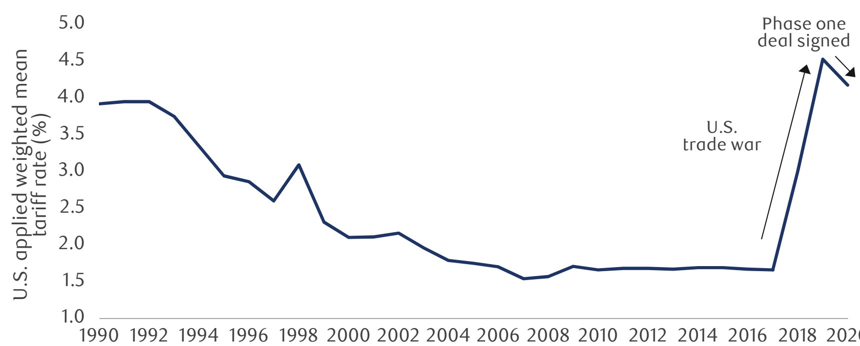
For developed economies, the recent inflation pickup is notable but not especially problematic. In the U.S. and Canada, year-over-year inflation now

Exhibit 25: U.S. trade scenarios for 2020

Scenario	Worst case	Negative	Moderately negative	Slightly negative	Neutral
Likelihood	10%	20%	35%	25%	10%
Detail	Trade war	Substantial tariffs	Moderate tariffs	Small tariffs	Trump tariffs unwind
Economic effect	U.S.: -2.1%	U.S.: -0.6 to -0.8%	U.S.: -0.45 to -0.65%	U.S.: -0.1 to -0.2%	U.S.: 0.0%
	CN: -2.5%	CN: -0.75 to -0.95%	CN: -0.6 to -0.8%	CN: -0.2 to -0.5%	CN: 0.0%
	CA: -2.0%	CA: -0.4 to -0.6%	CA: -0.3 to -0.45%	CA: -0.1%	CA: 0.0%

Source: RBC GAM, Oxford, Bloomberg, OECD, Nomura, Goldman Sachs, UBS, Barclays, Fajgelbaum et al

Exhibit 26: U.S. trade tariffs have probably peaked



Note: Applied weighted mean tariff rates for all products. Estimates of U.S. tariffs introduced in 2018 and after based on additional tariffs announced up to 1/15/2020. Source: Deutsche Bank, World Bank, Haver Analytics, RBC GAM

Exhibit 27: Trade-war ammunition extends well beyond tariffs

Tariffs:
- Universal
- Geographic filter
- Product filter

Non-tariff barriers:
- Import quota
- Domestic subsidy
- Border thickness
- Technical barrier
- U.S. blocking WTO judge appointments

Investments:
- Restrict inward capital flows
- Restrict inward corporate acquisitions
- Sell foreign holdings (China: U.S. bonds)

Export restrictions:
- Access to Chinese “rare earths”
- Access to advanced U.S. tech

Other pressure points:
- Immigration restrictions
- Constrain individual firms (ZTE, Huawei, Qualcomm, Micron, Apple)
- Access to $ clearance system
- Gov’t procurement contracts
- Exchange rate manipulation
- Universal Postal Union
- Inflame public sentiment(boycott, tourism)
- Military posturing

Source: RBC GAM

runs around 2.5%. But the inflation numbers should ease over the next few months due to year-ago distortions that are set to fall out of the equation.

Two opposing forces should combine to send inflation back to normal levels. Applying an upward force are cyclical pressures related to the remarkable tightness of the labour market and the longevity of the economic expansion. Granted, this effect is weaker than it once was due to a flatter Phillips Curve, but it remains relevant and is the central reason that inflation has edged higher over the past decade. Tariffs are no longer changing significantly and so this has ceased to be an important consideration.

Pushing inflation downwards are slower population growth and an aging population, as demonstrated by the regions most afflicted by those conditions – Japan and the Eurozone.

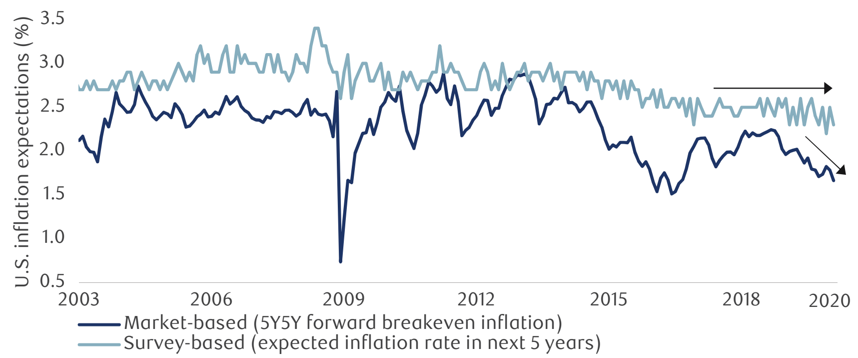
Our inflation forecasts are slightly above consensus, but remain in the realm of normal (Exhibit 29). Fundamentally, it is still a benign inflation environment.

From a scenario-analysis perspective, we would argue that lower-than-expected inflation remains more conceivable than surprisingly high inflation. While this would bring its own complications, it is probably preferable to a bout of high inflation, which might damage equities and bonds simultaneously.

Central banks return to easing

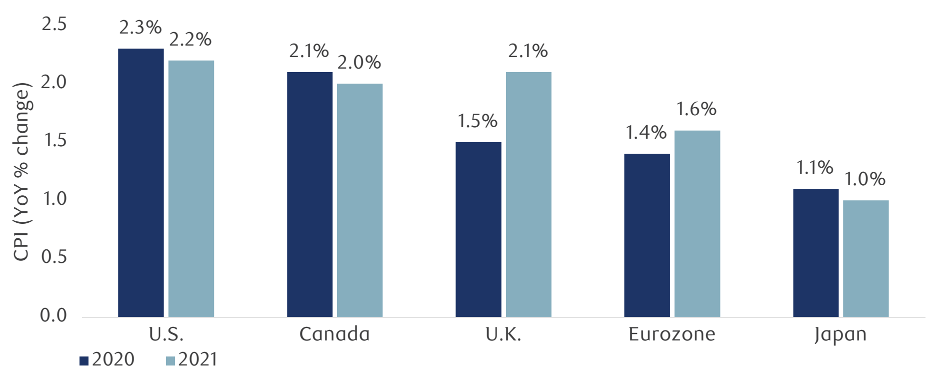
Central banks delivered a sizeable slug of monetary stimulus in 2019. Several emerging-market central banks have continued on that trajectory through

Exhibit 28: U.S. inflation expectations still low



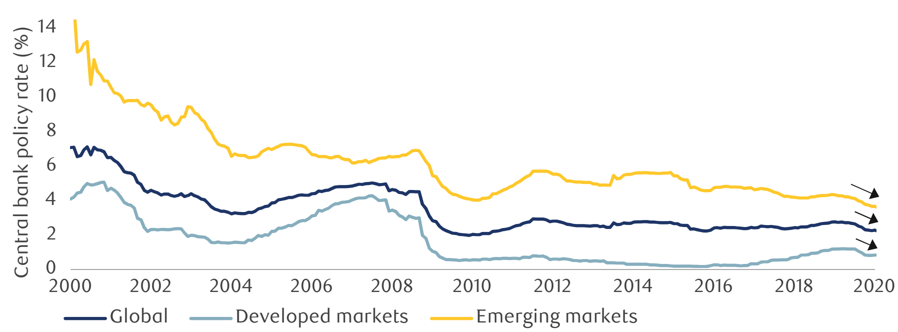
Note: Market-based inflation expectations as of 2/26/2020, survey-based inflation expectations as of Feb 2020. Source: Federal Reserve, University of Michigan Surveys of Consumers, Haver Analytics, RBC GAM

Exhibit 29: RBC GAM CPI forecast for developed markets



Source: RBC GAM

Exhibit 30: Global central banks to continue easing



Note: As of Feb 2020. Policy rates of the U.S., Canada, U.K., Eurozone, Switzerland, Sweden, Norway, Japan, Australia, China, India, South Korea, Russia, Brazil and Mexico aggregated and weighted by PPP-based GDP share. Source: Haver Analytics, RBC GAM

2020, most prominently in China (Exhibit 30).

This concerted effort initially appeared to be working, with global growth stabilizing after a two-year deceleration. However, as uncertainty has ratcheted higher again and Covid-19 threatens to weigh on economic activity beyond China, another round of monetary stimulus is now underway. Following closely on the heels of a G-7 declaration to support growth, the U.S. Federal Reserve (Fed) delivered a large inter-meeting interest-rate cut of 50 basis points, and may contemplate further reductions in the coming weeks.

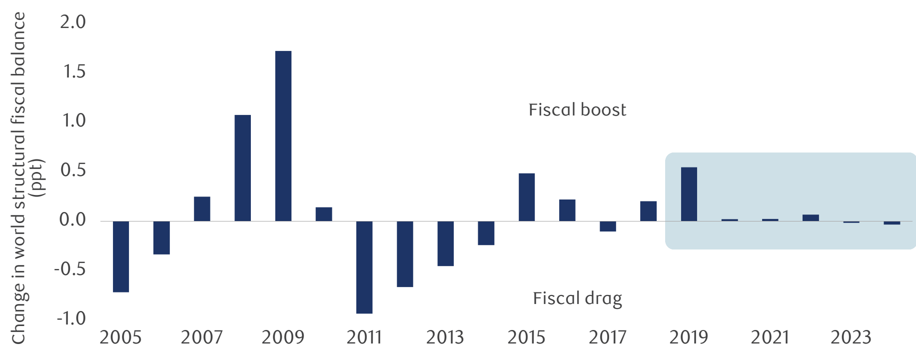
Our view is that additional monetary easing is likely. Risks remain asymmetrically skewed to the downside and evidence continues to accumulate that the neutral policy rate is extraordinarily low.

Fiscal stimulus should help

At the global level, the IMF continues to calculate an essentially neutral fiscal impulse for 2020 (Exhibit 31). However, there are two additional items to consider.

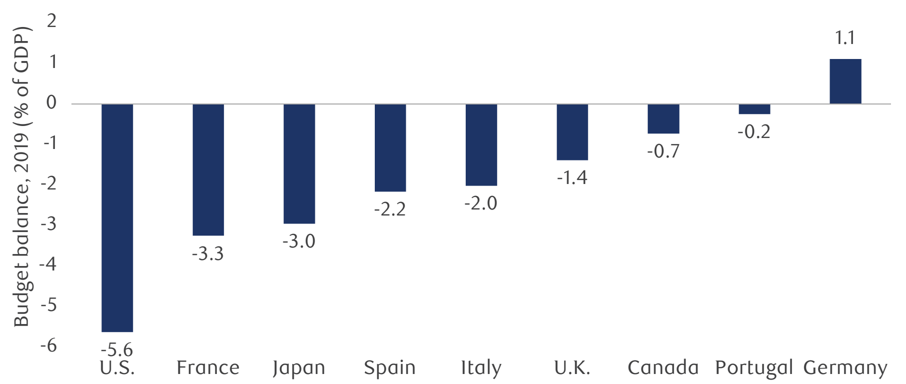
First, the fiscal impulse varies considerably by country. For instance, the U.S. is on track for an outright fiscal drag in 2020 due to expiring stimulus, while China is now pumping in substantial support. Related to this, countries are starting out with wildly different fiscal positions, with the U.S. sporting the largest fiscal deficit and thus theoretically least capable of delivering more fiscal stimulus, whereas Germany luxuriates in a budget surplus and thus has plenty of fiscal capacity (Exhibit 32).

Exhibit 31: Pre-Covid-19 budgetary plans said no net fiscal stimulus in 2020



Note: Forecast from IMF World Economic Outlook, Oct 2019. PPP-based country GDP as share of world total used as weights. Source: IMF, Haver Analytics, RBC GAM

Exhibit 32: U.S. fiscal deficit highest among developed countries



Source: IMF WEO, Oct 2019, RBC GAM

Second, we believe governments will pivot away from the current neutral stance and toward more fiscal stimulus as economic uncertainty ratchets higher. Some have already begun this shift. China has been active for some time, and recently announced further targeted measures in response to the coronavirus outbreak. Japan is committing to substantially more fiscal support given its own recent economic weakness. India has cut its corporate-tax rate nearly in half. Germany and the Netherlands have both announced modest programs, the former with global warming in mind. Italy has now responded with specific fiscal measures as the virus spreads there. The U.K. and Canada also seem to be pivoting in somewhat more fiscally expansive directions.

For the moment, we do not expect heroics from U.S. fiscal policy. While U.S. public-debt servicing costs are manageable right now, they are projected to become less so over the coming decades unless fiscal restraint is applied (Exhibit 33). Of even greater relevance, a divided Congress makes significant legislative achievements of any kind less likely through the election this fall, at a minimum.

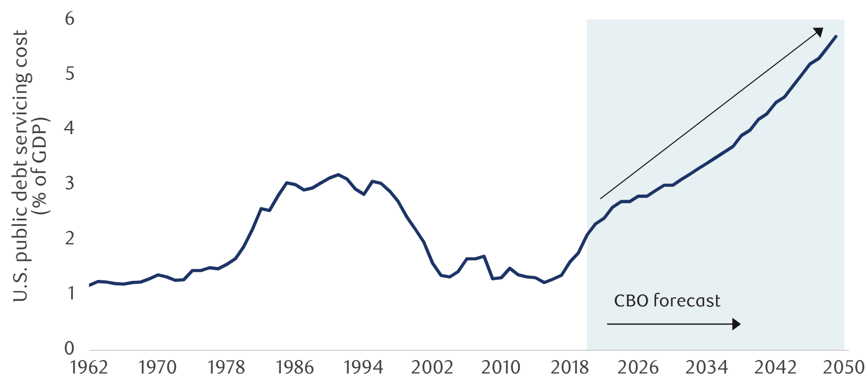
U.S. political race heats up

The impeachment of President Trump unfolded as expected, with the Democratic-led House of Representatives opting to impeach but the Republican-controlled Senate failing to convict him. The saga appears to have done little to sway voters one way or the other regarding the upcoming election.

The Democratic nomination race is now underway. Socialist candidate Bernie Sanders held what had appeared to be a commanding lead after the first several states, with betting markets assigning as high as a 62% chance that he would capture the nomination. But Joe Biden has since consolidated the support of moderates as others have dropped out, surging from just a 12% chance in late February to a remarkable 85% likelihood after the "Super Tuesday" primaries. Sanders, in turn, has fallen to just 15% (Exhibit 34). Much could obviously change with the figures swinging so wildly and dozens of states still to stage primaries, but this is a profound shift.

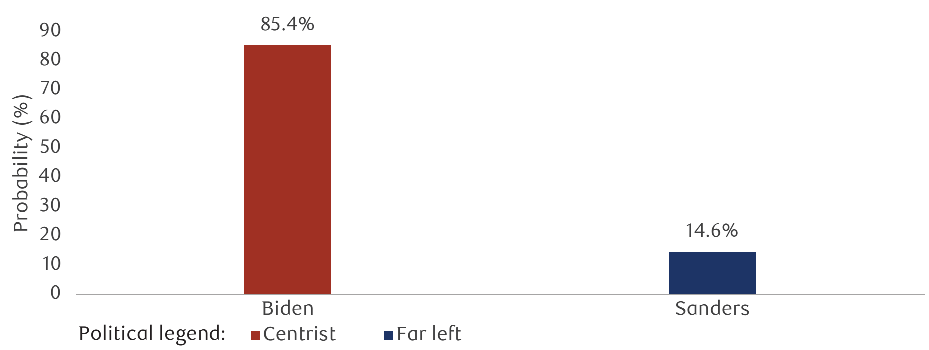
Although his likelihood of capturing the nomination has declined, Sanders's candidacy still represents a risk to financial markets, as he proposes higher taxes on corporations and investment income, and threatens to shake up a host of industries including financials, health care, high tech,

Exhibit 33: Rising U.S. public debt eventually outweighs low interest rates



Note: As of Jan 28, 2020. Source: CBO, Macrobond, RBC GAM

Exhibit 34: Who will win the Democratic presidential nomination?



Note: As of 3/8/2020. Based on prediction markets data and RBC GAM calculations.
Source: PredictIt; RBC GAM

agriculture and oil. From a purely economic standpoint, it remains hard to judge the short-term implications of his policies as the anti-business aspects would be problematic for the private sector portion of GDP, but his proposal to spend tens of trillions of additional dollars would presumably boost the public-sector part of GDP.

Tempering financial market concerns is the belief among many pundits that Sanders would lose in a head-to-head battle with President Trump. For that matter, even as Biden has now surged, betting markets now believe Trump has a better than 50-50 chance of winning a second term (Exhibit 35). Trump's perceived advantage is defensible: incumbents usually win a second term and low unemployment is associated with re-election. For the moment, markets prefer Trump to the unknown of the Democratic race, particularly given the tax cuts and deregulation in his first term. As such, the most likely scenario in November is a moderate rally for risk assets.

That said, we should not assume that the next president will be able to deliver entirely on their agenda. Congressional checks and balances limit the power of the president, particularly with Congress expected to remain divided after the election. This said, it is notable that betting markets believe the Democratic Party lead in the House has been narrowing, opening the narrow possibility of a Republican sweep that would permit a more substantial policy shift.

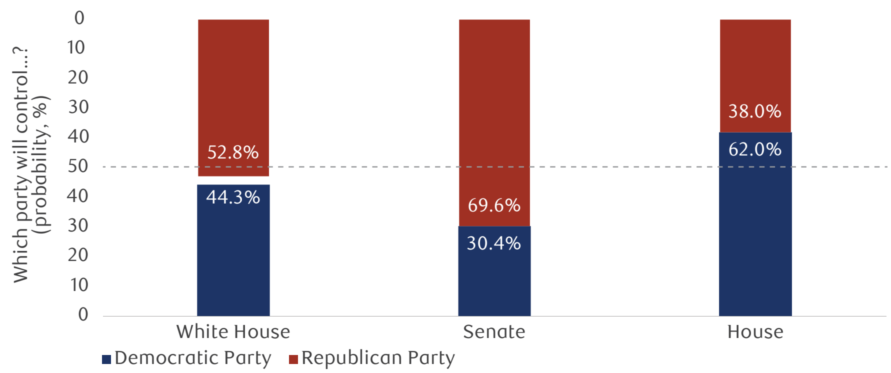
U.S. slows, but outperforms the rest

Uncertainty linked to Covid-19 has prompted analysts to lower growth forecasts nearly everywhere, including the U.S. This is partially a function of elevated uncertainty, partially the indirect effect of China's multi-week economic outage, and partially the assumption that some economically-relevant quarantining will take place outside of China.

In the U.S. context, we can at a minimum take solace that the country's economy has entered this period of uncertainty on a good footing. Homebuilder sentiment has been very good, suggesting American households are still enthusiastic about making the biggest ticket purchase of all (Exhibit 36).

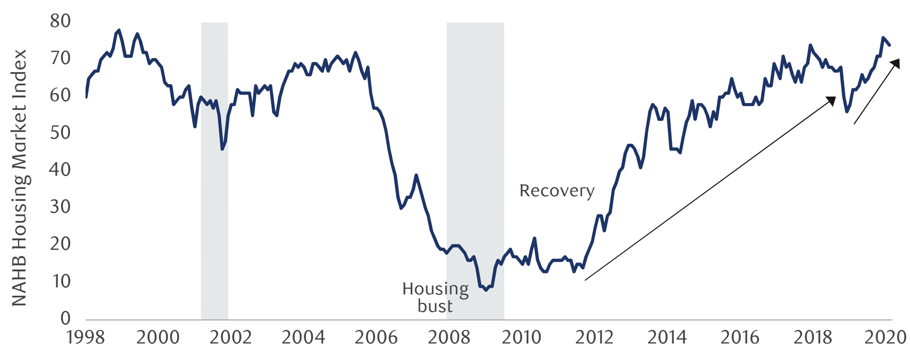
Consumer spending growth has been a source of resilience for years, and capital-expenditure expectations have recently been stabilizing after a long downdraft (Exhibit 37).It is admittedly now an open question whether these trends persist, but the starting point is at least good.

Exhibit 35: Status quo after 2020 election?



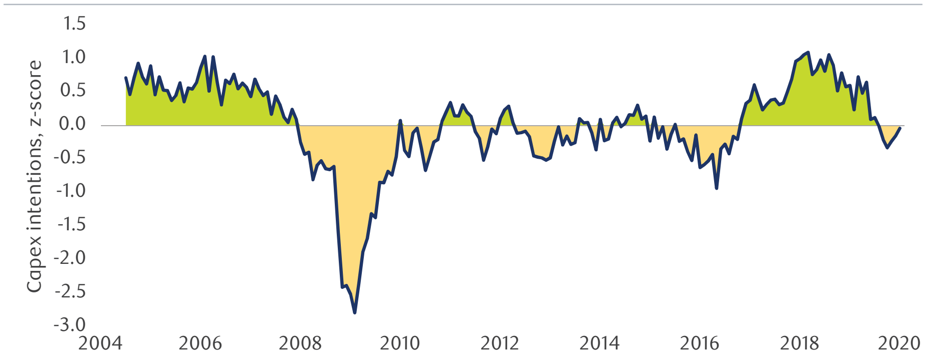
Note: As of 3/1/2020. Source: PredictIt; RBC GAM

Exhibit 36: Homebuilders have been optimistic



Note: As of Feb 2020. Shaded area represents recession. Source: National Association of Home Builders, Macrobond, RBC GAM

Exhibit 37: U.S. capex intentions had stabilized



Note: As of Feb 2020. Z-scores of expectations of captial expenditures from surveys of manufacturers conducted by Dallas Fed, Kansas Fed, New York Fed, Richmond Fed, ISM, and NFIB. Source: Macrobond, RBC GAM

To be fair, there are other parts of the economy that are growing less briskly. The remarkable shale-oil industry is no longer rising as steadily (Exhibit 38). Furthermore, there are pockets of stress visible in the household-debt numbers (Exhibit 39).

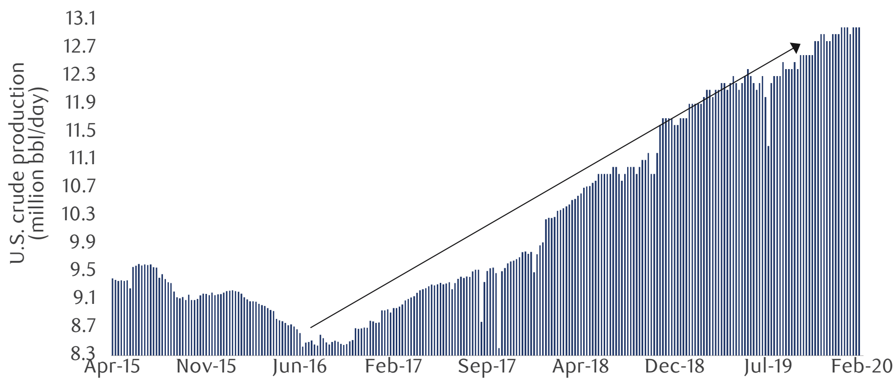
By virtue of superior U.S. productivity growth (Exhibit 40), the country's knack for nurturing world-beating companies and less challenging demographics than the developed-world norm, the U.S. still seems on track to outpace most of the developed world in economic growth. Even after shaving the outlook in response to Covid-19, 1.9% GDP growth is still achievable in 2020, followed by 2.0% in 2021. Although U.S. inflation is currently running a bit hot, we look for it to calm to 2.3% in 2020 and then 2.2% in 2021.

The Fed has already begun the process of combatting the virus, lowering rates by a big 50 basis points in March and it will likely to continue cutting in the coming months. From a currency perspective, the current period of risk aversion is translating into considerable volatility, but we are firm in our belief that the U.S. dollar is overvalued and should begin to soften over the coming year.

U.K. and Eurozone in focus

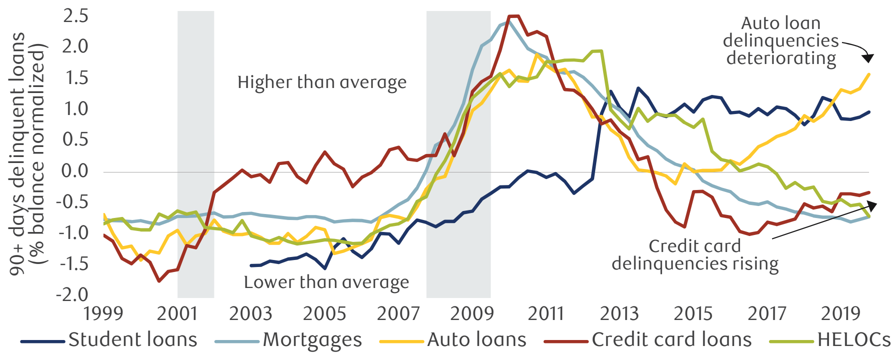
Brexit is no longer front of mind for investors, as other more urgent matters present themselves and as the situation de-escalates. Of relevance, the U.K. managed to nail down a stable majority government in December and to reach an interim agreement with the European Union (EU) before the January 31 deadline.

Exhibit 38: U.S. oil production has risen, could struggle to continue



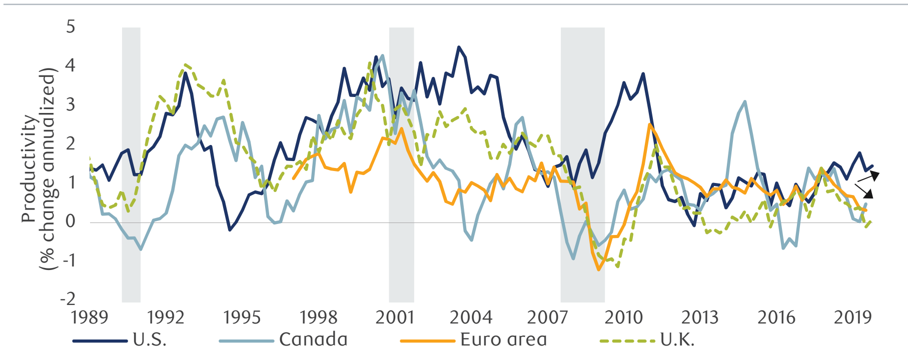
Note: As of 2/21/2020. Source: EIA, Haver Analytics, RBC GAM

Exhibit 39: U.S. consumer-loan delinquencies climbing



Note: As of Q4 2019. Percent of balance of 90+ days delinquent loans normalized. Shaded area represents recession. Source: FRBNY Consumer Credit Panel/Equifax, Macrobond, RBC GAM

Exhibit 40: Productivity divergence: U.S. vs. other developed countries



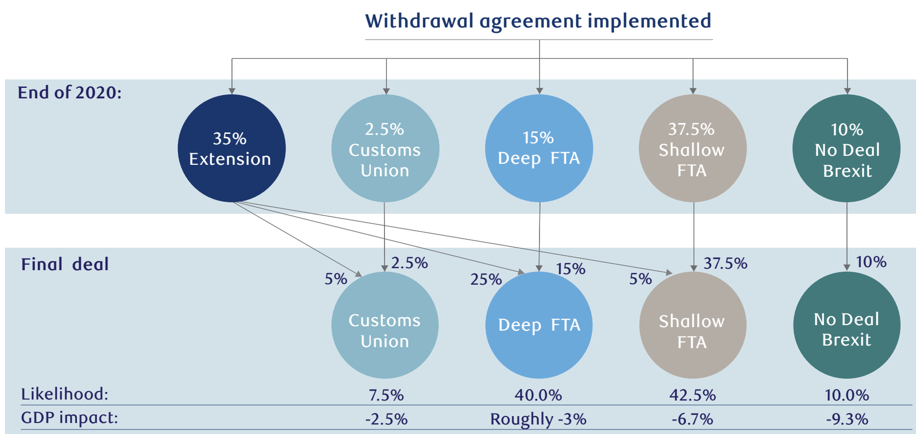
Note: As of Q4 2019 for U.K. and U.S., Q3 2019 for Canada and Eurozone. Productivity measured as rolling 8-quarter annualized % change of the business sector/total economy real output per hour of all persons. Shaded area represents U.S. recession. Source: NBER, Macrobond, RBC GAM

However, Brexit is not fully resolved. A final economic relationship must still be negotiated with the EU by the end of this year, and the outcome remains highly consequential for the U.K., moderately consequential for the EU and of some relevance to the rest of the world as well.

The most likely scenario is that Brexit is resolved in the form of a free-trade agreement (Exhibit 41). Whether the outcome is a deep free trade agreement that minimizes the economic damage or a shallower one that leaves a greater schism with the EU will come down mostly to whether the negotiating partners seek an extension beyond the end-of-2020 deadline. For the moment, the U.K. is insisting that it will not extend the deadline, and a shallower free-trade agreement is arguably most likely. While this outcome would impose some further economic damage beyond the uncertainty-induced underperformance already suffered over the past several years, we suspect it will prove manageable. The most important aspect is that we believe the risk of a 'no deal' exit, while lately threatened as a negotiating strategy by the U.K., is ultimately a much lower risk than it was last fall.

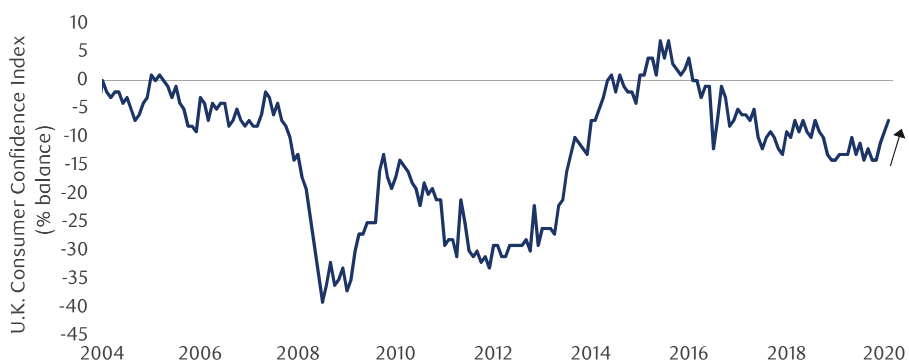
Turning to the U.K. economy itself, there is evidence that confidence has rebounded in light of constructive Brexit developments (Exhibit 42). The stakes remain considerable, but the path forward is less fraught with risk than before. With a less concerning Brexit trajectory plus the prospect of additional fiscal support pitted against global Covid-19 concerns, we peg U.K. growth at 1.1% in 2020 and 1.4% in 2021.

Exhibit 41: Brexit withdrawal agreement implemented – likely culminates in some form of free-trade agreement, though timing is tight



Note: As at January 28, 2020. Source: U.K. Treasury, RBC GAM

Exhibit 42: U.K. consumer confidence rebounded as Brexit deal solidified



Note: As of Feb 2020. Source: GfK, Haver Analytics, RBC GAM

The Bank of England has so far resisted the monetary-easing trend, but we expect it will soon opt to join the herd in the near future as global growth battles new headwinds. British inflation is set to alight at 1.5% in 2020, followed by 2.1% in 2021. For its part, the pound should remain roughly steady over the coming year.

Across the English Channel, Eurozone growth had also been stabilizing in recent months (Exhibit 43). Fortunately, the populist forces that have long swirled in the Eurozone seem slightly diminished at this instant. However, the latest mix of risks has necessitated a slight downgrade in our outlook to just 0.9% GDP growth in 2020 and 1.2% in 2021.

Eurozone inflation continues to run somewhat below target. There is no denying that the region is suffering from a mild case of Japanification – an old and aging population, leading to slow growth, low inflation and ultra-low interest rates (Exhibit 44). Given the European Central Bank's (ECB) extremely stimulative starting position, the central bank is limited in how much further support it can provide, but it should nevertheless make a symbolic effort from a policy-rate perspective and also seek to enhance market liquidity.

Although Sweden's central bank recently abandoned negative interest rates on the view that they were no more effective than a 0% rate, the ECB's interest-rate "tiering" already renders its negative rates entirely theoretical to most participants in the economy, and so we do not anticipate a similar move in the Eurozone.

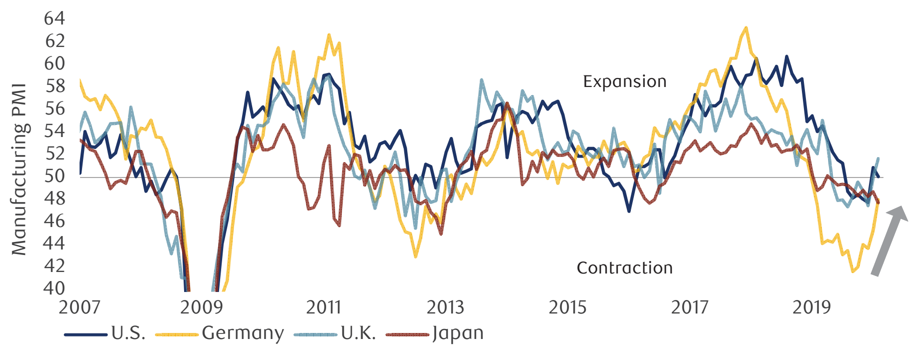
We forecast a moderately stronger euro in a year's time due to the euro's cheap valuation, the ECB's lesser scope for easing than the Fed, plus the region's current-account surplus.

Japan stumbles badly

Unlike many developed countries, the Japanese economy was already stumbling badly at the end of 2019 due to a typhoon and a sales-tax hike. In the fourth quarter of 2019, the country recorded an abysmal 6.3% annualized GDP decline, with business conditions tracking similarly weakly (Exhibit 45).

Now, Covid-19 appears to be hurting the country more than most, with a recent nationwide school closure that will last more than a month. The country had already announced a major fiscal package in response to the earlier economic deceleration, and an expansion is now likely given Covid-19. Monetary policy is already operating near maximum, but some small further sympathetic move is possible.

Exhibit 43: Manufacturing started to rebound across advanced economies



Note: As of Feb 2020. PMI refers to Purchasing Managers Index for manufacturing sector, a measure for economic activity. Source: Haver Analytics, RBC GAM

Exhibit 44: Inflation expectations in Eurozone very low

Note: As of 2/25/2020. Source: Bloomberg, RBC GAM

Exhibit 45: Japanese business conditions deteriorated further

Note: As of Q4 2019. Source: Bank of Japan, Macrobond, RBC GAM

Japan continues with its gradual structural reforms with regard to international trade, the labour market and corporate governance, which help to partially offset a challenging demographic situation. The Tokyo Olympics this summer could provide a slight boost later, but classically the main thrust for such events comes from the infrastructure projects undertaken over the prior years.

Against this backdrop, the Japanese economy is unlikely to grow at all in 2020 – we forecast a woeful 0.2% economic decline. That said, we expect that growth will bounce back in 2021, with 0.8% growth possible. The Japanese inflation rate should be 1.1% in 2020 and a slightly lower 1.0% in 2021. The Japanese yen is expected to strengthen further, in keeping with the theme of a weakening dollar.

Canadian competitiveness concerns intensify

Providing welcome support for the Canadian economy are still-solid U.S. demand and a resurgent Canadian housing market (Exhibit 46).

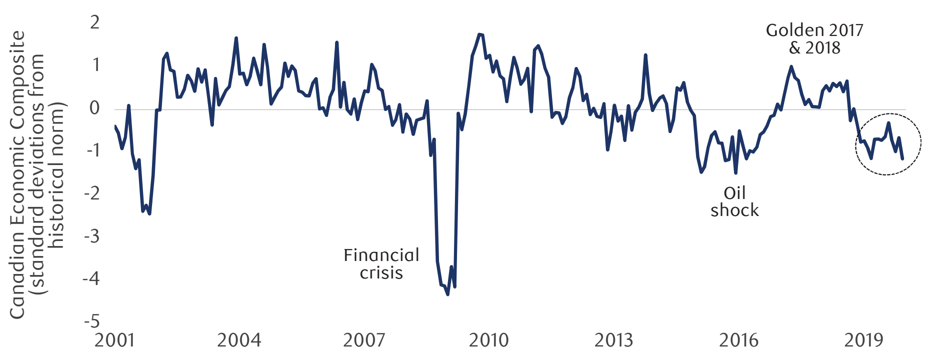
That said, the Canadian economy slowed materially to close 2019, barely expanding at all in the final quarter of the year (Exhibit 47).

Several economic headwinds help to explain this underperformance. The country's oil and gas industry continues to grapple with adversity including a low global oil price (in which Covid-19 demand concerns are outweighing rocky U.S.-Iran relations). Chronic energy transportation constraints are arguably an even more profound limitation for the sector, resulting in little new investment (Exhibit 48).

Exhibit 46: Canadian housing market is reviving

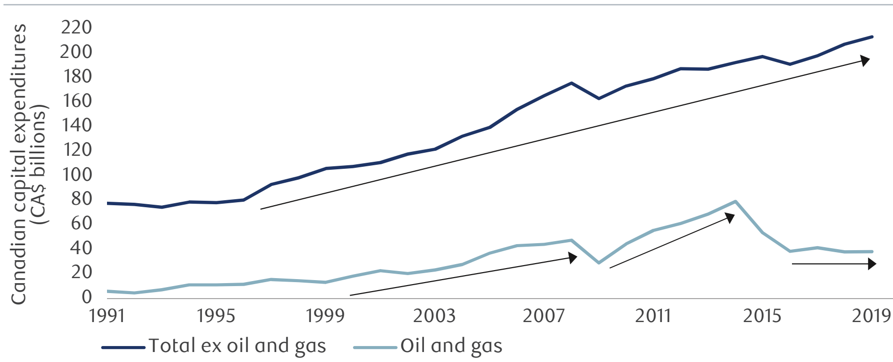
Note: As of Jan 2020. Y/Y % change of average home price normalized using data since 1991. Source: Haver Analytics, RBC GAM

Exhibit 47: Canadian growth to remain subpar



Note: As of Dec 2019. Composite constructed using four leading indicators from surveys on Canadian businesses. Source: CFIB, Macrobond, RBC GAM

Exhibit 48: Canadian oil and gas capex have flatlined



Note: As of 2019. Capital expenditures for latest 2 years are preliminary actuals and intentions and do not include repair expenditures. Source: Statistics Canada, Haver Analytics, RBC GAM

Canada also continues to be limited by serious competitiveness challenges that include higher tax rates than the U.S., a heavier regulatory burden and the recent cancellation and/or delay of various infrastructure projects.

The recent rail blockades in Canada will subtract a few tenths of a percentage point from first-quarter growth, but are unlikely to prove significant in the annual figures.

Factoring in these influences, we forecast Canadian GDP growth of just 1.3% for 2020 and 1.7% for 2021. The Bank of Canada has now delivered a major 50-basis-point rate cut, and seems likely to follow up with further easing in future months. We persist in the view that the Canadian dollar may lose a bit further ground, but it is undeniably already cheap relative to its long-term normal valuation.

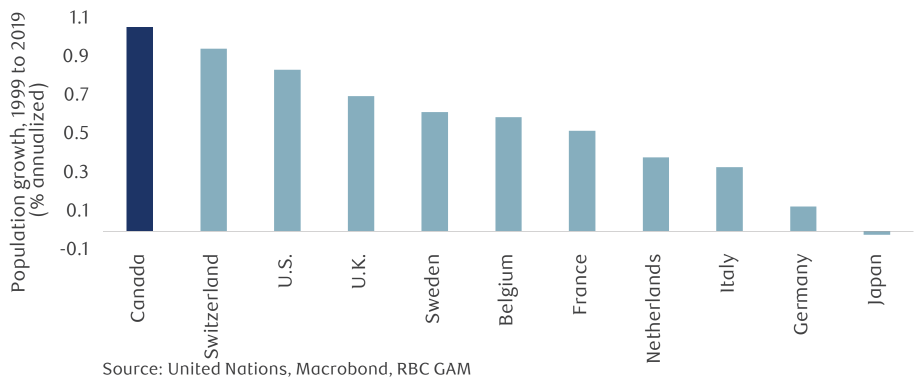
For all of the country's manifold near-term challenges, Canada arguably enjoys a more favourable longer-term outlook than many. In addition to a highly educated population, ample land and enormous resource wealth, the country has some of the best demographics in the developed world (Exhibit 49).

Long-term considerations

Sticking with the long-term outlook but now pivoting to the global economy, there remain many reasons why economic growth is unlikely to return to the glory days of the 20th century, centering around poor demographics plus a host of further challenges such as less business dynamism, populism, climate change and high indebtedness (Exhibit 50). From a demographic standpoint, working-age populations are set to decline even more starkly than is the overall population (Exhibit 51).

However, we reject the notion that innovation in the future will be more muted. There are still plenty of clever ideas in the pipeline and countries like China are now joining the developed world at the technology frontier.

Exhibit 49: Canada enjoys fastest population growth in G10



Source: United Nations, Macrobond, RBC GAM

Exhibit 50: Long-term challenges and risks to economic growth

Human factors	Economic structure	Post-crisis
• Demographics: – Slower pop. growth – Rising retired % • Decelerating gains in: – Education – Health – Urbanization • Rising complacency: – Low labor mobility – More segregated – Less risk-taking • Falling societal trust • Higher inequality: – Drag on growth – Revolution?	• Fading globalization • Declining creative destruction: – Lower firm turnover – Higher firm concentration • Goods ➔ services • Maturing EM economies	• Populism • Secular stagnation: – Diminished expectations – Less business investment – Skill decay • Debt excesses: – Servicing – Deleveraging
	Environment	**Technology**
	• Climate change: – Higher temperature – More extreme variation – More natural disasters – Higher sea levels • Low prob./high impact: – Asteroid, etc.	• Running out of new ideas? – Not convinced • Cyber-warfare? • Technological singularity?

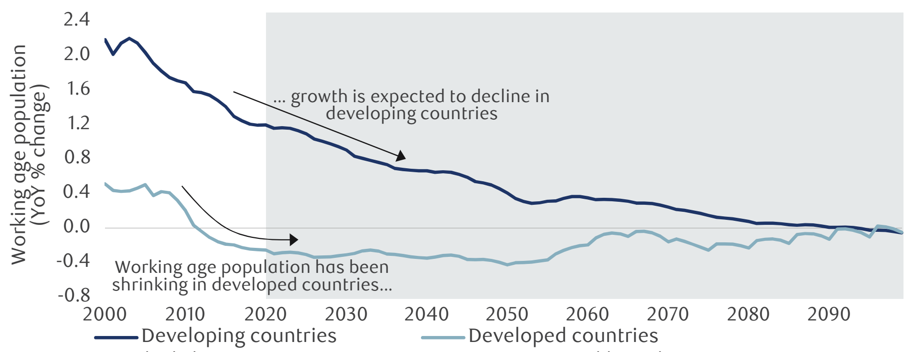
Source: RBC GAM

Bottom line

After a brief interlude, the global economy has snapped back into the all-too-familiar position of high uncertainty paired with slowing growth. There are several reasons for this renewed uncertainty, but the spread of Covid-19 is by far the most consequential. As a result, 2020 economic growth now looks set to be worse than 2019.

Still, it is important to put this situation into context. Viral outbreaks over the past several decades have had only a temporary effect on economic growth and financial markets. Furthermore, even if the worst-case scenario of sustained global contagion occurs, the economic damage should primarily arise from temporarily quarantined workers as opposed to more permanent impediments. As such, the economy should eventually reclaim most lost ground.

Exhibit 51: Deteriorating global demographics



Note: Shaded area represents UN projections. Source: UN World Population Prospects 2019, Haver Analytics, RBC GAM

Market Outlook

Bull market stumbles

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

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

It's hard to believe that just two months ago, many stock markets were at record levels, volatility was low and leading economic indicators appeared to be stabilizing after a period of weakness. Moreover, investors were optimistic that risks related to U.S.-China trade and Brexit were being addressed. We pointed out at the time that equity markets were priced for perfection and that valuations were becoming stretched based on a variety of measures. Our sense was that prospective returns for stocks were low and early in 2020 we trimmed our equity allocation by one percentage point, moving the proceeds to cash.

Since the end of January, the economy and financial markets have been rattled by the Covid-19 outbreak, whose spread from China to the rest of the world has caused risk assets to decline sharply and spurred unprecedented demand for safe-haven government bonds as investors factored in the outbreak's damage to the economy and corporate profits. Stocks in most major markets sold off by more than 10% in the last week of February and sovereign-bond yields plunged as investors turned more cautious.

The emergence of the virus represents a significant challenge to global economic activity as it disrupts supply chains, dissuades people from traveling and deflates investor confidence. This quarter, we lowered our 2020 global economic-growth forecast by 0.4 percentage point based on our assessment at the end of February. The extent of the damage remains highly uncertain and the situation is evolving rapidly. While financial markets are likely to remain volatile in the near term, the sell-off in risk assets has boosted the return potential of stocks versus bonds and, as a result, we added one percentage point to our equity allocation at the conclusion of the quarter ended February 28, sourced from fixed income.

The market's response to crisis events is usually short-lived

While the intensity of the late-February sell-off has many investors concerned, history suggests that declines associated with crisis events tend to be short-lived, as long as the event doesn't cause sustained harm to the economy. We looked at 88 crisis events dating back to World War II and tracked the stock market's reaction measured by the Dow Jones Industrial Average (Exhibit 1). The table in the exhibit groups crisis events by

Exhibit 1: Dow Jones Industrial Average
Median experience through crisis events

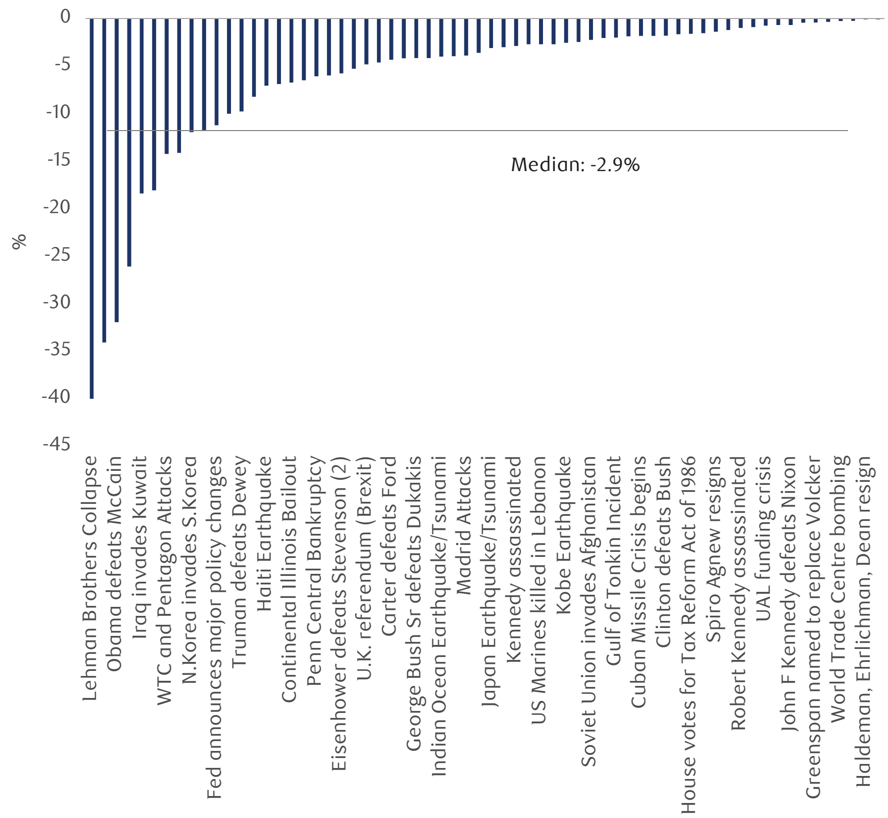
		Decline			Reaction	Return following crisis date						
	Count	Days	%	Recovery Days	Period Days	1 Day	1 Week	1 Month	3 Months	1 Year	3 Years	5 Years
Acts of war	28	6.0	-2.7	4.0	13.0	-0.2%	-0.5%	1.8%	1.9%	10.5%	22.1%	46.1%
Disasters	11	9.5	-3.8	11.5	21.0	0.0%	-0.4%	-1.7%	1.3%	7.8%	30.1%	55.6%
Administrative	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	4	15.5	-6.3	5.0	20.5	-0.1%	-0.1%	-1.7%	7.5%	14.2%	34.6%	60.3%
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, 2020. Source: RBC GAM

type and provides the median market reaction for each type of event: act of war, natural disaster, administrative shock, economic policy shock, assassination, or global health scare. A decline of 2.9% spanning six days is the median experience followed by a full recovery six days thereafter. Global health scares have tended to be more damaging to markets, with a median decline of 6.3% over 16 days, though here too subsequent recoveries have been rapid, erasing declines in as few as five days after bottoming. While the median outcome is quite benign, it's important to note that experiences can vary widely. In the case of the Lehman Brothers bankruptcy in 2008, for example, the stock market took over a year to get back to where it was before that event (Exhibit 2).

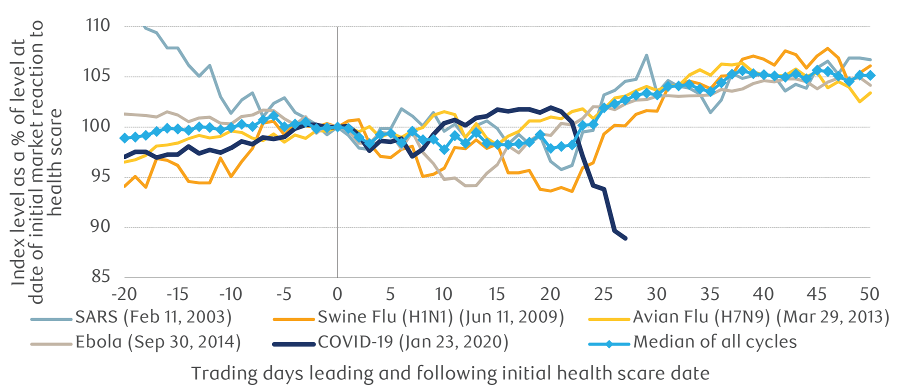
The market response to Covid-19 has thus far been more extreme than is usually the case in a global health scare. Exhibits 3 and 4 plot road maps of the S&P 500 Index and U.S. 10-year Treasury yield, where T=0 on the charts marks the date that markets initially reacted. While stocks and bonds followed similar patterns during the past four health scares that we identified (SARS, Swine flu, Avian flu, Ebola), the market response to Covid-19 is quickly becoming an outlier. The current situation could turn out worse this time since stocks began the correction from record highs and the virus appears to be having a greater impact on the global economy than was the case in previous health scares. That said, markets have recovered rapidly in all instances once investors began looking beyond the crisis event and towards a recovery in the economy and corporate profits.

Exhibit 2: Dow Jones Industrial Average
% decline during market crisis events



Note: As of February 28, 2020. Source: RBC GAM

Exhibit 3: S&P 500 and global health scares



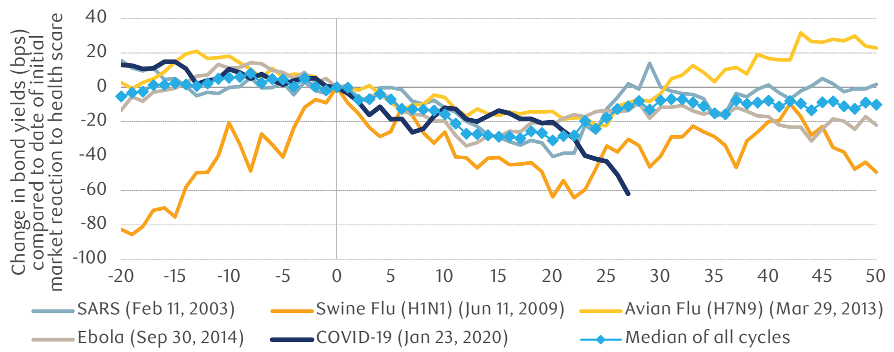
Note: As of February 28, 2020. Source: RBC GAM

Stress indicators begin to signal caution

A variety of indicators suggest that market stress has escalated. In credit markets, data suggests that most of the stress is confined to the Energy sector. Exhibit 5 plots high-yield credit spreads and separates out the Energy component from the BofAML U.S. High Yield Master II Index. Although spreads on energy bonds have widened significantly during the recent decline in oil prices, non-energy spreads and even those for the index as a whole remained below their long-term averages as of February 28. This market behaviour suggests that investors foresee a major reduction in energy companies' ability to meet their financial obligations, but also that the financial stress in the rest of the market appears contained for now.

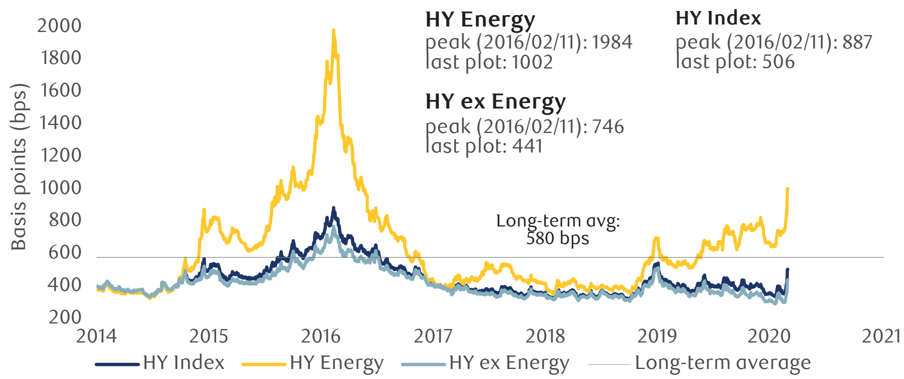
Equity markets, however, are exhibiting signs of significant stress, as evidenced by the CBOE Volatility Index (VIX) soaring to levels not seen since the global financial crisis more than 10 years ago. Having jumped above 40 now from below its long-term average of 15 several weeks ago, the VIX suggests extreme uncertainty regarding the immediate future of equity prices. Interestingly, the spike in the VIX has coincided with the flattening of the yield curve on a 30-month lagged basis (Exhibit 6). The flattening of the yield curve, which began in 2015-2016, may have foreshadowed the volatility that we are seeing. The slope of the yield curve remains close to zero, suggesting that volatility will remain elevated.

Exhibit 4: U.S. 10-year yield and global health scares



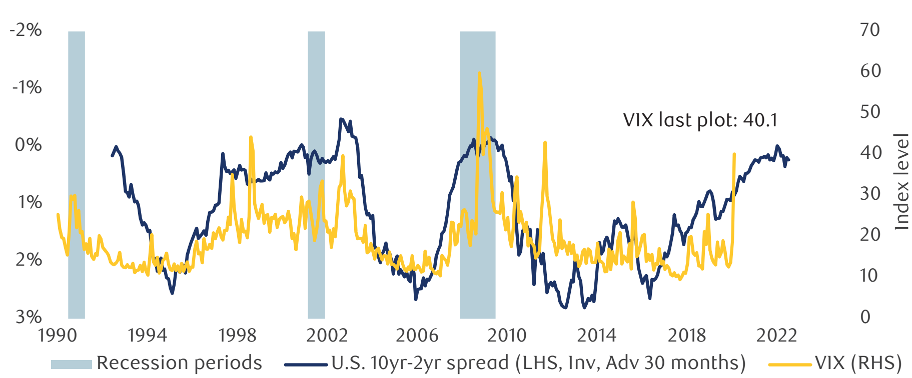
Note: As of February 28, 2020. Source: RBC GAM

Exhibit 5: BofAML U.S. High Yield Master II Index
Government option adjusted spread



Note: As of February 28, 2020. Source: BofAML, RBC GAM

Exhibit 6: U.S. yield curve vs. VIX volatility



Note: As of February 28, 2020. Source: Bloomberg, RBC GAM

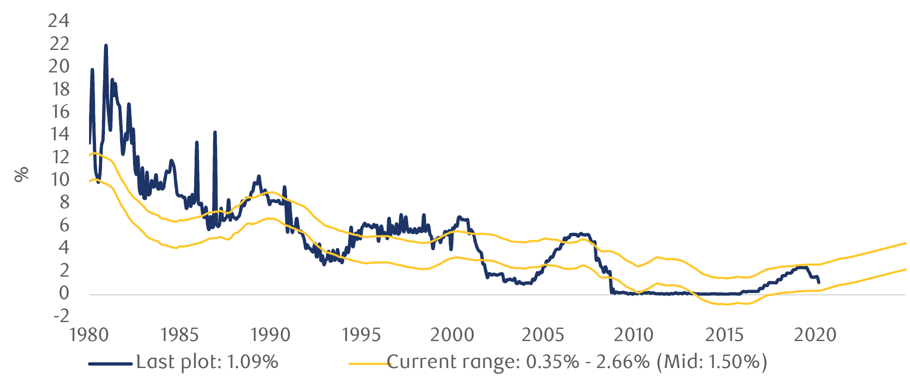
Central banks provide support

In an effort to head off the worst of Covid-19's economic impact, the U.S. Federal Reserve (Fed) cut its benchmark interest rate by 50 basis points on March 3, the first unscheduled rate cut since the financial crisis. The move followed the three rate cuts delivered by the U.S. central bank in late 2019 in response to deteriorating economic leading indicators and concerns related to global trade and Brexit. The Bank of Canada followed suit with a 50-basis-point rate reduction at its scheduled meeting on March 4. Our short-term interest-rate model shows that U.S. interest rates are now highly stimulative, but that the Fed still has room to deliver more rate cuts if necessary (Exhibit 7). In fact, the market is pricing in at least two more rate cuts this month (Exhibit 8). Although the near-term outlook remains challenged by Covid-19, the significant additional monetary stimulus should ultimately provide a boost to economies in the quarters ahead.

Bond yields plunge; valuation risk is acute

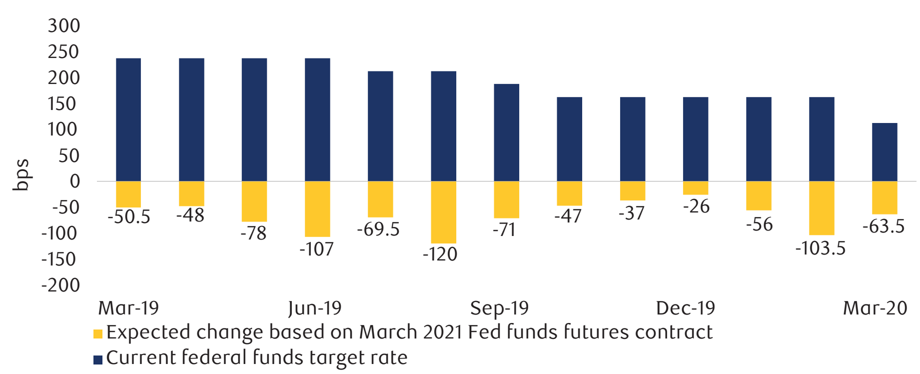
In today's environment of heightened uncertainty, investors have flocked to safe-haven government bonds, with the U.S. 10-year yield plunging to a record low at the end of February. Yields on other major sovereign bonds are situated well below the bottom of their equilibrium bands (page 42). In aggregate, our global composite of equilibrium for bonds is approaching its lowest level on record (Exhibit 9). At this level, the risk that yields will rise, leading to fixed-income losses, is acute

Exhibit 7: U.S. fed funds rate
Equilibrium range



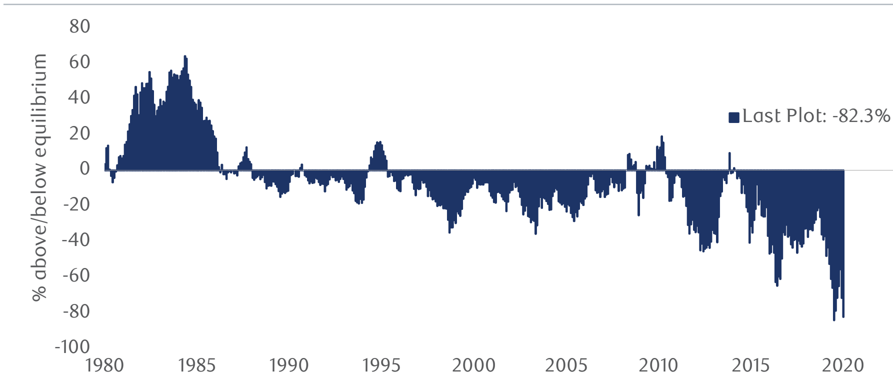
Note: As of March 5, 2020. Source: Federal Reserve, RBC GAM

Exhibit 8: Fed funds rate and implied expectations
12-month futures contract



Note: As of March 5, 2020. Source: RBC GAM

Exhibit 9: Global bond-market composite
10-year government-bond yields relative to equilibrium



Note: As of February 28, 2020. Source: RBC GAM

as long as the global economy avoids recession.

Our model suggests that the U.S. 10-year yield is unsustainably low, even factoring in economic headwinds that would tend to hold down bond yields. We model the 10-year yield by combining an inflation premium with a real rate of interest (Exhibit 10). Inflation is hovering around the 2% level that our models predict, but real interest rates are currently deeply negative. Our traditional model was constructed to assume that real rates would eventually return to their long-term average, but structural factors that have pulled real rates down over the past few decades are unlikely to reverse meaningfully over the coming five to 10 years. These factors include slower economic growth, a preference for saving over spending, and the fact that much of the emerging world has now emerged.

Taking these factors into account lowers the sustainable level of bond yields going forward and incorporating them into our model establishes the mid-point of our equilibrium band five years out at just 1.85% for U.S. 10-year Treasuries, which is more than 250 basis points lower than the 4.56% assumed in our traditional model (Exhibit 11). In both cases, the current yield is well below the expected modelled level and presents significant valuation risk for bond investors. While yields are currently being suppressed by the virus's impact on investor confidence in a time of stress, we expect that investors will eventually demand a real, or after-inflation, return on their savings. For that to occur, yields will need to rise from current

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

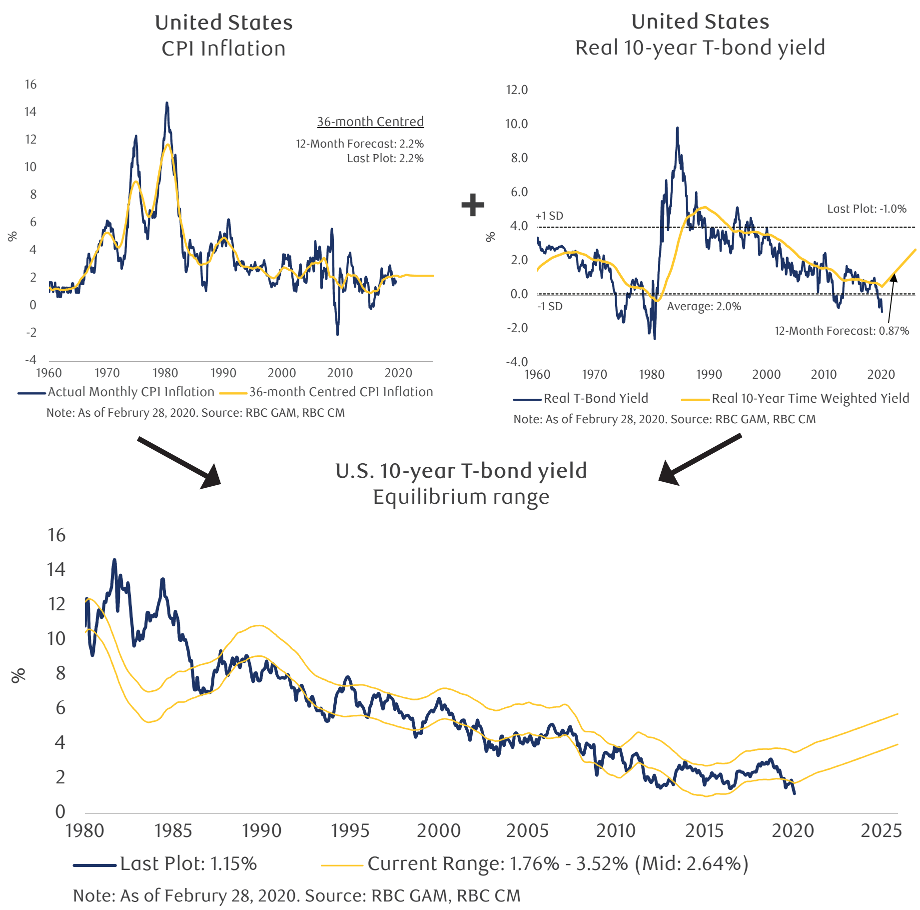
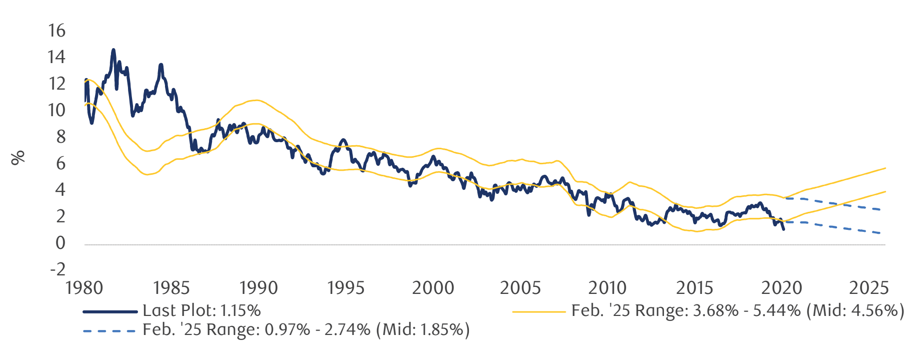


Exhibit 11: U.S. 10-year T-bond yield
Equilibrium range



Note: As of February 28, 2020. Note dotted channel reflects real interest rate assumptions based on Bank of England Staff Working Paper No. 571: Secular drivers of the global real interest rate. Source: RBC GAM, RBC CM.

levels, leading to very low returns or even declines for bonds.

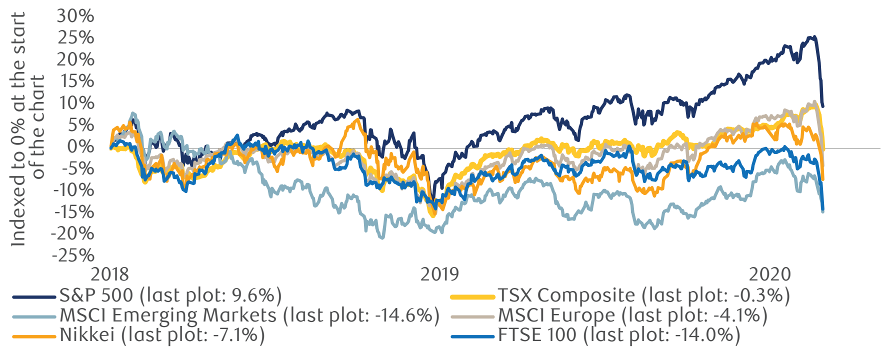
Equity markets retreat after hitting record levels

The global equity decline poses a new threat to corporate profits amid damaged investor confidence. The S&P 500 has declined significantly from its record high, erasing solid gains from earlier in the year. Other markets have also recorded declines, and most non-U.S. markets have now moved sideways or lower over two years (Exhibit 12).

Prior to the sell-off, S&P 500 valuations were becoming stretched, but the decline dropped U.S. equities closer to our estimate of fair value, while other markets are especially attractive on this basis (page 43). Overall, our global composite of equity markets situates stocks at 11% below fair value, in line with levels seen in the fall of 2019 (Exhibit 13).

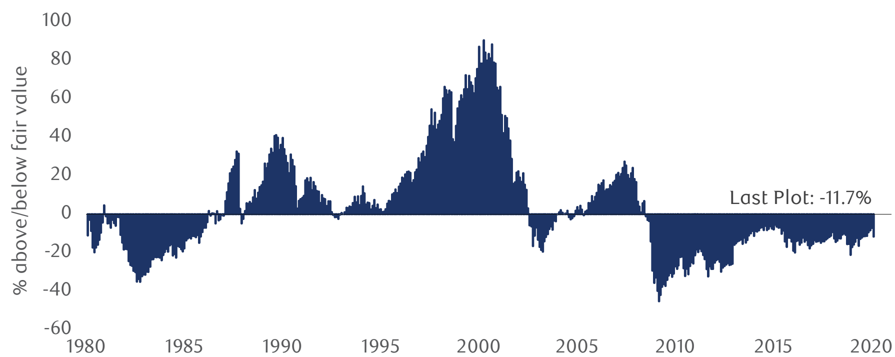
The sell-off has lowered equity prices but the other part of the value equation – earnings – is now coming into question. A decline in global economic activity triggered by the Covid-19 outbreak could lower revenues and corporate profits. Even if the bulk of the damage was limited to offshore economies, 30% of sales and 40% of profits earned by S&P 500 companies are generated outside of the U.S. (Exhibits 14 to 15). At the beginning of this year, analysts expected profits to grow 8% in 2020, but estimates are being ratcheted lower (Exhibit 16). Without solid corporate-profit growth, stocks are vulnerable, especially given a starting point of elevated valuations.

Exhibit 12: Major equity-market indices
Cumulative price returns indices



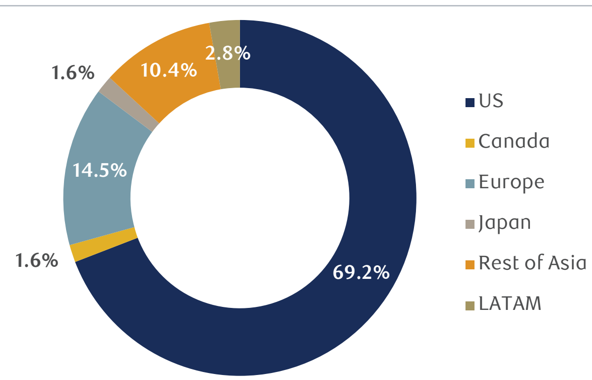
Note: As of February 28, 2020. Price returns computed in local currencies, except MSCI Emerging Markets Index, which is in USD. Source: Bloomberg, RBC GAM

Exhibit 13: Global stock-market composite
Equity market indexes relative to equilibrium



Note: As of February 28, 2020. Source: RBC GAM

Exhibit 14: S&P 500 sales by region

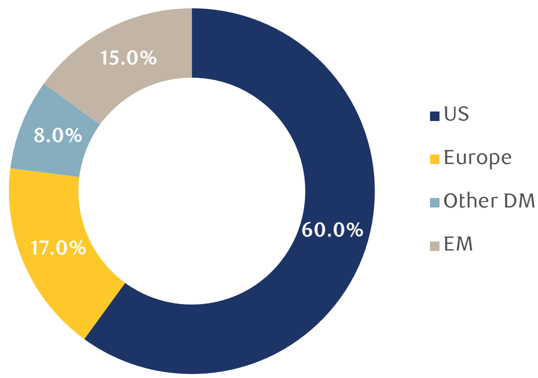


Note: As of December 31, 2017. Source: Deutsche Bank

Gauging the potential outcomes for stocks

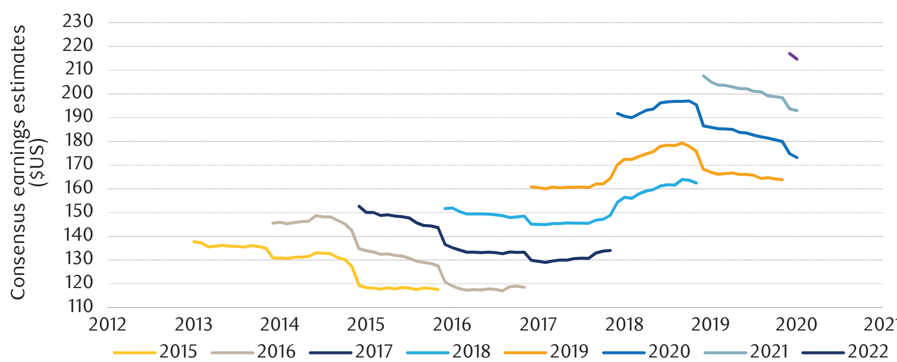
Given the lack of clarity surrounding corporate profits, a wide range of scenarios is possible. While the outlook could worsen, we must also keep in mind that there is the potential for a solid market rally if the virus scare is resolved quickly and economies rebound. Exhibit 17 outlines a variety of scenarios for the S&P 500 based on expectations for earnings combined with different price-to-earnings multiples. Before the appearance of Covid-19, stocks were trading at one standard deviation above our modelled estimate of equilibrium – the level consistent with current and expected interest rates, inflation and corporate profitability – and S&P 500 earnings were estimated to grow to US$174.00 per share by year-end. Goldman Sachs recently provided estimates for S&P 500 earnings based on the virus having a mild or a severe impact. Their base case is for a mild impact that would leave S&P 500 earnings per share in 2020 unchanged from a year earlier at US$165.00. In a scenario where the damage from Covid-19 is more severe, S&P 500 profits would fall to US$143.50. In a recession scenario, we expect earnings could fall as much as 25% to US$123.80, which is consistent with the average profit decline in past recessions. Assuming stocks trade at an equilibrium P/E of 18.3, the S&P 500 could trade anywhere between 2,268 and 3,190 with the gap in performance ranging between a decline of 21% and a gain of 10% from the close on February 28. Of course, changes in investor sentiment could push those ranges wider on either side.

Exhibit 15: S&P 500 profits by region



Note: As of December 31, 2017. Source: Deutsche Bank

Exhibit 16: S&P 500 Index
Consensus earnings estimates



Note: As of February 28, 2020. Source: Thomson Reuters, Bloomberg Bloomberg

Exhibit 17: Earnings estimates and alternative scenarios for valuations and outcomes for the S&P 500 Index

		Consensus			
		2020 Top down	Mild coronavirus impact*	Severe coronavirus impact*	Recessionary**
	P/E	$174.0	$165.0	$143.5	$123.8
+1 Standard Deviation	22.4	3905.3	3703.3	3220.7	2777.5
+0.5 Standard Deviation	20.4	3547.4	3363.9	2925.6	2522.9
Equilibrium	18.3	3189.5	3024.6	2630.4	2268.4
-0.5 Standard Deviation	16.3	2831.7	2685.2	2335.3	2013.9
-1 Standard Deviation	14.2	2473.8	2345.8	2040.2	1759.4

*Earnings figures based on Goldman Sachs equity strategist estimate as of February 27, 2020
**Trailing 12-Month Earnings to December 2019 less 25% (i.e. average decline in earnings through recession). Source: Bloomberg, Thomson Reuters, RBC GAM

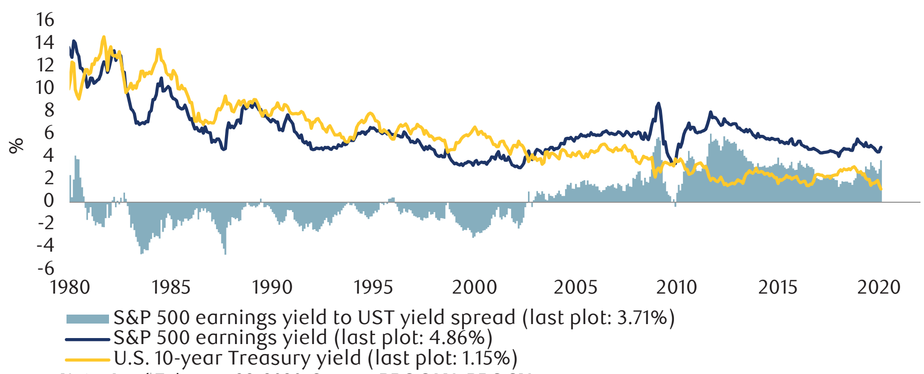
History suggests that returns tend to be quite good following an initial 10% decline in stocks provided that recession is avoided. We looked at 33 instances in which the S&P 500 fell at least 10% dating to 1950 and compiled return statistics for the 12 months following a 10% decline (Exhibit 18). Stocks rose in 76% of one-year periods following corrections, gaining an average of 11%. In the two-thirds of cases that were not followed by recession, stocks increased 96% of the time by an average of 16%. In the cases where recession occurred, however, stocks rose only 45% of the time. While it is possible that the damage from the Covid-19 outbreak sends economies into recession, our base case is that it won't. Should recession be avoided, it's possible that most of the damage in financial markets is behind and stocks could be setting up for attractive gains.

Exhibit 18: S&P 500 Index following corrections
Returns in 1 year following initial 10% decline

	# observations	Average	Median	Min	Max	Batting average*
All cases	33	11%	15%	-37%	36%	76%
No recession	22	16%	16%	-7%	36%	91%
Recession	11	0%	-4%	-37%	30%	45%

Note: Data from January 1950 to February 2020. *Incidence of positive return. Source: RBC GAM

Exhibit 19: S&P 500 earnings yield
12-month trailing earnings/index level



Note: As of February 28, 2020. Source: RBC GAM, RBC CM

Asset Mix – taking advantage of the equity-risk premium

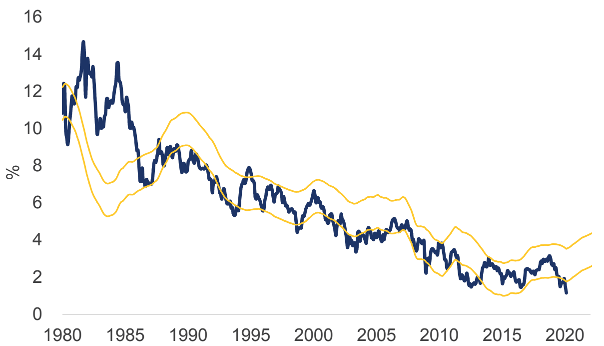
The Covid-19 outbreak was an unexpected shock to economies and financial markets, and asset values have adjusted rapidly to reflect the potential for negative economic outcomes. Central banks have responded with monetary stimulus and governments are providing fiscal support. In the end, we think that the negative impact of Covid-19 will eventually pass, leading to a subsequent recovery in economic activity. The major risk is that the impact of the virus extends much longer than we anticipate, weighing on aggregate demand and exposing potential vulnerabilities in corporations with excessive leverage. Other risks include Brexit and the U.S. presidential election. All of these factors are likely to pose elevated uncertainty for investors over the months and quarters ahead.

Against this backdrop, the drop in government-bond yields to record lows reflects a dire outcome for the economy. In our view, the outlook priced into the bond market appears too severe. In the event that recession is avoided, prospective returns for bonds are especially unattractive from current levels. We forecast low or even slightly negative returns for sovereign bonds over the year ahead. In comparison, potential returns for stocks are superior, as long as we don't see significant further deterioration in the corporate-profit outlook and investor confidence.

Our asset mix reflects the fact that economies are likely to continue growing over the longer term, though we recognize that the Covid-19 outbreak may have delayed progress anywhere from two to four quarters. Prior to the outbreak, we had trimmed our equity allocation by one percentage point amid concerns about stretched valuations, excessive investor optimism and the fact that economies were stabilizing but not accelerating meaningfully. Since then, the valuation risk in stocks has diminished, especially outside the U.S., and the plunge in bond yields has boosted the relative attractiveness of stocks versus bonds to the most attractive levels in seven years (Exhibit 19). As a result, we recently added back the one percentage point to our equity allocation that we had removed and sourced the funds from fixed income. For a balanced, global investor, we currently recommend an asset mix of 59 percent equities (strategic neutral position: 55 percent) and 39 percent fixed income (strategic neutral position: 43 percent), with the balance in cash.

Global Fixed Income Markets

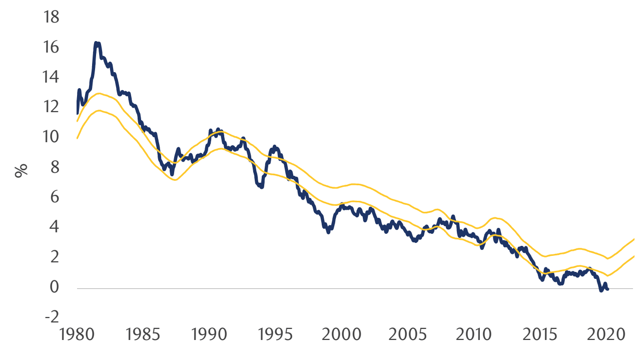
U.S. 10-Year T-Bond Yield
Equilibrium range



Last Plot: 1.15% Current Range: 1.76% - 3.52% (Mid: 2.64%)

Source: RBC GAM, RBC CM

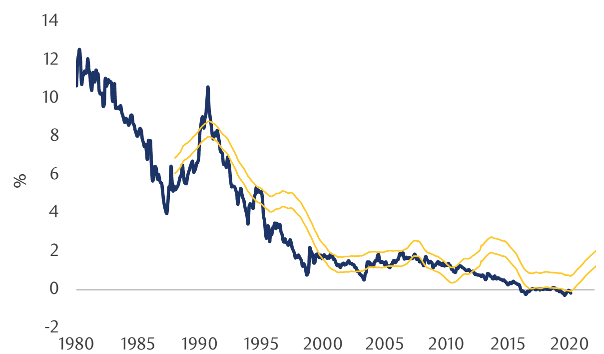
Eurozone 10-Year Bond Yield
Equilibrium range



Last Plot: -0.03% Current Range: 0.86% - 2.00% (Mid: 1.43%)

Source: RBC GAM, RBC CM

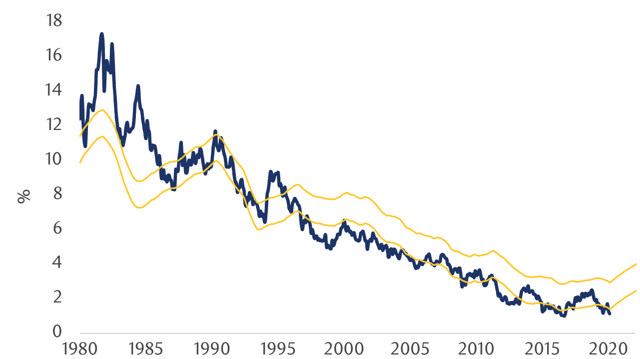
Japan 10-Year Bond Yield
Equilibrium range



Last Plot: -0.15% Current Range: -0.06% - 0.74% (Mid: 0.34%)

Source: RBC GAM, RBC CM

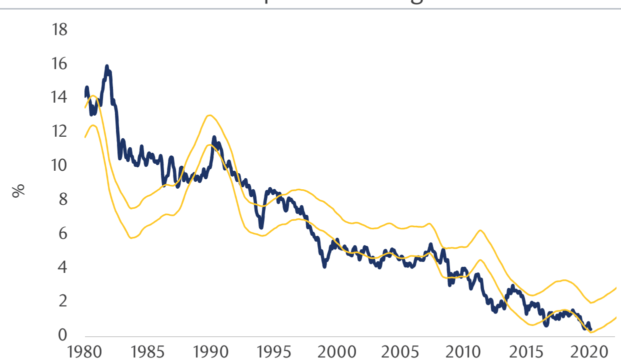
Canada 10-Year Bond Yield
Equilibrium range



Last Plot: 1.13% Current Range: 1.40% - 2.94% (Mid: 2.17%)

Source: RBC GAM, RBC CM

U.K. 10-Year Gilt
Equilibrium range



Last Plot: 0.44% Current Range: 0.25% - 2.00% (Mid: 1.12%)

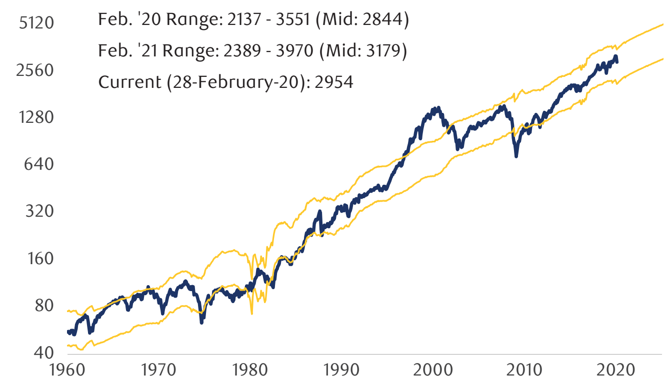
Source: RBC GAM, RBC CM

Note: As of February 29, 2020

> “In today’s environment of heightened uncertainty, investors have flocked to safe-haven government bonds, with the U.S. 10-year yield plunging to a record low at the end of February. Yields on other major sovereign bonds are situated well below the bottom of their equilibrium bands.

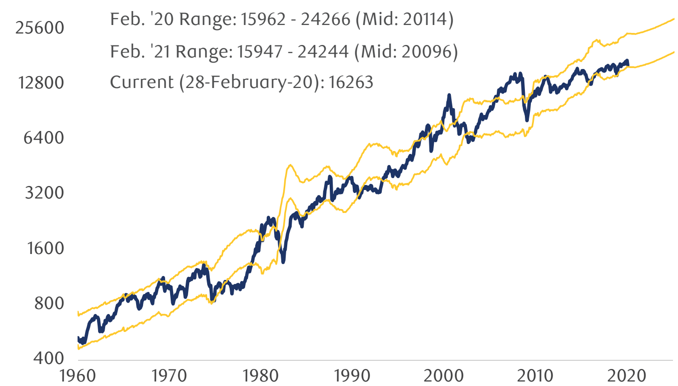
Global Equity Markets

S&P 500 Equilibrium
Normalized earnings and valuations



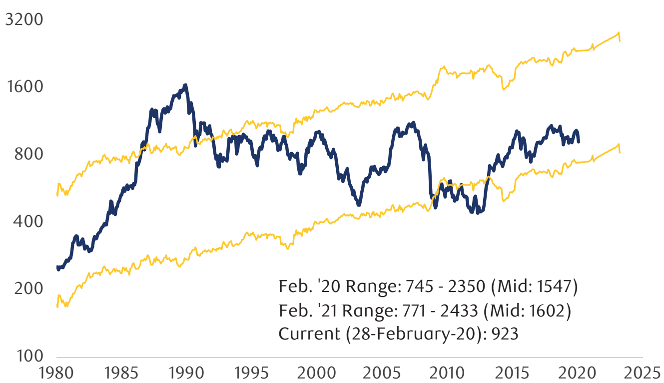
Source: RBC GAM

S&P/TSX Composite Equilibrium
Normalized earnings and valuations



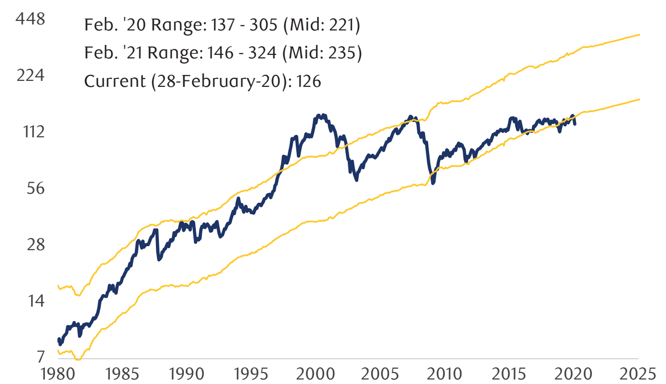
Source: RBC GAM

MSCI Japan Index
Normalized earnings and valuations



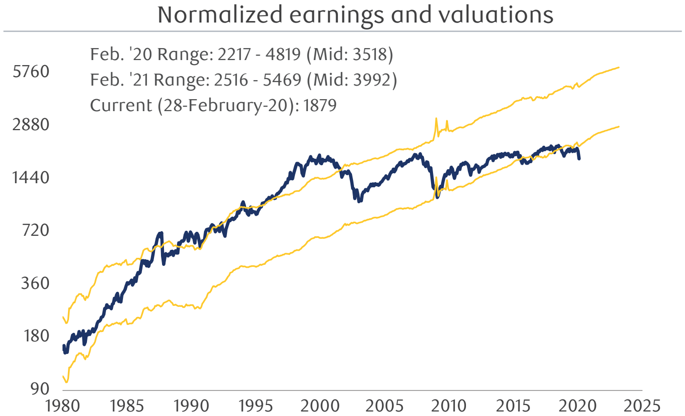
Source: Consensus Economics, RBC GAM

MSCI Europe Index
Normalized earnings and valuations



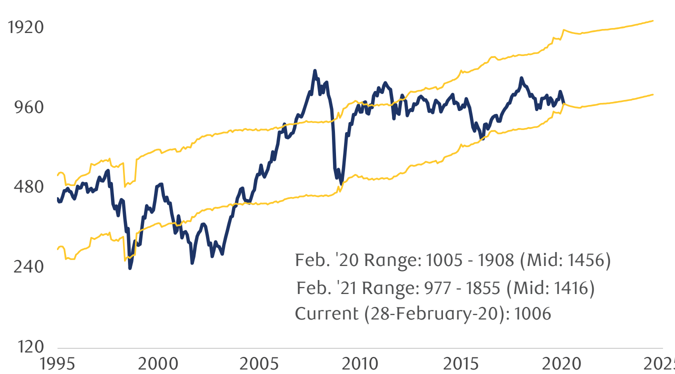
Source: Consensus Economics, RBC GAM

MSCI U.K. Index
Normalized earnings and valuations



Source: Consensus Economics, RBC GAM

MSCI Emerging Markets Index
Normalized earnings and valuations



Source: Datastream, RBC GAM

Global Fixed Income Markets

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

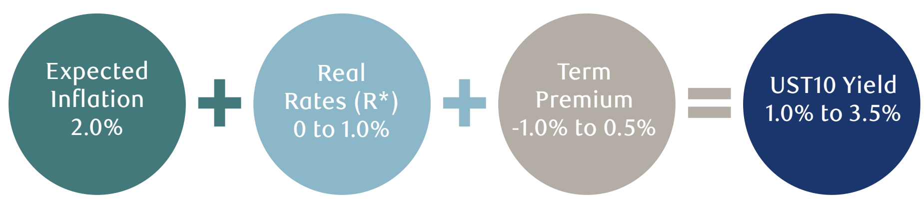
Suzanne Gaynor
V.P. & Senior Portfolio Manager
RBC Global Asset Management Inc.

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

Exhibit 1: U.S. 10-year bond yields

Note: As of February 28, 2020. Source: Bloomberg

Exhibit 2: Building blocks of long-term bond yields



Note: As of January 31, 2020. Source: RBC GAM

At the beginning of 2020, global economic activity showed signs of re-accelerating. However, the emergence in China of the new coronavirus has become a real threat to global trade and investor confidence. At the time of writing, the number of cases is piling up in Europe and the Middle East, raising the probability of a pandemic. Accordingly, global bond yields recently declined to the lowest levels ever recorded. In the short term, the success or failure of efforts to combat the spread of the virus will be among the most important drivers of bond yields.

Our expectation is that the outbreak will be brought under control before it threatens severe economic damage given the enormous public resources being marshalled to fight the spread of the virus. For now, economic activity is being deferred rather than destroyed, and will likely receive a boost when things return to normal as the economy plays “catch up.” Until investors are able to get a better handle on the progression of the disease, dubbed Covid-19, we expect volatility and demand for safe assets such as government bonds to remain high.

While the coronavirus has driven bond yields to historical lows (Exhibit 1), they were already remarkably low, and we were growing concerned that too many investors were in agreement about the outlook for the bond market. Years of central-bank intervention have inured investors to downside risks in the prices of safe assets. We are wary that some of the complacency that marked investors’ early responses to Covid-19 is also present in their long-term expectations for bond returns.

Faced with a continuation of extremely high fixed-income valuations in long-maturity bonds, it is useful to revisit some of our longer-term fair-value models. Broadly, we know that, over time, bond yields are a function of three factors: short-term interest rates, inflation and a term premium. Based on an analysis of these factors (Exhibit 2), our estimate of the fair-value range for the U.S. 10-year yield lies somewhere between 1.00% and 3.50%.

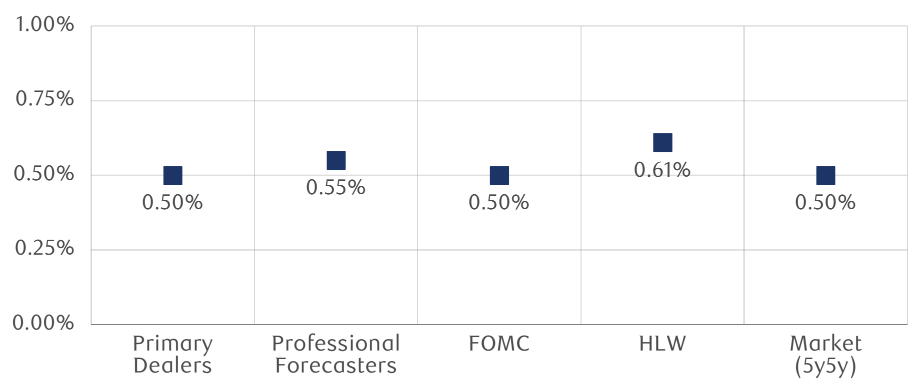
When we use these long-term estimates, we also review the assumptions that underpin them. Short-term interest rates are largely a function of expected economic growth, which is itself largely a function of demographics. Inflation, at 2%, reflects our expectation that central banks will be able to contain price pressures successfully over the long run. We view the dynamics underlying both interest rates and inflation expectations as being relatively slow-moving.

The most interesting factor for a bond investor these days is the term premium, which measures how much extra compensation lenders receive as they tie up money for longer and longer periods. Historically, the term premium was positive: investors accepted fixed cash payments and were paid for bearing the risk of changes in inflation, interest rates, or both. This is no longer the case (Exhibit 3). The term premium has turned negative. In their determination to own safe-haven assets, investors are actually paying for the privilege of lending to safe-haven governments for long periods, rather than demanding compensation.

Exhibit 3: U.S. term premium

Note: As of February 28, 202. Source: Bloomberg

Exhibit 4: Estimates of equilibrium inflation-adjusted interest rates



Note: As of January 31, 2020. Source: Federal Reserve Banks, Bloomberg

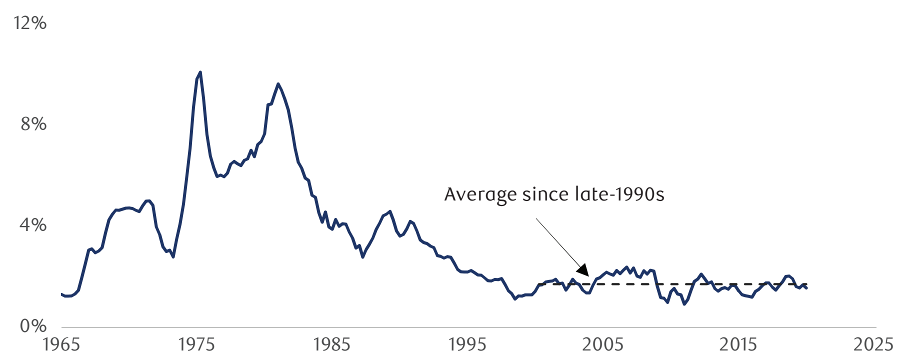
Why is this the case? Part of the story might be that the insurance-like properties of bonds have become paramount: when equities decline, bond prices typically go up. Another reason is that investors might have become too complacent in their assumption that interest rates and inflation will remain stable well into the future. Estimates for inflation-adjusted short-term interest rates have coalesced around 0.5% and the range of estimates has narrowed (Exhibit 4). The range of professional forecasts for central-bank policy rates, in addition to falling substantially, has narrowed in recent years. Inflation expectations are increasingly sticky around 2% as a growing share of the population has no experience with or recall of the high and variable inflation that last afflicted fixed-income markets in the 1970s (Exhibit 5).

Other reasons for low term premiums are structural changes that have occurred in the bond market over the past decade - the large and growing share of the outstanding stock of debt securities owned by central banks, in particular. We estimate that the U.S. Federal Reserve's (Fed) holdings of Treasuries are pushing the term premium down by 60 to 100 basis points – well into negative territory. Asset purchases by other central bank are also having an effect.

Regulatory changes have also played a role in the rising demand for bonds. Since the financial crisis of 2008-2009, banks and insurers have had to increase exposure to Treasuries and other "safe" bonds to meet capital tests and improve their ability to sell assets in an emergency. As a result, financial institutions have poured money into fixed-income markets, increasing competition among private investors.

In conclusion, extremely high bond valuations and a growing consensus among investors that they will stay that way give us pause. Bond prices, like all long-life assets, rely on a chain of expectations and are subject to large and rapid changes in price if those expectations are disrupted. The complacency means that long-term investors might be exposed to soaring yields–and capital losses-should investors' expectations shift rapidly.

Exhibit 5: U.S. core inflation



Note: As of January 31, 2020. Source: Federal Reserve Bank of New York

Direction of rates

U.S. – Uncertainty around the impact of the coronavirus spurred the Fed to enact an emergency 50-basis-point interest-rate cut at the beginning of March, and further changes in the policy rate are likely to be lower. The Fed will continue to purchase Treasury bills through the spring to grease the wheels of overnight funding markets. We view this injection of liquidity as potentially positive for the economy and financial markets. Bond yields will also be affected by the long run-up to the November presidential election. Our assumption is that the 10-year Treasury yield will be around 1.60% in a year's time, 15 basis points lower than the previous quarter. Rate cuts should be followed by a modest rise in long-term interest rates as investors raise their long-run expectations for economic growth in response to easing now. Nevertheless, we expect a wide trading range, reflecting substantial macroeconomic uncertainty.

Germany – We don't expect the European Central Bank (ECB) to lower interest rates before next year in the absence of a pronounced and sustained slowdown in economic activity. The ECB is undertaking a review of its policy framework, and while this effort to clarify the basis for policy action is going on, the bar for further easing will be high. However, Covid-19 puts the risks around these expectations squarely to the downside and we cannot rule out some form of ECB easing.

Meanwhile, continued ECB asset purchases should help support bond prices and hold down yields. Inflation pressures remain weak in Europe in contrast to the U.S., and we expect European inflation to fall below the ECB's target of 2% this year. In this context, the ECB's overnight deposit rate will decline to -0.60% over our forecast horizon, while the forecast for the 10-year bund yield is -0.30%, up from a previous forecast of -0.40%.

Japan – Fears linked to the coronavirus are compounding existing concerns about disappointing economic growth in the final quarter of 2019. We were expecting a small tailwind from construction tied to the Tokyo Olympics, but this could be undermined by reduced business and tourist travel. There is even talk that the Olympics will be canceled if the coronavirus outbreak isn't under control in the coming months. The Bank of Japan (BOJ) continues to provide substantial stimulus through asset purchases and "yield-curve control," a policy of making sure that short- and long-term yields stay tethered. Given that Japan is the centre of a particularly bad Covid-19 outbreak, the BOJ will likely provide additional stimulus over the next year through increased asset purchases and strengthened forward guidance. Nevertheless, yields on 10-year Japanese government bonds will likely remain in the range of between -0.20% and 0.20%.

U.K. – Even after agreeing to a Brexit deal, the U.K. faces significant uncertainty regarding the relationship with its largest trading partner, the European Union. As a result, we expect the Bank of England (BOE) to reduce rates over the next year, driven by Covid-19 fears. Our base case forecast for the BOE policy rate is 0.50%. We are leaving our forecast for the 10-year gilt to 0.60%.

Canada – The Bank of Canada (BOC), responding to the coronavirus outbreak, cut its policy rate to 1.25% from 1.75% in early March. The rate reduction was the first since mid-2015, when the central bank took action in reaction to a steep drop in oil prices. After the latest cut, 10-year yields extended their decline on a flight-to-safety bid that dropped Canadian yields to record lows near 66 basis points. We expect that, as concerns ease, yields will rise back to the top half of the recent range in the area of 1.50%-1.70%. Investors are pricing in further rate cuts on the assumption that growth will be slower than anticipated and the impact of the virus prolonged.

We expect one more BOC rate cut within the next year and forecast that the 10-year bond yield will rise gradually within the next 12 months to 1.50%, a 10-basis-point reduction from the previous quarter.

Regional preferences

We are recommending a neutral stance across regions given heightened uncertainty surrounding the coronavirus.

Interest rate forecast: 12-month horizon
Total Return calculation: February 28, 2019 – February 27, 2020

U.S.	3-month	2-year	5-year	10-year	30-year	Horizon return (local)
Base	1.00%	1.25%	1.45%	1.60%	2.00%	(1.14%)
Change to prev. quarter	(0.50%)	(0.35%)	(0.15%)	(0.15%)	(0.25%)	
High	1.50%	1.90%	2.10%	2.25%	2.65%	(5.13%)
Low	0.50%	0.50%	0.50%	0.75%	1.35%	3.96%
Expected Total Return US$ hedged: (1.00%)						

Germany	3-month	2-year	5-year	10-year	30-year	Horizon return (local)
Base	(0.60%)	(0.50%)	(0.40%)	(0.25%)	0.05%	(3.20%)
Change to prev. quarter	(0.10%)	(0.10%)	0.00%	0.05%	(0.10%)	
High	(0.25%)	(0.20%)	(0.10%)	(0.05%)	0.25%	(5.68%)
Low	(0.50%)	(0.60%)	(0.70%)	(0.70%)	(0.30%)	0.95%
Expected Total Return US$ hedged: (2.00%)						

Japan	3-month	2-year	5-year	10-year	30-year	Horizon return (local)
Base	(0.20%)	(0.20%)	(0.20%)	(0.10%)	0.30%	0.09%
Change to prev. quarter	0.00%	0.00%	0.00%	0.10%	(0.10%)	
High	(0.20%)	(0.10%)	(0.10%)	0.00%	0.45%	(2.25%)
Low	(0.20%)	(0.20%)	(0.30%)	(0.25%)	0.25%	1.11%
Expected Total Return US$ hedged: 1.30%						

Canada	3-month	2-year	5-year	10-year	30-year	Horizon return (local)
Base	1.00%	1.20%	1.40%	1.50%	1.55%	(1.87%)
Change to prev. quarter	(0.50%)	(0.30%)	(0.10%)	(0.10%)	(0.15%)	
High	1.75%	2.00%	2.00%	2.00%	2.00%	(6.47%)
Low	1.00%	0.90%	0.80%	0.75%	1.00%	4.06%
Expected Total Return US$ hedged: (2.10%)						

U.K.	3-month	2-year	5-year	10-year	30-year	Horizon return (local)
Base	0.50%	0.50%	0.55%	0.60%	0.95%	0.09%
Change to prev. quarter	(0.25%)	(0.25%)	(0.20%)	0.00%	(0.25%)	
High	0.75%	0.80%	1.00%	1.00%	1.30%	(5.71%)
Low	0.25%	0.25%	0.25%	0.25%	1.10%	(1.28%)
Expected Total Return US$ hedged: 0.00%						

Source: RBC GAM

Currency Markets

Expecting U.S. dollar weakness ahead

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

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

In a classic case of "be careful what you wish for," currency traders got a reminder of what volatility looks like in February. Currency markets whipsawed on concerns that the new coronavirus will have a detrimental impact on growth and push the global economy into a recession. As the daily number of new cases in China began to subside, incidents outside the mainland accelerated putting an end to hopes for a V-shaped recovery. Initial concerns led to a U.S.-dollar rally in a safe-haven scenario, but heavy flows into U.S. Treasuries changed the narrative for the dollar. It became obvious that the spread of the virus beyond China would lead the U.S. Federal Reserve (Fed) to cut rates aggressively, eroding the dollar's interest-rate advantage.

This may be the last straw that was needed to resolve and accelerate the toppy dollar range to the downside (Exhibit 1). Given these developments, our confidence in calling the start of the new dollar cycle is increasing. The key question is which currencies will benefit more from the dollar weakness during the global slowdown/recession. When we consider valuations and economies that benefit from global fiscal measures we expect the euro and Japanese yen to outperform the Canadian dollar and the pound.

Exhibit 1: Trade-weighted USD index

Note: As at Mar. 5, 2020. Source: Federal Reserve, Bloomberg, RBC GAM

U.S. dollar

Over the past few years, we have been anticipating the end of the dollar bull market but appreciated the resilience the yield advantage bestowed on the dollar. The negatives, however, have been accumulating and by the fall, the list was quite persuasive:

- Capital flows moving back to Europe and emerging markets
- Global reserve de-dollarization
- The U.S. administration's preference for a weaker dollar
- Softer U.S. economic data
- Diminishing yield advantage (Exhibit 2)
- Phase 1 agreement dissuading China from devaluing the renminbi
- And of course, twin fiscal/current-account deficits

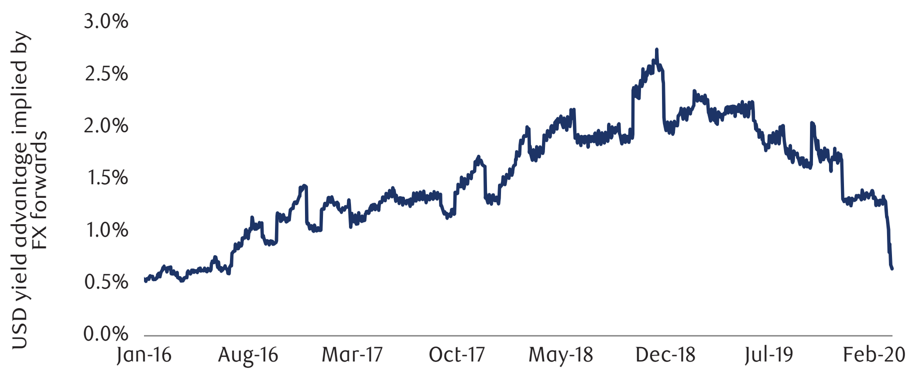
These factors contributed to a more balanced view on the U.S. dollar among investors. It was no longer unequivocally bullish. By early January, we had seen tentative signs of economic improvement in the rest of the world, but the arrival of the coronavirus in China delayed expectations of the dollar's decline. In a classic safe-haven fashion, the greenback benefited initially from the expectations of slower growth at the expense of emerging-market currencies, in particular. However, the spread of the coronavirus beyond China put the hopes of an isolated hit and a V-shaped recovery in question. At the time of writing, the spread of confirmed cases in China appears to have been contained, but new cases are still growing daily in other countries. Markets came to realize that the only central bank with ammunition to ease rates was the Fed and aggressive pricing of interest-rate cuts preceded the massive rally in U.S. Treasuries. The dollar turned from a safe haven to a casualty.

In these volatile markets, where the narrative changes quite abruptly, we need to keep in mind our long-term perspective. With the dollar at overvalued levels against most G10 currencies (excluding the yen), its bouts of strength offer opportunities to reduce exposure to the greenback and shift into other currencies. This is especially true given the extent to which the world is still overweight U.S. assets and as expectations for economic growth abroad are overly depressed.

Prior to the sharp correction in February, global economic growth had begun to stabilize. In December, Japan announced plans to implement a ¥13.2 trillion (US$126 billion) fiscal package equal to 2.5% of GDP. Several other countries, including Canada, India, Poland and South Korea, also announced their intention to either ramp up spending or cut taxes. Admittedly, these economies are relatively small, so the overall impact is unlikely to move the needle on global growth. The focus remains on whether any European fiscal measures will be announced, particularly in Germany, but it's hard to imagine the current U.S. administration standing aside while the economy takes a hit. The longer the disruption, the higher the odds of a targeted U.S. fiscal package as well.

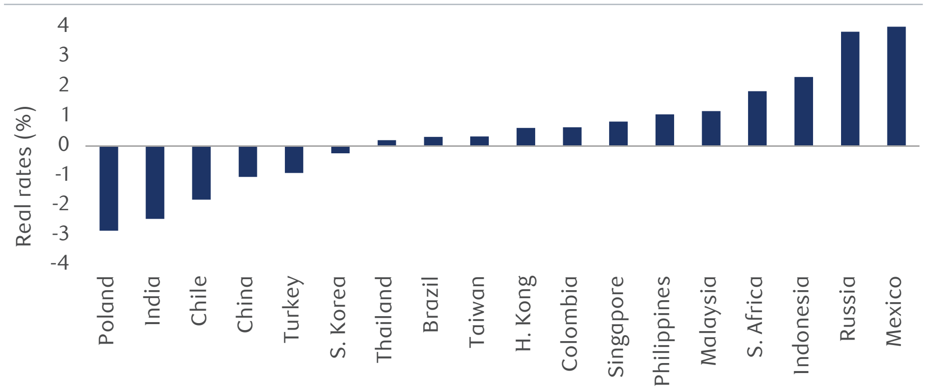
The bottom line is that the coronavirus's larger and more protracted impact than was first believed will contribute to the dollar's bear-market turn.

Exhibit 2: Diminished U.S. yield advantage



Note: Equally weighted (CAD, EUR, GBP, JPY). As at: Mar 9, 2020. Source: Bloomberg, RBC GAM

Exhibit 3: Real policy rates



Note: As at Jan. 31, 2020. Source: Bloomberg, RBC GAM

Emerging-market currencies

Financial-market flows have supported our thesis that emerging-market currencies would outperform this year. Until the end of February investors had piled into emerging-market equities and bonds on (i) cheaper currency valuations, (ii) the removal of trade uncertainty and (iii) a growing consensus for a weaker U.S. dollar.

Admittedly the flows have slowed as the coronavirus has dominated headlines but we believe they will resume once the growth in infections stabilizes.

Widespread monetary easing by major central banks bolsters the case for investing in emerging markets as it both improves risk sentiment and widens the yield advantage over developed markets.

Rate cuts by emerging-market central banks have also been acting to support local assets by improving the earnings potential of companies and by providing support for local-currency bonds. There remains room for further easing by emerging-market policymakers, as many countries still have positive real policy rates (Exhibit 3).

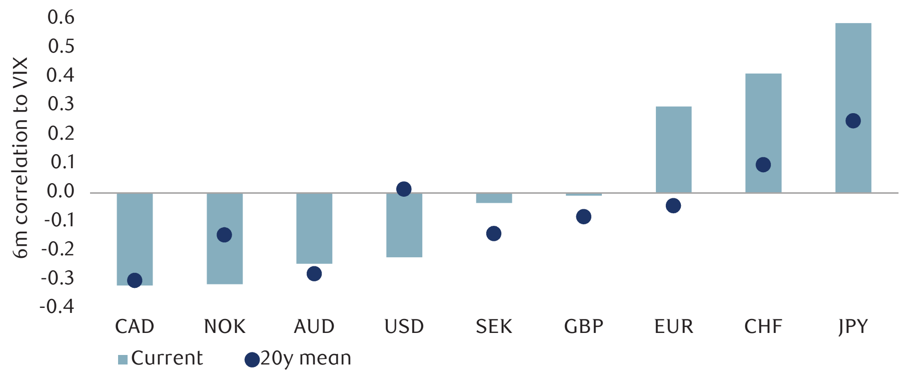
It's important to underscore that currency selection will be much more important in 2020 than in recent years. This is a departure from 2019, when U.S.-China trade negotiations prevailed as the primary market driver, and is not immediately obvious in a world where coronavirus fears are currently the dominant theme. Later in the year, however, we expect country-specific factors will play a bigger role in driving currencies. Already, we have seen some recent examples, including economic protests in Chile and Colombia, a contentious bill in India that makes it harder for the Muslim population to obtain citizenship and fiscal strains in South Africa. At the more positive end of the spectrum, the Indonesian central bank has indicated a willingness to allow currency strength, Brazilian policymakers are working to push through tax reform and technology-oriented Asian economies are set to benefit from the next generation of products.

Euro

The most common pushback to our constructive view on the single currency is that there are better places to invest if global growth is improving. For example, emerging-market currencies would be a higher-octane way of positioning for U.S.-dollar weakness and offer higher sensitivity to global growth. While we broadly agree with that sentiment, we note a growing list of “likes” about the euro:

Valuation: Purchasing-power-parity models show the single currency to be 16% undervalued. That’s not extreme by our measures, but the undervaluation has been persistent enough (since 2015) that the currency has provided some much-needed easing in financial conditions.

Exhibit 4: Currency correlation to equity volatility



Note: As at Mar. 9, 2020. Source: Bloomberg, RBC GAM

Safe-haven status: The euro now shares some of the same DNA as the safe-haven yen. The main ingredient for this DNA is large holdings of foreign investments by domestic investors, which are liquidated and brought home during periods of market stress. In Japan, the cause was a dearth of attractive investment opportunities during the 2000s, whereas Europe’s experience was prompted by the European Central Bank’s (ECB) quantitative easing, which forced investors abroad in search of returns. While the euro fell most in the immediate aftermath of the coronavirus’s appearance, that weakness was quickly unwound. The euro will gradually displace the greenback as a safe-haven currency – its correlation to volatility is now approaching that of the yen and Swiss franc (Exhibit 4).

ECB policy: Newly appointed ECB chief Christine Lagarde seems to be moving in the opposite direction from other central bankers. Whereas the Fed, Bank of England (BOE) and Bank of Canada (BOC) are seen to drop interest rates further, Lagarde used her first few press conferences to highlight signs of inflation and de-emphasize risks to growth. While she may be forced into easing policy to stem the impact of the virus, the ECB is running out of available tools to do so and, with interest rates already at -0.40%, is unlikely to match the Fed’s recent half-percent cut. For her part, Lagarde seems bent on challenging governments with fiscal space (such as Germany) to start spending in order to share the burden. Like other central banks, the ECB is undertaking a strategic review to define how policy should be implemented in the years ahead.

Positive flows: As in any market, supply and demand are the ultimate arbiter of foreign-exchange rates. A current-account surplus, especially one as large as Europe’s, creates demand for a currency and thus acts to support it. For several years, this tailwind was more than fully offset by massive outbound investment flows during the era of negative rates and ECB bond purchases. More recently, these capital flows have turned positive for the euro, as outbound debt flows have slowed and foreigners have shown more interest in European equities. Moreover, corporations are boosting their direct investments in Europe, contributing to aggregate net inflows (basic balance of payments) of 375 billion euros per year (Exhibit 5).

Japanese yen

The yen tends to perform best in tumultuous times, but it failed to strengthen materially during the first few weeks of the coronavirus outbreak. The yen has traded mostly within a narrow 108-110 range over the past three months, reflecting in part the influence of a few offsetting factors. On the one hand, the yen's undervaluation and Japan's current-account surplus are supportive. On the other hand, Japanese life insurers continue to purchase foreign assets, a portion of which are kept unhedged due to costs associated with hedging. Our view is that the yen can strengthen over the next 12 months owing in part to the four factors listed below:

Economic growth: The Japanese economy is set to receive a helping hand in 2020 from a fiscal package amounting to 2.5% of GDP over 15 months. The Tokyo Summer Olympics, provided they aren't cancelled, may also revive inbound tourism, which is still suffering from a trade spat with South Korea (Exhibit 6).

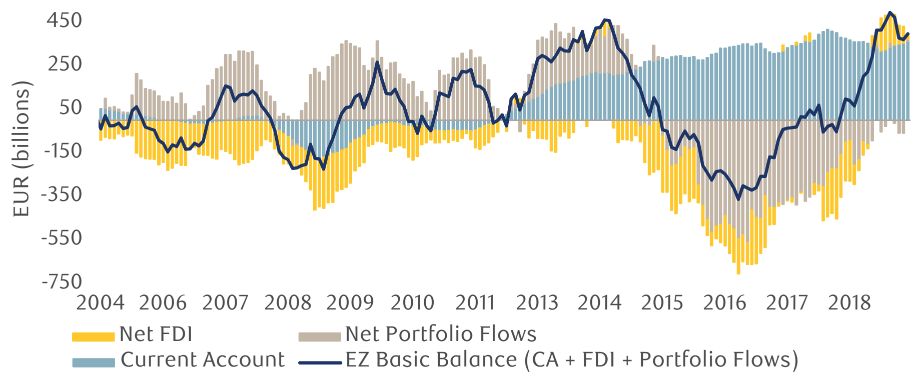
Trade: High-level relations between Japan and the U.S. seem to be on better footing since Japan announced in September that it would lower tariffs on American beef products, a step that might keep Japan from being the next victim of President Trump's protectionism. However, Japan remains on the U.S. Treasury's watch list of currency manipulators and tensions between the two countries persist as the U.S. seeks US$8 billion to cover the cost of troops in Japan.

Foreign investment: The Japanese parliament passed legislation in November that waives special reporting requirements for foreign investors taking stakes of at least 10% in Japanese companies. Tax exemptions to promote capital expenditures and incentives to spur innovation could also create demand for Japanese assets this year.

British pound

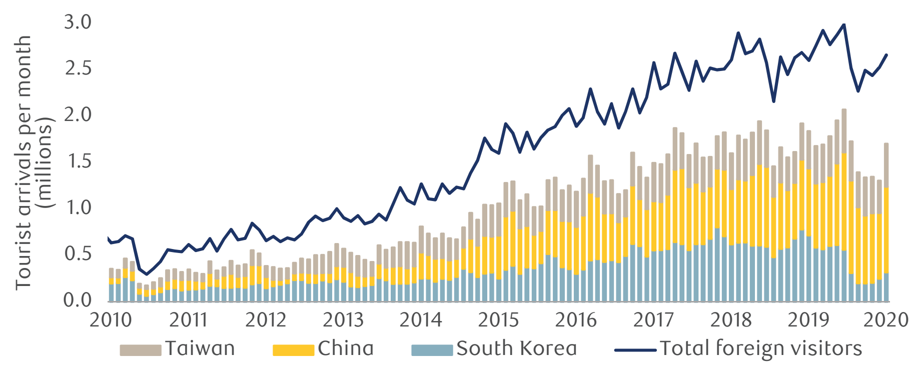
We are bearish on the pound, but very slightly as we look for a decline to US$1.28. In our view, U.K. economic growth will continue to be challenged by uncertainty surrounding the terms of the exit deal being negotiated by the Conservative government as it prepares to withdraw the country from the European Union. Businesses

Exhibit 5: European basic balance of payments



Note: As at Dec. 31, 2019. Source: ECB, RBC GAM

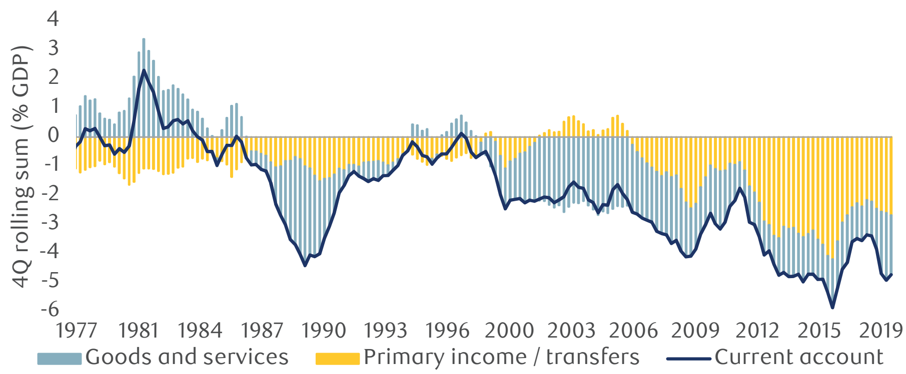
Exhibit 6: Japan tourist arrivals by destination



Note: As at Jan. 31, 2019. Source: Japan National Tourism Organization, RBC GAM still lack clarity about the future relationship with Europe, and so the climate isn't primed for business investment. Given that it took Europe and Canada eight years to finalize the terms of their 2016 trade deal, we are skeptical that Prime Minister Boris Johnson can accomplish a similar feat in just 10 months. We do acknowledge the possibility that the two sides reach a very narrow deal where common ground already exists. This would represent a positive surprise for markets, but one that is short-lived as it would likely exclude services – especially financial services – and would worsen an already large current-account deficit (Exhibit 7).

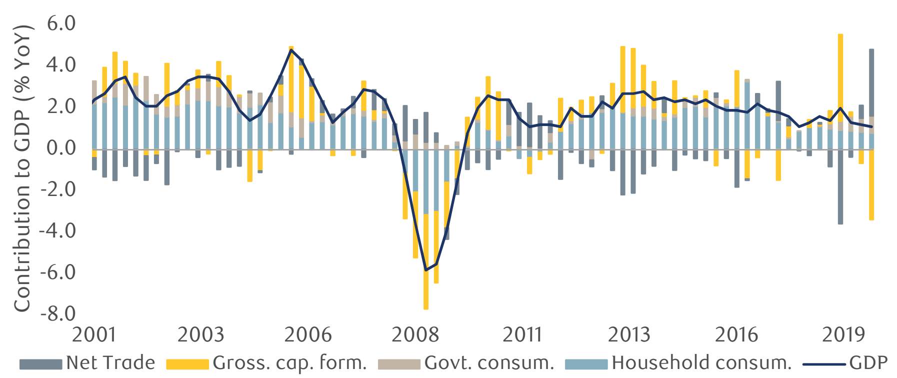
At one time, the Bank of England had been touting the case for rate hikes on expectations that hiring would boost consumption after a deal was reached. Market pricing, however, still implies 45 basis points of easing over the next 12 months and the pound has shown few signs of life since Johnson's decisive election victory in December. Consumption, which makes up the lion's share of the U.K. economy has been on a steady decline (Exhibit 8), and the economy looks increasingly reliant on fiscal spending to stay afloat. A slowdown in hiring or moderation in wages would further dent consumption and presage more troubled times ahead.

Exhibit 7: U.K. current acount



Note: As at Jun. 30, 2019 (Quarterly data). Source: ONS, RBC GAM

Exhibit 8: U.K. contribution to growth



Note: As at Dec. 31, 2019. Source: ONS, RBC GAM

Canadian dollar

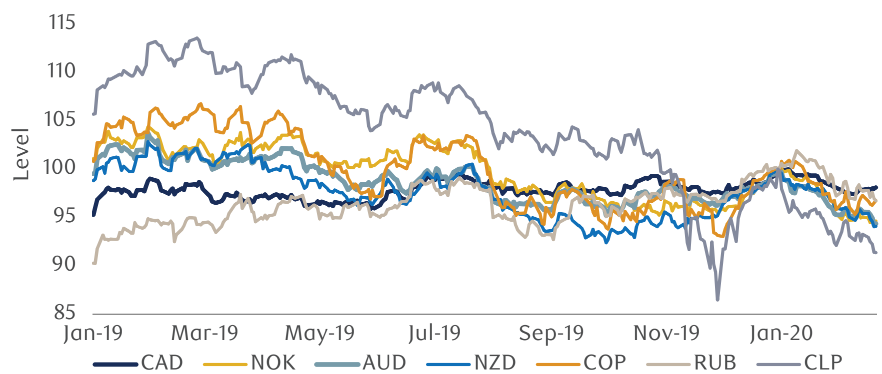
The Canadian dollar has stayed mostly in a year-long range of 1.30-1.36 – an exceptionally tight band for a currency that typically swings with risk sentiment, commodities and global growth expectations. As other commodity currencies weakened, the loonie's stability (Exhibit 9) and outperformance were due to technical and fundamental factors. As an example, Canadian investors need to sell U.S. dollars to increase hedges when asset markets rally. This consistent flow capped U.S.-dollar rallies during the buoyant equity markets of 2019, but recently abated with the coronavirus-driven correction. Fundamentally, many investors have pointed to Canada's strong labour markets and immigration as signs that the BOC could resist cutting rates. Several governors were reluctant to loosen policy for fear that this would further fuel high Canadian consumer debt levels. However, these concerns have seemingly taken a back seat to recent shocks, not only from the virus but also from an environment of already slowing U.S. growth and lower oil prices.

Navigating and communicating an appropriate policy response will likely be a tougher task for the central bank as it balances the need to provide temporary support during Covid-19 growth fears while also recognizing that further easing could exacerbate vulnerabilities in the labour and housing markets. The bank must also mull a number of crosswinds affecting the data:

- Better prospects for business investment now that the U.S-Mexico-Canada (USMCA) deal has been finalized
- A greater capacity to support growth with fiscal measures than other developed nations
- Cold weather in western provinces, which slowed crude-by-rail shipments
- Several week long railway blockades by protesters causing disruptions to shipments
- Interruptions to shipments of oil to the United States from an oil leak in the Keystone pipeline in North Dakota
- The General Motors shutdown in Oshawa

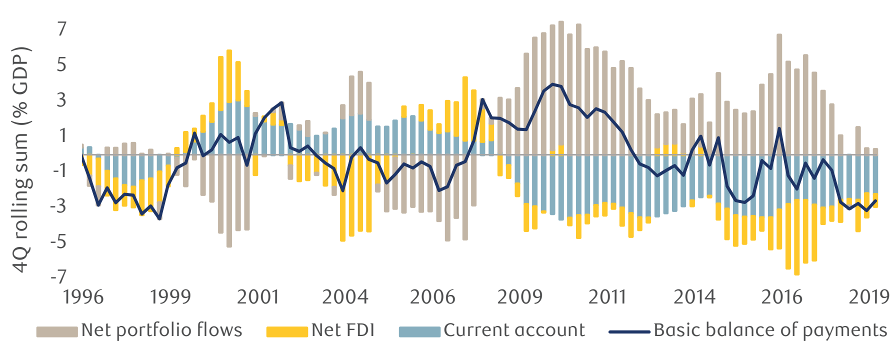
So monetary authorities in Canada will be left to ponder how each of these factors fits into the broader economic outlook, which may encourage them to ease further. While we envision a time where the Canadian dollar can benefit from a weaker overall greenback, we have not seen the kind of improvement in longer-term Canadian fundamentals to justify such a move within the next 12 months. The country's poor productivity, relatively weak labour competitiveness, lower capital investments and current-account deficit still weigh (Exhibit 10). Importantly, negative net foreign-direct investment confirms the story

Exhibit 9: CAD more stable than other commodity currencies



Note: As at Feb. 21, 2020. Indexed to 100 on Dec. 31, 2019. Source: Bloomberg, RBC GAM

Exhibit 10: Canadian basic balance of payments



Note: As at Jun. 30, 2019 (quarterly data). Source: Statistics Canada, RBC GAM

of the headlines that both foreign and domestic businesses are choosing to withdraw investment from Canada and instead expand abroad. Weaker levels in the currency are needed to accurately reflect these long-term factors.

Conclusion

Fear of a global pandemic has woken a sleepy foreign-exchange market and brought currency volatility back to life. Initial U.S. dollar rallies proved to be opportune selling points. As dollar weakness continues over the next year, the euro and Japanese yen will likely outperform the British pound and Canadian dollar, which initially will be held back by balance-of-payments and other country-specific factors. Emerging-market currencies, having been battered by U.S.-China trade uncertainty and the global growth slowdown, should begin to reclaim lost ground once Covid-19 fears subside.

Regional Outlook – U.S.

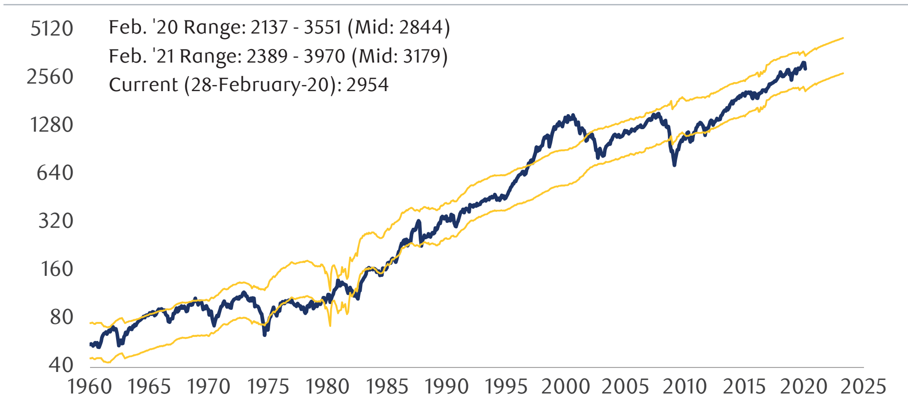
Brad Willock, CFA
V.P. & Senior Portfolio Manager
RBC Global Asset Management Inc.

United States – Recommended sector weights

	RBC GAM Investment Strategy Committee February 2020	Benchmark S&P 500 February 2020	Active Risk vs. Benchmark February 2020
Energy	2.5%	3.5%	(1.0%)
Materials	1.8%	2.5%	(0.7%)
Industrials	9.0%	8.7%	0.3%
Consumer Discretionary	10.5%	9.8%	0.7%
Consumer Staples	6.8%	7.3%	(0.5%)
Health Care	14.3%	14.1%	0.2%
Financials	11.8%	12.2%	(0.5%)
Information Technology	25.5%	24.7%	0.8%
Communication Services	11.5%	10.6%	0.9%
Utilities	3.5%	3.5%	(0.0%)
Real Estate	3.0%	3.1%	(0.1%)

Source: RBC GAM

S&P 500 Equilibrium
Normalized earnings and valuations



Source: RBC GAM

The S&P 500 Index posted a decline during the three-month period ended February 29, 2020, as gains in December were more than offset by losses in February due to the coronavirus outbreak. The benchmark fell 3% during the last two weeks of January following the first news of the virus (Covid-19) in China. China's aggressive steps to contain the disease at first gave investors confidence that the outbreak would be a short-term, localized event with a limited impact on U.S. corporate profits. However, stocks plummeted beginning in mid-February after the spread of the virus in Asia and Europe threatened 2020 earnings estimates.

At the end of February, the S&P 500 was down 13% from the peak. Sectors with more dependable earnings performed best, led by Consumer Staples, Real Estate, Utilities and Health Care, while Industrials, Materials, Information Technology, Financials and Energy lagged. The last week of February was the worst week for the S&P 500 since the 2008 financial crisis, as the coronavirus dashed hopes that the global economy might quickly emerge from a period of soft economic growth.

As we try to quantify the potential impact that Covid-19 might have on S&P 500 earnings, we are struck by how much uncertainty is embodied in this task. We know neither the scope, severity nor duration of the infection, nor how governments, corporations and consumers will ultimately respond. Most importantly, we cannot be sure how investors will react to the situation given the enormous complexity and interconnectedness of the global economy and the tendency of humans to act precipitously during stressful times. At times like these, making precise predictions is a fool's errand. However, as investors, we can make some assumptions about the way things are most likely to unfold while contemplating positive and more negative outcomes.

With regard to policymakers and health agencies, we expect them to take an aggressive approach to containing the outbreak. Inaction is not an option. China has quarantined over 60 million people in Hubei province, Japan has closed its schools until April and we have seen the closure of borders, transportation systems, public spaces, concert halls and theatres. The 2020 Tokyo Summer Olympic Games may even be canceled. We expect, however, that monetary and fiscal authorities around the world will support economies, and the increased stimulus should bolster financial markets even after the virus has receded as a major problem. We expect the corporate response to be equally aggressive. The outbreak has highlighted vulnerabilities in the global supply chain and will likely encourage corporations to seek alternate suppliers outside of China. We also expect a reduction in conferences and travel, and potential decreases or delays in capital spending and hiring, as companies make contingencies for an economic slowdown. The biggest wildcard is the response of U.S. consumers if the outbreak becomes serious enough that officials quarantine populous areas and close schools. While this reaction would be the most efficient way to contain the spread of the virus, it would also guarantee that the economy experiences significant weakness.

We can gain some valuable perspective by observing what is being priced into the market since news of the virus hit the headlines: the best performers have been companies in defensive industries that are domestically oriented such as utilities and Reits, while the worst performers have been in cyclical sectors with supply chains in China and/or that have significant end demand there or are travel-related, such as semiconductors, oil and gas, airlines and hotels.

Current expectations for overall S&P 500 earnings are about US$176 per share for 2020 but are rapidly being lowered by Wall Street analysts. We assume that the virus continues to spread around the world, resulting in a significant slowdown in U.S. economic activity followed by a gradual rebound later this year and into 2021. Under this scenario, we estimate S&P 500 earnings for 2020 will come in about flat with 2019 at about US$165, and then increase by roughly 6% to US$175 in 2021. Assuming a P/E ratio of 17, the S&P 500 could trade at about 2975 by the end of 2020 under this scenario.

A less severe scenario assumes economic activity in China returns to near normal by the end of March and that the virus has only a minor impact on the U.S. economy. In this situation, earnings might come in 5%-6% higher this year and next, and the S&P 500 would likely be well above 3000 by year-end. In a pessimistic scenario, which assumes the continued spread of the virus and aggressive government action to stop it, earnings would be 5%-10% lower than in 2019, and valuations would likely also be lower. In a recession, the stock market typically falls about 20% - 40%, depending on the severity, which would drop the S&P down to between 2400 and 2800. While we see this scenario as a low-odds bet, it is important to acknowledge the potential downside risk should the outbreak get out of control.

We believe the market has fallen quick enough and that sentiment has deteriorated sufficiently for stock prices to mount a short-term recovery. However, we expect the markets to remain volatile over the next few weeks as we learn more about the likely scope of the virus and its impact on the global economy and corporate earnings. Our experience with prior viral outbreaks, natural disasters and acts of terrorism suggests that following a period of time required to understand the nature of the event, people move quickly toward getting things back to normal. Markets react in a similar fashion, by treating the hit to corporate earnings as a delay rather than a fundamental change to earnings power. The volatility and uncertainty in the markets over the next several weeks should provide investors with excellent opportunities to add equity exposure to the portfolio.

Regional Outlook – Canada

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

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

The S&P/TSX Composite Index recorded all-time highs toward the end of last year amid signs of global economic improvement, rising oil prices and a moderation in U.S.-China trade tensions. The spread since then of the new coronavirus makes all that a distant memory, with equity markets retreating toward the end of February as the outbreak raised considerable uncertainty about the outlook for the economy and corporate profits. As a result, gains in January have been erased. In the three months ended February 29, 2020, the Canadian stock benchmark was down 3.8% on a total-return basis, while, in U.S.-dollar terms, the S&P 500 fell 5.5% and the MSCI global index declined 6.3%.

The magnitude of the virus's impact on China and around the world is difficult to assess at this point. The significant reduction in travel and other economic activities is likely to initially affect the Canadian economy somewhat negatively, especially considering the potential disruption to supply chains and the effect that a slowing global economy will have on demand for industrial commodities, their prices and equities linked to them. In addition to the coronavirus, some domestic factors including rail blockades are also likely to weigh on Canada's economic-growth outlook. We consider these temporary issues, but are aware of the dampening impact that these events could have on the outlook for large infrastructure projects.

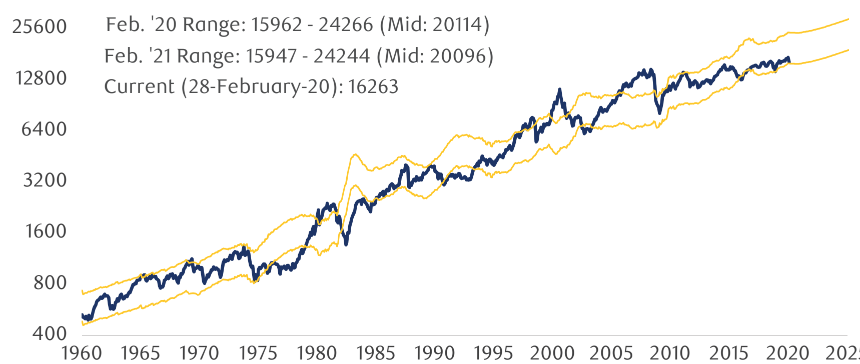
In January, the Bank of Canada lowered its GDP growth forecasts, noting weakness in domestic business investment, hiring and consumer spending, and in early March cut its key interest rate by 50 basis points to 1.25%. Canadian consumers have supported economic activity, and the spread of the coronavirus could pose a threat to this. Moreover, the BOC is cognizant that lowering rates could exacerbate financial vulnerabilities by tempting already overleveraged consumers into taking on even more debt and potentially overheating the housing market. Against this backdrop, the Canadian dollar is unlikely to

Canada – Recommended sector weights

	RBC GAM Investment Strategy Committee February 2020	Benchmark S&P/TSX Composite February 2020	Active Risk vs. Benchmark February 2020
Energy	15.0%	15.7%	(0.7%)
Materials	10.5%	10.8%	(0.3%)
Industrials	12.0%	11.3%	0.7%
Consumer Discretionary	4.5%	3.9%	0.6%
Consumer Staples	4.0%	3.9%	0.1%
Health Care	1.0%	1.1%	(0.1%)
Financials	32.0%	32.2%	(0.2%)
Information Technology	6.0%	6.4%	(0.4%)
Communication Services	6.0%	5.6%	0.4%
Utilities	5.0%	5.3%	(0.3%)
Real Estate	4.0%	3.7%	0.3%

Source: RBC GAM

S&P/TSX Composite Equilibrium
Normalized earnings and valuations



Source: RBC GAM

appreciate relative to the U.S. currency as was the case last year.

We forecast S&P/TSX earnings growth in 2020 of 5%, up from 4% last year, but down from 16% in 2018. Earnings-growth estimates could be revised lower to account for the domestic and global economic impacts of the coronavirus and continued commodity-price weakness. Accommodative monetary policy and low long-term interest rates underpinned last year's improved valuation multiples, which have recently fallen. The overall S&P/TSX valuation is 15.8 times trailing earnings, under the long-term average of 16.7 and well below the S&P 500 Index's 18.3 multiple. The discount to U.S. stocks is linked to the fact that the Financials, Energy and Materials sectors make up about 60% of the Canadian index's weighting.

The Information Technology sector led the S&P/TSX last year and at the start of 2020, thanks in part to shares of Shopify, the rapidly growing e-commerce software provider. The rotation out of defensive telecommunications and Consumer Staples stocks late last year has benefited the Industrials sector, where transport-related equities posted a recovery. We are wary of the potential for an economic slowdown to cut this rally short.

The Utilities and Real Estate sectors continue to outperform the broader index due to their higher-than-benchmark dividend yields and the attraction of sectors that tend to cushion losses in a downturn. In the Utilities sector, a small number of independent power producers with exposure to renewable energy sources is outperforming. Gold recently traded between US$1,600 and US$1,700 an ounce, below the all-time high of US$1,908 touched in 2011, but above its five-year trading range. Gold companies have surged given the metal's traditional safe-haven status, and are likely to support the performance of the Materials sector. Offsetting the positive impact of precious metals is the early-2020 sell-off in industrial commodities such as copper.

Canadian banks delivered 3% EPS growth in fiscal 2019, the least since the 2016 energy downturn. A growth deceleration in Canadian retail and commercial banking, as well as capital markets, were mainly responsible for the slowdown. However, mortgage lending has picked up as a result of lower borrowing rates and robust demand for housing. Industrywide loan losses came in 25% higher than last year and pose a headwind to earnings in 2020. Expense control remains a key focus in this slower-revenue-growth environment, and banks have begun to announce layoffs and other cost-cutting measures; we expect more to come in 2020. Analysts expect bank earnings per share to rise at a relatively slow 5% in 2020, reflecting narrower net interest margins and the risk of higher credit losses. As a result, the banks continue to trade below their historical trading multiple of 11.1 times forward earnings. With strong regulatory capital levels and dividend payout ratios at 45%, the group remains positioned to reinvest in its businesses.

The Energy sector continues to reflect short-run and long-term concerns, trading at 20-year relative lows to the S&P/TSX and S&P 500. The TSX Energy sector has lost 11% so far this year, and earnings are forecast to decline year over year in 2020. Crude-oil prices have fallen 25% in the same period, reflecting coronavirus fears and their impact on global demand. China, which accounts for about 15% of worldwide demand, is the largest importer of crude oil and had been expected to be one of the biggest drivers of demand growth in 2020. With crude-oil prices dropping below the marginal cost of new production, we expect output cutbacks as producers seek to stabilize prices. Energy-producer valuations are at historic lows and reflect a lack of pipeline space, commodity-price declines and investment-portfolio-driven environmental concerns. Many large Canadian producers are set to generate significant free cash flow assuming commodity prices stay in the current range. In an environment of limited transport options and opposition to commodity projects, many petroleum producers are using any extra cash flow to buy back shares rather than plow capital into growth projects.

Regional Outlook – Europe

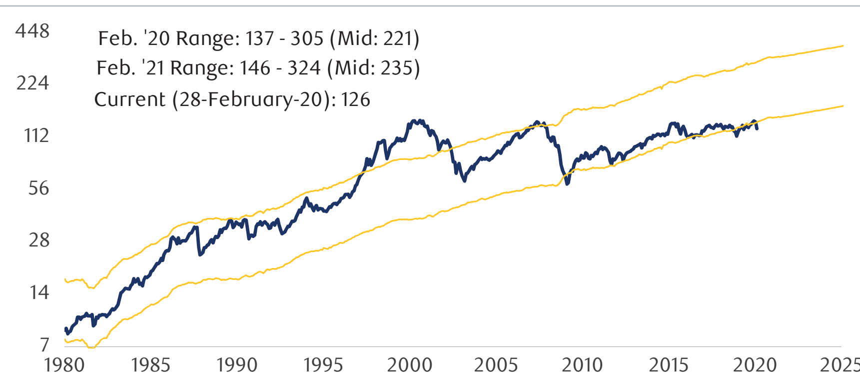
David Lambert
Senior Portfolio Manager
RBC Global Asset Management (UK) Limited

Europe – Recommended sector weights

	RBC GAM Investment Strategy Committee February 2020	Benchmark MSCI Europe February 2020	Active Risk vs. Benchmark February 2020
Energy	5.0%	5.9%	(0.9%)
Materials	6.0%	7.0%	(1.0%)
Industrials	14.5%	13.6%	0.9%
Consumer Discretionary	10.8%	9.7%	1.0%
Consumer Staples	15.0%	14.2%	0.8%
Health Care	15.8%	14.8%	1.0%
Financials	16.5%	17.4%	(0.9%)
Information Technology	7.0%	6.5%	0.5%
Communication Services	3.8%	4.3%	(0.5%)
Utilities	4.3%	5.2%	(1.0%)
Real Estate	1.5%	1.5%	0.0%

Source: RBC GAM

MSCI Europe Index Equilibrium
Normalized earnings and valuations



Source: Consensus Economics, RBC GAM

Europe's macroeconomic dynamics appear to be broadly positive. Leading indicators are sloping up, or at least not deteriorating as they had been. For example, Purchasing Manager Indexes (PMIs) and earnings estimates appear to be bottoming, and prospects for the economy as measured by Europe's Economic Surprise Index sit at a two-year high, both in absolute terms and relative to other regions.

While the course of the coronavirus outbreak injects a degree of uncertainty into our macroeconomic outlook, we remain focused on the relationship among PMIs, GDP and the pace of earnings growth in the region. A clear basing pattern in these indicators is apparent and bodes well for earnings growth over the medium term. Current earnings-growth projections for Europe in 2020 are about 9%. At the beginning of a calendar year, expectations for profit growth are typically in the region of 10%, and are pared as the year progresses. This year, however, earnings estimates should hold up better than past history suggests given the macroeconomic improvements.

Are European stocks attractive given the improving macroeconomic outlook? Not necessarily, as European equity P/E ratios are moderately high at 14.9 compared with a long-run average of 13.2. Still, equities continue to offer the highest dividend yields ever versus fixed income: the yield advantage of European stocks relative to 10-year government bonds rests at a 100-year high, with shares in the region offering a premium of 3.5 percentage points.

It is against the U.S. that European stocks appear to be "cheap," but there are good reasons for this. For one thing, European companies have over time lagged in terms of returns on equity, which today trail those in the U.S. by about 5 percentage points – the largest gap in 30 years. So perhaps U.S. equities should be more expensive, as their higher returns will ultimately reflect the promise of higher earnings over time, at least in the aggregate. We do not expect this return-on-equity gap to improve in Europe's favour anytime soon, but European stocks do offer the potential for significant outperformance if this turns out to not be the case. Global supply chains have been affected by the spread of the coronavirus, and Europe is among the regions that would be most exposed to its continued spread. There is a good chance, however, that the impact represents a temporary blip, and investors should treat the event as one to look beyond, at least for now. We continue to monitor the situation day by day.

The other clear difference between European and U.S. stocks is the composition of their equity markets. Technology companies, which require less capital to expand, make up a smaller percentage of Europe's equity markets relative to the U.S., and slow-growing financial companies account for a higher portion of Europe's market.

We analyzed European stocks using a method that strips away the impact of extremes in market capitalization and valuation. While Europe may look cheap on a regional basis, individual stocks in our stock-picking universe generally trade close to fair value. At the index level, European stocks trade at their most attractive valuations in history relative to global stocks. However, the median stock trades slightly above its long-term average. Our conclusion is that European stock-index valuations are being dragged down by a small number of issues with extremely low valuations.

There are large differences in valuations among regional stock markets, as sector and style biases across global equity markets have a big influence on regional performance. Europe's "undervaluation" is due to its relatively high exposure to value and lower-quality stocks.

One area of Europe where valuations have fallen significantly is the U.K., especially for companies that depend on the domestic economy for a large portion of their business. The decline has been pronounced since the Brexit vote in 2016. We see an opportunity here as these stocks tend to move in the same direction as consumer confidence, and consumer confidence has strengthened since the December election of a government committed to removing the U.K. from the European Union. As a result, we expect domestically focused U.K. companies to post better relative returns.

The European market remains in a 'recovery' phase where macroeconomic indicators are improving from a low base. In this phase, stocks with less predictable earnings and low valuations usually perform better than stocks with predictable profit growth and solid balance sheets, and this was definitely the case in the second half of last year. We note, however, that this phase tends to last between six and nine months, and so the advantage of owning lower-quality stocks may soon be coming to an end if history is any guide.

From a sector perspective, we continue to like the consumer sectors, but have built cyclicality into the portfolio with an overweight position in the Industrials sector given the market styles we see prevailing in the recovery scenario. We remain neutral on the Financials sector, although our bias in the sector is toward diversified financials and away from banks. We like the cash generated by capital-light businesses that require relatively little investment to grow.

Regional Outlook – Asia

Derek Au
Research Analyst, Asian Equities
RBC Global Asset Management(Asia) Limited

Asian equities started the period strongly after a preliminary U.S.-China trade deal in mid-January and signs of stabilization of Chinese retail sales and industrial output fueled hopes for economic growth this year. This optimism was short-lived as the coronavirus outbreak, centred in the Chinese city of Wuhan, led to a late-January pullback before triggering more significant declines toward the end of February. While China has made progress in stopping the spread of the disease, the virus is taking hold in other parts of the world, with increasing infection rates and casualties in South Korea, Italy and parts of the Middle East.

Citywide protests in Hong Kong have quieted, partially because of the coronavirus, but also because of "fatigue" after seven months of demonstrations. In India, the government is again raising the percentage of domestic companies that foreigners can own to promote investment, and the increased openness will likely boost India's weighting in the MSCI Emerging Markets Index. Indian stocks trade just below record highs, but slowing growth and consumption are at hand.

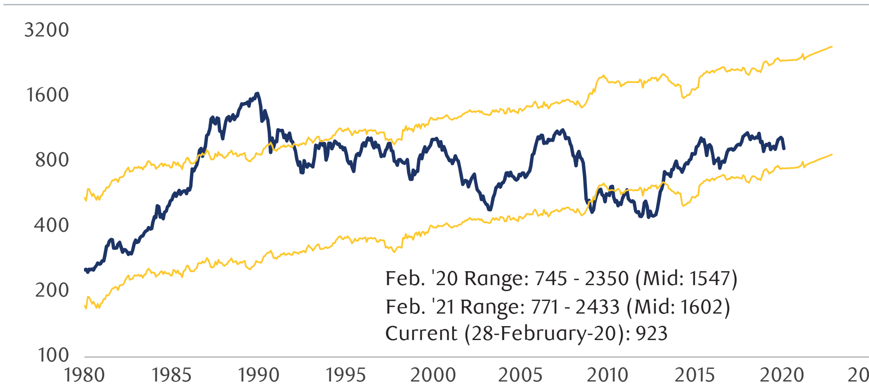
Equity markets in Australia, China, Taiwan and India outperformed the Asian benchmark while Thailand, Singapore and the Philippines lagged. Japanese stocks underperformed the rest of Asia. Regionally, the Information Technology, Communication Services, Consumer Discretionary and Health Care sectors outperformed. Energy, Real Estate, Industrials and Utilities underperformed.

Asia – Recommended sector weights

	RBC GAM Investment Strategy Committee February 2020	Benchmark MSCI Pacific February 2020	Active Risk vs. Benchmark February 2020
Energy	2.0%	2.7%	(0.7%)
Materials	4.5%	5.6%	(1.1%)
Industrials	11.5%	11.4%	0.1%
Consumer Discretionary	16.5%	15.5%	1.0%
Consumer Staples	6.5%	6.2%	0.3%
Health Care	8.0%	6.9%	1.1%
Financials	18.5%	19.4%	(0.9%)
Information Technology	15.5%	14.5%	1.0%
Communication Services	9.5%	10.0%	(0.5%)
Utilities	2.0%	2.4%	(0.4%)
Real Estate	5.5%	5.4%	0.1%

Source: RBC GAM

MSCI Japan Index Equilibrium
Normalized earnings and valuations



Source: Consensus Economics, RBC GAM

Japan

As was the case with almost all stock markets, the coronavirus outbreak led to a pullback in Japanese equities in late January, erasing what had been gains for the month. A sharp decline in Japanese retail spending after a consumption-tax hike was imposed in October 2019 further pressured local equity markets, and the Japanese yen strengthened over the three-month period to 109 per U.S. dollar. The currency-adjusted value of Japanese exports to the U.S. and the EU fell on lower shipments of auto parts and capital goods, and shipments to China continued to weaken given the negative impact of the coronavirus. Imports have also been anemic, reflecting domestic demand dampened by the higher retail tax.

While purchasing managers' indexes (PMIs) for manufacturing and services have recovered from subdued levels in the fourth quarter, the impact of the coronavirus is likely to be felt, and we see a risk that companies will cut back on capital investments. As a result, the rebound in the Japanese economy in 2020 will not be as strong as we had been expecting, and it will be hard to fathom a guess on how much weaker until global authorities bring the spread of the virus under control.

Asia Pacific ex-Japan

While China, Hong Kong and Singapore are pledging extra fiscal stimulus to counter the economic damage from the coronavirus, we expect regional market volatility to remain elevated.

China's economy had been showing signs of recovery in late 2019. The country's manufacturing PMI bottomed, with export and import growth rising on a year-on-year basis. Inventories had been declining in most sectors, while growth in passenger-car sales and volume increased. Property sales and financing conditions improved moderately thanks to government easing measures. Now the coronavirus has disrupted manufacturing production and domestic consumption as authorities try to contain the epidemic. The Chinese government will likely continue to apply monetary and fiscal stimulus in an effort to reboot the economy.

Taiwan has been one of Asia's better-performing equity markets, with domestic capital investment and private consumption expanding in recent months. Nevertheless, GDP forecasts for Taiwan have been cut for the rest of the year. Tsai Ing-wen of the pro-independence DPP party secured a second term as president in the January election, which many investors considered a positive for the country's stock market.

South Korea's GDP growth has been stronger than market expectations due to a strong contribution of fiscal spending in the late stages of last year, and private investment is improving but at a slower pace. These positives are now being offset by South Korea's status as the country with the second-highest number of coronavirus cases, which will reduce both domestic consumption and put manufacturing supply chains at risk. With declining exports and deteriorating consumer confidence, the Bank of Korea may announce easing measures.

The Australian economy is facing multiple headwinds from drought, a major downturn in residential construction, wildfires and the coronavirus given that China is the country's largest trading partner. In light of these headwinds, the Reserve Bank of Australia may tilt towards further monetary easing.

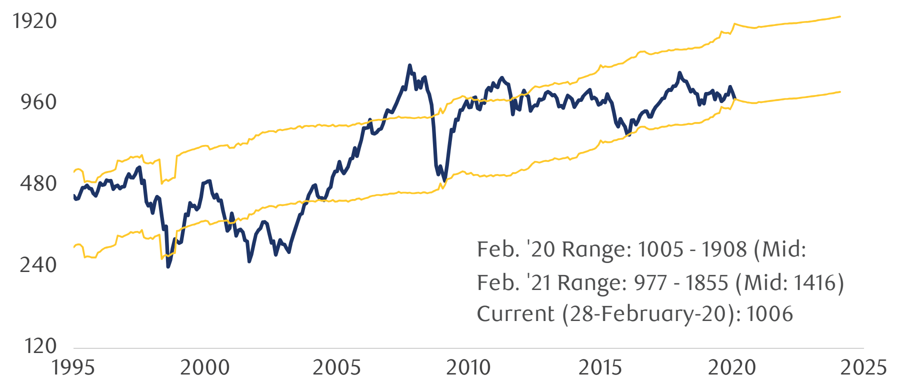
India's economy has slowed over the past year, and the deterioration has accelerated in recent months on the back of stress among non-bank lenders, rising inflation and anti-government protests in response to a new law that makes it harder for Muslims to qualify for citizenship. The International Monetary Fund in January slashed India's 2019 growth estimate to 4.8% from 6.1%. Indian equities, however, were among the better-performing emerging markets, perhaps reflecting that the fact that country remains relatively unscathed from the coronavirus outbreak so far.

Hong Kong remains in the doldrums as the weak Chinese economy, the local protests and the coronavirus outbreak severely curtail all forms of economic activity. Hong Kong has experienced big reductions in trade related to tourism, retail, transportation and property, and the economy is heading for another year of recession following a 1.2% decline in GDP last year. The unemployment rate rose for the fourth straight month in January, to 3.4%. To cope with the economic downturn, Hong Kong policymakers have announced US$15.4 billion in hand-outs and tax cuts to support home buyers, tourism and small business. These measures will result in a record budget deficit for the 2020-2021 fiscal year.

Regional Outlook – Emerging Markets

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

MSCI Emerging Markets Index Equilibrium
Normalized earnings and valuations



Source: RBC GAM

Emerging-market equities have fallen so far in 2020 due to concerns about the spread of the new coronavirus and its impact on what was a nascent, yet fragile, economic recovery. Stocks in emerging markets had started the year on a firm footing, building on a strong performance at the end of 2019. However, the spread of the coronavirus from China's Hubei region in mid-January led to a market sell-off, with emerging-market stocks down significantly since then.

Ironically, the Chinese stock market is one of the best-performing emerging markets so far this year, outperforming the MSCI Emerging Markets Index. The index has recovered somewhat from the recent low reached on February 3 of this year, which was exactly two weeks after the market was first hit by concerns about the coronavirus.

It is possible that the market recovery was due to investors believing that the disease had been contained in mainland China and was therefore under control. However, the risk of the virus spreading to other emerging markets - and the rest of the world - has increased as confirmed by recent events in South Korea, Italy and Iran. There is a growing realization that the coronavirus, which appears to be an extreme form of viral flu, has not been contained outside China and this started to negatively affect financial markets toward the end of February.

It is hoped, and indeed is still the base case, that the virus will behave in a similar way to the SARS virus and recede when the weather improves. While there will be an impact on economic growth, we expect this impact to be a one-off event and that central banks and governments will act in a synchronized manner to reduce such an impact.

Looking beyond the coronavirus, we believe there are four key factors that will play an important role in determining the performance of emerging-market equities: the U.S. dollar, the economic growth differential between emerging markets and developed markets, earnings growth and valuations. In our view, there is a high likelihood that in the coming years some of these factors will move from headwinds to tailwinds, and such changes would ultimately support a sustained improvement in relative emerging-market performance.

A significant overhang for the performance of emerging-market equities in recent years has been U.S.-dollar strength. Emerging markets have tended to move in the opposite direction of the U.S. dollar over the past two decades, and the trend has been more pronounced in the past three years. While U.S.-dollar strength has been a headwind for emerging-market equities over the past decade, we believe that this relationship could be about to reverse because the U.S. Federal Reserve has abandoned its tightening bias and the U.S. dollar appears to be fully valued on many measures. Also, emerging-market currencies look very attractive on the basis of purchasing power parity.

Another positive factor that should bolster relative emerging-market performance is earnings. According to the Institutional Brokers' Estimate

System, emerging-market earnings are expected to rise 14.5% in 2020, although we expect this number to be reduced in the short term to account for the economic impact of Covid-19. Relative earnings revisions versus developed markets remain close to a 10-year high, which should support relative emerging-market returns.

Likewise, relative earnings growth and economic leading indicators (purchasing managers' indexes) have been pointing for some time to a significant improvement in relative emerging-market performance, but judging from equity-market performance there is still a good degree of investor skepticism. This is important because the performance of emerging-market equities relative to developed markets has been correlated with the difference in economic growth rates between them. Before the virus outbreak became a serious issue, the IMF had forecast that emerging-market growth would accelerate to 4.6% in 2020 while developed markets would stay steady at 1.7%. Those figures translate to a difference in growth rates between emerging markets and developed markets of 2.9 percentage points, an increase from 2.2 percentage points in 2019. The gap will be a potential positive for the emerging-market outlook as the economy recovers from the current scare.

Emerging-market equities have traded in a relatively tight range over the last few years, and look modestly undervalued given that they trade below their long-term average. Emerging-market valuations are particularly attractive relative to developed markets, however, with price-to earnings and price-to-book discounts of around 30%. Returns on equity are largely driven by profit margins and the recovery since 2016 in emerging-market margins is still relatively patchy. As such there should still be wide scope for returns on equity to improve, driving a more sustained rise in emerging-market profitability on both a relative and absolute basis.

In our view, emerging markets are also benefiting from the fact that more of the index contains higher-quality consumer and technology companies, which tend to have higher returns on equity and more stable earnings growth, and there is now less exposure to the capital-intensive commodity sectors. The resulting improvement in the index's overall return on equity should support higher emerging-market valuations.

In terms of portfolio positioning, we expect stock-market breadth to improve on the assumption that "quality" stocks that did not do well in 2019 will join top-performing areas such as technology. In terms of new areas for the next decade, we are looking at opportunities and risks from climate change. Consistent with that stance, we will continue to maintain no exposure to the Energy sector. We are also reviewing our exposure to traditional manufacturing, an area that we believe will increasingly face incremental challenges in terms of business model and economic drivers.

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 $474 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 December 31, 2019.

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.

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 charter-holder 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.

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.

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.

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.

William E. (Bill) Tilford

Head, Quantitative Investments
RBC Global Asset Management Inc.

Bill is Head, Quantitative Investments, at RBC Global Asset Management and is responsible for expanding the firm's quantitative-investment capabilities. Prior to joining RBC GAM in 2011, Bill was Vice President and Head of Global Corporate Securities at a federal Crown corporation and a member of its investment committee. His responsibilities included security-selection programs in global equities and corporate debt that integrated fundamental and quantitative disciplines, as well as management of one of the world's largest market neutral/overlay portfolios. Previously, Bill spent 12 years with a large Canadian asset manager, where he was the partner who helped build a quantitative-investment team that ran core, style-tilted and alternative Canadian / U.S. funds. Bill has been in the investment industry since 1986.

Milos Vukovic, CFA

Vice President, Investment Policy
RBC Global Asset Management Inc.

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

Brad Willock, CFA

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

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

Global equity advisory committee

- **Philippe Langham**
  Head & Senior Portfolio Manager,
  Emerging Market Equities
  RBC Global Asset Management (UK) Limited
- **Brad Willock, CFA**
  V.P. & Senior Portfolio Manager,
  North American Equities
  RBC Global Asset Management Inc.
- **Mayur Nallamala**
  Head & Senior V.P., Asian Equities
  RBC Global Asset Management (Asia) Limited
- **Martin Paleczny, CFA**
  V.P. & Senior Portfolio Manager,
  Asset Allocation & Derivatives
  RBC Global Asset Management Inc.
- **Dominic Wallington**
  Head, European Equities &
  Senior Portfolio Manager,
  RBC Global Asset Management (UK) Limited

Global Fixed Income & Currencies advisory committee

- **Dagmara Fijalkowski, MBA, CFA**
  Head, Global Fixed Income & Currencies
  RBC Global Asset Management Inc.
- **Soo Boo Cheah, MBA, CFA**
  Senior Portfolio Manager,
  Global Fixed Income & Currencies
  RBC Global Asset Management (UK) Limited
- **Suzanne Gaynor**
  V.P. & Senior Portfolio Manager, Global Fixed Income & Currencies
  RBC Global Asset Management Inc.
- **Eric Lascelles**
  Chief Economist
  RBC Global Asset Management Inc.

Disclosure

This document is provided by RBC Global Asset Management (RBC GAM) for informational purposes only and may not be reproduced, distributed or published without the written consent of RBC GAM or its affiliated entities listed herein. This document does not constitute an offer or a solicitation to buy or to sell any security, product or service in any jurisdiction. This document is not available for distribution to people in jurisdictions where such distribution would be prohibited.

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

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

This document has not been reviewed by, and is not registered with any securities or other regulatory authority, and may, where appropriate, be distributed by the above-listed entities in their respective jurisdictions. Additional information about RBC GAM may be found at www.rbcgam.com.

This document is not intended to provide legal, accounting, tax, investment, financial or other advice and such information should not be relied upon for providing such advice. RBC GAM takes reasonable steps to provide up-to-date, accurate and reliable information, and believes the information to be so when printed. RBC GAM reserves the right at any time and without notice to change, amend or cease publication of the information.

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

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

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

RBC Global Asset Management

Publication date: March 10, 2020

100537 (03/2020)

GIO SPRING_2020_EN 03/10/2020