

Global Insight

Perspectives from the Global Portfolio Advisory Committee



Climate change: Changing the investment climate

How climate change is creating a climate of change for businesses and investors.

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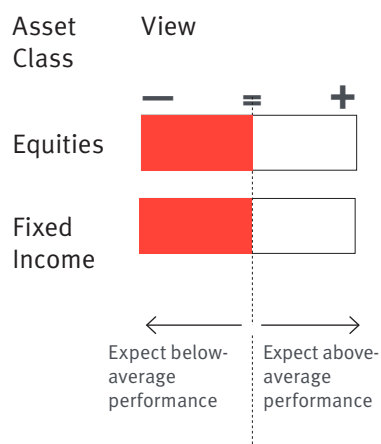
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All values in U.S. dollars and priced as of market close, March 31, 2019, unless otherwise stated.

RBC's investment stance

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See “Views explanation” below for details

Source - RBC Wealth Management

Equities

- Following a strong rebound at the beginning of the year, equity markets have shifted attention to slowing growth in the Big 3 economies of the U.S., Europe, and China and the related downdraft in interest rates that was accompanied by an [inversion of the Treasury yield curve](#)—a cautionary signal. Markets are also contending with earnings growth and trade/tariff uncertainties.
- These risks are balanced out by dovish central bank policies and signs U.S. economic growth should hold while trends in Europe and China should stabilize/improve later this year. Equity market valuations remain reasonable, with most trading near or slightly below their long-term averages. Consensus earnings estimates are also realistic, in our view. While we would maintain overall equity exposure at the Market Weight or benchmark level in portfolios, vigilance is warranted.

Fixed income

- The Fed's significant policy shift in March to zero rates hikes (from 2) in 2019 set a new path for global central banks. Global economic weakness is driving the broad move to “easy street” and concerns are mounting as benchmark yield curves invert. The Fed projects one hike in 2020, but implied probabilities indicate a greater than 70% likelihood of a rate cut by January and market expectations predict one rate cut per year from 2019–2021.
- There is the distinct possibility that rates could move lower, and we believe this makes “reinvestment risk” a potential issue for investors attracted by short-term rates equal to or exceeding long-term rates. As such, we maintain our Market Weight in fixed income and recommend investors add duration with a focus on high-quality assets.

Views explanation

(+ / = / -) represents the Global Portfolio Advisory Committee's (GPAC) view over a 12-month investment time horizon.

+ Overweight implies the potential for better-than-average performance for the asset class or for the region relative to other asset classes or regions.

= Market Weight implies the potential for average performance for the asset class or for the region relative to other asset classes or regions.

- Underweight implies the potential for below-average performance for the asset class or for the region relative to other asset classes or regions.

Climate change: Changing the investment climate



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We shouldn't overlook how climate change is changing the investment climate. Economic activity can be stressed by extreme weather events and increased regulatory costs to mitigate and adapt to climate change. As such, it preoccupies businesses, central bankers, and rating agencies. Equity investors should also pay attention as investment returns could be impacted. It's not all bad news as climate change may also offer new opportunities.

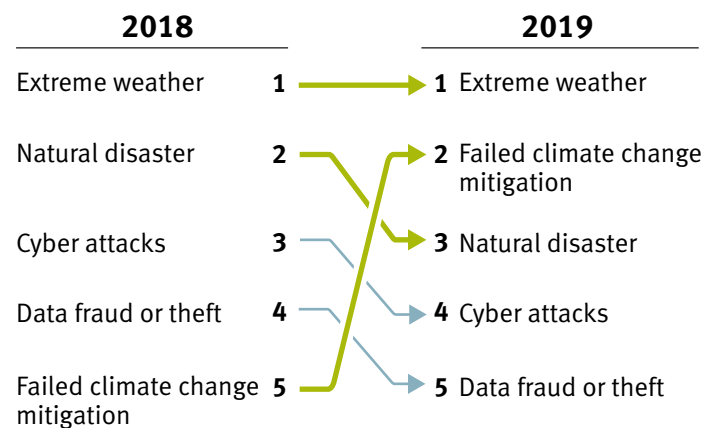
More extreme, intense weather

Climate change—by which we mean the increasing occurrence of extreme weather events such as freak storms, all-engulfing floods, or debilitating droughts—has been affecting the lives of a growing number of people. Witness Houston, Texas, which endured three massively damaging floods over the span of 2015, 2016, and 2017, each of which was rated a 1-in-500-year event.

In 2018, 415 asset managers, together overseeing assets totaling \$32T, signed an open letter to governments urging more action on climate change, which they say threatens their holdings.

The World Economic Forum (WEF), in its *Global Risks Report 2019*, noted that climate change, already a major concern in 2018, had moved up a notch in its ranking of the most pressing risks. A survey of the WEF's stakeholder-respondents, made up of insurance and reinsurance companies, banks, and industry-based focus groups, revealed the top three global risks are related to climate change.

Top five risks identified in the World Economic Forum's *Global Risks Report 2019*



Climate change, already a major concern in 2018, has moved up a notch.

Note: Green arrows denote risks related to climate change
Source - World Economic Forum's *Global Risks Report 2018* and *2019*

How can climate change affect businesses?

Effects of climate change impact countries and sectors unevenly. Eric Lascelles, RBC Global Asset Management's chief economist, points to research arguing that, logically, warmer countries will likely be affected most negatively, while some colder countries might not be negatively affected to the same degree. Asia is seen as most vulnerable, particularly China with close to 150 million people living in coastal areas threatened by rising sea levels as polar ice caps are melting faster than previously forecast.

Yet investors living in the Northern Hemisphere should not be complacent. Climate change can lead to increased costs for businesses, some tangible and visible, some less so, but costly nonetheless.

For example, extreme heat can not only reduce crop yields, increasing the cost of raw materials for food companies and households, it can also cause huge spikes in power prices, increasing energy costs. It can also affect labour productivity across a wide swath of industries, from agriculture to call centers to construction. Crippling heat and humidity may threaten equipment in data centers.

Rising sea levels can disturb offshore oil and gas infrastructure and can cause flooding, disrupting increasingly integrated global just-in-time supply chains. Warmer water can impact aquaculture as well as power stations which use water to cool reactors.

Droughts can be devastating too. In the second half of 2018, the water levels of Germany's Rhine River, a key transport corridor for moving industrial products, declined to a 12-year low, so barges could not be fully loaded. BASF, a German chemicals manufacturer and only one of the companies affected, stated that it incurred some \$250M worth of additional costs to use other, more expensive modes of transport.

Policymakers are also preoccupied

It's not just businesses that are preoccupied. Central bankers are also studying how monetary policy could be impacted. Extreme weather events can affect growth and push inflation higher, impeding policymakers' ability to decipher underlying economic trends. In the example above, lower water levels in the Rhine contributed to lower economic growth while at the same time driving up inflation due to resulting fuel shortages.

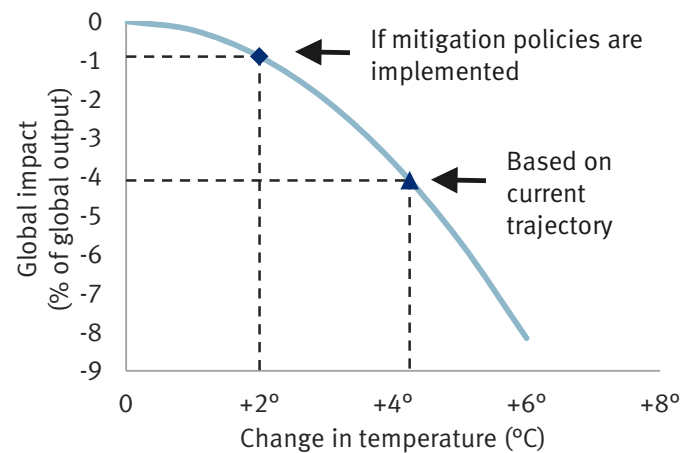
In the U.S., repeatedly weak Q1 GDP data over a number of years has in part been explained by weather factors, but what if these mask a real slowing trend? Bank of England Governor Mark Carney has gone as far as suggesting that the potential impact of climate change be included in bank stress tests.

Over the long run, according to Lascelles, climate change could result in a loss of economic output through an unpalatable mix of less favourable climate conditions for economic activity, and the cost of adjusting to an altered climate, including insurance costs or liability risks.

As the amount of carbon dioxide in the atmosphere rises, the debate continues about what costs higher worldwide temperatures will impose on the global economy. Lascelles refers to work by American Nobel Prize-winning economist

Extreme weather events can impede policymakers' ability to decipher underlying economic trends.

Long-term economic effects of climate change



The damage from climate change will be non-linear.

Note: Change in temperature relative to pre-industrial levels defined as the period from 1850 to 1900. Source: *IPCC Climate Change 2014 Synthesis Report*; W.D. Nordhaus and A. Moffat (2017) "A Survey of Global Impacts of Climate Change: Replication, Survey Methods, and a Statistical Analysis"; RBC Global Asset Management

William Nordhaus which estimates that those costs will rise exponentially. A temperature rise of 2 degrees Celsius above pre-industrial levels will cost the global economy 1% of lost output by the end of the century. But double the temperature increase to 4 degrees and the cost quadruples to a much more painful 4% of lost global GDP.

The damage would be gradual but insidious, Lascelles says, with the global economy only growing by a few hundredths of a percentage point slower per year. Spread over many decades, this would certainly add up.

All very hush hush

Few companies talk about the potential impact of climate change on their infrastructure or actively manage climate risk for fear of exposing a potential weakness or liability. For CEOs focused on delivering the next set of quarterly results, so many other factors may seem more urgent, tangible, predictable, or even easier to prepare for, such as fending off the consequences of wage growth or more intense competition. According to S&P Global, only some 15% of companies in the S&P 500 disclose effects on earnings from weather-related events.

Many corporate management teams worry that preparing for climate change may put a company at a competitive disadvantage. The significant negative effect on cash flows and margins for a company which is building slack and/or redundancies into its supply chain to offset the impact of potential floods could damage its competitiveness if rivals don't follow suit or don't have to because they are located in regions that don't face the same climatic risks.

This could hurt

Despite the reluctance of companies to publicly acknowledge the challenge, we believe investors can and should take climate change into consideration as it may impact investment returns. Mercer, a consulting firm for institutional investors, opines that the performance of agriculture, timberland, real estate, and emerging

market equities would be most affected in a worst-case scenario of a 4-degree increase in temperature.

It is widely believed in the investment community that investors could start shunning companies perceived to be negatively exposed to climate change for fear liabilities will eventually materialise. PG&E, a U.S. utility, offers an extreme example. The significant legal liabilities stemming from PG&E's possible role in sparking California's massive 2018 wildfires, which fed on an increasingly parched landscape, far exceeded the company's insurance coverage. With its debt downgraded by rating agencies, credit became unavailable, and PG&E, targeted by short sellers, had to file for bankruptcy protection.

Lascelles points out investors may start to actively sell companies and regions of the world that may be hurt the most by climate change.

ESG funds (which factor in environmental, social, and governance criteria) now make up a substantial and growing 26% of all professionally managed assets in the U.S. as of the start of 2018, according to the US SIF: The Forum for Sustainable and Responsible Investment. The managers of these funds will decline to own companies that do not stand up to their scrutiny.

Some companies may even see their cost of borrowing increase. Credit rating agencies have started to include climate risk considerations into their assessments. S&P Global altered over 100 corporate ratings in 2017, or twice as many as in the previous two years, pointing to environmental and climate considerations. Fitch and Moody's are following suit. In time, funding costs will rise for companies vulnerable to climate change, with potentially serious consequences for profitability.

Not all bad news

Investors wishing to focus on companies best placed to deal with the challenges of climate change could focus on ESG funds whose managers scrutinize their holdings so as to minimize these risks. In addition, climate change can also unearth opportunities for new industries and innovative companies to develop products and strategies to address or mitigate the environmental damage of climate change.

Renewable energy and electric vehicles are top of mind these days, but there is a whole range of other industries and spaces which stand to benefit:

- Construction of sea walls and levees to protect against storm surges and flooding on coasts as well as flood-prone inland regions
- Special building material manufacturers as roofing and insulation products evolve to meet changing residential and commercial building codes
- Indoor agriculture and aquaculture to control air and water temperatures and shield against acid rain
- Housing required for disaster response or to accommodate human migration that could be sparked by climate change; the U.N. expects some 200 million climate refugees by 2050

Climate change can also unearth opportunities for new industries and innovative companies.

- Land and real estate located far from oceans, flood plains, and areas with fresh water shortages
- Desalination plants in drought-prone regions or systems which keep water clean after purifying it; pumps, filters, and other technologies used in water storage/ transmission and for wastewater management
- Providers of energy efficiency systems for new commercial, industrial, and large multifamily residential structures; companies that retrofit older buildings to significantly reduce greenhouse gas emissions and power consumption

Change in the air

More and more, climate change is creating a climate of change for businesses and investors. Companies will increasingly need to think about how climate change affects the way they do business. We are already seeing central bank policymakers as well as rating agencies considering the potential impact. Investors too should be proactive and think about how to adapt their portfolios to the climate change challenge ... and opportunity. The returns of investments in companies and regions most exposed to climate change may be hurt. We would be on the lookout for companies which address, monitor, or help avoid environmental damage and those which successfully prepare for climate change, as they are likely to find favour with investors.

Climate change is creating a climate of change for businesses and investors.

Yield curve inversion: A shot across the bow



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Has inversion of the yield curve started the “recession clock”? The closing chapter of all economic cycles is a recession. The recent inversion makes it appropriate to start thinking about that eventuality but we believe it will take some doing to get the U.S. into recession from here. We are content for now with our Market Weight exposure to stocks in a global portfolio.

The Treasury yield curve has inverted—short-term interest rates have moved above long-term rates. Or, more precisely in this case, long-term rates have fallen below short-term rates.

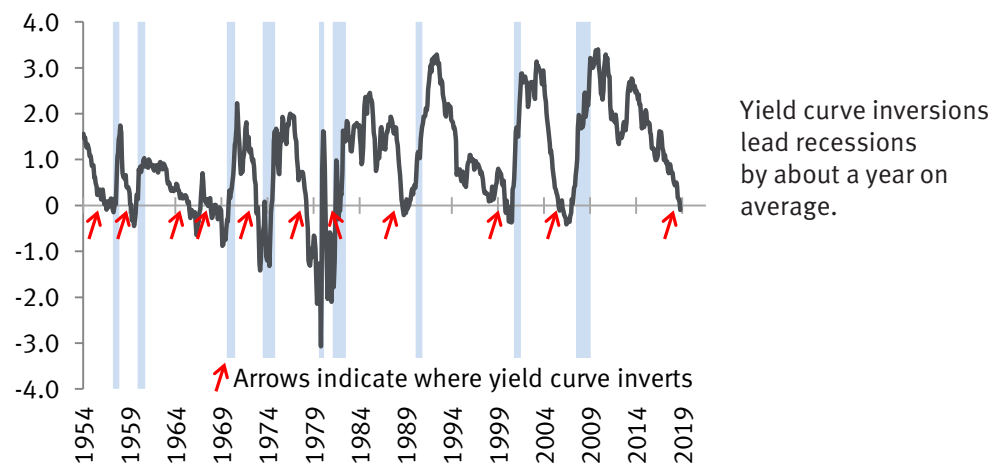
This has garnered a lot of attention because in past economic cycles “inversion” has proven to be a reliable signal that a U.S. recession was on the way—on average about 11 to 14 months from the date of inversion.

Long, bruising equity bear markets, not just in the U.S. but also in Canada, the U.K., Europe, and Japan, have been associated with U.S. recessions. These bear markets have typically started months before the recession gets underway. That makes inversion of the yield curve a valuable early warning signal that a more defensive investment state of mind is called for.

Is the recession clock starting?

The debate is already raging as to what, if any, credence should be given to the yield curve’s signal this time. There are a number of arguments—some very compelling—asserting that this inversion has occurred for very different reasons

Yield differential between the 10-year and 1-year U.S. Treasury notes



Note: Shaded areas indicate recessions
Source - RBC Wealth Management, U.S. Federal Reserve, National Bureau of Economic Research

than in past cycles and therefore can be safely ignored. Perhaps. But in our experience, arguments like this have always surfaced around the time of previous inversions and, even though the mechanical reasoning was often correct, a recession (and equity bear market) eventually arrived.

There was one exception. The yield curve deeply inverted in 1965 and no recession ensued. However, U.S. GDP growth went from 10.1% (yes, that's no typo, 10.1%!) in Q1 1966 to an effective standstill at 0.2% five quarters later. Around that time the stock market corrected by a brisk, but not disastrous, 20%.

Despite the wonderful track record of yield curve inversion as a recession/bear market early warning, we believe the routes taken by the economy and markets this time will undoubtedly wind up being different in some important aspects. That should make investors reluctant to bank everything on a signal given by just one indicator, no matter how historically reliable.

Eric Lascelles, chief economist for RBC Global Asset Management (see "[An aging economic expansion](#)" on page 12), rates 17 different economic variables and concludes that this longest of U.S. economic expansions is in its late-to-end-of-cycle phase. Of course, this last part of the expansion cycle before the next recession arrives could prove to be very drawn out. Certainly the early-cycle and mid-cycle phases were unusually extended.

Our U.S. recession scorecard follows six indicators, all of which have usefully warned of recessions ahead of time. Three (the yield curve, unemployment claims, and the Conference Board Leading Economic Index) have given their signals about a year ahead of the recession getting underway. The other three (see table) typically flash red much closer to the event. To date, only the yield curve has given a warning signal.

Only the yield curve is giving a warning signal

RBC Wealth Management U.S. economic indicator scorecard

Indicator	Status		
Yield curve (12-month to 10-year)	–	✓	–
Unemployment Claims	✓	–	–
Unemployment Rate	✓	–	–
Conference Board Leading Index	✓	–	–
ISM New Orders Minus Inventories	✓	–	–
Fed Funds vs. Nominal GDP Growth	✓	–	–
Expansion	Neutral	Recessionary	

This last part of the expansion cycle could prove to be very drawn out.

Source - RBC Wealth Management, Bloomberg, FRED Economic Data St. Louis Fed

Confidence matters

Indicators aside, we believe it will take some doing to get the U.S. into recession from here. One need only check in on the American consumer who thoroughly dominates the U.S. economy at almost 70% of GDP. Consumers are confident and for many good reasons. The unemployment rate was last below 4% in the mid-1960s; unemployment claims recently hit all-time lows; there are 7.6 million

unfilled jobs on offer, according to the Labor Department; wage rates are rising nicely; home values and other components of household wealth are elevated and don't look frothy or otherwise overly vulnerable; and consumer spending has remained mostly in line with income growth, suggesting household debt has not become unmanageable.

It has usually taken the arrival of tight monetary conditions to tip the economy into recession. “Tight money” has two necessary components: prohibitively high interest rates and banks that have become noticeably more restrictive in their lending practices. Neither is present today and with the Fed apparently on hold for the rest of this year restrictive credit conditions still lie some ways off. Looking at the latest monthly survey of thousands of small and medium-sized U.S. businesses by the National Federation of Independent Business, just 3% of respondents (historically very low) report being unable to get the credit they need, while 51% say they need no credit.

And what does this say for investment strategy?

The “inversion signal” has always been hard for investors to get behind precisely because it has given such a long early warning. It is usually followed by several quarters of positive economic growth—one such interval lasted almost two years. And the stock market typically has some months or even quarters to go before it sets its final high. It is difficult for investors to adopt a defensive approach when the economy continues to perform and earnings look set to go on growing.

For our part, we note that most stock markets are still below last year's highs and about at the same level as 12 months ago. Price-to-earnings multiples are reasonable and no longer as extended as they were in early 2018. We have been impressed by the power and breadth of the liftoff from the ultra-depressed December low point. We expect new highs lie ahead for the U.S. broad averages and for most developed economy stock markets.

We are content for now to maintain our benchmark target weight (Market Weight) exposure to stocks in a global portfolio. However, we are treating the inversion of the yield curve as a “shot across the bow” for equity investors. We expect to counsel the adoption of a progressively more defensive posture over the course of the next six to 12 months.

An aging economic expansion



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Given the august age of the U.S. expansion, it's fair to think about the expansion's life expectancy and the appropriate investment strategy. Recently we checked in with Eric Lascelles, chief economist at RBC Global Asset Management, about the economic growth outlook, the cycle positioning of the U.S. economy, and recession probabilities.

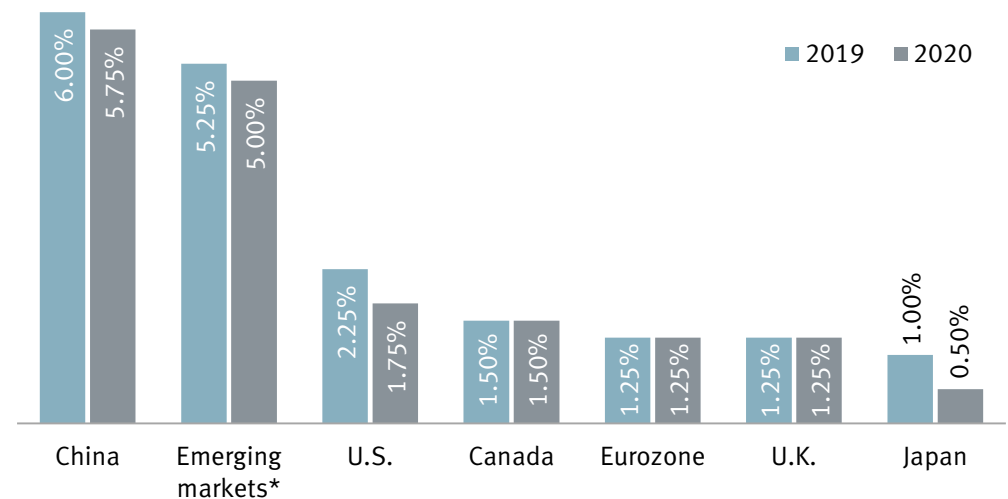
Q. U.S. economic growth has exceeded that of other developed countries. Will that persist?

A. U.S. fiscal stimulus is fading, ceasing to provide a material boost to economic growth in 2019, and eventually translating into an outright drag in 2020. This marks quite a contrast to last year, when stimulus provided a heroic boost to U.S. growth.

Global economic headwinds include protectionism, fading fiscal stimulus, and somewhat less favourable financial conditions (recent inversion of yield curves). These headwinds blow more strongly in the U.S., suggesting that the country's growth advantage could begin to shrink relative to the rest of the developed world. The economy of the other global behemoth—China—also continues to slow, though stimulus programs may start to gain traction by the second half of the year.

Given the time of year, it is perhaps also worth mentioning that U.S. growth often suffers from a curious seasonal distortion that makes the first quarter of each year appear unnaturally weak. Any U.S. softness in the near term needs to be filtered through this lens.

RBC's GDP growth forecasts



* Emerging markets forecast is a weighted average of China, India, South Korea, Brazil, Mexico, and Russia
Source - RBC Global Asset Management's *Global Investment Outlook*, Spring 2019

One of the more compelling endorsements of a late-cycle view is that the U.S. economy is now extremely tight.

Q. What factors are signaling the economy is “late” in the cycle?

A. As usual, many of the 17 inputs that go into our scorecard of the U.S. cycle disagree with one another. Counterintuitively, this is the strength of the approach. Whereas nearly any assertion can be supported by a rogue data series somewhere, it is much harder to be misled (or mislead) when considering many angles at once.

First, “late cycle” is clearly the single best guess, receiving considerably more support than the rest (see table below).

Second, although this has been the conclusion for many quarters running, there is considerable forward motion beneath the surface. Whereas a year ago “mid cycle” was giving “late cycle” an honest run for its money, the “mid cycle” argument has withered markedly over the past year. Simultaneously, the “end of cycle” argument has strengthened substantially, now representing the second-most plausible conclusion.

U.S. business cycle scorecard

	Start of cycle	Early cycle	Mid cycle	Late cycle	End of cycle	Recession
Inventories		●	○			
Consumer durables		○	●	●		
Leverage			●	○		
Housing			●	●		
Equity profitability			●	●		
Prices			○	●	○	
Monetary policy			○	●	○	
Credit			○	●	○	
Business investment			○	●	○	
Bonds				●	○	
Economic trend				●	●	
Employment				●	●	
Equity direction				●	●	
Economic slack				●	●	
Volatility				●	●	
Sentiment				○	●	
Cycle age					●	
Votes for each stage of business cycle	0	1.5	6.5	14	9.5	0
Votes in previous period	0	2	9	13.5	6.5	0

Legend: ● = most likely stage of business cycle (full weight); ○ = alternative interpretation (0.5 weight)
Source - RBC Global Asset Management

One of the more compelling endorsements of a late-cycle view is that the U.S. economy is now extremely tight. When asked to list their main problems, businesses rarely mention poor sales, and regularly complain about the quality of workers they are able to attract. This is relevant to the cycle in part because it is hard to continue growing once economies start to bump up against their natural constraints, and in part because tight economies are prone to boiling over, triggering the end of the cycle.

In the credit space, auto-loan delinquencies have been rising for some time and are now fairly high, especially in subprime lending. Meanwhile, credit-card delinquencies are also rising—albeit gradually and from historically very low levels. In fairness, mortgage delinquencies are still low and the broader household-debt environment is not overly worrisome, but little dents in the armour are forming—a classic signal of an aging business cycle.

Q. What are the odds the U.S. could slip into recession this year or next?

A. The business cycle and the risk of a recession are intertwined concepts, with recessions representing the natural conclusion of the business cycle. Of the recession models we monitor, most acknowledge a rising recession risk, though with substantially different assessments of the precise likelihood. We assign a 35% chance of a 2019 recession, and slightly higher odds for 2020.

Q. What does a “late-cycle” economy mean for investment strategy?

A. The world remains awash in uncertainty. Some of this could manifest in the form of better-than-expected outcomes—the possibility, for example, that secular stagnation might ebb more quickly than presently assumed. However, much of the uncertainty tilts toward downside risks. Among a fairly long list of these risks, the three primary items are protectionism, Chinese growth, and the U.S. business cycle.

The fact that we may be late in the cycle doesn't make the case that investment risk-taking should be abandoned altogether, but rather that it must be undertaken cautiously, as the risk-reward equation isn't as favourable as it was earlier in the cycle.

We anticipate continued financial-market volatility in 2019, due to the lateness of the cycle, the flatness of the yield curve, and the degree to which the big macro questions of the day such as Brexit and tariffs will be resolved by mercurial politicians.

Thank you for sharing your thoughts, Eric.

The fact that we may be late in the cycle doesn't make the case that investment risk-taking should be abandoned altogether, but rather that it must be undertaken cautiously.

While the inversion of the Treasury yield curve is a factor equity investors should weigh carefully, other developments are also expected to move major indexes over the near and midterm. U.S. earnings trends, European and Chinese economic momentum, trade and tariff risks (or deals), and the never-ending Brexit saga could impact equity prices. We think the balance of risks and opportunities warrant holding global (total) equity exposure at the Market Weight or benchmark level, with an eye toward dialing back exposure as conditions warrant.

Regional highlights

United States

- Reality set in to the U.S. equity market as global economic momentum slipped further and domestic growth concerns mounted with the [Treasury yield curve inverting](#) for the first time since 2006. Following a torrid snap-back rally throughout much of Q1, the S&P 500 backed and filled through much of March.
- With the earnings season around the corner, analysts are now collectively forecasting a slight dip in S&P 500 profits in Q1 compared to the same period a year ago and modest 3.3%

Equity views

Region	Current
Global	=
United States	=
Canada	=
Continental Europe	=
United Kingdom	=
Asia (ex-Japan)	=
Japan	+

+ Overweight = Market Weight - Underweight
Source - RBC Wealth Management

growth for the full year. Recent estimate cuts by bellwether FedEx, which cited headwinds in Europe and China, and cautious domestic projections by Nike confirm corporate conditions are more challenging. However, we think the consensus forecasts are probably a bit too cautious—barring a near-term recession. Analysts have cut estimates aggressively since last October, and during periods of economic growth scares, they often overreach.

- We are sticking with our Market Weight recommendation on U.S. equities but emphasize that markets could be buffeted by earnings and economic trends, as well as trade and tariff risks. U.S.-China trade uncertainties linger, and the

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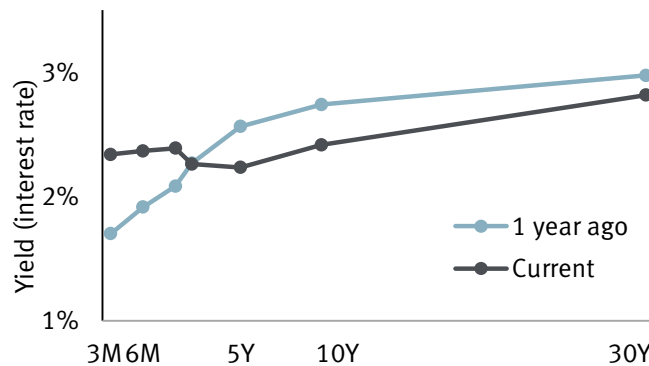
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Then and now: The U.S. yield curve



Rising short-term rates and falling intermediate-term rates result in the clear inversion on the shorter end of the curve.

Source - RBC Wealth Management, Bloomberg; data through 3/31/19

Trump administration has yet to determine whether it will impose tariffs on European automakers. Positive resolutions to these trade issues have become more important for the market now that economic momentum has slowed and the yield curve has inverted. Vigilance is warranted.

Canada

- Canadian banks reported generally weaker-than-expected fiscal Q1 results due to the impact of December's volatility on market-sensitive segments, higher-than-expected expenses, and higher-than-expected credit loss provisions. We are modestly Underweight the banks in our domestic equity model portfolios due in part to our outlook for rising credit provisions. This outlook is supported by a worsening in key variables used to assess potential loan losses, including RBC Capital Markets' forecasts for lower domestic GDP growth and higher unemployment coupled with falling local home prices in some markets.
- The lack of adequate crude oil pipeline capacity remains a focal point for equity investors and corporate capital allocators alike. While the federal government reviews the National Energy Board's decision

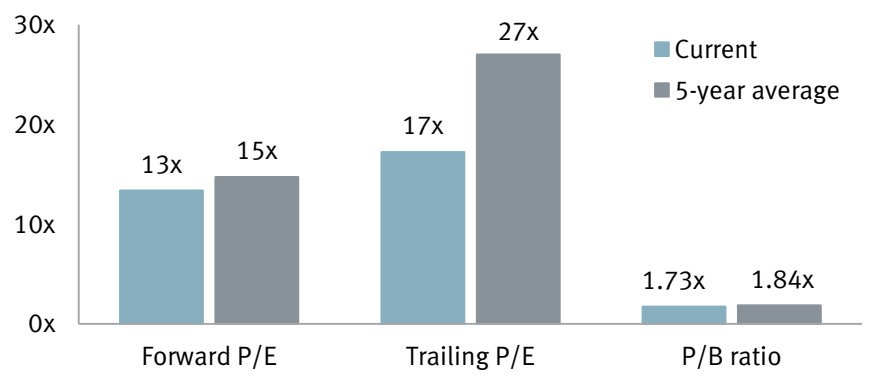
to approve the Trans Mountain Expansion Project (subject to 16 new conditions) and continues its consultations with First Nations, the expected timeline for completion of the Line 3 replacement in the U.S. Midwest has been delayed to H2 2020 from late 2019. The delay in the latter pipeline project and the result of the Alberta election set for April 16 could have implications for whether mandated production curtailments in the province are extended into 2020.

- Alberta is not the only jurisdiction set to go to the polls, as Canada faces a federal election to be held on or before October 21. With the SNC-Lavalin political controversy dogging the incumbent Liberals, recent polling data show the Conservatives holding a modest lead. Climate policy stands to be a key issue in the fall election with the federal carbon tax plan facing opposition from Saskatchewan, Ontario, and New Brunswick.

Continental Europe & U.K.

- At this stage, it is still unclear how the U.K. will leave the EU, its largest trading partner. So far, despite investment and business confidence retreating markedly, the labour market has held up well,

U.K. valuations appear modest



Note: Price-to-earnings (P/E) ratios and price-to-book (P/B) ratio
Source - RBC Wealth Management, Bloomberg; data through 3/31/19

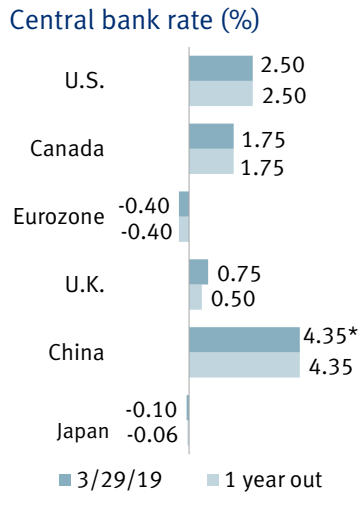
with unemployment reaching multi-decade lows. Still, the economy is operating much below its potential. The Bank of England (BoE) expects GDP growth of a mere 1.2% this year.

- Hamstrung by how the Brexit saga could play out, the BoE is staying on the sidelines for now, though it is itching to tighten policy. The pound remains vulnerable to Brexit headlines and would only likely sustainably strengthen in the eventuality of a second referendum.
- We maintain our Market Weight stance on U.K. equities due to attractive valuation levels. The FTSE All-Share Index's 2020E price-to-earnings ratio is a low 12.0x while the dividend yield exceeds 4.5%. We reiterate our long-standing bias towards exporters.
- European economic data is mixed, with some series pointing to stabilization and others suggesting there are still headwinds. The European Central Bank's recent announcement of a liquidity injection should help. For now, we continue to expect a growth recovery in the second half of the year. The STOXX Europe 600 ex UK Index is trading on a relatively modest 13.2x the 2020 consensus earnings forecast. We maintain our Market Weight positioning and would focus on Health Care and Industrials exposed to secular trends.
- Equity gains have been led by mainland China where, after a relentless decline in 2018 when equities fell to a multiyear low, the Shanghai Composite has already gained 24.5% in 2019. In our view, there is a reasonable likelihood this is a bear market rally. A U.S.-China trade deal that ticks all the boxes could alter that view. However, recent comments from the U.S. indicate that most, perhaps all, U.S. tariffs on Chinese imports will remain in place even if a trade deal is struck.
- Besides the trade situation, the Chinese economy continues to decelerate. There are more negative earnings estimates revisions than positive revisions in the equity market. Positively, the authorities continue to pay close attention to the slowdown and are engineering a soft landing via policy support, for example significant reductions to the value-added tax.
- We maintain a preference for Japan, although we also acknowledge that the TOPIX is sensitive to global leading economic indicators and the global growth environment at present is soft. Japanese equities are inexpensive. The TOPIX trades at a price-to-book ratio of 1.2x. Through the current cycle, it has mostly traded between 1.1x and 1.4x.

Asia

- The MSCI AC Asia Pacific Index was flat in March, after gains in January and February, and remains well below its record high reached in January 2018.

Paying attention to the yield curve (redux)



*1-yr base lending rate for working capital, PBoC
 Source - RBC Investment Strategy Committee, RBC Capital Markets, Global Portfolio Advisory Committee, RBC Global Asset Management

The June 2018 *Global Insight* included a [focus article on the yield curve](#) and the message it sends with regard to the economic outlook. Our view then was that flattening yield curves were something to pay attention to, but not of immediate concern. However, the last two weeks have seen an inversion of benchmark government bond yield curves (10-year/1-year maturities) in Canada and the U.S.—and the warning signs, in our opinion, shouldn't be dismissed.

Central banks throw in the towel

Central bank meetings in March were pivotal to the yield curve inversion we are now seeing, as slowing global economic growth led policymakers in the U.S., Canada, and Europe to execute sharp dovish policy pivots. For the U.S. Federal Reserve and the Bank of Canada this meant canceling rate hike plans for the foreseeable future, and for the European Central Bank pushing its first rate hike even further out on the calendar. But market expectations, which central banks have been following rather than leading recently, indicate a greater than 70% chance of a Fed rate *cut* by January 2020.

It's likely not different this time

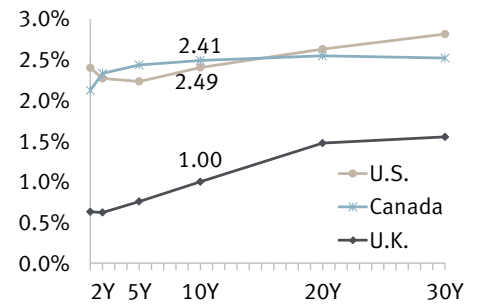
From time to time we see the predictive ability of key market indicators with long track records questioned when the message they are delivering doesn't fit a desired narrative, in this case that growth is just hitting a soft patch or that there may be "noise" in the data. But rather than a soft patch, we see the inversion as one more sign the late

Fixed income views

Region	Gov't Bonds	Corp. Credit	Duration
Global	=	+	5–7 yr
United States	=	+	5–7 yr
Canada	=	=	3–5 yr
Continental Europe	=	+	5–7 yr
United Kingdom	=	=	3–5 yr

+ Overweight = Market Weight – Underweight
 Source - RBC Wealth Management

Sovereign yield curves



Source - Bloomberg

stage of the economic cycle is upon us. Eric Lascelles, chief economist at RBC Global Asset Management, recently noted that 14 of 17 indicators he follows are clearly in late-stage territory. If we heed our own advice from last June, we would expect a recession within 12 to 14 months after the yield curve has inverted.

But if it were to be different ...

... what could happen? One might look to the late 1990s for direction, in our view, as there are some similarities to the current economic

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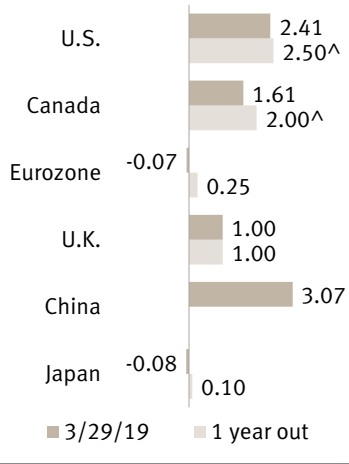
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10-year rate (%)



Note: Eurozone utilizes German Bunds.
 Source - RBC Investment Strategy Committee, RBC Capital Markets, Global Portfolio Advisory Committee, RBC Global Asset Management
[^]Under review

environment. Yield curves were either flat or modestly inverted but economic growth continued as the Fed stayed in neutral or supplied a little gas when needed, helping to engineer a soft landing for the economy. Such outcomes tend to be rare, however, and our fallback position remains that the yield curve is still one of the best market-based metrics for gauging the tightness of monetary policy and rising recession risks. The yellow caution signal is flashing, and the likelihood that interest rates have peaked for this cycle makes “reinvestment risk” a potential issue for investors attracted by short-term rates that equal or exceed long-term rates. As such, we recommend investors add duration to portfolios with a focus on high-quality assets.

Regional highlights

United States

- The Federal Reserve formalized its recent pledge to be patient, bringing down its rate hike forecast for 2019 to zero, down from the two expected following the December 2018 meeting. While the Fed did leave one more hike on the table in 2020, we believe the rate hike cycle is effectively over. Markets are pricing a

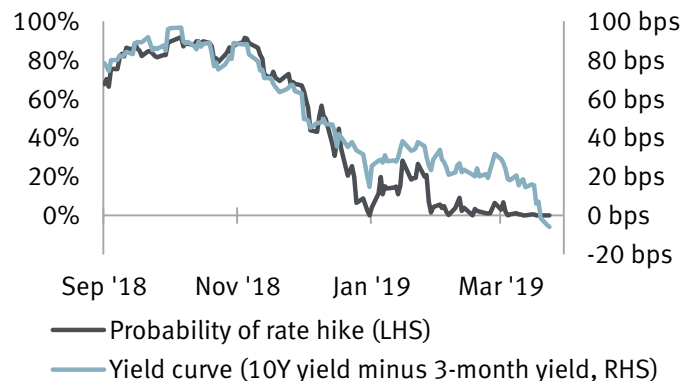
greater than 70% chance that the next move will be to cut rates within the next year.

- Following the Fed’s announcement, and on another round of global growth concerns, yield curves flattened and inverted for the first time since 2006. Investors may favor the short end of yield curves in this environment as there is little yield to be found by extending maturities, but doing so increases reinvestment risk should the Fed start cutting rates. We continue to recommend extending maturities, locking in current coupons and yields amid little risk that yields move higher.
- Credit investors should focus on credit quality. The yield on speculative-grade corporate bonds is just 3.91% over Treasuries, well below the 5.1% average since the last recession ended in 2009. With inverting yield curves signaling heightened recession risks, we continue to see better value in investment-grade bonds.

Canada

- The Bank of Canada followed other developed market central banks in March by putting monetary policy on pause. A domestic economy that is

The rate hike cycle is effectively over



The market sees the end of rate hikes as the yield curve flattens and inverts.

Source - RBC Wealth Management, Bloomberg; probability of at least one rate hike by the January 2020 meeting; data through 3/26/19

currently operating below capacity, combined with a more benign global growth outlook, provided persuasive rationale for the move. The government bond market has been increasingly pricing in the chances of the next move being a cut and the yield curve is now largely inverted, a sign the market views the somewhat coordinated dovish moves by developed market central banks as a little too late.

- We have known for a while that we are heading towards the later stages of the economic cycle, but the question remains whether we have reached the end of the cycle, as the bond market is beginning to suggest. Although we do not want to be dismissive of the yield curve inverting, we believe that one can just as easily build a case that the recent central bank pauses are temporary, and that the hiking cycle will resume in due course.
- In our view, conditions in Canadian fixed income argue for positioning portfolios for the more negative scenario. Fixed income allocations should be restricted to higher-quality issuers that offer good liquidity.

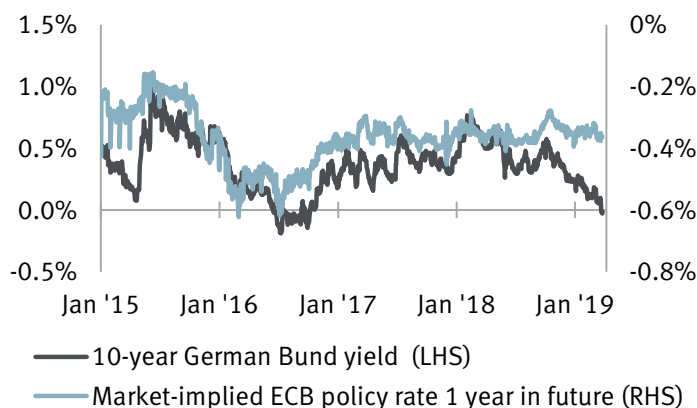
With lower-quality credits offering historically low extra yield, investors are leaving very little on the table to make switches.

Continental Europe & U.K.

Europe

- As concerns around moderating economic momentum play on the minds of central bankers, the European Central Bank (ECB) struck a similar dovish tone and downgraded both its growth and inflation forecasts for the next three years. This reinforces our view that the ECB is likely to maintain a policy of “lower for longer” as well as potentially follow a more gradual or shorter tightening cycle. With a new round of targeted longer-term refinancing operations (TLTRO) providing cheap funding for banks for the next four years and the ECB’s forward guidance extended into 2020, this will likely provide support for yields, which we expect to remain range-bound for now. Therefore, we maintain our Market Weight position in government bonds and modest Overweight in corporate credit.
- While recent risk-off moves have taken 10-year German Bund yields

10-year German Bund yields return to negative territory



We do not expect yields to remain at current levels as we anticipate growth fears diminishing later in the year.

Source - RBC Wealth Management, Bloomberg; data through 3/26/19

into negative territory for the first time since 2016, we do not expect yields to remain at current levels as we anticipate growth fears diminishing later in the year.

U.K.

- In the U.K., given the extreme political uncertainty and the potential for a leadership challenge to Prime Minister Theresa May, we anticipate Gilt yields will remain at low levels in the near term. We maintain our Market Weight view on government bonds with short-duration positioning but are closely watching the Brexit developments over the coming weeks. We also see the yield pickup in corporate credit as attractive, albeit on a selective basis, and reiterate our Market Weight allocation.

Asia

- China continues to send stronger signals to markets that it will make every effort to cushion its economic slowdown. After the announcement earlier this year of an additional cut in banks' reserve requirement ratio and the introduction of a central bank bills swap program to help banks replenish capital bases, Chinese Premier Li Keqiang announced further policies to stabilize growth and employment at the annual National People's Congress in March. China plans significant tax cuts to

stimulate its economy at the cost of incurring a higher budget deficit for 2019.

- Asia credit markets performed well in Q1, with high yield and investment grade delivering 7.8% and 4.1% returns, respectively, based on the J.P. Morgan Asia Credit Index, thanks to a dovish Federal Reserve and China's stimulus policy measures. Our preference for Asia high yield over investment grade has worked well so far, and we maintain our view at this stage despite the significant outperformance of high yield. Importantly, the reason for keeping this view has changed.
- When we moved to an Overweight position in Asia high yield in January, it was because valuations were compelling. Spreads had blown out in 2018, but we were still cautious about fundamentals. Now, both valuations and fundamentals give us reason to be positive. The high-yield market is not as cheap as it was, but it still offers value with a current yield of 6.8%.
- Fundamentally, the slew of policies by the Chinese authorities makes us more confident most corporates will be able to refinance maturing paper and that defaults will be contained and not contagious to the overall Asia credit market.

Currency forecasts

Currency pair	Current rate	Forecast Jun 2020	Change*
Major currencies			
USD Index	96.43	94.64	-2%
CAD/USD	0.75	0.75	0%
USD/CAD	1.33	1.33	0%
EUR/USD	1.14	1.18	4%
GBP/USD	1.32	1.34	2%
USD/CHF	1.00	1.00	0%
USD/JPY	111.4	118.0	6%
AUD/USD	0.71	0.67	-6%
NZD/USD	0.69	0.63	-8%
EUR/JPY	126.6	139.0	10%
EUR/GBP	0.86	0.88	2%
EUR/CHF	1.13	1.18	4%
Emerging currencies			
USD/CNY	6.70	7.50	12%
USD/INR	68.8	80.00	16%
USD/SGD	1.35	1.44	7%

* Defined as the implied appreciation or depreciation of the first currency in the pair quote.

Examples of how to interpret data found in the Market Scorecard.

Source - RBC Capital Markets, Bloomberg

U.S. dollar: Patience prevails

The U.S. dollar has been whipsawed by numerous developments thus far in 2019. The fluidity of trade progress with China, an ease in domestic growth momentum, and ongoing global risks have underpinned swings in the currency; however, a patient Fed points to limited upside for the dollar from here. An apparent policy pause and signs of improving growth conditions abroad could limit the attractiveness of the dollar through the remainder of 2019, in our view.

Euro: A dose of shock and awe

The European Central Bank caught financial markets off guard in March, sending the euro sharply lower against its G10 peers. A cautionary tone was widely expected by market participants, but it was details of a bank funding package that appeared to trigger investor fears of a protracted slowdown. Near-term growth prospects remain subdued; however, the euro could trend modestly higher with growth fears poised to diminish through 2019, in our view.

British pound: Kicking the (Brexit) can

Ongoing Brexit drama has meant a bumpy path for the British pound, although it is the best-performing G10 currency so far in 2019, admittedly from a very low base. Shifting sentiment towards the U.K. avoiding a

no deal exit at the end of March abetted sharp swings in the currency. Despite the request of extending Article 50 having been granted, the default outcome remains a cliff-edge exit if common ground on a way forward is not found. This uncertainty points to the pound remaining at depressed levels until greater clarity on the outcome emerges.

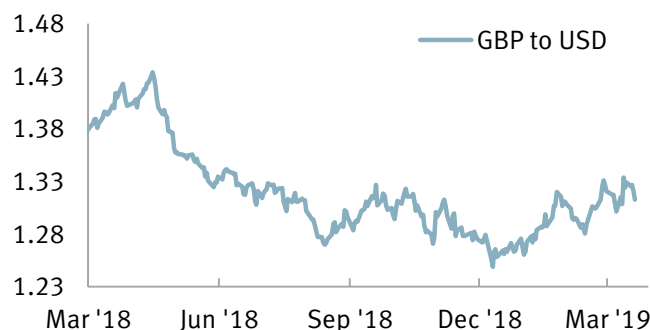
Canadian dollar: Headwinds

The Canadian dollar plunged over the span of a few days in early March to nearly erase its year-to-date gains. A sharp growth slowdown in Q4 2018 triggered the selloff, aggravated by the Bank of Canada warning of “increased uncertainty” on the timing of future rate hikes. A pause in policy tightening alongside a muted oil price outlook points to the currency remaining relatively range-bound in 2019, in our view.

Japanese yen: Grinding lower

The yen has steadily ground lower against the U.S. dollar so far this year. Renewed risk appetite alongside market optimism for U.S.-China trade progress saw investors shy away from the safe-haven currency. Signs that the Bank of Japan could embark on further monetary stimulus could keep pressure on the yen; however, bouts of risk-off sentiment are likely to provide an offset and keep us neutral on the outlook for the yen.

The ongoing Brexit saga makes for a bumpy ride for the British pound



Sterling is poised to continue to take guidance from Brexit developments.

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Source - Bloomberg, RBC Wealth Management; data through 3/21/19

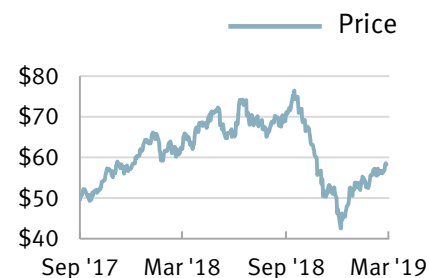
Commodity forecasts

	2019E	2020E
Oil (WTI \$/bbl)	\$55.85	\$64.00
Natural Gas (\$/mmBtu)	\$3.00	\$2.75
Gold (\$/oz)	\$1,300	\$1,300
Copper (\$/lb)	\$2.63	\$3.00
Soybean (\$/bu)	\$9.40	\$9.70
Wheat (\$/bu)	\$5.00	\$4.93

Source - RBC Capital Markets forecasts (oil, natural gas, gold, and copper), Bloomberg consensus forecasts (soybean and wheat)

Oil — WTI: New No. 1 in town

Saudi Arabia will extend its March production cut of 500,000 bbl/day into April. President Trump urged OPEC to “take it easy,” to which the Saudis responded that OPEC and its partners are taking a slow and measured approach. No significant change in policy is expected at the next OPEC meeting on April 17. Fresh from regaining the No. 1 producer status, according to the IEA, the U.S. will also become the world’s largest exporter of crude by 2024.



Natural gas — Off to the races

A drawdown in U.S. inventories and colder-than-expected weather contributed to higher pricing, up approximately 8% m/m. The EIA believes North American production will set record highs through 2019 and 2020, outpacing domestic demand. At the same time, Qatar is committed to growing its LNG capacity by more than 40% to 110 mtpa by 2024. With warmer weather around the corner and large supply increases coming over several years, we see limited upside for prices.



Copper — Rosemont is red, violets are blue

Copper prices are up about 3% m/m, driven by China’s two trillion yuan tax package and infrastructure spending plans as well as a more dovish Federal Reserve. On the supply front, the Rosemont Project in Arizona received its long-awaited water permit in March. Upon commissioning, RBC Capital Markets believes it will take approximately three years to reach peak production. On balance, we look for copper to be in modest surplus until 2023.



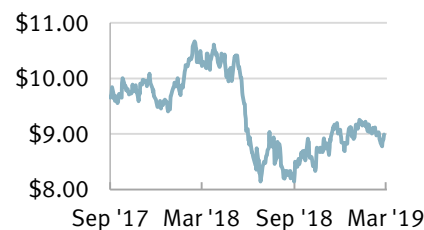
Gold — Slight pullback, but still constructive

Gold prices have retreated back to the \$1,300 level after breaching a high of roughly \$1,340 YTD. With no significant new supply on the horizon, slow-but-steady increases in end-use demand, and a constructive macro backdrop—dovish comments from central bankers, Brexit uncertainty, and U.S.-China trade risks—RBC Capital Markets sees prices as being well supported at these levels.



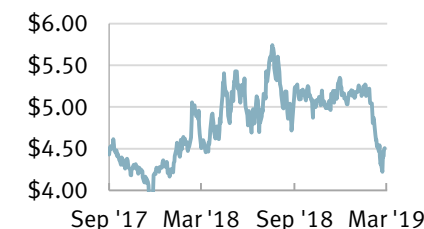
Soybeans — Is it too late to say soy-ry?

Global soybean stocks came in at 107.2 million tonnes (consensus at 106.6 million tonnes) at the end of February. Price action has been fairly muted. Farmers continue to closely monitor U.S.-China trade negotiations as they approach the planting season. China proposed to purchase an additional \$30B per year of U.S. agricultural products as part of a possible trade deal. Prior to the trade dispute, China’s agricultural imports from the U.S. were about \$20B per annum.



Wheat — Growing inventories

The outlook for wheat is slightly more bearish following a 3 million tonne increase in global inventories m/m. India’s upward revision of ending stocks led to a 5 million tonne reduction in the USDA’s global consumption estimate for the 2018/2019 period. In addition, U.S. inventories are expected to rise on increased export competition and reduced domestic usage. Prices are down roughly 11% m/m and 9% y/y.

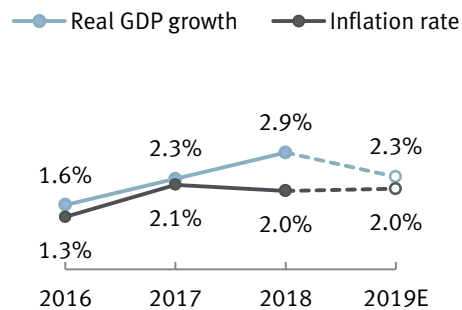


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Source - RBC Wealth Management, Bloomberg; date range: 9/19/17–3/15/19

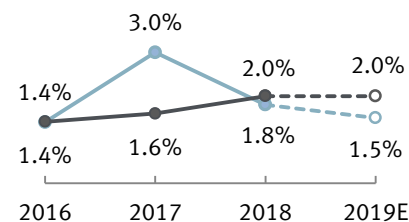
United States — Inverted yield curve

The Fed's March meeting confirmed dovish comments. FOMC members signaled no further rate hikes for 2019. The yield curve subsequently inverted with the 3-month Treasury yield rising higher than the 10-year Treasury yield, sparking fears of a recession. Hiring slowed to just 20,000 in February, from January's blockbuster 311,000; however, jobless claims data show no signs of cracks in the labor market. Q4 GDP was revised lower to 2.2% from 2.6%; Q1 2019 GDP estimates are trending at 1.5% q/q.



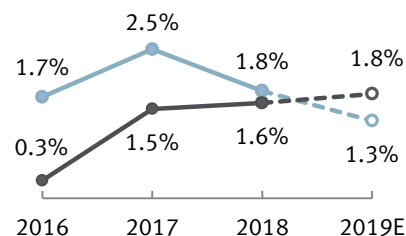
Canada — Reaccelerating wage growth

In lockstep with the Fed, the BoC has signaled a pause from hiking interest rates given mounting concerns over slower global growth and softening inflation in Canada with a robust 56,000 new jobs added in February while wages accelerated to 2.2% y/y, above the 2.0% y/y inflation rate. If it persists, this should help households manage the rising cost of debt, which continues to sit at record levels.



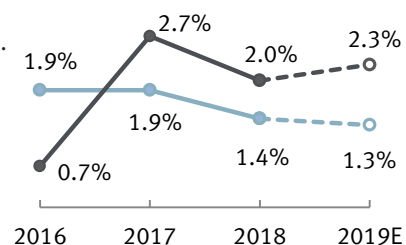
Eurozone — Bank mergers dominate

10-year German Bund yields returned to negative territory in March after the Manufacturing PMI collapsed further into recessionary territory. The European Central Bank took a dovish tone and markets anticipate no rate hikes in 2019. The negative interest rate policy has hurt bank profitability, with banks struggling to return to pre-financial crisis profit levels; merger talks continue to dominate the region with the two largest German banks in discussions.



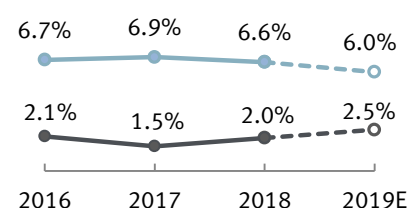
United Kingdom — Brexit uncertainty

Brexit uncertainty continues to weigh on the economy, with U.K. PMIs remaining subdued at levels that point towards a tepid expansion. While some businesses make plans to relocate out of the U.K., British citizens are also nervous about a chaotic departure from the EU, with consumer credit growth slowing to the weakest pace in over four years, and increasing deposits into interest paying accounts. Interestingly, retail sales data reaccelerated to 4.0% y/y.



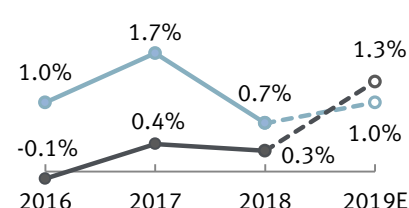
China — Signs of stability

While trade disputes with the U.S. have been weighing on China's economy, Chinese and U.S. negotiators have been working line-by-line through the text of an agreement. With an estimated \$360B in duties imposed on each other's imports, both countries are eager to strike a deal. Meanwhile, a record RMB 2T (\$297B) tax cut and improved supply of credit to small business appear to be stabilizing local economies.



Japan — Optimistic for the second half

Japan's industrial production rose 0.4% m/m in February but not enough to signal a turnaround from months of declines amid a softening of global tech demand and a slowdown in China, the nation's biggest trading partner. The Bank of Japan recently downgraded GDP estimates based on the negative impact of softer global demand; however, the Bank remains hopeful momentum will pick up in the second half, especially in the run-up to the sales tax hike in October.



Source - RBC Investment Strategy Committee, RBC Capital Markets, Global Portfolio Advisory Committee, RBC Global Asset Management

Market scorecard

Index (local currency)	Level	1 month	YTD	12 month
S&P 500	2,834.40	1.8%	13.1%	7.3%
Dow Industrials (DJIA)	25,928.68	0.0%	11.2%	7.6%
NASDAQ	7,729.32	2.6%	16.5%	9.4%
Russell 2000	1,539.74	-2.3%	14.2%	0.7%
S&P/TSX Comp	16,102.09	0.6%	12.4%	4.8%
FTSE All-Share	3,978.28	2.3%	8.3%	2.2%
STOXX Europe 600	379.09	1.7%	12.3%	2.2%
EURO STOXX 50	3,351.71	1.6%	11.7%	-0.3%
Hang Seng	29,051.36	1.5%	12.4%	-3.5%
Shanghai Comp	3,090.76	5.1%	23.9%	-2.5%
Nikkei 225	21,205.81	-0.8%	6.0%	-1.2%
India Sensex	38,672.91	7.8%	7.2%	17.3%
Singapore Straits Times	3,212.88	0.0%	4.7%	-6.3%
Brazil Ibovespa	95,414.55	-0.2%	8.6%	11.8%
Mexican Bolsa IPC	43,281.28	1.1%	3.9%	-6.2%
Bond yields	3/31/19	2/28/19	3/30/18	12 mo. chg
US 2-Yr Tsy	2.260%	2.514%	2.266%	-0.01%
US 10-Yr Tsy	2.405%	2.715%	2.739%	-0.33%
Canada 2-Yr	1.549%	1.780%	1.775%	-0.23%
Canada 10-Yr	1.617%	1.942%	2.091%	-0.47%
UK 2-Yr	0.642%	0.827%	0.823%	-0.18%
UK 10-Yr	1.000%	1.302%	1.350%	-0.35%
Germany 2-Yr	-0.602%	-0.519%	-0.602%	0.00%
Germany 10-Yr	-0.070%	0.183%	0.497%	-0.57%
Commodities (USD)	Price	1 month	YTD	12 month
Gold (spot \$/oz)	1,292.30	-1.6%	0.8%	-2.5%
Silver (spot \$/oz)	15.12	-3.1%	-2.4%	-7.6%
Copper (\$/metric ton)	6,486.50	-1.1%	9.0%	-2.9%
Uranium (\$/lb)	20.90	-0.5%	-12.6%	-7.7%
Oil (WTI spot/bbl)	60.14	5.1%	32.4%	-7.4%
Oil (Brent spot/bbl)	68.39	3.6%	27.1%	-2.7%
Natural Gas (\$/mmBtu)	2.66	-5.3%	-9.5%	-2.6%
Agriculture Index	273.20	-1.8%	-3.8%	-7.5%
Currencies	Rate	1 month	YTD	12 month
US Dollar Index	97.2840	1.2%	1.2%	8.1%
CAD/USD	0.7491	-1.3%	2.2%	-3.4%
USD/CAD	1.3349	1.3%	-2.1%	3.5%
EUR/USD	1.1218	-1.3%	-2.2%	-9.0%
GBP/USD	1.3035	-1.7%	2.2%	-7.0%
AUD/USD	0.7096	0.0%	0.7%	-7.6%
USD/JPY	110.8600	-0.5%	1.1%	4.3%
EUR/JPY	124.3500	-1.8%	-1.2%	-5.1%
EUR/GBP	0.8606	0.4%	-4.3%	-2.1%
EUR/CHF	1.1164	-1.6%	-0.8%	-5.0%
USD/SGD	1.3557	0.3%	-0.5%	3.4%
USD/CNY	6.7121	0.3%	-2.4%	7.0%
USD/MXN	19.4279	0.8%	-1.1%	6.9%
USD/BRL	3.9205	4.4%	1.2%	18.6%

The global stock market's year-to-date rally is showing signs of fatigue, stalling out in March.

German 10-year Bund yields are in negative territory for the first time since 2016 following weak eurozone economic data.

Oil saw its best quarterly gain since 2009 as OPEC curbs production to clear excess inventory.

The greenback continued to rally amid deteriorating economic outlooks for Europe and Japan.

Equity returns do not include dividends, except for the Brazilian Ibovespa. Equity performance and bond yields in local currencies. U.S. Dollar Index measures USD vs. six major currencies. Currency rates reflect market convention (CAD/USD is the exception). Currency returns quoted in terms of the first currency in each pairing. Examples of how to interpret currency data: CAD/USD 0.74 means 1 Canadian dollar will buy 0.74 U.S. dollar. CAD/USD -3.4% return means the Canadian dollar has fallen 3.4% vs. the U.S. dollar during the past 12 months. USD/JPY 110.86 means 1 U.S. dollar will buy 110.86 yen. USD/JPY 4.3% return means the U.S. dollar has risen 4.3% vs. the yen during the past 12 months.

Source - RBC Wealth Management, RBC Capital Markets, Bloomberg; data through 3/31/19.

Research resources

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