

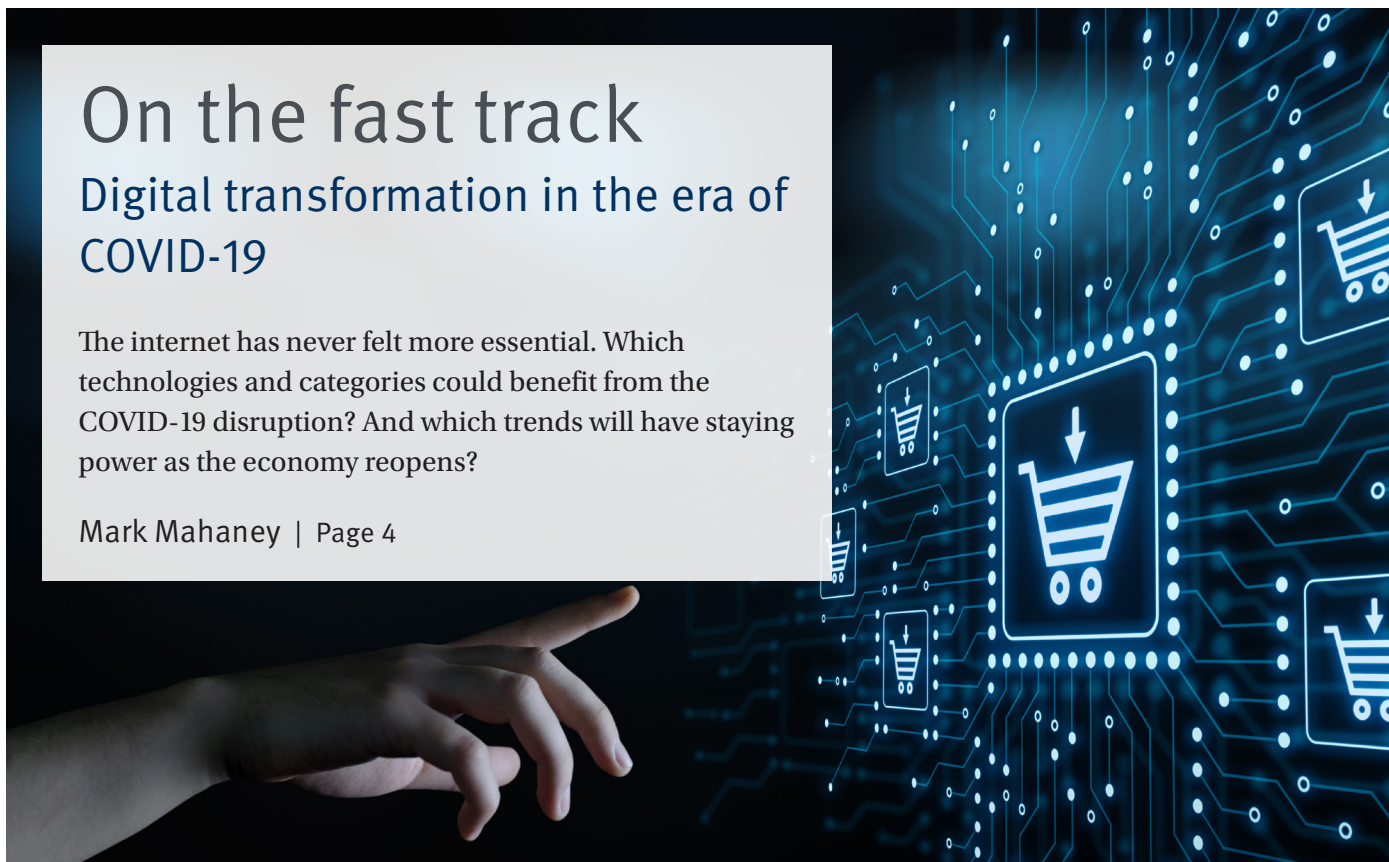
# Global Insight

Perspectives from the Global Portfolio Advisory Committee

## On the fast track Digital transformation in the era of COVID-19

The internet has never felt more essential. Which technologies and categories could benefit from the COVID-19 disruption? And which trends will have staying power as the economy reopens?

Mark Mahaney | Page 4



Global equity  
Invested, but not fully invested



Global fixed income  
Central banks enter the next phase



Key forecasts

For important and required non-U.S. analyst disclosures, see page 15.  
Produced: June 1, 2020 14:11ET; Disseminated: June 2, 2020 8:00ET

Investment and insurance products offered through RBC Wealth Management are not insured by the FDIC or any other federal government agency, are not deposits or other obligations of, or guaranteed by, a bank or any bank affiliate, and are subject to investment risks, including possible loss of the principal amount invested.



Wealth  
Management

# Table of contents

## **4 On the fast track: Digital transformation in the era of COVID-19**

The COVID-19 disruption has hammered home that necessity is the mother of invention. We asked Mark Mahaney, top-ranked internet analyst from RBC Capital Markets, what impact the COVID-19 crisis is having on the internet sector.

## **8 Global equity: Invested, but not fully invested**

While long-term equity values are attractive, the nearer-term picture still entails some outsized risks for the economy and earnings. We think the way to reconcile this divergence is to carry equity exposure that is modestly below benchmark.

## **10 Global fixed income: Central banks enter the next phase**

Though central banks have already waded into new waters in various respects, we largely see them sticking to the scripts they have already written, with the trajectory of the global recovery dictating the need for new pages.

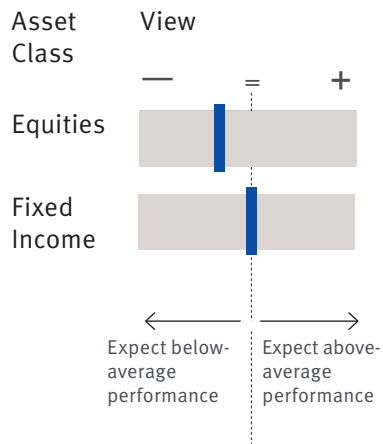
### **Inside the markets**

- 3 RBC's investment stance
- 8 Global equity
- 10 Global fixed income
- 12 Key forecasts
- 13 Market scorecard

All values in U.S. dollars and priced as of market close, May 29, 2020, unless otherwise stated.

# RBC's investment stance

## Global asset views



See “Views explanation” below for details

Source - RBC Wealth Management

## Equities

- The COVID-19 news flow has improved markedly in the developed world over the past few weeks, with the number of deaths as well as new cases falling and some progress on possible treatments and vaccines announced. Most countries are gradually reopening their economies, and signs of improvement are appearing. Reassuringly, monetary and fiscal authorities remain committed to providing financial support where needed.
- Yet several challenges remain. Certain sectors of the economy will remain under severe strain for months to come, while the swelling ranks of newly unemployed workers may struggle to find work. We continue to expect the recovery will be slow, long, and uneven.
- With stock markets having staged a strong recovery already, valuations full in key regions, and much uncertainty remaining, we believe it is prudent, while remaining invested, to hold a slightly Underweight position in equities.

## Fixed income

- The Fed’s efforts to soothe financial markets since March have proven successful. Volatility in the Treasury market remains at the lowest levels of the year, with the Fed’s balance sheet having expanded beyond \$7 trillion. Though higher-than-normal economic risks will be a feature for some months to come, current market levels still offer an attractive risk/reward profile for investors across a number of fixed income sectors, specifically in corporate credit.
- We maintain our Market Weight in global fixed income. Though global yields are historically low, we think they should remain steady around current levels. With markets already priced for a short recession, we maintain a broad Overweight to corporate credit.

## 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.



**Mark Mahaney**  
RBC Capital Markets, LLC  
San Francisco, United States

# On the fast track

## Digital transformation in the era of COVID-19

The COVID-19 disruption has hammered home that necessity is the mother of invention. We asked Mark Mahaney, top-ranked internet analyst from RBC Capital Markets, LLC, what impact the COVID-19 crisis is having on the internet sector. Which technologies and categories could benefit? Which could lose out? And which trends will have staying power as the economy reopens?

(This article is a condensed transcript of an [audio commentary](#) released on May 13, 2020)

- The pandemic has highlighted the competitive edge that digital platforms can provide and online distribution seems to be a structural winner from the crisis.
- The shift to online distribution has received new impetus due to this crisis and we believe this trend is here to stay.
- Ride-sharing companies were deeply affected by the crisis, but a snapback is already becoming apparent.
- Regulatory risk for the internet sector, which used to be a main concern, is on the back burner for now.

**Global Insight:** Mark, as many people find themselves working from home, ordering groceries and other essentials, and binge-watching TV series, all online, it has occurred to them that they—and presumably others—are relying on the internet much more than before the crisis. **Are all internet-related businesses benefiting from this surge in activity?**

**Mark Mahaney:** You're right, this has been a huge shock to systems, economies, and social patterns. Here are some of the things we've learned from the crisis.

First, almost no internet stock, even the most digital, is immune from the kind of social and economic dislocation that has been caused by the COVID-19 crisis. Of the 39 internet companies we cover, only a small handful have experienced material positive revisions to 2020 revenue estimates in the wake of the crisis. And slightly more than half of these companies have suffered 10 percent or greater negative revisions to 2020 revenue estimates.

Said another way, at the beginning of the year the median consensus revenue growth expectation for the internet sector was 21 percent, according to FactSet; it is now eight percent.

Mark Mahaney is a Managing Director covering the internet sector at RBC Capital Markets. Mr. Mahaney has been ranked No. 1 in the Institutional Investor Poll for the internet sector (2008–2012). He has also been ranked No. 1 in the Greenwich Institutional Investor Poll for the internet sector, as well as the No. 1 earnings estimator and the No. 1 stock picker in the internet retail segment by the Financial Times and StarMine.

The categories that have been hit the hardest have been travel, ride-sharing, event ticketing, real estate, and advertising.

That said, a second key point is there are clearly a few categories of structural winners such as online retail and online food delivery.

Other segments that are really benefiting are those that offer cloud services and a digital presence. Small businesses, local services, or retail companies that find themselves without a digital presence are facing the prospect of no or much lower revenues for a number of months. This has created an impetus to make sure a web presence is part of their core strategy.

The third takeaway is that internet advertising has been negatively impacted—but not equally. Many companies have disclosed a material increase in usage on their platforms, but almost all also experienced a major deceleration in their ad revenue growth rates.

Predictably, the giants are proving to have the most resilient ad platforms. Why? Because they offer marketers the greatest reach and frequency in terms of audience—billions of daily users.

Because the ad marketplace is based on auction dynamics, prices can immediately correct and rebalance to meet and generate marketer demand. Also, no one would question a decision to buy ads on these huge industry-leading platforms, in our view. All these were reasonable assumptions going into the COVID-19 crisis, and they were all proved correct.

Fourth, online retail names have been positively impacted, for the most part equally. But at the same time, in a crude way, this pandemic has become an advertisement for the benefits and necessities of online retail.

Certain categories such as groceries, health care, home office supplies, distance learning, and home fitness have all experienced a spike in demand. There has been strength even among categories that would be considered highly discretionary such as fashion & apparel.

Our own Grocery Survey report supported this dramatically accelerated adoption. Yet we believe this adoption has been broad-based across all online retail verticals.

Fifth, the companies that have been negatively impacted have focused on cost management and liquidity in a way I've not seen in a while. More capital has been raised to shore up the balance sheet in the last month than we've seen in two or three years.

**The world has changed in ways we never thought possible over the last three months. You have been researching companies for a long time and have seen other paradigm shifts with consumer spending, advertising, and travel following the 9/11 attacks and the Great Recession. How quickly can consumer spending rebound or consumers' willingness to travel return?**

---

We have definitely seen a shift in how consumers want to spend. I would expect that they will get back to normal spending patterns at the very end of this year or sometime in 2021.

I'm most struck by the way travel is likely to be the most delayed recovery category as well as by how much and how rapidly retail has shifted to online. The latter has been a two-decade phenomenon, but it's clearly accelerating due to this crisis.

And it's not just necessities, groceries, and personal care, but across the board: for example, home office supplies, home fitness equipment, and consumer discretionary categories such as fashion & apparel.

When people go back to work, they may cut back on their online shopping somewhat, but I think the overall trend is going to be there as we've had this accelerated adoption of the online retail channel.

To me, that's going to be one of the biggest structural changes that comes out of this crisis.

**So let's focus on online grocery shopping. Certainly, it has taken off during the COVID-19 pandemic. Many more people are utilizing pickup at curbside as well as delivery. Do you think this will remain a part of life once the crisis passes?**

---

I think so. We hosted a call with the president of Instacart, a private company in the online grocery space. The company has seen in weeks an acceleration in online grocery adoption that it thought would take years to occur. That company had to hire 300,000 individuals, more than doubling its employee base. Amazon has talked about building out its capacity by 60 percent in order to meet grocery demand.

Whether this surge in demand for online groceries is permanent or not, I don't think that the acceleration in online grocery adoption will reverse. A lot of people needed to become comfortable with the idea of safely and effectively purchasing groceries from home.

My view is that most people have had a positive experience and will continue to do it once the crisis passes.

**Ride-sharing companies have obviously changed our lives in many ways over the past few years. Will this concept be able to weather consumers worried about contagion?**

---

There has been a dramatic reduction in ride-sharing usage during the pandemic, as sharp as in travel and live events, which have suffered a decline in demand of between 80 percent and 90 percent year over year.

If we can't leave our homes it undercuts the basic value proposition of ride-sharing, which is inexpensive and effective mobility. My view is that demand comes back relatively quickly.

A few data points give us an indication. Uber, on its earnings call in early May, said that in states that have opened up such as Georgia and Texas, it has already seen a 40 percent to 50 percent increase in ride volume. That is off the bottom; rides are still down some 60 percent year over year—a dramatic reduction but you've seen a snapback.

For many, health risks associated with ride-sharing are preferable to those of public transportation. There will be extra costs for the ride-sharing companies to ensure that those cars are reasonably hygienic, but I think demand snaps back relatively quickly for ride-sharing.

**There has been a lot of concern about increased regulation for big tech. Is that still an issue?**

---

It's certainly on the back burner for now, but it will probably come back as an issue, perhaps in a year or two, and over that period, the U.S. presidential election could also have a major impact on what happens to the regulatory risk.

**Is there one trend that you believe our clients must keep their eyes on for the next year, or even for the long term?**

---

We've had an acceleration in the adoption of all things digital. This unfortunate crisis has highlighted and elevated the importance of digital platforms, whether for consumers who need to provide for themselves at home, educate, and entertain, or for small businesses that need to reach customers, market and deliver to them, and provide for them while physical facilities are shut down.

*Mark, thank you so much for your time and insights. For our readers, if you have an interest in learning more about Mark's recommendations, please reach out to your RBC advisor.*

# Invested, but not fully invested

Within a global balanced portfolio we would carry equity exposure that is modestly below benchmark. This stance reflects our thinking on two factors:

- 1) Long-term share values are attractive but not mouth-wateringly compelling today.
- 2) The nearer-term picture still entails some outsized risks associated with the eventual path of the pandemic as well as the vulnerability of the recovery to unanticipated shocks.

Price-to-earnings (P/E) ratios are not very helpful when the economic downturn and downward earnings estimate revisions are still in full flood, when one recognizes that stock markets are looking a year or more ahead to when a recovery is expected to be underway and earnings appreciably higher. A valuation method that minimizes this distortion is one that calculates the net present value of all the future earnings of the stock market (or an individual business) and sets that as fair value.

RBC Global Asset Management has done that calculation and concludes that the permanent loss of value for the S&P 500 due to the COVID-19 episode will turn out to be in the neighbourhood of five percent. Among other things, that assumes earnings endure a significant drop this year, improve but don't get back to their 2019 peak in 2021, and don't get back to where they would have been without the pandemic until 2024.

At one point the S&P 500 Index was down 35 percent from its peak. As of this writing, that gap has narrowed to just 10

## Equity views

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

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

percent. That leaves the market, looked at from a net-present-value-of-all-future-earnings perspective, trading not far off its fair value.

When we shift our focus to the next 6–12 months, we are aware of some outsized risks that might deepen or widen the economic/earnings valley we are trying to get beyond.

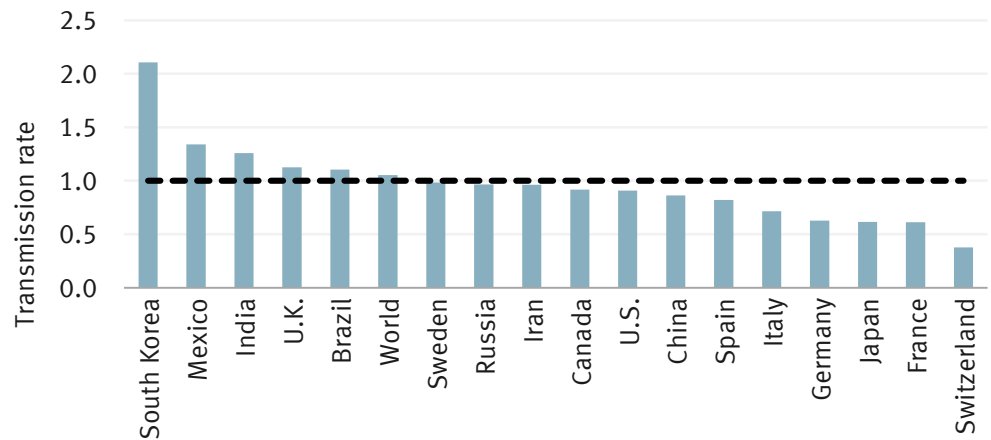
Some have to do with the pandemic itself. While it's heartening that the number of daily new cases seems to be in decline in every developed economy, there are concerns that a too-rapid reopening could produce a renewed surge in infection rates.

It is good news that at last count, globally there are at least eight new possible vaccines headed for or already in clinical trials, three of which are backed by major pharmaceutical giants. But it has to be said that so far we know very little about the efficacy or safety of any of these potential vaccines. They are just the furthest along of any of the dozens under development. Nor do we know whether those who have been infected by the virus

**Jim Allworth**  
Vancouver, Canada  
jim.allworth@rbc.com



Transmission rate above one suggests continued growth (based on new cases)



Note: Transmission rate calculated as 7-day percentage change of underlying 5-day moving average of new daily cases.  
 Source - European Centre for Disease Prevention and Control (ECDC), Macrobond, RBC Global Asset Management; data as of 5/28/20

and recovered are now immune. And if they are, for how long?

The pandemic could go on pitching curveballs for some time to come. It has already thrown a doozy—how do you restart an economy that has been arbitrarily shut down? Telling businesses they can reopen and employees they can go back to work doesn't mean they will. It remains an open question whether the massive injections of stimulus by governments and central banks around the world will have the desired effects and for how long. How do you reel the stimulus back in once it's no longer needed or effective? Could it produce problematic distortions in the economy down the road?

We believe some of these questions will be answered over the next few quarters. For our part, we expect a measurable improvement in GDP growth throughout the developed economies starting in Q3. Momentum will likely build further in Q4 and throughout 2021, with most economies regaining their 2019 peaks by 2022. We also expect the path the recovery takes will prove to be uneven and

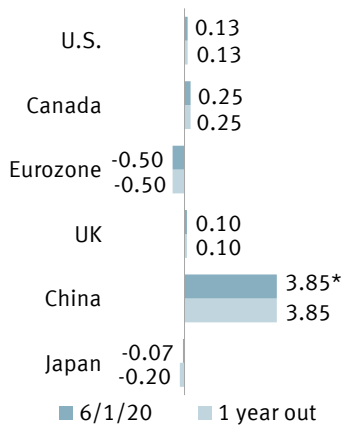
uncomfortable to experience. Confidence that the economy is once again on a sustainable footing will probably take far longer to build than the economy takes to achieve that state.

The stock market rally since March suggests investors have put fears of an open-ended economic downturn to one side for now. We believe they have been persuaded by the avalanche of fiscal and monetary support which arrived and, in particular, by the related collapse in corporate bond yields which took away the threat of a destructive credit crunch and allowed P/E multiples to rise.

A revival in GDP and earnings growth more or less along the path we have outlined should permit investor focus to shift back to the prospect for the long-term appreciation of the value of businesses. We think the proper way to reflect these prospects in a global equity portfolio today, while acknowledging the lingering risks that adverse pandemic/reopening developments still pose, is to be invested, but not fully invested. We recommend a modestly-below-benchmark exposure to equities.

# Central banks enter the next phase

Central bank rate (%)



\*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

We expect that central banks, having pulled out all of the stops since March, will now shift their focus to what comes next, and what more can be done, with major meetings scheduled this month.

The Federal Reserve has not published its quarterly Summary of Economic Projections since the December 2019 meeting, opting to forgo the March edition given monumental uncertainty. Therefore, we think the June 9–10 meeting will offer the first formal glimpse in nearly six months at how the Fed sees the economy developing.

While little of the uncertainty has faded, Federal Reserve Chair Jerome Powell has warned of a shallow economic recovery that could extend through 2021, which is likely to be reflected in the Fed's projections. Its forecast period will extend through 2022, a time in which we expect unemployment to remain high, the economic recovery to be uncertain,

## Fixed income views

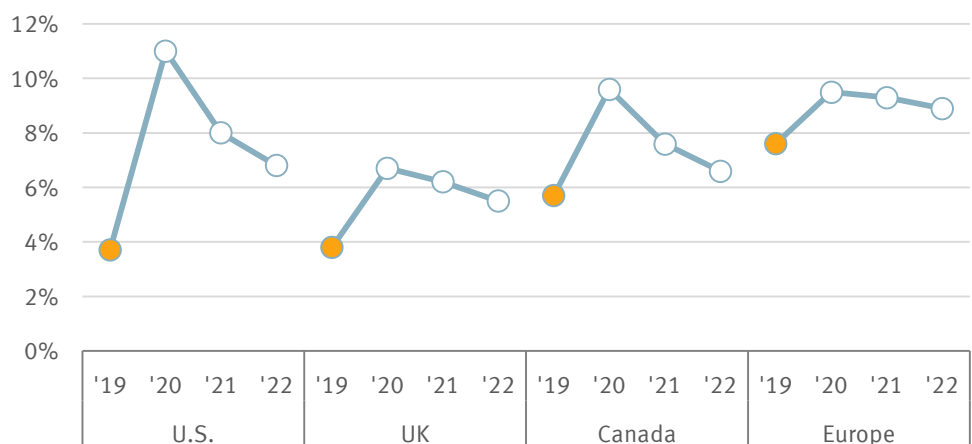
Region	Gov't Bonds	Corp. Credit	Duration
Global	=	+	5–7 yr
United States	+	+	7–10 yr
Canada	=	+	3–5 yr
Continental Europe	=	+	5–7 yr
United Kingdom	–	=	3–5 yr

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

inflation below target, and ultimately for the Fed's forecast for interest rates to remain at 0%.

And with a slower recovery expected, markets have begun to price some chance the Fed might eventually turn to negative interest rates, but Powell again pushed back against the notion, stating that “the committee's view on negative rates really

## Unemployment projected to remain above 2019 levels



Source - RBC Wealth Management, Bloomberg Consensus Survey for May

**Thomas Garretson, CFA**  
Minneapolis, United States  
tom.garretson@rbc.com

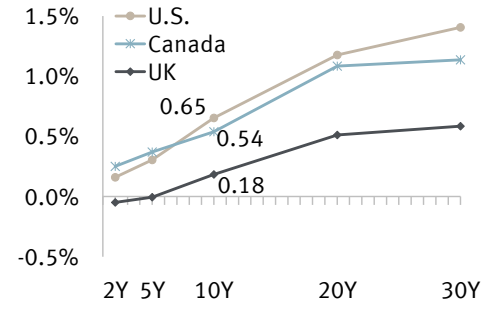
# Global fixed income

has not changed. This is not something we're looking at."

The same can't be said for the Bank of England where, for possibly the first time, an official stated something more accepting of the idea of negative interest rates, though it was stressed that it is not the main policy choice being considered. The next step will be to expand the quantitative easing program. We expect a similar approach from the European Central Bank this month to pair with its updated macroeconomic projections that are likely to show fading V-shaped economic recovery expectations.

Though central banks have already waded into new waters in various respects, we

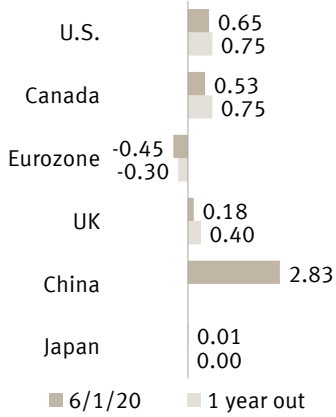
## Sovereign yield curves



Source - Bloomberg; data through 5/31/20

largely see them sticking to the scripts they have already written, with the trajectory of the global recovery dictating any need for new pages.

## 10-year rate (%)



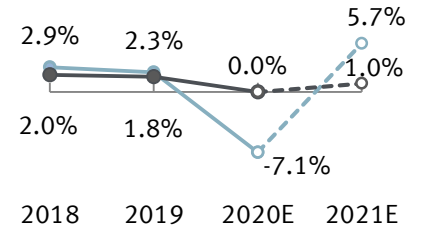
Note: Eurozone utilizes German Bunds.

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

— Real GDP growth — Inflation rate

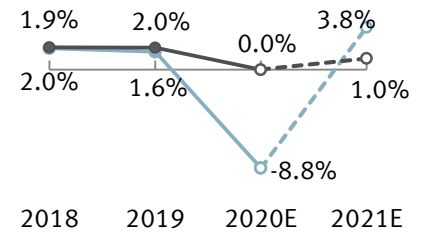
## United States – Retail sales plunge

COVID-19 took a heavy toll in May. Unemployment claims topped 40 million in about 10 weeks. Retail sales plunged 16.4% as the pandemic shuttered business, spurred layoffs, and kept Americans at home. Durable goods orders reflect a sharp pullback in consumer demand and business investment. The CARES Act injected some positive momentum into the economy, sending sentiment unexpectedly higher.



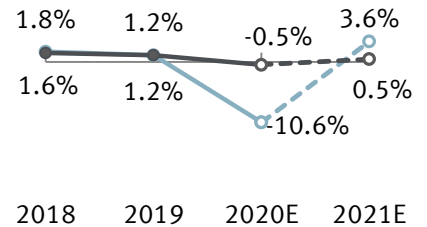
## Canada – Unemployment rate surges

The unemployment rate almost doubled from the previous reading as it climbed to 13.0%, a year after hitting an all-time low of 5.4%. Q1 GDP contracted at an 8.1% annualized rate. Q2 will be worse but expected to mark the bottom. The BoC began use of QE—a tool it did not resort to following the financial crisis—starting purchases of CA\$5 billion weekly in Government of Canada securities.



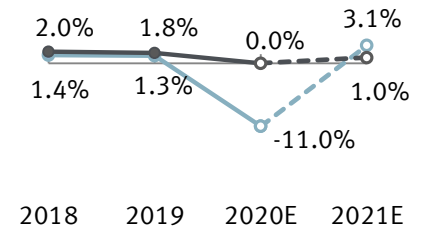
## Eurozone – Banks under stress

Investor confidence picked up slightly in May from April's all-time low. Manufacturing also improved but remains deep in contraction. GDP sagged by a record 3.8% in Q1 while employment declined by 0.3%, the first drop since 2013. The ECB noted that the “deep recession” has exposed new risks to the financial system, which could cause heavy stress on banks and hamper their ability to support economic recovery.



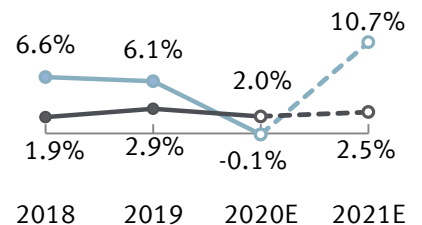
## United Kingdom – Consumer weakness

UK retail sale volumes fell 18% in April signaling the economy could contract as much as 17% in Q2. According to RBC GAM, the British economy is expected to contract 7% in 2020, with a partial rebound expected during the second half of the year due to Treasury and Bank of England intervention. Manufacturing and services PMIs improved in May but remain in contraction territory. Brexit negotiations complicated by economic disarray.



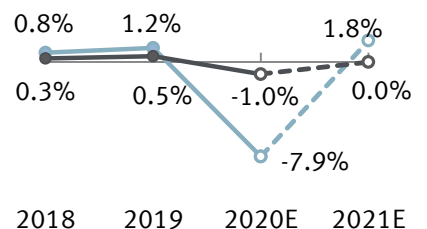
## China – Moderate improvement

China's manufacturing sector continues to ramp up, but global demand is not yet keeping pace with Chinese output. Official manufacturing PMI eased to 49.4 from 50.8 in April. Non-manufacturing PMI is notably stronger. Consumer spending and new home sales are both growing. New car sales rebounding. Consumer confidence lower, business confidence stable.



## Japan – Double down

The Bank of Japan (BoJ) has pledged ¥117.1 trillion on top of its earlier ¥117 trillion bond purchase program to combat the impact of the economic downturn. Another ¥32 trillion (5.8% of GDP) will come from a second budget funded by the same amount of government bond issuance. The economic stimulus package as presented so far, is expected to add 0.7 percentage point to GDP growth.



Source - RBC Investment Strategy Committee, RBC Capital Markets, Global Portfolio Advisory Committee, RBC Global Asset Management(RBC GAM), Bloomberg consensus estimates

# Market scorecard

Index (local currency)	Level	1 month	YTD	12 month
S&P 500	3,044.31	4.5%	-5.8%	10.6%
Dow Industrials (DJIA)	25,383.11	4.3%	-11.1%	2.3%
NASDAQ	9,489.87	6.8%	5.8%	27.3%
Russell 2000	1,394.04	6.4%	-16.4%	-4.9%
S&P/TSX Comp	15,192.83	2.8%	-11.0%	-5.3%
FTSE All-Share	3,363.67	3.1%	-19.8%	-14.3%
STOXX Europe 600	350.36	3.0%	-15.7%	-5.1%
EURO STOXX 50	3,050.20	4.2%	-18.6%	-7.0%
Hang Seng	22,961.47	-6.8%	-18.5%	-14.6%
Shanghai Comp	2,852.35	-0.3%	-6.5%	-1.6%
Nikkei 225	21,877.89	8.3%	-7.5%	6.2%
India Sensex	32,424.10	-3.8%	-21.4%	-18.4%
Singapore Straits Times	2,510.75	-4.3%	-22.1%	-19.5%
Brazil Ibovespa	87,402.60	8.6%	-24.4%	-9.9%
Mexican Bolsa IPC	36,122.73	-1.0%	-17.0%	-15.5%
Bond yields	5/29/20	4/30/20	5/31/19	12 mo. chg
US 2-Yr Tsy	0.160%	0.196%	1.922%	-1.76%
US 10-Yr Tsy	0.653%	0.639%	2.125%	-1.47%
Canada 2-Yr	0.290%	0.312%	1.429%	-1.14%
Canada 10-Yr	0.534%	0.547%	1.488%	-0.95%
UK 2-Yr	-0.043%	0.017%	0.600%	-0.64%
UK 10-Yr	0.184%	0.231%	0.886%	-0.70%
Germany 2-Yr	-0.659%	-0.601%	-0.659%	0.00%
Germany 10-Yr	-0.447%	-0.185%	-0.202%	-0.25%
Commodities (USD)	Price	1 month	YTD	12 month
Gold (spot \$/oz)	1,730.27	2.6%	14.0%	32.5%
Silver (spot \$/oz)	17.87	19.3%	0.1%	22.4%
Copper (\$/metric ton)	6,486.50	3.7%	-13.0%	-7.8%
Uranium (\$/lb)	20.90	-0.5%	-12.6%	-7.7%
Oil (WTI spot/bbl)	35.49	88.4%	-41.9%	-33.7%
Oil (Brent spot/bbl)	35.33	39.8%	-46.5%	-45.2%
Natural Gas (\$/mmBtu)	1.85	-5.1%	-15.5%	-24.7%
Agriculture Index	273.20	-0.2%	-12.9%	-10.2%
Currencies	Rate	1 month	YTD	12 month
US Dollar Index	98.3440	-0.7%	2.0%	0.6%
CAD/USD	0.7259	1.2%	-5.7%	-1.9%
USD/CAD	1.3780	-1.2%	6.1%	2.0%
EUR/USD	1.1101	1.3%	-1.0%	-0.6%
GBP/USD	1.2343	-2.0%	-6.9%	-2.3%
AUD/USD	0.6667	2.4%	-5.0%	-3.9%
USD/JPY	107.8300	0.6%	-0.7%	-0.4%
EUR/JPY	119.7700	2.0%	-1.6%	-1.0%
EUR/GBP	0.8995	3.4%	6.3%	1.7%
EUR/CHF	1.0675	0.9%	-1.7%	-4.5%
USD/SGD	1.4135	0.3%	5.0%	2.8%
USD/CNY	7.1364	1.0%	2.5%	3.4%
USD/MXN	22.1761	-8.3%	17.2%	13.0%
USD/BRL	5.3370	-2.7%	32.6%	36.0%

U.S. equity markets posted strong gains as many states began their initial phases of reopening.

Global bond yields were mixed with the U.S. 2-year firmer and UK 2-year drifting into negative yield territory.

Commodity prices were mostly higher with WTI and Brent posting solid gains and closing above \$30 per barrel.

U.S. Dollar Index weakened against most of its global peers with the exception of the British pound where USD gained 2.0%.

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 0.72 means 1 Canadian dollar will buy 0.72 U.S. dollar. CAD/USD -1.9% return means the Canadian dollar has fallen 1.9% vs. the U.S. dollar during the past 12 months. USD/JPY 107.83 means 1 U.S. dollar will buy 107.83 yen. USD/JPY -0.4% return means the U.S. dollar has fallen 0.4% vs. the yen during the past 12 months.

Source - RBC Wealth Management, RBC Capital Markets, Bloomberg; data through 5/31/20.

# Research resources

This document is produced by the Global Portfolio Advisory Committee within RBC Wealth Management's Portfolio Advisory Group. The RBC Wealth Management Portfolio Advisory Group provides support related to asset allocation and portfolio construction for the firm's investment advisors / financial advisors who are engaged in assembling portfolios incorporating individual marketable securities. The Committee leverages the broad market outlook as developed by the RBC Investment Strategy Committee, providing additional tactical and thematic support utilizing research from the RBC Investment Strategy Committee, RBC Capital Markets, and third-party resources.

## **Global Portfolio Advisory Committee members:**

Jim Allworth – Co-chair; Investment Strategist, RBC Dominion Securities Inc.

Kelly Bogdanova – Co-chair; Portfolio Analyst, RBC Wealth Management Portfolio Advisory Group U.S., RBC Capital Markets, LLC

Frédérique Carrier – Co-chair; Managing Director & Head of Investment Strategies, RBC Europe Limited

Mark Bayko, CFA – Head, Portfolio Management, RBC Dominion Securities Inc.

Janet Engels – Head, Portfolio Advisory Group U.S., RBC Wealth Management, RBC Capital Markets, LLC

Thomas Garretson, CFA – Fixed Income Senior Portfolio Strategist, RBC Wealth Management Portfolio Advisory Group, RBC Capital Markets, LLC

Christopher Girdler, CFA – Fixed Income Portfolio Advisor, RBC Wealth Management Portfolio Advisory Group, RBC Dominion Securities Inc.

Patrick McAllister, CFA – Canadian Equities Portfolio Advisor, RBC Wealth Management Portfolio Advisory Group – Equities, RBC Dominion Securities Inc.

Alan Robinson – Portfolio Analyst, RBC Wealth Management Portfolio Advisory Group – U.S. Equities, RBC Capital Markets, LLC

Michael Schuette, CFA – Multi-Asset Portfolio Strategist, RBC Wealth Management Portfolio Advisory Group – U.S., RBC Capital Markets, LLC

Alastair Whitfield – Head of Fixed Income – British Isles, RBC Wealth Management, RBC Europe Limited

The RBC Investment Strategy Committee (RISC) consists of senior investment professionals drawn from individual, client-focused business units within RBC, including the Portfolio Advisory Group. The RISC builds a broad global investment outlook and develops specific guidelines that can be used to manage portfolios. The RISC is chaired by Daniel Chornous, CFA, Chief Investment Officer of RBC Global Asset Management Inc.

## **Additional Global Insight authors:**

Mark Mahaney – Managing Director, Internet analyst, RBC Capital Markets, LLC

# Required disclosures

## Analyst Certification

All of the views expressed in this report accurately reflect the personal views of the responsible analyst(s) about any and all of the subject securities or issuers. No part of the compensation of the responsible analyst(s) named herein is, or will be, directly or indirectly, related to the specific recommendations or views expressed by the responsible analyst(s) in this report.

## Important Disclosures

In the U.S., RBC Wealth Management operates as a division of RBC Capital Markets, LLC. In Canada, RBC Wealth Management includes, without limitation, RBC Dominion Securities Inc., which is a foreign affiliate of RBC Capital Markets, LLC. This report has been prepared by RBC Capital Markets, LLC which is an indirect wholly-owned subsidiary of the Royal Bank of Canada and, as such, is a related issuer of Royal Bank of Canada.

Non-U.S. Analyst Disclosure: Jim Allworth, Mark Bayko, Christopher Girdler, and Patrick McAllister, employees of RBC Wealth Management USA's foreign affiliate RBC Dominion Securities Inc.; and Frédérique Carrier and Alastair Whitfield, employees of RBC Wealth Management USA's foreign affiliate RBC Europe Limited contributed to the preparation of this publication. These individuals are not registered with or qualified as research analysts with the U.S. Financial Industry Regulatory Authority ("FINRA") and, since they are not associated persons of RBC Wealth Management, they may not be subject to FINRA Rule 2241 governing communications with subject companies, the making of public appearances, and the trading of securities in accounts held by research analysts.

In the event that this is a compendium report (covers six or more companies), RBC Wealth Management may choose to provide important disclosure information by reference. To access current disclosures, clients should refer to <https://www.rbccm.com/GLDisclosure/PublicWeb/DisclosureLookup.aspx?EntityID=2> to view disclosures regarding RBC Wealth Management and its affiliated firms. Such information is also available upon request to RBC Wealth Management Publishing, 60 South Sixth St, Minneapolis, MN 55402.

References to a Recommended List in the recommendation history chart may include one or more recommended lists or model portfolios maintained by RBC Wealth Management or one of its affiliates. RBC Wealth Management recommended lists include the Guided Portfolio: Prime Income (RL 6), the Guided Portfolio: Dividend Growth (RL 8), the Guided Portfolio: ADR (RL 10), and the Guided Portfolio: All Cap Growth (RL 12). RBC Capital Markets recommended lists include the Strategy Focus List and the Fundamental Equity Weightings (FEW) portfolios. The abbreviation 'RL On' means the date a security was placed on a Recommended List. The abbrevia-

tion 'RL Off' means the date a security was removed from a Recommended List.

## Distribution of Ratings

For the purpose of ratings distributions, regulatory rules require member firms to assign ratings to one of three rating categories - Buy, Hold/Neutral, or Sell - regardless of a firm's own rating categories. Although RBC Capital Markets' ratings of Outperform (O), Sector Perform (SP), and Underperform (U) most closely correspond to Buy, Hold/Neutral and Sell, respectively, the meanings are not the same because our ratings are determined on a relative basis.

## Explanation of RBC Capital Markets, LLC Equity Rating System

An analyst's "sector" is the universe of companies for which the analyst provides research coverage. Accordingly, the rating assigned to a particular stock represents solely the analyst's view of how that stock will perform over the next 12 months relative to the analyst's sector average.

Rating	Count	Percent	Investment Banking Services Provided During Past 12 Months	
			Count	Percent
Buy [Outperform]	755	51.64	220	29.14
Hold [Sector Perform]	619	42.34	126	20.36
Sell [Underperform]	88	6.02	11	12.50

**Outperform (O):** Expected to materially outperform sector average over 12 months. **Sector Perform (SP):** Returns expected to be in line with sector average over 12 months. **Underperform (U):** Returns expected to be materially below sector average over 12 months. **Restricted (R):** RBC policy precludes certain types of communications, including an investment recommendation, when RBC is acting as an advisor in certain merger or other strategic transactions and in certain other circumstances. **Not Rated (NR):** The rating, price targets and estimates have been removed due to applicable legal, regulatory or policy constraints which may include when RBC Capital Markets is acting in an advisory capacity involving the company.

As of March 31, 2020, RBC Capital Markets discontinued its Top Pick rating. Top Pick rated securities represented an analyst's best idea in the sector; expected to provide significant absolute returns over 12 months with a favorable risk-reward ratio. Top Pick rated securities have been reassigned to our Outperform rated securities category, which are securities expected to materially outperform sector average over 12 months.

**Risk Rating:** The Speculative risk rating reflects a security's lower level of financial or operating predictability, illiquid share trading volumes, high balance sheet leverage, or lim-

ited operating history that result in a higher expectation of financial and/or stock price volatility.

### **Valuation and Risks to Rating and Price Target**

When RBC Wealth Management assigns a value to a company in a research report, FINRA Rules and NYSE Rules (as incorporated into the FINRA Rulebook) require that the basis for the valuation and the impediments to obtaining that valuation be described. Where applicable, this information is included in the text of our research in the sections entitled “Valuation” and “Risks to Rating and Price Target”, respectively.

The analyst(s) responsible for preparing this research report have received (or will receive) compensation that is based upon various factors, including total revenues of RBC Capital Markets, LLC, and its affiliates, a portion of which are or have been generated by investment banking activities of RBC Capital Markets, LLC and its affiliates.

### **Other Disclosures**

Prepared with the assistance of our national research sources. RBC Wealth Management prepared this report and takes sole responsibility for its content and distribution. The content may have been based, at least in part, on material provided by our third-party correspondent research services. Our third-party correspondent has given RBC Wealth Management general permission to use its research reports as source materials, but has not reviewed or approved this report, nor has it been informed of its publication. Our third-party correspondent may from time to time have long or short positions in, effect transactions in, and make markets in securities referred to herein. Our third-party correspondent may from time to time perform investment banking or other services for, or solicit investment banking or other business from, any company mentioned in this report.

RBC Wealth Management endeavors to make all reasonable efforts to provide research simultaneously to all eligible clients, having regard to local time zones in overseas jurisdictions. In certain investment advisory accounts, RBC Wealth Management or a designated third party will act as overlay manager for our clients and will initiate transactions in the securities referenced herein for those accounts upon receipt of this report. These transactions may occur before or after your receipt of this report and may have a short-term impact on the market price of the securities in which transactions occur. RBC Wealth Management research is posted to our proprietary Web sites to ensure eligible clients receive coverage initiations and changes in rating, targets, and opinions in a timely manner. Additional distribution may be done by sales personnel via e-mail, fax, or regular mail. Clients may also receive our research via third-party vendors. Please contact your RBC Wealth Management Financial Advisor for more information regarding RBC Wealth Management research.

**Conflicts Disclosure:** RBC Wealth Management is registered with the Securities and Exchange Commission as a broker/dealer and an investment adviser, offering both brokerage and investment advisory services. RBC Wealth Manage-

ment’s Policy for Managing Conflicts of Interest in Relation to Investment Research is available from us on our website at <https://www.rbccm.com/GLDisclosure/PublicWeb/DisclosureLookup.aspx?EntityID=2>. Conflicts of interests related to our investment advisory business can be found in Part 2A Appendix 1 of the Firm’s Form ADV or the RBC Advisory Programs Disclosure Document. Copies of any of these documents are available upon request through your Financial Advisor. We reserve the right to amend or supplement this policy, Part 2A Appendix 1 of the Form ADV, or the RBC Advisory Programs Disclosure Document at any time.

The authors are employed by one of the following entities: RBC Wealth Management USA, a division of RBC Capital Markets, LLC, a securities broker-dealer with principal offices located in Minnesota and New York, USA; by RBC Dominion Securities Inc., a securities broker-dealer with principal offices located in Toronto, Canada; by RBC Investment Services (Asia) Limited, a subsidiary of RBC Dominion Securities Inc., a securities broker-dealer with principal offices located in Hong Kong, China; by Royal Bank of Canada, Singapore Branch, a licensed wholesale bank with its principal office located in Singapore; and by RBC Europe Limited, a licensed bank with principal offices located in London, United Kingdom.

### **Third-party disclaimers**

The Global Industry Classification Standard (“GICS”) was developed by and is the exclusive property and a service mark of MSCI Inc. (“MSCI”) and Standard & Poor’s Financial Services LLC (“S&P”) and is licensed for use by RBC. Neither MSCI, S&P, nor any other party involved in making or compiling the GICS or any GICS classifications makes any express or implied warranties or representations with respect to such standard or classification (or the results to be obtained by the use thereof), and all such parties hereby expressly disclaim all warranties of originality, accuracy, completeness, merchantability and fitness for a particular purpose with respect to any of such standard or classification. Without limiting any of the foregoing, in no event shall MSCI, S&P, any of their affiliates or any third party involved in making or compiling the GICS or any GICS classifications have any liability for any direct, indirect, special, punitive, consequential or any other damages (including lost profits) even if notified of the possibility of such damages.

References herein to “LIBOR”, “LIBO Rate”, “L” or other LIBOR abbreviations means the London interbank offered rate as administered by ICE Benchmark Administration (or any other person that takes over the administration of such rate).

### **Disclaimer**

The information contained in this report has been compiled by RBC Wealth Management, a division of RBC Capital Markets, LLC, from sources believed to be reliable, but no representation or warranty, express or implied, is made by Royal Bank of Canada, RBC Wealth Management, its affiliates or any other person as to its accuracy, completeness or correctness. All opinions and estimates contained in this report constitute RBC Wealth Management’s judgment as of the date of this report, are subject to change without notice and are provided in good faith but without legal responsibility. Past performance is not a guide to future performance, future returns are not guaranteed, and a loss of original capital may occur. Every province in Canada, state in the U.S., and most countries throughout the world have their own laws regulating the types of securities and other investment products which may be offered to their residents, as well as the process for doing so. As a result, the securities discussed in this report may not be eligible for sale in some jurisdictions. This report is not, and under no circumstances should be construed as, a solicitation to act as securities broker or dealer in any jurisdiction by any



person or company that is not legally permitted to carry on the business of a securities broker or dealer in that jurisdiction. Nothing in this report constitutes legal, accounting or tax advice or individually tailored investment advice. This material is prepared for general circulation to clients, including clients who are affiliates of Royal Bank of Canada, and does not have regard to the particular circumstances or needs of any specific person who may read it. The investments or services contained in this report may not be suitable for you and it is recommended that you consult an independent investment advisor if you are in doubt about the suitability of such investments or services. To the full extent permitted by law neither Royal Bank of Canada nor any of its affiliates, nor any other person, accepts any liability whatsoever for any direct, indirect or consequential loss arising from, or in connection with, any use of this report or the information contained herein. No matter contained in this document may be reproduced or copied by any means without the prior written consent of Royal Bank of Canada in each instance. In the U.S., RBC Wealth Management operates as a division of RBC Capital Markets, LLC. In Canada, RBC Wealth Management includes, without limitation, RBC Dominion Securities Inc., which is a foreign affiliate of RBC Capital Markets, LLC. This report has been prepared by RBC Capital Markets, LLC. Additional information is available upon request.

**To U.S. Residents:** This publication has been approved by RBC Capital Markets, LLC, Member NYSE/FINRA/SIPC, which is a U.S. registered broker-dealer and which accepts responsibility for this report and its dissemination in the United States. RBC Capital Markets, LLC, is an indirect wholly-owned subsidiary of the Royal Bank of Canada and, as such, is a related issuer of Royal Bank of Canada. Any U.S. recipient of this report that is not a registered broker-dealer or a bank acting in a broker or dealer capacity and that wishes further information regarding, or to effect any transaction in, any of the securities discussed in this report, should contact and place orders with RBC Capital Markets, LLC. International investing involves risks not typically associated with U.S. investing, including currency fluctuation, foreign taxation, political instability and different accounting standards.

**To Canadian Residents:** This publication has been approved by RBC Dominion Securities Inc. RBC Dominion Securities Inc.\* and Royal Bank of Canada are separate corporate entities which are affiliated. \*Member-Canadian Investor Protection Fund. ®Registered trademark of Royal Bank of Canada. Used under license. RBC Wealth Management is a registered trademark of Royal Bank of Canada. Used under license.

**RBC Wealth Management (British Isles):** This publication is distributed by RBC Europe Limited and RBC Investment Solutions (CI) Limited. RBC Europe Limited is authorised by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and the Prudential Regulation Authority (FCA registration number: 124543). Registered office: Riverbank House, 2 Swan Lane, London, EC4R 3BF, UK. RBC Investment Solutions (CI) Limited is regulated by the Jersey Financial Services Commission in the conduct of investment business in Jersey. Registered office: Gaspé House, 66-72 Esplanade, St Helier, Jersey JE2 3QT, Channel Islands, registered company number 119162.

**To Hong Kong Residents:** This publication is distributed in Hong Kong by Royal Bank of Canada, Hong Kong Branch which is regulated by the Hong Kong Monetary Authority and the Securities and Futures Commission ("SFC"), and RBC Investment Services (Asia) Limited, which is regulated by the SFC.

**To Singapore Residents:** This publication is distributed in Singapore by the Royal Bank of Canada, Singapore Branch, a registered entity licensed by the Monetary Authority of Singapore. This material has been prepared for general circulation and does not take into account the objectives, financial situation, or needs of any recipient. You are advised to seek independent advice from a financial adviser before purchasing any product. If you do not obtain independent advice, you should consider whether the product is suitable for you. Past performance is not indicative of future performance. If you have any questions related to this publication, please contact the Royal Bank of Canada, Singapore Branch. Royal Bank of Canada, Singapore Branch accepts responsibility for this report and its dissemination in Singapore.

© 2020 RBC Capital Markets, LLC – Member NYSE/FINRA/SIPC  
© 2020 RBC Dominion Securities Inc. – Member Canadian Investor Protection Fund  
© 2020 RBC Europe Limited  
© 2020 Royal Bank of Canada  
All rights reserved  
RBC1524