

Will the Fed twist the yield curve?

Atul Bhatia, CFA – Minneapolis

The continuing U.S. economic recovery has stoked concern that inflation could drive interest rates higher, but a more complicated picture may be coming into focus. We examine the long-term market forces in play and the Fed's policy options.

The continuing global rise in interest rates has strong foundations in the market's growth expectations, as improving economic data and rising vaccination rates reduce demand for low-risk government debt. We believe the move is sustainable and reasonable given the improved economic trajectory.

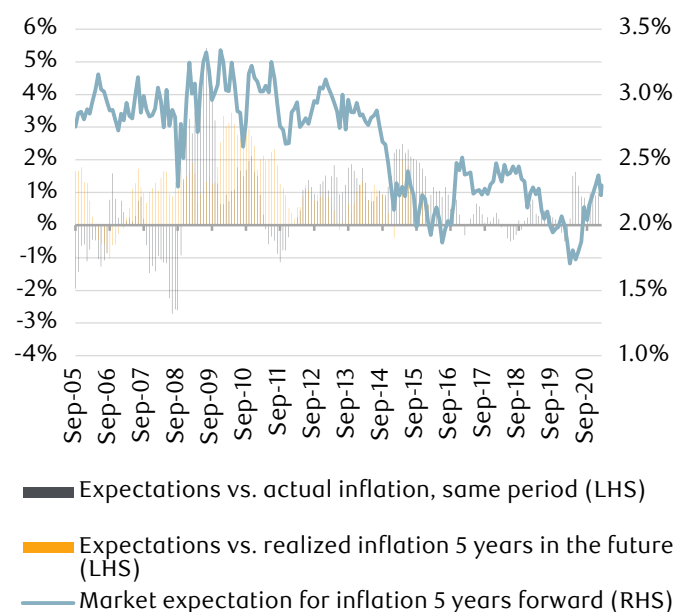
At the same time, concerns that the rise in longer-term rates could presage a near-term tightening of the Federal Reserve's monetary policy are misguided, in our view. Investors should also keep in mind the market forces that will likely help offset some of the upward pressure on longer-term rates even as the economy recovers.

Transitory inflation unlikely to move the Fed

Rising inflation expectations have partly fueled the recent drop in bond prices, as investors confront the potential simultaneous arrival of \$1.9 trillion in fiscal stimulus and the large-scale return of consumers, flush with an extra \$1.6 trillion in savings after pulling back from pre-pandemic spending levels. The potential combined demand increase is equivalent to 16 percent of U.S. GDP. As a result, relatively small shifts in estimates of vaccination rates and consumer confidence can have outsized effects on inflation projections. The impact on Consumer Price Inflation (CPI), which is reported on a

Markets consistently over-estimate inflation

5-year forward projection typically exceeds both current and future inflation readings



Source - RBC Wealth Management, Bloomberg

For perspectives on the week from our regional analysts, please see pages 3–4.

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.

Priced (in USD) as of 3/4/21 market close, ET (unless otherwise stated). Produced: Mar. 4, 2021 3:58 pm ET; Disseminated: Mar. 4, 2021 4:45 pm ET
For important disclosures, required non-U.S. analyst disclosures, and authors' contact information, see page 6.

year-over-year basis, is magnified by the comparison to a 2020 economy that was largely shut down.

The Fed is not likely to place any real weight on these outsized inflation reports when setting policy, in our view. The underlying economic events are non-recurring, and constitute necessary steps in the economic recovery the central bank is working hard to engineer. And while expectations for near-term inflation have increased sharply, we see little evidence that inflation expectations are hardening at a level the Fed would find troublesome. The Fed's preferred gauge of inflation expectations—the market's expectation for annual inflation over a five-year period starting five years in the future—is at only 2.3 percent, an unexceptional level by historical standards, and entirely consistent with the Fed's average two percent inflation targeting regime.

By statute, the Fed is mandated to maximize employment while keeping prices stable and long-term interest rates moderate. Today, prices are indeed stable and long-term rates moderate, but employment is far from maximized: the U.S. economy currently provides 10 million fewer jobs than it did before the start of the pandemic; the unemployment rate is almost three percent higher than it was a year ago; and the long-term unemployed now account for 40 percent of all jobless workers, the highest level since 2008. In light of this mandate, we see no cogent argument today for the Fed to shift to a tighter monetary policy stance, particularly as the market-led rise in rates has already tightened financing conditions across the economy.

Operation Twist returns?

One policy option the Fed may choose is to relaunch Operation Twist, which involves selling short-term assets like T-bills and reinvesting the proceeds into longer-maturity Treasury bonds. The policy would have two major benefits from the Fed's perspective. First, it would send a strong signal to the market on long-term rates. Yields on the 10-year Treasury bond are a benchmark for many corporate investments, so slowing the rate rise there could help the Fed achieve its larger employment and growth goals. Second, Operation Twist could help avoid potential problems in short-term money markets. The Treasury Department's recent decision to spend down existing cash balances instead of issuing new T-bills has raised concerns about the availability of short-maturity, risk-free assets for money market investors. The Fed could replace some of the missing supply by selling off its holdings.

Given the potential dual benefits of Operation Twist, we would not be surprised to see at least a discussion of the strategy at the Fed's next meeting, scheduled for March 16–17.

Fed may twist curve back into shape

10-year yield vs. 3-month bill yield at multiyear high



Note: The chart shows the difference in yield between a U.S. Treasury bond maturing in 10 years and a 3-month Treasury bill.

Source - RBC Wealth Management, Bloomberg

Headwinds to rising long-term interest rates

Even without direct Fed intervention, there are downward forces on long-term interest rates. One is the potential for persistent low inflation. Zero interest rates and balance sheet expansion have been empirically tested across developed markets since 2008 without creating consistent, on-target inflation. The benefits of these monetary policies have flowed primarily to higher-income savers, while inflation is based on the consumption basket of the average American, who relies on wages for spending. Without an increase in wage income, it is difficult to see sustained upward price pressure.

Rising long-term Treasury rates also impact the federal budget. U.S. government debt is at 127 percent of GDP, the highest level since World War II. If the Treasury Department were forced to pay 2018-level interest on today's record debt load, almost \$160 billion annually would be redirected towards debt service. Shifting resources from spenders to savers in this way would tend to decrease long-term interest rates.

Finally, higher U.S. Treasury yields also draw in foreign investors. Although the most recent Treasury Department data on foreign bond holdings is from December 2020, we know that as of mid-February the Federal Reserve was holding more than \$3 trillion in Treasury securities on behalf of foreign official and institutional investors—the largest total since early 2018. As yields increase further, we would expect additional foreign purchases to help temper any rise in interest rates.

UNITED STATES

Alan Robinson – Seattle

- **U.S. equities started the week on the front foot on confirmation a third COVID-19 vaccine was approved** for emergency pandemic use. Johnson & Johnson (JNJ) expects to deliver more than 20 million doses in March. President Joe Biden announced the U.S. will now have enough vaccines for all U.S. adults by the end of May, two months earlier than originally planned. However, the positive sentiment faded as increasing case counts cast doubts on plans to ease restrictions in most of the country.
- **Economic data was mixed.** The ISM Services Purchasing Managers' Index reading of 55.3 for February was down from January's 58.7. However, the ISM Services Prices Index rose by 7.6 points to 71.8, the strongest level since September 2008, with the report noting capacity constraints and human resource issues driving prices higher, even as the February ADP National Employment Report showed another month of anemic job gains.
- **The U.S. Senate edged closer to approving a COVID-19 relief package** ahead of the expiry of unemployment benefits later this month. Next on the fiscal agenda will likely be an infrastructure bill. In combination, these measures should lead the economy to significant near-term growth at the cost of spiraling long-term fiscal deficits.
- **Global oil prices rose nearly 5% on Mar. 4 to \$67 per barrel of Brent crude ahead of the "OPEC+" meeting of oil exporters that day.** The 2020 global recession prompted the group to slash production by a record of 9.7 million barrels per day (mb/d) last year, before easing cuts to 7.2 mb/d from January 2021. Ahead of the OPEC+ press conference, RBC Capital Markets, LLC's Global Head of Commodity Strategy Helima Croft expected a modest production increase of up to 1 mb/d to meet increasing demand from improving global economies. But she also cautioned that Saudi Arabia has a bias to higher oil prices and may be reluctant to increase supply until oil approaches \$75–\$80 per barrel. **Firmer oil prices should sustain the rebound seen in energy stocks this year.**

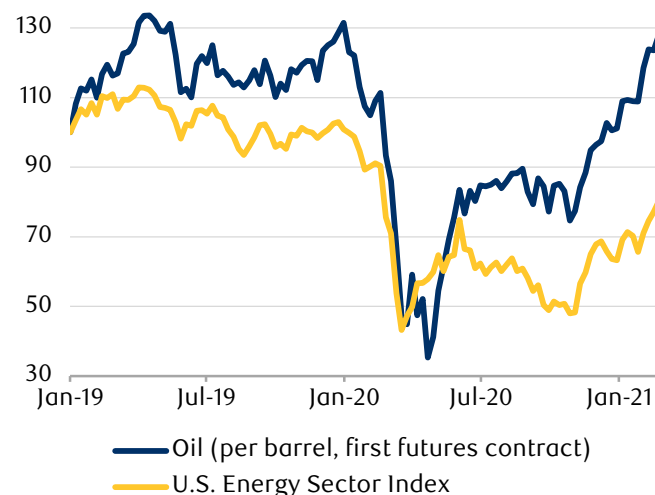
CANADA

Carolyn Schroeder & Richard Tan, CFA – Toronto

- **The S&P/TSX Composite is trading at approximately 16x forward earnings, a premium to its long-term average of roughly 14.8x dating back to 2001.** While Canadian equities may seem expensive at first glance, we would argue that valuations are actually attractive in the context of equity risk premiums—a measure of potential excess return over the risk-free rate. Currently,

Oil has regained its pre-COVID range, Energy sector yet to catch up

Relative performance of oil price and Energy sector stocks since 2019



Source - Thomson One Refinitiv, RBC Wealth Management; weekly closing prices with 1/4/19 = 100

the S&P/TSX Composite is generating an equity risk premium of nearly 4.9%, about 100 basis points above its long-term average. In other words, investors of Canadian equities are being compensated more than average to be invested into equities compared to Government of Canada bonds all else equal. Furthermore, we believe the setup for Canadian equities is compelling because (1) the S&P/TSX Composite is trading at a discount to U.S. equities and (2) Canada is a resource-based economy and the outlook for commodities such as oil and copper has improved, in our view.

- **The Canadian economy continued to grow during the second wave of COVID-19** as GDP surged 9.6% (annualized) in Q4 2020 despite restrictions. The level of GDP in the quarter was still down 3.2% y/y, but that's much improved from the 13% y/y drop in Q2 2020. Unsurprisingly, consumer spending on hospitality/travel services remained exceptionally weak, but other parts of the economy have continued to improve. Although consumer spending on goods edged lower in Q4, as virus containment measures limited in-store shopping, it was still up 4.6% from a year ago. The manufacturing sector also pulled back in December, though likely rebounded in January alongside improving business sentiment. With containment measures already easing gradually again in most parts of the country in February, RBC Economics believes it is highly likely growth will remain positive through the second wave.

EUROPE

Frédérique Carrier & Thomas McGarrity, CFA – London

- **The UK government presented its budget** to Parliament on Mar. 3. **Fiscal policies will continue to be expansive** for some time. Measures to reduce the ballooning deficit were also announced for 2023, with the UK being one of the first countries to worry about fiscal rectitude.
- **Emergency measures to support the economy**, such as the furlough scheme for employees, **are being extended through the summer**, beyond the point when the economy is expected to be fully reopened in mid-June. The Chancellor of the Exchequer also announced near-term incentives to encourage businesses to invest over the next two years.
- **These supportive measures were much more generous than what was widely expected.** According to RBC Capital Markets, **the measures represent a boost of some 2.5% to the UK's GDP**, and bring all the country's COVID-related fiscal relief to a high 14% of GDP (vs. Canada's 13%). As such, this support should help underpin the economic recovery in the near term and justifies the market's expectation the UK interest rate tightening cycle will start in H1 2023.
- **However, a large increase in corporate taxes will occur in 2023**, taking effect after the government expects the economy to have strengthened. **The rate will jump from 19% to 25% in 2023**, just one year before the next general elections are slated to take place. This is more than had been expected by the business sector and will bring the corporate tax rate closer to the G7 average corporate tax rate. Moreover, personal tax allowances, such as the capital gains tax allowance and the pensions lifetime allowance, will be frozen from April this year. Additional announcements regarding taxes will be made at the next budget release, probably in November. All told, in four years' time, **the UK tax burden will rise to its highest level in 50 years**, according to the Financial Times.
- **UK domestic-focused stocks were generally boosted by the larger-than-expected fiscal support measures**, with the performance of the homebuilders standing out. This helped the UK's midcap equity index, the FTSE 250, which is significantly more domestically focused than the large-cap FTSE 100 Index, close at its highest point in over a year. The FTSE 250 is now less than 4% below its all-time high set in January 2020 prior to the outbreak of the pandemic.

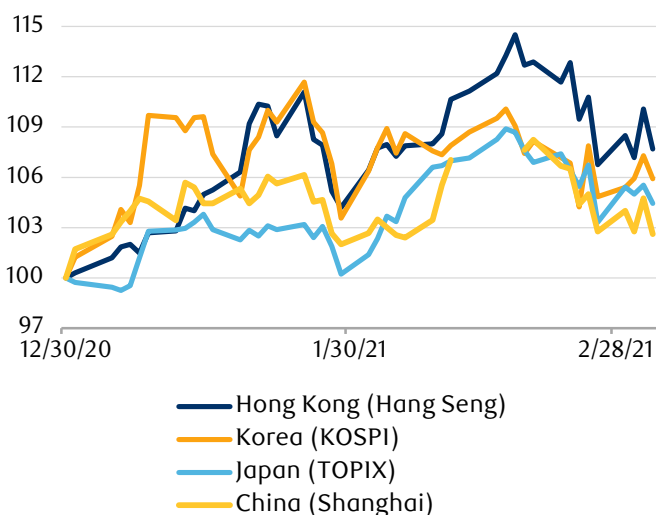
ASIA PACIFIC

Jasmine Duan – Hong Kong & Nicholas Gwee, CFA – Singapore

- **Asian equities were choppy this week** following a surge in U.S. sovereign bond yields that reignited valuation concerns. The Technology sector struggled while Real Estate, Financials, and Energy shares

Key Asian equity markets converge to the downside after volatile start to 2021

Relative equity index performance



Source - Thomson One Refinitiv, RBC Wealth Management; daily closing prices with 12/30/20 = 100

outperformed as part of a global shift to the value segment. China led losses amid the worst drop in the Asia Pacific region on Thursday, with the CSI 300 Index down 3.2% as investors sold what we view as overvalued sectors such as baijiu (a type of Asian liquor) and solar energy.

- The China market correction also comes after **a warning from China's top banking regulator**, Guo Shuqing, that he's "very worried" about risks emerging from bubbles in global financial markets and the nation's property sector, sparking concerns about further tightening in China.
- China's "Two Sessions", the annual gatherings of the Chinese People's Political Consultative Conference (CPPCC) and the National People's Congress (NPC), commence on Thursday and Friday, respectively. **The "Two Sessions" are a window to the central government's priorities and plans for the coming year.** One of the NPC's tasks this year will be to pass the final version of China's 14th five-year plan. The outlines of the five-year plan published in November indicate China intends to boost domestic consumer demand and encourage self-reliance in the hi-tech sector, as part of its "dual circulation" strategy.
- **Japan may extend the virus emergency in the Tokyo region**, which was set to expire on Mar. 7, for another two weeks. A final decision would be made after consulting with experts and local leaders. The announcement comes as Tokyo's governor and the leaders of the three most-populous prefectures adjacent to the capital were pressing for a two-week extension to stem infections that have fallen, but not as fast as some officials had hoped.

MARKET Scorecard

Data as of March 4, 2021

Equities (local currency)	Level	MTD	YTD	1 yr	2 yr
S&P 500	3,768.47	-1.1%	0.3%	20.4%	34.9%
Dow Industrials (DJIA)	30,924.14	0.0%	1.0%	14.1%	19.8%
Nasdaq	12,723.47	-3.6%	-1.3%	41.1%	67.9%
Russell 2000	2,146.92	-2.5%	8.7%	40.2%	36.3%
S&P/TSX Comp	18,125.72	0.4%	4.0%	8.0%	13.0%
FTSE All-Share	3,792.09	2.4%	3.2%	-0.1%	-3.4%
STOXX Europe 600	411.91	1.7%	3.2%	6.6%	9.8%
EURO STOXX 50	3,704.85	1.9%	4.3%	8.3%	11.7%
Hang Seng	29,236.79	0.9%	7.4%	11.5%	1.0%
Shanghai Comp	3,503.49	-0.2%	0.9%	16.3%	15.7%
Nikkei 225	28,930.11	-0.1%	5.4%	37.1%	32.6%
India Sensex	50,846.08	3.6%	6.5%	32.4%	41.0%
Singapore Straits Times	3,014.78	2.2%	6.0%	-0.3%	-7.3%
Brazil Ibovespa	112,690.20	2.4%	-5.3%	5.1%	19.1%
Mexican Bolsa IPC	46,004.19	3.2%	4.4%	6.0%	8.5%
Gov't bonds (bps change)	Yield	MTD	YTD	1 yr	2 yr
U.S. 10-Yr Treasury	1.554%	14.9	64.0	50.1	-116.9
Canada 10-Yr	1.494%	13.9	81.7	48.2	-40.2
UK 10-Yr	0.731%	-8.9	53.4	36.2	-54.2
Germany 10-Yr	-0.311%	-5.1	25.8	32.7	-46.9
Fixed income (returns)	Yield	MTD	YTD	1 yr	2 yr
U.S. Aggregate	1.45%	-0.4%	-2.5%	0.4%	16.9%
U.S. Investment-Grade Corp	2.12%	-0.7%	-3.7%	1.2%	22.3%
U.S. High-Yield Corp	4.19%	0.2%	0.9%	8.1%	18.5%
Commodities (USD)	Price	MTD	YTD	1 yr	2 yr
Gold (spot \$/oz)	1,699.25	-2.0%	-10.5%	3.8%	32.1%
Silver (spot \$/oz)	25.40	-4.8%	-3.8%	47.5%	68.3%
Copper (\$/metric ton)	9,128.25	-0.1%	17.8%	61.2%	41.3%
Oil (WTI spot/bbl)	63.83	3.8%	31.6%	36.4%	12.8%
Oil (Brent spot/bbl)	67.10	1.5%	29.5%	31.2%	2.2%
Natural Gas (\$/mmBtu)	2.75	-0.9%	8.2%	50.3%	-3.9%
Currencies	Rate	MTD	YTD	1 yr	2 yr
U.S. Dollar Index	91.6120	0.8%	1.9%	-5.9%	-5.2%
CAD/USD	0.7896	0.6%	0.5%	5.7%	5.0%
USD/CAD	1.2666	-0.6%	-0.5%	-5.4%	-4.8%
EUR/USD	1.1972	-0.9%	-2.0%	7.5%	5.6%
GBP/USD	1.3895	-0.3%	1.6%	7.9%	5.4%
AUD/USD	0.7722	0.2%	0.4%	16.5%	8.9%
USD/JPY	107.9700	1.3%	4.6%	0.4%	-3.4%
EUR/JPY	129.2600	0.5%	2.4%	7.9%	2.0%
EUR/GBP	0.8617	-0.6%	-3.6%	-0.4%	0.1%
EUR/CHF	1.1124	1.4%	2.9%	4.4%	-1.8%
USD/SGD	1.3374	0.4%	1.2%	-3.4%	-1.3%
USD/CNY	6.4699	-0.1%	-0.9%	-6.8%	-3.5%
USD/MXN	21.1301	1.3%	6.1%	8.2%	9.5%
USD/BRL	5.6686	1.2%	9.0%	50.0%	50.0%

Equity returns do not include dividends, except for the Brazilian Ibovespa. Bond yields in local currencies. Copper Index data and U.S. fixed income returns as of Wednesday's close. 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 0.78 means 1 Canadian dollar will buy 0.78 U.S. dollar. CAD/USD 0.5% return means the Canadian dollar rose 0.5% vs. the U.S. dollar year to date. USD/JPY 107.97 means 1 U.S. dollar will buy 107.97 yen. USD/JPY 4.6% return means the U.S. dollar rose 4.6% vs. the yen year to date.

Source - Bloomberg; data as of 4:35 pm ET 3/4/21.

Authors

Atul Bhatia, CFA – Minneapolis, United States

atul.bhatia@rbc.com; RBC Capital Markets, LLC

Alan Robinson – Seattle, United States

alan.robinson@rbc.com; RBC Capital Markets, LLC

Carolyn Schroeder – Toronto, Canada

carolyn.schroeder@rbc.com; RBC Dominion Securities Inc.

Richard Tan, CFA – Toronto, Canada

richard.tan@rbc.com; RBC Dominion Securities Inc.

Frédérique Carrier – London, United Kingdom

frederique.carrier@rbc.com; RBC Europe Limited

Thomas McGarrity, CFA – London, United Kingdom

thomas.mcgarrity@rbc.com; RBC Europe Limited

Jasmine Duan – Hong Kong, China

jasmine.duan@rbc.com; RBC Investment Services (Asia) Limited

Nicholas Gwee, CFA – Singapore

nicholas.gwee@rbc.com; Royal Bank of Canada, Singapore Branch

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: Carolyn Schroeder and Richard Tan, employees of RBC Wealth Management USA's foreign affiliate RBC Dominion Securities Inc.; Thomas McGarrity and Frédérique Carrier, employees of RBC Wealth Management USA's foreign affiliate RBC Europe Limited; Jasmine Duan, an employee of RBC Investment Services (Asia) Limited; and Nicholas Gwee, an employee of Royal Bank of Canada, Singapore Branch 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.

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.

Distribution of ratings – RBC Capital Markets, LLC Equity Research
As of December 31, 2020

Rating	Count	Percent	Investment Banking Services Provided During Past 12 Months	
			Count	Percent
Buy [Outperform]	828	54.83	299	36.11
Hold [Sector Perform]	615	40.73	166	26.99
Sell [Underperform]	67	4.44	12	17.91

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.

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.

Ratings: 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. **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 limited 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 Management’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.

Research Resources

This document is produced by the Global Portfolio Advisory Committee within RBC Wealth Management’s Portfolio Advisory Group. The RBC WM 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.

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. 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: 100 Bishopsgate, London, EC2N 4AA, 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.

©2021 RBC Capital Markets, LLC – Member NYSE/FINRA/SIPC
 ©2021 RBC Dominion Securities Inc. – Member Canadian Investor Protection Fund
 ©2021 RBC Europe Limited
 ©2021 Royal Bank of Canada
 All rights reserved
 RBC1253



Wealth
Management