Global Insight

Speak loudly and carry a big stick

Thomas Garretson, CFA – Minneapolis

The Fed has fashioned its monetary policy response to the COVID-19 pandemic after foreign policy of old, with massive pledges of quantitative easing and liquidity facilities. And, as is usually the goal, the simple promise to act may reduce the need to actually do so.

While this week's Fed meeting lacked any of the Fed fireworks we have seen over the past two months, Fed Chair Jerome Powell again spoke forcibly, stating, "we are committed to using our full range of tools to support the economy in this challenging time, we are going to use them forcefully, proactively and aggressively until we are confident that we are solidly on the road to recovery."

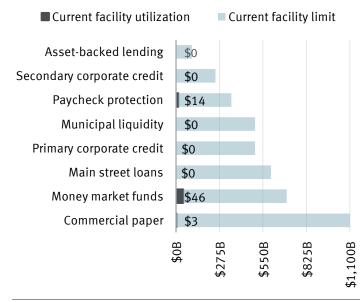
And those tools, or the Fed's big stick in this case, have been the wide swath of lending facilities announced that have cajoled markets back into a more-normal state of operation—even as most of them aren't even up and running, while others stand barely used.

As the first chart shows, two of the first facilities launched, support for money market funds and commercial paper markets, stand mostly unused with just barely \$50 billion utilized against total potential lending of nearly \$2 trillion.

The \$2.3 trillion in credit facilities that were announced to much market fanfare at the beginning of April still aren't ready, with Powell unable to put a date on any launch, simply stating that they would be ready "soon." But even so, markets have already largely reopened and are again functioning smoothly. New corporate bond issuance, as companies look to shore up liquidity, has reached record highs, while even speculative-grade companies have been able to access capital markets to the greatest extent since last year.

While the Fed's balance sheet crossed the \$6.5 trillion mark this week, up from \$4 trillion at the start of the year, as it continues to buy Treasuries at a daily pace of about \$10 billion, the actual utilization of these credit and lending facilities that are

As Fed lending facilities come online, questions remain about their usage



Source - RBC Wealth Management, Bloomberg, Federal Reserve

Market pulse

- 3 Cyclical sectors lead U.S. equity rebound
- 3 The cost of Canada's pandemic response
- 4 UK banks hit by impairment charges
- 4 China's manufacturing undercut by low demand abroad

Click <u>here</u> for authors' contact information. Priced (in USD) as of 4/30/20 market close, ET (unless otherwise stated). **For important disclosures and required non-U.S. analyst disclosures, see <u>page 6.</u> Produced: Apr 30, 2020 17:12ET; Disseminated: Apr 30, 2020 17:21ET**



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.

backstopped by the Treasury via funds allocated from the CARES Act might actually go largely unused. For now it seems the simple threat to act has been sufficient for markets, but that the facilities will stand ready to act as a powerful backstop should another bout of volatility rock markets.

Reading the tea leaves

If there was any disappointment in this week's Fed meeting, it was the limited amount of forward guidance, with the statement simply saying, "The Committee expects to maintain this target range [0 percent to 0.25 percent] until it is confident that the economy has weathered recent events and is on track to achieve its maximum employment and price stability goals."

So what might that mean for the path forward for interest rates? After the Fed first cut rates to zero percent in December 2008, it took a full seven years until December 2015 for the Fed to leave the zero percent lower bound. We don't expect it to take that long this time around, but believe it will almost undoubtedly be a multi-year process.

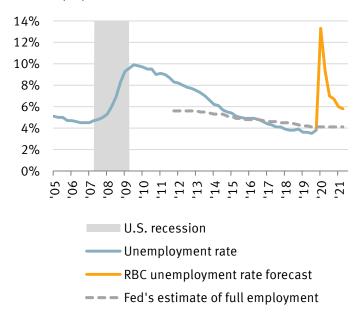
As was the case then, the primary bar for beginning to raise rates will be a return to full employment. The difference now is that the Fed is likely to judge the level of full employment as being even lower. In 2015, the unemployment rate had converged with the Fed's estimate of full employment at five percent, which then kicked off the rate hike cycle. When the Fed last provided economic estimates in December 2019, it had estimated that level at nearly four percent. In our view, that should provide a rough approximation for when the Fed may again leave the zero percent lower bound.

And as the last chart shows, that will take time. RBC economists currently project that the unemployment rate will only fall under six percent by the end of 2021, after averaging 13.3 percent this quarter. And the recovery from there would likely be more gradual; the last move from six percent to four percent unemployment took place over the course of four years from 2014 to 2018.

Conclusion

In our view, the Fed has been largely successful in its stated goal of ensuring financial markets continue to operate smoothly. As the economy edges closer to at least a first phase of reopening, we don't believe the Fed is anywhere near the point of pulling back on the reins. While questions remain about the large scale of fiscal and monetary support, the Fed's approach of speaking loudly while carrying a big stick appears to be working, and may actually limit what it might ultimately need to do.

Fed unlikely to raise rates again until U.S. economy returns to full employment



Source - RBC Wealth Management, Bloomberg

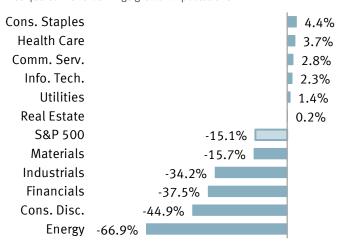


United States

Ben Graham, CFA - Minneapolis

- U.S. equity markets have sharply rebounded in April, albeit not to the levels seen in late February. The week's low single-digit gains have pushed equity markets into low double-digit territory for the month. Specifically, the S&P 500 has climbed 2.7% thus far this week and is up 12.7% for the month. Small caps and the NASDAQ have been even better, and growth has outpaced value in April, despite the outperformance of value stocks so far this week. Sector leadership has been pro-cyclical for the month and week as the industries hit hardest in the COVID-19-related bear market have often seen the sharpest reversals. For context, Energy is still the worst-performing sector for the year, down more than 30%, but it's also delivering near double-digit weekly gains. Other outperforming sectors include risk-on trades such as Financials, Industrials, and Materials.
- Earnings season is in the midst of its peak week and, so far, results have pushed earnings expectations steadily lower to the current consensus view of a 15% contraction in Q1 2020 earnings per share. However, the good news is that Q1 consensus views are solidifying around this estimate, and the uncertainty around the quarter's results is diminishing. Per Thomson Reuters I/B/E/S, six sectors are forecast to deliver earnings growth this quarter, while the others are on track for an earnings contraction, led lower by Energy (-67%) and Consumer Discretionary (-45%).
- RBC Capital Markets, LLC Head of U.S. Equity Strategy
 Lori Calvasina has recently attempted to put the most
 recent bear market <u>into the context</u> of the previous three

U.S. earnings expectations are led lower by cyclical sectors
First-quarter 2020 earnings growth expectations



Source - RBC Wealth Management, Thomson Reuters I/B/E/S; data as of 4/30/20

- corrections. She found that, first, this rebound has been legitimate but remains fragile given the current assumption that a recession will end in the second quarter. Second, she discovered that the current leadership trends seen in small caps and economically sensitive stocks are on par with similar rebounds during previous recessions. Finally, equities typically bottom four months before a recession ends with a median rebound of 34%. Today, the S&P 500 is about 30% higher than its Mar. 23 lows, which also happens to be just more than three months prior to the end of Q2.
- U.S. GDP contracted 4.8% in Q1, the sharpest decline since Q4 2008. The decline was largely fueled by a 7.6% contraction in personal consumption. Finally, new jobless claims continued to trend above the 3 million mark with this week's reading of 3.8 million pushing the total new claims for the year north of 30 million and with consensus forecasts indicating that 18% of the workforce is currently unemployed.



Canada

Sayada Nabi & Meika McKelvey - Toronto

- Extraordinary times call for extraordinary measures, as shown by the response to COVID-19 from all levels of the Canadian government. However, the bill for pandemic response is growing rapidly. The cost of the federal government's programs to manage the health crisis and support the economy has exceeded CA\$230 billion (10% of GDP). Each province has unique needs and this means the way the crisis is handled will vary, but RBC Economics estimates all provinces will run stimulus programs into the billions of dollars. As an example, British Columbia and Alberta plan to spend CA\$5 billion and CA\$7.7 billion, respectively, while Ontario's spending is at CA\$17 billion to date and Quebec has allotted CA\$18 billion. While Canadian provinces will see a material deterioration in their fiscal positions, the deficits currently forecasted would not be the worst they have faced relative to economic output. According to RBC Economics, increased provincial deficits in the near future will not become a major near-term issue as the Bank of Canada (BoC) is expected to provide liquidity support by keeping funding costs manageable and funding channels open.
- The BoC, through the introduction of several liquidity measures and the launch of its first-ever quantitative easing program, has played a central role (alongside the U.S. Federal Reserve) in unclogging the corporate bond market in Canada, compressing Canadian credit spreads, and fueling the swift turnaround seen over the past month across risk assets. Although the proper functioning of most markets

has been restored and this has been a positive development from a liquidity perspective, the solvency of many of the corporations benefiting from these measures remains in **question**. With the traffic jam in the credit market cleared, corporate bond issuance has surged dramatically, allowing companies to shore up liquidity; however, the economic impact of the virus continues to pose a significant threat to cash flows. The result of this combination is rising corporate **leverage**, from already-elevated levels. As Fed Chair Jerome Powell has repeatedly pointed out, "this is not the time to be concerned about debt levels", but we believe this is a risk further down the line that is worth thinking about.



Frédérique Carrier & Thomas McGarrity, CFA – London

- Two trends are clear this earnings season with respect to consensus estimates of COVID-19's economic impacts. First, consensus has generally underestimated the size of impairments to be taken by banks in light of the deterioration of the economic outlook. Second, consensus has generally underestimated the positive impact of stockpiling for the Consumer Staples and Health Care sectors.
- Looking at the three largest UK-listed banks by market capitalisation, impairment charges made by HSBC (\$3 billion), Lloyds Banking Group (£1.43 billion), and Barclays (£2.1 billion) were 73%, 61%, and 129% more than consensus expectations. It has been a similar story for European banks.
- Meanwhile, Health Care giants Novartis, AstraZeneca, and GlaxoSmithKline all reported earnings ahead of consensus expectations, with COVID-19-related stockpiling of drugs contributing to this. Within the pan-European Consumer Staples space, **Reckitt Benckiser** delivered the biggest beat to consensus estimates, as surging consumer demand for health- and cleaning-related products drove like-for-like sales growth of 13.3% in Q1 versus the consensus estimate of 5.3%.
- The downturn in commodity prices has resulted in Royal Dutch Shell cutting its dividend for the first time since World War II. The company will reduce its quarterly dividend payment by 66% to \$0.16 per share from \$0.47 previously, in order to "provide financial resilience and further flexibility to manage the uncertainty".
- · Flash estimates for Q1 euro area GDP suggest the economy contracted 3.8% q/q, making this the most severe downturn for the economic block in some 50 years. With most of the lockdowns having taken effect mid-March, the

full economic impact is likely to be even more dramatic in Q2. European Central Bank (ECB) governor Christine Lagarde suggested the regional economy could contract by as much as 12% in 2020, slightly less than RBC Capital Markets' -13.5% projection. The ECB announced additional liquidity operations but stopped short of expanding its quantitative easing programme, preferring to reserve some ammunition for future use, if needed.



Asia Pacific

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

- Asia-Pacific equity markets traded higher during the week, led by India and Taiwan. India's Nifty 50 Index tracked its U.S. peers higher on hopes that the COVID-19 curve is flattening in the western world and positive data on a potential treatment. The optimism in the Indian equity market, however, does not truly reflect the COVID-19 situation in the country. India reported its highest daily increase in COVID-19 fatalities on Apr. 29 with the death toll passing the 1,000 mark. The numbers remain low compared to Europe and the U.S. According to a report in Barron's, with crowded cities, a shaky health care system, and a lack of testing, some health care professionals are concerned that the actual number of infected cases may be much higher than what is being reported by the government.
- China's official manufacturing Purchasing Managers' Index (PMI) for April came in at 50.8, missing consensus expectations of 51.0 and falling below March's reading of 52.0. Officials from the National Bureau of Statistics noted that as the spread of COVID-19 accelerated overseas and global economic activity contracted sharply, demand for Chinese goods has been recovering at a slower pace than **production**. Data showed that most companies surveyed reported "insufficient orders," and some firms said market demand was weak, with difficulties in product sales and more time needed before orders return. Meanwhile, the non-manufacturing PMI came in at 53.2, up from 52.3 in March and above consensus expectations. Observers believe China's manufacturing activity has split onto two tracks, with domestic demand recovering on increased infrastructure spending, while export headwinds are mounting. If overall demand remains weak, we think Beijing may have to step up its policy support to help businesses, particularly manufacturers. Investors will likely have more clarity in late May, when the National People's Congress is slated to convene, on what other steps the government may take.
- According to an unconfirmed Reuters report, Chinese e-commerce retailer JD.com is pressing ahead with plans for a secondary listing in Hong Kong, to be completed as early as June, to raise at least US\$3 billion.



Data as of April 30, 2020

	,									
Equities (local currency)	Level	MTD	YTD	1 yr	2 yr	Govt bonds (bps chg)	Yield	MTD	YTD	ĺ
500	2,912.43	12.7%	-9.9%	-1.1%	10.0%	U.S. 10-Yr Tsy	0.638%	-3.2	-128.0	
Industrials (DJIA)	24,345.72	11.1%	-14.7%	-8.5%	0.8%	Canada 10-Yr	0.542%	-15.5	-116.0	
DAQ	8,889.55	15.4%	-0.9%	9.8%	25.8%	U.K. 10-Yr	0.231%	-12.5	-59.1	
sell 2000	1,310.66	13.7%	-21.4%	-17.6%	-15.0%	Germany 10-Yr	-0.586%	-11.5	-40.1	
/TSX Comp	14,780.74	10.5%	-13.4%	-10.9%	-5.3%	Fixed Income (returns)	Yield	MTD	YTD	
All-Share	3,262.51	5.0%	-22.3%	-19.8%	-21.0%	U.S. Aggregate	1.36%	1.8%	5.0%	
K Europe 600	340.03	6.2%	-18.2%	-13.1%	-11.8%	U.S. Invest Grade Corp	2.68%	5.3%	1.5%	
RO STOXX 50	2,927.93	5.1%	-21.8%	-16.7%	-17.2%	U.S. High Yield Corp	8.18%	4.1%	-9.1%	
g Seng	24,643.59	4.4%	-12.6%	-17.0%	-20.0%	Currencies	Rate	MTD	YTD	
nghai Comp	2,860.08	4.0%	-6.2%	-7.1%	-7.2%	U.S. Dollar Index	99.0180	0.0%	2.7%	
kei 225	20,193.69	6.7%	-14.6%	-9.3%	-10.1%	CAD/USD	0.7179	1.0%	-6.7%	
a Sensex	33,717.62	14.4%	-18.3%	-13.6%	-4.1%	USD/CAD	1.3929	-0.9%	7.2%	
gapore Straits Times	2,624.23	5.8%	-18.6%	-22.8%	-27.4%	EUR/USD	1.0954	-0.7%	-2.3%	
zil Ibovespa	80,505.90	10.3%	-30.4%	-16.4%	-6.5%	GBP/USD	1.2596	1.4%	-5.0%	
xican Bolsa IPC	36,470.11	5.5%	-16.2%	-18.2%	-24.6%	AUD/USD	0.6515	6.3%	-7.2%	
mmodities (USD)	Price	MTD	YTD	1 yr	2 yr	USD/JPY	107.2100	-0.3%	-1.3%	
ld (spot \$/oz)	1,683.84	6.8%	11.0%	31.2%	28.0%	EUR/JPY	117.4400	-1.0%	-3.6%	
ver (spot \$/oz)	14.96	7.0%	-16.2%	0.0%	-8.4%	EUR/GBP	0.8696	-2.1%	2.8%	
pper (\$/metric ton)	5,233.00	6.0%	-14.9%	-18.6%	-22.7%	EUR/CHF	1.0576	-0.3%	-2.6%	
(WTI spot/bbl)	18.84	-8.0%	-69.1%	-70.5%	-72.5%	USD/SGD	1.4105	-0.8%	4.8%	
(Brent spot/bbl)	25.27	11.1%	-61.7%	-65.3%	-66.4%	USD/CNY	7.0633	-0.3%	1.4%	
ural Gas (\$/mmBtu)	1.94	18.4%	-11.3%	-24.6%	-29.8%	USD/MXN	24.1345	2.0%	27.5%	í
						USD/BRL	5.4710	5.1%	35.7%	4

Source - Bloomberg. Note: 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. Data as of 9:35 pm GMT 4/30/20.

Examples of how to interpret currency data: CAD/USD 0.71 means 1 Canadian dollar will buy 0.71 U.S. dollar. CAD/USD -6.7% return means the Canadian dollar fell 6.7% vs. the U.S. dollar year to date. USD/JPY 107.21 means 1 U.S. dollar will buy 107.21 yen. USD/JPY -1.3% return means the U.S. dollar fell 1.3% vs. the yen year to date.

Authors

Thomas Garretson, CFA – Minneapolis, United States tom.garretson@rbc.com; RBC Capital Markets, LLC

Ben Graham, CFA – Minneapolis, United States

benjamin.graham@rbc.com; RBC Capital Markets, LLC

Sayada Nabi - Toronto, Canada

sayada.nabi@rbc.com; RBC Dominion Securities Inc.

Meika McKelvey - Toronto, Canada

meika.mckelvey@rbccm.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

Disclosures and Disclaimer

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 whollyowned subsidiary of the Royal Bank of Canada and, as such, is a related issuer of Royal Bank of Canada.

Non-U.S. Analyst Disclosure: Sayada Nabi and Meika McKelvey, employees of RBC Wealth Management USA's foreign affiliate RBC Dominion Securities Inc.; Frédérique Carrier and Thomas McGarrity, 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/ <u>GLDisclosure/PublicWeb/DisclosureLookup.aspx?EntityID=2</u> 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 abbreviation '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.

Distribution of Ratings - RBC Capital Markets, LLC Equity Research										
As of March 31, 2020										
			Investment Ba	Investment Banking Services						
			Provided During	Provided During Past 12 Months						
Rating	Count	Percent	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						

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.

Ratings:

Outperform (0): 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 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 thirdparty 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

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

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: 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.

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

All rights reserved

RBC1253