September 24, 2020

RBC WEALTH MANAGEMENT

Global Insight Weekly

Going out with a bang?

Frédérique Carrier – London

As the Brexit endgame begins to unfold, the UK government appears ready to break the Withdrawal Agreement it negotiated less than a year ago. We look at how the British strategy could influence the prospects for free trade agreements with the EU and the U.S., as well as considerations that could affect investors in the months ahead.

British Prime Minister Boris Johnson recently proposed contentious legislation in preparation for the UK's departure from the EU single market. The divorce will be final at the end of December 2020, when the clock runs out on the one-year transition period during which the UK remains tied to the EU's economic structures.

The Internal Market Bill would in effect negate much of the Withdrawal Agreement, the divorce settlement to which the UK and EU agreed late last year. The main point of contention is state aid: the British government has decided it now wants an unconstrained ability to subsidize companies and industries, something that would not be possible under the terms of the current agreement.

An important casualty of the demise of the Withdrawal Agreement would be the Northern Ireland protocol, which guarantees the Good Friday Agreement that prevents a hard border on the island of Ireland.

Should the prime minister's proposal be passed in Parliament, and the UK renege on the Withdrawal Agreement, Britain would in effect breach international law.

The proposal was strongly condemned not only by the EU, but also by former Prime Ministers who want to protect the UK's reputation as a staunch defender of the rule of law. Politicians in the U.S. soon joined in, with Speaker of the House of Representatives Nancy Pelosi and presidential candidate Joe Biden pointing out that the House of Representatives would be unlikely to approve a U.S.-UK free trade agreement (FTA) if the Good Friday Agreement were breached—a sign of the power of the Irish lobby in the U.S. An FTA with the U.S. was always much coveted by Brexit proponents, who saw severing ties with the EU as an acceptable cost to obtain it. With the EU accounting for close to 50 percent of Britain's exports, a large alternative FTA is clearly needed.

Most observers expected negotiations to become increasingly acrimonious as the deadline to reach a trade deal with the EU approached. Few, however, could have predicted a move that could sully Britain's international reputation.

Brexit brinkmanship: Does he mean it?

Is this simply a negotiating tactic, aimed at sowing havoc and preparing the ground for Britain to orchestrate a U-turn and agree to a trade deal? Or does Johnson believe the cost of leaving without a trade deal is a fair price to pay for the freedom to pick and choose industrial winners? Opinions are divided.

Market pulse

Click here for authors' contact information. Priced (in USD) as of 9/24/20 market close, ET (unless otherwise stated). **For important disclosures and required non-U.S. analyst disclosures, see page 6.**
Produced: Sept. 24, 2020 16:38ET; Disseminated: Sept. 24, 2020 17:00ET;

Brexit scenarios to year's end

Note: whether a trade deal is agreed or not, emergency negotiations are likely to take place as several issues will likely need to be ironed out.

Source - RBC Wealth Management

A deal, at least in the form of a rudimentary FTA covering goods, is still possible. After all, the EU would still prefer one, and many observers believe the UK authorities should not consider putting the country through an economic shock at a time when Britain is already weak due to the COVID-19 health crisis. The British economy has bounced back from its 22 percent year-over-year Q2 contraction, but the recent tightening of restrictions in response to a rising infection rate will likely hamper the recovery. For 2020, RBC Capital Markets expects UK GDP to contract by some nine percent year over year, a much deeper contraction than is expected in the U.S. (-3.5%) or Canada (-6%).

While a rudimentary FTA is still possible in theory, we continue to assign a probability of just over 50 percent to the UK leaving the EU without a significant economic arrangement on December 31. Time is quickly running out, and the prospect of a no-deal Brexit seems to inspire less fear in the EU than it did in the past, given the bloc's recent creation of its ambitious fiscal stimulus package.

Staying Underweight amid poor visibility

The Bank of England is on high alert. With some of the government's emergency support programmes becoming less generous, new COVID-19 restrictions taking effect, and the prospect of a no-trade-deal Brexit looming, the UK economy is likely to need more support in the months to come. To that end, the central bank has reiterated that negative interest rates are part of its toolkit, and is looking into how they could be implemented effectively. In the short term, we anticipate further quantitative easing focused on gilts (UK government bonds) before year's end, with the potential for interest rates to be cut to zero later if deemed necessary.

For now, with a 6- to 12-month view, we would be Underweight UK sovereign debt. We expect gilt yields to grind higher over time as the effects of much higher government spending and accommodative monetary policy play out. Sterling investment-grade corporate credit provides relatively more compelling valuations, though we would be very selective given the double challenge of the pandemic and Brexit.

The prospect of negative rates, the recent resurgence of COVID-19 infections, and news of the government's intention to negate the Withdrawal Agreement led the pound to retrace some of its recent gains against the U.S. dollar and the euro, falling five percent against the former so far in September. We believe trade negotiation headlines will be the most prominent driver of sterling in coming weeks. With risks asymmetric to the downside, we have a cautious outlook for the currency. The pound's buoyancy so far this year suggests it is pricing in a 60 percent likelihood of a trade deal being signed, so it would likely retreat should this not materialise.

As for equities, valuations are undoubtedly attractive, with the FTSE All-Share Index close to where it stood following the 2016 Brexit referendum. But with the COVID-19 crisis far from being under control and a hard Brexit possible, we continue to believe there are better opportunities elsewhere and maintain our Underweight recommendation. We would focus on UK companies that are well positioned to benefit from long-term structural growth tailwinds or that have internal levers to grow, rather than on those whose prospects are tied to the macroeconomic environment.

United States

Ben Graham, CFA – Minneapolis

- **The S&P 500 officially entered correction territory this week**—defined as a minimum decline of 10% from recent highs—and on track for its worst September since 2008. To date, the S&P 500 has shed 9.3% from its Sept. 2 closing high. This trend is also evident and **even more exaggerated in the Nasdaq** (-11.5% since Sept. 2) while the **Dow Jones Industrial Average** (-8.0% since Sept. 2) **has held up slightly better** than these indexes and is yet to dip into correction territory. Granted, and it's not a small consideration, the Nasdaq is still the clear leader so far in 2020, up 18.9% year to date.
- **The divergence in index moves thus far in 2020**, both during the recovery and the current correction, **has seen a common amplifier: Growth and technology-oriented stocks**. In the aftermath of the March lows, growth and Tech stocks rallied on the heels of unprecedented fiscal stimulus and work-from-home trends. Several of the largest companies in the world more than doubled in value from their March lows, highlighted by Apple's climb of 160% and passing of the $2 trillion milestone. Fast forward to today and the likelihood of further stimulus is fading, while the elevated valuations that are a result of this rally are coming to the forefront. As a result, these growth and Tech stocks are reversing course in what we believe is a **healthy, albeit fast, consolidation**.

U.S. equity market returns

Index or sector	2020 through 9/2/20	9/2/20 to date	Year to date
Nasdaq	34.4%	-11.5%	18.9%
S&P 500	10.8%	-9.3%	0.5%
Dow Jones	2.0%	-8.0%	-6.2%
Technology	38.6%	-12.3%	21.5%
Cons. Discretionary	30.1%	-9.2%	18.1%
Comm. Services	18.8%	-12.0%	4.6%
Materials	7.8%	-6.3%	1.0%
Health Care	5.9%	-5.8%	-0.3%
Cons. Staples	7.2%	-7.2%	-0.5%
Industrials	-2.1%	-5.4%	-7.4%
Utilities	-7.0%	-3.8%	-10.5%
Real Estate	-4.6%	-8.2%	-12.4%
Financials	-17.3%	-8.4%	-24.3%
Energy	-42.4%	-12.8%	-49.8%

Source - RBC Wealth Management, FactSet; data though 9/24/20

- As has frequently been the case with 2020, **the current correction is underway with a surprising amount of rapidity**. In fact, the Nasdaq fell 10.0% over the course of just three days ending Sept. 8. Excluding March of this year, when COVID-19 fears reached extremes, this was the worst three-day move for the tech-heavy index since the U.S. debt downgrade in August 2011. Furthermore, the CBOE Volatility Index (VIX) has seen an average reading of 30.5 in 2020, higher than every other year since the Great Recession, with a peak in March that was mere inches short of the October 2008 high.
- However, it's important to put this most recent correction into context. Despite the sharpest losses occurring in the stocks that were leaders throughout much of 2020, Tech remains the best-performing sector for the full year. It's followed by Consumer Discretionary and Communication Services, while the worst-performing sectors in 2020 include Energy and Financials. Surprisingly, the S&P 500 has actually climbed 0.5% in 2020, while the majority of sectors are lower for the year. Taken together, **we view this most recent Tech-led correction as part of the normal rhythms of markets** and it makes sense in the greater context of how 2020 has played out. Tech had run too far, too fast in recent months, in our view, and now it is correcting and bringing other parts of the market down with it, albeit to a lesser degree. Equity markets are essentially flat for the year, but they sure have been on an uncomfortably fast and rapidly shifting path for much of the ride.
- Finally, the economy continues to improve, despite the pace of the recovery being slower than the pace of the decline. Employment trends didn't deteriorate to the levels that many feared. Home buying activity remains elevated while manufacturing activity stabilizes. This **economic picture indicates incremental improvement that should provide a sturdy backstop for equity markets from here** and should prevent March-like losses for the foreseeable future, in our opinion.

Canada

Ryan Harder & Luis Castillo – Toronto

- **Prime Minister Justin Trudeau's plan for the expansion of new fiscal spending measures into 2021 and beyond was outlined** in this year's Speech from the Throne. Given on Wednesday afternoon by Governor General Julie Payette, the speech marked the resumption of parliament, which was suspended in August. Among the **notable items announced** were the extension of the Canada Emergency Wage Subsidy, an investment in a nationwide childcare program, a promise to accelerate a national pharmacare strategy, and various incentives designed to meet a greenhouse gas emission target by 2030. Although the full scope and execution of these programs are still unclear, the breadth of new spending items announced indicates that the FY2021 federal deficit is likely to be considerably larger than pre-COVID-19 levels. With interest rates already near zero and long-term yields having fallen significantly this year, we believe **the addition of ongoing fiscal stimulus should provide a tailwind for inflation going forward**.

- **Canada retail sales rose 0.6% in July to CA$52.9 billion**, with sales up in six of 11 subsectors according to Statistics Canada. While a number of other activity measures remain well below the pre-COVID-19 levels, retail sales activity sits above the pre-lockdown level. Some of this consumer resilience stems from **household incomes increasing by over CA$30 billion in the second quarter**, despite a nearly CA$20 billion decrease in wages, as government transfers more than filled this gap. We note that the pace of retail sales growth has slowed considerably after a strong May (+21%) and June (+23%). Early August estimates suggest retail sales increased 1.1%.

Europe

Frédérique Carrier & Thomas McGarrity, CFA – London

- **Markets in Europe followed the lead of the U.S. and retraced some of their gains in the week.** In Europe and the UK, the Financials sector was hit worse not only due to concerns about rising infection rates affecting the economic cycle, but also as **banks were highlighted in a FinCEN report as having been implicated in money laundering operations**. The FTSE All-Share is now 24% below its starting point at the beginning of 2020, and the STOXX Europe 600 ex UK is down 10%.
- **Economic momentum in Europe started to slow down.** Both the French and German September flash PMI (Purchasing Managers' Index) for the services sector entered contraction territory, as the resurgence of infection cases weighed on business activity. Given only mild restrictions are in place compared to those used in March, this decline highlights **the sensitivity of economic activity to consumer behaviour**. By contrast, the manufacturing sector's readings remain in expansion territory, and were slightly above consensus expectations, albeit lower than the previous month's levels. Overall, while we think it is too early to worry about a double-dip recession, national authorities and the European Central Bank will be on the alert.
- For the UK, whose recovery trailed that of the euro area as the economy was reopened comparatively later, PMIs for both services and manufacturing were firmly in expansion territory in September, but below consensus expectations. Here as well, the risk is that as government restriction measures become ever more severe in the winter months, economic activity could slow further. **Despite freshly announced stimulus**, including a wage-subsidy scheme designed to help out employees working reduced hours, **a decline in economic activity as soon as October cannot be ruled out**.

Asia Pacific

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

- **The correction in U.S. equities spilled over to Asian stocks during the week.** Sentiment for Asian equities remained somewhat weak, with the MSCI Asia ex Japan Index down by 2.3% as of Sept. 23.
- **In China, retail sales returned to growth for the first time since the COVID-19 pandemic**, up 0.5% y/y in August. Further data shows that sales of luxury goods, cars, and electronics are leading, ahead of the growth of food, clothing, and other essentials. According to Boston Consulting Group, luxury spending in China should grow 20%–30% this year.
- According to an unsubstantiated report from Bloomberg, **Ant Group Co., the fintech giant owned by Alibaba (9988 HK), is seeking to raise about $35 billion in a dual listing in Hong Kong and Shanghai at a valuation of about $250 billion**. The deal, which could be completed in mid-to-end-October, would be one of the largest IPOs in the world ever. The article noted that the company won't seek "cornerstone" investors (more common in Hong Kong than in other markets, these are usually large institutions that agree to hold the shares for about six months in exchange for a sizable allocation) in its Hong Kong share sale, as it is confident there will be sufficient demand for the IPO.
- On Sept. 23, **ByteDance Ltd., the owner of video-sharing app TikTok, filed in U.S. federal court for a temporary block on the Trump administration's ban** that would remove the app from U.S. app stores. Bloomberg reported that ByteDance is pursuing approvals from the Trump administration for a sale of its U.S. operations to Oracle Corp. and Walmart Inc. The company asked the court to set a hearing before the rules take effect at 11:59 p.m. on Sept. 27 and proposed that both sides file additional briefs this week.
- **South Korea's central bank estimates the country is expected to see a record number of "zombie" companies this year.** The Bank of Korea (BOK) defines such firms as those that have been unable to make payments on interest from operating profit for three years. The ratio of companies deemed "marginal" by the BOK will reach 21.4% of local firms subject to independent audits by the end of 2020, or around 5,000. That would be a significant increase from 14.8% in 2019.

MARKET SCORECARD

Data as of September 24, 2020

Equities (local currency)	Level	MTD	YTD	1 yr	2 yr
S&P 500	3,246.59	-7.2%	0.5%	9.4%	11.2%
Dow Industrials (DJIA)	26,815.44	-5.7%	-6.0%	0.0%	1.0%
Nasdaq	10,672.27	-9.4%	18.9%	33.5%	33.5%
Russell 2000	1,451.82	-7.0%	-13.0%	-5.3%	-14.9%
S&P/TSX Comp	15,912.26	-3.6%	-6.7%	-5.3%	-1.8%
FTSE All-Share	3,245.12	-2.9%	-22.7%	-19.1%	-21.1%
STOXX Europe 600	355.85	-2.9%	-14.4%	-8.7%	-6.9%
EURO STOXX 50	3,159.64	-3.4%	-15.6%	-10.5%	-7.4%
Hang Seng	23,311.07	-7.4%	-17.3%	-11.3%	-15.2%
Shanghai Comp	3,223.18	-5.1%	5.7%	8.0%	15.2%
Nikkei 225	23,087.82	-0.2%	-2.4%	4.5%	-3.3%
India Sensex	36,553.60	-5.4%	-11.4%	-6.5%	0.7%
Singapore Straits Times	2,450.82	-3.2%	-24.0%	-22.3%	-23.9%
Brazil Ibovespa	97,012.10	-2.4%	-16.1%	-6.6%	24.4%
Mexican Bolsa IPC	36,217.49	-1.7%	-16.8%	-16.0%	-26.7%
Commodities (USD)	**Price**	**MTD**	**YTD**	**1 yr**	**2 yr**
Gold (spot $/oz)	1,869.90	-5.0%	23.2%	22.1%	56.0%
Silver (spot $/oz)	23.21	-17.5%	30.0%	24.7%	62.8%
Copper ($/metric ton)	6,617.10	-1.2%	7.6%	15.0%	4.1%
Oil (WTI spot/bbl)	40.16	-5.7%	-34.2%	-29.8%	-45.0%
Oil (Brent spot/bbl)	41.76	-7.8%	-36.7%	-33.8%	-48.6%
Natural Gas ($/mmBtu)	2.19	-16.8%	0.0%	-12.6%	-28.0%

Govt bonds (bps chg)	Yield	MTD	YTD	1 yr	2 yr
U.S. 10-Yr Tsy	0.666%	-3.9	-125.2	-98.0	-242.3
Canada 10-Yr	0.557%	-6.5	-114.5	-75.0	-189.2
U.K. 10-Yr	0.219%	-9.2	-60.3	-30.9	-139.4
Germany 10-Yr	-0.501%	-10.4	-31.6	9.9	-101.1
Fixed Income (returns)	**Yield**	**MTD**	**YTD**	**1 yr**	**2 yr**
U.S. Aggregate	1.18%	0.1%	6.9%	7.0%	18.4%
U.S. Invest Grade Corp	1.97%	0.2%	7.1%	8.1%	22.8%
U.S. High Yield Corp	5.83%	-1.2%	0.4%	2.7%	9.8%
Currencies	**Rate**	**MTD**	**YTD**	**1 yr**	**2 yr**
U.S. Dollar Index	94.3170	2.4%	-2.1%	-4.1%	0.1%
CAD/USD	0.7489	-2.3%	-2.7%	-0.8%	-3.0%
USD/CAD	1.3354	2.4%	2.8%	0.8%	3.1%
EUR/USD	1.1672	-2.2%	4.1%	5.9%	-0.6%
GBP/USD	1.2738	-4.7%	-3.9%	2.0%	-2.9%
AUD/USD	0.7048	-4.4%	0.4%	3.6%	-2.8%
USD/JPY	105.4200	-0.5%	-2.9%	-1.5%	-6.5%
EUR/JPY	123.0400	-2.7%	1.0%	4.3%	-7.2%
EUR/GBP	0.9163	2.6%	8.3%	3.9%	2.3%
EUR/CHF	1.0816	0.3%	-0.4%	-0.4%	-4.5%
USD/SGD	1.3757	1.1%	2.2%	0.0%	0.7%
USD/CNY	6.8287	-0.3%	-1.9%	-4.0%	-0.4%
USD/MXN	22.1313	1.1%	16.9%	13.8%	16.7%
USD/BRL	5.5118	0.3%	36.8%	45.9%	34.8%

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 8:35 pm GMT 9/24/20.

Examples of how to interpret currency data: CAD/USD 0.74 means 1 Canadian dollar will buy 0.74 U.S. dollar. CAD/USD -2.7% return means the Canadian dollar fell 2.7% vs. the U.S. dollar year to date. USD/JPY 105.42 means 1 U.S. dollar will buy 105.42 yen. USD/JPY -2.9% return means the U.S. dollar fell 2.9% vs. the yen year to date.

Authors

Frédérique Carrier – London, United Kingdom
frederique.carrier@rbc.com; RBC Europe Limited

Ryan Harder – Toronto, Canada
ryan.harder@rbccm.com; RBC Dominion Securities Inc.

Luis Castillo – Toronto, Canada
luis.castillo@rbccm.com; RBC Dominion Securities Inc.

Thomas McGarrity, CFA – London, United Kingdom
thomas.mcgarrity@rbccm.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 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: Ryan Harder and Luis Castillo, 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/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 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 June 30, 2020

			Investment Banking Services Provided During Past 12 Months	
Rating	Count	Percent	Count	Percent
Buy [Outperform]	776	51.63	238	30.67
Hold [Sector Perform]	635	42.25	130	20.47
Sell [Underperform]	92	6.12	12	13.04

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 (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 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.