

Bubble trouble?

Frédérique Carrier – London

Given the exuberance in different pockets of the market, it's fair to wonder if we're seeing a bubble inflating close to a bursting point. We take stock of the signs of excess and look at how to position portfolios through this period.

Concerns are mounting as to whether financial markets may have entered bubble territory over the past few weeks. Certainly, instances of excessive behaviour in markets have become apparent, and, it seems, more frequent.

The usual key ingredients to form a bubble in financial markets include cheap credit or easy money and an enticing narrative, with both resulting in excessive behaviours and valuations. The dot-com bubble is a case in point. With central banks increasing money supply ahead of the transition to the new millennium and the new possibilities offered by the internet leading to a tantalising narrative, the Nasdaq went up more than fourfold from the beginning of 1995 until it peaked in early 2000. Then, with money supply starting to tighten, the bubble burst. By the end of 2002, the Nasdaq had lost more than 70 percent of its value.

Today's financial markets are grounded on easy money, and many market observers are worried about the impact of a reversal of central bank policies when the pandemic ultimately ends. Such concerns are valid, in our view, but we see the situation as a growing number of red flags rather than a definitive sign that we are in a bubble that is about to burst.

Red flags accumulate

There are visible signs of excess in financial markets as loose monetary policy and record-low bond yields push market participants to take on more risk. There have been several examples recently of market participants displaying FOMO—the fear of missing out—and assuming consistently rising prices rather than rationally assessing the value of an investment.

Investor attitudes are being shaped by the headline-making gains of some high-profile issues. For example, the 35 percent gain made by Bitcoin in the first nine days of 2021, on the heels of a fivefold surge in price from March to December 2020; or the more-than-sixfold increase in GameStop shares in less than two weeks to Jan. 26; or even Tesla, now the fifth-largest stock in the S&P 500 by market capitalisation, with a market cap larger than that of the major U.S., European, and Japanese automakers combined.

Interestingly, some of these have an enticing narrative and are perceived as providing a foothold in the economy of the future.

Other signs of excess include the increased participation of individual investors (aka retail investors) in markets.

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.

Being stuck at home due to pandemic lockdowns and restrictions seems to have spurred an influx of day traders. Another marker is the volume of initial public offerings (IPOs), which has reached a rapid pace, with \$347 billion worth of IPOs announced in 2020 despite the pandemic, more than double the \$165 billion announced the prior year, per data from Bloomberg. Moreover, according to a University of Florida report, the median age of companies coming to the market as IPOs in 2020 was nine years. The median age of companies going public hasn't been this young since 2007, the year the stock market peaked before the global financial crisis.

Stretched, but not overly

It would be remiss to ignore these warnings and we repeat our call for vigilance. But we see less evidence of bubble territory when we look at stock market valuations.

On the surface, U.S. equities appear expensive at 22.3x the 2021 consensus earnings estimate for the S&P 500. After excluding the five largest technology-driven stocks (Apple, Amazon, Microsoft, Google, and Facebook), which constitute more than 20 percent of the S&P 500's market capitalisation, the forward price-to-earnings (P/E) ratio drops to 17.5x, according to our national research correspondent. This compares to a 10-year average of 16.4x for the S&P 500 as a whole, suggesting to us that while valuations are expensive, they are not significantly overvalued.

Valuations elsewhere are also elevated and above their long-term averages, but they remain far below the heights reached at the time of the dot-com bubble. These higher valuations are underpinned by bond yields which are currently at historical lows.

Equities' currently high valuations are susceptible to declines if bond yields climb as the economy recovers. But we think any increase in yields will be contained this year, although the 10-year Treasury yield has the potential to rise to around 1.5 percent versus the current high of one percent, which if reached would leave it about where it was pre-pandemic and well below the 2.1 percent it averaged in 2019.

With elevated unemployment levels and a full economic recovery still years away, we believe the Fed will very likely maintain its current loose monetary policy stance, even if inflation picks up over the next few months. Likewise, other major central banks are likely to keep monetary stimulus in place. Tapering by central banks, or the reduction of monetary stimulus, is unlikely before early 2022, in our view.

Still, a pullback or correction cannot be ruled out, as much enthusiasm seems discounted in equity prices. The frothiest, most extended parts of the U.S. market would be most vulnerable, in our opinion. Difficulties with vaccine

Current valuations are all above long-term averages

Index	2021 P/E ratio (x)	P/E long-term average (x)
S&P 500	22.3	16.4
S&P/TSX Comp (Canada)	16.8	14.8
MSCI China	15.9	14.6
TOPIX (Japan)	16.3	14.1
MSCI Europe ex UK (Europe)	18.0	13.5
MSCI UK	14.5	13.0

Note: Long-term averages use time frames most relevant to each market given changes in constituents over the years. U.S. 10 years; Canada and Japan 20 years; Europe and UK 22 years; and China 5 years.

Source - RBC Wealth Management, Bloomberg; China and Japan data as of 1/28/21, all others as of 1/27/21

rollouts and delays in reopening economies that lead to disappointing earnings guidance could all trigger profit-taking.

How to position?

We maintain our Overweight stance in global equities, and we are willing to withstand possible volatility as we think equities will eventually move slowly higher over the course of the year. We expect the sector rotation into cyclicals that started in November 2020 to continue as the economy approaches a reopening. We would continue to look for exposure to more attractively valued cyclicals, without neglecting exposure to resilient defensive stocks.

UNITED STATES

Alan Robinson – Seattle

- **Stocks endured a volatile week**, driven by the competing forces of optimism over a post-COVID-19 earnings rebound set against concerns over stretched valuations and speculative investment behavior. During the week, the Volatility Index (VIX), a measure viewed as a classic “fear gauge,” jumped to 37 from 23. While investors’ natural inclination may be to take money off the table during periods of extreme volatility, we note that since 1991, **when the VIX exceeds 37, the market has posted positive returns 83% of the time** over the subsequent six months.
- However, **the near-term path for stocks may be more challenging** as pockets of extreme market action appeared during the week. On Jan. 27, the market posted the largest share-volume day on record, and the third-largest dollar-volume day on record. The volume of shares that traded away from the major exchanges was 45% of the total, indicating heavy speculative trading. According to Bloomberg, several hedge funds were forced to close their bearish positions on individual stocks as social media-driven investors pushed their prices higher. This triggered hedge fund selling in larger core holdings to fund their losses, which fed the midweek market decline.
- With Q4 2020 earnings season in full swing, **several bellwether companies posted impressive quarterly results**. Microsoft’s \$2.03 earnings per share (EPS) beat the consensus \$1.64 estimate, while Facebook (FB) reported EPS of \$4.43 vs. \$3.43 consensus. The solid tech stock results follow similar positive reports from the banking industry the prior week, suggesting a broad-based earnings rebound.
- The Federal Reserve concluded its regular policy meeting during the week with **Fed Chair Jerome Powell downplaying the “rising inflation” narrative**, suggesting interest rates will remain low for the foreseeable future.
- **The U.S. economy posted solid preliminary 4.0% (annualized) quarter-over-quarter growth in Q4 2020**, to leave the level of economic output within 2.5% of year-ago levels. The bounceback in the second half of the year limited the annual GDP decline to a still-large 3.5% in 2020 after the plunge in output in the spring.

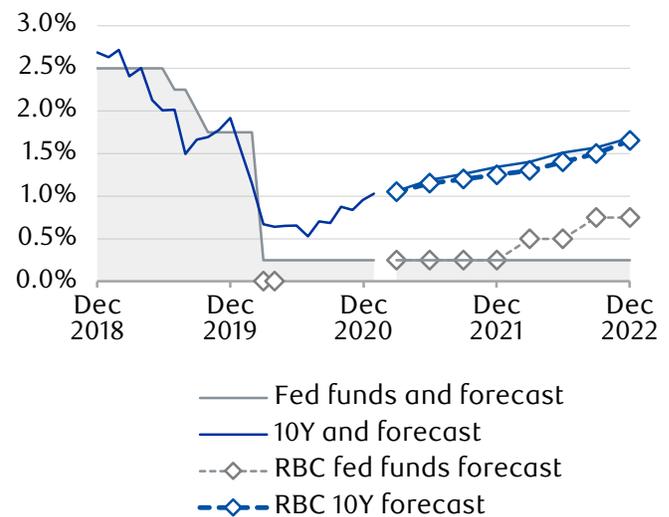
CANADA

Luis Castillo – Toronto

- In spite of recent political setbacks, **energy has been one of the best-performing credit sectors in recent months** as fixed income investors have become more comfortable deploying capital in the space. However, **a recent credit warning threatens its momentum**. Following an industry review, credit rating agency S&P

Analysts don’t expect a significant rise in interest rates this year

Key rate forecasts for January



Source - RBC Wealth Management, Bloomberg Economists Survey for January, RBC Economics

Global increased the risk score of companies in the oil and gas industry (exploration and production [E&P] and integrated) to “moderately high” from “intermediate,” which resulted in a number of companies being placed on “CreditWatch with negative implications” and two placed on “Negative Outlook.” Amongst those affected were Canadian energy giants Suncor Energy and Canadian Natural Resources. The agency noted, “The revision to the industry risk assessment reflects our concerns about the trajectory of oil and gas supply/demand and the impact on producers of fossil fuels, given the increasing adoption and transition of renewable energy alternatives to address climate change.”

- **Canadian retail sales, up for a seventh straight month, beat expectations in November, rising 1.3% m/m, according to Statistics Canada.** Although the labour market remains below pre-pandemic employment levels we believe the continued resilience in retail sales can be largely attributed to government transfer payments, which have more than offset lost wages. This dynamic has helped fuel the inflation narrative and propelled Canada’s inflation breakevens, a measure of market-implied inflation expectations, above pre-pandemic levels and towards their highest level since early 2019. However, **the positive surprise was short-lived** as Statistics Canada’s preliminary December holiday season estimates revealed that sales potentially fell by 2.6% m/m as lockdowns in parts of the country intensified, although at a more gradual pace and less widespread than before. This would mark the lowest reading since April, and RBC Economics expects weakness to continue into January.

EUROPE

Thomas McGarrity, CFA & Alastair Whitfield – London

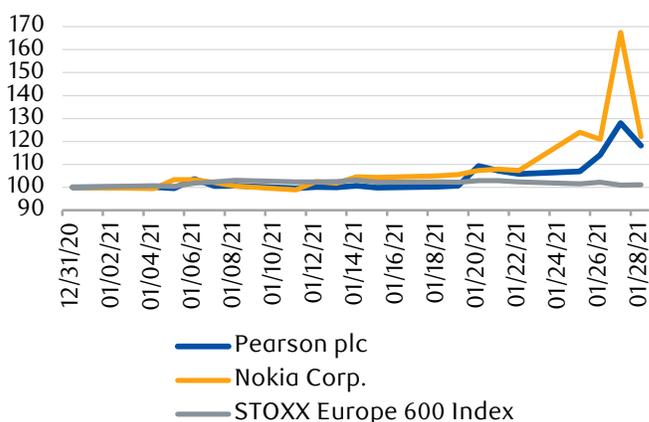
- **Pan-European equities were in risk-off mode during the week**, with the STOXX Europe 600 down 1.8% over the past five trading days amid the UK tightening travel restrictions, rising COVID-19 cases, and concerns around the pace of the vaccine rollout in Continental Europe following manufacturing issues of the AstraZeneca/Oxford vaccine in the EU. **Defensives outperformed cyclicals**, while apparent short covering led to a strong rally in some of Europe's most heavily shorted stocks, including communications equipment provider Nokia and education-focused publisher Pearson.
- **UK-listed insurance group Prudential announced it is planning to demerge its U.S. business**, Jackson National, in Q2 2021. This is a change of course from previous guidance, in which Prudential had indicated it would pursue a minority IPO of the business. As part of the process, Prudential is considering an equity raise of around \$2.5–\$3.0 billion to “increase financial flexibility and take advantage of Asia growth opportunities.” Prudential shares fell 8% following the announcement.
- **European Central Bank (ECB) President Christine Lagarde spoke on the topic of green banking and green central banking** at a speech in Europe this week, which may set the stage for other central banks to have similar discussions in the future. This has been echoed by other ECB board members suggesting that climate-related risk should be taken into account when conducting monetary policy. Lagarde further referenced the ECB contributing to the support of the EU's economic policies and its priority of combating climate change.
- **The EU has been active in issuing social bonds since last year to support the impact of the pandemic**, and these have attracted sizeable investor interest. This week alone, over €115 billion of orders were submitted by investors for issuance of just €14 billion. With this existing framework to be extended towards green and sustainability EU bonds and given ongoing trends in new bond supply towards sustainable investing and high levels of investor appetite, we expect further ESG-oriented issuance to continue in the weeks and months ahead.

ASIA PACIFIC

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

- **Asia Pacific equity markets traded broadly lower during the week**, with the decline led by Vietnam and Indonesia. The Vietnam Ho Chi Minh Stock Index is down 12.2% week-to-date, the biggest weekly decline since the onset of COVID-19. Sentiment weakened sharply

Heavily shorted European shares have staged strong rallies to confound the bears



Source - RBC Wealth Management, Thomson Reuters Refinitiv. Normalized with 12/31/20 levels = 100

after two new locally transmitted COVID-19 cases were reported, the first in over two months.

- **South Korea could come out of the pandemic in the best shape of any OECD country**, in our view. Fourth-quarter 2020 GDP grew at a faster-than-expected pace (+1.1% q/q vs. a median estimate of +0.7% q/q in a Reuters poll). **Growth has been supported by overseas demand** for semiconductors and tech devices. Reuters also reported that Oxford Economics expects recovery momentum to gather pace from the second quarter onwards, led by strong export prospects as global growth and 5G deployment pick up speed.
- **Tencent Holdings (700 HK) slumped after a 10.9% surge** on Monday that pushed its market capitalization to the cusp of US\$1 trillion for the first time. The stock has given back all its gains this week as many traders took profits after the rally while others exited their positions after an adviser to China's central bank signaled that excessive liquidity was creating asset bubbles. According to a Bloomberg report, **China onshore funds have purchased a record amount of Hong Kong shares this month**, with about a quarter of that targeting Tencent.
- **Ant Financial**, an affiliate of Alibaba Group (9988 HK), is **planning to turn itself into a financial holding company overseen by China's central bank**, according to a report by the Wall Street Journal. The report said the restructuring plan could be finalized before China's week-long Lunar New Year holiday in mid-February. Top Chinese financial regulators recently hinted they are happy with the progress being made at Ant. On Tuesday, when asked during a virtual meeting of the World Economic Forum if Ant would **revive its IPO**, the People's Bank of China governor said if laws and regulations are followed, “you will have the result.”

MARKET Scorecard

Data as of January 28, 2021

Equities (local currency)	Level	MTD	YTD	1 yr	2 yr
S&P 500	3,787.38	0.8%	0.8%	15.6%	43.3%
Dow Industrials (DJIA)	30,603.36	0.0%	0.0%	6.5%	24.8%
Nasdaq	13,337.16	3.5%	3.5%	43.9%	88.2%
Russell 2000	2,106.61	6.7%	6.7%	27.0%	43.0%
S&P/TSX Comp	17,657.20	1.3%	1.3%	0.9%	14.8%
FTSE All-Share	3,699.97	0.7%	0.7%	-10.9%	-0.5%
STOXX Europe 600	403.39	1.1%	1.1%	-3.4%	13.8%
EURO STOXX 50	3,557.04	0.1%	0.1%	-4.4%	13.4%
Hang Seng	28,550.77	4.8%	4.8%	2.2%	3.5%
Shanghai Comp	3,505.18	0.9%	0.9%	17.8%	35.0%
Nikkei 225	28,197.42	2.7%	2.7%	21.5%	36.6%
India Sensex	46,874.36	-1.8%	-1.8%	14.4%	31.5%
Singapore Straits Times	2,920.30	2.7%	2.7%	-8.2%	-8.7%
Brazil Ibovespa	118,883.30	-0.1%	-0.1%	2.1%	24.6%
Mexican Bolsa IPC	44,280.73	0.5%	0.5%	-1.0%	1.5%
Gov't bonds (bps change)	Yield	MTD	YTD	1 yr	2 yr
U.S. 10-Yr Treasury	1.048%	13.5	13.5	-60.8	-169.6
Canada 10-Yr	0.815%	13.8	13.8	-56.0	-114.9
UK 10-Yr	0.287%	9.0	9.0	-26.5	-97.8
Germany 10-Yr	-0.539%	3.0	3.0	-19.8	-74.4
Fixed income (returns)	Yield	MTD	YTD	1 yr	2 yr
U.S. Aggregate	1.15%	-0.5%	-0.5%	5.4%	19.3%
U.S. Investment-Grade Corp	1.84%	-1.0%	-1.0%	6.9%	25.8%
U.S. High-Yield Corp	4.29%	0.3%	0.3%	7.3%	17.8%
Commodities (USD)	Price	MTD	YTD	1 yr	2 yr
Gold (spot \$/oz)	1,842.28	-3.0%	-3.0%	17.6%	41.3%
Silver (spot \$/oz)	26.46	0.2%	0.2%	51.4%	68.1%
Copper (\$/metric ton)	7,821.25	0.9%	0.9%	37.8%	30.8%
Oil (WTI spot/bbl)	52.34	7.9%	7.9%	-2.1%	0.7%
Oil (Brent spot/bbl)	55.49	7.1%	7.1%	-6.8%	-7.4%
Natural Gas (\$/mmBtu)	2.69	6.0%	6.0%	39.2%	-7.5%
Currencies	Rate	MTD	YTD	1 yr	2 yr
U.S. Dollar Index	90.5400	0.7%	0.7%	-7.6%	-5.4%
CAD/USD	0.7800	-0.7%	-0.7%	2.6%	3.4%
USD/CAD	1.2821	0.8%	0.8%	-2.5%	-3.3%
EUR/USD	1.2120	-0.8%	-0.8%	10.0%	6.1%
GBP/USD	1.3726	0.4%	0.4%	5.4%	4.3%
AUD/USD	0.7678	-0.2%	-0.2%	13.5%	7.1%
USD/JPY	104.2600	1.0%	1.0%	-4.5%	-4.7%
EUR/JPY	126.3600	0.1%	0.1%	5.0%	1.1%
EUR/GBP	0.8830	-1.2%	-1.2%	4.4%	1.7%
EUR/CHF	1.0770	-0.4%	-0.4%	0.4%	-5.0%
USD/SGD	1.3289	0.5%	0.5%	-2.1%	-1.8%
USD/CNY	6.4495	-1.2%	-1.2%	-7.1%	-4.4%
USD/MXN	20.2444	1.7%	1.7%	8.1%	6.3%
USD/BRL	5.4405	4.7%	4.7%	44.0%	44.5%

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 -0.7% return means the Canadian dollar fell 0.7% vs. the U.S. dollar year to date. USD/JPY 104.26 means 1 U.S. dollar will buy 104.26 yen. USD/JPY 1.0% return means the U.S. dollar rose 1.0% vs. the yen year to date.

Source - Bloomberg; data as of 4:44 pm ET 1/28/21.

Authors

Frédérique Carrier – London, United Kingdom

frederique.carrier@rbc.com; RBC Europe Limited

Alan Robinson – Seattle, United States

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

Luis Castillo – Toronto, Canada

luis.castillo@rbccm.com; RBC Dominion Securities Inc.

Thomas McGarrity, CFA – London, United Kingdom

thomas.mcgarritty@rbc.com; RBC Europe Limited

Alastair Whitfield – London, United Kingdom

alastair.whitfield@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: Luis Castillo, an employee of RBC Wealth Management USA's foreign affiliate RBC Dominion Securities Inc.; Frédérique Carrier, Thomas McGarrity, and Alastair Whitfield, 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