GLOBAL
Insight
WEEKLY

Wealth Management

Perspectives from the Global Portfolio Advisory Committee | October 6, 2022

Correction: We are republishing due to incorrect Federal Reserve calendar information which has been removed from the U.S. regional bullets.

Receding liquidity exposes risks

Frédérique Carrier – London

Long dry spells and retreating water levels are exposing many finds from forgotten archaeological sites to discarded cars. Similarly, the receding tide of monetary liquidity, as western central banks hike interest rates, is exposing long glossed over financial vulnerabilities and systemic risks. In this environment, we expect financial markets' volatility to continue. We would stay defensive and up the quality of portfolio holdings.

Increased focus on vulnerabilities

Tightening financial conditions are increasing investors' attention on financial weaknesses and potential threats to financial stability.

A prime example of this was last week's turmoil in the UK where the announcement of new unfunded tax cuts threw the government bond market (gilts) in a spin, forcing the Bank of England (BoE), as the lender of last resort, to intervene in an attempt to restore orderly market function. Within a week, the UK 10-year yield soared to 4.6 percent from 3.29 percent, while the pound plunged from 1.14 to the USD to a low of 1.03, a record low against the greenback. Fearing systemic failure, the BoE, which had intended to start to sell the government bonds it had accumulated during the COVID-19 pandemic on Oct. 3, announced a temporary bond purchase programme to run daily until Oct. 14.

What do we believe was the cause of such a fallout? Against the backdrop of precarious national finances and double-digit inflation, the new government's economic policy lacked credibility. New tax cuts of some two percent of GDP, on top of the previously announced energy support package of some six percent of GDP, were perceived as adding to inflationary pressures and increasing the national debt to unsustainable levels. The market's expectation of peak interest rates was pushed beyond six percent at one point. The FTSE All-Share reached a one-year low.

Less-forgiving markets

Markets used to cheer the news of new tax cuts, as borrowing costs were low and central banks, via quantitative easing, were natural buyers of large amounts of bonds. But circumstances have changed. RBC Global Asset Management Inc. Chief Economist Eric Lascelles points out that debt service costs have soared due to the rise in interest rates. Furthermore, central banks are no longer actively pursuing quantitative easing, depriving markets of a useful source of bond demand, even as many nations' fiscal deficits remain large. Lascelles believes that is why the supply and demand of public debt is again becoming a relevant determinant of bond yields.

Marc Dowding, chief investment officer at RBC BlueBay Asset Management, points out that contagion risks should not be ruled out. Previous episodes of financial stress,

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

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

Priced (in USD) as of 10/5/22 market close (unless otherwise stated). Produced: 10/7/22 1:42 pm ET; Disseminated: 10/7/22 1:44 pm ET
For important disclosures, required non-U.S. analyst disclosures, and authors' contact information, see page 6.

such as the collapse of the hedge fund Long-Term Capital Management in 1998, have shown us that their impact can be felt far and wide.

As systemic risk is increasing due to global liquidity tightening, investors are also becoming much more selective about what risks they are willing to take. Even as calm returned to UK financial markets, market participants focused on troubled Swiss investment bank Credit Suisse, a 'globally significant bank', as labelled by the Bank for International Settlements, the central banks' bank. Its share price already tumbled more than 40 percent year to date, and its credit default swaps, or the premium to buy insurance against a default, spiked to record highs. In our view, credit and equity markets turning against a large bank points to increasing investor concern.

Tightening financial conditions

Volatility over the past 10 days may be a taste of things to come as financing conditions tighten further. More than 20 central banks have increased interest rates so far in 2022, in a synchronised attempt to quell inflation. Many have been very aggressive. In the U.S., real interest rates, or interest rates after taking inflation into account, have moved up at a pace unmatched in the recent past, reaching 1.7 percent. Even in the eurozone, which has been, until recently, beset by negative interest rates and very low inflation, real rates are now in positive territory.

We believe more hikes are in the offing. In the U.S., the Personal Consumption Expenditures Price Index, the Fed's favourite tool to gauge inflation, rose 0.3 percent month over month, exceeding consensus expectations and diminishing the possibility of a rapid halt to the U.S. central bank's tightening. The European Central Bank and BoE have both signalled they are likely to continue to hike aggressively, even in the face of slowing economies.

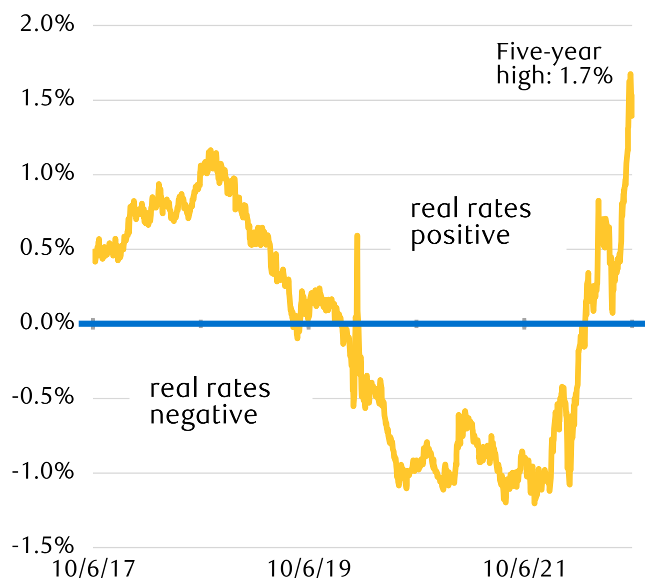
Not only are central banks increasing rates in a synchronised fashion, but the Federal Reserve is also passively reducing the size of its balance sheet by letting up to $1 trillion of securities it holds mature without reinvestment in a 12-month period, a move which Fed Chair Jerome Powell estimates could be equal to an approximate 0.25 percent interest rate increase. Though the Bank of England has postponed its plan for quantitative tightening, it expects to initiate its programme before year end.

Bias towards quality defensives

While the Bank of England managed to calm markets, thanks to its market intervention, we believe further bouts of volatility are possible in the coming months as central banks continue to tighten monetary policy, debt servicing costs rise, and investors become more circumspect about financial vulnerabilities.

With investor sentiment very depressed and global equity markets, as tracked by the MSCI World Index, down more than 25 percent year to date, we believe a trading rally is possible. We would use this opportunity to review the quality of companies in portfolios, focusing particularly on those with clean balance sheets and the ability to generate strong cash flow. As higher interest rates work themselves through economies, we would be favourably biased towards defensive stocks. Markets becoming more selective about what risks they are willing to take suggests to us it would be best try to avoid being in their crosshairs.

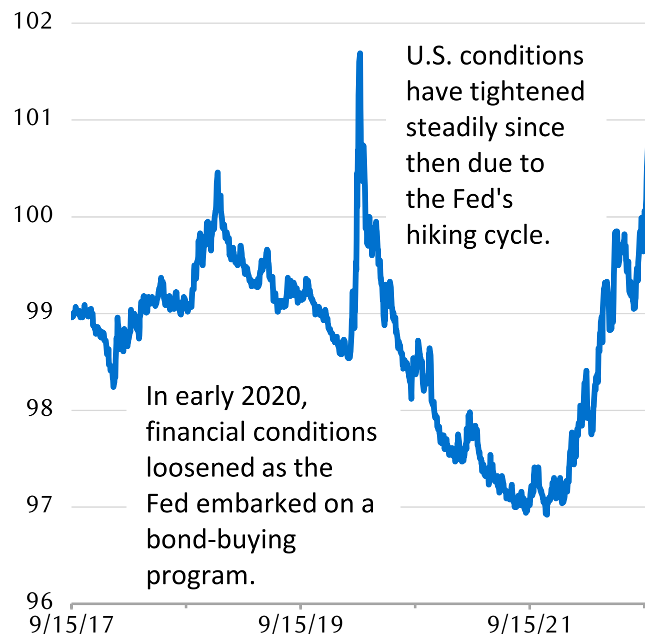
U.S. real rates are now in positive territory



Source - RBC Wealth Management, Bloomberg; data through 10/5/22

Financing conditions are tightening

Goldman Sachs Global Financial Conditions Index



Source - RBC Wealth Management, Bloomberg; data through 10/4/22

UNITED STATES

Ben Graham, CFA – Minneapolis

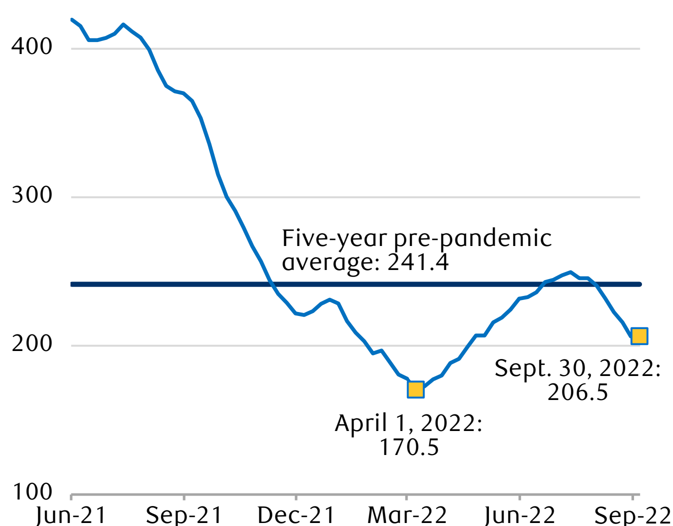
- **U.S. equities are on track for large weekly gains to start Q4 after declining in six of the past seven weeks and ending Q3 at 2022 lows**. Most U.S. equity indexes are at least 5% higher through Thursday morning's trading, with the Nasdaq and small-cap Russell 2000 indexes providing leadership. From a sector perspective, Energy leads considerably on the week, having climbed more than 12% on OPEC+ production cuts despite requests from Washington to maintain supply. Tech is also providing leadership with sector gains of more than 7%, while Utilities is up less than 1% and Real Estate is the one sector to trade lower on the week.

- **Next week will likely prove pivotal in terms of Q4 market performance for stocks**. On Thursday, Oct. 13, Q3 earnings season will begin in earnest with large-cap banks and asset managers reporting results. **Consensus expectations are for S&P 500 earnings growth of 2.2% y/y, down from 9.5% at the end of Q2**. Earnings strength is forecast in the Energy, Industrials, and Consumer Discretionary sectors, but we think forward-looking macroeconomic views and company-specific guidance will be the most important evolutions to watch throughout earnings season.

- **September's Institute for Supply Management (ISM) economic activity data showed a slight slowing compared to August levels, but were still representative of an expansionary manufacturing sector**. The manufacturing index registered 50.9, above the threshold of 50 for an expansionary reading, despite the New Orders component slipping below 50 and into contractionary territory. On the services side, ISM data showed an expansionary reading of 56.7, which actually beat consensus expectations despite a very modest decline from August's 56.9. **Initial unemployment claims reversed their downward trend of recent weeks** and registered their highest reading since mid-August, with 219,000 filings for the week ended Sept. 30. This represents 29,000 more filings than the previous week.

Unemployment claims remain below average despite weekly rise

Weekly initial unemployment claims, four-week average for past 15 months (thousands)



Source - RBC Wealth Management, FactSet; data through 9/30/22

CANADA

Luis Castillo & Simon Jones – Toronto

- **GDP surprised to the upside in July, but we don't think the details from Statistics Canada's data release provide much reason to celebrate**. The Canadian economy narrowly avoided the contraction the consensus had been expecting, with GDP growing a modest 0.1% for the month. The growth was largely driven by improved crop production in the agricultural sector and strong improvement in oil sands output that had been constrained by maintenance activities earlier in the year. However, inflation and higher interest rates are clearly beginning to weigh on economic activity and consumer spending. This was particularly evident in the services sector where retail sales fell to their lowest levels since 2021 and spending on accommodation and food services contracted for the first time since January. While the Bank of Canada will likely be pleased to see interest rates having their desired effect, RBC Economics expects the central bank to raise rates another 75 basis points before the end of the year.

- For most of 2020 and through the H1 2021, the Canadian dollar was steadily gaining against the U.S. dollar with the help of some very supportive short-term rate differentials. Typically, rising domestic short-term rates relative to foreign rates promote flows into the domestic currency as global yield seekers pursue higher yields outside of their borders. However, **as we entered 2022, the hawkish narrative from the U.S. Federal Reserve intensified along with inflation pressures, enabling short-term rates in the U.S. to eventually exceed Canadian rates**. Although rate differentials have historically played a role in currency fluctuations, timing currency moves can be a particularly difficult task, given the multitude of factors at play. In addition to rate differentials, a strong correlation between the loonie and equity markets has also developed, as periods of equity market pullbacks (risk-off) have been associated with Canadian dollar weakness. Furthermore, Canada being a commodity-based economy means that falling commodity prices from their March peaks have also played a role in recent performance, in our opinion.

EUROPE

Rufaro Chiriseri, CFA – London

- The secret is out. Bank of England (BoE) Deputy Governor Sir Jon Cunliffe has confirmed what many market participants thought, stating in a letter this week that the meltdown in gilt markets that led to central bank intervention started on the day Chancellor Kwasi Kwarteng announced the "mini-budget." **The BoE intervened because asset managers facing margin calls on their hedges would have had to sell as much as an estimated £50 billion worth of long gilts to raise cash**, in addition to the usual volume of £12 billion a day. Without intervention, this would have led to a systemic crisis.

- **Long-term gilt yields are on the rise once again**, as some investors were surprised the BoE would not indiscriminately purchase gilts at any price. Currently, the central bank has used only a fraction of the £65 billion facility available to purchase long-term gilts, and has even rejected tender offers this week. An official statement revealed that **the central bank is assessing market patterns of demand and will continue to set a maximum price it is willing to pay** "to ensure the backstop objective of the tool is delivered."

- A process of reducing the size of the BoE's balance sheet, otherwise known as quantitative tightening (QT), is expected to commence at the end of October. The combination of QT and debt issuance is set to significantly increase the supply of gilts that must be absorbed by the market. RBC Capital Markets estimates that if QT commences as planned, net gilt issuance for the next tax year could rise to £292 billion, significantly higher than the £130 billion record previously set in 2010/2011. We therefore believe the repricing of UK debt is likely to be significant as the market digests the supply glut, and this should lead to higher yields.

ASIA PACIFIC

Jasmine Duan – Hong Kong

- **Asia equities rallied this week** on easing concerns of global central bank tightening. Hong Kong stocks led the rebound, boosted by the strong performance of technology and Consumer Discretionary stocks. South Korea equities also performed well thanks to the rebound of semiconductor chip stocks.

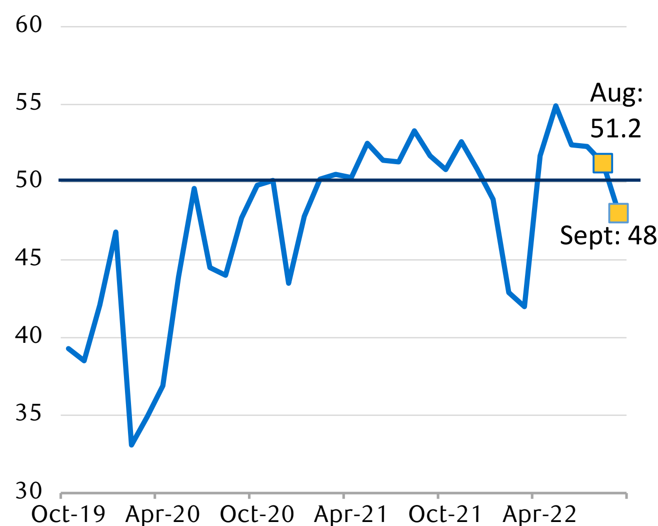
- **Hong Kong replaced its mandatory hotel quarantine for inbound travelers** with three-day home surveillance staring Sept. 26. However, data show that it may take some time for the number of travelers to recover to pre-pandemic levels. According to Bloomberg, the number of available seats and flights in October is only about 18% of what it was in October 2019. Cathay Pacific (239 HK), Hong Kong's flagship airline, said it is challenging to bring back flight crews as many of them left the industry during the pandemic. It also takes time for Cathay Pacific to recruit and train new staff.

- **The city's economic recovery journey is bumpy.** The S&P Global Hong Kong Purchasing Managers' Index fell to 48 in September from 51.2 in August. This marks the lowest reading since March, when Hong Kong was in its fifth wave of the COVID-19 outbreak. We believe further relaxation in international travel restrictions, i.e., when travelers can come in freely without having home surveillance, is crucial for travelers to return. We expect more easing measures to be announced soon.

- **Samsung Electronics (005930 KS)**, a leader in the semiconductor industry, **rolled out a five-year plan to expand its production capacity for advanced chips by more than three times by 2027.** The company also targets mass production of 2 nanometer (nm) process technology by 2025 and 1.4 nm by 2027. Samsung's plan includes bringing a new factory currently under construction in Taylor, Texas, online and potentially expanding existing foundry manufacturing lines in nearby Austin and three locations in South Korea. The company said its strategy is in response to the robust demand for advanced semiconductors due to the growth of high-performance computing, artificial intelligence, 5/6G connectivity, and automotive applications.

Hong Kong's economy slowed in September despite the loosening of international travel restrictions

S&P Global Hong Kong Purchasing Managers' Index



Source - RBC Wealth Management, Bloomberg; monthly data through September 2022

MARKET
Scorecard

Data as of October 5, 2022

Equities (local currency)	Level	MTD	YTD	1 yr	2 yr
S&P 500	3,783.28	5.5%	-20.6%	-12.9%	11.0%
Dow Industrials (DJIA)	30,273.87	5.4%	-16.7%	-11.8%	7.6%
Nasdaq	11,148.64	5.4%	-28.7%	-22.8%	-1.6%
Russell 2000	1,762.69	5.9%	-21.5%	-20.9%	11.4%
S&P/TSX Comp	19,235.09	4.3%	-9.4%	-4.7%	17.2%
FTSE All-Share	3,848.67	2.3%	-8.5%	-4.8%	15.7%
STOXX Europe 600	398.91	2.9%	-18.2%	-12.5%	9.1%
EURO STOXX 50	3,447.72	3.9%	-19.8%	-15.2%	7.1%
Hang Seng	18,087.97	5.0%	-22.7%	-25.0%	-23.9%
Shanghai Comp	3,024.39	0.0%	-16.9%	-15.2%	-6.0%
Nikkei 225	27,120.53	4.6%	-5.8%	-2.5%	16.3%
India Sensex	58,065.47	1.1%	-0.3%	-2.8%	49.0%
Singapore Straits Times	3,153.23	0.7%	0.9%	2.8%	25.3%
Brazil Ibovespa	117,197.82	6.5%	11.8%	6.1%	22.0%
Mexican Bolsa IPC	45,845.83	2.7%	-13.9%	-10.2%	24.8%
Gov't bonds (bps change)	**Yield**	**MTD**	**YTD**	**1 yr**	**2 yr**
U.S. 10-Yr Treasury	3.751%	-7.8	224.1	222.5	296.9
Canada 10-Yr	3.280%	10.7	185.4	174.4	266.0
UK 10-Yr	4.035%	-5.8	306.4	295.1	374.7
Germany 10-Yr	2.034%	-7.4	221.1	222.2	254.4
Fixed income (returns)	**Yield**	**MTD**	**YTD**	**1 yr**	**2 yr**
U.S. Aggregate	4.58%	1.1%	-13.6%	-13.6%	-14.1%
U.S. Investment-Grade Corp	5.48%	1.6%	-17.4%	-17.2%	-15.6%
U.S. High-Yield Corp	9.49%	1.9%	-13.2%	-12.5%	-3.2%
Commodities (USD)	**Price**	**MTD**	**YTD**	**1 yr**	**2 yr**
Gold (spot $/oz)	1,715.94	3.3%	-6.2%	-2.5%	-10.3%
Silver (spot $/oz)	20.66	8.6%	-11.4%	-8.7%	-15.3%
Copper ($/metric ton)	7,800.00	1.5%	-19.9%	-15.0%	19.7%
Oil (WTI spot/bbl)	87.76	10.4%	14.0%	11.2%	123.8%
Oil (Brent spot/bbl)	93.68	6.5%	20.4%	13.5%	126.9%
Natural Gas ($/mmBtu)	6.96	2.9%	86.6%	10.3%	166.1%
Currencies	**Rate**	**MTD**	**YTD**	**1 yr**	**2 yr**
U.S. Dollar Index	111.1710	-0.8%	16.2%	18.3%	18.9%
CAD/USD	0.7344	1.6%	-7.2%	-7.6%	-2.7%
USD/CAD	1.3617	-1.5%	7.8%	8.2%	2.7%
EUR/USD	0.9886	0.9%	-13.1%	-14.8%	-16.1%
GBP/USD	1.1325	1.4%	-16.3%	-16.9%	-12.7%
AUD/USD	0.6495	1.5%	-10.6%	-10.9%	-9.6%
USD/JPY	144.6400	-0.1%	25.7%	29.8%	36.8%
EUR/JPY	142.9900	0.8%	9.2%	10.6%	14.8%
EUR/GBP	0.8730	-0.5%	3.8%	2.6%	-3.8%
EUR/CHF	0.9719	0.5%	-6.3%	-9.7%	-9.9%
USD/SGD	1.4245	-0.8%	5.6%	5.0%	4.7%
USD/CNY	7.1160	0.0%	12.0%	10.4%	4.8%
USD/MXN	20.0608	-0.4%	-2.3%	-2.5%	-6.2%
USD/BRL	5.2024	-3.9%	-6.7%	-5.0%	-6.7%

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 0.73 means 1 Canadian dollar will buy 0.73 U.S. dollar. CAD/USD -7.2% return means the Canadian dollar fell 7.2% vs. the U.S. dollar year to date. USD/JPY 144.64 means 1 U.S. dollar will buy 144.64 yen. USD/JPY 25.7% return means the U.S. dollar rose 25.7% vs. the yen year to date.

Source - Bloomberg; data as of 10/5/22

Authors

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

Ben Graham, CFA – Minneapolis, United States
benjamin.graham@rbc.com; RBC Capital Markets, LLC

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

Simon Jones – Toronto, Canada
simon.jones@rbccm.com; RBC Dominion Securities Inc.

Rufaro Chiriseri, CFA – London, United Kingdom
rufaro.chiriseri@rbc.com; RBC Europe Limited

Jasmine Duan – Hong Kong, China
jasmine.duan@rbc.com; RBC Investment Services (Asia) Limited

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

One or more research analysts involved in the preparation of this report (i) may not be registered/qualified as research analysts with the NYSE and/or FINRA and (ii) may not be associated persons of the RBC Wealth Management and therefore may not be subject to FINRA Rule 2241 restrictions on communications with a subject company, public appearances and trading securities held by a research analyst account.

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, 250 Nicollet Mall, Suite 1800, Minneapolis, MN 55401-1931.

RBC Capital Markets 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 RBC Capital Markets ratings are determined on a relative basis.

Distribution of ratings – RBC Capital Markets Equity Research

As of September 30, 2022

			Investment Banking Services Provided During Past 12 Months	
Rating	Count	Percent	Count	Percent
Buy [Outperform]	844	57.18	260	30.81
Hold [Sector Perform]	580	39.30	161	27.76
Sell [Underperform]	52	3.52	5	9.62

Explanation of RBC Capital Markets 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 RBC Capital Markets' 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 Capital Markets 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, and its affiliates, a portion of which are or have been generated by investment banking activities of RBC Capital Markets 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.

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 Royal Bank of Canada (Channel Islands) 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. Royal Bank of Canada (Channel Islands) 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.

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.

© 2022 RBC Capital Markets, LLC – Member NYSE/FINRA/SIPC
© 2022 RBC Dominion Securities Inc. – Member Canadian Investor Protection Fund
© 2022 RBC Europe Limited
© 2022 Royal Bank of Canada
All rights reserved
RBC1253

Wealth
Management