



Perspectives from the Global Portfolio Advisory Committee

August 25, 2022

# Will China's recovery recover?

Jasmine Duan - Hong Kong

Despite its economic might, China's vaunted recovery has appeared less certain this summer. Recent weak economic data highlight the continued impact of the government's strict anti-COVID policies, while housing market turbulence and Taiwan tensions add to the complex picture. We gauge China's growth momentum, and discuss implications for equity investors.

Since June, China's economic recovery has been fading amid a COVID-19 resurgence, a continued housing market downturn, and elevated geopolitical tensions regarding Taiwan. Furthermore, a drought has constrained hydroelectric output and industrial production in Sichuan Province, a major industrial center.

Both the path and the pace of the country's economic growth are garnering more attention from investors in developed countries given China's outsized contribution to the global economy. With the UK and Europe likely facing a recession and the U.S. economy on shaky ground, China's trajectory becomes even more important than usual. We assess the main issues that are contributing to China's economic uncertainty, and discuss implications for equity positioning.

#### Sticking to zero-COVID

We think the consensus view among market participants is that China's COVID-19 containment measures are not likely to be loosened before the 20th National Congress of the Chinese Communist Party later this year. This important event, held every five years, approves the country's roster of top decision makers.

However, we see some evidence that despite the strict policies, China is actively exploring options for reopening and re-engaging with the world.

For example, Hong Kong recently shortened its quarantine period for inbound travelers to three days from seven days. The city will host two major international events in early November: a two-day financial summit intended to help the city re-establish itself as a major financial center, and the World Rugby Sevens tournament. Hong Kong's arrangements for the two events are important, as they may serve as examples for the future reopening of the city, and even for China as a whole.

Media outlets outside China have reported that President Xi Jinping may visit Saudi Arabia soon, and is considering attending the Shanghai Cooperation Organization regional summit in mid-September in Uzbekistan. Bloomberg has also reported that Xi will attend the G-20 Summit in Indonesia in November. These would be the Chinese leader's first international trips in nearly three years. In our view, attending international events would demonstrate that senior leaders are willing to balance COVID-19 health risks with the benefits of reconnecting

For perspectives on the week from our regional analysts, please see pages 4-5.

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 8/24/22 market close (unless otherwise stated). Produced: 8/25/22 2:01 pm ET; Disseminated: 8/25/22 2:06 pm ET For important disclosures, required non-U.S. analyst disclosures, and authors' contact information, see page 7.

with the world, which could pave the way for a broader reopening.

The zero-COVID policy remains a risk factor for the economy, but we think lockdowns such as we saw in Shanghai earlier this year are unlikely to happen again. Any future COVID-19 resurgence should be less disruptive to the supply chains of major production centers and the economy as a whole because newly updated pandemic protocols have eased quarantine rules for close contacts and inbound travelers, and the government has announced measures to reduce overly strict containment measures at the local level.

#### Property market still vulnerable

Since late June, a spreading mortgage boycott in China has dominated news headlines. Homebuyers across the country are refusing to repay mortgages on yet-to-be completed projects that are suffering construction halts. This has shaken confidence in the housing market by highlighting the risk of buying presold apartments from struggling developers.

The situation is still evolving, but we think the damage to the Chinese banking sector is likely to be limited. Commercial banks impacted so far have reported that atrisk mortgages amount to about 0.01 percent of their loan books. Furthermore, rather than walking away from their liabilities, Chinese homebuyers are demanding delivery of their apartments.

However, the possibility that the situation could encourage banks and local governments to tighten their criteria for mortgage approvals and impose stricter rules on developers' use of presale funds is cause for concern, in our view, because this would exacerbate the financing squeeze facing the property sector.

Currently, local governments are taking the lead to ensure the completion of residential projects by setting up local rescue funds, and by providing financial support to some projects. We see these moves as incremental support at the project level, not as evidence of a full-scale rescue plan led by the central government. Even if the central government were to intervene, significant time would be needed to develop a nationwide plan.

The bottom line is there is no quick fix for the property market problem. We think local-level rescue funds alone will prove insufficient to restore homebuyers' confidence at the national level. The weakness in China's housing market could last longer than we previously expected.

#### More forceful economic stimulus

China's government has been reluctant to announce large-scale monetary policy loosening because the problems facing its economy are rooted in a lack of loan demand due to the uncertain growth outlook and COVID-19 restrictions. The disappointing July credit data show that loan demand remains relatively soft.

#### China's property sales have been slowing

Sales of residential buildings in China (y/y change)



Source - RBC Wealth Management, Bloomberg; monthly data through 7/31/22

After taking a short break from policy easing in July, the People's Bank of China (PBoC) has resumed its easing cycle. On Aug. 15, China's central bank responded to the recent weak data with a surprise policy rate cut of 10 basis points (bps). Subsequently on Aug. 22, it further cut its key lending rates, the 1-year and 5-year loan prime rates, by 5 bps and 15 bps, respectively. Although these moves may not be enough to meaningfully mitigate the growth pressure, we think the PBoC wants to reassure market participants that it is taking action to stabilize the economy. And on Aug. 24, the central government announced additional fiscal spending mechanisms, mostly aimed at infrastructure projects.

We think policymakers may ultimately announce more aggressive easing to limit downside risks, and there could be one more benchmark rate cut this year.

In our view, the 5.5 percent GDP growth target set by the government at the beginning of the year will be almost impossible to achieve. Beijing recently downplayed the importance of meeting growth targets, stating it intends to "keep economic growth within a reasonable range," which we believe indicates a focus on ensuring employment and maintaining inflation targets.

#### **Tension over Taiwan**

Taiwan has become the latest geopolitical flashpoint of the ongoing conflict between the U.S. and China.

However, despite recent forceful rhetoric, we don't expect China to further escalate tensions over the island. As RBC Global Asset Management Inc. Chief Economist Eric Lascelles recently wrote, "... it still seems unlikely that China will actually invade Taiwan in the near term, or that China and the U.S. will come to blows. The main reason is that such a conflict would be disastrous for all parties, from both a military and an economic perspective."

The restrictions China recently imposed on food imports from Taiwan are largely symbolic and should have only a modest impact on the island's economy, in our view. We think China will avoid placing more sweeping trade sanctions on Taiwan because doing so could hurt China's manufacturing sector. More than 70 percent of Taiwan's exports to China are tech products, such as electronics and advanced semiconductors, which are heavily intertwined with regional tech supplies and China's own exports to the rest of the world.

That being said, we expect tensions surrounding Taiwan to persist over the medium term, as both U.S. political parties seem to be interested in using the issue for domestic political gains, and some congressional leaders are focusing on the issue in an attempt to achieve their foreign policy objectives. This could, at the very least, raise headline risks for markets from time to time.

#### **Equity strategy implications**

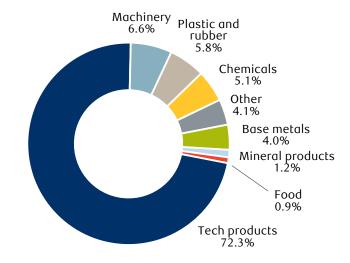
There are many uncertainties surrounding China's economy and equity market at the moment. We believe China's market needs time to digest recent headlines, and could be volatile in the near term.

However, the current pessimism seems at least somewhat reflected in the market's valuation. The MSCI China Index is trading at a price-to-earnings ratio of 10.5x the 12-month forward consensus estimate, far below its five-year average of 14.9x.

We believe additional accommodative monetary and fiscal policies will be forthcoming, and should provide downside support to Chinese stocks—particularly given that other major developed markets are still going through rate hike cycles.

# Taiwan's food exports to China/Hong Kong are less than 1% of total exports

Taiwan's 2021 exports to China/Hong Kong



Source - RBC Wealth Management, Taiwan Ministry of Finance

Going forward, we think further relaxation of the zero-COVID policy will be key to restoring corporate and consumer confidence in the Chinese economy. Policy direction toward the property market will also be a focus for investors.

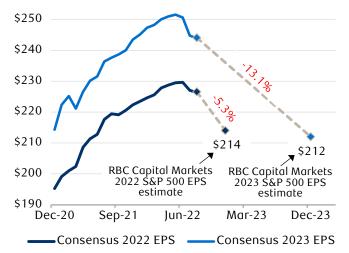
Within the Chinese equity universe, we favor structural themes such as the energy transition, and prefer investments in the renewable energy value chain. We also think themes connected to the country's plans to achieve self-sufficiency in the technology sphere will benefit from government policy support amid geopolitical tensions. High-end manufacturing, such as the electric vehicle value chain, should benefit in the medium to long term. The valuations of some stocks in this area appear attractive, in our view, following the recent correction.

#### **UNITED STATES**

Tyler Frawley, CFA - Minneapolis

- U.S. equities are on track for weekly losses, as Treasury yields spike and investors await Fed Chair Jerome Powell's speech from the Jackson Hole Economic Symposium. The S&P 500 Value Index has outperformed the S&P 500 Growth Index this week, but both are lower, falling 1.64% and 2.52%, respectively. Energy is the best-performing sector, up 4.87%. Oil prices spiked after Saudi Arabia suggested OPEC could consider cutting output due to the disconnect between the crude oil futures market and the physical market. Other OPEC members cited the global economic downturn and Iran's potential return to the market as reasons to consider production cuts.
- Consensus S&P 500 EPS estimates for 2022 and **2023 have begun moving lower**. After remaining resilient throughout the market turbulence this year, FactSet consensus S&P 500 EPS estimates have fallen in recent months as strategists continue to digest the uncertain economic environment. Since peaking in June at \$230, the 2022 consensus EPS estimate has declined by a modest 1.7% to \$226. Estimated EPS for 2023 has come down 3.2% to \$244 after peaking at \$252 in May. While downward revisions have been moderate thus far, there are indications that further reductions may be coming. RBC Capital Markets, LLC Head of U.S. Equity Strategy Lori Calvasina is projecting S&P 500 EPS to come in at \$214 this year and \$212 in 2023. This would represent further reductions of 5.3% for 2022 and 13.1% for 2023 from current consensus estimates. While Calvasina's research shows that markets have made meaningful bottoms while EPS forecasts are falling, it will be important to

# Consensus S&P 500 EPS estimates have begun moving lower for 2022 and 2023



Source - FactSet, RBC Capital Markets forecasts; data as of 8/24/22

keep an eye on the magnitude of downward revisions in the coming months. See our recent <u>Global Insight focus</u> <u>article</u> for an in-depth analysis of how falling earnings can impact the equity market.

■ Economic data have been mixed this week. New home sales plunged 12.6% in July to 511,000, the lowest level since January 2016 and well below consensus expectations of 575,000, as high prices and elevated mortgage rates pushed buyers to the sidelines. Looking forward, investors are hoping the Fed Chair's Jackson Hole statement will provide clues as to whether the central bank plans to double down on its aggressive rate hiking cycle in order to curb inflation.

#### CANADA

Luis Castillo & Simon Jones – Toronto

- This month has seen rates across the yield curve resume their move higher, following a drop of nearly 100 basis points (bps) in the Canadian 10-year benchmark rate since mid-June. The recent climb has been fueled by strengthening market expectations for a 75 bps hike in the Bank of Canada's (BoC) Sept. 7 interest rate announcement. Despite some deceleration in July, the pace of headline CPI inflation remains significantly above BoC targets; core CPI inflation actually accelerated, and continues to put pressure on the central bank to tighten financial conditions further. BoC Governor Tiff Macklem has maintained his hawkish tilt, stating in a recent National Post opinion piece: "We know our job is not done yet, it won't be done until inflation gets back to the 2% target."
- Retail sales are an increasingly important metric for economists and market participants as they try to assess the impact of inflation and higher interest rates on consumer spending. Canadian consumers have been fairly resilient to start the year, and June was no exception. According to Statistics Canada, retail sales rose 1.1% in June, far exceeding the consensus expectation of a modest 0.4% increase. Although much of the increase in spending can be attributed to higher prices, sales volumes (which control for the effect of inflation) did hold steady, rising 0.2% during the period. However, Statistics Canada's preliminary estimate indicates retail sales likely experienced a sharp 2% decline in July. It is difficult to know exactly what caused sales to decline because Statistics Canada provides little detail on the advanced estimate; however, RBC cardholder data point to lower gasoline prices as a likely culprit.

#### **EUROPE**

Frédérique Carrier – London

- Another week, another record increase in European natural gas prices, this time after Gazprom announced the Nord Stream 1 pipeline would close for three days of unscheduled "maintenance," highlighting once again Europe's dependence on Russia. Gas prices rose despite storage levels climbing to 77% of capacity for the EU as a whole (and 80% for Germany) according to the Aggregated Gas Storage Inventory. Nord Stream 1 now represents only 11% of Germany's gas imports, but losing this supply would likely necessitate additional voluntary savings measures or the rationing of gas supplies to segments of industry.
- The uncertainty, as well as higher inflation and interest rates, are reflected in lower levels of economic activity. The August S&P Global Flash Eurozone Composite Purchasing Managers Index fell to 49.2 from 49.9 in July, mostly due to lower activity in the service sector. This suggests the regional economy may already be in a recession, complicating matters for the European Central Bank markedly. We still expect a 50 basis point interest rate increase in September, and further hikes later in the year, but we see a risk that the central bank may have to pause and take stock in the autumn. The euro fell below parity with the U.S. dollar for the first time in 20 years.
- In the UK, the energy crisis is no less acute. The average yearly household energy bill is now projected to exceed £4,000 by January 2023, a level which could drive large swathes of the population into poverty and severely curtail business activity. The incoming prime minister will be under pressure to act, and will likely have to contemplate a support package similar to the pandemic furlough scheme which came at a cost £70 billion. Even if a potential support package does not reach that size, financing it would be more costly given the increase in interest rates. That would leave little room for the tax cuts currently being floated by the candidates for Conservative Party leadership. Moreover, we believe energy rationing should not be ruled out. Though UK economic activity levels suggest the economy remains in expansion, it is slowing down markedly as the country braces for a difficult winter ahead.

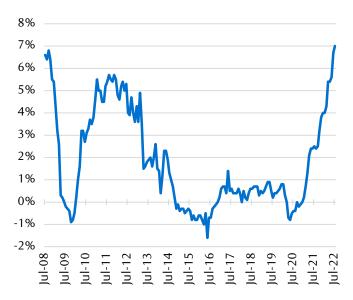
#### **ASIA PACIFIC**

Jasmine Duan - Hong Kong

■ Major Asian equity indices are largely down this week as investors are waiting for more clarity on the Federal Reserve's policy direction from this week's Jackson Hole Economic Symposium. The MSCI Asia ex Japan Index was down 2.2% for the first three days of the week.

- Q2 2022 earnings season is 50% complete for China companies. Among the 54% of MSCI China companies who have reported results, there were more earnings misses than beats, according to Bloomberg. However, the aggregate EPS surprise is almost 10% higher than estimates. The Internet sector's results came in better than feared. Positive results were led by Tencent (700 HK), Alibaba (9988 HK/BABA), and JD.com (9618 HK/JD). Low expectations, prudent cost-control, and improved operational efficiency were the key reasons given for the earnings beats.
- Singapore's headline consumer price index rose
  7% y/y in July as inflation reached its highest level since
  2008. The surge was mainly driven by strong increases
  in food, electricity, and gas prices. Core inflation, which
  excludes private transport and accommodation, rose to
  4.8% y/y in July, the highest reading in 14 years. Monetary
  Authority of Singapore officials said they expect core
  inflation to peak in Q3 before ebbing slightly toward year's
  end. The central bank may need to further tighten its
  policy to control inflation.
- Singapore also announced further loosening of COVID-19 containment measures. Effective from Aug. 29, the only indoor settings with mandatory mask requirements will be public transport and healthcare facilities. Travelers entering Singapore from 11:59 p.m. on Aug. 28, and who are not fully vaccinated, do not need to quarantine, but will need to test negative within two days before traveling to the city. At the other end of the spectrum, Hong Kong, which is regularly compared to Singapore, may tighten social distancing restrictions due to rising COVID-19 cases putting pressure on its healthcare system.

# Singapore's headline CPI inflation surged to the highest level since 2008



Source - RBC Wealth Management, Bloomberg; monthly data through 7/31/22

### MARKET Scorecard

Data as of August 24, 2022

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 0.77 means 1 Canadian dollar will buy 0.77 U.S. dollar. CAD/USD -2.5% return means the Canadian dollar fell 2.5% vs. the U.S. dollar year to date. USD/JPY 137.11 means 1 U.S. dollar will buy 137.11 yen. USD/JPY 19.1% return means the U.S. dollar rose 19.1% vs. the yen year to date.

Source - Bloomberg; data as of 8/24/22 market close

Equities (local currency)	Level	MTD	YTD	1 уг	2 уг
S&P 500	4,140.77	0.3%	-13.1%	-7.7%	20.7%
Dow Industrials (DJIA)	32,969.23	0.4%	-9.3%	-6.8%	16.5%
Nasdaq	12,431.53	0.3%	-20.5%	-17.2%	9.2%
Russell 2000	1,935.29	2.7%	-13.8%	-13.3%	23.4%
S&P/TSX Comp	20,021.38	1.7%	-5.7%	-2.6%	20.4%
FTSE All-Share	4,100.82	-0.2%	-2.5%	-0.1%	20.5%
STOXX Europe 600	432.05	-1.4%	-11.4%	-8.4%	16.5%
EURO STOXX 50	3,667.46	-1.1%	-14.7%	-12.2%	10.1%
Hang Seng	19,268.74	-4.4%	-17.6%	-25.1%	-24.6%
Shanghai Comp	3,215.20	-1.2%	-11.7%	-8.5%	-5.0%
Nikkei 225	28,313.47	1.8%	-1.7%	2.1%	23.2%
India Sensex	59,085.43	2.6%	1.4%	5.6%	52.3%
Singapore Straits Times	3,233.48	0.7%	3.5%	4.1%	27.4%
Brazil Ibovespa	112,897.84	9.4%	7.7%	-6.1%	10.4%
Mexican Bolsa IPC	47,449.73	-1.4%	-10.9%	-8.7%	24.8%
Gov't bonds (bps change)	Yield	MTD	YTD	1 yr	2 yr
U.S. 10-Yr Treasury	3.106%	45.7	159.6	181.2	245.2
Canada 10-Yr	3.101%	49.1	167.5	191.1	254.2
UK 10-Yr	2.698%	83.4	172.7	216.0	248.5
Germany 10-Yr	1.370%	55.3	154.7	184.8	186.1
Fixed income (returns)	Yield	MTD	YTD	1 уг	2 yr
U.S. Aggregate	3.82%	-2.2%	-10.2%	-10.9%	-11.2%
U.S. Investment-Grade Corp	4.68%	-2.1%	-13.5%	-14.1%	-12.5%
U.S. High-Yield Corp	8.00%	-0.7%	-9.8%	-8.6%	0.6%
Commodities (USD)	Price	MTD	YTD	1 уг	2 yr
Gold (spot \$/oz)	1,752.32	-0.8%	-4.2%	-2.8%	-9.2%
Silver (spot \$/oz)	19.12	-6.1%	-18.0%	-19.9%	-28.1%
Copper (\$/metric ton)	8,170.75	3.0%	-16.1%	-12.9%	25.1%
Oil (WTI spot/bbl)	95.64	-3.0%	24.2%	41.3%	125.2%
Oil (Brent spot/bbl)	101.73	-7.5%	30.8%	43.2%	125.4%
Natural Gas (\$/mmBtu)	9.22	12.0%	147.1%	136.6%	266.8%
Currencies	Rate	MTD	YTD	1 yr	2 yr
U.S. Dollar Index	108.6010	2.5%	13.5%	16.9%	16.4%
CAD/USD	0.7712	-1.3%	-2.5%	-2.9%	1.9%
USD/CAD	1.2967	1.3%	2.6%	3.0%	-1.9%
EUR/USD	0.9969	-2.5%	-12.3%	-15.2%	-15.4%
GBP/USD	1.1795	-3.1%	-12.8%	-14.1%	-9.7%
AUD/USD	0.6909	-1.1%	-4.9%	-4.8%	-3.5%
USD/JPY	137.1100	2.9%	19.1%	25.0%	29.4%
EUR/JPY	136.6800	0.4%	4.4%	6.0%	9.4%
EUR/GBP	0.8451	0.7%	0.5%	-1.3%	-6.3%
EUR/CHF	0.9637	-1.0%	-7.1%	-10.2%	-10.3%
USD/SGD	1.3937	1.0%	3.3%	2.9%	1.7%
USD/CNY	6.8595	1.7%	7.9%	6.0%	-0.9%
USD/MXN	19.8893	-2.3%	-3.1%	-1.6%	-9.6%
USD/BRL	5.1065	-1.3%	-8.4%	-2.7%	-9.0%

#### **Authors**

#### Jasmine Duan - Hong Kong, China

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

#### Tyler Frawley, CFA – Minneapolis, United States

tyler.frawley@rbc.com; RBC Capital Markets, LLC

#### Simon Jones - Toronto, Canada

simon.jones@rbccm.com; RBC Dominion Securities Inc.

#### Luis Castillo - Toronto, Canada

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

#### Frédérique Carrier – London, United Kingdom

frederique.carrier@rbc.com; RBC Europe 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 <a href="https://www.rbccm.com/GLDisclosure/PublicWeb/DisclosureLookup.aspx?EntityID=2">https://www.rbccm.com/GLDisclosure/PublicWeb/DisclosureLookup.aspx?EntityID=2</a> 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 June 30, 2022

			Investment Banking Services Provided During Past 12 Months		
Rating	Count	Percent	Count	Percent	
Buy [Outperform]	851	58.41	290	34.08	
Hold [Sector Perform]	560	38.44	169	30.18	
Sell [Underperform]	46	3.16	6	13.04	

### 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 <a href="https://www.rbccm.com/GLDisclosure/">https://www.rbccm.com/GLDisclosure/</a> <u>PublicWeb/DisclosureLookup.aspx?EntityID=2.</u> 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

