GLOBAL
Insight
WEEKLY

Wealth Management

Perspectives from the Global Portfolio Advisory Committee
March 3, 2022

European Union: Cohesion amid adversity

Frédérique Carrier – London

The Russian invasion of Ukraine puts lives and livelihoods at risk. It may also have consequences for the global economy. We focus on how it could impact Europe's recovery and look at some of the profound policy changes taking place in the EU as a result of the war, with an eye to positioning European equity investments.

Higher inflation, lower growth

The conflict appears likely to push stubborn inflation even higher and dent growth in many countries around the globe, but it could affect Europe more than most.

The biggest impacts, in our view, are likely to take the form of commodity prices being greatly elevated for longer, and supply chains—which had shown tentative signs of improvement earlier in the year—facing new stresses, given that Russia is a major provider of essential metals and agricultural resources.

Eric Lascelles, RBC Global Asset Management's chief economist, estimates the conflict could drive U.S. inflation measured by the Consumer Price Index to 8.5 percent, up from the 7.5 percent previously penciled in. An even longer period of higher inflation would increase the risk of inflation expectations becoming stuck at a higher level, in his view.

Lascelles estimates tentatively that a scenario of moderately elevated commodity prices and depressed demand due to the conflict could subtract 0.2 percent to 0.5 percent from global growth, bringing his U.S. growth estimate down to 3.1 percent for 2022.

Europe is particularly vulnerable to these disruptions because it imports close to 40 percent of its natural gas and 25 percent of its oil from Russia, though the level of dependence varies from country to country.

With the caveat that estimates are highly changeable given the fluidity of the situation, Lascelles assesses the potential impact on European growth to be on the order of 0.7 percent of GDP, bringing his GDP growth forecast for 2022 down to three percent—still above the historical average. The region ended 2021 with particularly strong momentum, some of which is likely to spill over into spring and summer economic activity. But a higher inflation outlook is likely to hurt household wallets in Europe eventually, despite government support. To a lesser extent, a reduction in European exports to Russia, which represented 0.6 percent of regional GDP in late 2021, would also weigh on growth.

Europe faces the potential loss of Russian energy supplies

A worst case scenario, which is less likely in our view, would be for Russia to entirely shut off its energy taps to Europe. This would have a larger impact, with global growth likely taking a one percentage point hit and European growth falling by as much as two percentage points, according to Lascelles.

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 3/2/22 market close (unless otherwise stated). Produced: Mar. 3, 2022 2:34 pm ET; Disseminated: Mar. 3, 2022 3:03 pm ET
For important disclosures, required non-U.S. analyst disclosures, and authors' contact information, see page 6.

Europe could cope with these new circumstances for a time by tapping regional and national strategic reserves, importing more natural gas, and possibly imposing mild measures to cap demand such as limiting some industrial gas uses. Most EU members should then be able to make it to next winter without severe shortages.

Living without Russian gas for a longer period of time could prove challenging, as long-term supply contracts often limit the flexibility of producers to redirect large volumes of gas to new buyers. Some suppliers outside of Russia are also already producing and exporting at full capacity.

An extreme disruption in the supply of energy would increase the risk of a recession in Europe.

Central banks face a policy quandary

For central banks, the higher inflation outlook is problematic. They now need to balance the risk of higher inflation against the risk of lower growth.

We believe most should recognise that the geopolitical situation warrants caution, and may slow the pace of policy normalisation, including rate hikes, over the next few months. The dilemma could be most acute for the European Central Bank (ECB).

RBC Capital Markets now expects the ECB to postpone the announcement of the end of its Asset Purchase Programme by six months, to September, and to increase interest rates only in 2023 instead of later this year.

Profound transformations in the EU

In the face of this adversity, profound transformations are taking place in the regional bloc. Regional cohesiveness has increased, and attitudes towards fiscal rectitude are relaxing.

The war has brought member countries closer together. The decision by German Chancellor Olaf Scholz to approve the export of lethal weapons to a conflict zone for the first time since World War II is a notable development which could enable more coordination at the EU level. The threat of external aggression may also shift the balance towards a greater tolerance for decision making at the EU level rather than at the national level.

The war also appears to be reducing the appeal of euro-skeptic political parties, both from the extreme right and extreme left, which have at times cited Putin as a role model. This reduces the risk of an anti-EU government being elected in France or Italy (French elections will take place in April), and likely channels the political winds more firmly towards the centre.

Importantly, we think Germany abandoning its long-held preference for reining in fiscal deficits should diminish tensions within the bloc, where limiting national deficits to three percent of GDP has been a thorny issue for years. German Finance Minister Christian Linder is now advocating for increased defense spending representing 2.7 percent of his country's GDP, with further increases possible thereafter. A more constructive tone from Germany, long a fiscal hawk, suggests a review of EU fiscal policy—a key topic under discussion this year—could result in a more accommodative stance on what constitutes an acceptable level of budget deficit, as opposed to a fiscal policy straightjacket.

The green transition in a holding pattern

The transition towards cleaner and greener energy policies, a key regional focus, may well stall in the short term as a result of the conflict. On the one hand, Germany's advocacy for a more rapid build-up of renewable capacity as an investment in "freedom" from Russian energy dependence (and, by extension, Russian influence) as well as its decision to bring forward its goal of 100 percent green power to 2035 from 2040 represent a strategy likely to be copied by other countries. On the other hand, coal-burning power plants could be revived and the closure of German nuclear plants might be postponed as short-term measures to reduce dependence on Russian energy. Nonetheless, the decarbonisation push remains an area where Europe stands out relative to other regions, given it is home to numerous leading global companies that should be well positioned to benefit from the pickup in green spending this decade.

Maintaining our regional Overweight

Despite a more complicated outlook for the region as a result of the war, and inevitable volatility in the short to medium term, we continue to suggest holding a modest Overweight position in European equities. So far in 2022, the MSCI Europe ex UK Index is down more than 11 percent in local currency terms, leaving it trading on 14x its 12-month forward earnings, a steeper-than-average discount to the U.S. on a sector-neutral basis. This low valuation suggests the severity of the situation and the upcoming downgrade in growth forecasts have largely been discounted in the price.

In addition, we think recent developments in the region—including increased cohesion as expressed by the EU's swift action on sanctions, Germany's foreign and fiscal policy U-turns as well as its possibly more lenient approach to EU fiscal rules, and decreased concerns that anti-EU political forces could prevail in a large country—all point to reduced tensions within the bloc. We think the changes lower the risk of a potential EU breakup, and increase the likelihood of more fiscal support for the regional economy. These profound transformations could contribute, in time, to reducing the valuation discount historically attributed to the region.

UNITED STATES

Ben Graham, CFA – Minneapolis

- As the Russia-Ukraine conflict ages into its second week, **U.S. equities are on track for modest losses** as of intraday trading on Thursday, Mar. 3. Small caps, as measured by the Russell 2000, are positioned for weekly leadership thus far, with the Nasdaq and Dow Jones Industrial Average each lagging slightly. **Growth is outpacing value this week**, as of midday trading, despite Energy continuing to rally and lead the market as Russian oil supply is perceived by some key market participants to be at risk of declining due to the indirect consequences of the current central bank sanctions and selective SWIFT actions, according to the RBC Capital Markets commodity team. Treasury yields have moved modestly higher after sharp declines to start the week, while the spread between corporate interest rates and government interest rates is near its widest level since November 2020. This widening spread is indicative of increased business and cycle risk, likely as a function of both geopolitical tensions and rising inflation in the U.S.

- As of midday trading on Mar. 3, sector leadership in recent weeks and months can be found clearly in Energy, as well as Utilities and Consumer Staples, as these sectors have held nearest to their 52-week highs. In fact, **Energy has actually set new 52-week highs this week** as oil prices soar on geopolitical tensions. Meanwhile, **Consumer Staples and Utilities remain close to their highs** as investors position portfolios defensively. The worst performance is evident in Communication Services, which is nearly 20% lower than its 52-week high. Company-specific missteps and the relative growth orientation of the sector are the primary drivers. Other sectors that have pulled back the most from recent highs include Consumer Discretionary and Information Technology where the growth orientation and the nature of the impact of inflationary pressure on these sectors act as headwinds.

- **The weekly initial unemployment claims report showed that the U.S. economy saw fewer filings than expected** with the announced 215,000 coming in below the consensus estimate of 229,000. **Manufacturing activity was also stronger than anticipated** with this week's release of February's ISM Manufacturing Purchasing Managers' Index data registering 58.6, higher than expectations at 58.0 and indicative of an ongoing economic expansion.

U.S. equity moves off of 52-week highs

Index	% off 52-week high
Industrials	-5.9%
Consumer Discretionary	-15.9%
Consumer Staples	-2.2%
Health Care	-6.8%
Financials	-8.2%
Real Estate	-11.2%
Information Technology	-12.5%
Communication Services	-19.2%
Utilities	-4.4%
Energy	-0.6%
Materials	-7.8%
S&P 500	**-8.5%**
Dow Industrials (DJIA)	**-7.8%**
Nasdaq	**-14.9%**

Source - RBC Wealth Management, FactSet, data through 9:45 am ET 3/3/22

CANADA

Luis Castillo & Simon Jones – Toronto

- After being anchored at the lower bound since March 2020, and despite heightened geopolitical tensions, **the Bank of Canada (BoC) has followed through with a 25 basis point hike to its policy rate**. Canada's strong economic growth in Q4 2021 was cited in the BoC's statement as confirmation that the economic slack experienced in the early phases of the pandemic has now been absorbed. The statement also included comments on the conflict between Russia and Ukraine, which the bank cites as a "major new source of uncertainty," adding to inflationary pressures around the world. Canada's latest inflation print of 5.1% for the month of January was in line with BoC expectations, but the bank now sees inflation climbing higher in the near term than previously expected.

- **It has taken nearly two years, but real GDP in Canada has returned to pre-pandemic levels**. Economic growth finished on a strong note in 2021, expanding 1.6% in Q4, bringing total GDP growth for the year to 4.6%, according to Statistics Canada. The household savings rate fell to 6.4% during the quarter, down from 9% in Q3, due to a combination of higher household consumption and lower disposable income. Although it remains well above the pre-pandemic level of 2.7%, a continued deterioration in the savings rate could begin to weigh on consumption as the year progresses. **The most surprising aspect of this release, however, was the preliminary GDP estimate for January, which showed the economy expanded 0.2% m/m**, despite the introduction of various public health restrictions. If this rate of growth were to prove correct, it would indicate that the economy was more resilient throughout the omicron wave than originally anticipated.

EUROPE

Rufaro Chiriseri, CFA & Thomas McGarrity, CFA – London

- Since last Thursday's open (Feb. 24), when the Russian government sent troops into Ukraine, **the STOXX Europe 600 Index is down 3.6%; however, the dispersion of**

performance under the surface has been very wide. Basic Resources has been the best-performing subsector, up 6.3%, as metal commodity prices rallied on heightened supply concerns, as well as signs of healthy demand from China.

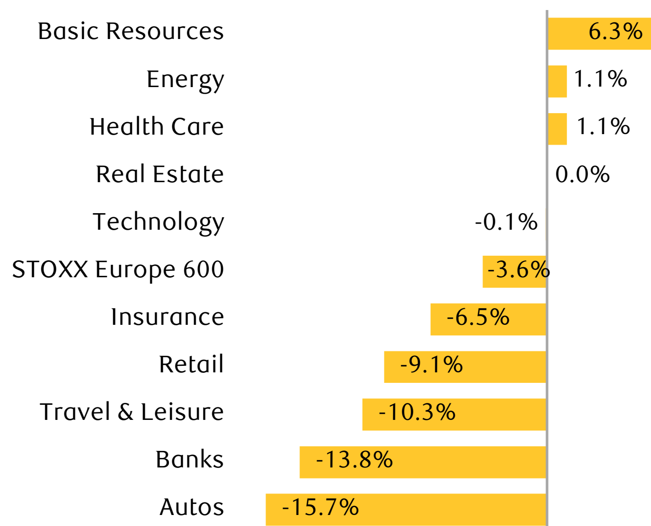
- Energy has also outperformed, up around 5% at the subsector level. While traditional energy stocks have generally outperformed, with the exception of those companies that have higher exposure to Russia, **renewable energy stocks have seen sharp share price gains owing to the intensifying energy security concerns** that have emanated from this crisis. We believe this seems likely to further fast-track Europe's clean energy shift.

- **Non-commodity cyclicals have borne the brunt of the selloff, particularly autos and banks**. With regards to the latter, the equity risk premium attached to bank equities' valuations tends to move rapidly, to reflect heightened uncertainty and increased risks. The key risks to the European banks relate to: (1) a slowdown in economic growth; (2) reduced interest rate hike expectations for 2022; and (3) banks' direct and indirect exposure to Russia. On the latter, European banks' direct aggregate exposure to Russia is small, equivalent to 0.7% of total claims, according to the Bank for International Settlements. However, some banks, such as Société Générale and UniCredit, have a higher exposure. The former has estimated a capital impact of around -50 basis points in a "potential extreme scenario" from its direct exposure. We expect banks' share prices will likely continue to be volatile in the near term.

- There is now a clear divergence in central bank policy, with **the European Central Bank likely to delay raising interest rates, whereas the market expects the Bank of England (BoE) to raise interest rates by 0.25%** this month, albeit with some notable caution. The BoE has to contend with possible "upside surprises on inflation" against the backdrop of Russia's invasion of Ukraine, which upends the growth outlook. A BoE Monetary Policy Committee member noted the risk of inflation becoming "embedded" as companies and employees expect wages to rise by about 5% this year. These **inflationary pressures will likely outweigh the geopolitical concerns at the BoE's upcoming policy meeting** on Mar. 17, in our view.

Performance of top five and bottom five subsectors since Russia's invasion of Ukraine

STOXX Europe 600 Index



Source - RBC Wealth Management, Bloomberg; data through 3/3/22

ASIA PACIFIC

Jasmine Duan – Hong Kong

- **Asian markets fluctuated during the week on the back of a series of factors, including talks between Russia and Ukraine, a surge in commodity prices, and expectations of a Fed rate hike**. Companies ranging from energy players, infrastructure builders, and smartphone manufacturers to automakers have announced their businesses may be affected by the Russia-Ukraine war. Among smartphone manufacturers, Xiaomi (1810 HK) and ZTE (763 HK) had the highest exposure to Russia and Ukraine by percentage of sales in 2021. For automakers, Hyundai Motor (005380 KS) and Kia Corporation (000270 KS) had a combined 23% market share in Russia as of the end of 2021.

- Guo Shuqing, chairman of China's banking regulator, the **China Banking and Insurance Regulatory Commission**, signaled that he's **comfortable with moves being seen in home prices** during the industry slowdown—as long as they aren't too extreme. Guo's remarks signal that **authorities are sticking to their line that homes are for living in, rather than speculation**. But officials recently also tweaked some policies, including cutting mortgage down payment ratios in some cities. We think more policy relaxation is likely to be announced after the "Two Sessions" (the concurrent annual meetings of the National People's Congress and Chinese People's Political Consultative Conference) in early March. In addition, Guo said Ant Group Co. and 13 other fintech platforms have yet to complete rectifications ordered by the government, but overall progress has been "smooth."

- **Hong Kong's Purchasing Managers' Index (PMI) plunged to 42.9, the lowest level since April 2020**. New orders and output also hit their lowest points since April 2020. The PMI signals a worsening in the economy as new COVID-19 cases surge and Hong Kong braces for a citywide lockdown, likely during compulsory testing of the entire population in March. According to a Bloomberg survey of economists, gross domestic product is expected to contract 1% in Q1 2022.

MARKET
Scorecard

Data as of March 2, 2022

Equities (local currency)	Level	MTD	YTD	1 yr	2 yr
S&P 500	4,386.54	0.3%	-8.0%	13.3%	41.9%
Dow Industrials (DJIA)	33,891.35	0.0%	-6.7%	8.0%	26.9%
Nasdaq	13,752.02	0.0%	-12.1%	2.9%	53.6%
Russell 2000	2,058.87	0.5%	-8.3%	-7.7%	35.6%
S&P/TSX Comp	21,255.64	0.6%	0.2%	15.4%	28.4%
FTSE All-Share	4,134.87	-0.6%	-1.7%	9.6%	11.5%
STOXX Europe 600	446.33	-1.5%	-8.5%	8.0%	18.7%
EURO STOXX 50	3,820.59	-2.6%	-11.1%	3.0%	14.4%
Hang Seng	22,343.92	-1.6%	-4.5%	-23.2%	-15.0%
Shanghai Comp	3,484.19	0.6%	-4.3%	-0.7%	17.3%
Nikkei 225	26,393.03	-0.5%	-8.3%	-10.3%	23.7%
India Sensex	55,468.90	-1.4%	-4.8%	10.3%	45.4%
Singapore Straits Times	3,244.40	0.1%	3.9%	9.1%	7.9%
Brazil Ibovespa	115,173.60	1.8%	9.9%	3.3%	8.0%
Mexican Bolsa IPC	53,300.66	-0.2%	0.1%	16.7%	26.4%
Gov't bonds (bps change)	**Yield**	**MTD**	**YTD**	**1 yr**	**2 yr**
U.S. 10-Yr Treasury	1.846%	2.1	33.6	45.4	68.2
Canada 10-Yr	1.818%	0.5	39.2	48.7	71.7
UK 10-Yr	1.259%	-15.1	28.8	57.2	85.3
Germany 10-Yr	0.027%	-10.8	20.4	37.9	65.1
Fixed income (returns)	**Yield**	**MTD**	**YTD**	**1 yr**	**2 yr**
U.S. Aggregate	2.42%	-0.6%	-3.9%	-3.2%	-2.1%
U.S. Investment-Grade Corp	3.19%	-0.9%	-6.1%	-4.0%	-1.6%
U.S. High-Yield Corp	5.65%	0.0%	-3.7%	0.4%	9.8%
Commodities (USD)	**Price**	**MTD**	**YTD**	**1 yr**	**2 yr**
Gold (spot $/oz)	1,929.02	1.0%	5.5%	11.0%	21.4%
Silver (spot $/oz)	25.25	3.3%	8.3%	-5.7%	50.9%
Copper ($/metric ton)	10,194.25	2.8%	4.7%	10.6%	79.5%
Oil (WTI spot/bbl)	110.60	15.5%	43.7%	85.1%	136.6%
Oil (Brent spot/bbl)	112.93	11.8%	45.2%	80.1%	117.6%
Natural Gas ($/mmBtu)	4.82	9.5%	29.2%	69.8%	174.5%
Currencies	**Rate**	**MTD**	**YTD**	**1 yr**	**2 yr**
U.S. Dollar Index	97.3850	0.7%	1.8%	7.3%	0.0%
CAD/USD	0.7911	0.3%	0.0%	0.0%	5.4%
USD/CAD	1.2640	-0.3%	0.0%	0.0%	-5.2%
EUR/USD	1.1114	-0.9%	-2.3%	-8.1%	-0.2%
GBP/USD	1.3397	-0.2%	-1.0%	-4.0%	5.0%
AUD/USD	0.7295	0.4%	0.4%	-6.7%	11.6%
USD/JPY	115.5100	0.4%	0.4%	8.3%	6.6%
EUR/JPY	128.3800	-0.5%	-1.9%	-0.5%	6.4%
EUR/GBP	0.8296	-0.8%	-1.4%	-4.2%	-5.0%
EUR/CHF	1.0232	-0.5%	-1.4%	-7.5%	-4.2%
USD/SGD	1.3551	0.0%	0.5%	1.9%	-2.5%
USD/CNY	6.3211	0.2%	-0.6%	-2.3%	-9.2%
USD/MXN	20.6498	0.9%	0.6%	0.2%	6.5%
USD/BRL	5.1020	-1.0%	-8.5%	-9.9%	14.0%

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 0.79 means 1 Canadian dollar will buy 0.79 U.S. dollar. CAD/USD 0.0% return means the Canadian dollar return is even with the U.S. dollar return year to date. USD/JPY 115.51 means 1 U.S. dollar will buy 115.51 yen. USD/JPY 0.4% return means the U.S. dollar rose 0.4% vs. the yen year to date.

Source - Bloomberg; data as of 3/2/22 market close

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

Thomas McGarrity, CFA – London, United Kingdom
thomas.mcgarrity@rbc.com; RBC Europe Limited

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

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.

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, 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, 2021

			Investment Banking Services Provided During Past 12 Months	
Rating	Count	Percent	Count	Percent
Buy [Outperform]	831	57.59	365	43.92
Hold [Sector Perform]	557	38.60	180	32.32
Sell [Underperform]	55	3.81	3	5.45

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.

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