



Not living on borrowed time

Atul Bhatia, CFA – Minneapolis

Yes, the U.S. is facing a mountain of debt. No, the sky is not falling, despite media hand-wringing. With financial markets taking the U.S.'s deteriorating fiscal position in stride, we unpack the U.S. debt dilemma and argue that positioning portfolios for a U.S. debt crisis is likely to lead to subpar returns.

Late last year, we expressed a relatively sanguine view on [U.S. debt levels](#). Since then, the U.S. fiscal position has undeniably deteriorated: debt-to-GDP has moved higher, debt servicing costs increased, and the Congressional Budget Office's projected fiscal balances shifted deeper into deficits. In short, the U.S. has more debt, more expensive debt, and is adding to the burden at a faster pace. Rating agencies have taken note, with fiscal policy and government dysfunction causing the U.S. to lose its AAA status.

At least for now, however, markets are shrugging off the news. As of Dec. 6, equity and bond markets were higher on the year, and the dollar had appreciated against trading partner currencies—a strange result if investors were worried about rising U.S. government credit risk.

We expect this behavior to continue and for asset prices to ignore U.S. debt levels. Longer-term, we continue to believe that investment plans built around any potential U.S. debt crisis are likely to underperform a balanced portfolio by significant amounts.

What gets (mis)measured gets (mis)managed?

The federal government has an astonishing \$33 trillion in debt. Even after eliminating borrowing between various government agencies and adjusting for the growth of the

economy, the only comparable debt in modern U.S. history was after World War II.

But that particular measurement—debt owed directly by the U.S. government to investors—is not the only measure of financial leverage in the overall economy. Households, banks, local governments, and non-financial corporations all rely on borrowed money to varying extents. And in these other areas, the U.S. doesn't look so bad.

This borrowing by lower-level entities has two impacts on a nation's financial balance.

One is the direct impact. Borrowing by households, for instance, tends to reduce future consumption as resources are diverted to debt servicing. At a macro level, there is little difference if GDP growth is under pressure from debt-laden governments or over-leveraged households—the economic risk and pain are substantially the same.

The other concern is that in a crisis this non-government debt will ultimately have to be backed by the entire nation and, as such, should be viewed as contingent obligations of the central government. The quintessential example, in our view, is the global financial crisis, when bank and household mortgage debt was effectively backstopped by an alphabet soup of government programs.

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.

For important disclosures, required non-U.S. analyst disclosures, and authors' contact information, see [page 6](#).

Priced (in USD) as of 12/6/23 market close (unless otherwise stated). Produced: 12/7/23 3:06 pm ET; Disseminated: 12/7/23 3:15 pm ET

While we don't see a repeat of 2008 in the offing, we do think it's important to contextualize debt data between countries. Germany's federal debt is extremely low by international standards, but its banking system liabilities relative to GDP nearly triples that of the U.S. China is a net creditor at the national level, but the picture shifts when including substantial municipal and local government debt—a factor in Moody's recent decision to shift to a negative outlook on the world's second-largest economy. Closer to the U.S., Canada's federal debt is low, but households have built up a substantial debt burden—nearly 50 percent larger than the U.S. numbers adjusted for GDP.

Ignoring these liabilities and focusing only on central government debt ignores the similarities in the day-to-day impact of leverage on the broader economy, and also ignores the potential for a rapid and unforeseen increase in national debt in a crisis.

What you see is what you get

Say what you will about the U.S. appropriations process, it's an [open book](#). This transparency is another underappreciated strength of the U.S. in terms of debt crisis risk.

Financial crises tend to arise when there is a rapid, unforeseen event. Problems with a long lead time tend to get resolved with adjustments instead of shocks. And this is what we see as likely: a gradual shift toward fiscal balance as the cost of debt funding erodes the value of tax cuts and higher spending.

Better before it gets worse

Even though we think a gradual adjustment is likely, we don't expect it to be anytime soon.

To begin with, not many people really care about fixing the problem. Surveys of even self-described fiscal hawks show that when it comes to ranking policy choices, debt reduction falls below tax cuts and identifiable spending priorities. In short, everyone wants debt reduction if someone else makes the sacrifice. That's a political non-starter.

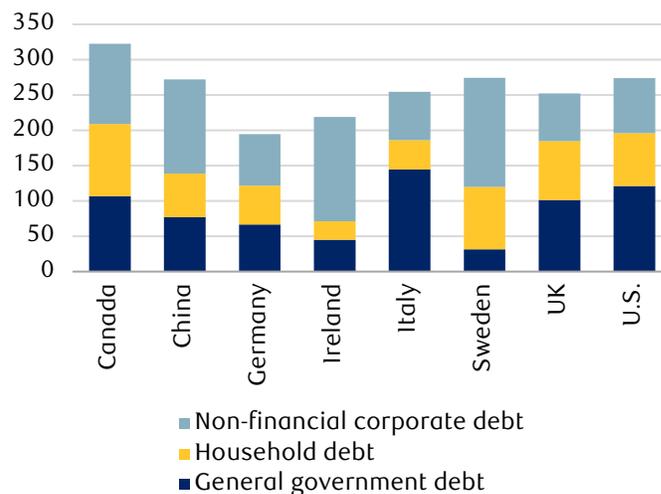
The overarching problem with pushing for lower debt levels is the near-total lack of evidence on what debt level creates problems for countries that issue bonds in their own currency. The best evidence we have is negative: Japan shows us that debt-to-GDP over 200 percent is not incompatible with low interest rates and low perceived default risk. Beyond that, we are in terra incognita.

The healthiest canary in the flock

This lack of empirical data cuts both ways. It makes it perfectly plausible to argue that the U.S. is on the cusp of losing investor confidence because of its large stock of outstanding debt.

In a broader sense, the U.S. is not so different after all

Debt including bonds, loans, and debt securities as percentage of 2022 GDP



Source - International Monetary Fund

For investors who remain convinced that a U.S. debt crisis is inevitable, we think bond financing markets are one clear indicator that there is no imminent concern.

Most bonds are financed using repurchase agreements, more commonly known as repos. A repo is essentially a short-term loan with bonds offered as collateral. Most repo loans are repaid within a day, meaning that lenders typically risk millions of dollars of cash to earn mere hundreds of dollars in interest. Odds like that tend to focus the mind on collateral quality, to say the least.

In repo markets, across all the different bond issuers, U.S. Treasuries are the preferred asset type for most lenders. Borrowers with Treasury collateral, broadly speaking, can borrow more and pay less than investors who offer other bonds as security. We see repo lenders as having the best claim to “canary in the coal mine” status for U.S. credit risk, and they are chirping happily as far as we can see.

No there, there

For at least 40 years, we have been hearing how U.S. fiscal imbalances are unsustainable. And for all that time those imbalances have been sustained, the U.S. economy has grown, and financial markets have generated positive returns.

Given this outcome, we find it somewhat surprising that the press continues to attach so much importance to U.S. debt levels. People generally focus on strategies that have worked, and this input has been an unmitigated failure for decades. We think that history is likely to continue and that positioning for a U.S. debt crisis is likely to lead to subpar returns.

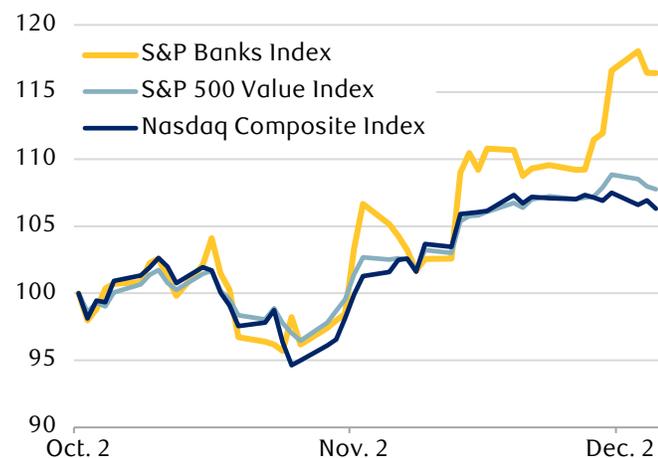
UNITED STATES

Alan Robinson – Seattle

- **U.S. stock indexes have traded in narrow ranges**, just below their 2023 highs, during the first full week of December. As pressure from year-end tax-loss selling abated, sentiment turned more positive, with market bulls pointing to a higher likelihood of a soft landing for the economy in 2024. This was in contrast to the recessionary concerns that saw stocks hit a six-month low near the end of October.
- **Generally tepid economic data reported during the week** buoyed the market, as traders saw this as evidence of a gradually slowing economy that might trigger interest rate cuts from the Fed sooner rather than later. October factory orders were down 3.6% m/m, but the services sector looked a little healthier as the ISM Services Purchasing Managers’ Index beat consensus forecasts with a 52.7 result. A reading below 50 indicates a contraction.
- **Economists pored over employment-related data** in advance of the monthly payrolls report due Dec. 8. The JOLTS report showed far fewer job openings than expected, and unit labor costs for Q3 2023 were down 1.2% q/q. The ADP private payroll report also missed forecasts, with only 103,000 new jobs, as the once-buoyant leisure and hospitality segment posted job losses. This data added to the cooling-economy narrative pushing interest rates lower.
- **The Banks sector was in focus** during the week as commentary from industry conferences and testimony to lawmakers by bank CEOs persuaded traders that the recent selloff in bank stocks might be overdone. According to bank bosses, the consumer is still healthy even if spending is slowing, the credit landscape is

Banks vault above the market as investors reassess risks

Relative performance around the Q4 2023 low



Source - RBC Wealth Management, FactSet; daily closing data normalized with 10/2/23 = 100

manageable, and an economic soft landing is still in the cards. These executives also warned lawmakers that further regulatory pressure would harm the broad economy. This shift in narrative has seen bank stocks handily outperform value stocks and the Tech sector in recent weeks (see chart).

CANADA

Matt Altro & Richard Tan, CFA – Toronto

- **The Bank of Canada (BoC) maintained its 5% overnight policy rate** at its Dec. 6 meeting. This continued pause was driven by recent data showing a weak economic backdrop, including a 1.1% annualized contraction in GDP in Q3 and unemployment ticking higher despite core inflation measures that are still above the 1%–3% BoC target range. Furthermore, the central bank has concluded that as of Q4 demand pressures are easing within the economy, implying that monetary policy has been doing its job. Despite this, wage growth remains resilient in the 4%–5% y/y range, but further softening of the labour market should work against it. All in, inflation has been softening within Canada given incrementally weaker data points, but it is important to be aware that the central bank has not softened its tone and remains vigilant of any potential shifts in trends.
- **The diversified Canadian banks have rallied 4%, on average, since Q4 2023 results were announced.** At first glance, earnings were mixed with half the group exceeding consensus expectations while the remainder were modestly below. However, we note that Q4 typically comes with a higher degree of noise due to one-time events such as restructuring costs (e.g., company layoffs). The group also continued to build reserves ahead of a slowing economic outlook and an environment where many households will be renewing mortgages at significantly higher interest rates. On the flip side, we are comforted that a few banks posted declines in negatively amortizing mortgages, and most were able to increase their dividends. Overall, we believe bank stocks come with attractive and sustainable dividend yields, and valuations have priced in a degree of economic softness in the year ahead. We expect volatility to persist in the coming quarters, but we would be comfortable if income-oriented investors added incremental positions.

EUROPE

Frédérique Carrier & Thomas McGarrity, CFA – London

- **Expectations regarding European Central Bank (ECB) action have swung sharply during the week**, with markets now anticipating the current deposit rate of 4% being cut several times in 2024. Markets are pricing in

a greater than 60% probability of a cut next March, and an interest rate of 2.6% at the end of 2024. Two weeks ago, they expected the rate to close out 2024 at a much higher 3.2%.

- Markets interpreted comments from normally hawkish ECB board member Isabel Schnabel, to the effect that further interest rate increases might not be necessary, as a major turning point. She pointed out that **macro data in Europe continues to signal weakness, and November inflation dropped to 2.4% year over year.**

- **The rapid shift in interest rate expectations puts an additional spotlight on the ECB’s Dec. 14 meeting.** So far, the central bank’s position has been that interest rates would be kept at current levels for some time. Wage growth of 4% is inconsistent with the ECB’s 2% inflation target and the risk of potential oil price increases due to war in the Middle East. With market expectations having moved so quickly, ECB President Christine Lagarde’s comments regarding the bank’s future course of action will be under increased scrutiny. The quandary remains: cutting interest rates too soon risks inflation flaring up, but maintaining elevated rates for too long risks a deeper economic slowdown.

- **The growing narrative in favor of interest rate cuts in 2024 has kept European equities hovering around four-month highs,** and up over 10% in euro terms since their October lows. The rally has been led by rate-sensitive parts of the market, including Real Estate and Retail, as well as long-duration technology-related stocks.

- The forward 12-month price-to-earnings ratio of the STOXX Europe ex UK Index rerated from 12.2x at the end of October to around 13.5x currently. It remains below the index’s 10-year median average of 14.7x.

- **Should the ECB adopt a more lenient stance, we think European equities could continue to rerate.** In our view, absent a sustained bond rally, the valuation discount relative to history may persist given the earnings risks that currently exist, particularly for cyclical.

ASIA PACIFIC

Jasmine Duan – Hong Kong

- **Moody’s Investors Service**, one of the big three global credit rating agencies, **downgraded the outlook for China’s government credit rating to negative** from stable on Tuesday. The agency said the move was mainly due to concerns the central government may increase financial support to local governments and state-owned enterprises. This reflects challenges posed by slower medium-term economic growth and a cooling property market.

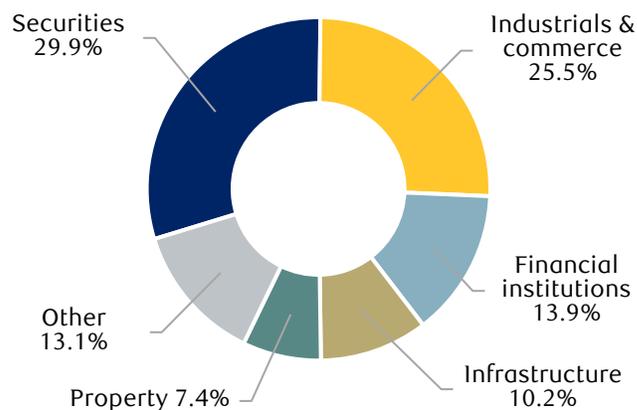
- **The rating agency also reduced the credit rating outlooks for Hong Kong and Macau to negative from stable,** reflecting their political, financial, and economic ties to China. Sentiment towards China and Hong Kong equities has remained sluggish during the week, partially affected by the downgrade.

- **Moody’s concerns are well-known in the market, in our view.** Many investors’ anxieties center on local governments’ debt burden and recent turmoil in China’s trust industry. We acknowledge that these issues are worrisome and reflect the slowing property market and economic growth exerting pressure on local government revenue and parts of the financial industry. However, we don’t anticipate systemic financial risks.

- **Many local governments, despite being heavily indebted, hold substantial real assets.** We estimate that local government assets totaled roughly RMB 240 trillion by the end of 2021, far exceeding their liabilities of around RMB 100 trillion. Local governments could monetize some infrastructure such as roads and bridges to generate revenue, providing an additional financial buffer.

- **Regarding companies in the trust industry, financial conglomerate Zhongzhi Enterprise Group’s recent missed payments to investors might not be the last such instance.** However, financial regulators have been curbing trust and shadow-banking lending since 2017. Trust industry assets account for just 5% of China’s total financial system assets. Investment exposure of trust companies to the property market is only around 7% of total trust investment as of Q1 2023. Therefore, the likelihood of a trust industry problem leading to a systemic financial crisis remains low, in our view.

China trust companies investment mix



Source - China Trustee Association, RBC Wealth Management; data as of March 2023

MARKET Scorecard

Equities (local currency)	Level	MTD	YTD	1 yr	2 yr
S&P 500	4,549.34	-0.4%	18.5%	15.4%	-0.9%
Dow Industrials (DJIA)	36,054.43	0.3%	8.8%	7.3%	2.3%
Nasdaq	14,146.71	-0.6%	35.2%	28.4%	-7.1%
Russell 2000	1,852.05	2.4%	5.2%	2.2%	-15.9%
S&P/TSX Comp	20,274.21	0.2%	4.6%	1.4%	-2.8%
FTSE All-Share	4,096.16	1.0%	0.5%	-0.4%	-0.5%
STOXX Europe 600	470.06	1.8%	10.6%	7.1%	0.3%
EURO STOXX 50	4,483.26	2.3%	18.2%	13.8%	8.4%
Hang Seng	16,463.26	-3.4%	-16.8%	-15.3%	-29.5%
Shanghai Comp	2,968.93	-2.0%	-3.9%	-7.6%	-17.3%
Nikkei 225	33,445.90	-0.1%	28.2%	19.9%	19.8%
India Sensex	69,653.73	4.0%	14.5%	11.2%	22.7%
Singapore Straits Times	3,087.24	0.5%	-5.0%	-5.1%	-0.9%
Brazil Ibovespa	125,622.65	-1.3%	14.5%	14.0%	17.6%
Mexican Bolsa IPC	54,100.37	0.1%	11.6%	6.0%	6.9%
Gov't bonds (bps change)	Yield	MTD	YTD	1 yr	2 yr
U.S. 10-Yr Treasury	4.104%	-22.2	22.9	57.3	267.0
Canada 10-Yr	3.282%	-27.2	-1.8	50.7	175.7
UK 10-Yr	3.943%	-23.3	27.1	86.7	320.5
Germany 10-Yr	2.200%	-24.7	-37.1	40.0	258.8
Fixed income (returns)	Yield	MTD	YTD	1 yr	2 yr
U.S. Aggregate	4.86%	1.2%	2.8%	1.4%	-10.8%
U.S. Investment-Grade Corp	5.42%	1.3%	5.3%	3.4%	-11.5%
U.S. High-Yield Corp	8.26%	0.6%	10.0%	8.9%	-1.1%
Commodities (USD)	Price	MTD	YTD	1 yr	2 yr
Gold (spot \$/oz)	2,026.03	-0.5%	11.1%	14.4%	13.9%
Silver (spot \$/oz)	23.92	-5.3%	-0.1%	7.8%	6.9%
Copper (\$/metric ton)	8,252.75	-1.6%	-1.3%	-1.6%	-13.7%
Oil (WTI spot/bbl)	69.38	-8.7%	-13.6%	-6.6%	-0.2%
Oil (Brent spot/bbl)	74.30	-10.3%	-13.5%	-6.4%	1.7%
Natural Gas (\$/mmBtu)	2.57	-8.2%	-42.5%	-53.0%	-29.6%
Currencies	Rate	MTD	YTD	1 yr	2 yr
U.S. Dollar Index	104.1530	0.6%	0.6%	-1.3%	8.1%
CAD/USD	0.7357	-0.2%	-0.3%	0.5%	-6.1%
USD/CAD	1.3592	0.2%	0.3%	-0.4%	6.6%
EUR/USD	1.0767	-1.1%	0.6%	2.9%	-4.6%
GBP/USD	1.2560	-0.5%	3.9%	3.5%	-5.3%
AUD/USD	0.6551	-0.8%	-3.8%	-2.0%	-7.1%
USD/JPY	147.2800	-0.6%	12.3%	7.5%	29.8%
EUR/JPY	158.5800	-1.7%	12.9%	10.6%	23.8%
EUR/GBP	0.8573	-0.6%	-3.2%	-0.6%	0.8%
EUR/CHF	0.9416	-1.2%	-4.9%	-4.5%	-9.9%
USD/SGD	1.3418	0.3%	0.2%	-1.3%	-2.0%
USD/CNY	7.1606	0.4%	3.8%	2.4%	12.3%
USD/MXN	17.2849	-0.6%	-11.4%	-12.6%	-18.6%
USD/BRL	4.9026	-0.3%	-7.2%	-6.4%	-13.8%

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 Tuesday'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 -0.3% return means the Canadian dollar fell 0.3% vs. the U.S. dollar year to date. USD/JPY 147.28 means 1 U.S. dollar will buy 147.28 yen. USD/JPY 12.3% return means the U.S. dollar rose 12.3% vs. the yen year to date.

Source - Bloomberg; data as of 12/6/23

Authors

Matt Altro – Toronto, Canada

matt.altro@rbc.com; RBC Dominion Securities Inc.

Atul Bhatia, CFA – Minneapolis, United States

atul.bhatia@rbc.com; RBC Capital Markets, LLC

Frédérique Carrier – London, United Kingdom

frederique.carrier@rbc.com; RBC Europe Limited

Jasmine Duan – Hong Kong, China

jasmine.duan@rbc.com; Royal Bank of Canada, Hong Kong Branch

Thomas McGarrity, CFA – London, United Kingdom

thomas.mcgarritty@rbc.com; RBC Europe Limited

Alan Robinson – Seattle, United States

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

Richard Tan, CFA – Toronto, Canada

richard.tan@rbc.com; RBC Dominion Securities Inc.

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.

References to a Recommended List in the recommendation history chart may include one or more recommended lists or model portfolios maintained by RBC Wealth Management or one of its affiliates. RBC Wealth Management recommended lists include the Guided Portfolio: Prime Income (RL 6), the Guided Portfolio: Dividend Growth (RL 8), the Guided Portfolio: ADR (RL 10), and the Guided Portfolio: All Cap Growth (RL 12). The abbreviation 'RL On' means the date a security was placed on a Recommended List. The abbreviation 'RL Off' means the date a security was removed from a Recommended List. As of April 3, 2023, U.S. RBC Wealth Management's quarterly reports will serve as the primary communication for its models and will highlight any changes to the model made during the quarter.

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, 2023

Rating	Count	Percent	Investment Banking Services Provided During Past 12 Months	
			Count	Percent
Buy [Outperform]	820	55.97	250	30.49
Hold [Sector Perform]	590	40.27	148	25.08
Sell [Underperform]	55	3.75	5	9.09

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.

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; RBC Dominion Securities Inc., a securities broker-dealer with principal offices located in Toronto, Canada; Royal Bank of Canada, Hong Kong Branch which is regulated by the Hong Kong Monetary Authority and the Securities and Futures Commission (“SFC”); Royal Bank of Canada, Singapore Branch, a licensed wholesale bank with its principal office located in Singapore; and 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 persons receiving this from Royal Bank of Canada, Hong Kong Branch: This document is distributed in Hong Kong by Royal Bank of Canada, Hong Kong Branch which is regulated by the Hong Kong Monetary Authority and the SFC. This document is not for distribution in Hong Kong, to investors who are not “professional investors”, as defined in the Securities and Futures Ordinance (Cap. 571 of Hong Kong) and any rules made under that Ordinance. This document has been prepared for general circulation and does not take into account the objectives, financial situation, or needs of any recipient. Past performance is not indicative of future performance. **WARNING:** The contents of this document have not been reviewed by any regulatory authority in Hong Kong. Investors are advised to exercise caution in relation to the investment. If you are in doubt about any of the contents of this document, you should obtain independent professional advice.

To persons receiving this from Royal Bank of Canada, Singapore Branch: 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 publication is not for distribution in Singapore, to investors who are not “accredited investors” and “institutional investors”, as defined in the Securities and Futures Act 2001 of Singapore. This publication 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.

©2023 RBC Capital Markets, LLC – Member NYSE/FINRA/SIPC
 ©2023 RBC Dominion Securities Inc. – Member Canadian Investor Protection Fund
 ©2023 RBC Europe Limited
 ©2023 Royal Bank of Canada
 All rights reserved
 RBC1253



**Wealth
Management**