GLOBAL
Insight
WEEKLY

Perspectives from the Global Portfolio Advisory Committee April 18, 2024

Don't fight (or fear) the Fed

Atul Bhatia, CFA – Minneapolis

"Don't fight the Fed" is one of the oldest Wall Street aphorisms and for good reason. The U.S. central bank is an incredibly powerful institution that can exert influence on essentially any U.S. dollar-denominated asset. For all its power, though, we believe the Fed is also widely misunderstood.

When it comes to the Fed, the default view of many investors often seems to be that high rates are bad and low rates are good, and that the central bank is nearly omnipotent, particularly when it comes to crisis management. While we believe there is some element of truth to these statements, we also think they fall far short of reality and are unhelpful in thinking about the economy and the central bank.

Laissez les bon temps rouler

The financial press tends to portray the current level of Fed rates—around 5.38%—as high, with Fed rate cuts being the key to letting the good times roll. It is true that lower interest rates tend to push the price of assets—such as stocks, bonds, and real estate—higher, as the current value of future cash flows increases in a lower interest rate environment. But this is largely a one-time effect—it's a shot of adrenaline to securities' pricing.

This is likely to be excellent news for a short-term or leveraged investor, but for a long-term investor, the difference is largely one of timing. The investment portfolio will likely produce the same or substantially similar lifetime cash flows under either interest rate regime, but low rates lead us to ascribe a higher current value to future gains. And we think that early recognition of future earnings is an absolute negative for investors who are still contributing to their investment portfolios. For any given investment amount, they can buy fewer assets.

There are other mixed impacts to lower interest rates. They can contribute to economic growth and may lead to higher earnings multiples on some assets, but they also reduce reinvestment income on dividends and new investments. We believe these impacts largely cancel out for a typical 60/40 mix of stocks and bonds, although it depends heavily on the underlying assumptions. We think it's fair to say, however, that the bulk of the perceived positive impact from low rates comes from a one-time pop in asset prices.

Low rates can come at a high cost

The questionable benefits of low interest rates come with real costs. Even a cursory glance at this century's financial history provides stark reminders of the pitfalls of easy monetary policy.

We think the obvious risk is inflation. The latest iteration of near-zero interest rates was supposed to lead to only "transitory" price impacts; a view that was demonstrably incorrect and has since been abandoned by the Fed. We think inflationary risks are particularly acute when—like

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

For important disclosures, required non-U.S. analyst disclosures, and authors' contact information, see page 6.

Priced (in USD) as of 4/17/24 market close (unless otherwise stated). Produced: 4/18/24 13:57 ET; Disseminated: 4/18/24 14:05 ET

now—labor markets and consumer demand are stronger than economic models suggest.

Even more pernicious than inflation, however, is the role of low interest rates on capital allocation. Put simply, when the Fed keeps low risk rates low, investors are forced to take additional—and in many cases unwanted—risks to meet their income needs. The lead-up to the global financial crisis, we believe, is the quintessential example. We have serious doubts if CDO-squareds and subprime mortgages would have sounded attractive to investors had they been able to earn a decent return on lower-risk investments.

It's the economy—pure and simple

More generally, we believe there's nothing to fear—and a lot to like—about an economy that can function with higher interest rates. If companies can continue to grow revenues and earnings when rates are high, one of the main implications is that investors can be fairly compensated across the capital structure. Bond holders can earn a decent return on their investment, and shareholders can see growth in earnings and potentially dividends.

Taking a step back, we find it somewhat odd that the Fed is even contemplating rate cuts. The institution is charged with creating full employment, consistent with price stability. We do not see any meaningful indication of labor market weakness, while inflation remains a concern. Not only was the most recent consumer price index report higher than target, but there are also troubling signs of inflation becoming embedded in consumer expectations. The Fed's preferred measure of this factor—a market derived indicator of annual inflation over a five-year period starting five years in the future—remains stubbornly above target and pre-pandemic levels.

With the economy functioning for workers, companies, and investors, we think a stable Fed policy rate is not a particularly troubling outcome.

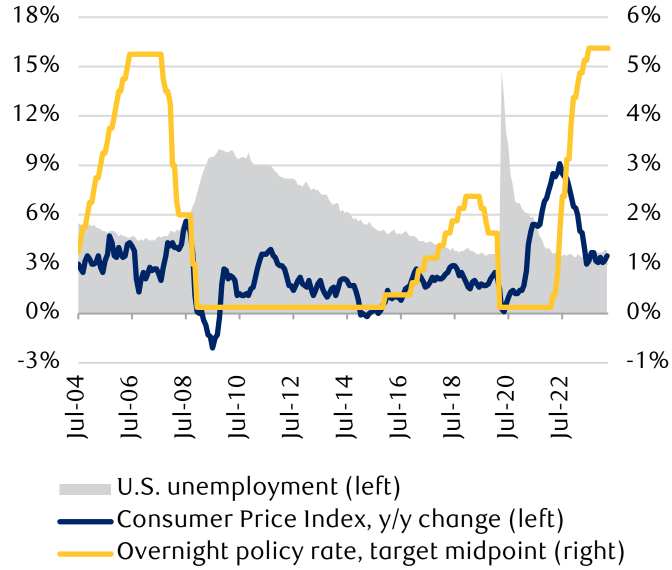
Fed omnipotence, well, sort of

The Fed can effectively set short-term interest rates and it has the capacity to fix long-term interest rates—at least for some time. It can also finance any quantity of investments for any length of time. This last power was critical in the bounce back from the global financial crisis as it bought time for assets to recover.

The Fed's power in a financial crisis was further demonstrated during the regional bank turmoil of March 2023. At the time, we emphasized that the central bank could stop contagion whenever it liked—the issues banks faced then were a quintessential financing issue. Most current active investors, ourselves included, have mainly seen financial crises, leading many of us, we believe, to overemphasize the Fed's capacity to deal with any economic problem.

Back to the future?

The U.S. economy has previously functioned well at this interest rate level



Source - RBC Wealth Management, Bloomberg

The pandemic, however, emphasized the limits of Fed power: the institution has much less impact in the physical world than in the financial world. Supply chain problems are largely outside the Fed's ability to influence. There's no level of interest rates that can make a port operate more quickly or make ships sail faster. In theory, the Fed could force interest rates high enough to bring demand in line with reduced supply, but crushing the economy to match a temporary supply reduction is an idea only a theorist could love.

Perils of oversimplification

The Fed is undoubtedly a powerful global institution. In our view, however, the discourse on the central bank too often becomes cheerleading for low rates while emphasizing the Fed's nearly magical powers. A more nuanced reading of the institution and its policies makes clear that higher rates are not to be feared and that Fed support can only go so far in times of turmoil.

UNITED STATES

Kelly Bogdanova – San Francisco

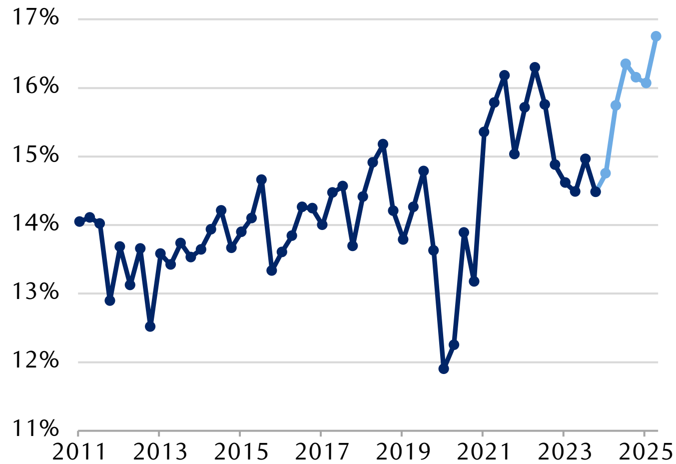
- **The S&P 500 has retreated 4.4% from its all-time high in late March through Wednesday's close. It's not surprising to us that a broad-based pullback has developed given the index had surged 27.6% in the previous five months.** The U.S. equity market has been weighed down recently by renewed consumer inflation concerns, a related downshift in market expectations for Fed rate cuts and upswing in Treasury yields, and lackluster earnings reports from some large financial institutions, along with an escalation of the Middle East conflict. While these factors have been catalysts for the decline, we view this as a normal pullback following a strong rally. Since the late-March peak, the Communication Services and Energy sectors have held up the best, whereas Real Estate, Health Care, Financials, Consumer Discretionary, and Information Technology have underperformed the S&P 500.

- With almost 13% of S&P 500 companies having reported Q1 results so far, earnings growth is pacing at 2.2% y/y according to Bloomberg, lower than the 3.8% y/y consensus forecast when the reporting season began. **As more companies disclose results, including mega-capitalization technology firms, we think the S&P 500's earnings growth rate will rise.** Thus far, the proportion of companies recording earnings beats is high at 81%. The proportion of revenue beats is lower than average, but overall revenue growth of 3.5% y/y is near the consensus forecast prior to reporting season.

- Analysts are closely scrutinizing management teams' profit margin guidance. **RBC Capital Markets, LLC's Head of U.S. Equity Strategy Lori Calvasina thinks the consensus forecasts for S&P 500 operating margins later this year and next year (shown in light blue on the chart) are too lofty.** When margins reached similar levels in 2021 and 2022, they were boosted by unique post-COVID trends and a related bout of strong inflation. Calvasina's anticipation of less-robust margin expansion is a key reason that her forecast for 2024 S&P 500 earnings of $237 per share is lower than the consensus forecast of $242 per share.

Profit margin expectations seem too high

S&P 500 quarterly operating profit margin (actuals in dark blue, consensus forecasts in light blue)



Source - RBC Wealth Management, Bloomberg; data as of 4/17/24

CANADA

Luis Castillo & Josh Nye – Toronto

- **Canada's 2024 federal budget features higher spending, higher taxes, and still-high deficits.** The annual budget released this week includes CA$53 billion in new spending over five years, largely financed by a combination of revenue that is stronger than officials previously expected and an increase in capital gains taxes. Aggregate deficits over the next five years are anticipated to be CA$10 billion higher than assumed last fall, but the trajectory for the debt-to-GDP ratio is expected to be slightly lower thanks to an improving nominal GDP growth outlook. Gross bond issuance is projected to increase by 12% in the current fiscal year, which is less than RBC Capital Markets assumed pre-budget. Bond investors took the budget in stride, with yields little changed following the release. With new spending largely to be financed by higher revenues, we think **the net economic impact is likely to be fairly limited and shouldn't have a significant impact on the Bank of Canada's (BoC) forecasts for GDP and inflation, nor on its upcoming policy decision in June**.

- **Canadian inflation took another step in the right direction in March**, putting a June rate cut in focus. Although headline (all items) inflation ticked higher to 2.9% y/y in March, in line with consensus expectations and due in part to an increase in gasoline prices, the BoC's preferred core inflation metrics (excluding volatile items) came in below expectations, averaging slightly below 3% y/y. On a 3-month annualized basis (which provides a better gauge of recent inflationary pressure), core inflation slowed to just 1.25%, the lowest since May 2020. There will be one more Consumer Price Index (CPI) report, two more monthly GDP reports, and two more jobs reports ahead of the BoC's June meeting. Barring a major step backwards in the April CPI report, **we believe the BoC should have plenty of optionality to consider cutting rates in June**.

EUROPE

Rufaro Chiriseri, CFA & Thomas McGarrity, CFA – London

- **LVMH reported Q1 results broadly in line with consensus expectations, as the group's organic revenue grew 3% y/y.** The company reported Chinese consumer spending increased 10% y/y in the quarter, driven by strong growth in tourist spending by Chinese customers, particularly in Japan, as tourists took advantage of Japanese yen weakness.

- **Sentiment around the luxury goods sector has soured of late amid worries over slowing demand, particularly in China.** After several years of above-trend growth following COVID-19, we think the luxury goods sector is going through a period of normalisation. The luxury goods industry's year-over-year growth rate is expected to slow to the low to mid single digits in 2024, according to Bain & Company, versus a compound annual growth rate of about 10% from 2019 to 2023. We believe an increasingly volatile backdrop for luxury goods as growth rates normalise will translate into increased performance dispersion within the sector. Accordingly, investors should focus on stock-picking opportunities, in our view, rather than trying to make a broad call on the sector.

- **ASML shares, after gaining over 60% since the start of Q4 2023, slipped more than 6% after the company reported Q1 orders were below consensus expectations.** Order intake was €3.6 billion for the quarter, compared to the €4.6 billion consensus estimate. On the results call, the company's Chief Financial Officer (CFO) noted that ASML's "order flow can be lumpy and may not be evenly distributed over the year." The CFO also stated that an order rate of just over €4 billion per quarter for the rest of 2024 would be required for ASML to be on track to hit the midpoint of its €30 billion–€40 billion 2025 revenue guidance.

- **UK economic data this week showed signs of a cooling labour market and price growth pressures, albeit marginally above the Bank of England's (BoE) February forecasts.** Headline CPI inflation data for March fell to 3.2% y/y from 3.4% y/y in February, with services inflation decelerating to 6% y/y from 6.1% y/y in February. Meanwhile, unemployment rose to 4.2% in February, from 4% previously, and job vacancies continued to fall, while private sector pay growth slowed to 6%.

- **While the data presents an "unbalanced picture," according to BoE Governor Andrew Bailey, it continues moving in the right direction.** We continue to expect the first BoE rate cut in August, but June remains a real possibility. The market now expects around 50 basis points of easing this year.

ASIA PACIFIC

Nicholas Gwee, CFA – Singapore

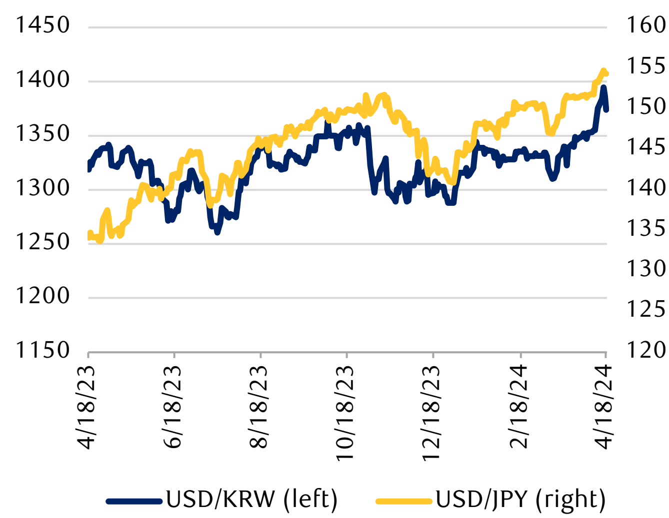
- **The Asia Pacific equity market traded broadly lower during the week**, with the MSCI AC Asia Pacific Index trading below the 100-day moving average and breaking the support level of 170. Sentiment has been weak with the flare-up in geopolitical risks in the Middle East and U.S. Federal Reserve Chair Jerome Powell signalling policymakers are in no rush to cut interest rates.

- **The Chinese equity market is an outlier this week.** The Shanghai Shenzhen CSI 300 Index is up 3.50% week to date as of the time of writing. **China's Q1 2024 GDP grew 5.3% y/y, ahead of a Reuters poll of economists that expected 4.6%** and faster than the 5.2% growth recorded in the previous quarter. China has set what we consider to be an ambitious economic expansion target of "around 5%" for 2024. The Q1 data puts the target within reach. However, economists are cautioning against extrapolating Q1 growth data for the rest of the year, citing the latest indicators—property investment, retail sales, and industrial output—showing demand remains frail, weighing on overall momentum. We maintain our neutral stance on Chinese equities.

- **China, Japan, and South Korea expressed concerns this week over the recent weakening of their currencies against the U.S. dollar** and warned they may take steps to counter any drastic volatility. The People's Bank of China (PBoC) said in a report that China will "resolutely" put the yuan back on track when traders take lopsided positions and the PBoC will also attempt to avoid excessive volatility. A joint statement from U.S. Treasury Secretary Janet Yellen alongside the finance ministers of Japan and South Korea noted "serious concerns" about the depreciation of the two Asian currencies. Observers believe the U.S. has effectively given the nod on intervention, although it remains unclear when or if this will take place.

Japanese and Korean currencies have weakened against the U.S. dollar

USD vs. Japanese yen (JPY) & South Korean won (KRW)



Source - RBC Wealth Management, Bloomberg; daily price data

MARKET

Scorecard

Equities (local currency)	Level	MTD	YTD	1 yr	2 yr
S&P 500	5,022.21	-4.4%	5.3%	21.0%	14.3%
Dow Industrials (DJIA)	37,753.31	-5.2%	0.2%	11.1%	9.6%
Nasdaq	15,683.37	-4.2%	4.5%	29.0%	17.5%
Russell 2000	1,947.95	-8.3%	-3.9%	8.0%	-2.8%
S&P/TSX Comp	21,656.05	-2.3%	3.3%	4.9%	-0.9%
FTSE All-Share	4,273.02	-1.5%	1.0%	-0.2%	1.0%
STOXX Europe 600	498.52	-2.8%	4.1%	6.8%	8.4%
EURO STOXX 50	4,914.13	-3.3%	8.7%	12.5%	27.7%
Hang Seng	16,251.84	-1.8%	-4.7%	-21.8%	-24.5%
Shanghai Comp	3,071.38	1.0%	3.2%	-9.3%	-4.8%
Nikkei 225	37,961.80	-6.0%	13.4%	33.1%	39.7%
India Sensex	72,943.68	-1.0%	1.0%	21.8%	25.0%
Singapore Straits Times	3,154.69	-2.2%	-2.6%	-5.0%	-5.4%
Brazil Ibovespa	124,171.15	-3.1%	-7.5%	17.1%	6.9%
Mexican Bolsa IPC	55,415.69	-3.4%	-3.4%	1.2%	2.3%
Gov't bonds (bps change)	**Yield**	**MTD**	**YTD**	**1 yr**	**2 yr**
U.S. 10-Yr Treasury	4.587%	38.7	70.8	98.7	176.0
Canada 10-Yr	3.700%	23.2	59.0	60.2	93.9
UK 10-Yr	4.261%	32.8	72.4	57.0	237.2
Germany 10-Yr	2.465%	16.7	44.1	-0.8	162.3
Fixed income (returns)	**Yield**	**MTD**	**YTD**	**1 yr**	**2 yr**
U.S. Aggregate	5.29%	-2.7%	-3.4%	-0.5%	-3.1%
U.S. Investment-Grade Corp	5.75%	-2.9%	-3.3%	1.7%	-0.6%
U.S. High-Yield Corp	8.27%	-1.7%	-0.2%	8.6%	7.6%
Commodities (USD)	**Price**	**MTD**	**YTD**	**1 yr**	**2 yr**
Gold (spot $/oz)	2,371.93	6.4%	15.0%	18.9%	20.2%
Silver (spot $/oz)	28.27	13.3%	18.8%	12.9%	10.1%
Copper ($/metric ton)	9,355.10	6.7%	10.5%	4.4%	-9.2%
Oil (WTI spot/bbl)	85.36	2.6%	19.1%	5.6%	-20.2%
Oil (Brent spot/bbl)	87.44	0.0%	13.5%	3.2%	-21.7%
Natural Gas ($/mmBtu)	1.72	-2.7%	-31.7%	-24.6%	-76.5%
Currencies	**Rate**	**MTD**	**YTD**	**1 yr**	**2 yr**
U.S. Dollar Index	105.9440	1.4%	4.6%	3.8%	5.6%
CAD/USD	0.7261	-1.7%	-3.8%	-2.7%	-8.5%
USD/CAD	1.3772	1.7%	4.0%	2.8%	9.3%
EUR/USD	1.0673	-1.1%	-3.3%	-2.3%	-1.4%
GBP/USD	1.2454	-1.3%	-2.2%	0.6%	-4.7%
AUD/USD	0.6436	-1.3%	-5.5%	-4.0%	-13.2%
USD/JPY	154.4000	2.0%	9.5%	14.8%	22.7%
EUR/JPY	164.7900	0.9%	5.8%	12.2%	20.9%
EUR/GBP	0.8569	0.2%	-1.2%	-2.9%	3.5%
EUR/CHF	0.9718	-0.1%	4.6%	-1.0%	-4.8%
USD/SGD	1.3605	0.8%	3.0%	2.0%	0.3%
USD/CNY	7.2386	0.2%	2.0%	5.2%	13.5%
USD/MXN	16.9578	2.4%	-0.1%	-5.9%	-15.1%
USD/BRL	5.2431	4.6%	7.9%	6.1%	11.5%

Equity returns do not include dividends, except for the Brazilian Ibovespa. Bond yields in local currencies. Copper Index data and U.S. fixed income returns as of 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 0.72 means 1 Canadian dollar will buy 0.72 U.S. dollar. CAD/USD -3.8% return means the Canadian dollar fell 3.8% vs. the U.S. dollar year to date. USD/JPY 154.40 means 1 U.S. dollar will buy 154.40 yen. USD/JPY 9.5% return means the U.S. dollar rose 9.5% vs. the yen year to date.

Source - Bloomberg; data as of 4/17/24

Authors

Atul Bhatia, CFA – Minneapolis, United States
atul.bhatia@rbc.com; RBC Capital Markets, LLC

Kelly Bogdanova – San Francisco, United States
kelly.bogdanova@rbc.com; RBC Capital Markets, LLC

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

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

Nicholas Gwee, CFA – Singapore
nicholas.gwee@rbc.com; Royal Bank of Canada, Singapore Branch

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

Josh Nye – Toronto, Canada
josh.nye@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 March 31, 2024

			Investment Banking Services Provided During Past 12 Months	
Rating	Count	Percent	Count	Percent
Buy [Outperform]	831	56.84	264	31.77
Hold [Sector Perform]	585	40.01	151	25.81
Sell [Underperform]	46	3.15	4	8.70

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.](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.

RBC® Wealth Management