

Global Insight

Weekly



A closer look

Crosscurrents and conflicting signals

Laura Cooper – London

Earlier fears of a growth slowdown and a Fed out of tune with financial markets have given way to a relief rally in markets, but darker economic clouds outside of the U.S. could still roll in. It's worth looking at what's on the radar for the global economy to gauge whether a growth storm will be averted.

Fears of a global growth slowdown and ongoing uncertainty around the U.S.-China trade spat sent shivers through equity markets in late 2018. A thaw came earlier than spring with financial markets rallying strongly so far in 2019. Optimism around trade developments supported the upswing while the Fed's abrupt dovish U-turn has pared back investors' U.S. recessionary angst.

Growth has cooled in the U.S., yet it is the darker economic clouds beyond its borders that appear to be keeping investors nervous about a brewing global growth storm. Rising geopolitical tensions, soft economic data in Europe and China, and trade uncertainty are underpinning the anxiety, but we see silver linings that should provide some calm before investors need to batten down the hatches.

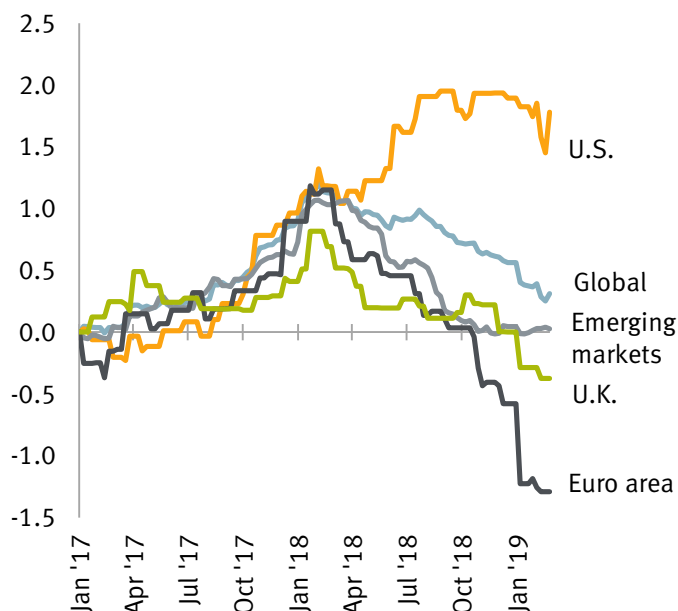
Powell's patience persists

The fading of U.S. recessionary fears on the back of the Fed's pivot has injected life into equity markets, while an easing away from the earlier tightening of financial conditions is leaving investors to bask in the Fed's embrace of patience. Comments from the central bank continue to point to a rate hike pause prevailing, and Fed Chair Jerome Powell alluded that the U.S. economy could be finding itself in a sweet spot.

In his semiannual testimony to Congress, Powell conceded that U.S. economic data has softened; however, excess slack in a still strong labor market should keep inflationary pressures "muted." These conditions have created an environment that is ripe, in his view, for patience towards policy decisions, notably as the U.S. economy has faced "crosscurrents and conflicting signals" over the past few months.

A clouded growth outlook captured in forecast revisions

JPMorgan Global Forecast Revision Index; cumulative change in %-points



Source - RBC Wealth Management, Bloomberg; data through 3/6/19

Market pulse

- 3 U.S. Health Care stocks in investors' crosshairs
- 3 BoC's choice of words suggests no rush to hike rates
- 3 Extra support for the European economy
- 4 China moving to a more pro-growth stance

Click [here](#) for authors' contact information.

Priced (in USD) as of 3/7/19 market close, EST (unless otherwise stated).

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



Wealth Management

Navigating crosscurrents

A favorable U.S. economic outlook appears at odds with a confluence of factors and is underpinning the tug of war described by the Fed. Greater financial market volatility towards the latter part of 2018 alongside elevated political uncertainty is feeding into the Fed's caution. But Powell further flagged concerns about slowing growth across major foreign economies, advocating that it is a "good time" to watch and wait to gauge how the global outlook evolves.

Deteriorating growth prospects have dotted the global economy in recent months, led by slowdowns in Europe and China. Gauges of European economic activity sank to start 2019, signaling that the weakness seen in the latter half of 2018 was persisting. Germany's export exposure to a weaker external backdrop underpinned its growth slowdown, while Italy slumped into recession to end 2018 and French activity was weighed down by the "Yellow Vest" protests.

But bright spots are emerging. A sizeable improvement and stabilization in German and French services activity in February point to domestic demand recovering. This in turn should be sufficient to prevent the slowdown from worsening despite ongoing weakness amongst the region's key export markets, notably in Asia.

Even on this front, despite China facing medium-term structural issues, a string of recent fiscal and monetary stimulus measures should provide a cyclical lift to the country's growth, in our opinion. Thus, the risk of further spillover to developed markets should diminish later this year.

Risky (geopolitical) business

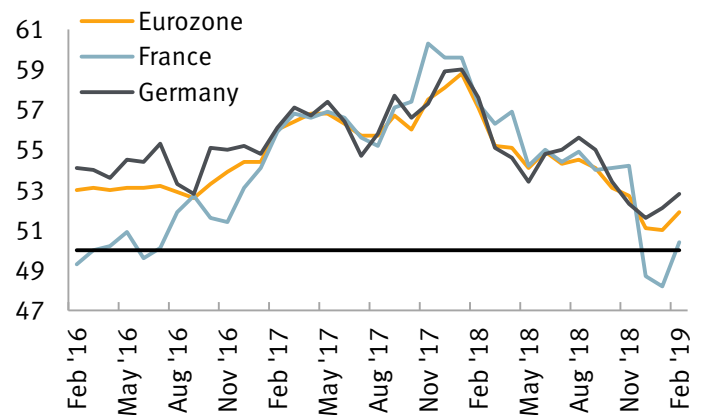
Risks still remain that the global economic expansion could falter further led by heightened political uncertainty. Ongoing trade negotiations come top of mind with the U.S.-China dispute yet to be resolved. There also remains the threat that the U.S. could announce tariffs on auto imports within 90 days following the submittal of the U.S. Commerce Department's investigation of the effects of imports on national security to the White House on February 17. Meanwhile, the Brexit saga in the U.K. endures and a U.S. debt ceiling will need to be tackled, likely before this autumn.

However, signs are emerging that tensions could be easing somewhat. The extension of the March 1 trade deadline by the Trump administration—that would have seen tariffs rise sharply on Chinese imports—points to a potential deal in the offing. The truce could prove to be superficial with structural issues persisting, yet the development could provide some relief to investors' global growth worries.

Across the pond, the risk of the U.K. leaving the EU without a deal in place declined materially recently. Prime Minister Theresa May conceded on February 26 to opening the door to an extension of the March 29 exit date, allowing for mid-March

Euro area slowdown showing signs of steadying

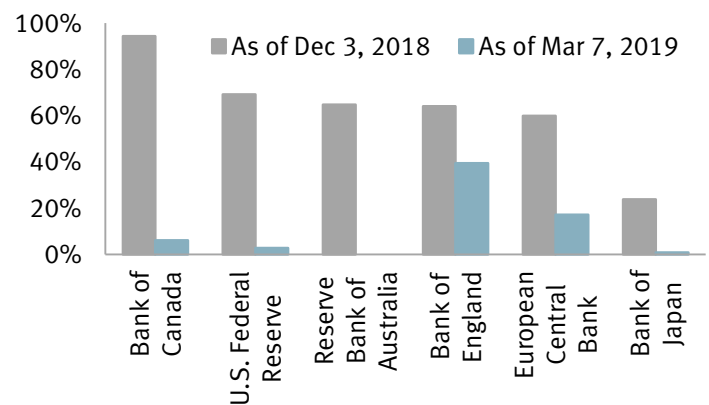
Markit Composite PMIs



Source - RBC Wealth Management, Bloomberg; data through 3/6/19

Policy rate hike expectations have plunged since the market turmoil of late 2018

Market-implied odds of at least one policy rate increase by Dec 31, 2019



Source - RBC Wealth Management, Bloomberg; data through 3/7/19

votes in the U.K. Parliament that could rule out a "no-deal" scenario. Greater clarity on the outcome would help to lift the "fog of Brexit" that the Bank of England warned is weighing on domestic economic activity.

Policy to provide a push

On account of the global growth slippage, central banks around the globe have mirrored the cautious stance of the Fed. As a result, financial markets have lowered expectations for tighter policy paths, in turn alleviating pent-up investor fears that a global growth downturn portends an end to the bull run in financial markets.

Storm clouds are likely to roll in at some point, in our view, yet the widespread embrace of data dependency by central banks should support global growth conditions. We remain Market Weight on global (total) equities, which equates to being invested up to the benchmark strategic allocation in portfolios.



United States

Ben Graham, CFA – Minneapolis

- **U.S. equities are on pace for their worst week in 2019**, evidenced by the S&P 500's 2.0% decline in recent days. The NASDAQ has traded in line with the S&P 500, while the Dow Jones has actually held up better. Small-caps lag as **the Russell 2000** is down 4.2% recently, though it **still leads other U.S. indexes by a considerable margin** in 2019 with a 13.0% YTD return.
- **Health Care stocks have been in investors' crosshairs recently**, declining by nearly 4% in recent sessions as Insurers and Providers retreat on headlines that continue to be negative for the industry. Managed Care Organization (MCO) stocks are down more than 11% in the last two weeks as RBC Capital Markets, LLC analyst Frank Morgan points out that the **"Medicare For All" narrative continues to gain traction as a Democratic initiative**, but has a low probability of materializing. Another concern denting the sector recently is the launch of the nonprofit Haven Health Care, a joint venture of Berkshire Hathaway, JPMorgan Chase, and Amazon. Frank Morgan also notes that the ongoing weakness here is likely a sector rotation out of the stocks as investors weigh the mosaic of headline risks against future prospects.
- **The other laggards in recent days are the Industrials and Financials sectors**; leadership could be found in Real Estate, Consumer Discretionary, and Communication Services.



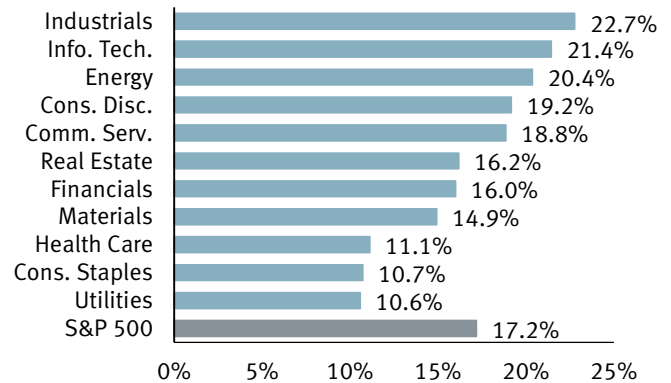
Canada

Diana Di Luca, Carolyn Schroeder, & Arete Zafiriou – Toronto

- **The Bank of Canada (BoC) kept the overnight lending rate unchanged at 1.75%** on March 6. It is unsurprising that the BoC has joined other central banks in highlighting the somewhat challenging outlook for both global and domestic growth this year; however, the latest statement by the bank's Governing Council omits a phrase that has appeared in recent communiqués indicating the move to a neutral rate—estimated to be between 2.5% and 3.5%—is justified over time. While we have often debated the meaning of "over time" (one year? three years?), the Council has now opted to say the "outlook continues to warrant a policy interest rate that is below its neutral range." This may be just a different way of **reminding us that monetary policy remains accommodative**, but the choice of words in combination with an acknowledgement of "increased uncertainty about the timing of future rate increases" suggests **the BoC is in no rush to hike the overnight lending rate unless the data improves from here**. All this may come as no surprise to those who have been watching

Near-term volatility can't mask a rally from late December lows

S&P 500 sector returns since 12/24/18



Source - RBC Wealth Management, FactSet; data through 3/7/19 at 11:35 a.m. CST; returns are price returns

the recent economic data releases, but **we believe the BoC's conviction that the economy will bounce back in the second half of the year has clearly deteriorated**.

- **Canadian GDP growth was 0.4% in Q4 2018, down from 2.0% in Q3 and softer than the expected 1.0% increase**. GDP fell 0.1% m/m in December, the second consecutive monthly 0.1% decline and the third in the last four months. Last quarter's GDP growth was weighed down by **weakness in the oil and gas sector amid lower oil prices and a drop in drilling activity** due to the mandated production cuts in Alberta. However, **even excluding the oil and gas sector, GDP only increased by 1%**. Over the quarter, **consumer spending growth slowed to 0.7% and residential investment posted its sharpest decline since Q1 2009** as new construction spending fell. Business investment growth was also revised lower, resulting in a mere 1.7% increase for all of 2018. On a positive note, **Canadian labour markets appear healthy and household disposable income increased by 3.3% in Q4**. RBC Economic Research expects household spending to rebound off December lows, but remain subdued throughout 2019.



Europe

Frédérique Carrier & Thomas McGarrity, CFA – London

- Faced with weaker momentum, **the European Central Bank (ECB) opted to give the European economy extra support**. Its statement following the policy meeting on March 7 was more dovish than markets expected. In addition to delaying interest rate hikes, a measure which had been well telegraphed, the ECB surprised markets by announcing a **new long-term liquidity injection (TLTRO III)**, starting in September 2019 and running until March 2021. In an important sign for markets, both decisions were unanimous.

- **RBC Capital Markets now expects a first 0.1% rate hike in December 2019** followed by another in March 2020, bringing the deposit rate back up to 0%. At that point it anticipates the ECB will pause.
- **Importantly, the ECB believes the recovery, while slowing, is not reversing.** Yet even after the policy decisions, ECB President Mario Draghi maintained his view that the risks to the economy are tilted to the downside given Brexit uncertainty, U.S.-EU trade discussions, and the slowdown in China.
- The central bank revised its growth forecasts more dramatically than the consensus had expected, given the slowdown seen in the second half of 2018 spilled into this year. For 2019, the ECB now expects growth of 1.1% vs. 1.7% previously. It barely touched its 2020 forecast (tweaked to 1.6% from 1.7%) as **the ECB continues to expect that the expansion will reassert itself.** The growth forecast for 2021 was maintained at 1.5%.
- **Inflation projections were also reduced** for the entire three-year forecasting period, and in particular to 1.2% for 2019 vs. a previous forecast of 1.6%.
- The ECB's dovishness and lower 2019 growth forecasts put **some pressure on the euro**, which fell close to a four-month low at 1.12 to the U.S. dollar.
- In the U.K., important Brexit votes are expected to take place from March 12. As things stand, **the U.K. government looks likely to again lose the vote on Prime Minister Theresa May's Withdrawal Agreement by a noticeable margin**, given there has been no breakthrough in negotiations with the EU on the issue of the Irish backstop. The Brexit saga continues, weighing on business sentiment.
- A driving force behind tax reductions, which will improve corporate profitability, is to **support the job market.** Employment conditions have faced headwinds from wage growth, higher costs, and, more recently, the trade dispute.
- **Overall, the work report is supportive for markets in 2019**, in our view, although items such as increasing the quotas for local government bond issuance, a major source of debt in China, cast some doubt on debt levels going forward. However, the government has said that there will not be large-scale stimulus, for example in the form of significantly loosening monetary policy.
- **We expect the Chinese economy to continue on its path of gradual deceleration.** The authorities are acutely aware of the risks in multiple areas and are attentive. For example, in the housing market, government policy (particularly at the local level) has been highly adaptive over the years to changing market conditions, whether this has been to tighten or to support the housing market. That said, they are not magicians: properly curtailing credit growth will come at a cost to the broader economy over time.
- **Equity markets in Asia were muted** over the week. The solid 2019 rally—albeit following a torrid time in Q4—seems to have finally lost steam. Optimism of a good trade deal between the U.S. and China has soured a bit as investors begin to question what the details of such a deal may be.
- The stakes may have been raised for both sides in the trade dispute as the U.S. reported a 10-year-high trade deficit of \$621B. About two-thirds (\$419B) of the deficit is with China. **The trade deficit with China hit a record high in 2018, despite tariffs.**
- **It's not only China that is seeing slower growth. Australia's Q4 GDP print was 2.3% y/y (forecast: 2.5%).** Growth was propped up by government consumption. Residential construction was a headwind, unsurprising given the ongoing correction in house prices in Sydney and Melbourne, home to a significant chunk of the country's housing stock. Sydney's house prices have declined by low double digits from the top, the largest such decline in several decades. Currently, the average discount on prices from their initial listing is around 8%, the biggest since 2009.
- With respect to monetary policy, RBC Capital Markets notes that the “underlying growth pulse is clearly weaker” than the Reserve Bank of Australia thought. It also notes that residential construction has peaked and expects **housing to drag on growth throughout 2019 and 2020.** While RBC Capital Markets forecasts the overnight rate to remain unchanged at 1.5% during 2019 and 2020, these latest data points mean that the risk to this base case is shifting to the downside, in its view. Indeed, the market forecasts that there is a greater probability of a rate cut in H2 2019 than there is no change.



Asia Pacific

Jay Roberts, CFA – Hong Kong

- **Chinese Premier Li Keqiang delivered his work report** to the annual National People's Congress. The economic growth target was reduced from 6.5% to 6.0%–6.5%, as expected.
- Li noted that **China “will face a graver and more complicated environment.”** Li has often been forthright in acknowledging risks to the economy. Given the challenges, the authorities have moved to **a more pro-growth stance** in comparison to 2018, where there was more focus on financial deleveraging, or curbing the rate of credit growth.
- **Tax cuts through the year totaling around RMB2T (\$298B) were announced.** Li stated that one goal is to reduce the tax burden for companies. The VAT rate for manufacturers was reduced to 16% from 17% in 2018. The new rate will be 13%.



MARKET SCORECARD

Data as of March 7, 2019

Equities (local currency)	Level	MTD	YTD	1 yr	2 yr
S&P 500	2,748.93	-1.3%	9.7%	0.8%	16.1%
Dow Industrials (DJIA)	25,473.23	-1.7%	9.2%	2.7%	21.7%
NASDAQ	7,421.46	-1.5%	11.8%	0.3%	27.2%
Russell 2000	1,523.63	-3.3%	13.0%	-3.2%	10.8%
S&P/TSX Comp	16,056.51	0.4%	12.1%	3.8%	2.9%
FTSE All-Share	3,926.03	1.0%	6.8%	-0.7%	-1.7%
STOXX Europe 600	373.88	0.3%	10.7%	0.3%	0.4%
EURO STOXX 50	3,308.85	0.3%	10.2%	-2.0%	-2.3%
Hang Seng	28,779.45	0.5%	11.4%	-4.7%	21.5%
Shanghai Comp	3,106.42	5.6%	24.6%	-5.1%	-4.2%
Nikkei 225	21,456.01	0.3%	7.2%	1.0%	10.9%
India Sensex	36,725.42	2.4%	1.8%	11.2%	26.6%
Singapore Straits Times	3,229.48	0.5%	5.2%	-6.4%	3.2%
Brazil Ibovespa	94,340.17	-1.3%	7.3%	10.4%	41.5%
Mexican Bolsa IPC	41,641.84	-2.8%	0.0%	-12.6%	-12.2%
Commodities (USD)	Price	MTD	YTD	1 yr	2 yr
Gold (spot \$/oz)	1,285.40	-2.1%	0.2%	-3.0%	5.7%
Silver (spot \$/oz)	15.03	-3.7%	-3.0%	-8.9%	-14.1%
Copper (\$/metric ton)	6,499.50	-0.9%	9.3%	-5.9%	12.9%
Oil (WTI spot/bbl)	56.66	-1.0%	24.8%	-7.3%	6.6%
Oil (Brent spot/bbl)	66.11	0.1%	22.9%	2.8%	18.2%
Natural Gas (\$/mmBtu)	2.86	1.8%	-2.6%	3.1%	1.4%

Govt bonds (bps chg)	Yield	MTD	YTD	1 yr	2 yr
U.S. 10-Yr Tsy	2.639%	-7.6	-4.5	-24.3	12.1
Canada 10-Yr	1.764%	-17.8	-20.3	-47.4	2.4
U.K. 10-Yr	1.172%	-13.0	-10.5	-32.2	-2.1
Germany 10-Yr	0.067%	-11.6	-17.5	-58.8	-25.2
Fixed Income (returns)	Yield	MTD	YTD	1 yr	2 yr
U.S. Aggregate	3.20%	0.1%	1.1%	3.4%	4.6%
U.S. Invest Grade Corp	3.90%	0.2%	2.8%	3.2%	6.0%
U.S. High Yield Corp	6.62%	-0.1%	6.2%	4.5%	9.0%
Currencies	Rate	MTD	YTD	1 yr	2 yr
U.S. Dollar Index	97.6490	1.6%	1.5%	8.9%	-4.1%
CAD/USD	0.7435	-2.0%	1.4%	-4.0%	-0.3%
USD/CAD	1.3451	2.1%	-1.4%	4.2%	0.3%
EUR/USD	1.1191	-1.6%	-2.4%	-9.8%	5.9%
GBP/USD	1.3081	-1.4%	2.6%	-5.9%	7.2%
AUD/USD	0.7014	-1.1%	-0.5%	-10.4%	-7.6%
USD/JPY	111.6400	0.2%	1.8%	5.3%	-2.1%
EUR/JPY	124.9500	-1.4%	-0.7%	-5.1%	3.7%
EUR/GBP	0.8555	-0.2%	-4.8%	-4.2%	-1.2%
EUR/CHF	1.1323	-0.2%	0.6%	-3.3%	5.8%
USD/SGD	1.3610	0.7%	-0.1%	3.6%	-3.6%
USD/CNY	6.7150	0.3%	-2.4%	6.2%	-2.7%
USD/MXN	19.5569	1.4%	-0.5%	4.5%	0.3%
USD/BRL	3.8759	3.2%	-0.1%	19.5%	24.6%

Source - Bloomberg. Note: 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. Data as of 9:35 pm GMT 3/7/19.

Examples of how to interpret currency data: CAD/USD 0.74 means 1 Canadian dollar will buy 0.74 U.S. dollar. CAD/USD 1.4% return means the Canadian dollar rose 1.4% vs. the U.S. dollar year to date. USD/JPY 111.64 means 1 U.S. dollar will buy 111.64 yen. USD/JPY 1.8% return means the U.S. dollar rose 1.8% vs. the yen year to date.

Authors

Laura Cooper – London, United Kingdom

laura.cooper@rbc.com; Royal Bank of Canada Investment Management (U.K.) Ltd.

Ben Graham, CFA – Minneapolis, United States

benjamin.graham@rbc.com; RBC Capital Markets, LLC

Diana Di Luca – Toronto, Canada

diana.diluca@rbc.com; RBC Dominion Securities Inc.

Carolyn Schroeder – Toronto, Canada

carolyn.schroeder@rbc.com; RBC Dominion Securities Inc.

Arete Zafiriou – Toronto, Canada

arete.zafiriou@rbc.com; RBC Dominion Securities Inc.

Frédérique Carrier – London, United Kingdom

frederique.carrier@rbc.com; Royal Bank of Canada Investment Management (U.K.) Ltd.

Thomas McGarrity, CFA – London, United Kingdom

thomas.mcgarritty@rbc.com; Royal Bank of Canada Investment Management (U.K.) Ltd.

Jay Roberts, CFA – Hong Kong, China

jay.roberts@rbc.com; RBC Investment Services (Asia) Limited

Disclosures and Disclaimer

Analyst Certification

All of the views expressed in this report accurately reflect the personal views of the responsible analyst(s) about any and all of the subject securities or issuers. No part of the compensation of the responsible analyst(s) named herein is, or will be, directly or indirectly, related to the specific recommendations or views expressed by the responsible analyst(s) in this report.

Important Disclosures

In the U.S., RBC Wealth Management operates as a division of RBC Capital Markets, LLC. In Canada, RBC Wealth Management includes, without limitation, RBC Dominion Securities Inc., which is a foreign affiliate of RBC Capital Markets, LLC. This report has been prepared by RBC Capital Markets, LLC, which is an indirect wholly-owned subsidiary of the Royal Bank of Canada and, as such, is a related issuer of Royal Bank of Canada.

Non-U.S. Analyst Disclosure: Diana Di Luca, Carolyn Schroeder, and Arete Zafiriou, employees of RBC Wealth Management USA's foreign affiliate RBC Dominion Securities Inc.; Frédérique Carrier, Laura Cooper, and Thomas McGarrity, employees of RBC Wealth Management USA's foreign affiliate Royal Bank of Canada Investment Management (U.K.) Limited; and Jay Roberts, employee of RBC Investment Services (Asia) Limited contributed to the preparation of this publication. These individuals are not registered with or qualified as research analysts with the U.S. Financial Industry Regulatory Authority ("FINRA") and, since they are not associated persons of RBC Wealth Management, they may not be subject to FINRA Rule 2241 governing communications with subject companies, the making of public appearances, and the trading of securities in accounts held by research analysts.

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.

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), and former lists called the Guided Portfolio: Large Cap (RL 7), the Guided Portfolio: Midcap 111 (RL 9), and the Guided Portfolio: Global Equity (U.S.) (RL 11). RBC Capital Markets recommended lists include the Strategy Focus List and the Fundamental Equity Weightings (FEW) portfolios. 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.

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, LLC ratings of Top Pick/Outperform, Sector Perform, and Underperform 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.

Rating	Count	Percent	Investment Banking Services Provided During Past 12 Months	
			Count	Percent
Buy [Top Pick & Outperform]	876	54.92	234	26.71
Hold [Sector Perform]	642	40.25	111	17.29
Sell [Underperform]	77	4.83	7	9.09

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.

Ratings:

Top Pick (TP): Represents analyst's best idea in the sector; expected to provide significant absolute total return over 12 months with a favorable risk-reward ratio. **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 received 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 the member companies 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; and by Royal Bank of Canada Investment Management (U.K.) Limited, an investment management company 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.

References herein to "LIBOR", "LIBO Rate", "L" or other LIBOR abbreviations means the London interbank offered rate as administered by ICE Benchmark Administration (or any other person that takes over the administration of such rate).

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 or consequential loss arising from 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 consent of Royal Bank of Canada. 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 Royal Bank of Canada Investment Management (U.K.) Limited and RBC Investment Solutions (CI) Limited. Royal Bank of Canada Investment Management (U.K.) Limited is authorised and regulated by the Financial Conduct Authority (Reference number: 146504). Registered office: Riverbank House, 2 Swan Lane, London, EC4R 3BF, UK. RBC Investment Solutions (CI) 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, registered company number 119162.

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. Financial Services provided to Australia: Financial services may be provided in Australia in accordance with applicable law. Financial services provided by the Royal Bank of Canada, Hong Kong Branch are provided pursuant to the Royal Bank of Canada's Australian Financial Services Licence ('AFSL') (No. 246521).

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.

© RBC Capital Markets, LLC 2019 - Member NYSE/FINRA/SIPC

© RBC Dominion Securities Inc. 2019 - Member Canadian Investor Protection Fund

© RBC Europe Limited 2019

© Royal Bank of Canada 2019

All rights reserved

RBC1253