

Global Insight

Weekly



A closer look

Another brick in the wall of worry

Tom Garretson, CFA – Minneapolis

Risk assets have had a strong start to the year as Fed rate hike fears have been removed from investors' wall of worries. However, rising corporate leverage is quickly replacing those fears, creating an opportunity for fixed income investors in 2019.

Risk assets, including U.S. stocks and speculative-grade corporate bonds, have come out of the gate running to start 2019, and it's at least partly due to a much more cautious tone from Fed officials since they raised rates in December.

As the chart shows, while equity markets have recovered from the December lows, market-based expectations of a rate hike this year have not. With the market expecting the Fed to be on the sidelines, equity markets have been given room to breathe.

And the reason markets are no longer expecting rate hikes in 2019 is largely due to a number of public comments from Fed officials since the December meeting, including Fed Chair Jerome Powell, that have stressed the idea of being patient at this point, culminating earlier in the week when one of the most hawkish members, Kansas City Fed President Esther George, essentially threw in the towel on rate hike plans for the time being, stating: *"A pause in the normalization process would give us time to assess if the economy is responding as expected with a slowing of growth to a pace that is sustainable."*

We maintain our view that the Fed will be on hold for the balance of 2019, leaving investors one less thing to worry about. But as always with markets, whenever one brick in the wall of worry is taken out, there's always another brick waiting to replace it.

B-B-B afraid?

And that brick has increasingly become the growing size of the U.S. corporate debt market, and particularly the BBB-rated bonds that fall at the bottom rung of the investment-grade spectrum. The top chart on the following page certainly confirms this fear, as the BBB bucket has grown by more than 200% to \$3.2T, or about 50% of the entire investment-grade

Stock markets recover as Fed rate hike expectations do not



Source - RBC Wealth Management, Bloomberg; market probability based on fed funds futures; date range: 10/31/18 – 1/16/19

Market pulse

- 3 U.S. equities shaking off the shutdown
- 3 Cautious BoC conscious of market dynamics
- 3 Back to the drawing board for Theresa May
- 4 Hong Kong sees no need to support the property market

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

Priced (in USD) as of 1/17/19 market close, EST (unless otherwise stated).

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



Wealth
Management

market, compared to the AA bucket, which has increased by just 40%, to \$600B.

Here's how the basic story goes. Since the end of the Great Recession in 2009, companies have been able to load up on debt due to low interest rates, and that debt has largely been used to fund share repurchases instead of for more productive purposes and investments. And as companies have loaded up on debt and increased the size of their balance sheets, they have been downgraded from the A-tier and into BBB. The risk then becoming that should interest rates rise, they won't be able to afford the costs, or in the case of a recession, be at risk of being downgraded to junk status.

But that's not the full story. In our view, concerns have been overblown as downgrades of formerly A-rated companies to BBB have accounted for less than 25% of the increase in the size of that market; the largest driver has simply been an increase in the number of firms issuing debt since 2009. Effectively, new companies have matured to the point that they can issue debt, spreading the size of the investment-grade corporate market across a larger number of firms; leverage and interest expense coverage ratios have ticked higher in recent years but remain reasonable, so we don't see widespread credit risks.

In fact, we actually think increased supply has created a better technical backdrop for investment-grade bond investors. As the top chart also shows, the speculative-grade market has shrunk in recent years, with demand far outpacing new supply.

We believe that supply/demand dynamic has created better relative value in investment-grade corporate bonds over speculative-grade bonds, and that forms the basis of our fixed income portfolio positioning views for 2019.

The credit investing landscape in 2019

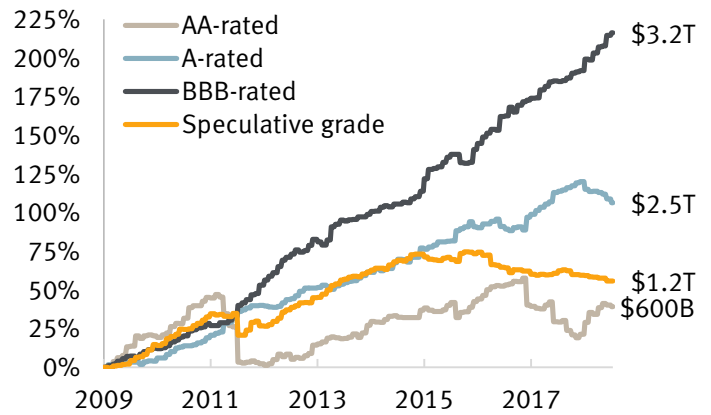
While U.S. stock markets are off to a hot start in 2019, up 4.4% on the S&P 500, speculative-grade bonds aren't far behind, already up 3.5% for easily the best start in the last 10 years; investment-grade corporates are up just 0.40%.

In our view, speculative-grade corporates again look rich following that rally. Since the end of the 2009 recession, investment-grade investors have been paid, on average, 1.47% over Treasuries for credit risk, equal to what investors are currently being paid.

On the other hand, speculative-grade bonds have offered, on average, 5.07% over Treasuries since 2009; today that yield compensation for credit risk stands at just 4.36%.

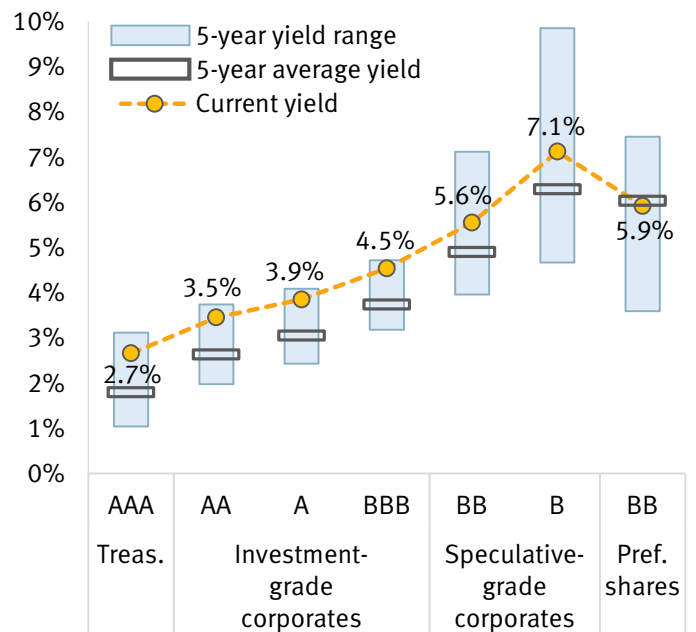
As the bottom chart shows, investment-grade yields are near the highest levels of the past five years, while speculative-grade yields are well below the top ends of their ranges. And at this stage of the expansion, amid rising recession risks, we would hold a bias toward quality, over the higher yields offered at the moment in speculative grade.

Growth in corporate debt since the end of the financial crisis



Source - RBC Wealth Management, Bloomberg, Bank of America Merrill Lynch Indexes; growth indexed to 6/30/09; data through 1/11/19

The yield landscape: Yields for quality bonds near 5-year highs



Source - RBC Wealth Management, Bloomberg Barclays Indexes, Bank of America Merrill Lynch Indexes; data through 1/16/19

So we maintain a modestly positive view on the investment-grade sector and a modestly negative view on the speculative-grade space, while our favorite sector remains preferreds. While we believe a pause in Fed rate hikes should support risk assets, it should also serve to keep a lid on yields. Additionally, preferreds tend to be issued by financial institutions, and with banks up 11% this year on the back of solid earnings, compared to 4.4% for the S&P 500, that performance has helped to boost the S&P Preferred Stock Index by 3%.

The wall of worry will always exist for investors, in our view, but as bricks are replaced, we look to be opportunistic. And the market volatility of late has created opportunities for fixed income investors in 2019.



United States

Bill Kuehn, CFA – Minneapolis

- **U.S. equities have continued to march higher in 2019**, and have thus far tallied the **best performance during any government shutdown dating back to 1976**. The S&P 500 is higher by 9.1% since the shutdown began on December 22, 2018, with the help of modestly positive Q4 corporate earnings reports. **Bank earnings have been the biggest uncertainty** with quarterly results being mixed with fixed income, currencies, and commodities trading falling well short of expectations; however, sentiment on the sector was so poor and expectations so low after underperforming beginning in fall 2018 that banks have traded higher following Q4 results and forward guidance and have outperformed the S&P 500 year to date.
- RBC Capital Markets, LLC Head of U.S. Equity Strategy Lori Calvasina has a **2900 price target on the S&P 500** for year end 2019 based on her estimate of \$171 in earnings per share at a 17x price to earnings multiple assumption. This would represent 10.1% upside from the current 2636 closing level. Additionally, Calvasina **prefers value stocks over growth stocks** and recommends an overweight position on Consumer Staples, Health Care, Energy, and Financials. **We maintain a Market Weight view on U.S. equities** as we believe the economy is not headed into a recession in 2019, but rather a slowdown in growth from 2018's stronger pace.
- The results of **January's Philadelphia Fed Manufacturing Business Outlook Survey** have bucked the trend of sharp declines in numerous regional manufacturing activity surveys that have shown signs of a significant slowdown in recent months. The **general business conditions component jumped to 17.0** from 9.1 and, more importantly, the **new orders component**, which has been an accurate predictor of future economic activity, **soared to 21.3** from 13.3, perhaps signaling a slightly better outlook.

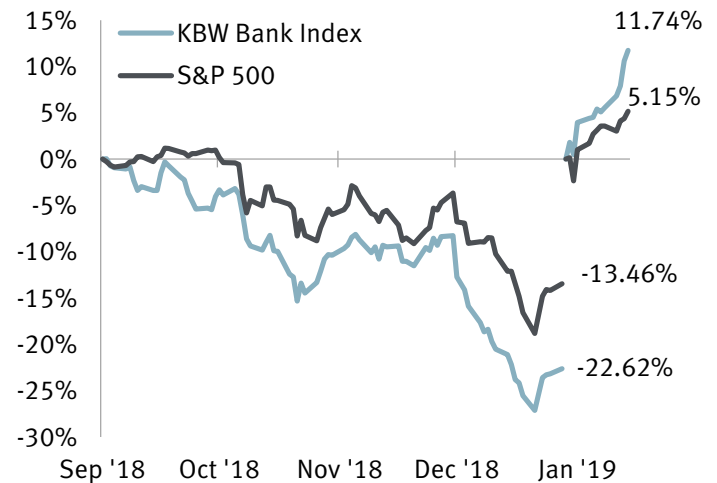


Canada

Diana Di Luca – Toronto

- **The Bank of Canada (BoC) kept the overnight lending rate unchanged at 1.75%**, as the market expected. The BoC released its statement accompanying the policy decision, alongside its updated *Monetary Policy Report*, in which it acknowledged **consumer spending and investment in housing have been weaker than expected** but the **Canadian economy has been performing well overall**. The BoC is also clearly conscious of market dynamics (flat yield curve, tightening of financial

After underperforming in 2018, bank stocks outperform to start 2019



Source - RBC Wealth Management, Bloomberg; data through 1/17/19

conditions), which leads us to believe that it **will tread carefully** against a backdrop of global growth concerns and weaker energy prices. The market is expecting the BoC to remain on hold this year.

- We acknowledge that we are **edging closer to the end of the economic cycle** and, therefore, would **maintain shorter-duration positioning** with a bias to higher-rated, higher-quality bonds. We continue to recommend discounted Federal bonds that offer lower expected volatility of returns and a source of liquidity. As far as 2019 goes, we believe a more cautious BoC should give time for curves to re-steepen as inflation expectations rebuild into the market. This should provide better levels to buy longer-dated bonds.
- **The Canadian preferred share market is up approximately 7% from the December lows**. This comes as corporate bond spreads have narrowed from the widest levels since 2016. Corporate bond supply has responded to strong demand at wider spread levels in early 2019, setting a positive tone to credit markets, helping to narrow credit spreads on secondary market preferred shares. Against this backdrop, the Canadian preferred share market saw the **first new issue since October during the week**.



Europe

Laura Cooper – London

- **U.K. Prime Minister Theresa May suffered a crushing defeat** on January 15 when the U.K. **House of Commons voted overwhelmingly—432 to 202—against her plan outlining the U.K.'s departure from the EU**. This was the

worst defeat by any government in close to 100 years. The defeat was widely expected, though not its magnitude. As a result, **the British pound sold off on the extent of the opposition** to the agreement.

- In the immediate aftermath of the vote, which was deferred from December 11, the Labour Party put forward a no-confidence motion in an attempt to trigger a general election. The proposal ultimately failed in a narrow 325-306 vote on the evening of January 16; however, **further no-confidence motions are likely**, in our opinion. Therefore, the chance of a general election coming to pass could see the Labour Party shift its policies towards a permanent customs union with the EU or uniting around a second Brexit referendum to bolster support.
- The lack of consensus on how the U.K. should proceed with its Brexit plans has ostensibly thrown the country into turmoil. With the clock continuing to tick down to the planned March 29 exit date, **Prime Minister May vowed to work with government party leaders to seek amendments to the current Withdrawal Agreement**. A revised plan is due to be proposed on January 21.
- In the absence of material concessions coming from the EU, it is looking increasingly likely that tweaks to the current Withdrawal Agreement will still not be palatable to the U.K. Parliament. Accordingly, **we anticipate that the government will seek an extension to Article 50 negotiations—the mechanism that legally binds the U.K. to leave the EU on March 29—to allow for more time to draft and gain approval on a revised agreement**. Prospects for this development are, in turn, underpinning support for the pound while U.K. Gilt yields are modestly retracing from their earlier low levels.
- Politics is poised to continue to overshadow the flow of economic data in the U.K. The U.K. inflation rate ended 2018 slightly above target, coming in at 2.1%. **The Bank of England (BoE) is likely to remain on the sidelines until greater clarity emerges around Brexit**, however. In comments on January 16, BoE Governor Mark Carney assessed that the central bank will be “prudent not passive” in gauging Brexit progress, asserting that it has the tools needed for whatever form Brexit takes.



Asia Pacific

Jay Roberts, CFA – Hong Kong

- **Asian stocks continue to move steadily higher**. The MSCI AC Asia Pacific Index fell to a low for 2018 of 142 on December 25. The index has since risen by 10 points, or 7%. Stocks have been buoyed by an improvement in

performance in the U.S. market, developments from the trade talks between the U.S. and China, and signs of policy easing in China.

- **China posted weaker trade data in December**. Exports declined by 4.4% y/y and imports by 7.6%. Even so, China's exports to the U.S. rose by 11.3% in 2018 while imports from the U.S. rose by less than 1%. Consequently, **China's trade surplus with the U.S. rose** by approximately \$50B to \$323.3B, a record high. Notably, **China's global trade surplus actually fell** in 2018 by 16% to \$351.8B. Exports rose by 9.9% while imports expanded by 16.2%. Trade negotiations between the U.S. and China are ongoing.
- **China has responded to economic deceleration with policy support**. Although benchmark lending rates have remained unchanged, the People's Bank of China (PBoC) has been helping to ease interbank borrowing rates via cash injections. The PBoC has also lowered the required reserve ratio for banks, freeing up capital to lend. Tax cuts are also expected. Chinese authorities are striking a balance between reducing riskier areas of credit growth in the economy while also providing overall support.
- **Market expectations that the Hong Kong authorities will relax measures put in place to cool the property market were laid to rest**, at least temporarily, by Financial Secretary Paul Chan, who noted that there is no need for the government to support the market. Prices in the secondary market (i.e., not new property) have consistently declined since August and are down by around 9% from the peak. Even though prices have registered their longest losing streak since 2008—the 3.5% decline in November was the largest monthly drop since November 2008—they remain 47% higher than five years ago and far higher still than 10 years ago. It remains unknown whether the current phase is a correction or the start of a bear market in the world's most expensive residential real estate market.
- **Shares of Chinese smartphone company Xiaomi (1810 HK) continue to weaken in Hong Kong**, falling by 5.8% during the week. The stock is **down around 40% since listing on the Hong Kong exchange six months ago**. Recent weakness has in part been caused by the expiration of a lockup period for early investors. A range of companies, including several large Chinese vendors, Apple, and Samsung, also produce high-quality devices, resulting in stiff competition.
- **Sinopec (386 HK)**, one of the big three Chinese oil and gas companies, **may have received approval from China's State Council to list its retail unit** later in 2019, according to Bloomberg. Sinopec Marketing's retail operations include over 30,000 gas stations and nearly as many convenience stores.



MARKET SCORECARD

Data as of January 17, 2019

Equities (local currency)	Level	MTD	YTD	1 yr	2 yr
S&P 500	2,635.96	5.2%	5.2%	-5.9%	16.2%
Dow Industrials (DJIA)	24,370.10	4.5%	4.5%	-6.7%	22.9%
NASDAQ	7,084.46	6.8%	6.8%	-2.9%	27.9%
Russell 2000	1,467.25	8.8%	8.8%	-7.5%	8.5%
S&P/TSX Comp	15,211.22	6.2%	6.2%	-6.8%	-1.5%
FTSE All-Share	3,757.86	2.3%	2.3%	-11.4%	-4.0%
STOXX Europe 600	350.73	3.9%	3.9%	-11.9%	-3.2%
EURO STOXX 50	3,069.35	2.3%	2.3%	-15.0%	-6.6%
Hang Seng	26,755.63	3.5%	3.5%	-16.3%	17.1%
Shanghai Comp	2,559.64	2.6%	2.6%	-25.7%	-17.7%
Nikkei 225	20,402.27	1.9%	1.9%	-14.5%	8.4%
India Sensex	36,374.08	0.8%	0.8%	3.7%	33.6%
Singapore Straits Times	3,214.44	4.7%	4.7%	-9.2%	6.7%
Brazil Ibovespa	95,351.09	8.5%	8.5%	17.4%	48.2%
Mexican Bolsa IPC	43,932.08	5.5%	5.5%	-11.7%	-4.5%
Commodities (USD)	Price	MTD	YTD	1 yr	2 yr
Gold (spot \$/oz)	1,291.97	0.7%	0.7%	-2.7%	6.2%
Silver (spot \$/oz)	15.52	0.2%	0.2%	-8.7%	-9.7%
Copper (\$/metric ton)	5,938.25	-0.2%	-0.2%	-15.1%	3.6%
Oil (WTI spot/bbl)	52.07	14.7%	14.7%	-18.6%	-0.8%
Oil (Brent spot/bbl)	61.22	13.8%	13.8%	-11.8%	10.4%
Natural Gas (\$/mmBtu)	3.41	16.1%	16.1%	5.6%	0.1%

Govt bonds (bps chg)	Yield	MTD	YTD	1 yr	2 yr
U.S. 10-Yr Tsy	2.747%	6.3	6.3	15.6	42.2
Canada 10-Yr	1.993%	2.6	2.6	-21.1	32.6
U.K. 10-Yr	1.337%	6.0	6.0	2.9	2.8
Germany 10-Yr	0.243%	0.1	0.1	-31.9	-7.8
Fixed Income (returns)	Yield	MTD	YTD	1 yr	2 yr
U.S. Aggregate	3.29%	0.1%	0.1%	0.7%	2.9%
U.S. Invest Grade Corp	4.16%	0.4%	0.4%	-1.6%	3.2%
U.S. High Yield Corp	7.12%	3.5%	3.5%	0.5%	7.6%
Currencies	Rate	MTD	YTD	1 yr	2 yr
U.S. Dollar Index	96.0620	-0.1%	-0.1%	6.1%	-4.3%
CAD/USD	0.7532	2.7%	2.7%	-6.4%	-1.8%
USD/CAD	1.3277	-2.6%	-2.6%	6.7%	1.8%
EUR/USD	1.1389	-0.7%	-0.7%	-6.5%	6.3%
GBP/USD	1.2986	1.8%	1.8%	-6.1%	4.6%
AUD/USD	0.7191	2.0%	2.0%	-9.8%	-5.0%
USD/JPY	109.1800	-0.5%	-0.5%	-1.9%	-3.1%
EUR/JPY	124.3500	-1.2%	-1.2%	-8.3%	3.1%
EUR/GBP	0.8770	-2.4%	-2.4%	-0.5%	1.6%
EUR/CHF	1.1318	0.6%	0.6%	-3.8%	5.5%
USD/SGD	1.3553	-0.6%	-0.6%	2.3%	-4.2%
USD/CNY	6.7764	-1.5%	-1.5%	5.3%	-1.0%
USD/MXN	19.0095	-3.3%	-3.3%	1.6%	-11.6%
USD/BRL	3.7460	-3.3%	-3.3%	16.2%	16.7%

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 1/17/19.

Examples of how to interpret currency data: CAD/USD 0.75 means 1 Canadian dollar will buy 0.75 U.S. dollar. CAD/USD 2.7% return means the Canadian dollar rose 2.7% vs. the U.S. dollar year to date. USD/JPY 109.18 means 1 U.S. dollar will buy 109.18 yen. USD/JPY -0.5% return means the U.S. dollar fell 0.5% vs. the yen year to date.

Authors

Tom Garretson, CFA – Minneapolis, United States

tom.garretson@rbc.com; RBC Capital Markets, LLC

Bill Kuehn, CFA – Minneapolis, United States

william.kuehn@rbc.com; RBC Capital Markets, LLC

Diana Di Luca – Toronto, Canada

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

Laura Cooper – London, United Kingdom

laura.cooper@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, an employee of RBC Wealth Management USA's foreign affiliate RBC Dominion Securities Inc.; Laura Cooper, an employee of RBC Wealth Management USA's foreign affiliate Royal Bank of Canada Investment Management (U.K.) Limited; and Jay Roberts, an 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