# Global Insight Weekly



A closer look

## A walk on the wild side

Tom Garretson - Minneapolis

A wild week in Washington resulting in trade tariffs has added another layer of uncertainty for markets, and complicates the outlook for what we expect to be the most important Fed meeting of 2018 this month.

It has been another wild week in Washington D.C., with the departure of National Economic Council Director Gary Cohn on March 6 opening the door for the protectionist wing of the White House, and to the formal signing of steel and aluminum tariffs on March 8. It will take weeks and months to gauge the impact, and there are simply too many variables at the moment to form a cogent outlook, but we take a more detailed look at the potential ramifications on page 3.

Suffice it to say that few analysts and economists see any positives from walking down the path of tariffs, and potentially stoking trade battles. But as the chart shows, there is a strong correlation between U.S. trade flows and economic growth. Both U.S. imports and exports have been on the rise—a reflection not only of domestic economic strength, but also of an improving global economic backdrop—and a decline in activity as a result of escalating trade wars would undoubtedly be a negative for global growth.

And while we foresee considerable uncertainty ahead, we walk through our latest thoughts on the upcoming Fed meeting, where we expect that same uncertainty to weigh on what is a widely anticipated meeting.

#### Three rate hikes still the base case for 2018

The Fed's March 20–21 meeting might prove to be the most important of 2018. This will be the first to feature updated economic projections under new Chair Jay Powell, and more importantly, the first to feature those projections following the passage of the tax reform package in December.





Source - RBC Wealth Management, Bloomberg; GDP y/y data through December 2017, trade flow data through 1/31/18

### Market pulse

- **3** Protectionism rears its ugly head
- 4 A showdown is brewing in the Treasury market
- 4 Why the Bank of Canada remains cautious
- **5** Politics take center stage in the U.K. and Europe
- 5 Japan's economy caps off a good performance in 2017

Wealth Management

As the top chart shows, economic growth expectations have accelerated thus far in 2018, with the current consensus of 2.7% for the year now above the range that the Fed had expected at the December confab. At issue for the market is whether this will light a fire under the Fed, and lead officials to signal the need for four rate hikes this year, up one from their current forecast of three. Complicating matters for the Fed is that while tariffs could weigh on growth, they could also stoke inflationary pressures.

While we acknowledge that a pickup in growth could fuel an acceleration in inflation toward the Fed's target of 2%, and drive further gains in the labor market, we think the Fed will want to wait for more data, with the uncertainty around growth following President Trump's actions on tariffs only adding to our conviction that the Fed will keep the pace of rate hikes in 2018 steady at three for the time being.

#### The Fed's "dot plot"

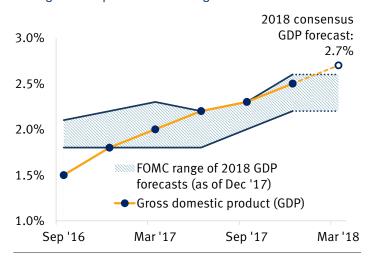
While we do not believe the Fed will desire to send a signal of four rate hikes this year to the markets at this meeting, we do think it will raise its rate hike forecasts for 2019 and 2020—adding one rate hike in each as a reflection of stronger growth and tighter labor markets over the next few years.

What might this mean for the 10-year yield outlook following the jump in yields to start 2018? Our long-held belief has been that the peak in the fed funds rate is likely to form a ceiling for the 10-year Treasury—as the 10-year did not trade above peak short-term rates during the last two rate hike cycles of the late 1990s and mid-2000s. The middle chart updates this view with our expectations for the Fed's rate hike forecast. If the Fed sees a fed funds rate of 3.25%–3.50% in 2020 following the March meeting, that could be the new ceiling for the 10-year over the near term; we don't think it's a coincidence that the current Bloomberg consensus now calls for a 10-year yield of 3.50% by 2020 as well.

#### What can you do now?

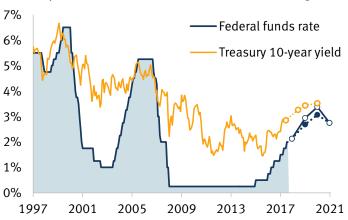
As we don't see much further upside risk for the 10-year Treasury yield for the rest of the year, we think the jump that we have already seen has opened up extremely attractive entry points into preferred shares, as shown in the bottom chart. Prices have fallen to some of the lowest levels in five years, and preferreds are now our favorite place to put money to work in fixed income.

#### 2018 growth expectations running ahead of Fed forecasts



Source - RBC Wealth Management, Bloomberg February Consensus Survey, Federal Reserve

### Fed likely to raise rate hike forecasts at March meeting



Source - RBC Wealth Management, Bloomberg consensus data, Federal Reserve Summary of Economic Projections; data through 3/8/18

#### Entry points: Preferred share prices at multiyear lows



Source - RBC Wealth Management, Bloomberg; data as of 9:30 am ET 3/8/18



# Protectionism rears its ugly head

Frédérique Carrier - London

The prospect of trade wars, dormant for months, reappeared with President Trump slapping tariffs on steel and aluminum. The resignation of his chief economic adviser, Gary Cohn, suggests the globalists within the administration are struggling to influence the president. The situation remains fluid even on the heels of the tariff proclamation being signed by President Trump, so we await the global response.

#### Sabre-rattling

On March 1, the U.S. announced it would levy new tariffs of 25% on steel and 10% on aluminum imports from all countries. This may not be so consequential for the U.S. economy, as these imports represent a mere 0.25% of U.S. GDP, but it raises the prospect of a trade war if other countries retaliate.

This action comes on the heels of tariffs on softwood lumber. aerospace, solar panels, washing machines, and a "Buy American" campaign, while NAFTA is being renegotiated. Despite some signs of progress, recent news flow has been ominous, according to RBC Global Asset Management Chief Economist Eric Lascelles. He estimates there is a 40% probability of a bad NAFTA outcome (35% chance it is torn up, 5% chance a bad deal is struck).

#### Trade wars and economies

The tariffs will initially include exemptions for Canada and Mexico, while other countries will be able to apply for exemptions. Regardless, we still foresee significant global risks following these measures.

As for the U.S., assessing the economic impact of tariffs depends on assumptions regarding domestic supply and demand, the currency response, and the scale of retaliation, among others.

Broadly, tariffs tend to be negative for growth. Lascelles points to the 2002 U.S. experience, when the Bush administration imposed tariffs on steel and other countries retaliated. Today, given that steel imports are worth a mere 0.25% of U.S. GDP, he calculates no more than a 0.1% or 0.2% hit to U.S. GDP.

Protectionism also tends to increase inflation. Deprived of imports, a country must either rely on scarce domestic products or pay punitive duties for imported products, though the extent of the increase in inflation depends on any currency adjustment. Theoretically, U.S. protectionism should be dollar positive, but prior episodes were negative for the dollar.

#### The protectionist landscape in 2018

Protectionism delivered	Protectionism pending
United States	United States
• Killed TPP trade deal	NAFTA renegotiation
<ul> <li>Softwood lumber tariff</li> </ul>	(40% chance of bad outcome)
• Bombardier tariff (rescinded)	• Trade war brewing?
<ul> <li>Washing machines tariff</li> </ul>	• Chinese intellectual property
• Solar panels tariff	• Chinese trade more generally
• Steel & aluminum tariffs	<ul> <li>Korean FTA renegotiation</li> </ul>
• "Buy American"	
United Kingdom	United Kingdom
Brexit vote	Brexit outcome
Globally	Canada
<ul> <li>Non-tariff barriers rising</li> </ul>	• Provincial trade war?
Fighting back	Counterpoints
• Canada retaliates via WTO, Chapter 19, "Buy Canadian"	• 11 countries sign CPTPP Cdn CETA & interprovincial deal

Source - RBC Global Asset Management

With higher inflation, U.S. monetary policy would have to be adjusted accordingly, potentially shortening the business cycle.

#### Cooler heads should prevail

A full-blown trade war is not inconceivable, but it is a low probability event, in our view. Too many countries realize its perils, even though the EU has pledged to "react firmly" and China could consider retaliatory options (e.g., against Boeing, agriculture, tech, stopping Treasury purchases).

Moreover, Republican leaders are trying to persuade President Trump to reconsider and the WTO is the arbiter of such disputes—the Bush steel tariffs were unwound 10 months later, as the WTO deemed them out of bounds.

Stock and bond markets do not seem to be pricing in much risk of a trade war, though the Canadian dollar's precipitous fall suggests it has priced in a negative outcome. The U.S. tax cuts and a resilient U.S. economy have been the driving force of U.S. financial markets. A full NAFTA withdrawal would send a powerful message to financial markets about protectionism and a major trade war would darken economic prospects.

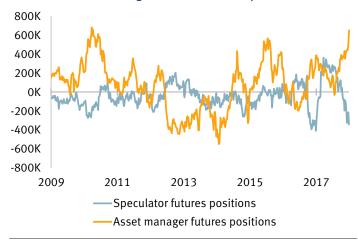


#### **United States**

Bill Kuehn & Sam Renikoff - Minneapolis

- The primary debt market was tested during the week with the **third-largest corporate bond issuance ever**, as CVS Health Corp. (Baa1 Negative/BBB Stable) issued \$40B of debt on March 6, in order to finance its acquisition of health insurer Aetna Inc., after initially raising \$49B in bridge loans in late 2017. The issuance was widely perceived as a **test of buyer demand** in the highest rate environment since 2012, and based on the 3x oversubscribed deal and subsequent \$450M rally in market value for the newly issued debt, **it appears investor appetite for corporate credit remains strong**.
- A showdown has built up between long-term asset managers and shorter-term hedge fund speculators in the Treasury futures market, with the gap between the number of outstanding futures positions reaching its widest level since 2007. According to the Commodity Futures Trading Committee (CFTC), asset managers have built up 650,000 long positions in 10-year Treasury futures, while speculators have compiled 343,000 short positions. This points to the view that most long-term money managers still see value in bonds despite the recent runup in yields, while speculators see further short-term pain in the bond market. To us, this tilts the risk to yields to the downside, as any lower-than-expected inflation data will likely trigger a rush from speculators to cover their short positions, driving downward pressure on bond yields.
- The U.S. trade deficit widened by 5% in January, more than forecast by the consensus and to the widest levels since October 2008. Expectations were for a surge in imports into the U.S. as companies attempted to bring in raw materials and other goods ahead of steel and aluminium tariffs enacted by President Trump on March 8, especially after small tariffs were enacted on solar panels and washing machines in January. However, the widening of the trade deficit was a result of a 1.3% decline in exports abroad, while imports remained little changed.
- This trade data plays right into the president's hands on imposing tariffs in the face of widening trade deficits—especially after a swelling trade deficit in Q4 subtracted 1.13% from GDP, breaking the two-quarter streak of +3% q/q GDP growth. The Atlanta Fed GDP Now model reduced the estimate for Q1 2018 economic growth from 3.5% to 2.8%, citing the decline in the contribution of net exports from -0.43% to -0.59% on the trade balance release.

#### A showdown is brewing in the U.S. Treasury market



Source - RBC Wealth Management, Bloomberg; data through 3/5/18

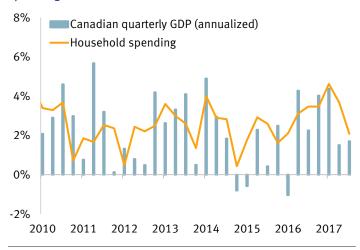


#### Canada

Richard Tan & Farazeh Mahboob - Toronto

- The new tariffs proposed by the U.S. on steel and aluminum have indefinitely exempted Canada. It is worth noting that Canada is the largest exporter of both steel and aluminum to the U.S., and these exports make up 0.7% of Canada's GDP. The conversation around the uncertainty of tariffs levied against other trade partners serves to further exacerbate heightened tensions between the two regions amid NAFTA renegotiations.
- Real GDP increased by an annualized rate of 1.7% in Q4, capping off a 3% growth rate in 2017 and outpacing 2016's 1.6%. Although Q4 GDP was below the market's expectation of 2.0%, a moderation of growth was expected following outsized growth in Q1 and Q2 of last year. However, NAFTA uncertainty and corporate tax reform in the U.S. pose sizeable risks to Canadian trade and competitiveness, and thus a risk to GDP growth going forward (see chart on following page).
- The Bank of Canada kept interest rates on hold, as was largely expected, citing trade policy developments as a growing source of uncertainty to its outlook. The governing council acknowledged Q4 GDP was slower than expected, as household credit growth decelerated for three consecutive months amidst higher interest rates and record high levels of debt. Uncertainties to trade and how the housing market reacts to recently introduced lending rules, at a time when the output gap is effectively closed, is likely to keep the central bank heavily data dependent and in a gradual hiking pattern over the course of the year.
- Despite the uptick in oil prices year to date, RBC Capital Markets believes that oil producers may be unwilling

#### Growth cools off in Canada on deceleration in household spending



Source - RBC Wealth Management, Bloomberg; data through 3/2/18

to invest in capital-intensive long-term projects given depressed futures prices, which remain anchored in the low-to-mid-\$50 per barrel range. RBC Capital Markets believes that outside of short-cycle shale, the majority of global oil projects are planned and budgeted based on the dated portion of the futures curve, which is a discount to current oil prices.



Frédérique Carrier & Thomas McGarrity - London

- It has been an eventful 10 days regarding Brexit. While our base case continues to be that the U.K. will eventually negotiate a trade deal with the EU, we would now assign a slightly lower probability to that outcome (some 65% vs. 75%). In turn, we believe the probability of other outcomes, such as a chaotic Brexit or Brexit being abandoned altogether, have both increased over the 10day period.
- Against the backdrop of an uncompromising EU, U.K. Prime Minister Theresa May adopted a conciliatory tone and suggested in a keynote speech her vision of Brexit, i.e., leaving the single market and customs union, while aiming to stay aligned with EU regulation where possible. The **EU** is unmoved, and the lack of detail, such as no indication of how a hard border in Ireland can be avoided, highlights how both parties are still, even this late in the game, so far apart. We estimate the probability of a hard Brexit at some 25%.
- Meanwhile, we believe the probability of no Brexit has also edged up to some 10%, due to the recent

- crystallisation of a loose alliance of Labour and Conservative members of Parliament who want to stay in the customs union, a new challenge for Prime Minister
- Politics were also the key focal point in Europe. The Italian elections were inconclusive though the largerthan-expected gains by the Five Star Movement (32% of the vote) suggest a **sizeable support for populism**. It falls to the president of Italy, Sergio Mattarella, to orchestrate coalition negotiations. While the case for investing in Europe remains, we acknowledge that political risk has intensified somewhat at a time when economic growth momentum, while still high, is no longer accelerating.



### Asia Pacific

Jay Roberts - Hong Kong

- The Reserve Bank of Australia (RBA) kept its benchmark interest rate unchanged at 1.5%, as forecast. This means the benchmark has been unchanged for 19 consecutive months. RBC Capital Markets is keeping to its base case for no change to the rate for the rest of 2018, with the RBA remaining patient despite policy changes from global counterparts. Notably, the RBA mentioned in its statement that the housing markets in both Sydney and Melbourne had slowed.
- The Japanese economy capped off a good performance in 2017 with Q4 growth of 1.6% y/y, quite a bit higher than the preliminary reading of 0.5%. This marked the eighth consecutive quarter of expansion in Japan, the longest stretch in 30 years. However, some economic indicators have been softer in 2018, while the strength of the yen is proving to be a headwind for Japanese stocks.
- The yen strengthened further after comments from Bank of Japan Governor Haruhiko Kuroda about a possible timetable for policy normalization, the first time he has made such comments. Kuroda stated, "Right now, the members of the policy board and I think that prices will move to reach 2% in around fiscal 2019. So it's logical that we would be thinking about and debating exit at that time too."
- Chinese bank stocks trading in Hong Kong, such as ICBC (1398.HK) and China Construction Bank (939 HK), received a boost on news that **Chinese authorities may** relax rules regarding provisioning requirements against nonperforming loans. The bad-loan coverage ratio will be reduced to 120% from 150%, which could free up capital for banks.



#### Data as of March 8, 2018

Equities (local currency)	Level	MTD	YTD	1 yr	2 yr
S&P 500	2,738.97	0.9%	2.4%	15.9%	38.4%
Dow Industrials (DJIA)	24,895.21	-0.5%	0.7%	19.4%	46.8%
NASDAQ	7,427.95	2.1%	7.6%	27.2%	59.8%
Russell 2000	1,571.97	3.9%	2.4%	15.1%	47.2%
S&P/TSX Comp	15,538.70	0.6%	-4.1%	0.3%	16.7%
FTSE All-Share	3,979.76	0.0%	-5.7%	-0.3%	18.3%
STOXX Europe 600	376.62	-0.8%	-3.2%	1.1%	11.6%
EURO STOXX 50	3,413.28	-0.7%	-2.6%	0.7%	13.7%
Hang Seng	30,654.52	-0.6%	2.5%	28.9%	53.2%
Shanghai Comp	3,288.41	0.9%	-0.6%	1.5%	13.3%
Nikkei 225	21,368.07	-3.2%	-6.1%	11.0%	27.3%
India Sensex	33,351.57	-2.4%	-2.1%	15.4%	35.2%
Singapore Straits Times	3,480.44	-1.1%	2.3%	10.7%	25.3%
Brazil Ibovespa	84,984.61	-0.4%	11.2%	31.3%	73.1%
Mexican Bolsa IPC	48,240.00	1.7%	-2.3%	1.5%	8.4%
Commodities (USD)	Price	MTD	YTD	1 yr	2 yr
Gold (spot \$/oz)	1,322.37	0.3%	1.5%	9.4%	4.8%
Silver (spot \$/oz)	16.50	0.5%	-2.6%	-4.3%	7.5%
Copper (\$/metric ton)	6,909.75	0.2%	-4.1%	20.2%	41.6%
Oil (WTI spot/bbl)	60.12	-2.5%	-0.5%	19.6%	64.7%
Oil (Brent spot/bbl)	63.86	-2.9%	-4.5%	20.2%	61.1%
Natural Gas (\$/mmBtu)	2.75	3.0%	-7.0%	-5.3%	60.4%

Govt bonds (bps chg)	Yield	MTD	YTD	1 yr	2 yr
U.S. 10-Yr Tsy	2.855%	-0.5	45.0	29.6	102.7
Canada 10-Yr	2.224%	-1.1	17.9	44.6	104.2
U.K. 10-Yr	1.474%	-2.7	28.4	25.6	8.9
Germany 10-Yr	0.628%	-2.8	20.1	25.8	44.6
Fixed Income (returns)	Yield	MTD	YTD	1 yr	2 yr
U.S. Aggregate	3.18%	-0.1%	-2.2%	1.4%	1.9%
U.S. Invest Grade Corp	3.76%	-0.3%	-2.8%	3.2%	7.8%
U.S. High Yield Corp	6.19%	-0.3%	-0.5%	4.6%	23.2%
Currencies	Rate	MTD	YTD	1 yr	2 yr
U.S. Dollar Index	90.1310	-0.5%	-2.2%	-11.7%	-7.3%
CAD/USD	0.7750	-0.6%	-2.6%	4.6%	3.9%
USD/CAD	1.2904	0.6%	2.6%	-4.4%	-3.8%
EUR/USD	1.2311	1.0%	2.5%	16.8%	11.8%
GBP/USD	1.3809	0.4%	2.2%	13.5%	-2.9%
AUD/USD	0.7786	0.3%	-0.3%	3.4%	4.7%
USD/JPY	106.1900	-0.5%	-5.8%	-7.1%	-5.7%
EUR/JPY	130.7300	0.5%	-3.4%	8.5%	5.4%
EUR/GBP	0.8915	0.6%	0.4%	2.9%	15.1%
EUR/CHF	1.1709	1.7%	0.1%	9.5%	6.8%
USD/SGD	1.3175	-0.6%	-1.4%	-7.1%	-4.9%
USD/CNY	6.3422	0.2%	-2.5%	-8.3%	-2.5%
USD/MXN	18.6592	-0.9%	-5.1%	-5.1%	4.1%
USD/BRL	3.2645	0.5%	-1.4%	3.0%	-13.1%

Source - Bloomberg. Note: Equity returns do not include dividends, except for the German DAX and 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 9:49 pm GMT 3/8/18.

Examples of how to interpret currency data: CAD/USD 0.77 means 1 Canadian dollar will buy 0.77 U.S. dollar. CAD/USD -2.6% return means the Canadian dollar fell 2.6% vs. the U.S. dollar year to date. USD/JPY 106.19 means 1 U.S. dollar will buy 106.19 yen. USD/JPY -5.8% return means the U.S. dollar fell 5.8 vs. the yen year to date.

## Authors

#### Tom Garretson, CFA – Minneapolis, United States

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

#### Frédérique Carrier – London, United Kingdom

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

#### Bill Kuehn, CFA – Minneapolis, United States

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

#### Sam Renikoff - Minneapolis, United States

sam.renikoff@rbc.com; RBC Capital Markets, LLC

#### Farazeh Mahboob - Toronto, Canada

farazeh.mahboob@rbc.com; RBC Dominion Securities Inc.

#### Richard Tan - Toronto, Canada

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

#### Thomas McGarrity, CFA - London, United Kingdom

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

#### Jay Roberts, CFA - Hong Kong, China

jay.roberts@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: Farazeh Mahboob, Richard Tan, and Jay Roberts, employees of RBC Wealth Management USA's foreign affiliate RBC Dominion Securities Inc.; and Frédérique Carrier and Thomas McGarrity, employees of RBC Wealth Management USA's foreign affiliate Royal Bank of Canada Investment Management (U.K.) 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 <a href="http://www.rbccm.com/GLDisclosure/PublicWeb/DisclosureLookup.aspx?EntityID=2">http://www.rbccm.com/GLDisclosure/PublicWeb/DisclosureLookup.aspx?EntityID=2</a> 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 (TP)/Outperform (O), Sector Perform (SP) and Underperform (U) most closely correspond to Buy, Hold/Neutral and Sell, respectively, the meanings are not the same because our ratings are determined on a relative basis (as described below).

Distribution of Ratings - RBC Capital Markets, LLC Equity Research As of December 31, 2017					
Investment Banking Service				nking Services	
			Provided During	Provided During Past 12 Months	
Rating	Count	Percent	Count	Percent	
Buy [Top Pick & Outperform]	868	52.42	281	32.37	
Hold [Sector Perform]	683	41.24	155	22.69	
Sell [Underperform]	105	6.34	8	7.62	

#### **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. Although RBC Capital Markets, LLC ratings of Top Pick (TP)/Outperform (O), Sector Perform (SP), and Underperform (U) most closely correspond to Buy, Hold/Neutral and Sell, respectively, the meanings are not the same because our ratings are determined on a relative basis (as described below).

#### 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.

#### **Risk Rating:**

As of March 31, 2013, RBC Capital Markets, LLC suspends its Average and Above Average risk ratings. 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 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 Web site at http://www.rbccm.com/GLDisclosure/PublicWeb/ DisclosureLookup.aspx?EntityID=2. Conflicts of interests related to our investment advisory business can be found in Part II of the Firm's Form ADV or the Investment Advisor Group 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 II of the ADV, or 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

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 granted offshore bank licence 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 2018 Member NYSE/FINRA/SIPC
- © RBC Dominion Securities Inc. 2018 Member Canadian Investor Protection Fund
- © RBC Europe Limited 2018
- © Royal Bank of Canada 2018

All rights reserved

RBC1253