December 19, 2019

RBC WEALTH MANAGEMENT

Global Insight

Weekly

How did we get here and where are we going?

Kelly Bogdanova – San Francisco

To say 2019 was eventful is an understatement. And just because the market hit new highs this week is no reason to take things for granted. Yes, we like the set-up for U.S. equities, but there's plenty for investors to think about, and it's prudent to be actively tuned in to the challenges in 2020.

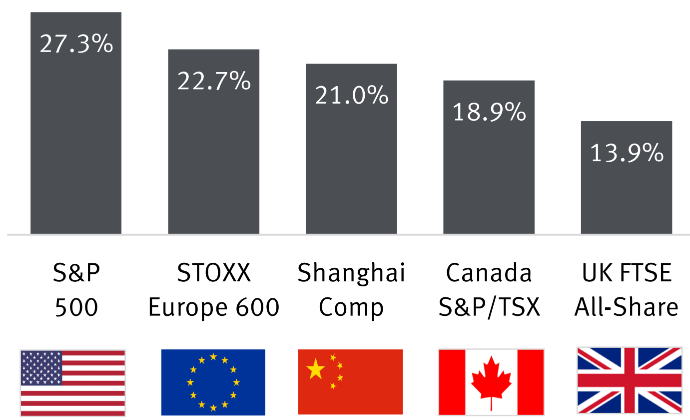
The equity market turbulence in May and late summer seems like a distant memory. Time—and especially gains—heal all wounds. What stands out now about 2019 are the strong rally since early October and well above-average year-to-date returns of most equity markets, with the U.S. leading the way.

We think three factors have contributed most to the S&P 500's surge this year:

- **Fed rate cuts—just enough *and* at the right time:** As recession and trade war risks were rising, the Federal Reserve delivered three 25 basis point rate cuts. This provided "insurance" for the economy, elongating the longest-ever economic expansion cycle, and thereby boosting the equity market. The old maxim "don't fight the Fed" once again rang true in 2019.
- **Prospects for continued economic growth:** The strength of the U.S. consumer is the key to this story, in our view. Unemployment is at a 50-year low, wages are rising nicely, and workers have flexibility to change jobs. All of this sets the table for higher U.S. consumer spending in 2020—in an economy that garners about 70% of its activity from household spending. The fact that we expect this to occur in the world's largest economy is not something to overlook. U.S. consumer trends influence the global economy.
- **Decreasing U.S.-China trade tensions:** The constructive signals sent by Washington and Beijing helped boost the market for the past two months, and the recent announcement of a "phase one" trade deal has been embraced by markets globally. While we think much of

A banner year for equities

2019 year-to-date index returns (not including dividends)



Source - RBC Wealth Management, Bloomberg; data through 12/18/19; data in local currencies

The next edition of the *Global Insight Weekly* will be published on January 9, 2020.

Click here for authors' contact information. Priced (in USD) as of 12/19/19 market close, ET (unless otherwise stated). **For important disclosures and required non-U.S. analyst disclosures, see page 6**
Produced: Dec 19, 2019 16:28ET; Disseminated: Dec 19, 2019 16:43ET

the positive news is largely priced into markets, the deal diminishes a meaningful trade headwind for 2020.

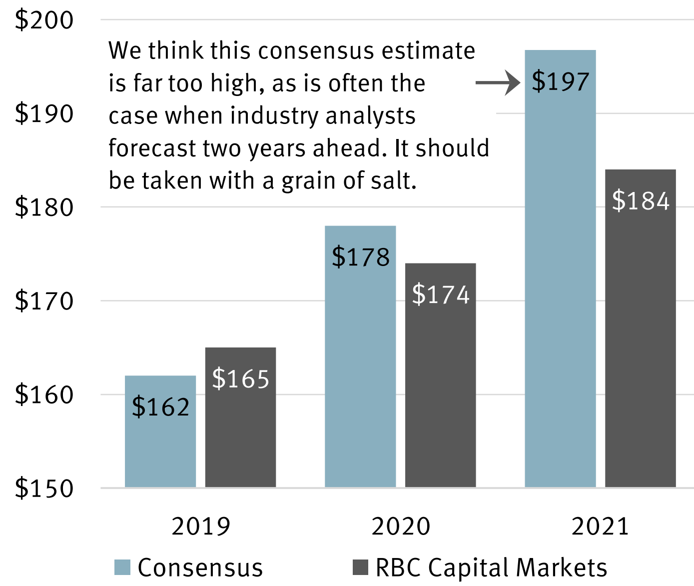
The market's strong performance in 2019 came with almost nonexistent earnings growth and at a time when the S&P 500's valuation was above average for much of the year.

The lack of earnings growth can be excused given S&P 500 profits expanded by a whopping 23% y/y in 2018, with corporate tax cuts representing about eight percentage points of the total. Such robust growth late in the expansion cycle is rare and set a high hurdle for this year.

Regarding the market's above-average valuation, we think the low interest rate environment makes it more tolerable. Investors have historically been willing to "pay up" for every dollar of earnings when rates and inflation were low. The S&P 500 is now trading at 18.4x RBC Capital Markets' 2020 earnings forecast of $174 per share versus a long-term average of 16.2x. While we're still not overly bothered by the elevated valuation, we see less room for it to expand in 2020 and acknowledge the U.S. valuation is stretched vis-à-vis other developed markets.

RBC forecasts moderate U.S. earnings growth

S&P 500 annual EPS estimates



Source - RBC Wealth Management, RBC Capital Markets, Refinitiv I/B/E/S (consensus); data as of 12/18/19

Challenges for 2020

For the upcoming year, we have a bullish bias with new highs and moderate returns forecast for the S&P 500. Right alongside this is a heightened need for caution acknowledging that the late cycle carries particular challenges for both the economy and stock market. Our outlook has been well telegraphed in this [full report] and [brief summary].

There are a few additional things to keep in mind as the new year approaches, especially regarding the U.S. equity market:

- **Put political angst and biases aside when it comes to investing:** The media, both mainstream and alternative varieties on each end of the ideological spectrum, is quite adept at inflating the importance of U.S. presidential elections. While the person occupying the Oval Office certainly has great influence and can help or hinder the country's economic progress and overall direction, many other factors also determine U.S. asset class returns. Financial market performance has greater linkages to the state of the business cycle, corporate earnings, and monetary policy than it does to actions that emanate from the White House and Capitol Hill. The Fed actually has a bigger influence on recessions and recoveries than the president, in our view. We advise investors not to allow the roar of 2020 election coverage to get in the way of sound portfolio management.
- **Trade tussles may yet again create volatility:** With the U.S.-China phase one deal and NAFTA 2.0 (USMCA) almost completed, other trade and sanctions issues could jostle equity markets at times in 2020. The UK-EU trade agreement related to Brexit may be the toughest nut to crack. In this connection, trade tensions and uncertainties can impact regional growth, and thus, the global economy. There could be more strains in the U.S.-China trade and business relationships. There are also unresolved trade issues between the U.S. and EU related to automobiles and aircraft subsidies, and between the U.S. and Japan on automobiles. Last but not least is the hobbled state of the World Trade Organization's appellate body. Trade battles have been a cornerstone of President Donald Trump's agenda, and we'd be surprised if he reverts to a quiet posture heading into the November 2020 election.
- **Beware of complacency:** The problem is that as the economic cycle wears on and the equity bull market persists, complacency tends to set in. We encourage investors to remain vigilant. The late stage of the business cycle often brings with it challenges for the economy and financial markets, especially equities, just when they're least expected.

Happy holidays, and we wish you a prosperous 2020!

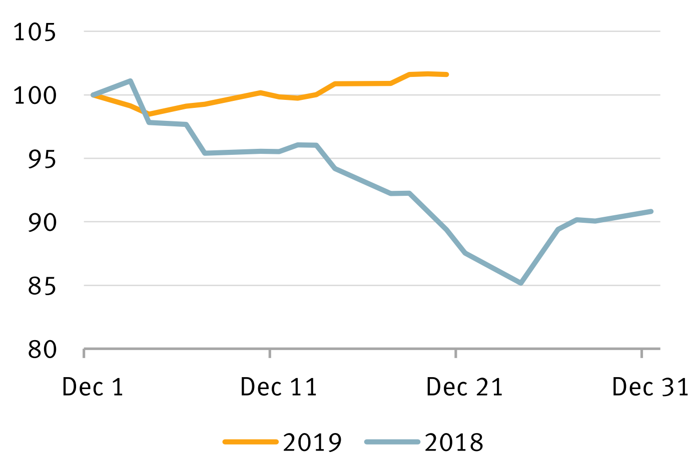
United States

Alan Robinson – Seattle

- **The S&P 500 Index eked out new record highs during the week** as trade fears receded, but the overall trading range was narrow, as is typical during major option-expiration weeks. Memories of the major market selloff one year ago (see chart) haunted traders, and **with the broad market up nearly 36% from the low of December 24, 2018**, some traders were wary of adding to positions.
- **RBC Capital Markets equity strategist Lori Calvasina surveyed 119 institutional investors** during the week of December 9 and, unsurprisingly, found that **optimism has surged over the last three months**. She noted 51% of respondents are now bullish compared to 29% in a September poll, with bearish investors dropping to 15% of the total. **However, the number of investors saying valuations are appealing fell to 11%, the lowest level seen since Q1 2018.** We caution that elevated sentiment and stretched valuations are often a harbinger of equity underperformance.
- The U.S. House of Representatives voted on December 18 to impeach President Trump for abuse of power and obstruction of Congress. In the weeks preceding his impeachment, it appeared that the president sought to divert attention from this vote by making progress towards trade deals, and stocks rallied in anticipation. We now believe there is a risk that, with the impeachment process likely to stall in the Republican-controlled Senate, **the president may be tempted to play hardball again on trade; this could act as a headwind for stocks**.
- **U.S. industrial production increased 1.1% in November from the prior month**, marking the biggest m/m increase since October 2017. The jump came after the United Auto Workers union ended its nationwide 40-day strike at General Motors factories in late October, and suggests the manufacturing sector is beginning to stabilize after a tumultuous year marked by trade uncertainty. **This data builds on the positive trends seen in other areas of the U.S. economy** including labor and homebuilding, with housing starts up 3.2% in the month.
- In earnings news, **global freight and logistics company FedEx announced quarterly earnings that missed consensus forecasts by 28%**, after excluding a tax benefit, and the stock dropped 10% as a result. Management cited structural headwinds due to e-commerce, and while Amazon is a minor customer for FedEx, its influence is clearly causing secular upheaval in delivery networks.

U.S. equities spread holiday cheer this year

S&P 500 December returns indexed to 100



Source - RBC Wealth Management, Bloomberg; data through 12/18/19

Canada

Carolyn Schroeder – Toronto

- **Canadian household debt has become a little more burdensome** as the debt-to-income ratio ticked marginally higher to 175.9% in Q3 from Q2's downwardly revised 175.4%. On a positive note, the latest national balance sheet accounts showed that **Canadian households' net worth climbed to yet another record level** in Q3. RBC Economics attributes the increase to rising asset values in both financial and non-financial assets for the third consecutive quarter, **reflecting strong equity market performance and a recovering housing market**. These positive developments masked the slight deterioration in virtually all household debt metrics, including the debt-to-income ratio and the debt service ratio, which rose to 15.0% despite household disposable income growing at a solid clip. Most of the increase in the latter stemmed from higher non-mortgage debt payments. With the growth in mortgage debt reaccelerating modestly, RBC Economics sees little scope to remove household indebtedness from its list of top vulnerabilities for Canada's economy.
- **Canada's core Consumer Price Index** (CPI), which excludes volatile food and energy prices, **reached a six-month high** as it rose 2.2% y/y in November. The jump in headline inflation last month was mainly due to base effects, as energy prices fell sharply toward the end of 2018. There is **growing evidence of firming in underlying inflation trends**, with prices for goods (ex-food and energy) growing at their fastest rate since a currency-driven increase in 2015–16. As a result, Canadian consumers may feel the pinch as prices for food purchased from stores have been growing at a 4% y/y rate and mortgage interest costs are up 6.6% y/y. **RBC Economics does not think the inflation data ties the Bank of Canada's hands** since policymakers will likely be more influenced

by next week's October GDP report, which may set up for another quarter of sub-trend growth in Q4. That would leave the door open for an interest rate cut next year, even with underlying inflation now on the high side of 2%.

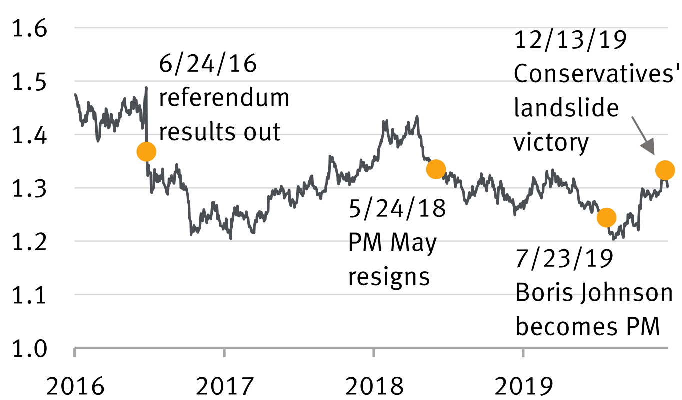
Europe

Frédérique Carrier & Alastair Whitfield – London

- Prime Minister Boris Johnson gained a large majority in last week's UK general elections. **The Johnson government will be characterized by a more flexible fiscal stance** than that of his predecessors, and, of course, by Brexit.
- According to the Conservative manifesto, Johnson's government aims to **raise spending to 41% of GDP** (from some 40% today) and **increase the national insurance threshold**, a personal exemption, over the course of the next five years. Combined, these measures should **increase GDP growth by some 0.4%**, all else being equal, in our view.
- **As for Brexit, Johnson intends to write into law the Withdrawal Agreement that he previously negotiated with the EU but remove the possibility of extending the one-year transition period** that maintains the status quo. That this change comes so early after the election and not as a result of pressure from amendments proposed by ardent Brexiters in the House of Commons **signals the government is assuming a hard Brexit stance**, in our view. It reignites the possibility that the UK could have to trade on WTO terms at the end of the transition period, or December 2020, if a trade deal with the EU is not struck by then. The pound lost its recently acquired gains, falling back to the early December level of 1.31 against the U.S. dollar.
- At the penultimate Bank of England (BoE) meeting under the stewardship of Governor Mark Carney, interest rates were held at 0.75% following another 7-2 split vote. The question now is, **who will replace Carney when his term ends on January 31, 2020?** The three frontrunners are Kevin Warsh, former U.S. Federal Reserve governor, Andrew Bailey, CEO of the UK Financial Conduct Authority, and Minouche Shafik, director of the London School of Economics. The latter two have previously acted as deputy governors at the BoE. Shafik seems to be the leading candidate, with the appointment expected to be announced in the near future. While not considered to be particularly dovish or hawkish, she has described herself instead as an "owl" and being wise in setting interest rates.

Brexit narratives and the British pound

British pound to U.S. dollar exchange rate



Source - RBC Wealth Management, Bloomberg; data through 12/18/19

Asia Pacific

Jasmine Duan – Hong Kong & Nicholas Gwee, CFA – Singapore

- Asian markets traded mostly higher this week as **risk appetite improved on the back of the U.S.-China "phase 1" trade deal** announced on December 13. Key details include: suspension of tariffs that were scheduled to take effect on December 15, reduction of tariff rates (that were imposed on September 1) from 15% to 7.5%, and increase in imports of U.S. goods, including agriculture, and services in 2020 by the Chinese. While the worst-case scenario has been averted, market observers believe execution risks remain; in particular, the implementation of larger agricultural and other U.S. commodity purchases by China. Meanwhile, **phase 2 negotiations will be tough as both sides debate the far more problematic issues of China's industrial policies**. Overall, the deal is a good start to easing the equity market's concerns over trade, in our view, although the tariff rollbacks were not as deep as some would have hoped. Meanwhile, we believe **optimism from the deal has largely been priced in by markets, and hence, we do not expect a sharp rally**.
- **The decline in Japan's factory activity continued in December as a sustained drop in output and new orders threatened to tip the economy into contraction** in the final quarter of 2019. The Jibun Bank Flash Japan Manufacturing Purchasing Managers' Index (PMI) edged down to 48.8 from 48.9 in November. New export orders shrank for the thirteenth straight month, but showed signs of bottoming as the pace of decline was the slowest in a year. Separately, Japan's services PMI inched up to 50.6 from 50.3 in the previous month.
- **Cathay Pacific Airways, Hong Kong's flagship airline, reported a drop in passenger traffic for the fourth consecutive month**. Separately, Bloomberg reported that Hong Kong's Airport Authority seized seven planes from embattled Hong Kong Airlines after it failed to make certain payments. Months of unrest has sent passenger traffic tumbling in Hong Kong, and observers are beginning to highlight the prospects of further job cuts and even bankruptcies for the smaller players.

MARKET SCORECARD

Data as of December 19, 2019

Equities (local currency)	Level	MTD	YTD	1 yr	2 yr
S&P 500	3,205.37	2.0%	27.9%	18.7%	19.5%
Dow Industrials (DJIA)	28,376.96	1.2%	21.6%	13.4%	14.6%
NASDAQ	8,887.22	2.6%	33.9%	24.2%	27.6%
Russell 2000	1,667.09	2.6%	23.6%	12.6%	8.5%
S&P/TSX Comp	17,064.04	0.1%	19.1%	19.6%	5.8%
FTSE All-Share	4,200.87	3.3%	14.3%	13.7%	1.4%
STOXX Europe 600	415.07	1.9%	22.9%	21.5%	6.2%
EURO STOXX 50	3,739.17	1.0%	24.6%	22.5%	4.4%
Hang Seng	27,800.49	5.5%	7.6%	7.5%	-5.0%
Shanghai Comp	3,017.07	5.1%	21.0%	18.3%	-8.5%
Nikkei 225	23,864.85	2.5%	19.2%	13.7%	4.4%
India Sensex	41,673.92	2.2%	15.5%	14.2%	23.2%
Singapore Straits Times	3,207.42	0.4%	4.5%	4.9%	-5.8%
Brazil Ibovespa	115,131.30	6.4%	31.0%	34.4%	58.4%
Mexican Bolsa IPC	44,649.43	4.3%	7.2%	7.9%	-7.8%
Commodities (USD)	**Price**	**MTD**	**YTD**	**1 yr**	**2 yr**
Gold (spot $/oz)	1,478.80	1.0%	15.3%	19.0%	17.2%
Silver (spot $/oz)	17.06	0.2%	10.1%	16.9%	5.8%
Copper ($/metric ton)	6,145.25	5.2%	3.3%	2.6%	-11.0%
Oil (WTI spot/bbl)	61.22	11.0%	34.8%	29.7%	6.5%
Oil (Brent spot/bbl)	66.46	6.5%	23.5%	16.1%	4.2%
Natural Gas ($/mmBtu)	2.29	0.4%	-22.1%	-38.5%	-14.9%

Govt bonds (bps chg)	Yield	MTD	YTD	1 yr	2 yr
U.S. 10-Yr Tsy	1.920%	14.5	-76.4	-83.4	-54.4
Canada 10-Yr	1.660%	19.7	-30.7	-29.9	-27.4
U.K. 10-Yr	0.804%	10.7	-47.3	-47.0	-40.1
Germany 10-Yr	-0.235%	12.5	-47.7	-47.4	-61.4
Fixed Income (returns)	**Yield**	**MTD**	**YTD**	**1 yr**	**2 yr**
U.S. Aggregate	2.36%	-0.3%	8.5%	9.9%	8.9%
U.S. Invest Grade Corp	2.89%	0.0%	14.2%	15.1%	12.0%
U.S. High Yield Corp	5.12%	1.7%	14.0%	11.3%	11.9%
Currencies	**Rate**	**MTD**	**YTD**	**1 yr**	**2 yr**
U.S. Dollar Index	97.4020	-0.9%	1.3%	0.4%	4.2%
CAD/USD	0.7620	1.2%	3.9%	2.7%	-1.9%
USD/CAD	1.3123	-1.2%	-3.8%	-2.7%	1.9%
EUR/USD	1.1122	0.9%	-3.0%	-2.2%	-6.1%
GBP/USD	1.3007	0.6%	2.0%	3.1%	-2.8%
AUD/USD	0.6886	1.8%	-2.3%	-3.1%	-10.1%
USD/JPY	109.3400	-0.1%	-0.3%	-2.8%	-3.1%
EUR/JPY	121.6100	0.8%	-3.4%	-5.0%	-9.0%
EUR/GBP	0.8551	0.4%	-4.9%	-5.2%	-3.3%
EUR/CHF	1.0880	-1.3%	-3.3%	-3.9%	-6.7%
USD/SGD	1.3547	-1.0%	-0.6%	-1.3%	0.6%
USD/CNY	7.0104	-0.3%	1.9%	1.7%	6.1%
USD/MXN	18.9247	-3.1%	-3.7%	-5.9%	-1.5%
USD/BRL	4.0654	-4.1%	4.9%	4.4%	23.5%

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 8:35 pm GMT 12/19/19.

Examples of how to interpret currency data: CAD/USD 0.76 means 1 Canadian dollar will buy 0.76 U.S. dollar. CAD/USD 3.9% return means the Canadian dollar rose 3.9% vs. the U.S. dollar year to date. USD/JPY 109.34 means 1 U.S. dollar will buy 109.34 yen. USD/JPY -0.3% return means the U.S. dollar fell 0.3% vs. the yen year to date.

Authors

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

Alan Robinson – Seattle, United States
alan.robinson@rbc.com; RBC Capital Markets, LLC

Carolyn Schroeder – Toronto, Canada
carolyn.schroeder@rbc.com; RBC Dominion Securities Inc.

Frédérique Carrier – London, United Kingdom
frederique.carrier@rbc.com; RBC Europe Limited

Alastair Whitfield – London, United Kingdom
alastair.whitfiled@rbc.com; RBC Europe Limited

Jasmine Duan – Hong Kong, China
jasmine.duan@rbc.com; RBC Investment Services (Asia) Limited

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

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: Carolyn Schroeder, an employee of RBC Wealth Management USA's foreign affiliate RBC Dominion Securities Inc.; Frédérique Carrier and Alastair Whitfield, employees of RBC Wealth Management USA's foreign affiliate RBC Europe Limited; Jasmine Duan, an employee of RBC Investment Services (Asia) Limited; and Nicholas Gwee, an employee of Royal Bank of Canada, Singapore Branch 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). 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.

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.

Distribution of Ratings - RBC Capital Markets, LLC Equity Research
As of September 30, 2019

			Investment Banking Services Provided During Past 12 Months	
Rating	Count	Percent	Count	Percent
Buy [Top Pick & Outperform]	748	51.73	208	27.81
Hold [Sector Perform]	618	42.74	126	20.39
Sell [Underperform]	80	5.53	3	3.75

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 have received (or will receive) 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 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; by Royal Bank of Canada, Singapore Branch, a licensed wholesale bank with its principal office located in Singapore; and by RBC Europe Limited, a licensed bank with principal offices located in London, United Kingdom.

Research Resources
This document is produced by the Global Portfolio Advisory Committee within RBC Wealth Management's Portfolio Advisory Group. The RBC WM Portfolio Advisory Group provides support related to asset allocation and portfolio construction for the firm's Investment Advisors / Financial Advisors who are engaged in assembling portfolios incorporating individual marketable securities. The Committee leverages the broad market outlook as developed by the RBC Investment Strategy Committee, providing additional tactical and thematic support utilizing research from the RBC Investment Strategy Committee, RBC Capital Markets, and third-party resources.

Third-party disclaimers
The Global Industry Classification Standard ("GICS") was developed by and is the exclusive property and a service mark of MSCI Inc. ("MSCI") and Standard & Poor's Financial Services LLC ("S&P") and is licensed for use by RBC. Neither MSCI, S&P, nor any other party involved in making or compiling the GICS or any GICS classifications makes any express or implied warranties or representations with respect to such standard or classification (or the results to be obtained by the use thereof), and all such parties hereby expressly disclaim all warranties of originality, accuracy, completeness, merchantability and fitness for a particular purpose with respect to any of such standard or classification. Without limiting any of the foregoing, in no event shall MSCI, S&P, any of their affiliates or any third party involved in making or compiling the GICS or any GICS classifications have any liability for any direct, indirect, special, punitive, consequential or any other damages (including lost profits) even if notified of the possibility of such damages.

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, indirect or consequential loss arising from, or in connection with, any use of this report or the information contained herein. No matter contained in this document may be reproduced or copied by any means without the prior written consent of Royal Bank of Canada in each instance. Additional information is available upon request.

To U.S. Residents: This publication has been approved by RBC Capital Markets, LLC, Member NYSE/FINRA/SIPC, which is a U.S. registered broker-dealer and which accepts responsibility for this report and its dissemination in the United States. RBC Capital Markets, LLC, is an indirect wholly-owned subsidiary of the Royal Bank of Canada and, as such, is a related issuer of Royal Bank of Canada. Any U.S. recipient of this report that is not a registered broker-dealer or a bank acting in a broker or dealer capacity and that wishes further information regarding, or to effect any transaction in, any of the securities discussed in this report, should contact and place orders with RBC Capital Markets, LLC. International investing involves risks not typically associated with U.S. investing, including currency fluctuation, foreign taxation, political instability and different accounting standards.

To Canadian Residents: This publication has been approved by RBC Dominion Securities Inc. RBC Dominion Securities Inc.* and Royal Bank of Canada are separate corporate entities which are affiliated. *Member-Canadian Investor Protection Fund. ®Registered trademark of Royal Bank of Canada. Used under license. RBC Wealth Management is a registered trademark of Royal Bank of Canada. Used under license.

RBC Wealth Management (British Isles): This publication is distributed by RBC Europe Limited and RBC Investment Solutions (CI) Limited. RBC Europe Limited is authorised by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and the Prudential Regulation Authority (FCA registration number: 124543). Registered office: 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.

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.