October 28, 2016

RBC WEALTH MANAGEMENT

Global Insight

Weekly

A closer look

Growing pains and gains

Tom Garretson – New York

The unexpected surges of Q3 growth in the U.S. and U.K. economies were a welcome treat. While more has to come together, this could be a signal that we're turning the corner, and we look at what this means for fixed income and equity positioning.

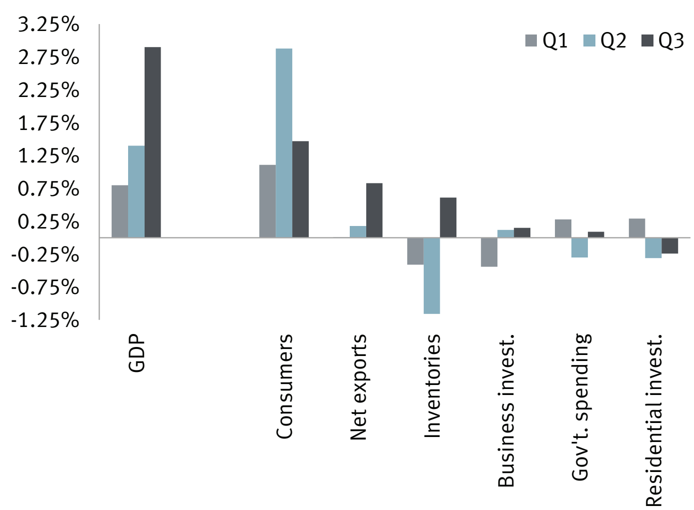
Global growth got a modest boost from the most recent Q3 GDP reports out of the U.S. and the U.K., with each posting upside surprises to consensus estimates with headline prints posting at +2.9% (annualized) and +0.5%, respectively.

In the U.S., 2.9% marks the fastest pace of growth since Q3 2014, though some of the internals suggest that growth won't be off to the races just yet. The biggest contributor, and upon which still rests the burden of continued growth, was consumer consumption. The pullback in consumer spending from the brisk pace in Q2 raised some eyebrows, but we have seen regular fits and starts here during this recovery, and with wages steadily on the rise we see this as nothing more than a blip.

Net exports, another strong contributor in Q3, could be expected to fade in the quarters ahead. It's volatile month-to-month, with the Q3 boost coming from, of all things, a jump in soybean exports. But with the dollar on the march higher—up nearly 3.5% in October alone—we could once again see U.S. exporters struggling against the dollar headwind. All that being said, the GDP report solidifies the idea that first-half weakness is giving way to second-half acceleration.

With respect to the U.K., at first blush the read-through is that Brexit has perhaps only had minimal impact thus far, but the entirety of the move was driven by the services sector, with contraction seen in manufacturing and production. The market's primary concern following the report is that the ongoing Brexit process is likely to weigh on services sector activity going forward.

2016 U.S. GDP and its primary contributors



Source - RBC Wealth Management, Bloomberg

Market pulse

Click here for authors' contact information.
Priced (in USD) as of 10/28/16 market close, EST (unless otherwise stated).
For important and required non-U.S. analyst disclosures, see Page 6.

RBC Wealth Management

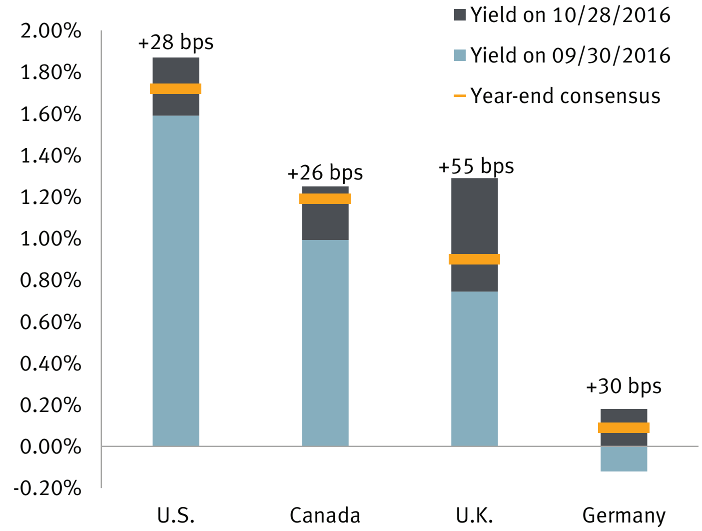
Impact with central banks on deck

The first week of November features meetings from both the Federal Reserve and the Bank of England (BoE), with GDP certain to factor into their decision-making processes. For global markets, the outcome of the BoE meeting is likely to be of far greater importance this time around, particularly due to the current disconnect between economists and the market in terms of rate cut expectations.

Most economists have forecasted the BoE to cut rates on November 3 to just above 0%, while the market is pricing in a 97% chance that the central bank leaves rates at 0.25%. Though some analysts have argued that the GDP report gives the BoE room to be patient, RBC Capital Markets maintained its call for a cut to 0.10%, expecting the bank will look through short-term data points. If the BoE delivers a surprise, global markets could be in for a bit of turbulence.

We expect the November 2 Fed meeting should be a nonevent. The GDP report should bolster the case for a December hike, but with the market already seeing a 75% chance that a December rate hike is on the way, the Fed will only have to make minor tweaks to its official statement to prepare markets.

Global 10-yr sovereign yields gap higher in October; exceed 2016 forecasts



Source - RBC Wealth Management, Bloomberg consensus forecasts for Q4 2016

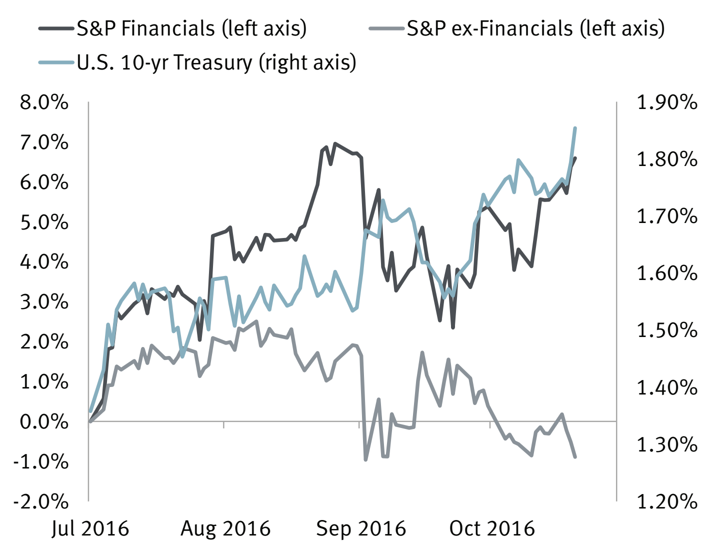
Growth gives another boost to yields

Global sovereign yields have been on a steady trend higher, but they got another boost on firming growth and inflation expectations, led by the U.K. As the top chart shows, the 10-year Gilt added an incredible 55 basis points (bps); Germany followed with a 30 bps point gain, putting the bund firmly back into positive territory and taking all regions beyond consensus year-end forecasts.

It's our view that global yields are repricing to pre-Brexit levels, and trading higher on fading disinflationary impulses and the idea that central banks are walking back from the edges of extreme dovishness. In the U.S., we think a return to a trading range of 1.70%–1.95% will hold through the end of the year—cracking 2% may have to wait until 2017.

Rising yields weighing on equities outside of Financials

Data since U.S. 10-yr Treasury reached low of 1.36% on July 8



Source - RBC Wealth Management, Bloomberg; data through 10/27/16

But another boost to yields weighs on equities

We saw the peak for earnings season during the week, but another round of mostly positive results failed to provide the boost for equities that some were expecting, as nonfinancial stocks were overcome by rising yields. We expect this impulse to fade, however, as yields stabilize around current levels and as the passing of the U.S. election refocuses the market on fundamentals and the prospects for some type of fiscal stimulus. Our view remains that equities should be able to handle higher rates—particularly higher rates driven by firming growth.

United States

Tom Garretson – New York; Sean Gray – Minneapolis

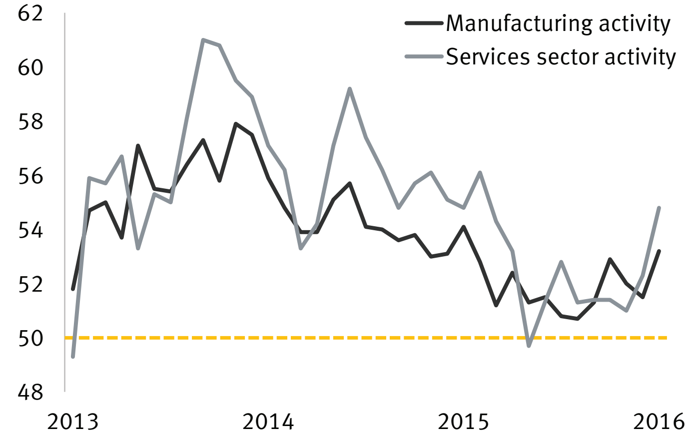
- **News late in the day on Friday the FBI is reopening the investigation into Hillary Clinton's emails** brought election concerns back to the forefront for the market as **the dollar and equities dropped sharply, and volatility as measured by the VIX spiked by 12%**. The implications of the investigation were not immediately known, but for a market that had largely priced in a Hillary Clinton victory, the U.S. presidential election on November 8 is suddenly back on the radar and may prove to be more of an event than expected.
- Preliminary reads on the **Purchasing Managers' Indexes for the manufacturing and services sectors showed strong recoveries in October**, reaching the highest levels of 2016. Purchasing Manager surveys tend to be more forward looking, and should bolster the economic outlook for Q4 on the back of a strong first estimate for Q3 GDP.
- Nearly two-thirds of S&P 500 constituents have reported Q3 results that are, on average, 6.4% ahead of consensus expectations, according to RBC Capital Markets. It is becoming increasingly **likely that the S&P 500 will post positive earnings growth for Q3, thereby ending the recent four-quarter-long earnings recession**. Results from the Energy, Utilities, and Financials sectors are most noticeably exceeding expectations, while **Utilities, Technology, and Financials companies are exhibiting the strongest year-over-year earnings growth**.
- Health Care stocks experienced another punishing week, **as the S&P 500 Health Care Index declined nearly 3%, led lower by pharmaceutical distributors**, such as McKesson, AmerisourceBergen, and Cardinal Health, following disappointing quarterly results at McKesson and reduced guidance on expectations that it will aggressively respond to pricing competition moving forward. Following this week's selloff, Health Care stocks now trade at 14.4x forward Q4 earnings, according to Bloomberg, or a 2.3x discount to the broader market. **That's the cheapest the sector has been, on a relative basis, over the past five years**. Separately, Real Estate stocks underperformed on the week, declining 3% as a result of rising Treasury yields.

Canada

Patrick McAllister, Farazeh Mahboob, & Alicia Buckiewicz – Toronto

- Amongst a barrage of corporate earnings, the **S&P/TSX Composite ended the week slightly lower** on declines in the Energy and Consumer Discretionary sectors.

PMI surveys perk up in October



Note: 50 indicates the level between expansion & contraction
Source - RBC Wealth Management, Bloomberg

- The Canadian government launched its **consultative process on lender risk sharing for government-insured mortgages**. Two alternatives were proposed: a "first loss" approach or a "proportionate loss" approach. The **consultations are in their early days** and RBC Capital Markets does not expect lender risk sharing to be introduced until 2018.
- **Toronto-Dominion Bank** announced an **agreement to acquire Scottrade Bank** for cash consideration of $1.3B. TD intends to concurrently purchase $400M in new common equity from TD Ameritrade as the latter seeks to finance its purchase of Scottrade's brokerage and advisory business.
- **National Bank added to the restructuring charges** taken by Canadian banks in an industry-wide effort to streamline organizational structures and processes. National Bank will take a **charge of CA$175M pretax in Q4**, which brings restructuring charges announced by Canadian banks in the past two years to an aggregate pretax amount of CA$2.2B.
- **Suncor reported better-than-expected Q3 results** highlighted by **significant operational improvement at Syncrude**. Feedstock for the Syncrude upgrader that was stockpiled during the Alberta wildfires promoted a bump in efficiency once the plant was restarted. How much of these gains will be sustainable moving forward will be closely watched by analysts.
- **DH Corporation** reported a **significant earnings miss** in Q3 and provided **cautious guidance** for the balance of 2016. The Canadian cheque-printing business saw volumes decline 12% y/y as the threat of a Canada Post strike prompted users to shift to electronic payments while the global transaction banking solutions unit disappointed relative to analyst expectations as global financial institutions deferred technology spending.

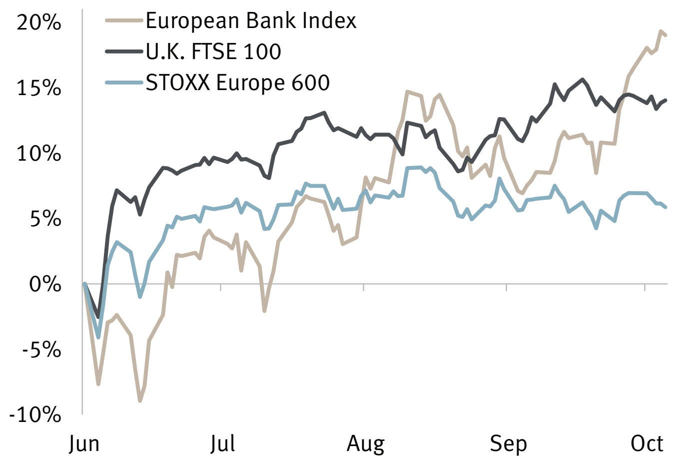
Europe

Frédérique Carrier & Thomas McGarrity – London

- **The STOXX Europe 600 declined** 1.0% during the week, with **bond yields** continuing to move **slightly wider**, fuelling further rotation into banks and basic resources, and out of Health Care, Real Estate, Technology, and Food and Beverage sectors.
- So far during **Q3 earnings season, European banks have delivered better-than-expected results**. While this partly reflects relatively low consensus expectations, some banks, including BNP Paribas and Barclays, have benefitted from a pickup in fixed income trading revenues in their investment banking divisions, similar to their U.S. counterparts' recent results. Additionally, some banks reported lower-than-anticipated loan losses, also helping provide a boost to earnings.
- **U.K. economic growth exceeded expectations** in Q3, increasing by an estimated 0.5% q/q versus consensus forecasts of 0.3%. The overshoot was **driven by the services sector**, which accounts for almost 80% of the U.K.'s economy, growing 0.8%. Conversely, output shrank in the production and construction industries, declining 0.4% and 1.4%, respectively. **The focus now shifts to the Bank of England's next Monetary Policy Committee meeting** on November 3, where RBC Capital Markets forecasts a further Bank Rate cut, from 0.25% to 0.10%.
- With the Socialist Party no longer opposing acting Prime Minister Mariano Rajoy, the **end is in sight for Spain's political deadlock**. Confirmation through a **vote of confidence** on Saturday (October 29) would allow Rajoy to **form a minority government**, meaning Spain would avoid a third general election in 12 months, having been without a proper government for 10 months.

Banks earnings, economic growth fuelling Europe's banks and U.K., despite relative weakness in STOXX Europe 600

European performance since the U.K. referendum



Source - RBC Wealth Management, Bloomberg

Asia Pacific

Yufei Yang – Hong Kong

- **Industrial profits in China rose 7.7% y/y** in September, another sign that the world's second-largest **economy is stabilizing**. In the first nine months of the year industrial profits increased 8.4% y/y. Steel and oil refining earnings were the biggest contributors—up 272.4% and 263.8%, respectively—thanks to recovering commodity prices.
- **China's government is refocusing on the high leverage issue**. The State Council set up a new ministry-level committee to ensure corporates reduce their debt level. Separately, China's central bank is **studying the inclusion of off-balance sheet wealth management products (WMPs) as broad-based credit in its macro-prudential assessment (MPA) framework**. This could help to deter banks transferring balance sheet assets to evade regulations, according to the People's Bank of China's Chief Economist Ma Jun. As of the end of June 2016, the total amount of WMPs came to RMB 26T ($3.9T), with 40% invested in the bond market.
- **Japan's market outperformed** over the week with the TOPIX Index closing 2% higher. **The weaker yen more than offset continued declines in exports and inflation**. Overseas shipments dropped 6.9% y/y in September, but were better than economists' average forecast for a 10.8% decline. Imports were down 16.3%. Excluding fresh food, core consumer prices retreated 0.5% y/y, marking a decline for the seventh straight month. Household spending also fell 2.1%.
- Taiwan's and South Korea's economies both grew faster than expected in Q3. **GDP growth in Taiwan accelerated to 2.1%** following a 0.7% gain in the previous quarter thanks to a rebound in electronics and machinery exports. **South Korea's economy expanded 0.7%**, mainly supported by strong construction activities. Exports were under pressure after Samsung halted production of the Galaxy Note 7. The world's largest smartphone maker reported a 17% decline in Q3 profit.

MARKET SCORECARD

Data as of October 28, 2016

Equities (local currency)	Level	1 week	MTD	YTD	12 mos
S&P 500	2,126.41	-0.7%	-1.9%	4.0%	1.7%
Dow Industrials (DJIA)	18,161.19	0.1%	-0.8%	4.2%	2.1%
NASDAQ	5,190.10	-1.3%	-2.3%	3.6%	1.9%
Russell 2000	1,187.61	-2.5%	-5.1%	4.6%	0.8%
S&P/TSX Comp	14,785.29	-1.0%	0.4%	13.6%	6.7%
FTSE All-Share	3,790.30	-0.5%	0.9%	10.0%	7.7%
STOXX Europe 600	340.80	-1.0%	-0.6%	-6.8%	-9.3%
German DAX	10,696.19	-0.1%	1.8%	-0.4%	-1.3%
Hang Seng	22,954.81	-1.8%	-1.5%	4.7%	0.0%
Shanghai Comp	3,104.27	0.4%	3.3%	-12.3%	-8.0%
Nikkei 225	17,446.41	1.5%	6.1%	-8.3%	-13.0%
India Sensex	27,941.51	-0.5%	0.3%	7.0%	3.3%
Singapore Straits Times	2,816.26	-0.5%	-1.9%	-2.3%	-7.4%
Brazil Ibovespa	64,307.63	0.3%	10.2%	48.3%	37.6%
Mexican Bolsa IPC	48,007.20	-0.8%	1.6%	11.7%	7.3%

Commodities (USD)	Price	1 week	MTD	YTD	12 mos
Gold (spot $/oz)	1,275.78	0.8%	-3.0%	20.2%	10.4%
Silver (spot $/oz)	17.77	1.3%	-7.3%	28.2%	11.5%
Copper ($/metric ton)	4,781.50	3.6%	-1.4%	1.6%	-8.2%
Oil (WTI spot/bbl)	48.70	-3.7%	1.0%	31.5%	6.0%
Oil (Brent spot/bbl)	49.70	-4.0%	1.3%	33.3%	1.3%
Natural Gas ($/mmBtu)	3.12	4.1%	7.2%	33.3%	53.3%
Agriculture Index	305.84	1.3%	3.9%	7.8%	5.1%

Govt bonds (bps chg)	Yield	1 week	MTD	YTD	12 mos
U.S. 2-Yr Tsy	0.853%	2.9	9.1	-19.5	15.0
U.S. 10-Yr Tsy	1.847%	11.2	25.2	-42.3	-25.4
Canada 2-Yr	0.565%	4.4	4.4	8.4	2.0
Canada 10-Yr	1.227%	9.6	23.1	-16.7	-25.6
U.K. 2-Yr	0.291%	5.0	18.9	-36.0	-24.8
U.K. 10-Yr	1.260%	17.3	51.4	-70.0	-53.6
Germany 2-Yr	-0.617%	4.4	6.6	-27.2	-27.2
Germany 10-Yr	0.167%	16.1	28.6	-46.2	-27.1

Currencies	Rate	1 week	MTD	YTD	12 mos
U.S. Dollar Index	98.34	-0.4%	3.0%	-0.3%	0.6%
CAD/USD	0.75	-0.4%	-2.0%	3.3%	-1.5%
USD/CAD	1.34	0.4%	2.0%	-3.3%	1.5%
EUR/USD	1.10	0.9%	-2.2%	1.1%	0.6%
GBP/USD	1.22	-0.4%	-6.0%	-17.3%	-20.1%
AUD/USD	0.76	-0.1%	-0.9%	4.3%	6.8%
USD/CHF	0.99	-0.6%	1.7%	-1.4%	-0.7%
USD/JPY	104.76	0.9%	3.4%	-12.9%	-13.5%
EUR/JPY	115.07	1.9%	1.0%	-11.9%	-13.0%
EUR/GBP	0.90	1.2%	4.0%	22.3%	25.9%
EUR/CHF	1.08	0.3%	-0.6%	-0.3%	-0.1%
USD/SGD	1.39	-0.2%	2.1%	-1.9%	-0.8%
USD/CNY	6.78	0.2%	1.6%	4.4%	6.6%
USD/BRL	3.20	1.4%	-1.9%	-19.2%	-18.1%

Source - Bloomberg. Note: Equity returns do not include dividends, except for the German DAX. Bond yields in local currencies. Copper and Agriculture Index data as of Thursday'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 10/28/16.

Examples of how to interpret currency data: CAD/USD 0.75 means 1 Canadian dollar will buy 0.75 U.S. dollar. CAD/USD 3.3% return means the Canadian dollar rose 3.3% vs. the U.S. dollar year to date. USD/JPY 104.76 means 1 U.S. dollar will buy 104.76 yen. USD/JPY -12.9% return means the U.S. dollar fell 12.9% vs the yen year to date.

UPCOMING EVENTS

125 S&P 500 companies are scheduled to report earnings during the week of October 31.

Mon, Oct 31

China NBS Manuf. PMI (50.4)
China NBS Non-Manuf. PMI
China Caixin Manuf. PMI (50.1)
Eurozone CPI (0.5% y/y, 0.8% core)
Eurozone Q3 GDP (0.3% q/q)
U.S. Personal Income/Spending

Tue, Nov 1

BoJ Meeting
U.K. Markit Manuf. PMI (54.4)

Tue, Nov 1, cont

U.S. Markit Manuf. PMI
U.S. ISM Manuf. (51.5)
Canada October GDP (1.2% y/y)

Wed, Nov 2

China Caixin Services PMI
China Caixin Composite PMI
Eurozone Markit Manuf. PMI (53.3)
U.S. Fed Meeting
U.S. ADP Employment Change (160K)

Thu, Nov 3

Japan Nikkei Services PMI
Japan Nikkei Composite PMI
Eurozone Unemployment (10.0%)
BoE Meeting
U.K. Markit Services PMI (52.5)
U.K. Markit Composite PMI
U.S. Markit Services PMI
U.S. ISM Non-Manuf. (56.0)

Fri, Nov 4

Eurozone Markit Services PMI (53.5)
Eurozone Markit Composite PMI (53.7)
U.S. Chg. in Nonfarm Payrolls (173K)
U.S. Unemployment (4.9%)
U.S. Avg. Hourly Earnings (0.3% m/m)
U.S. Fed Vice Chairman Fischer Speaks

Tue, Nov 8

China CPI
U.S. Elections

The dates reflect North American time zones. All data reflect Bloomberg consensus forecasts where available.

Authors

Tom Garretson, CFA – New York, United States
tom.garretson@rbc.com; RBC Capital Markets, LLC

Sean Gray, CFA – Minneapolis, United States
sean.c.gray@rbc.com; RBC Capital Markets, LLC

Patrick McAllister – Toronto, Canada
patrick.mcallister@rbc.com; RBC Dominion Securities Inc.

Farazeh Mahboob – Toronto, Canada
farazeh.mahboob@rbc.com; RBC Dominion Securities Inc.

Alicia Buckiewicz – Toronto, Canada
alicia.buckiewicz@rbc.com; RBC Dominion Securities Inc.

Frédérique Carrier – London, United Kingdom
frederique.carrier@rbc.com; Royal Bank of Canada Investment Management (UK) Ltd.

Thomas McGarrity, CFA – London, United Kingdom
thomas.mcgarrity@rbc.com; Royal Bank of Canada Investment Management (UK) Ltd.

Yufei Yang – Hong Kong, China
yufei.yang@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: Alicia Buckiewicz, Farazeh Mahboob, Patrick McAllister, and Yufei Yang, 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 (UK) 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 http://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), and the Guided Portfolio: ADR (RL 10), 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 September 30, 2016

			Investment Banking Services Provided During Past 12 Months	
Rating	Count	Percent	Count	Percent
Buy [Top Pick & Outperform]	848	50.62	255	30.07
Hold [Sector Perform]	719	42.93	133	18.50
Sell [Underperform]	108	6.45	10	9.26

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.

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

Disclaimer

The information contained in this report has been compiled by RBC Wealth Management, a division of RBC Capital Markets, LLC, from sources believed to be reliable, but no representation or warranty, express or implied, is made by Royal Bank of Canada, RBC Wealth Management, its affiliates or any other person as to its accuracy, completeness or correctness. All opinions and estimates contained in this report constitute RBC Wealth Management's judgment as of the date of this report, are subject to change without notice and are provided in good faith but without legal responsibility. Past performance is not a guide to future performance, future returns are not guaranteed, and a loss of original capital may occur. Every province in Canada, state in the U.S., and most countries throughout the world have their own laws regulating the types of securities and other investment products which may be offered to their residents, as well as the process for doing so. As a result, the securities discussed in this report may not be eligible for sale in some jurisdictions. This report is not, and under no circumstances should be construed as, a solicitation to act as securities broker or dealer in any jurisdiction by any person or company that is not legally permitted to carry on the business of a securities broker or dealer in that jurisdiction. Nothing in this report constitutes legal, accounting or tax advice or individually tailored investment advice. This material is prepared for general circulation to clients, including clients who are affiliates of Royal Bank of Canada, and does not have regard to the particular circumstances or needs of any specific person who may read it. The investments or services contained in this report may not be suitable for you and it is recommended that you consult an independent investment advisor if you are in doubt about the suitability of such investments or services. To the full extent permitted by law neither Royal Bank of Canada nor any of its affiliates, nor any other person, accepts any liability whatsoever for any direct 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: Le Gallais Chambers, 54 Bath Street, St Helier, Jersey JE4 8YD, 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'), RBC Investment Services (Asia) Limited and RBC Investment Management (Asia) Limited, both entities are 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.