


Global Insight

Perspectives from the Global Portfolio Advisory Committee



Continental shift: The appeal of European equities

After emerging from a long stretch in the doldrums, the shine is back for European stocks.

Dominic Wallington | Page 4



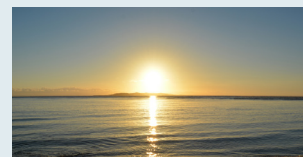
Focus article
Dividend strategy



Global equity
In sync



Global fixed income
Caution, slippery road
ahead



Commodities
Here comes the sun

For important and required non-U.S. analyst disclosures, see page 23.



**Wealth
Management**

Table of contents

4 Continental shift: The appeal of European equities

The prospects for European stocks look brighter than they have for some time. In an illuminating interview, the head of European equity at RBC Global Asset Management shares the many facets and special features which make the European equity story stand out.

8 Dividend strategy: Slow and steady wins the race

A simple concept can go a long way. For the investor who starts early the effect of compounding is surprisingly compelling. By harnessing the power of dividend-paying stocks, investors can cushion the blow from market downturns and build a cash flow machine.

11 Global equity: In sync

Manufacturing momentum around the world points to an economic expansion that is nowhere near the finish line. And with confident consumers, rising corporate earnings, and deliberate central bank policy, our long-term constructive outlook for global equities remains intact.

15 Global fixed income: Caution, slippery road ahead

The flat yield curve is sending a message. But it's important to filter out the noise about curve inversions and possible recessions in order to hear what's really being said. We think the curve is telling central banks to tread cautiously as they manage policy normalization.

Inside the markets

3 *RBC's investment stance*

11 *Global equity*

15 *Global fixed income*

18 *Commodities*

19 *Currencies*

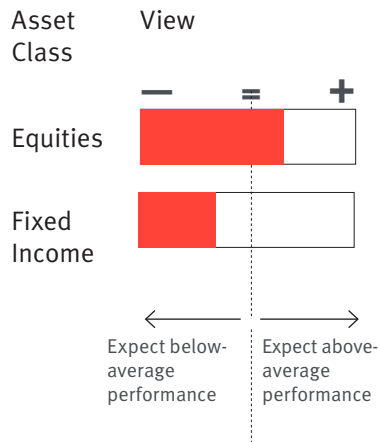
20 *Key forecasts*

21 *Market scorecard*

All values in U.S. dollars and priced as of market close, June 30, 2017, unless otherwise stated.

RBC's investment stance

Global asset views



See “Views explanation” below for details

Source - RBC Wealth Management

Equities

- The global equity market extended its run as the MSCI World Index climbed for the eighth straight month, the longest streak since the bull market began in 2009. While a consolidation period or pullback would be normal following such a rally, we believe a moderate Overweight position in global equities is still warranted as our positive long-term thesis remains intact. Economic downturns are the biggest threat to equity returns over time, and currently there is an absence of compelling evidence that a global or U.S. recession is close.
- At this stage, Europe offers the best risk/reward profile, in our view, due to improving economic and earnings outlooks, reduced political risks, and a larger-than-normal valuation discount versus the U.S. We would hold Market Weight positions in North America and Asia.

Fixed Income

- Fixed income markets are signaling that global growth is unlikely to shift into high gear anytime soon and inflation could remain tame. This message is coming through loud and clear as evidenced by the pronounced flattening of government bond yield curves, particularly in the U.S. While central bankers in North America and Europe assert that weak inflation is transitory, markets seem more circumspect. These developments could keep the Federal Reserve on the sidelines through year end.
- We would continue to Underweight global fixed income allocations in portfolios. Corporate credit remains our favorite sector, but we recommend investors upgrade the quality of their portfolios. Even though the pool of attractive bonds is limited due to tight credit spreads and elevated valuations, there are selective opportunities to move up the quality ladder.

Views explanation

(+/=/-) represents the Global Portfolio Advisory Committee's (GPAC) view over a 12-month investment time horizon.

+ Overweight implies the potential for better-than-average performance for the asset class or for the region relative to other asset classes or regions.

= Market Weight implies the potential for average performance for the asset class or for the region relative to other asset classes or regions.

- Underweight implies the potential for below-average performance for the asset class or for the region relative to other asset classes or regions.



Dominic Wallington
London, United Kingdom
dominic.wallington@rbc.com

Continental shift: The appeal of European equities

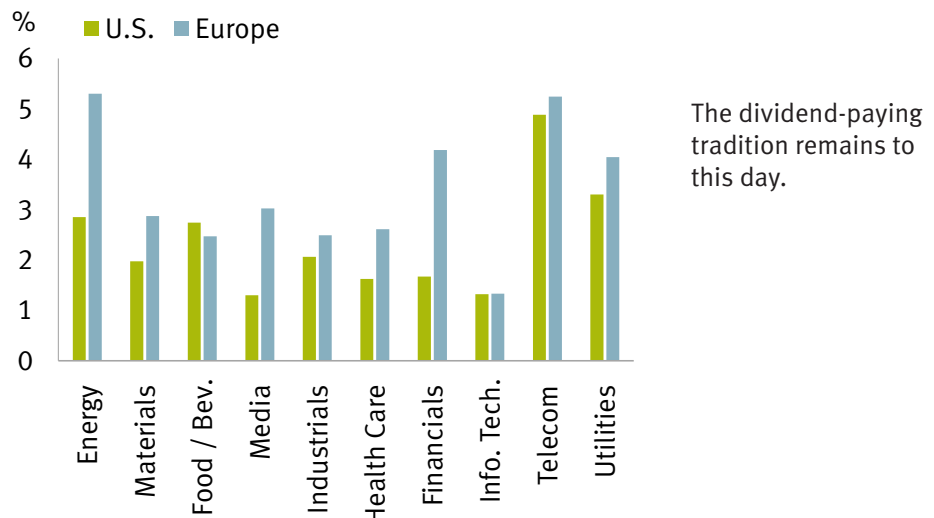
To us, the prospects for European equities look brighter than they have for quite some time. We recently [upgraded the region](#), citing reduced political risks, improved economic and earnings growth, and attractive valuations.

To gain additional insight we recently spoke with Dominic Wallington, head of European equity at RBC Global Asset Management. He discusses why equities in the region are appealing from his vantage point as a fund manager. He goes on to offer insights into the unique characteristics of European companies, including their long-standing dividend-paying tradition, centuries-old business franchises, and high-return traits.

Q. Are there distinguishing features of European companies that are particularly attractive for long-term investors?

A. One of Europe's most attractive features is its long history of sharing profits with shareholders in the form of dividends. This stems at least back to the year 1600 when Queen Elizabeth I gave a royal charter to the East India Company for which the *quid pro quo* was that the company would pay a dividend. So this is a very long-lived cultural phenomenon at which Europe tends to excel.

Comparison of key industry dividend yields by region



Note: For U.S., S&P 500; for Europe, Dow Jones Europe and STOXX Europe; data as of 6/26/17
Source - RBC Wealth Management, Bloomberg

Q. Many companies in the U.S. and in other global markets also pay dividends—what makes the European dividend-paying companies unique?

A. Europe has some of the oldest companies in the world. These sorts of companies have seen their returns persist for very long periods of time, sometimes centuries, not only in the form of profitability but also in terms of the franchise itself. A surprising number continue to dominate their particular sector or industry segment not only in Europe but globally.

LVMH is an example—Louis Vuitton opened its doors in the middle of the 19th century, but is also the owner of many brands that go back much further. One of these, Chaumet, has been around since 1780, making jewelry for the French aristocracy. The historians amongst you will know that business was curtailed in 1789 by the French Revolution. But by 1802, Chaumet had become the official jeweler to Napoléon I. Today the company has more than 80 stand-alone boutiques around the world and is in hundreds of other retail locations.

The reason I relate company histories is to point out these are long-lived franchises, with great cachet, that have existed during repeated periods of political and economic upheaval. They tend to possess the characteristics we focus on—high internal rates of return, low capital intensity, stability, international reach, and the proven capability to weather all sorts of storms.

Example of European global leaders with a long history

Many European companies have lived through tumultuous times

Date of origin	Company Logo	Description
1854		Luxury brand – LVMH (Christian Dior)
1925		Diabetes care company – Novo Nordisk
1880		Scientific publisher – RELX
1885		Emerging market FMCG company – Unilever
1849		Corrective lens supplier – Essilor
1896		Supplier of cancer medicines – Roche
1925		Supplier of enzymes – Novozymes
1874		Supplier of food cultures – Christian Hansen

Source - RBC Global Asset Management, RBC Wealth Management

Q. You say “high-return businesses” should be a priority for investors of European equities. Why is this important to you as a fund manager?

A. For the simple reason that in the normal course of events, if you attach yourself to a company that earns a high return, it is likely that you as an investor will also garner a high return. Broadly speaking, we’re referring to companies that

deliver a high return on equity, or said another way, companies that generate a high level of profits as a proportion of the money shareholders have invested.

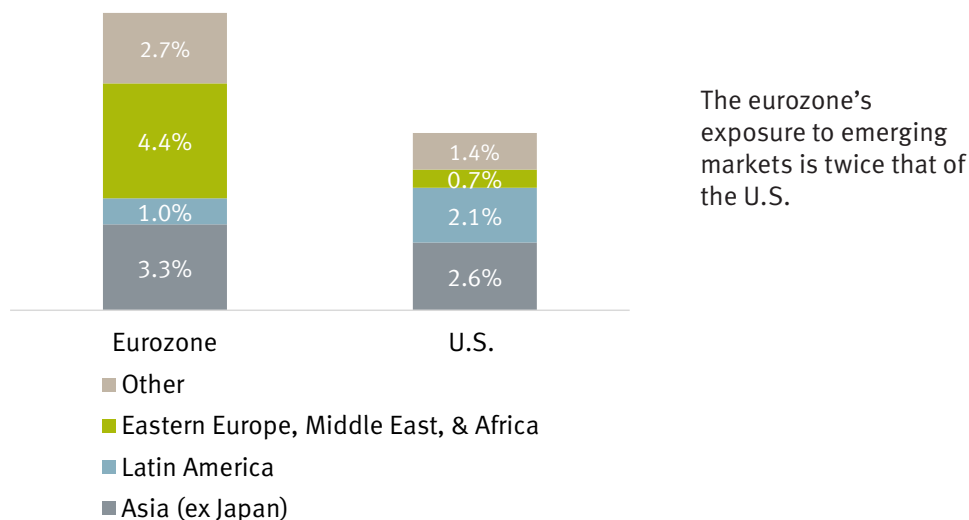
When we look at two different companies—one with a return on equity of 15% and one of 5%, and apply the same balance sheet to both and reinvest all the proceeds, then the 15% return business is worth more from a shareholders' equity perspective over a 10-year period than the lower return business by a factor of nearly five times. So we tend to look for these high-quality corporate franchises. We believe companies that have the widest, deepest moats (i.e., barriers to entry) and the highest returns on equity will deliver the best returns to shareholders. Moreover, among high-return businesses, there are still a number of European companies that trade at a discount to their U.S. peers.

Q. What specifically is it about European companies' international exposure that is so appealing at this stage?

A. Europe engages in a great deal of international trade. With the U.S., China, and Europe all growing, the world is enjoying a period of synchronized global growth. This benefits many European companies which tend to generate an above-average proportion of revenues and earnings outside their home markets.

Within this international profile, the region also has significant exposure to emerging market (EM) economies, which are usually thought to be outsized beneficiaries of synchronized global growth. At the same time, European companies have strong corporate governance and strict accounting rules. In effect, shareholders can access EM exposure through European equities with less corporate risk than most companies headquartered in those markets.

Gross exports to emerging markets as a percentage of gross domestic product



Source - National research correspondent, RBC Wealth Management

Industry concentration, digitization, chronic illness, and food technology are themes we think will be long-lived and benefit European companies.

Q. What are some of the key investment themes that you run across in Europe?

A. We're not thematic investors but when we did a deep dive into the franchises that had exhibited great returns over long periods of time, we began to realize there were other things going on in terms of persistent thematic trends.

Industry concentration is one area, as there has been a general move away from the strict application of antitrust rules in many developed markets and parts of Asia as well. This benefits large, dominant European businesses. We've seen very substantial mergers and acquisitions, which I think is a continuation of this theme. For some industries, what it confers is huge corporate power and simultaneously a dramatic reduction of competition. As an investor, one has to celebrate this trend because it means the moats (barriers to entry) are remarkably deep and wide, and the levels of profitability are considerable.

Another theme is digitization, not only on the internet, but also more broadly how digitization and machine intelligence improve returns of businesses. Artificial intelligence promises to be the next, powerful manifestation of this theme.

Within health care, chronic illness is another powerful theme for us. We look at companies that deal with things like the treatment of diabetes, the first non-communicable global disease pandemic which affects 371 million people globally. Another example would be short (near) sightedness, as it has doubled in a generation partly because of the increased use of LED screens and aggressive education systems in many developed markets.

Food technology is another theme we follow. Food products are moving into emerging, fast growing markets that they couldn't have previously due to advancements in fermentation, enzymes, and isolates. For example, one company we follow has developed a culture for yogurts that removes the need for refrigeration. This enables the company to sell its products in China where tastes favour room temperature yogurt.

We think these themes will be long-lived—over decades—and should benefit European companies, especially those with deep moats.

Q. Notwithstanding their long-term appeal, is this the right time to be considering European equities?

A. European stocks have usually traded at a price-to-earnings multiple discount to U.S. equities. Brexit and the rise of populist, anti-EU parties in several countries widened that discount out to unprecedented levels over the past year. Recently, the French election of a centrist, pro-EU government appears to have marked an easing in those tensions. We believe European equities, particularly the kind of all-weather, persistently high-return dividend payers we have been talking about here, can be acquired today at valuations which are at a discount to those of U.S. peers, at a time when revenues, earnings, and profit estimates all appear to be on the rise.

Dividend strategy: Slow & steady wins the race



Mark Allen
Toronto, Canada
mark.d.allen@rbc.com

- Dividend-paying stocks can buffer equity portfolios against market volatility
- Dividend payers have a proven track record of delivering superior returns with lower volatility
- Sustained dividend growth is a simple but effective indicator of investment quality

With equity markets near all-time highs, valuations elevated, and much political uncertainty, investors are wondering what strategy to employ. There is a time-tested, “slow and steady” approach that offers superior returns and less volatility.

Companies with a demonstrated ability to increase their dividends over time tend to be high-quality businesses that create shareholder value. As the earnings of these businesses rise and shareholders reinvest the dividends, the wealth-building effect of compounding can be compelling.

For investors to take full advantage of the benefits of compounding, the message is fairly simple: (1) the earlier you start, the more compounding can do for you, and (2) try to avoid risks that may disrupt the process.

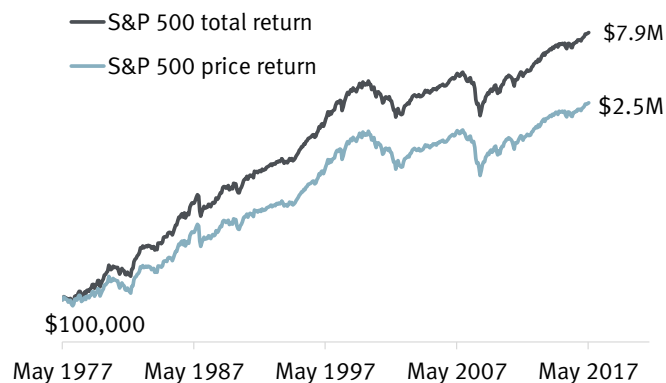
A short lesson in compounding

In any given year, an investor expecting perhaps a 6%–9% return on an equity portfolio with a dividend yield of 2%–3% is anticipating roughly one-third of the return to come from dividends and two-thirds from price appreciation.

Over the longer term and with the reinvestment of dividends, this expectation is turned on its head. The value of \$100,000 invested in the S&P 500 40 years

Value of \$100,000 invested in the S&P 500

Log scale



The power of compounding shines when comparing the difference in price appreciation versus total return with dividends reinvested over a long period of time.

Source - RBC Wealth Management, Bloomberg; data range: 5/31/77–6/27/17

“The effects of compounding even moderate returns over many years are compelling, if not downright mind boggling.”

– Seth Klarman

ago would have advanced to about \$8M today on a tax-free basis assuming all dividends were reinvested. Price appreciation alone would have taken the portfolio to just \$2.5M. The effect of dividend reinvestment and compounding accounted for roughly two-thirds of the ending value and price appreciation roughly one-third.

With an early start and decades to grow, the effect of compounding on the absolute sum is surprisingly powerful. Similar results were delivered over the same period by Canada's S&P/TSX Composite.

Avoiding potholes

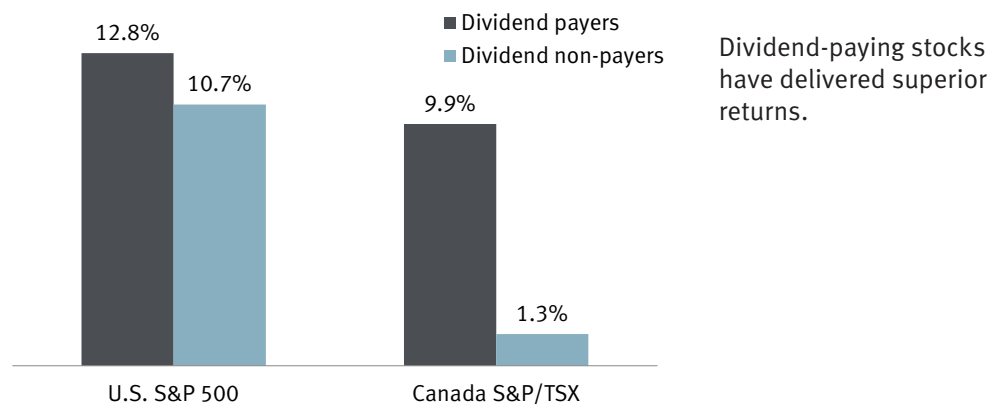
Avoiding disruption to this process is also important. Confusingly, percentage losses and percentage gains are not made equal. A portfolio that declines by one-third must go up by 50% just to break even. A portfolio designed for stability that declines by perhaps 20% during the same market correction has much less ground to make up (a 25% rise) before resuming gains above the baseline, pre-correction level. Just as compounding can provide a growth wonder over time, several periods in a row of negative performance can have a cumulative, destructive effect.

One way to cushion the blow of market corrections is to invest in dividend-paying stocks.

One way to cushion the blow of market corrections is to invest in dividend-paying stocks. Returns generated by dividends are more reliable than are short-term stock price gyrations because dividends are generally paid through market ups and downs.

Dividend payers give the investor a leg up

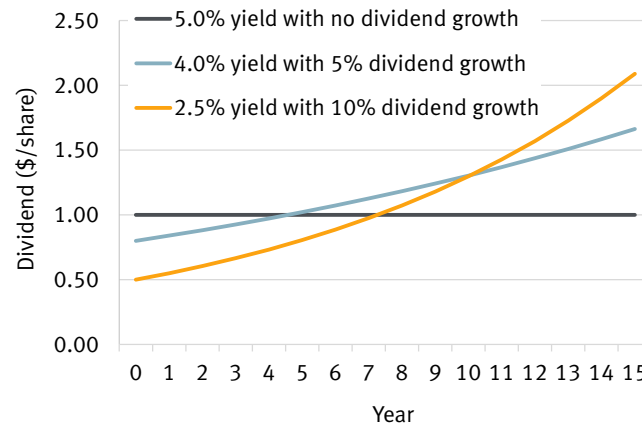
Average annual return, dividend payers versus non-payers



Source - RBC Capital Markets, Ned Davis Research

However, dividend-oriented strategies that are solely focused on seeking high dividend yields result in two common biases: a higher concentration in value stocks and a portfolio more focused on interest-rate-sensitive industries such as Telecom, Real Estate, Pipelines, and Utilities. Strategies focused on those themes can lag when markets shift from “value” to “growth,” or when interest rates rise. Designing a strategy based on dividend growth broadens the pool of investable stocks and degree of sector diversification beyond what a narrow focus on dividend yields above a specific threshold can deliver.

Illustrative dividend growth scenarios



Seemingly attractive, high dividends can be surpassed by an initially smaller dividend that grows over time.

Note: Initial yield based on a \$20 initial stock price in all three cases
Source - RBC Wealth Management

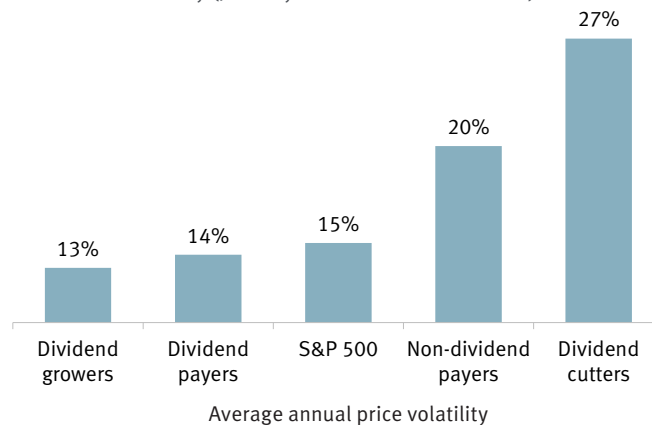
Dividend growers

The benefit of focusing on dividend growers versus dividend payers is really just an extension of the compounding theme. The income from a stock growing its dividend modestly will, in time, eclipse the income from an initially higher yield stock that does not deliver dividend growth. The compounding effect of steady growth can be illustrated with a simple mathematical representation.

Companies that raised, or at a minimum protected, their dividend through various economic cycles have demonstrated positive trends in their underlying businesses. Sustained dividend growth is a simple but effective indicator of investment quality that has produced better rates of return over time.

Easier to own

Annualized volatility (January 1994 – November 2016)



Payers experience much less price volatility.

Source - RBC Capital Markets Quantitative Research, RBC Wealth Management

Building a cash flow machine

Building portfolios including only “dividend payers” can help to buffer against market downdrafts allowing an investor to better harness the longer-term benefits of *boring* but *effective* compounding. Taking it one step further, selecting stocks that generate an increasing cash flow stream to the investor—“dividend growers”—over the long run has historically delivered even more superior rates of return.

In sync

The latest Purchasing Managers' Index reading from the U.S. manufacturing sector confirms what European, Canadian, and most emerging economy activity indexes have been saying for some time—the global economy is not teetering on the edge of some new downturn. Rather, there has been a synchronised build in economic momentum over several quarters. This has not yet produced elevated levels of reported GDP growth and may never. But it strongly suggests there is more of this expansion to come.

Confident, employed consumers together with confident, profitable businesses are permitting deliberate central bankers to move toward normalising monetary policy. And so far, policymakers' own desire not to commit a damaging mistake, helped by benign inflation readings, has kept them away from a more overt tightening that would run the risk of snuffing out this expansion.

That day may yet come. But, for now, accommodative credit conditions and central bankers' commitment to a gradualist approach suggest the next recession lays some considerable way off—by our reckoning, at least a year, probably longer.

“Until a renewed global downturn and, in particular, a U.S. recession are on the horizon and fast approaching, equities should be given the benefit of the doubt.” This mantra has underpinned our strategic recommendations on portfolio equity exposure for eight years and counting. We recommend a moderate equity Overweight for global portfolios.

Equity views

Region	Current
Global	+
United States	=
Canada	=
Continental Europe	+
United Kingdom	-
Asia (ex-Japan)	=
Japan	=

+ Overweight = Market Weight - Underweight
Source - RBC Wealth Management

Europe (ex the U.K.) is our favoured market (see the [French connection](#) article from the June issue and [Continental shift: The appeal of European equities](#) on page 4 of this issue), where we can find strong revenue and earnings growth coupled with still reasonable valuations and helped by a modest currency tailwind.

The valuation picture for most markets has changed over the past 18 months: from “compelling” at the lows of early 2016 to “less comfortable” today. For the S&P 500, the move from 15x earnings in Q1 last year to 21x today has provoked an outpouring of comments featuring terms like “expensive” and “overvalued.” However, price-to-earnings (P/E) multiples say almost nothing about where the market is headed next or even over the next year. Temptingly low P/Es can go distressingly lower and already high ones stretch dizzyingly higher. There are no reliable “lines in the sand.”

On the other hand, paying more than 20x earnings for any market puts the onus on profit growth to come through as forecast. We think it will not only

Jim Allworth
Vancouver, Canada
jim.allworth@rbc.com

Kelly Bogdanov
San Francisco, United States
kelly.bogdanov@rbc.com

Patrick McAllister
Toronto, Canada
patrick.mcallister@rbc.com

Frédérique Carrier
London, United Kingdom
frederique.carrier@rbc.com

Jay Roberts
Hong Kong, China
jay.roberts@rbc.com

for the U.S. market, but also for most developed economies as well.

That said, we expect there will be at least one correction of note before we get to the next “bear market” for stocks, probably more than one. Pick your poison: North Korea; the U.S. debt ceiling; German elections; Italian elections; British elections (it is a minority government after all); shrinking the Fed’s balance sheet; China tightening; the weather. Something will upset today’s comfortable equilibrium and usher in a period in which investors are much less certain than they are today about where markets are headed next.

As long as the risks of recession remain low, we expect to treat such interludes as buying opportunities.

Regional highlights

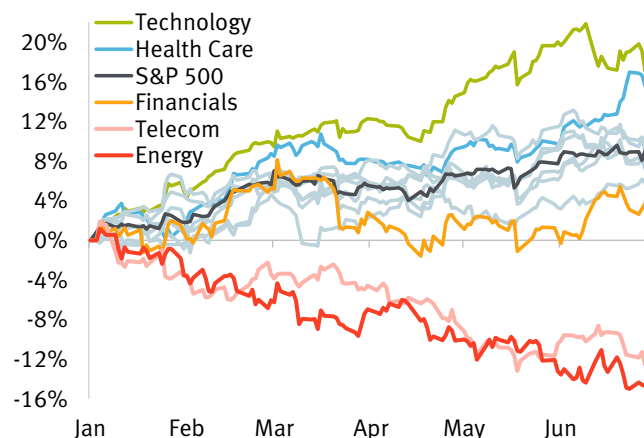
United States

- Amid the S&P 500’s 21% surge since last summer, market leadership has swapped places. Late last year after the election, Financials and other economically sensitive and value sectors, along with small caps, outperformed as economic and pro-growth policy optimism rose. But so

far this year, the less economically sensitive Technology and Health Care sectors and large caps have led the market as economic momentum eased, policy optimism receded, and Treasury yields, crude oil, and inflation pulled back.

- This rotation illustrates why it’s prudent to own a diverse group of sectors, styles, and market capitalizations within equity portfolios. In a slow-growth economy, it is not unusual for economic indicators and market leadership to ebb and flow—or for leadership to narrow to just a handful of stocks like it has lately—particularly when technological advances are increasingly transforming and disrupting many industries. These factors, by nature, tend to generate churn among key market segments.
- We would maintain Market Weight exposure to U.S. equities, which translates into holding an allocation equal to the long-term strategic recommended level. We would keep some cash on the sidelines in the event that a pullback materializes. We continue to view the long-term outlook as bullish.

U.S. sector returns, year-to-date with top and bottom performers highlighted



Outperformance of Tech and Health Care have driven the S&P 500 forward in 2017. The question of what will carry the market into year end is yet to be determined, but recent strength in the Financials sector may be an indicator of what’s to come.

Note: Light blue lines represent remaining S&P sectors
Source - RBC Wealth Management, Bloomberg; data through 6/30/17

Canada

- We are Market Weight on Canadian equities reflecting a balanced risk-reward opportunity in light of reasonable valuations. We are monitoring risks that we believe have relatively low probabilities of occurring but could have considerable consequences for the domestic economy if they were to unfold, including a housing market correction and material deterioration in U.S. trade relations.
- At 16.2x forward earnings, the S&P/TSX Composite trades at a notable discount to the S&P 500 at 18.1x. With the domestic market's year-to-date underperformance, that discount is nearly as wide as the extreme level reached in early 2016. However, the attractiveness of the Canadian market's discounted valuation is tempered by increased risks to housing, trade, and energy prices.
- The Toronto housing market cooled in May with the average home price falling 6% from the prior month. Listings continued to swell (up 48% y/y) while resale activity slowed (down 21%). RBC Economics believes those developments are consistent with a soft landing for prices in the region. While the likelihood of an imminent correction appears low, the health of the housing market remains a risk to monitor given its importance to economic growth and impact on household leverage.
- North American crude prices have fallen 7% over the past month amid concerns of rising U.S. production and bloated inventories. Should crude oil remain in the range of \$45 per barrel, we expect balance sheet strength to come back into focus. We prefer well-capitalized producers with visible production growth amid

a more cautious outlook for energy prices.

Continental Europe & U.K.

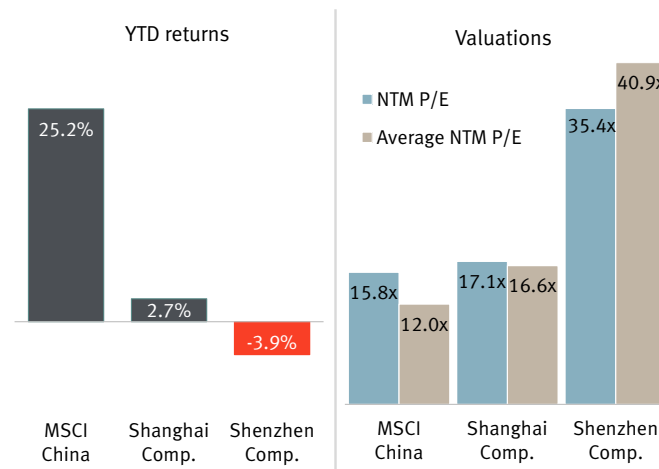
- We are Underweight the U.K. due to the precariousness of the new government at a time it is negotiating with the EU a fundamental change in its economic model. An autumn election remains possible, raising the prospect of a business-unfriendly Labour government.
- For now, with the U.K. economy slowing and inflation rising to 2.9%, the cost of Brexit is becoming clearer, and public opinion seems to be starting to shift, with calls for an "open Brexit" or "soft Brexit" gaining prominence.
- While the outlook is murky, there are some opportunities in U.K. equities. Valuations are not overly demanding, and dividend yields are attractive. The weak pound could lift earnings growth, as some 70% of corporate earnings arise from overseas, and make U.K. businesses more attractive to foreign buyers. We maintain our bias toward international companies.
- We are Overweight Europe thanks to the confluence of an improved economic cycle, a broad earnings recovery, and the reduction of political risk. We prefer domestic-oriented sectors and well-capitalised banks.

Asia

- Asian equities have performed solidly in 2017. The total return of the MSCI AC Asia Pacific Index was 16% in the first half of 2017. When global leading economic indicators peak, a degree of caution may be warranted. A number of Asian indices, including the KOSPI in South Korea and the Sensex in India, are at all-time highs, having rallied powerfully this year.

- MSCI's decision to include 222 mainland Chinese equities, or A-shares, in its Emerging Markets Index should be kept in perspective. The changes will not occur until mid-2018 and will represent a very small percentage of the index. (Please see page 3 of the June 22 [Global Insight Weekly](#) for additional details.) However, this marks another milestone in the development of China's capital markets and could eventually become a significant development. The market capitalization of mainland Chinese stocks is second only to the U.S.
- Equity performance in China has been muted. The authorities have been clamping down on financial leverage; leading indicators are expansionary, but only modestly so; and there is selective policy tightening in regional property markets. Moreover, while the valuation for the Shanghai Composite looks relatively appealing at approximately 17x, this multiple is brought down due to the heavy weighting of large-cap state-owned enterprises which trade at low price-to-earnings multiples. The Shenzhen Composite, dominated by private enterprises, is trading at about 35x earnings, and there are many companies trading at particularly high multiples.
- We remain constructive on Japanese equities, although there has been a long run of strong performance that may need to be digested. A key risk is further yen appreciation.

Returns and valuations on major equity indexes in China

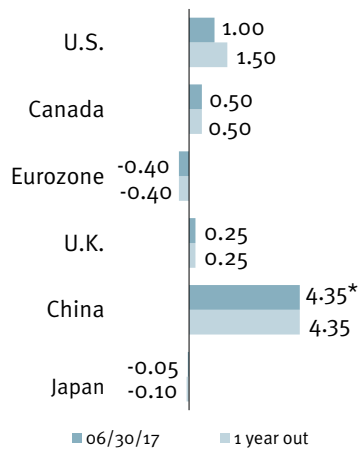


The Shenzhen Composite has limited exposure to large-cap state-owned enterprises, relative to the MSCI China and Shanghai Composite indexes.

Source - RBC Wealth Management, Bloomberg; data through 6/30/17

Caution, slippery road ahead

Central bank rate (%)



*1-yr base lending rate for working capital, PBoC
 Source - RBC Investment Strategy Committee, RBC Capital Markets, Global Portfolio Advisory Committee, Consensus Economics

“Listen to the yield curve” is receiving renewed interest as the 2-yr./10-yr. U.S. Treasury yield spread has collapsed to its tightest level in several years, with global yield curves running flat as well. Flat yield curves are not atypical and can last for months, but there are concerns the inevitable next step is to an inverted curve, commonly viewed as the harbinger of a recession. We don’t foresee a recession in the U.S., the economy is on solid footing, and growth prospects in other major economies are exhibiting positive signs. So rather than signaling impending recessions, flatter yield curves, in our opinion, are the result of global slow growth, low inflation, and the continued evolution of central bank monetary policies post Great Recession.

Yield curves, in our opinion, haven’t lost their predicative power, but market noise and concerns over curve inversions and recessions make it difficult for investors to interpret the signs they give. Ultimately, whether curves flatten further, or steepen, may be up to how central bankers manage the policy normalization process. The big picture points to reduced policy accommodation as policymakers in Canada, the U.K., and the EU start to move toward adopting the Fed’s patient, gradual path of policy normalization. At some point, tighter policy could narrow global sovereign yield spreads, stoking demand for domestic bonds at the expense of Treasuries. We think the slow pace of policy normalization by global central banks suggests steeper curves are a ways off.

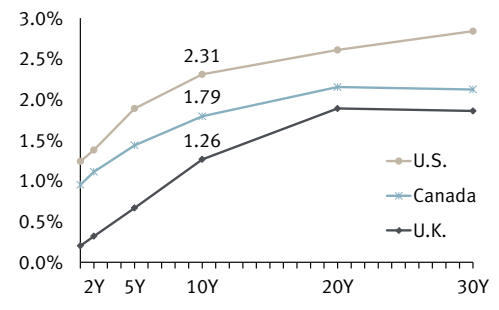
We believe investors should get used to flatter yield curves. Rather than signaling a recession, they are waving

Fixed income views

Region	Gov’t Bonds	Corp. Credit	Duration
Global	–	+	5–7 yr
United States	–	+	5–7 yr
Canada	–	=	4–6 yr
Continental Europe	=	+	5–7 yr
United Kingdom	–	=	5–7 yr

+ Overweight = Market Weight – Underweight
 Source - RBC Wealth Management

Sovereign yield curves



Source - Bloomberg

the yellow caution flag at policymakers. Three consecutive quarterly rate hikes in the U.S. may be too brisk a pace, and we believe that pace will have to slow down.

Regional highlights

United States

- The Fed delivered its fourth rate hike since 2015 to bring the Fed Funds rate to a 1.00%–1.25% range. But with economic data—particularly for inflation—hitting a soft patch in recent months, the Treasury yield curve has flattened, although after hitting its 2017 low around just 2.14%, the 10-year yield finished June at 2.30%. Flat yield curves may be, in

Craig Bishop
 Minneapolis, United States
 craig.bishop@rbc.com

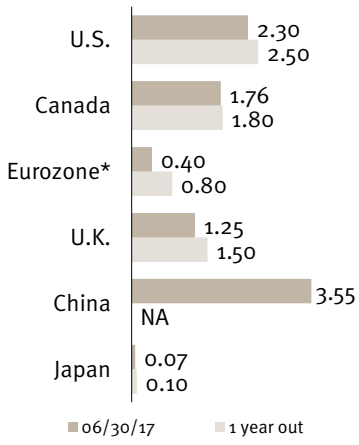
Tom Garretson
 New York, United States
 tom.garretson@rbc.com

Christopher Girdler
 Toronto, Canada
 christopher.girdler@rbc.com

Hakan Enoksson
 London, United Kingdom
 hakan.enoksson@rbc.com

Global fixed income

10-year rate (%)



* Eurozone utilizes German Bunds
 Source - RBC Investment Strategy Committee, RBC Capital Markets, Global Portfolio Advisory Committee

part, a sign of the market's waning economic optimism, and are perhaps enough to give the Fed pause when debating further rate hikes this year. We see few catalysts on the horizon that might send the 10-year yield higher, with any curve steepening likely to come from lower yields at the front end should the Fed ease off the rate hike throttle.

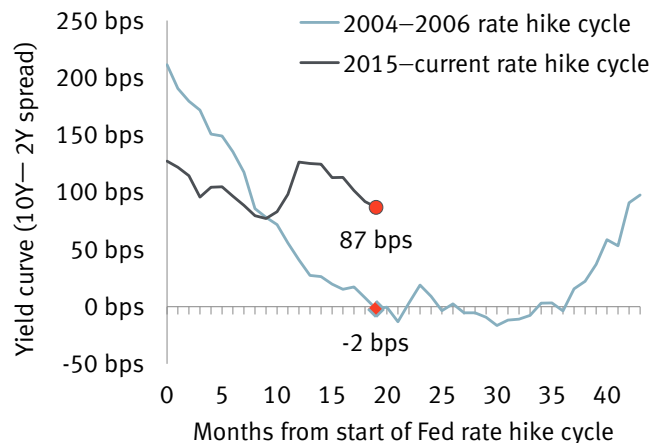
- Opportunities in credit markets have been few and far between as tight credit spreads and low Treasury yields have drained corporate bond markets of yield. High-yield market valuations have become increasingly rich this year, but another pullback in oil prices has sparked some selling pressure. However, we remain cautious and continue to recommend increased quality, where A-rated corporates still carry an average yield of 2.90%, compared to just 4.10% for BB-rated corporates, a historically low yield advantage.
- Municipal new issuance continues to lag 2016 and, in our view, a late-summer new supply boost is unlikely. Investor demand is expected to remain strong due to larger-than-expected maturities, early redemptions, and coupon payments. This demand-supply imbalance

should remain supportive of the muni market. We continue to see the best value in the 15- to 20-year part of the muni yield curve.

Canada

- Bank of Canada (BoC) Governor Stephen Poloz and Senior Deputy Governor Carolyn Wilkins shocked the bond market in June by hinting that the central bank may be closer to raising interest rates than investors were expecting. The Canadian Government yield curve flattened, driven by sharp moves higher in the short end with both the 2- and 5-year yields at 2.5-year highs. We continue to remain focused on the headwinds to the economy including the record high level of household debt and a strong reliance on the housing market as constraints to how quickly the BoC can realistically raise rates. Accordingly, we would view the move higher in short yields as an opportunity to invest in short-dated bonds at more attractive yields.
- Investment-grade credit spreads remain close to their tightest levels in three years in Canada. We continue to recommend investors think about upgrading credit quality within portfolios and ensure they are being

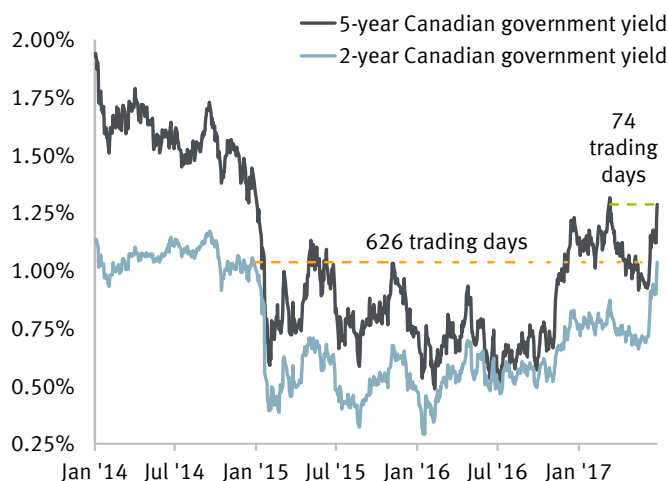
Room to run: yield curve is flat, but far from inversion



The yield curve had already inverted in 2005, 19 months into the Fed rate hike cycle; '08 recession would follow two years later.

Source - RBC Wealth Management, Bloomberg; data as of 6/28/17

Short-term Canadian yields look attractive



The move higher in short yields is an opportunity to invest in short-dated bonds.

Source - RBC Wealth Management, Bloomberg; data as of 6/28/17

adequately compensated for risks taken. We continue to like Maple bonds which exhibit diversification benefits.

- The preferred share market performed well in June thanks to resilient credit spreads and higher government bond yields. We continue to see better opportunities in preferred shares compared to corporate bonds, but investors should look to tilt portfolios defensively to protect annual price gains.

Continental Europe & U.K.

- The European Central Bank (ECB) kept rates on hold at -0.40% but, noting the improved economic growth, it removed the easing bias to interest rates. Given the absence of inflation, we don't expect any rate rise in the near future. The pattern of the ECB's government bond purchases suggests it is running out of German bonds to buy. Accordingly, we prefer those non-German sovereign issuers which offer positive yields, unlike many of their German counterparts.
- Several events during the month, including the resounding victory by reform-minded French President

Macron in parliamentary elections, the successful resolution of Banco Popular Español's liquidity crisis, and the agreement on the current Greek bailout program all bode well for the corporate bond environment. We think there is still room for the yield premium on European corporate bonds, and in particular for bank debt, to come down further.

- The Bank of England (BoE) left interest rates on hold at 0.25% but turned unexpectedly more hawkish, with three members voting for a rate hike as inflation is at a five-year high. Despite this, we still expect the BoE to stay on hold for the rest of the year given acute political uncertainty and the recent slowdown in the economy.
- The increased chance of a soft Brexit contrasts with the risks of an unstable government, and leaves 10-year gilt yields delicately balanced at around 1% for now. With such low visibility and a slowing economy, we expect a more volatile environment, in particular for issuers within the domestically focused utilities and consumer sectors.

Here comes the sun

Commodity forecasts

	2017E	2018E
Oil (WTI \$/bbl)	54.50	60.00
Natural Gas (\$/mmBtu)	3.15	3.25
Gold (\$/oz)	1,280	1,300
Copper (\$/lb)	2.65	2.75
Corn (\$/bu)	3.70	4.00
Wheat (\$/bu)	4.52	5.23

Source - RBC Capital Markets forecasts (oil, natural gas, gold, and copper), Bloomberg consensus forecasts (corn and wheat)

While oil prices are suffering from a supply glut at present, the greater threat long-term may lie on the demand side. Technology innovation in solar, wind, electric vehicles (EVs), and autonomous driving is poised to change our global energy system and urban transportation.

Renewable energy represents about one-quarter of global power output. Of this, the lion's share is hydro at 70%, while wind and solar represent 16% and 6%, respectively. However, solar costs continue to decline rapidly and solar power has become competitive with the local power grid in many sunny parts of the world. In Chile and the United Arab Emirates, for example, solar developers have contracted for projects below \$0.03/kWh. To put this rate in context, residential customers in many U.S. states pay \$0.10–\$0.20/kWh. The International Energy Agency (IEA) expects solar generation to triple and onshore wind generation to double over the next five years.

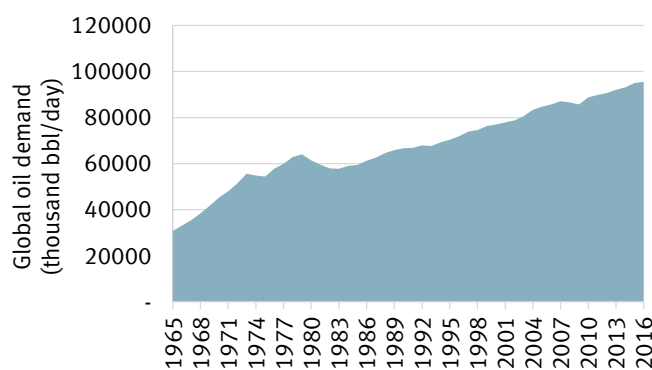
With over 750,000 EVs sold worldwide in 2016, there are now over two million EVs on the road globally. Norway leads with market penetration at 29% and the Netherlands is second at 6%. With a

global installed base of over one billion gas and diesel vehicles, EVs have a diminutive 0.2% market share. However, accelerated deployment is expected with Honda targeting two-thirds of sales to be electrified vehicles by 2030. The IEA sees potentially 9–20 million EVs on the road by 2020, and 40–70 million by 2025.

A third disruptive force is the advancement and regulatory acceptance of autonomous vehicles (AVs). The RethinkX Project, co-led by author Tony Seba, believes AVs will reshape transportation to a shared ride system, starting first in urban centers, with people moving away from individual car ownership. It sees the U.S. vehicle fleet dropping from 247 million in 2020 to 44 million in 2030, and global oil demand falling from 100 million bbl/day in 2020 to around 70 million bbl/day by 2030.

While the technology is exciting, these changes remain in the very early stage (and in the case of AVs highly speculative) with a pace of development that is difficult to predict with confidence decades into the future. We believe global oil growth continues at a 1%–2% annual pace for a number of years yet.

Global oil demand



Global oil demand has grown at 1.2%–1.6% per annum over one-, two-, three-, and four-decade time frames. We believe demand growth continues at this pace for years ahead.

Mark Allen
Toronto, Canada
mark.d.allen@rbc.com

Source - BP plc, RBC Capital Markets, RBC Wealth Management

Currency forecasts

Currency pair	Current rate	Forecast Jun 2018	Change*
Major currencies			
USD Index	95.65	99.97	5%
CAD/USD	0.77	0.74	-5%
USD/CAD	1.29	1.36	5%
EUR/USD	1.14	1.06	-7%
GBP/USD	1.30	1.22	-6%
USD/CHF	0.95	1.05	11%
USD/JPY	112.39	102.00	-9%
AUD/USD	0.76	0.72	-5%
NZD/USD	0.73	0.74	1%
EUR/JPY	128.40	108.00	-16%
EUR/GBP	0.87	0.87	0%
EUR/CHF	1.09	1.11	2%
Emerging currencies			
USD/CNY	6.78	7.70	14%
USD/INR	64.57	70.00	8%
USD/SGD	1.37	1.53	12%
USD/PLN	3.70	3.91	6%

* Defined as the implied appreciation or depreciation of the first currency in the pair quote.

Examples of how to interpret data found in the Market Scorecard.

Source - RBC Capital Markets, Bloomberg

U.S. dollar

Despite the 0.25% rate hike at the Federal Reserve's June meeting, concerns about slow wage growth and weak price inflation have kept the dollar subdued. We still believe that the continuing tightening of the labour market will eventually feed through into higher wages and prices, and will cause U.S. rate expectations to head higher, carrying the dollar along with them.

Euro

Improved fundamentals and receding regional political risks have brought us to soften our long-standing bearish stance to a more neutral outlook for the single currency. However, widespread slack in the labour market is likely to keep inflationary pressures tempered, allowing the European Central Bank to maintain its accommodative stance.

This, in turn, should keep the euro undervalued for now, in our view. Outright bullishness awaits the prospect of higher inflation.

British pound

While the hung parliament following the U.K.'s snap election caused the pound to fall, these losses were reversed by comments from Bank of England officials suggesting that rate hikes could be delivered far earlier than previously thought. Inflation

headed to a high 2.9%, but wage growth remained lacklustre. With consumers' real spending power eroding, we feel comfortable remaining bearish on the pound, given the country's crippling political uncertainty.

Canadian dollar

Hawkish comments from Bank of Canada Senior Deputy Governor Carolyn Wilkins, supported by Governor Stephen Poloz, have caused a drastic repricing of interest rate expectations in Canada, causing the Canadian dollar to rally strongly. Our neutral outlook for the loonie has been predicated on monetary policy divergence between the U.S. and Canada. If this hawkish tone were to continue, upside risk to the outlook would increase; we remain cautious for now.

Japanese yen

Large speculative short positions on the yen are keeping it undervalued for now. We still look for appreciation over the course of the year. The risk to this view would be major developed market interest rates heading higher. While this is happening in the U.S., the path higher is very gradual, and other developed market economies are likely to be slow to follow, allowing us to continue targeting the yen at 100 per dollar by early 2018.

GBP volatile following election outcome and hawkish BoE



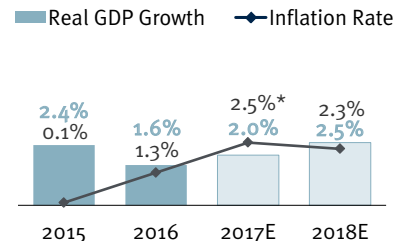
Lower real wages and Brexit uncertainties to keep pound under pressure.

Jack Lodge
London, United Kingdom
jack.lodge@rbc.com

Source - RBC Wealth Management, Bloomberg; data through 6/28/17

United States — Fed confident in economy

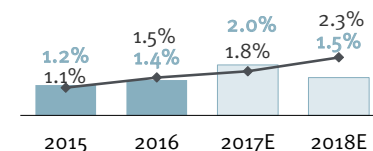
- FOMC rate hike signaled confidence in economic outlook. Q1 GDP revised higher to 1.4% from 1st est. of 0.7%. Inflation retreating from Fed's 2% target. Hiring slowed, but unemployment rate fell to 4.3%. Home sales slowing due to higher prices, low supply. Retail sales and personal spending subdued in Q2 but expected to reaccelerate in 2nd half.



*Forecast is under review

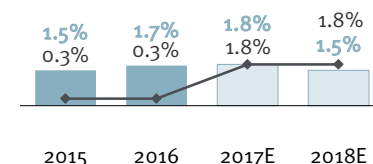
Canada — Pulling rate hikes forward

- April GDP up 0.2% following 0.5% March surge. Business survey indicates Q2 investment improvement. House prices surged 3.9% y/y in April but started slowing in May as restrictive regulations bite. Bank of Canada's commentary now hawkish. July rate hike odds at 84%. Strong May hiring but wage growth stagnant. Retail sales up a strong 1.5% m/m in April. May core CPI at 1.3%.



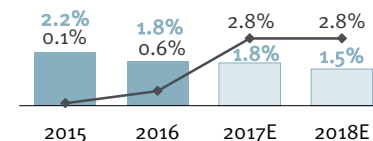
Eurozone — Economic growth strengthens

- Q1 GDP revised higher to 1.9% y/y. ECB economic outlook remains positive, but June meeting left rates and asset purchases at current levels. Regional inflationary pressures nonexistent. Services PMIs continue to strengthen. Manufacturing indicators retreated slightly on a y/y basis throughout the region. Employment data improving across the eurozone. Retail sales data accelerated to 2.5% y/y.



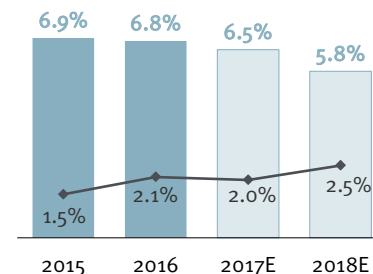
United Kingdom — Economic trade-offs

- GDP growth and inflation moving in different directions. Retail sales failed to build on the strong April, falling 1.2% m/m. Industrial production tepid as Brexit uncertainty weighs. Business investment down 0.8% y/y. Inflation rose 2.9% y/y, fastest pace in 4 years. Bank of England left rates at 0.25%, in split vote as bank weighs weaker growth against rising inflation.



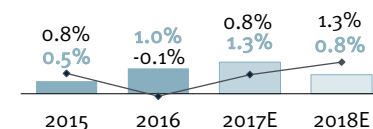
China — Investment cooling

- Producer prices have eased along with commodities, but past increases passed on to consumers, sending CPI up for third straight month to 1.5%. People's Bank of China's deleveraging efforts drove short-term rates higher, inverting yield curve for a record 10 days amidst liquidity concerns. Real estate investment cooling due to gov't restrictions and higher rates. Industrial production and retail sales resilient.



Japan — Hiccup in progress

- Q1 GDP revised down to 1.0% from 2.4% on weaker personal consumption and lower inventories. 17.8% y/y jump in imports outweighed strong export demand as trade deficit dragged on GDP. However, real GDP well above Bank of Japan's projected potential growth rate of just 0.7%. BoJ held rates steady at -0.1%, as inflation remains below 2% target at 0.0%.



Source - RBC Investment Strategy Committee, RBC Capital Markets, Global Portfolio Advisory Committee

Market scorecard

Index (local currency)	Level	1 Month	YTD	12 Month
S&P 500	2,423.41	0.5%	8.2%	15.5%
Dow Industrials (DJIA)	21,349.63	1.6%	8.0%	19.1%
NASDAQ	6,140.42	-0.9%	14.1%	26.8%
Russell 2000	1,415.36	3.3%	4.3%	22.9%
S&P/TSX Comp	15,182.19	-1.1%	-0.7%	7.9%
FTSE All-Share	4,002.18	-2.8%	3.3%	13.8%
STOXX Europe 600	379.37	-2.7%	5.0%	15.0%
German DAX	12,325.12	-2.3%	7.4%	27.3%
Hang Seng	25,764.58	0.4%	17.1%	23.9%
Shanghai Comp	3,192.43	2.4%	2.9%	9.0%
Nikkei 225	20,033.43	1.9%	4.8%	28.6%
India Sensex	30,921.61	-0.7%	16.1%	14.5%
Singapore Straits Times	3,226.48	0.5%	12.0%	13.6%
Brazil Ibovespa	62,899.97	0.3%	4.4%	22.1%
Mexican Bolsa IPC	49,857.49	2.2%	9.2%	8.5%
Bond yields	6/30/17	5/31/17	6/30/16	12 mo chg
US 2-Yr Tsy	1.382%	1.282%	0.582%	0.80%
US 10-Yr Tsy	2.304%	2.203%	1.470%	0.83%
Canada 2-Yr	1.103%	0.694%	0.518%	0.59%
Canada 10-Yr	1.762%	1.416%	1.061%	0.70%
UK 2-Yr	0.358%	0.131%	0.099%	0.26%
UK 10-Yr	1.257%	1.046%	0.867%	0.39%
Germany 2-Yr	-0.572%	-0.713%	-0.661%	0.09%
Germany 10-Yr	0.466%	0.304%	-0.130%	0.60%
Commodities (USD)	Price	1 Month	YTD	12 Month
Gold (spot \$/oz)	1,241.55	-2.2%	7.7%	-6.1%
Silver (spot \$/oz)	16.63	-4.1%	4.5%	-11.2%
Copper (\$/metric ton)	5,927.00	4.8%	7.3%	22.5%
Uranium (\$/lb)	20.50	3.8%	0.6%	-22.6%
Oil (WTI spot/bbl)	46.04	-4.7%	-14.3%	-4.7%
Oil (Brent spot/bbl)	47.92	-4.8%	-15.7%	-3.5%
Natural Gas (\$/mmBtu)	3.03	-1.2%	-18.5%	3.8%
Agriculture Index	297.53	4.7%	2.2%	-4.2%
Currencies	Rate	1 Month	YTD	12 Month
US Dollar Index	95.6570	-1.3%	-6.4%	-0.5%
CAD/USD	0.7714	4.1%	3.7%	-0.3%
USD/CAD	1.2964	-4.0%	-3.6%	0.3%
EUR/USD	1.1426	1.6%	8.6%	2.9%
GBP/USD	1.3025	1.1%	5.4%	-2.2%
AUD/USD	0.7689	3.4%	6.8%	3.2%
USD/JPY	112.3900	1.4%	-4.0%	8.9%
EUR/JPY	128.4000	3.1%	4.3%	12.1%
EUR/GBP	0.8771	0.6%	3.0%	5.2%
EUR/CHF	1.0950	0.6%	2.2%	1.0%
USD/SGD	1.3762	-0.5%	-4.8%	2.2%
USD/CNY	6.7809	-0.8%	-2.6%	1.9%
USD/MXN	18.1203	-2.7%	-12.6%	-0.9%
USD/BRL	3.3072	2.5%	1.6%	3.0%

Easing regulation concerns for biotech companies spurred small-cap outperformance.

Hawkish rhetoric from the Bank of Canada lifted short-term yields.

Crude oil entered bear market territory during the month, falling as much as 22% from its 2017 high.

The Bank of Mexico's four rate hikes in 2017 have elevated the peso as one of the year's top performers, but rate cuts could be on the horizon.

Equity returns do not include dividends, except for the German DAX and Brazilian Ibovespa. Equity performance and bond yields in local currencies. U.S. 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. Examples of how to interpret currency data: CAD/USD 0.77 means 1 Canadian dollar will buy 0.77 U.S. dollar. CAD/USD -0.3% return means the Canadian dollar has fallen 0.3% vs. the U.S. dollar during the past 12 months. USD/JPY 112.39 means 1 U.S. dollar will buy 112.39 yen. USD/JPY 8.9% return means the U.S. dollar has risen 8.9% vs. the yen during the past 12 months.

Source - RBC Wealth Management, RBC Capital Markets, Bloomberg; data through 6/30/17.

Research resources

This document is produced by the Global Portfolio Advisory Committee within RBC Wealth Management's Portfolio Advisory Group. The RBC Wealth Management 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.

Global Portfolio Advisory Committee members:

Jim Allworth – Co-chair; Investment Strategist, RBC Dominion Securities Inc.

Kelly Bogdanov – Co-chair; Portfolio Analyst, RBC Wealth Management Portfolio Advisory Group – Equities, RBC Capital Markets, LLC

Frédérique Carrier – Co-chair; Managing Director, Head of Investment Strategies, Royal Bank of Canada Investment Management (U.K.) Limited

Mark Allen, CFA – Portfolio Advisor, RBC Wealth Management Portfolio Advisory Group – Equities, RBC Dominion Securities Inc.

Mark Bayko, CFA – Head, Multi-Asset Portfolios & Practice Management, RBC Dominion Securities Inc.

Craig Bishop – Lead Strategist, U.S. Fixed Income Strategies Group, RBC Wealth Management Portfolio Advisory Group, RBC Capital Markets, LLC

Janet Engels – Head of U.S. Equities, RBC Wealth Management Portfolio Advisory Group, RBC Capital Markets, LLC

Hakan Enoksson – Head of Fixed Income - British Isles, Royal Bank of Canada Investment Management (U.K.) Limited

Tom Garretson, CFA – Fixed Income Portfolio Advisor, RBC Wealth Management Portfolio Advisory Group, RBC Capital Markets, LLC

Christopher Girdler, CFA – Fixed Income Portfolio Advisor, RBC Wealth Management Portfolio Advisory Group, RBC Dominion Securities Inc.

Jack Lodge – Associate, Structured Solutions team, Royal Bank of Canada Investment Management (U.K.) Limited

Patrick McAllister, CFA – Canadian Equities Portfolio Advisor, RBC Wealth Management Portfolio Advisory Group – Equities, RBC Dominion Securities Inc.

Jay Roberts – Head of Investment Solutions & Products, RBC Wealth Management Hong Kong, RBC Dominion Securities Inc.

Alan Robinson – Portfolio Analyst, RBC Wealth Management Portfolio Advisory Group – Equities, RBC Capital Markets, LLC

The RBC Investment Strategy Committee (RISC) consists of senior investment professionals drawn from individual, client-focused business units within RBC, including the Portfolio Advisory Group. The RISC builds a broad global investment outlook and develops specific guidelines that can be used to manage portfolios. The RISC is chaired by Daniel Chornous, CFA, Chief Investment Officer of RBC Global Asset Management Inc.

Additional *Global Insight* authors:

Dominic Wallington – Head of European Equity, RBC Global Asset Management (U.K.) Limited

Required disclosures

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: Mark Allen, Jim Allworth, Mark Bayko, Christopher Girdler, Patrick McAllister, and Jay Roberts, employees of RBC Wealth Management USA's foreign affiliate RBC Dominion Securities Inc.; and Frédérique Carrier, Hakan Enoksson, and Jack Lodge, employees of RBC Wealth Management USA's foreign affiliate Royal Bank of Canada Investment Management (U.K.) Limited; and Dominic Wallington, an employee of RBC Wealth Management USA's foreign affiliate RBC Global Asset 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 <http://www.rbccm.com/GLDisclosure/PublicWeb/Disclosure-Lookup.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), 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).

Rating	Count	Percent	Investment Banking Services Provided During Past 12 Months	
			Count	Percent
Buy [Top Pick & Outperform]	826	52.01	293	35.47
Hold [Sector Perform]	657	41.37	144	21.92
Sell [Underperform]	105	6.61	7	6.67

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.

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. 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. Additional information is available upon request.

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

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

RBC Wealth Management (British Isles): This publication is distributed by Royal Bank of Canada Investment Management (U.K.) Limited and RBC Investment Solutions (CI) Limited. Royal Bank of Canada Investment Management (U.K.) Limited is authorised and regulated by the Financial Conduct Authority (Reference number: 146504). Registered office: Riverbank House, 2 Swan Lane, London, EC4R 3BF, UK. RBC Investment Solutions (CI) Limited is regulated by the Jersey Financial Services Commission in the conduct of investment business in Jersey. Registered office: Gaspé House, 66-72 Esplanade, St Helier, Jersey JE2 3QT, Channel Islands, registered company number 119162.

To Hong Kong Residents: This publication is distributed in Hong Kong by Royal Bank of Canada, Hong Kong Branch which is regulated by the Hong Kong Monetary Authority and the Securities and Futures Commission ('SFC'), 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.

© 2017 RBC Capital Markets, LLC - Member NYSE/FINRA/SIPC

© 2017 RBC Dominion Securities Inc. - Member Canadian Investor Protection Fund

© 2017 RBC Europe Limited

© 2017 Royal Bank of Canada

All rights reserved