

August 7, 2018

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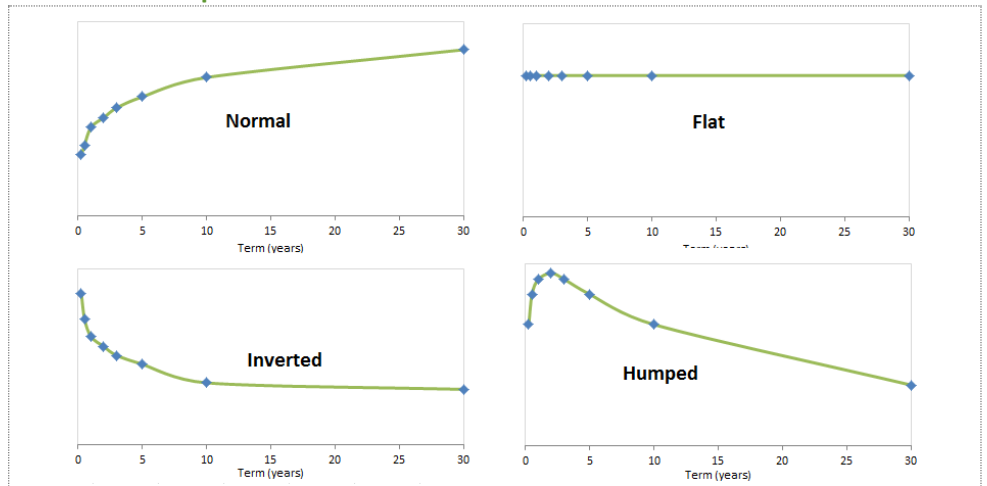
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Yield!

The US yield curve often garners a lot of attention from market strategists and for good reason. Every recession over the past 50 years has been preceded by an inversion of the US yield curve, making it one of the more reliable indicators for investors to re-evaluate their current asset allocation and investment decisions within each asset class prior to the economy entering a recession. As a refresher, a yield curve is a line that plots yields, at a set point in time, of bonds having equal credit quality, often of the same issuer, but differing maturity dates. By connecting the different maturities we can see the shape of the yield curve. In a normal economic environment, short-term bond yields are lower than long-term bond yields. The most frequently reported yield curve compares maturities across government debt instruments. There are four shape types the yield curve can take: Normal or positively sloping, flat, humped and inverted or negatively sloping. A positive sloping yield curve is an indication the economy is healthy and expanding, while a negative sloping curve is indicative of a pending economic contraction. The most common way to determine the slope of the curve is to compare the 10 year government yield and the 2-year government yield. If the 10 year yield is greater than the 2 year, we can say the curve is positively sloping. However, if the 10 year yield is less than the 2 year we would say the curve has inverted, or negatively sloping, which is an indication an economic slowdown is on the horizon.

In this month's edition, we look at the Canadian yield curve in more detail to determine its ability to predict Canadian recessions, as well as discussing the implication of a flattening yield curve in the US. The good news, at this point, is the US and Canadian yield curves are both positively sloping, even though they have each undergone a significant amount of flattening over the last 12 months.

Yield Curve Shapes



Source: Bloomberg, Raymond James Ltd.

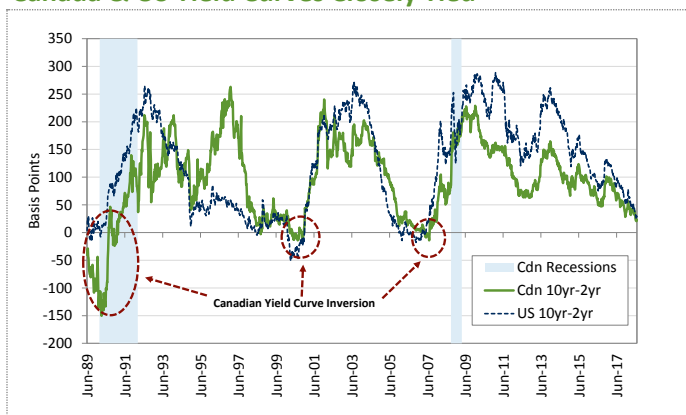
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Recessions are a normal part of the business cycle and typically occur following a period of economic expansion, although some recessions are caused by exogenous factors such as the collapse of the dot.com bubble and the oil shock in the 1970s. A recession can be defined as a temporary contraction in the overall output of an economy. In purely technical terms, a recession occurs when two or more successive quarters of negative real GDP growth are registered. Canada has experienced five recessions since the 1970s, which have typically lasted two to four quarters, on average. Similarly to the US, we wondered if using the Canadian yield curve was a good predictor of recessions. In the chart below, we plot the slope of the Canadian yield curve (10 year less 2 year), which did in fact invert prior to the last two recessions in 2008 and 1990. This behaviour is very similar to the US yield curve. Based on this information we could conclude that the Canadian yield curve is a good predictor of Canadian recessions; however, if we overlay the US yield curve we can quickly see that there exists a very strong relationship between Canadian and US government yield curves. In fact, the Canadian and US yield curves exhibit a positive correlation of approximately 0.70, which is to say the two variables tend to move in parallel. But the commonality doesn't stop there, as we can see in the table the Canadian business cycle is also very closely tied with the US's. Over the past six decades, Canadian and American recessions closely mirrored each other with the US typically leading Canada into an economic downturn. Given the relative size of the US economy and Canada's trading relationship it's not surprising to see that negative economic impact spills across the border. The relationship is not perfect as there have been exceptions like the dot.com bubble when Canada didn't slip into recession, but we can generalize by saying as the US's fortunes goes, so goes Canada's.

Canada & US Yield Curves Closely Tied



Source: Bloomberg, Raymond James Ltd.

We can now see why the Canadian yield curve gets so little attention. From a Canadian's perspective focusing on the US yield curve and business cycle is often enough to provide insight into where our economy may be heading. Knowing this we look more closely at what the US yield curve is telling us today.

Canadian and US Recessions

US		Canada	
Date	Duration	Date	Duration
Dec '07 - Jun '09	1 yr 6 mos	Oct '08 - May '09	1 yr 6 mos
Mar '01 - Nov '01	8 mos	No recession	
July '90 - Mar '91	8 mos	Mar '90 - Apr '92	8 mos
July '81 - Nov '82	1 yr 4 mos	Jun '81 - Oct '82	1 yr 4 mos
Jan '80 - Jul '80	5 mos	Jan '80 - Jun '80	5 mos
Nov '73 - Mar '75	1 yr 4 mos	Dec '74 - Mar '75	1 yr 4 mos
Dec '69 - Nov '70	11 mos	No recession	
Apr '60 - Feb '61	10 mos	Mar '60 - Mar '61	10 mos
Aug '57 - Apr '58	8 mos	Mar '57 - Jan '58	8 mos
Jul '53 - May '54	10 mos	Jul '53 - Jul '54	10 mos

Source: Bloomberg, Raymond James Ltd.

Don't Fear the Yield Curve (Yet)

As mentioned, the US yield curve is one of the best economic indicators we have in predicting recessions. An inversion of the yield curve (10 year Treasury trading at a lower yield than the 2 year) has preceded every US recession going back to the 1960s. Not surprisingly, investors have started to get nervous of late as the US yield curve has been flattening over the past 12 months, with the spread shrinking from 125 bps to 28 bps. The curve is currently at its flattest level in the post-2008 economic recovery and expansion.

US 10 Year-2 Year Spread 2007-2018



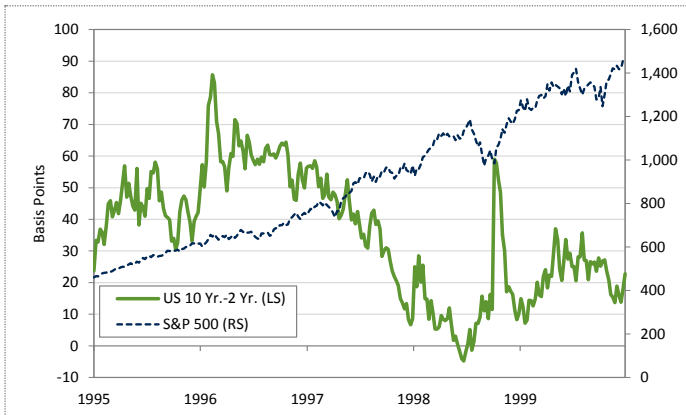
Source: Bloomberg, Raymond James Ltd.

However, looking at the historical record, a flattening yield curve is not the time for equity investors to run for the exit. In fact, in many cases it is quite the opposite. There are two key reasons why investors should maintain exposure: 1) a

flattening curve does not mean that an inversion is imminent, 2) an inverted yield curve is good at predicting recessions but not as great from a timing perspective.

We define a “flat” yield curve as one where the spread between the 10 and 2 year US Treasuries is shrinking and falls below 50 bps. Using the late 1990’s as an example, the yield curve remained below this threshold from February 1997 until October 1998 (almost 20 months) without ever truly inverting (it briefly dipped below 0 bps in June 1998). Moreover, the S&P 500 remained very strong throughout the same period, appreciating 32% (791 to 1,045). In fact, the S&P 500 didn’t peak until September 2000, at 1,523, one quarter after the yield curve inverted and a full year before the 2001 “tech wreck” bear market and recession. Selling equities due to a flat yield curve in 1997 would have missed three years of material gains in the stock market.

1990’s Yield Curve vs. S&P 500 Performance



Source: Bloomberg, Raymond James Ltd.

Our second point is that yield curve inversions have preceded all US recessions of the past but not every inversion has resulted in a recession. In fact, the timing between the inversion and the end of an economic cycle vary significantly. Since the 1960s, the timing between the initial inversion of the yield curve and a recession is between 6 and 24 months, with an average period of just under a year. More interesting is that in most cases, the performance of the stock market between inversion and recession has shown positive gains. Looking at the table below, we can see that in four of the past five curve inversions S&P 500 investors saw positive gains over 12, 18 and 24 months following inversion with the 2000 inversion being the exception. Looking at a shorter view, over six months, it is only the 1978 inversion where there was a negative period; although these losses were quickly reversed and produced double-digit gains over the following 18 months.

S&P 500 Performance Following Inversion

Inversion Date	Aug-1978	Dec-1988	Jun-1998	Feb-2000	Dec-2005
6 Months	-5.8%	15.9%	6.2%	2.7%	1.8%
12 Months	3.4%	26.7%	17.7%	-5.3%	13.6%
18 Months	10.2%	31.4%	29.0%	-14.7%	20.4%
24 Months	17.8%	18.3%	32.6%	-21.3%	18.4%

Source: Bloomberg, Federal Reserve, Raymond James Ltd.

From a sector perspective, energy and technology tend to outperform in the curve flattening period; while post-inversion, defensive, interest rate sensitive names (staples, health care, utilities, telecom) tend to perform the best.

Finally, looking at the reasons for a yield curve flattening can give us a deeper understanding as to the imminence of a US recession. Under normal circumstances a flattening yield curve occurs because the Fed is raising rates (impacting the 2 year bond) in response to inflation and a stretched economy and the 10 year is rising at a slower rate or dropping, as investors fear the end of the economic cycle and are looking for maximum safety to lock in their returns. We argue that in the current economic climate, the flattening effect from the long end of the curve has more to do with the fact that other comparable government bonds, correlated to the 10 year Treasury (particularly in Europe and Japan), are depressing their US counterpart as these economies are growing at a slower pace, keeping a lid on long term rates. In other words, the 2 year yield is doing what it should do (rising due to the ongoing strength of the US economy) but the 10 year yield is being artificially lowered by weaker comparables in other developed economies. Under this scenario, we expect the yield curve to remain flat but do not see an inversion or US recession on the near term horizon.

USA 10 Year Yield vs. G7 Economies

	10-Year Yield (%)	10-2 Year Spread (%)
US	2.93	0.28
Canada	2.23	0.21
UK	1.27	0.52
France	0.69	1.30
Germany	0.39	1.00
Italy	2.66	3.32
Japan	0.06	0.20
Avg G7 ex US	1.22	1.09

Source: Bloomberg, Raymond James Ltd. As at June 28, 2018

Using the yield curve to determine asset allocation is not a means unto itself. History shows that reacting to a flattening/inverting yield curve in isolation can make an investor miss out on significant gains in the equity markets. The yield curve must be used in conjunction with other factors, like employment, inflation, housing, consumer

confidence, capital investment, high yield spread, etc. to get a full picture of where we are in the economic cycle. Our *Recession Checklist*, which we publish in our *Asset Allocation Quarterly*, is a good visualization of this process. Although the yield curve and inflation trends have recently slipped from positive to the neutral category, one can see that all other key factors are still flashing green and none are in the red zone. In past cycles, the majority of our factors turn red prior to a recession.

Recession Checklist

	Yield Curve	Inflation Trend	Labour Mkt	ISM Man.	House Mkt	Hi Yld Spr
Nov-73	▼	▼	▼	▼	▼	▼
Jan-80	▼	▼	▼	▼	▼	▼
Jul-81	▼	▲	▲	▼	▼	▼
Jul-90	▼	▼	▼	▼	▼	▼
Mar-01	▼	▼	▼	▼	◀▶	▼
Dec-07	▼	▼	◀▶	▼	▼	▼
Now	◀▶	◀▶	▲	▲	▲	▲

Key: ▼ = Recessionary; ▲ = Expansionary; ◀▶ = Neutral

Source: Bloomberg, Raymond James Ltd.

In conclusion, investors should take heed but not panic at the first sign of a flattening yield curve. It indicates that we may be getting closer to the end of an economic cycle but is not necessarily the end of strong returns from the stock market. As such, we continue to see positive equity returns for both the Canadian and US markets over the next 6 to 12 months.

Jason Castelli, CFA
VP, Portfolio Manager

Robert Mark, CFA
Portfolio Manager

Keeping It Short and Sweet

Continuing with this month’s theme of short duration, we discuss some of the techniques and products that can reduce the interest rate sensitivity of your portfolio. Thankfully, the ever expanding world of ETFs has provided a number of different tools to effectively shorten portfolio duration. Underlying assets can range from ultra-short government or corporate bonds to floating rate notes and even senior bank loans. These products typically range in duration from half a year to less than five years while providing a distribution that is currently in line or better than the longer end of the curve. The trick is that these products can also range in credit quality. Therefore you need to find the right complement for one’s portfolio, taking into account both a rising rate environment and late cycle capital market that we generally believe we’re in. To do this we’ll look at three different products and their underlying structures.

We begin with the highest credit quality of the three in the short-term Canadian bond index. Our pick for this is Vanguard Canadian Short-term Bond fund (VSB-T) that seeks to track the Bloomberg Barclays Global Aggregate Canadian Govt/Credit 1-5 Yr Float Adjusted Bond Index. This product has an average duration of 2.8 years with a yield to maturity of 2.3% and a management expense ratio (MER) of 11 bps. We like Vanguard in this space given their low tracking error to the benchmark which is in part thanks to their low MER.

Next up, the short term investment grade corporate credit offering with a similar duration of 2.78 years with about a 50 bps pick-up compared to the more government-centric benchmark of VSB. For short-term corporate bonds, our pick is ZCS-T, the BMO Short-Term Corporate Bond ETF. ZCS is benchmarked to the FTSE TMX Canada Short Term Corporate Bond Index and comes in at 11 bps MER as well. This ETF is comprised of investment grade corporate bonds (credit rating of BBB or higher), duration between one and five years and a market cap of more than \$100 million per issue. We like ZCS based on its lower tracking error to their index.

Our final category of short duration fixed income is the floating rate space. On the higher end of the credit quality spectrum are floating rate bond funds. Canadian floating rate bond funds typically provide Canadian Dealer Offering Rate (CDOR) plus a spread based on the underlying credit quality. For this we like Horizons Active Floating Rate Bond ETF (HFR-T) sub-advised through Fiera Capital, which provides exposure to investment grade fixed income with a floating coupon. HFR provides interest rate and principle protection by entering into a swap agreement on corporate bonds whereby they pay a fixed coupon rate in return for a floating

coupon which should increase or decrease as rates go up and down.

On the lower end of the credit spectrum are short-term bank loans or senior loans issued to higher risk companies. These loans can act as a great hedge against rising rates given their short duration and ease in refinancing. A change in rates is quickly reflected in new loans when they roll over typically within a few months or are refinanced by companies/banks. This is also a market where being nimble is important, as the average settlement timeline for loans is today (T) + 14 versus the typical fixed income or equity trade which settles T + 2. Our choice here is Mackenzie Floating Rate Income Fund (MFT-T). As the floating rate loans that make up these products are typically below investment grade, MFT is able to provide a large pick-up in yield compared to the other options. We like that MFT takes an active approach to security selection and that their company infrastructure has consistently been able to settle loans faster than the street average making them a bit more nimble.

Short-Term Fixed Income ETF Offerings

Product	Sym	MER (bps)	Effect. Duration	YTM	Ave Credit
Vanguard Canadian ST Bond	VSB	11	2.8	2.30	AA
BMO ST Corp Bond	ZCS	11	2.78	2.85	A
Horizon's Active Floating Rate	HFR	40	0.74	2.60	-A
Mackenzie Floating Rate Income	MFT	74	0.67	7.01	B

Source: Raymond James Ltd; Data as of July 24, 2018

Short-term fixed income can provide great protection in a rising rate environment. However, the varying credit quality of securities contained in these products can produce a higher sensitivity to economic conditions which should be taken into consideration when building a well-diversified portfolio.

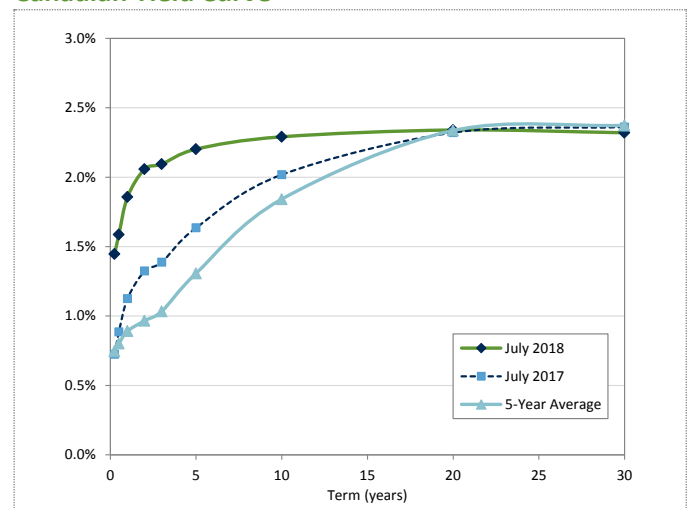
Spencer Barnes, MSc, CIM®
Mutual Funds & ETF Specialist

The Short End Fixed Income Trade

With the Bank of Canada tightening monetary policy, investors have been questioning where to invest along the yield curve. As stated many times in this publication we believe investors would be prudent to stick to the short-end of the curve, specifically three months to two years. Why, you ask? With short end yields roughly equivalent to those on the longer end of the curve investors are not being compensated for going longer; ultimately, the flattening yield curve has virtually erased any term premium.

At the time of writing the spread, or difference, between 30-year Government of Canada (GoC) bonds and 2-year GoC bonds is a mere 28 basis points (bps). We can see just how flat the yield curve in Canada is now compared to last year in the below graph. At this time last year the spread between 30-year and 2-year GoC bonds was 109 bps, which was enough to provide a slightly rising (normalized) yield curve. Typically investors in fixed income markets are paid to invest further out on the curve with compensation in the form of higher interest rates in exchange for tying up their capital for a longer period of time. With the current state of the yield curve the risk/reward trade-off doesn't provide the incentive to invest in the longer end when you are only getting a slightly better rate than if you were to stay shorter term. That, combined with economists' consensus estimates of rising rates over the coming year, lends us to believe that investors are better suited to stay shorter termed. This strategy will realize an adequate return while you wait for rates on the longer end of the curve to materialize, so basically *get paid to wait!*

Canadian Yield Curve



Source: Bloomberg, Raymond James Ltd.

Getting Paid To Wait

Below we have included a table of short-term instruments that you may want to consider when deciding on an investment for new money or for replacing a maturing issue. Among the below options we believe the most attractive instrument to purchase would be a banker’s acceptance issue due to its robust absolute yield, the fact that its trading at a discount to par and its overall high liquidity. If you do not need liquidity, the 1 year GIC is a very attractive rate for a 1 year locked-in term. As always, discuss your options with your financial advisor to see if any of the below investments are appropriate for your individual needs.

Short-Term Fixed Income Offerings

Product	Yield (%)		
	3M	6M	1YR
Canada Treasury Bills	1.40	1.52	1.79
GIC			2.45
Provincial Issue	1.50	1.60	1.95
BA from Major Bank	1.80	1.90	2.05
Bank Corporate Bond	1.75	2.00	2.15

Source: Raymond James Ltd. As at July 24, 2018

Harvey Libby
Fixed Income

Complementing Fixed Income Portfolios with Short-Term Structured Notes

Structured notes come in many different shapes and sizes and can be used to meet specific risk tolerances, time horizons and investment objectives. The **principal protected note (PPN)** or the **market-linked GIC (MLG)** are investment vehicles that can be utilized to enhance an existing portfolio’s ability to generate income while in addition, providing the potential to earn a variable return linked to the performance of an underlying index, ETF, a single stock, or even a basket of stocks.

Both PPNs and MLGs can be constructed to pay a fixed income stream quarterly, semi-annually or annually throughout the term of the note, or not at all. All PPNs and MLGs have a set maturity date and come with 100% principal protection at maturity.

While the PPN and MLG are very similar, there are a few key differentiating features:

- **Liquidity** – the PPN offers daily liquidity as most issuers maintain, under normal market conditions, a secondary market for their notes. The MLG on the other hand are

locked in for the entire term of the note, with a few exceptions.

- **Pricing** – the PPN is typically priced on a daily basis and can trade above or below its initial value throughout the term of the note. The MLG on the other hand never trades below its initial value throughout its term.
- **Insurability** – the MLG may be covered by CDIC up to a limit, whereas the PPN typically does not offer any CDIC coverage.

Below is an example of a short-term principal protected note that pays an annual fixed coupon (pricing shown is indicative and for illustrative purposes only).

Short-term PPN Pricing:

- **Term:** 3 years
- **Currency:** CAD
- **Underlying investment:** S&P/TSX Composite Low Volatility Index
- **Participation Rate:** 100%
- **Fixed Coupon:** 0.50% (paid annually)
- **Principal Protection:** 100% at maturity

Scenarios at Maturity

Underlying investment	Total Coupon Payments	Total Return	Annualized TR
+ 20%	3 x 0.50% = 1.50%	21.5%	6.7%
+ 10%	3 x 0.50% = 1.50%	11.5%	3.7%
0%	3 x 0.50% = 1.50%	1.5%*	0.5%*
- 20%	3 x 0.50% = 1.50%	1.5%*	0.5%*

* Returns are not 0 because principal protected

Source: Raymond James Ltd.

For example, even in the scenario where the underlying investment produces a negative return (-20%) over the term of the note, the holder would receive no less than a total return of 1.50% due to the annual coupon payments of 0.50% received.

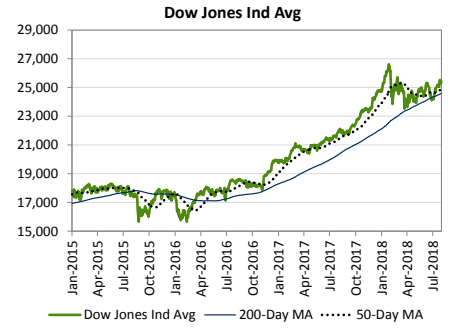
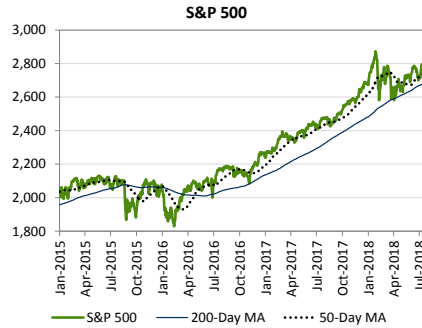
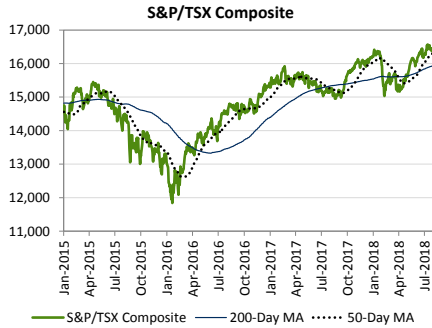
In conclusion, the PPN and MLG can serve as a suitable fixed income alternative to traditional fixed income instruments and can be positioned as such within a portfolio with the opportunity cost of investing in this type of product being very low given the current rate environment.

All the risks and benefits associated with principal protected notes or market-linked GICs must be carefully considered before purchase.

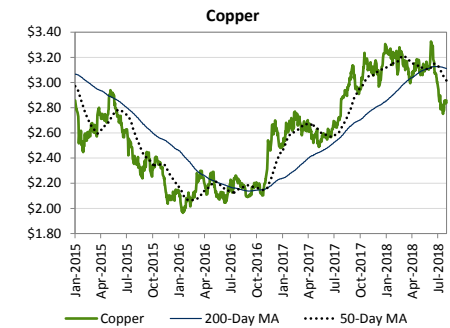
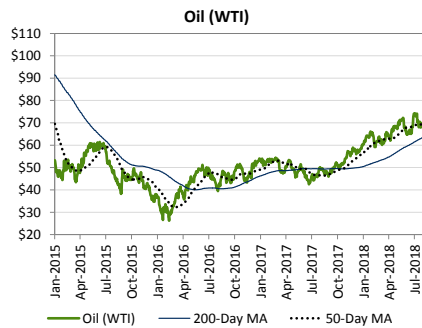
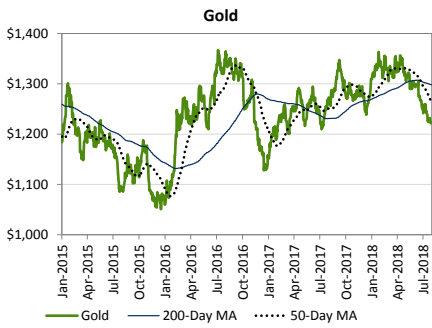
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Charts of Interest

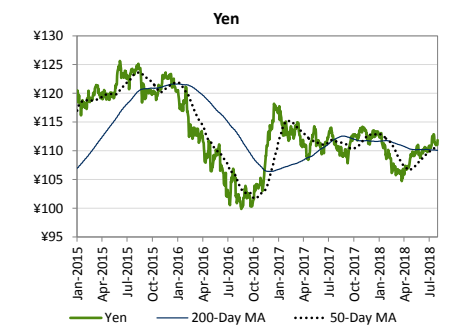
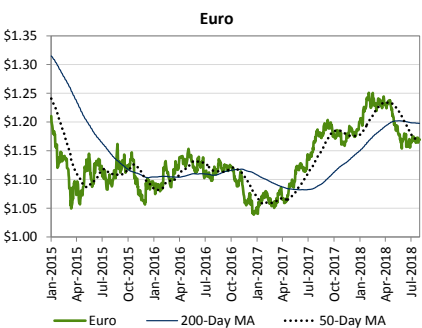
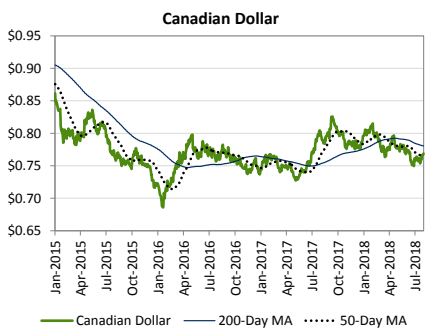
Markets



Commodities



Currencies



Source: Bloomberg, Raymond James Ltd. Performance as at July 31, 2018.

Investor Profiles and Asset Class Weightings

Recommended Asset Allocation					
Capital Preservation	Conservative	Moderate	Growth	Aggressive Growth	
Cash	5% (-2%)	5% (-2%)	5% (-2%)	5% (-2%)	5% (-2%)
Bonds	72% (+2%)	62% (+2%)	37% (+2%)	17% (+2%)	2% (+2%)
Can Equities	20%	23%	23%	23%	28%
US Equities	3%	10%	20%	33%	35%
Intl Equities	0%	0%	15%	22%	30%
Tactical Asset Mix (Bonds include cash)					
Bonds Equities	77 23	67 33	42 58	22 78	7 93
Strategic Asset Mix (Bonds include cash)					
Bonds Equities	80 20	70 30	50 50	30 70	10 90
Asset Ranges					
Cash	0-20	0-20	0-20	0-20	0-20
Bonds	60-100	50-90	20-70	10-50	0-30
Equities	0-30	10-50	30-75	50-90	70-100
Description					
May be appropriate for investors with long-term income distribution needs who are sensitive to short-term losses. The equity portion of this portfolio generates capital appreciation, which is appropriate for investors who are sensitive to the effects of market fluctuation but need to sustain purchasing power. This portfolio, which invests primarily in fixed-income securities, seeks to keep investors ahead of the effects of inflation with an eye toward maintaining principal stability.	May be appropriate for investors with intermediate-term time horizons who are sensitive to short-term losses yet want to participate in the long-term growth of financial markets. The portfolio, which fixed-income securities tend to make up the largest proportion of holdings, seeks to keep investors well ahead of the effects of inflation with an eye toward maintaining principal stability. The portfolio has characteristics that may deliver returns lower than that of the broader market with lower levels of risk and volatility.	May be appropriate for investors seeking a balance between capital preservation and capital growth. This portfolio, which is a split between fixed-income securities and equities, seeks to keep investors well ahead of the effects of inflation with an eye toward maintaining principal stability. With roughly half of the portfolio invested in a diversified mix of Canadian and international equities, investors should be comfortable with moderate fluctuations in the portfolios.	May be appropriate for investors with long-term time horizons who are not sensitive to short-term losses and want to participate in the long-term growth of the financial markets. This portfolio, which has a higher weighting in equities, seeks to keep investors well ahead of the effects of inflation with principal stability as a secondary consideration.	May be appropriate for investors with long-term time horizons who are not sensitive to short-term losses and want to participate in the long-term growth of the financial markets. This portfolio, which is primarily invested in equities, seeks to keep investors well ahead of the effects of inflation with little regard for maintaining principal stability. The portfolio may deliver returns comparable to those of the broader equity market with similar levels of risk and volatility.	

Important Investor Disclosures

Complete disclosures for companies covered by Raymond James can be viewed at: <https://www.rjcapitalmarkets.com/Disclosures/Index>

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