iA Wealth
Research Insight

Here's Why You Shouldn't Be Chasing Bond Fund Returns

September 10, 2019

Product Research & Oversight Team

JAMES GAUTHIER, CFA
(416) 601-2422
james.gauthier@iawealth.com

EDMUND FERNANDEZ, CFA, CIM
(416) 640-8270
edmund.fernandez@iawealth.com

COREY HURWITZ, MBA
(416) 350-3250 x6558
corey.hurwitz@iawealth.com

The initial inversion of the U.S. 10-year/2-year yield curve in early August triggered all sorts of chatter about how a recession is nigh and acted as a gut-punch to equity markets. The inversion also resulted in the bond market getting plenty of spotlight in the mainstream media, and we know that many clients and advisors have been trying to make sense of what's going on in fixed income land.

The inversion was driven by longer-term bond prices, which have soared over the past several months, sending yields lower and helping to drive the inversion. Case in point - the Canada 10-year government bond yield troughed at 1.09% on August 15 after beginning the year at close to 2% (the Canadian 10/2 yield curve actually inverted in early July). Since then, it has not been a matter of whether the curve has been inverted, rather, it's been a question of by how much. Also note that the U.S 10-year/3-month yield curve inverted back in March, but the 10/2 inversion got most of the attention.

> We believe that chasing performance in fixed income land may be indicative of a lack of understanding of basic bond arithmetic

Lower bond yields have led to spectacular shorter-term performance for most of Canada's major fixed income fund categories, and the money has followed. Flows into investment grade fixed income funds and ETFs have been huge so far this year.

This piece examines the performance success of these products, and the bottom line is that in order for there to be a repeat of the near-term performance success of these solutions, the unprecedented behaviour we've seen from global bond markets will have to become even more unprecedented.

We believe that chasing performance in fixed income land may be indicative of a lack of understanding of basic bond arithmetic, and investors who do not understand the mechanics of the market could be in for an ugly surprise if things don't go as they hope.

We continue to advocate for the use of investment grade fixed income in balanced portfolios but we believe that a basic understanding of the mathematics of bond pricing can be helpful in disarming the temptation to begin throwing excess capital at this red-hot area of the capital markets.

The Money Is Following the Returns

Bond returns have been on fire, and as Table I illustrates, six of the top ten performing mutual fund categories for the 12-month period ended July 31 were fixed-income focused. This has not been lost on investors. Canadian bond mutual funds and ETFs saw YTD inflows of $17.5 billion to July 31, a period in which net sales for the combined Canadian mutual fund and ETF industries were domiciled funds and ETFs were around $21 billion. U.S. domiciled fixed income funds and ETFs witnessed close to US$300 billion in flows during the same period. Some of the interest has been driven by defensive repositioning, but we reckon that a big chunk of the interest in bond funds boils down to good old fashioned performance chasing.

Table 1: Top Performing Fund Categories Over 1 Year to July 31 (%)

Name	1 Mo	3 Mo	6 Mo	1 Yr
Precious Metals Equity	6.7	23.9	15.7	19.7
Canadian Long Term Fixed Income*	0.3	6	10.1	13.6
Real Estate Equity	1.4	1.4	6.1	9.5
Global Infrastructure Equity	0	0.3	7.8	8.4
Emerging Markets Fixed Income	1.1	3.1	5.2	7.4
Canadian Fixed Income**	0.2	2.4	4.8	7.2
Canadian Inflation-Protected Fixed Inc	0.4	3.6	7.4	7.0
Global Corporate Fixed Income	0.7	1.9	5.2	6.8
US Equity	1.8	0.1	10.2	6.5
Canadian Corporate Fixed Income	0.4	2.0	4.5	6.3

*Fund duration must be an average of >9.0 years to qualify for this category

**Fund duration must be an average of between 3.5 and 9.0 years to qualify for this category

Source: Morningstar

Bond Math and Why it Matters

Let's put aside theories around why investors have been piling into bonds and bond funds and revisit the basics of bond pricing. Duration is the measure of the sensitivity of a bond's price to changes in interest rates, and this is key in explaining why bond funds have performed as they have. Duration is measured in years, and it is a different metric than average term to maturity (although these two items are related).

As an example, if a bond has a duration of seven years, its price will go up by about 7% if its yield drops by a percentage point. This same bond would decline in value by about 7% if its yield rose by a full percentage point.

Bond indexes and bond funds/ETFs with more long-dated holdings carry a higher duration than portfolios of short dated securities. As longer-term bond yields have declined, it is duration that explains why the average Canadian Long Term Fixed Income fund has performed better (13.6% for the year ended August 31) than the average Canadian Fixed Income fund over the same period (7.2%).

To add some context, the duration of the FTSE Canada Universe Bond Index, which is the go-to benchmark for the Canadian investment grade bond space, is more than eight years at this time.

For a great illustration of the power of duration, take the example of the Austrian 100-year government bond (yes, such a thing exists). This obligation, which matures in 2117, saw its yield slide from 1.76% at the start of the year to 0.69% by the end of August. This decline pushed the total return for the bond to a monumental 74% (in EUR terms) during that period. This bond now carries a duration of close to 60 years, so even the most minute change in its yield will equate to a massive swing in its price.

Convexity

Another important driver of returns for bonds is convexity. Convexity measures the sensitivity a bond's duration to yield changes. A bond with "positive" convexity sees its duration rise as yields move higher. This is additive to investor returns. Most conventional government and corporate bonds, and therefore, most plain vanilla bond funds and ETFs, exhibit positive convexity. The duration of the FTSE Canada Universe has increased from 6.2 years in 2005 to its current level of almost eight years and this has been a benefit to investors in long term bonds. If yields continue to decline, positive convexity means that duration would continue to rise.

> The point here is that changing credit spreads can be a real driver of bond fund/ETF returns.

Credit Spreads

A credit spread is the difference in the yield of a corporate bond and the yield of a government bond of the same maturity. The lower the quality of the corporate bond, the higher the spread. A spread is a premium that goes to the investor in exchange for assuming the additional credit risk of the bond (i.e., ultimate repatment at maturity). Even the bonds of the highest quality issuers will generally trade at a spread to government bonds. Spreads for the overall corporate bond market will widen or narrow based on economic conditions and investor appetite for risk.

Portfolios with significant exposure to corporate bonds will generally do better than portfolios with mostly government bonds of similar maturities when credit spreads tighten and the opposite is true when spreads widen.

About 70% of the FTSE Canada Universe bonds index is made up of paper issued by the Canadian federal government and the provinces, but we've observed that many bond funds tend to overweight corporate bonds. For example, TD Canadian Bond fund, a long time Recommended List constituent, had a corporate bond weighting of 62.3% according to its most recent Fund Facts.

The point here is that changing credit spreads can be a real driver of bond fund/ETF returns. Canadian investment grade credit spreads have not changed all that much on a YoY basis, meaning the juicy returns we've seen from the space have been generated mostly by capital gains from declining government bond yields.

Table 2: Top Bond ETF Characteristics and Returns

ETF	iShares Core Cdn Short Term Bond Index ETF	iShares Core Cdn Universe Bond Index ETF	iShares Core Cdn Long Term Bond Index ETF
Underlying Index	FTSE Canada Short Term Overall Bond Index	FTSE Canada Universe Bond Index	FTSE Canada Long Term Overall Bond Index
Ticker	XSB	XBB	XLB
Effective Duration	2.72 years	8.17 years	15.73 years
Wtd Avg Maturity	2.86 years	10.89 years	22.82 years
Wtd Avg. Coupon	2.51%	3.17%	4.16%
Wtd Avg Yield to Maturity	1.73%	1.97%	2.33%
12 Month Return to Aug 31, 2019	4.46%	9.47%	15.88%
12 Month Change in Yield to Match Trailing 12 Month Return	-1.0%	-0.8%	-0.8%

Bonds Will Need To Perform A Miraculous Feat to Repeat Their Recent Performance

Table II shows some of the characteristics and returns for three iShares bond index ETFs. The table also provides an approximation of what would have to happen to yields in order for the most recent annual return to be repeated.

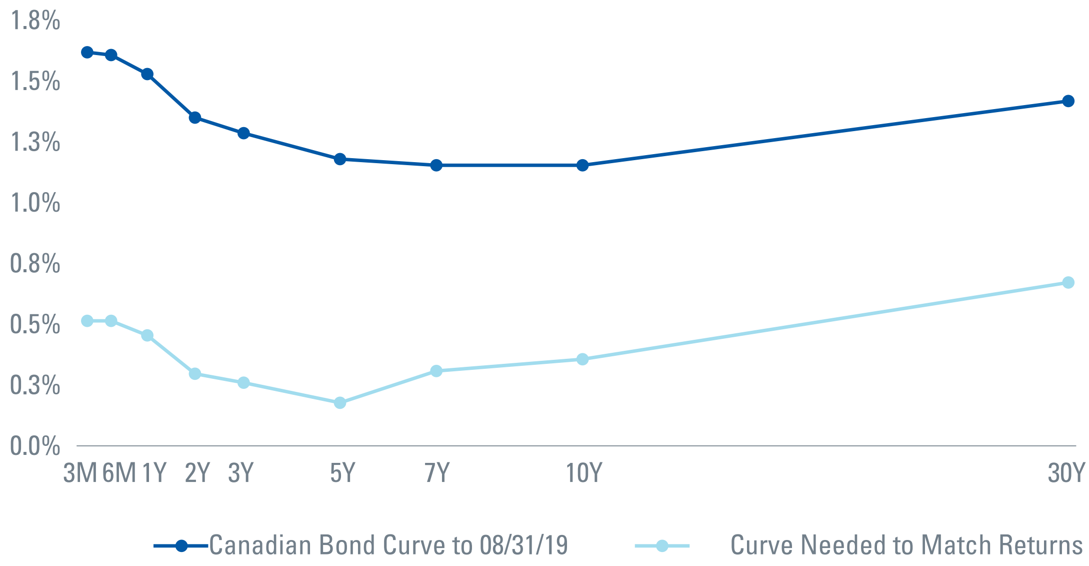
To further illustrate, Chart I illustrates hypothetically what the Canadian sovereign yield curve would look like if the returns experienced by investment grade bond products over the past 12 months are to to be repeated over the next 12 months. This assumes that credit spreads don't change, along with a few other things, but the point is that the historically low rates we are seeing would have to go materially lower from here in order to repeat the one year performance of the bond market.

Strange things have been happening in the bond market over the past decade, and we are not suggesting that the yield curve does not have the ability to shift dramatically lower. It can, and as government bond yields in much of the developed world indicate, the concept of zero bound interest rates is irrelevant. 10-year sovereign yields in Sweden, France, the Netherlands, Germany Switzerland and Japan are negative, for example. Even Portuguese 10-year government bonds, which were yielding in excess of 15% in 2012, have rapidly charged towards the zero yield barrier.

There's a good chance that a recession could push the Canadian sovereign yield curve much closer to zero, but increasing client allocations to investment grade bonds at this point is a pretty explicit wager on that outcome.

We will leave it to Clement Gignac and other economic watchers to make the recession call. We just know that unless there is a major deterioration in economic conditions or a significant exogenous dislocation, the arithmetic of bonds suggest that it will be difficult for the various bond fund categories to repeat the returns they achieved over the past year during the next 12 months. Chase the trailing returns at your peril.

Chart I: Current Canadian Sovereign Yield Curve vs. Where it Needs to Go To Match Past 12 Month Returns (Approximated)



Source: Bloomberg, iA Wealth.

Investment Recommendation Rating System

Recommended List: The list presents a selection of funds that we believe are among the best of their peers and offer unique characteristics that can add value when used in a well-diversified investment portfolio tailored to a client's investment objectives.

Hold:	The fund remains on the Recommended List, but is not recommended for adding to or selling from client's portfolios.
Sell:	The fund is no longer on recommended list.
Under Review:	The fund's participation on the Recommended List is under review.

General Disclosures

The information and opinions contained in this report were prepared by Industrial Alliance Securities Inc. (iA Securities). iA Securities is owned by Industrial Alliance Insurance & Financial Services Inc. (iA Financial). iA Financial is a TSX Exchange listed company and as such, iA Securities is related to iA Financial. The opinions, estimates and projections contained in this report are those of iA Securities as of the date of this report and are subject to change without notice. iA Securities endeavours to ensure that the contents have been compiled or derived from sources that we believe to be reliable and contain information and opinions that are accurate and complete. However, iA Securities makes no representations or warranty, express or implied, in respect thereof, takes no responsibility for any errors and omissions contained herein and accepts no liability whatsoever for any loss arising from any use of, or reliance on, this report or its contents. Information may be available to iA Securities that is not reflected in this report. Nothing contained in this report is or should be relied upon as a promise or representation as to the future. The pro forma and estimated financial information contained in this report, if any, is based on certain assumptions and management's analysis of information available at the time that this information was prepared, which assumptions and analysis may or may not be correct. There is no representation, warranty or other assurance that any projections contained in this report will be realized. Opinions, estimates and projections contained in this report are our own as of the date hereof and are subject to change without notice. This report is not to be construed as an offer or solicitation to buy or sell any security. The reader should not rely solely on this report in evaluating whether or not to buy or sell securities of the subject company. The reader should consider whether it is suitable for your particular circumstances and talk to your investment advisor.

Definitions

"The author" means any partner, director, officer, employee or agent of iA Securities who is held out to the public as a publisher of Investment Fund Research or whose responsibilities to iA Securities include the preparation of any written investment fund research report for distribution to clients or prospective clients of iA Securities. "Investment Fund Research" means any written or electronic communication that iA Securities has distributed or will distribute to its clients or the public, which contain author's comments concerning current Investment Fund indicators.

Conflicts of Interest

The author and or associates who prepared this report are compensated based upon (among other factors) the overall profitability of iA Securities, which may include the profitability of investment banking and related services. In the normal course of its business, iA Securities may provide financial advisory services for issuers. iA Securities will include any further issuer related disclosures as needed. iA Securities permits the authors to own and trade in the securities discussed herein. In that case, specific holdings disclosures will me made.

The Author's Certification

The author whose name appears on the front page of this Investment Fund Research report hereby certifies that (i) the opinions expressed in the investment fund research report accurately reflect the author's personal views about the marketplace and are the subject of this report and all strategies mentioned in this report that are covered by such the author and (ii) no part of the author's compensation was, is, or will be directly or indirectly, related to the specific views expressed by such technical strategies in this report. The author(s) of this report own(s) the following securities of the issuer(s): None.

Dissemination of Reports

iA Securities uses its best efforts to disseminate its investment fund research reports to all clients who are entitled to receive the firm's investment fund research reports, contemporaneously on a timely and effective basis in electronic form, via fax or mail.

For Canadian Residents

This report has been approved by iA Securities, which accepts responsibility for this report and its dissemination in Canada. Canadian clients wishing to effect transactions should do so through a qualified salesperson of iA Securities in their particular jurisdiction where their iA is licensed.

For US Residents

This report is not intended for distribution in the United States.

For EU Residents

This report is not intended for distribution in the European Union.

For UK Residents

This report is not intended for distribution in the United Kingdom.

Intellectual Property Notice

The materials contained herein are protected by copyright, trademark and other forms of proprietary rights and are owned or controlled by iA Securities or the party credited as the provider of the information.

Regulatory

iA Securities is a member of the Canadian Investor Protection Fund and the Investment Industry Regulatory Organization of Canada. iA Securities is a trademark and business name under which Industrial Alliance Securities Inc. operates.