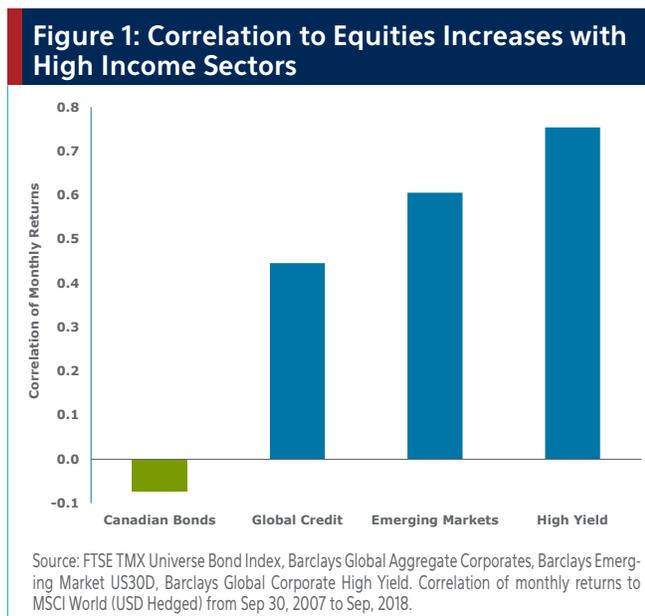




I Fixed Income: A Total Portfolio Perspective

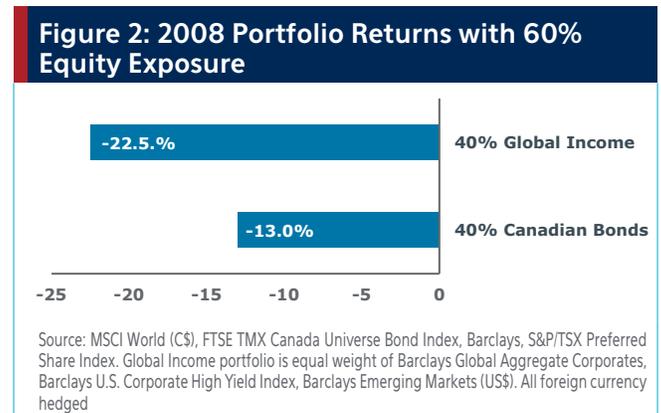
An efficient fixed income strategy should reduce the risk of the overall investment portfolio without sacrificing returns. As part of a balanced portfolio, fixed income can play an important role in reducing portfolio volatility and stabilizing the total portfolio in periods of equity stress.

The track record of the FTSE TMX Universe Bond Index fulfilling this role is highlighted by the negative correlation with global equity markets in Figure 1.



Interestingly, global income sectors that lack this diversification benefit and instead show a positive correlation with equities — such as global credit, emerging market and high yield debt — have seen growing interest in order to increase expected returns.

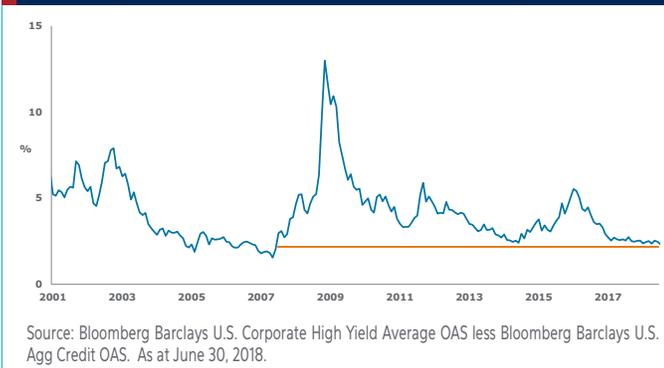
The underlying risks of credit strategies manifest precisely when defensive fixed income is needed most. For instance, as shown in Figure 2, balanced portfolios with 40% allocated to global income fell 22.5% in 2008 versus the 13% drop witnessed by those invested in the FTSE TMX Universe Bond Index.



In our view, measuring the incremental expected returns offered by global income (“credit”) sectors against the reduced diversification benefits requires analysis of historical pricing levels and the current phase of the business cycle.

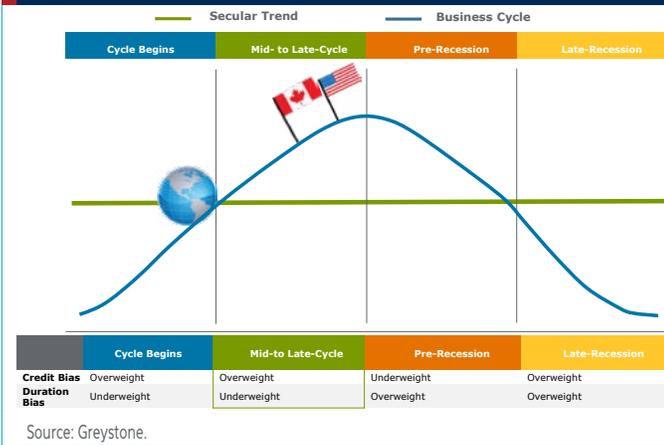
For example, high yield bonds appear expensive relative to history when subtracting the investment grade spread from the high yield spread (see Figure 3). The spread difference isolates the incremental compensation for taking on credit risk that is below investment grade and has recently compressed to pre-financial crisis levels.

Figure 3: U.S. High Yield vs Investment Grade Spreads



Determining where we are in the economic cycle provides a more nuanced view on credit positioning (see Figure 4). Credit exposures historically outperform government bonds when economic activity troughs in the late recession after corporate bonds sell-off and when the premium (or spread) provided is high. This outperformance typically continues through the mid-to-late phase of the cycle as spreads continue to contract. However, credit has shown less attractive attributes during the pre-recession phase of the cycle, which is characterized by waning economic growth as a result of tightening monetary policy. Credit tends to lead the economic cycle and sell-off in this stage, which is usually right before an actual recession.

Figure 4: Economic Cycle Informs Credit Bias

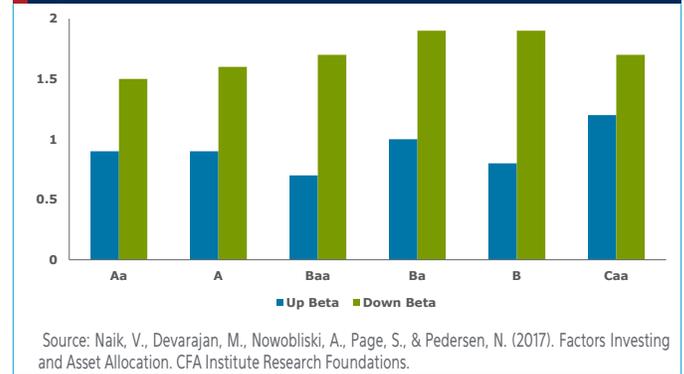


Empirical analysis of economic and financial metrics indicate that we are likely in the mid-to-late phase of the economic cycle, suggesting an overweight credit bias from a fundamental perspective. However, we recognize that as the business cycle matures so will our bias towards credit.

A manager’s ability to tactically underweight credit as the cycle rolls over is vital considering that equities also typically show outsized losses during the pre-recession phase of the

economic cycle. Credit also tends to exhibit a correlation creep to equities in periods of equity losses, depicted by the down beta measurements in Figure 5.

Figure 5: Credit Markets Sensitivity to Equity in Up and Down Markets



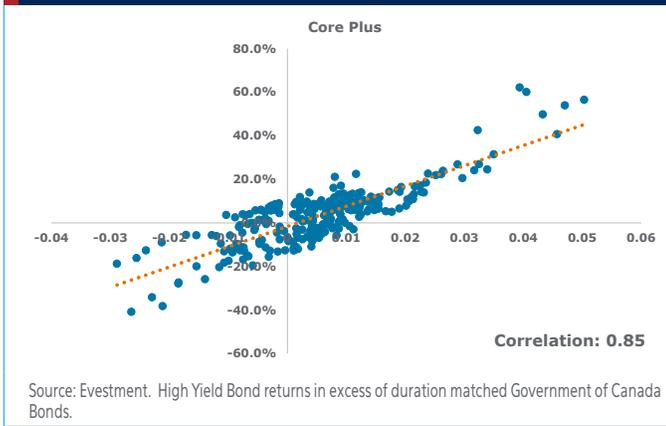
The degree to which Canadian fixed income managers are prepared to defend against these risks without sacrificing returns can be assessed through median manager historical return analysis sourced through eVestment. Figure 6 represents the historical median active returns for Core and Core Plus fixed income strategies and indicates that fixed income managers have generally been successful at adding value. What is interesting to note is periods of underperformance tend to correlate with recessions or stressed equity markets. As a result, active management may be fulfilling its role in value add but not necessarily stabilizing the risk of the total portfolio.

Figure 6: Canadian Fixed Income Core and Core Plus Active Returns



Considering the “equity-like” risks of credit highlighted in Figures 1, 2 and 5, it is prudent to determine if managers are increasing returns at the expense of total portfolio diversification. In Figure 7, we regressed the relative performance of Canadian Core Plus fixed income managers against the relative performance of high yield bonds and discovered a correlation of 0.83.

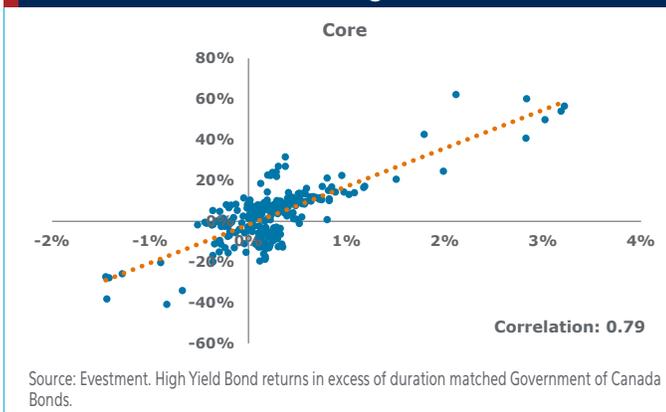
Figure 7: Core Plus Fixed Income Manager Active Return Correlation with High Yield Performance



This elevated correlation indicates relative performance of Canadian Core Plus managers is significantly dependent on strong credit and equity markets. Although this is not a holdings based analysis, it does imply that managers are extremely reliant on credit risks for active returns. This marginalizes the diversification benefit of the fixed income strategy given high yield's equity-like performance characteristics.

Core fixed income managers are typically prohibited from investing in high yield and we would expect a significantly lower correlation to credit risk and, therefore, equity. However, the regression analysis in Figure 8 indicates that the median Canadian Core fixed income manager's relative performance has a 0.78 positive correlation with high yield relative performance.

Figure 8: Core Fixed Income Manager Active Return Correlation with High Yield Performance



This does not mean that Core managers are specifically investing in high yield bonds. However, it does indicate that Canadian Core manager's active strategies may be overly reliant on credit exposure.

The degree to which Canadian fixed income managers are structurally overweight credit risk can be further understood

by assessing reliance on credit performance during different time periods. Meaningful variation in high yield exposures over time would indicate a non-structural active weight in credit risk given the various credit market conditions over the last 20 years. Figure 9 depicts the rolling 36 month correlation between high yield performance and the median Core and Core Plus performance.

Figure 9: Core & Core Plus Rolling Correlation with High Yield



For both Core and Core Plus strategies, the correlation is considerably and consistently positive over the past 20 years and indicates that managers were either long, or very long, credit risk in their portfolio. This implies that while credit exposures may be reduced, Canadian fixed income managers tend to maintain a structural overweight to credit risk and are susceptible to not fulfilling the role of a defensive anchor.

We believe that a prudent approach to fixed income active management is one that will harvest credit premiums when they are available, while also reducing credit exposures when spreads are tight and the economic cycle nears its end. This balance can allow for a portfolio that both seeks to add value above benchmarks while preserving the stabilization of portfolio risks.

In summary;

- We determined an efficient fixed income portfolio is one that can potentially reduce the risk of the overall portfolio without sacrificing returns.
- We highlighted how fixed income managers can fulfill this role through the added use of credit but must be willing to tactically overweight or underweight the sector given historical pricing levels and the current stage of the economic cycle.
- We illustrated that Canadian Core and Core Plus fixed income managers appear to be structurally overweight credit risk and are undermining the need for a defensive strategy within the overall portfolio as a result.

Disclosures

This paper is provided for informational purposes only, is not meant as investment advice and in should not be considered a recommendation to purchase or sell any particular security. There is no assurance that any predictions or projections made will occur. Past performance is not indicative of future results.

Commentary contained in this paper reflects the opinions of Greystone Managed Investments Inc. at the date of the report. It was developed from sources that Greystone believes to be reliable. Greystone does not guarantee the accuracy or completeness of such information. Greystone's opinions and viewpoints may change over time.

No part of this material may be duplicated by any means for distribution to any person who is not an employee, officer, director or authorized agent of the recipient without Greystone's prior written consent.

Copyright Greystone Managed Investments Inc. All rights reserved.

As of November 1st, the acquisition of Greystone by The Toronto-Dominion Bank closed and Greystone now operates as TD Greystone Asset Management.



¹ As at Sept 30, 2018.

Greystone Managed Investments Inc.

With over \$35 billion in assets under management,¹ we proudly serve universities, pension funds, multi-employer groups, endowments & foundations, insurance companies, and non-profit organizations.

Greystone has in-house expertise in the following areas:

MULTI-ASSET

- Balanced
- Balanced Plus
- Target Date Plus
- Alternative Plus⁴

ALTERNATIVES

- Real Estate
- Infrastructure

PRIVATE DEBT

- Mortgages

FIXED INCOME

- LDI
- Term
- Plus
- Sector

PUBLIC EQUITIES

- Canadian & U.S.
- International
- Global
- China

FOR FURTHER INFORMATION PLEASE CONTACT:

Toll Free: 1.800.213.4286

Email: inquiries@greystone.ca

Greystone.ca