Fixed Income Management Series

INSTITUTIONAL

IS CORE PLUS WORTH THE FUSS?

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Executive Summary

Institutional fixed income investors in Canada are at a crossroads in determining the right mix of fixed income assets that generate higher total returns while maintaining the appropriate level and type of risk. In addition, a Canadian institutional investor with future liabilities in Canadian dollars must maintain meaningful market exposure to domestic fixed income assets to avoid a large asset-liability mismatch.

In order to increase total return potential as well as capitalize on diversification benefits to a fixed income portfolio, institutional investors are now seeking to loosen constraints in order to gain global exposure. A 'Plus' strategy, including elements such as global developed sovereign bonds, high yield bonds and emerging market debt, can be added alongside an active Canadian core portfolio. However, an investor must be cognizant that these return-seeking additions do not lead to a portfolio with exposure to higher and unwanted risks.

Our research has led us to determine that a holistic approach to managing a core plus portfolio is the most appropriate strategy for a Canadian institutional investor.

The holistic core plus approach incorporates global fixed income opportunities on a "best ideas" basis, in the context of an active Canadian core portfolio. This way, the value adding strategies of an active Canadian bond portfolio (duration management, yield curve positioning and sector allocation) are not diluted when global bonds are introduced. Also, the risk management characteristics are more appropriate for an investor with domestic liabilities. This approach achieves the right balance of return enhancement and risk awareness for Canadian fixed income investors.

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CIBC Asset Management Inc. (CAM) is publishing a series of papers outlining our research and recommendations for managing fixed income assets. This research paper, "Is Core Plus Worth the Fuss?", is the second in the Fixed Income Management Series to be published by our Fixed Income Team in conjunction with the Institutional Advisory Group.

In the first research paper we expressed our view that fixed income managers are no longer able to generate adequate returns simply by gaining market exposure and relying predominantly on beta. Relative to the past, active returns are expected to make up a more significant proportion of total fixed income returns and investors should favour a manager who is actively seeking and capturing market inefficiencies.

This research paper will explore the extent to which this active concept should be utilized and expanded upon for an institutions' fixed income exposure. We will discuss the trend towards loosening constraints on a traditional Canadian core fixed income portfolio to allow global fixed income exposure as well as the implications of these changes to both alpha and beta capture. As the low yield environment persists and with the looming threat of a rise in interest rates, institutional fixed income investors are at a crossroads in determining the right mix of fixed income assets that generate higher total returns, while maintaining the appropriate level and type of risk.

Based on our research, we believe that by selecting a 'core plus' strategy for institutional fixed income assets, investors have the opportunity to balance the opportunity for higher total return with the appropriate risk exposure for a Canadian institution. The core plus approach to fixed income investing allows exposure to a number of securities outside of the standard Canadian universe benchmark. We have attempted to answer the question, is core plus worth the fuss by conducting in-depth research on the types of core plus strategies available to investors, the asset classes which can provide the potential for increased risk-adjusted returns and have determined what we believe to be the best approach for a Canadian institution.

Importance of Fixed Income

Before we examine the core plus concept in detail, we should remind ourselves of the importance of a Canadian fixed income allocation in an institutional portfolio. Fixed Income:

1. plays a large role in the safety of principal for the total portfolio, and, as such, the asset class acts as a hedge against an economic downturn;
2. generates a stable cash flow to help meet income requirements;
3. acts as a source of portfolio liquidity; and
4. acts as a hedge against liability movements which, while crucial for pension plans, is also important for all investors who have the objective of meeting a future liability.

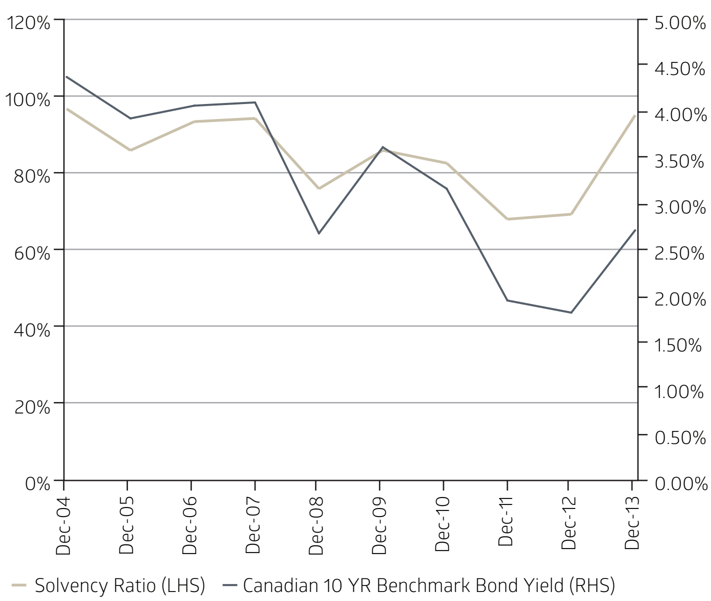
The first three benefits of fixed income exposure, safety of principal, income generation and liquidity, are self explanatory. We will explore the fourth point, hedging against liability movements, in more detail.

Asset – Liability Matching

If we isolate the impact of a single variable, interest rates, on a pension plan's funded status, and focus on the liability hedging benefit of fixed income investments, it is clear that, in an optimal portfolio, the duration of the portfolio's assets should be matched with the duration of the plan's liabilities. This asset-liability matching helps to ensure that the assets and the future liabilities they support move in tandem as interest rates change. Isolating the impact of interest rate movements helps us to understand this funding status variable. Obviously, others factors need to be considered, such as the returns in the growth portion of the portfolio, and other actuarial assumptions. As has been the case in recent years, interest rates have declined to record low levels and, as a result, the future value of a pension's liabilities has increased as the discount rate has declined. The discount rate used to determine the present value of future liabilities for the solvency method (the measure of a plan's ability to meet its future debt obligations) is a government interest rate. **In essence, a pension plan using the solvency method to determine the value of its future liabilities is forced to align their fixed income market exposure (beta), with this discount rate.**

The chart below illustrates how well the Canadian 10-Year Government Bond Yield tracks a pension plans' funded status as measured by its ability to meet future obligations (using the solvency ratio).

MOVEMENT OF CANADIAN SOLVENCY RATIO RELATIVE

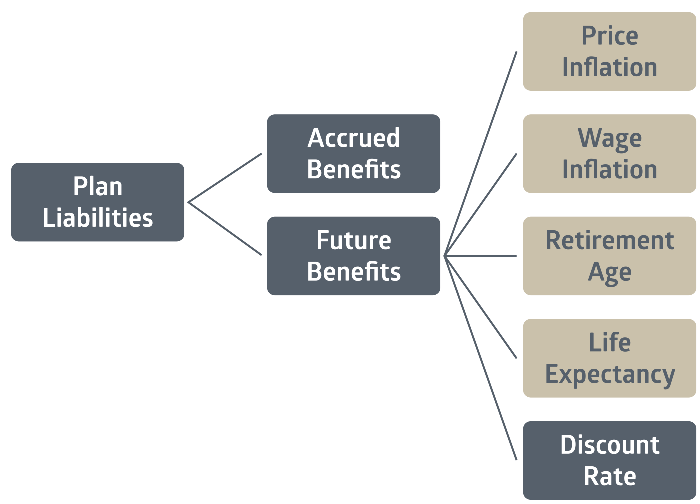


As of December 31, 2013. Source: AON Hewitt

This asset-liability matching premise is also relevant to other institutional investors as well as retail investors who have any future liability, such as retirement or education payments. Investing in fixed income can act as a hedge against movements in future liabilities which, as demonstrated, is crucial to ensuring that future liabilities are fully funded by assets.

In immunizing against movements in future liabilities, traditional asset-liability matching methodologies focus on matching the present value and durations of both assets and liabilities; both interest rate-focused metrics. While sufficient for mitigating known liabilities (accrued benefits in the case of a pension plan), this ignores the other variables that typically impact a plan's future benefits. The future benefits are often the largest portion of an ongoing plan's liabilities. There are a number of variables in addition to the discount rate, as seen in the red boxes of the diagram below, that impact the present value of liabilities. Because these variables are often consistent across a country's population and differ from country to country, there are legitimate reasons to favour domestic fixed income instruments over foreign substitutes. Domestic assets will move more closely with liabilities when the same variables are inputs to determine the valuation of both. For our analysis, we assumed we are looking at an open Canadian pension plan with benefits that are indexed to price inflation via CPI.

VARIABLES IN DETERMINING PRESENT VALUE OF A PENSION PLAN'S FUTURE LIABILITIES



Investing in Foreign Fixed Income

The table on the next page outlines economic statistics for Canada as well as several emerging market countries and the correlation between movement in the Canadian economy and the economic data points for Russia, China and Mexico.

FIGURE 5 – CREDIT METRICS THEN AND NOW (EX. FINANCIALS)

Price Inflation	↑	YoY Change In CPI	0.94	6.50	2.50	3.97	0.49	-0.02	0.37
Wage Inflation	↑	YoY Change in Nominal Wages	2.38	9.30	18.90	4.03	0.35	0.28	0.04
Retirement Age	↑	Average Retirement Age	63.80	63.30	66.80	72.30	0.71	0.35	-0.77
Life Expectancy	↑	Average Life Expectancy	81	69	74	77	0.55	0.98	0.99

CPI and Wage Growth as of December 31, 2013. Life Expectancy and Average Retirement Age as of December 31, 2012. Source: Bloomberg LP

As shown above, price and wage inflation of these emerging markets are largely uncorrelated to the equivalent Canadian figures. This poses an immunization risk to domestic plans invested in these foreign countries as their asset prices are driven, to some degree, by variables uncorrelated with the Canadian economy.

To minimize return fluctuations resulting from movements in foreign economies, investing in domestic fixed income assets that provide a better match to economic fundamentals is beneficial.

Therefore, we will call investing abroad equivalent to "dilution of Canadian beta", meaning that an investor's exposure to domestic market movements is lessened and the investor is increasingly exposed to fluctuations in foreign markets. The greater the foreign fixed income exposure, the greater the Canadian beta dilution. The challenge when broadening the scope of a fixed income strategy is to balance the diversification and return enhancement without materially diluting the beta.

Consideration for Total Return

While we are confident that investing in fixed income is beneficial given its risk-mitigation features, we will spend some time on the total return aspect of fixed income while remaining cognizant of risk considerations.

At CIBC Asset Management, we believe that we can employ the active management strategies discussed in our first paper, namely sector allocation, duration management, yield curve positioning and security selection strategies, and further enhance these returns with the addition of global fixed income strategies without sacrificing the benefits of a domestic fixed income portfolio. We cannot stress enough the importance of managing the balance between domestic and foreign exposure because, in the current environment, we believe many are abandoning the risk mitigating features of fixed income for total return opportunities. We believe that if investors move too far along this continuum, away from the fundamental benefits of fixed income, they will distort the Canadian market exposure that they are trying to capture.

Beta Dilution

Why should we consider global fixed income when allocating to these asset classes erodes Canadian market exposure? As expected, the illustration below confirms the beta dilution argument, as a basket of non-Canadian fixed income exposures will have a lower correlation to an investors liabilities. Investors need to be aware of this as they allocate away from Canadian fixed income.

CORRELATION WITH CANADIAN PENSION LIABILITIES

+	−
Canadian Government Bonds	US Government Bonds US Corporate Bonds US High Yield Bonds
Canadian Corporate Bonds	Global Developed Sovereign Bonds E.M. Debt Distressed Securities
Avg. Correlation of Return to Canadian Pensions Liabilities = 0.94[1]	Avg. Correlation of Return to Canadian Pensions Liabilities = 0.31[1]

[1]Average of 3-year correlations of various indices to the Towers Watson Canadian Liability Index using quarterly returns to the period ended December 31, 2013. All returns were converted into Canadian dollars using spot rates.

Sources: Towers Watson Canadian Pension Liability Index, Bloomberg Canadian Government and Canadian Corporate IG Indices, Bloomberg US Government and US Corporate IG Indices, BofA Merrill Lynch US High Yield Master II, J.P. Morgan Global Bond Index Unhedged, J.P. Morgan Emerging Markets Bond Index Plus, Barclay Distressed Securities index

Given this lower correlation with liabilities, we have to identify what benefit a global fixed income allocation may have to a Canadian portfolio. Will these allocations improve portfolio diversification and enhance expected returns? If not, there is no benefit to weakening the intended Canadian domestic exposure. Also, what allocation can be made to foreign assets before the balance is altered to the point at which portfolio diversification and expected return enhancement come at the cost of unacceptable beta dilution?

Canadian Fixed Income Composition

Let's examine the make up of the Canadian fixed income market as represented by the FTSE TMX Canada Universe Bond Index (formerly DEX Universe Bond Index). How broad is the benchmark and does it constrain managers in their search for alpha? Does it concentrate risk? Is there a better way to combine the benefits of benchmarking while addressing the market breadth? Recall that in our first research paper we explained that the Canadian bond market is the composition of the accumulated issuance of issuers in that market.

The four main exposures in Canada are the Governments of Canada, Ontario, Quebec and the Financials sector, which together represent nearly 75% of the benchmark. The table below illustrates how highly correlated these components are to the Canadian 10 Year Government Bond yield (which is a good proxy for the liability discount rate). Therefore, the opportunity for increased diversification is large for investors who are able to loosen the traditional investment constraints. However, before changing constraints, we should recall that these four main issuers mentioned above are considered low risk (meet safety of principal and liquidity standard) and have high correlations with the discount rate (meet liability matching standard). Maintaining the exposure is important, but enhancing it with diversification benefits is beneficial.

CORRELATION IN PERFORMANCE BETWEEN MAJOR CANADIAN FIXED INCOME ISSUERS

	GOV 10 YR	FEDERAL	PROVINCIAL	FINANCIAL
Gov 10 yr	1.00			
Federal	0.89	1		
Provincial	0.87	0.95	1.00	
Financial	0.81	0.93	0.89	1.00

Source: FTSE TMX Global Debt Capital Markets Inc. Daily, January 1, 2004 to Dec 31, 2013.

Since these major exposures in the Canadian benchmark are generally considered to be lower risk, there are also enhanced return opportunities to be exploited by loosening portfolio constraints and gaining exposure to high yield and foreign markets while keeping risk in the portfolio diversified. The table below shows the historical total returns of these 'plus' exposures.

GLOBAL BOND INDEX RETURNS

INDEX	5Y ANNUALIZED RETURN
JP Morgan Government Bond Index Unhedged (USD)	2.38%
JP Morgan Emerging Market Bond Index Plus (USD)	10.73%
Bank of America Merrill Lynch US Corporate Index (USD)	8.93%
Bank of America Merrill Lynch Global High Yield Index (USD)	19.52%
FTSE TMX Canada Universe Bond Index (CAD)	4.78%

Ending December 31, 2013
Sources: J.P.Morgan Global Index Research, Bank of American Merrill Lynch, Barclays Capital, FTSE TMX Global Debt Capital Markets Inc.

5-YEAR CORRELATIONS

Index	JPM EMBI+	JPM GBI Unhedged	BofA ML US Corporates	BofA Global High Yield	FTSE TMX Canada Bond Universe
JPM EMBI+	1.00				
JPM GBI Unhedged	0.74	1.00			
BofA ML US Corporates	0.78	0.85	1.00		
BofA Global High Yield	0.57	0.33	0.54	1.00	
FTSE TMX Canada Bond Universe	0.62	0.65	0.53	0.22	1.00

As at December 31, 2013. Monthly correlations.
Sources: eVestment Analytics, J.P.Morgan Global Index Research, Bank of American Merrill Lynch, Barclays Capital, FTSE TMX Global Debt Capital Markets Inc.

Globalizing the Canadian Fixed Income Portfolio

How do we go about introducing these diversifying and return-enhancing opportunities? In our research, we explored several strategies with a focus on the impact to both the alpha and beta of each. There are broadly three methods for adding foreign exposure to a Canadian fixed income portfolio: 1) Do It Yourself 2) Core Plus, and 3) Unconstrained Approach.

1) DO IT YOURSELF

The first option is to simply allocate to several different fixed income strategies. An investor can reduce the allocation to a traditional Canadian fixed income strategy weight to fund allocations to different global bond strategies. Assuming a 60% weight to fixed income in an overall portfolio, investors could structure a portfolio with holdings similar to the table below.

ADDITION OF GLOBAL BOND STRATEGIES

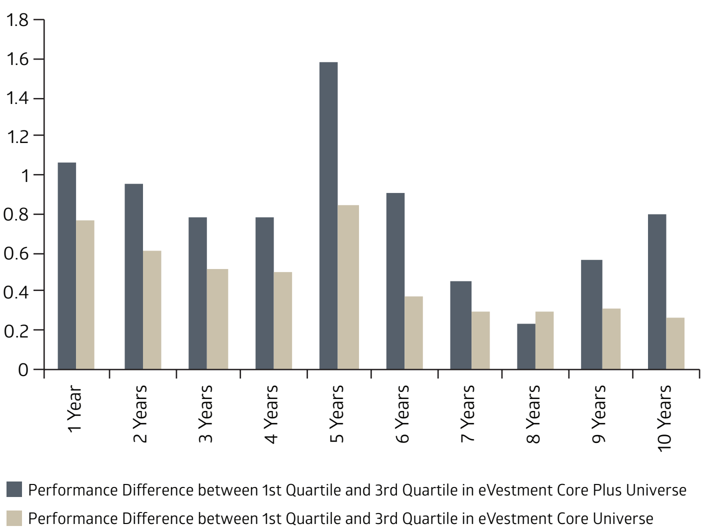
TOTAL PORTFOLIO	OLD ALLOCATION	NEW "DO IT YOURSELF" ALLOCATION
Fixed Income		
- Core Fund	60%	30%
- High Yield Fund		10%
- Emerging Market Debt Fund		5%
- Global Sovereign Fund		10%
- Global Corporate Fund		5%
Equity/Alternatives	40%	40%
Total	100%	100%

In this option, investors get exposure to non-Canadian fixed income, which is expected to improve overall portfolio diversification and expected return. However, this option means that multiple fixed income managers have to be selected to manage each individual and monitored. In addition, the asset allocation in this case is static and an investor will need to address the manual rebalancing. Also, as a result of the dynamic changes in the market, investors have to constantly monitor the global economy to implement an optimal asset allocation. More importantly, this structure is a poor beta replicator for Canadian investors with Canadian liabilities, diluting liability hedges. Finally, the safety of principal and liquidity principles are compromised exposing the investor to drawdown risks. These structural elements make this time consuming and can expose an investor to unwanted and unnecessary risks.

2) CORE PLUS

A second option would be to incorporate the traditional core and 'plus' components listed above into a single strategy. The immediate benefit of this approach is the selection and monitoring of a a single manager. The selected manager will manage the appropriate asset allocation among the components. More importantly, the allocations can be opportunistic so that the beta replication features are not diluted. We believe this is a balanced approach that incorporates an improved portfolio diversification/expected return profile without diluting the Canadian market exposure features. However, the expertise and experience of the manager becomes more important in this option as one manager is selected to manage all fixed income components. The chart below shows the performance difference between the first quartile and the third quartile performance in the core plus universe versus the core universe. The wider performance range in the core plus universe reveals the increased importance of manager selection as well as the differentiated approaches available in the subuniverse.

PERFORMANCE OF CORE AND CORE PLUS PORTFOLIOS



Ending December 31, 2013. Source: eVestment Analytics. Annualized returns are grossed fees.

There are two methods of structuring a core plus approach, each with its own philosophical differences:

I) BOLT-ON APPROACH

In the first method, the bolt-on approach, a single manager allocates to different global fixed income funds at the expense of the core approach. In this case, **the core component is often built more passively (not always) as the only goal of this fixed income component is to be the Canadian beta replicator**. Also, some of these managers have less experience with Canadian fixed income. Given the concentration risk described earlier this component of the portfolio (which can account for 60%- 80% of the total portfolio) may lead to missed opportunities to add value and protect capital. While proponents of this approach will argue that the Canadian portfolio is enhanced by a diversified allocation to specific global fixed income exposures, we would argue that unintended beta exposures will populate the Canadian portfolio, weakening the intended Canadian exposure.

The table below highlights the potential exposures to a fixed income portfolio with this fund-of-fund structure. The potential global bond funds included in this strategy are managed against foreign benchmarks and potentially add risky and lower quality exposures to a Canadian portfolio. Canadian investors may wish to avoid exposures to these securities because of the potential volatility it may introduce to the fixed income portfolio.

ACTUAL EXPOSURES IN GLOBAL INDICES

GLOBAL FIXED INCOME EXPOSURE	BENCHMARK	LOW QUALITY EXPOSURE	% EXPOSURE
Global Developed Country Sovereigns	JPM Government Bond Index - Broad	Peripheral Europe Sovereign Debt	11.1%
Emerging Market Debt	JPM Emerging Markets Bond Index	Venezuela Sovereign Debt	8.5%
High Yield	BofA ML High Yield Index	CCC/CC/C – Rated Issues	16.2%

As at December 31, 2013.
Sources: J.P.Morgan Global Index Research, Bank of American Merrill Lynch

If a core plus portfolio has an allocation to emerging market debt and this exposure is gained through a fund, this fund is probably being managed against an EMD benchmark. This benchmark has a significant exposure to Venezuelan sovereign debt. An active manager, conscious of tracking error risk, may choose an underweight allocation to the country relative to the benchmark instead of avoiding exposure to the position entirely. For the emerging market debt manager, this is an underweight position, for the core plus portfolio, it is an active position and is not necessarily the type of exposure a Canadian core plus investor is seeking.

We do agree that, because the allocation to global funds is opportunistic and not static, this strategy does partially mitigate the weakening Canadian beta dilution argument; however, our next approach goes a step further by, not only allocating opportunistically, but also implementing a holistic portfolio approach which helps to ensure that individual bond holdings are relevant for a Canadian portfolio.

II) HOLISTIC APPROACH

CIBC Asset Management believes the second Core Plus method, a holistic core plus approach, is a better strategy for Canadian institutional investors. The holistic core plus approach incorporates global fixed income opportunities on a "best ideas" basis, in the context of an active Canadian core portfolio. Therefore, each individual global bond security is added to the Canadian portfolio and evaluated relative to the domestic security it replaces. This way, the top down value adding strategies of an active Canadian bond portfolio (duration management, yield curve positioning and sector allocation) are not diluted when global bonds are introduced. Also, the risk management characteristics are more appropriate for an investor with domestic liabilities. Given the "best ideas" approach, the securities added are best for a Canadian portfolio. This does not necessarily mean the highest returning security. In fact, in the high yield bond universe for instance, adding a lower yielding, higher quality corporate bond might work better for a Canadian portfolio.

3) UNCONSTRAINED

We can take the idea of loosening constraints one step further and implement an unconstrained approach that incorporates the global opportunity set and becomes completely benchmark agnostic (agnostic of the traditional benchmark, that is). Without being tied to any fixed income sectors or regions, this non-traditional fixed income strategy allows managers to add value through active sector allocation across the whole fixed income spectrum. Managers can also effectively eliminate interest rate risk by maintaining short or even negative duration to protect the portfolio from rising interest rates. By removing benchmark constraints, portfolio managers are given the flexibility to capture opportunities in various areas, such as credit, sector, interest rate and volatility. This strategy calls for sophisticated investment management techniques and a managers' investment skill is a critical factor to performance. However, this approach does a very poor job of managing the investors' Canadian beta replication needs and is an inappropriate strategy for an investor that requires liability hedging.

The table below summarizes the different methods of incorporating global fixed income in a Canadian portfolio with descriptions of the impact of each to alpha and beta.

We believe the approach that least dilutes the desired Canadian fixed income beta, while achieving an improved expected return with enhanced portfolio diversification is the holistic core plus approach. While the return opportunities arguably may be at times lessened relative to some of the other strategies, this approach achieves a balance of return enhancement and risk awareness for many Canadian fixed income investors.

Portfolio Construction

What is the ideal allocation to balance the enhanced diversification and return benefits while maintaining the desired Canadian market exposure? A survey of core plus strategies produced an average 30% allocation to nonbenchmark securities. We believe that it is no coincidence that this commonly-used 30% allocation has its roots in the former "foreign-content rule". However, the 30% allocation actually works out to be an ideal allocation. The illustration below shows that this allocation provides a balance between managing risk and broadening the opportunity set to allow enhanced alpha opportunities. We modeled portfolios using the FTSE TMX Canadian Universe Bond Index as the base portfolio and gradually added a basket of foreign benchmark exposures. The basket is made up of the following weights: 33% Global High Yield, 33% U.S. Investment Grade, 17% Global Developed Sovereign Bonds, and 17% Emerging Market Debt. For simplicity, the allocations were static. As expected, historical returns increased as we increased the foreign exposure, but risk, as measured by the standard deviation of returns, also increased. When looking at a riskadjusted measure, such as the Sharpe ratio, we notice that the measure increases at higher foreign weightings, but at a declining rate. On a risk-adjusted return basis, while the argument to add more foreign exposure is valid, we have diminishing motivations to do so as the foreign allocation increases. With 20%-30% allocations an optimal balance to achieve greater risk-adjusted returns appears to be struck.

FIXED INCOME STRATEGIES

	CAPITAL PRESERVATION & LIQUIDITY	INCOME GENERATION	LIABILITY HEDGING	PORTFOLIO CONSTRUCTION
Active Core approach	High Investment in domestic investment grade provide great safety	Low Canadian concentration generates lower returns	High Close correlation with the liabilities	Best One fund, easy to manage
Do it yourself	Low Direct allocations to Foreign Bond strategies could erode capital during negative market events	High Direct exposure to higher yielding strategies increases income generation	Medium Worsens liability hedge as non-correlated strategies to base are added	Poor Requires asset allocation management and balancing
Core Plus with a bolt-on approach	Medium 'Bolt-on' component during crisis period can be problematic	High	Medium Unintended beta exposure	Good One fund; however, different sub-managers
Core Plus with a holistic approach	**High Better returns with less volatility**	**High Opportunistic allocation on 'best ideas' basis**	**High Beta exposure relevant to a Canadian portfolio**	**Best One fund, easy to manage**
Unconstrained approach	Low Greater performance volatility	High Greater return potential	Low Low correlation with the liabilities	Best One fund, easy to manage

SAMPLE PORTFOLIO ALLOCATIONS

PRODUCT/FUND NAME	RETURNS – 5 YEARS (12/2013)	STD DEV – 5 YEARS (12/2013)	SHARPE RATIO – 5 YEARS USING CIBC WM 91-DAY TREASURY BILL (12/2013)	SHARPE RATIO – 5 YEARS INCREMENTAL ADD (12/2013)
Portfolio 0% Foreign	4.86	3.40	1.34	–
Portfolio 10% Foreign	5.22	3.52	1.42	+0.08
Portfolio 20% Foreign	5.57	3.75	1.44	0.02
Portfolio 30% Foreign	5.93	4.05	1.44	0.00
Portfolio 40% Foreign	6.28	4.42	1.41	-0.03
Portfolio 50% Foreign	6.63	4.85	1.38	-0.03

As at December 31, 2013. Source: eVestment Analytics

Another method of controlling for Canadian beta dilution is to add foreign allocations on an opportunistic, instead of on a static basis. Therefore, if a 30% target is the maximum foreign bond allocation allowed, 0% should be the minimum. This feature is important so that risks can be controlled and even avoided when foreign bond market disruptions occur. This active asset allocation management is an additional feature incorporated in a core plus approach. Implementing a static foreign bond allocation to a core plus approach introduces real drawdown risks and, over time, some beta dilution appears inevitable.

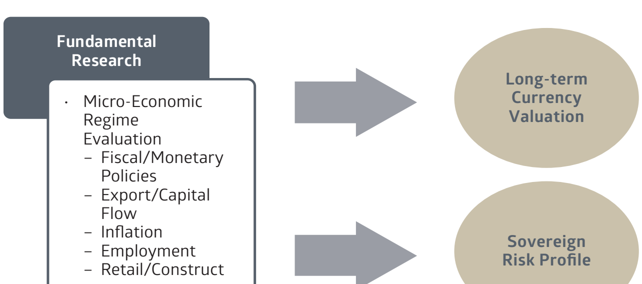
Finally, if security allocation decisions are being made as opposed to asset allocation decisions, there is a greater understanding of how that security will fit the core portfolio, allowing for less beta dilution. For example, adding high yield and emerging market debt allocations will likely reduce portfolio duration relative to the Canadian benchmark. If using a bolt on approach, this disrupts the portfolio's duration and yield curve strategies. Another implication is that a durationmismatched portfolio relative to the benchmark will occur.

Adding security selection ideas to enhance a core portfolio allows a manager to add the needed exposures at the security level, allowing for a more efficient portfolio construction process. In addition, using a holistic portfolio solution for core plus, a core plus "best ideas" structure, ensures that only the best research ideas based on the expertise of the manager are included in the portfolio.

CURRENCY

As illustrated below, global bond research and currency research are linked because many of the inputs are similar and the same factors are analyzed.

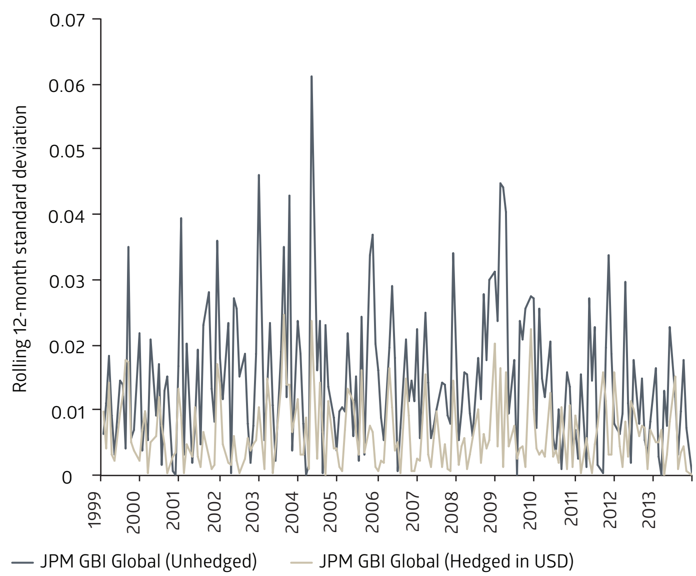
GLOBAL BOND RESEARCH VS CURRENCY RESEARCH



Source: CIBC Asset Management

However, the graph below shows that currency volatility is far greater than bond volatility. The data implies that if you do not manage the currency risk when investing in global bonds, the standard deviation of the portfolio tends to increase.

VOLATILITY OF JPM GBI GLOBAL INDEX (UNHEDGED) VS JPM GBI GLOBAL INDEX (HEDGED IN USD)



Ending December 31, 2013
Sources: J.P.Morgan Global Index Research, CIBC Asset Management

Given this increase in risk, it may be prudent to hedge some or all currency exposure when allocating to a core plus strategy. Again, currency risk has the potential to impair Canadian beta. Also, if an allocation to currency is permitted, having a dedicated currency team to manage the risk is essential.

CORE PLUS LONG

Throughout this research paper, we used the FTSE TMX Canada Universe Bond Index to describe the market exposure, or beta, sought by the investor. In a world that is increasingly liabilityaware, the selected beta can also include the FTSE TMX Canada Long Term Bond Index. Therefore, a new and growing segment in fixed income is a "core plus long" strategy, which is essentially a core plus strategy managed against a long benchmark. The goals are the same; increase diversification and expected returns, while managing a portfolio that has a longer duration.

The allocation to "plus" strategies will have a greater impact on managing portfolio duration as most of these new allocations have inherently shorter durations. Managers will need a strategy to manage this duration mismatch by either employing domestic government bonds, including long Canadas and/or Provincial strip bonds, or using derivative instruments to adjust duration. Duration management is essential when managing a core plus long portfolio.

Given that there are very few historical track records in the core plus long space, and the existing ones do not have a long history, many investors are using a managers' universe core plus track record for evaluation and selection purposes. A secondary consideration is a manager's track record managing long dated assets. This evaluation should give an investor confidence that a manager has the necessary capabilities to manage a core plus long strategy.

Global Fixed Income Components

To understand the merits of allocating beyond the Canadian market for return and diversification opportunities, we explored the available global fixed income components.

GLOBAL CORPORATE BONDS – INVESTMENT GRADE

In the past, it was hard to justify an allocation to corporate bonds outside of Canada on an unhedged basis because total yields in foreign markets were lower than Canadian government bond yields. The Bank of Canada raised its administered rate in 2010, while the rest of the world held constant. This meant that, without derivatives, a fixed allocation to U.S. credit was not necessarily yield enhancing for a Canadian portfolio. In today's environment, the Canadian economic outlook is not as strong as the U.S., which has been driving Canadian yields down. As such, currently there are new opportunities to enhance returns by allocating outside of the Canadian fixed income market.

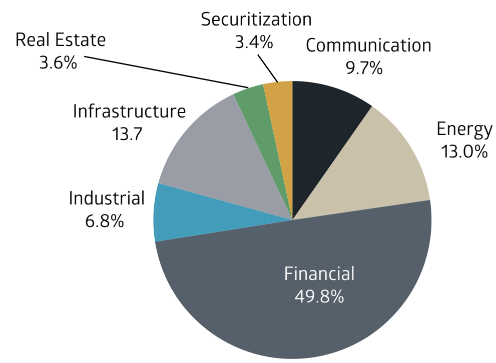
RELATIVE CORPORATE BOND YIELDS

As of May 19, 2014
Sources: Bloomberg, Bank of American Merrill Lynch, Moody's Corporation

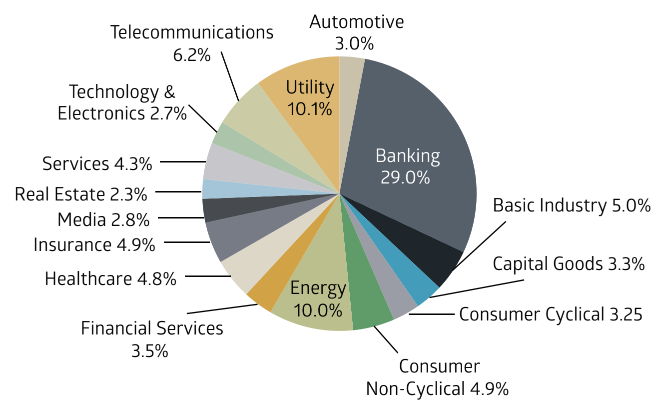
While return-enhancing opportunities may exist in foreign markets, diversification may be the greatest benefit allocating to non-Canadian investment grade credits. As can be seen in the illustration below, when comparing the make up of the Canadian corporate bond market to the global industry breakdown, as represented by a global corporate index, we see a large mismatch in exposure. However, more meaningful is the realization that growth in the global economy is coming from industries not represented by the Canadian fixed income market. Some of these industries' economic cycles may have lower correlations with one another, offering an important opportunity to diversify the risk of portfolio holdings.

SECTOR REPRESENTATION

FTSE TMX Canada All Corporate Universe Index Composition



BofA ML Global Corporate Index

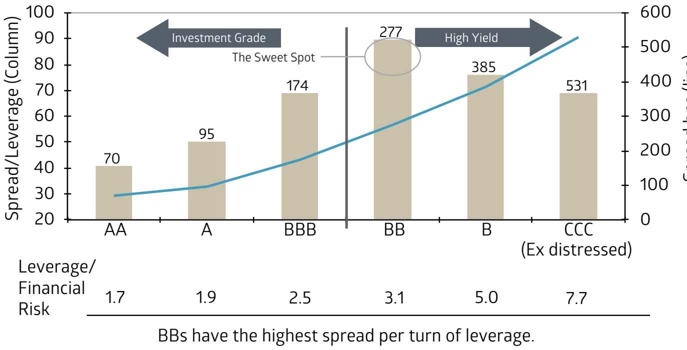


December 31, 2013
Source: FTSE TMX Global Debt Capital Markets Inc.and Bank of America Merrill Lynch

GLOBAL CORPORATE BONDS - HIGH YIELD

High yield bonds have come a long way from the 1980s when the asset class was referred to as the "junk bond" market. Anyone using this label today is not recognizing the transformation that has occurred in the high yield market. The high yield market is no longer simply a "fallen angels" market; credits once having an investment grade rating and subsequently being downgraded below BBB. Today, well established companies may choose to issue at BB and B ratings as this aligns their rating with their business strategies. For example, a growth-oriented business strategy requires a higher leverage ratio. Significant yield pick-up above investment grade yields can be captured while not incurring an additional, meaningful amount of risk. This yield enhancement is most prominent at the BB rating level as a structural inefficiency occurs when moving from BBB to BB. Many investment policies prohibit holding bonds rated below BBB; therefore, they are forced sellers if the credit is downgraded. The irony is that that many of these same investors (who do not allow high yield bonds to be held in their fixed income portfolios) do permit the purchase of the equity of these same companies, an investment that ranks below the bonds in the case of bankruptcy. Our research shows that high yield bonds can offer a yield premium with only a marginal increase in credit risk and a lower level of interest rate risk. The chart below illustrates the incremental spread pick-up of each rating category including the amount of financial risk inherent in bonds with these ratings. Moving from BBB to BB produces an incremental 277 basis points of yield while only incurring 0.6 times more leverage.

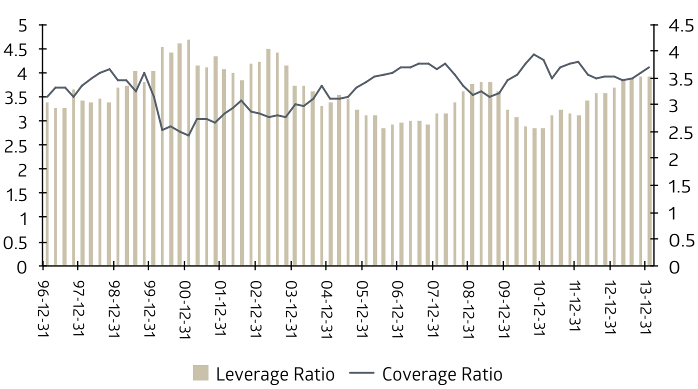
RELATIVE CORPORATE BOND YIELDS (INCREMENTAL YIELD PICKUP PER RATING CATEGORY)



As at December 31, 2013
Source: Bloomberg, Bank of America Merrill Lynch, Moody's

In today's environment, high yield companies are issuing debt at what have traditionally been investment grade yields. Given that the high interest cost is often a contributing factor to high yield defaults, we believe that this is a tremendous benefit to high yield companies, potentially leading to fewer defaults in high yield bonds for the foreseeable future. The chart below shows the overall improvement in the interest coverage and leverage ratios.

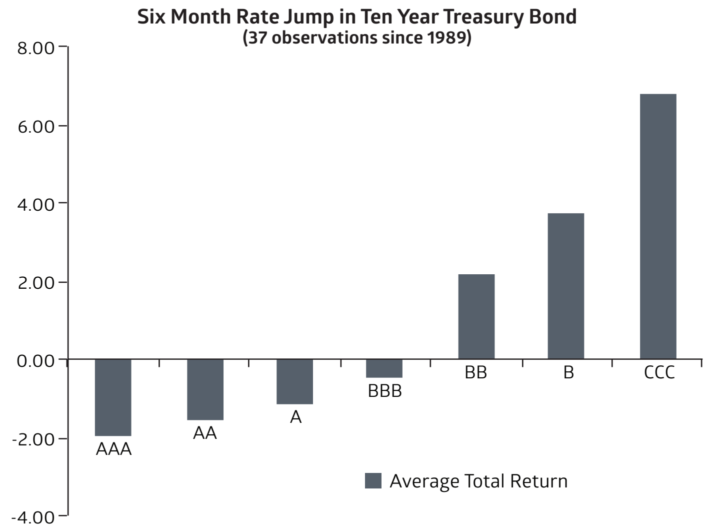
HIGH YIELD CREDIT METRICS



Source: Bank of America Merrill Lynch September 2013.
Leverage = Debt/EBITDA.

Finally, in the event that interest rates rise, high yield securities can provide a cushion. The graph below shows that, in periods of rising interest rates, the high yield asset class not only outperformed investment grade, it actually generated positive total returns, while investment grade markets produced negative returns. This makes sense intuitively as rising interest rates usually occur in improving economic environments, which are good for corporate borrowers. Also, in an improving economic environment, high yield issuers can grow their cash flows and assets, which has the effect of deflating their debt levels in proportion to assets as their debt levels remains stable, all else equal. Finally, high yield securities have less interest rate sensitivity as duration levels are on average lower.

MARKET RETURNS DURING PERIODS OF RISING INTEREST RATES



Ending December 31, 2013
Source: Bank of America Merrill Lynch

DEVELOPED COUNTRY SOVEREIGN DEBT

Obviously, the Canadian fixed income market only has one yield curve and one country risk/spread. Adding sovereign debt from multiple countries exposes a portfolio to different yield curves and different country risks/spreads. This exposure can work to diversify alpha strategies in the same way we explained a multi-strategy approach can achieve this for an active core portfolio. Another benefit of developed market sovereign debt allocations can be to hedge economic risk as there are usually opportunities to exploit divergent monetary policies. For example, a global market event may occur that leads investors to favour low risk assets. While Canadian government bonds may help to hedge this risk, the event may be driving capital to other sovereign developed bonds more so than Canada. In a core plus approach, portfolio managers can take advantage of this opportunity.

EMERGING MARKET DEBT

Emerging market debt has made a lot of progress in gaining market recognition. Years ago it was largely a U.S. dollar issue market with very few investment grade issuers. Today, the majority of issuers are investment grade and many governments issue debt in their local currency as well as US dollars. This progress is a direct result of fiscal improvements experienced by emerging market nations as their balance sheets improved. The table below illustrates the credit quality improvements experienced by a sampling of emerging market countries over the last two decades.

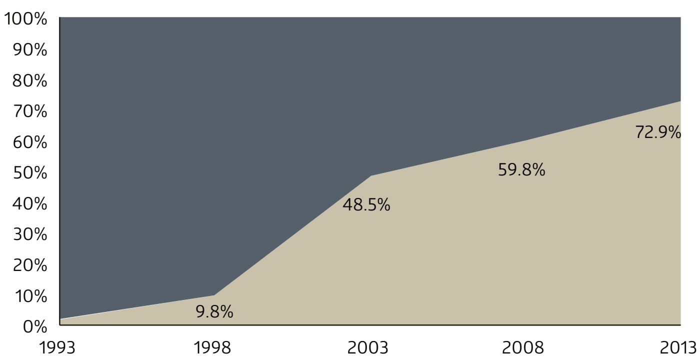
EMERGING MARKET CREDIT QUALITY

COUNTRY	LONG TERM FOREIGN BOND RATING (AS OF MAY 21, 2014)	LONG TERM FOREIGN BOND RATING (AS OF DEC. 31, 1994 OR FIRST RATING)	NOTCHES UPGRADED
Brazil	BBB-	B	5
China	AA-	BBB	5
Mexico	BBB+	BB+	3
Poland	A-	BB	5
Russia	BBB-	BB-	3
South Africa	BBB	BB	3

Source: Standard & Poor's Ratings Services, Bloomberg

In 1993, merely 2% of the J.P. Morgan Emerging Market Bond Index, by market capitalization, was rated investment grade, compared to 73% as of December 31, 2013.

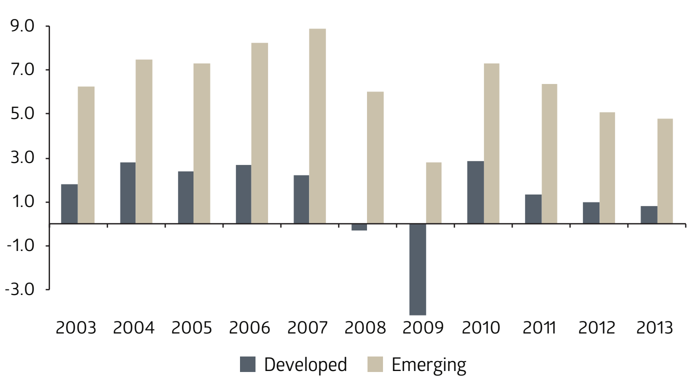
EMERGING MARKET RATINGS



Source: J.P.Morgan Global Index Research

Also, emerging market nations have been the main contributor to global growth as illustrated by the chart below.

GLOBAL REAL GDP GROWTH: DEVELOPED VS. EMERGING WORLD

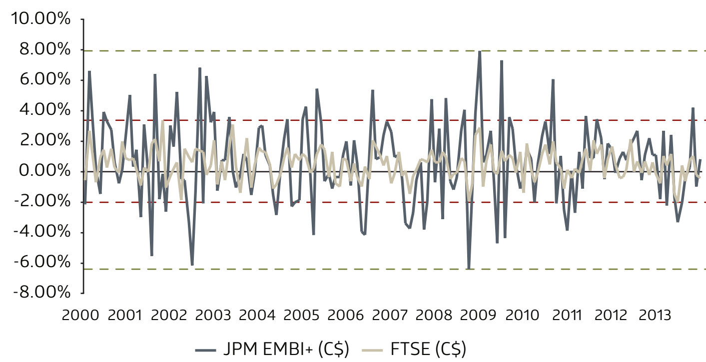


Source: Thomson Reuters Datastream

While it is important to realize that emerging market debt will continue to experience periods of volatility, this market has advanced enough to merit opportunistic allocation to a Canadian portfolio with the goal of improving risk-adjusted returns. However, we would argue that a static allocation to EMD should not be part of a Canadian bond portfolio. Even opportunistic allocations to EMD should be minimized.

The following chart gives you an example of the kind of volatility to expect from EMD relative to Canadian fixed income.

MONTHLY RETURNS – EMD VS CANADIAN BONDS



As of December 31, 2013.
Sources: J.P.Morgan Global Index Research, FTSE TMX Global Debt Capital Markets Inc.

CANADIAN FIXED INCOME - OUT-OF-BENCHMARK SECURITIES

In a core plus approach, unlike a core strategy, out-of-benchmark exposure is encouraged. However, not all out-of-benchmark exposures are desirable. It is key to determine whether this exposure will benefit the portfolio from both improved diversification and enhanced return opportunities. Let us explore some examples of Canadian out-of-benchmark exposures:

Canadian Mortgages – While this asset class can enhance return for a given level of duration, it has a smaller impact on diversification benefits given that mortgage exposure is indirectly obtained by exposure to the financials' sector, which dominate the Canadian corporate bond market. Also, the duration of a mortgage portfolio is typically low, adding complexity for portfolio managers when managing the portfolio.

Maples – While some Maples may have return enhancing benefits, it is revealing to understand the intention of an issuer when issuing Maples. Typically, Maples are issued by a global firm with operations in multiple countries. One of the reasons it utilizes the Canadian market for funding is because the current environment favours the issuer to issue in Canada in terms of yield. This implies that this same issuer will have to pay higher interest rates in other markets. In the context of a core plus approach, a well-informed manager, who likes the issuer's credit, can abstain from purchasing the Maple deal and purchase the same credit in another market. Some core plus strategies use Maples as their main "plus" source and many would be surprised to learn that Maples are a poor diversifier for Canadian corporate bonds as the correlation between the FTSE TMX Maples Index and the FTSE TMX Corporate Bond Universe Index is 0.81.

(Source: FTSE TMX Global Debt Capital Markets Inc. January 2006 to December 2013).

Real Return Bonds (RRBs) – RRBs lack return enhancement and are highly correlated with longer dated government bonds. The correlation between FTSE TMX Government Long Bond Index and FTSE TMX RRB Index is 0.70.

Source: Thomson Reuters Datastream, BofA Merrill Lynch, Barclays
Please see disclaimer for list of indices used

Core Plus Fees

Core plus strategies are being talked about in great detail and Canadian institutional investors are making allocations to this strategy. As the table below illustrates, fees for this additional "Plus" service relative to fees for traditional approaches remain relatively low. We suspect that the asset imbalance between core and core plus explains one of the driving forces behind this mismatch. In our first research paper we demonstrated that fees paid for active fixed income should focus on alpha targets as well as risk management strategies. This is the same rationale for core plus mandates.

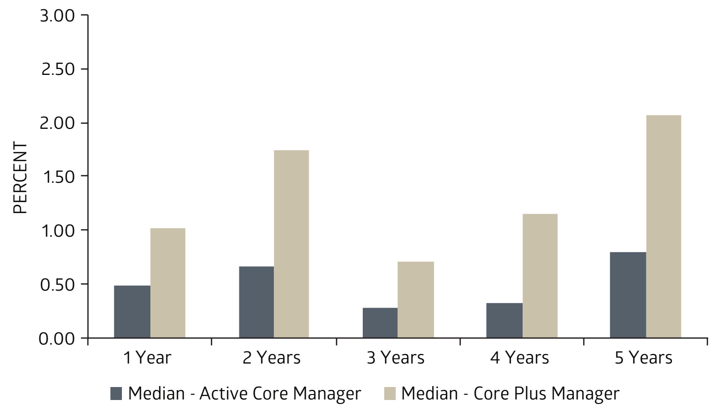
GLOBAL REAL GDP GROWTH: DEVELOPED VS. EMERGING WORLD

EVESTMENT UNIVERSE	CORE PLUS (EXPECTED ALPHA 75 BPS)		ACTIVE CORE (EXPECTED ALPHA 50 BPS)		COMPARISON	
	FEES ON C$50 MIL (BPS)	5Y ANNUALIZED RETURN (%)	FEES ON C$50 MIL (BPS)	5Y ANNUALIZED RETURN (%)	INCREMENTAL FEES (BPS)	5Y ANNUALIZED RETURN DIFFERENCE (%)
25th Percentile	28.00	7.87	20.00	6.06	**8.00**	1.81
Median	30.00	6.86	24.00	5.58	**6.00**	1.28
75th Percentil	30.00	6.29	26.00	5.22	**4.00**	1.07

Source: eVestment Analytics. Ending December 31, 2013.
Annualized returns are gross of fees

The data suggests that Canadian core plus managers have produced material excess returns above core returns over the last five years. In the five-year period ending December 31, 2013, the median active core manager added 80 basis points of value (gross of fees) above the passive manager, while the median core plus managers added 208 basis points (gross of fees). This is a significant outperformance over the median active core manager for a very low incremental fee.

GLOBAL REAL GDP GROWTH: DEVELOPED VS. EMERGING WORLD



Ending December 31, 2013
Source: eVestment Analytics. Annualized returns are gross of fees

Conclusion

We made the case in our first research paper that active fixed income management can improve a portfolio's return on a risk-adjusted basis. In this research paper we demonstrated that the addition of global fixed income strategies have the potential to improve the risk-adjusted returns of a total portfolio. We have shown the potential return enhancement as a result of adding global fixed income as well as the diversification benefits of these markets as they have a lower correlation with Canadian fixed income.

While there are many ways to allocate to global fixed income, we have shown that a holistic core plus approach is the most effective approach to balance the objective of enhancing returns, managing risk, and improve the diversification benefits while ensuring that the global fixed income strategies do not dilute the market exposure of the Canadian fixed income portfolio. This point is key because investors who extend too far will find that they will have negated the very reason for an allocation to fixed income.

This is a unique time to allocate to core plus strategies as they are favourably priced. The fee for incremental alpha is low and includes an opportunistic allocation among asset classes. Further, investors can match their beta choice (e.g. long duration), with a managers' alpha strategy. As a result, we indeed believe that core plus is worth the fuss.

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