



RICHARDSON GMP



WHAT OF THE 40?

Fixed Income in portfolio building and the alternatives that are often substituted



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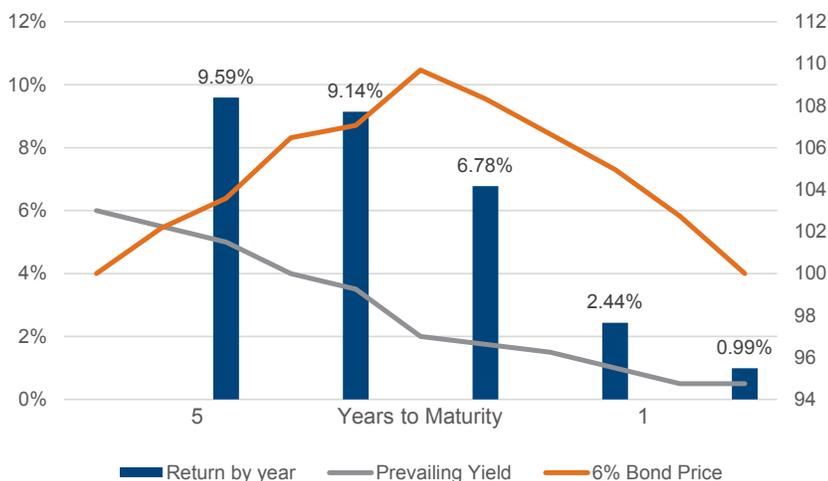
An analysis of Fixed Income in portfolio building and the alternatives that are often substituted

Once upon a time, the classic portfolio mix was created by taking 100 less your age to determine the equity allocation in your portfolio. The rest went to fixed income. Of course, that rule of thumb was designed in an era where fixed income allocations were both plain vanilla (more on that later) and offered some fixed real returns. The 60/40 portfolio, referring to 60% equity and 40% fixed income became the standard benchmark, where the fixed income was generally made up of government and investment grade corporate bonds.

Starting in 1981, but particularly since 2008 when central banks around the world began slashing rates, yields, but not so much returns, have diminished on our fixed income portfolios. At first, we didn't mind. Starting yields had been healthy, and with inflation and rates dropping, the capital gains in our bond allocations gave great total returns (as yields drop, the price of bonds rise).

Eventually, however, bonds mature. If a 5 year bond is bought with a yield of 6% and held to maturity, the average return over the 5 years WILL BE 6%, even if yields drop throughout. Returns measured year by year will start out great, but decline quickly such that they average 6%. For fixed income investors, dropping yield feel good along the way, but eventually bonds mature.

Prevailing yields vs. price of a bond as it approaches maturity



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When the bonds mature, we must re-invest at prevailing market yields. Since the purchase yield so closely resembles the ultimate return, this spells trouble. The days of declining yields appear to be over (or at least close to over as we approach the zero bound). A 5 year Canada bond yields about 1.5% at the moment, so it is a pretty good bet that a portfolio of Canada bonds with maturities near 5 years will average about that return if held to maturity. With inflation running at about 1.6%, the return in real terms is long gone.

This begs the question – if we can't rely on the "40%" fixed income portion of our portfolio to provide any decent return, should we continue to hold it? Fixed Income used to be simple. Bonds had a coupon and a maturity date. That gave them certain reliable characteristics. Over the past decade, government bonds have an average correlation of -0.20 to equities, meaning they will rise in value when equities fall.

Today, what gets classified as fixed income often doesn't pass the classic tests. Coupon rates are not fixed, maturity dates are not guarantees, and pools of debt in a fund often have the ability to use all sorts of instruments including private securities and derivatives in an effort to replicate the fixed income portion of portfolios, while still generating a competitive level of return.

Portfolio construction is not just about return. Government and investment grade bonds tend to do well when equities do not, thus providing some ballast for when equities lag or drop. While we still believe this to be true, we feel seeking actual returns from "the 40" is reasonable, **provided the risks of doing so are understood.**

This paper is our attempt to examine alternatives – many of which are new to the investment landscape – while maintaining diversification and avoiding some of the potential pitfalls that are inherent to seeking returns.

Executive Summary

- Fixed Income serves two purposes in a portfolio:
 1. To diversify a portfolio from equity exposure; and
 2. To provide a source of return
- The prospects for Part 2 of that equation have diminished substantially given yields in government and investment grade bonds have declined so dramatically over the past 30 years.
- While the diversification function is still alive and well, many investors have been steadily reducing their allocation to traditional fixed income in an attempt to find more returns.
- As a result, we believe many portfolios are exposed to risk that isn't being properly recognized.
- We examine the common methods of squeezing extra return out of fixed income, and some of the alternatives being used to complement or even replace fixed income in portfolio construction. Namely;
 - More aggressive bonds and debentures
 - Mutual Funds and ETFs
 - Preferred Shares
 - Hedge Funds
 - Private Debt funds
 - Mortgage Investment Corporations
 - Structured Notes

In our examination, we discuss the benefits and risks of each asset class as they relate to common portfolio construction.

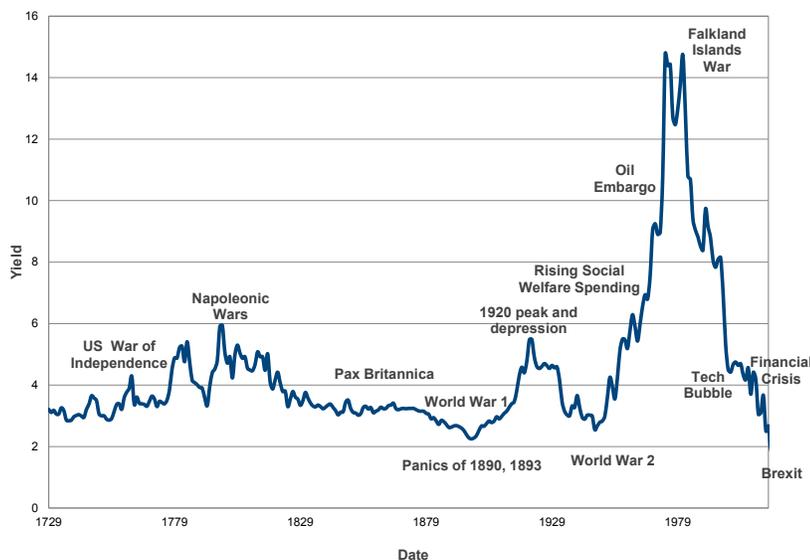
Bond Markets – How did we get to 2017?

Summary:

- For centuries, long term rates were range-bound between 2% and 6%. The inflationary 70's caused that upward bound to be shattered, and the deflationary 00-10's have caused the bottom bound to be tested.
- Central Bank actions have been unprecedented
- Current government bond rates provide negative to minimal real returns, challenging investors.

The mid-sixties to the early eighties represented an unprecedented period for bond markets. A confluence of social and military spending, demographics and monetary system changes, among other reasons set the stage for rising inflation. These factors led long term bond yields to definitively break above 6%, a cap that had held not just for decades, but for over two centuries. These centuries were also characterized by a floor on rates of around 2.0%, despite numerous wars and severe business cycles, including the great depression.

Long UK interest rates since 1729



Source: Bank of England, Bloomberg, GMP Securities L.P.

Starting in late 1970s, a period of “tight money” was initiated; Higher central bank rates to combat the rampant inflation. Although this sparked a recession, yields finally peaked in 1981, and since then investors have enjoyed a 35 year run of declining yields. Whereas in the 1890s and 1930s deflationary shocks resulted in severe downturns in industrial production, the monetary tools employed by central banks since 2008 staved off a prolonged decline in GDP. What might have been a severe depression has instead become a long period of tepid growth, as the unprecedented expansion of the monetary base globally has so far helped markets avoid a deflationary bout as seen in the past.

Cutting interest rates to all-time lows, the use of unconventional policies such as direct bond and asset buying by central banks and experimentation with negative interest rate policy, the bailing out of financial institutions and European sovereigns avoided a crisis, but ensured the continuation of these policies. Finally, last summer global yields plummeted to new lows amidst “Brexit” news and we have broken definitively below that 2% yield floor that had held through the centuries.

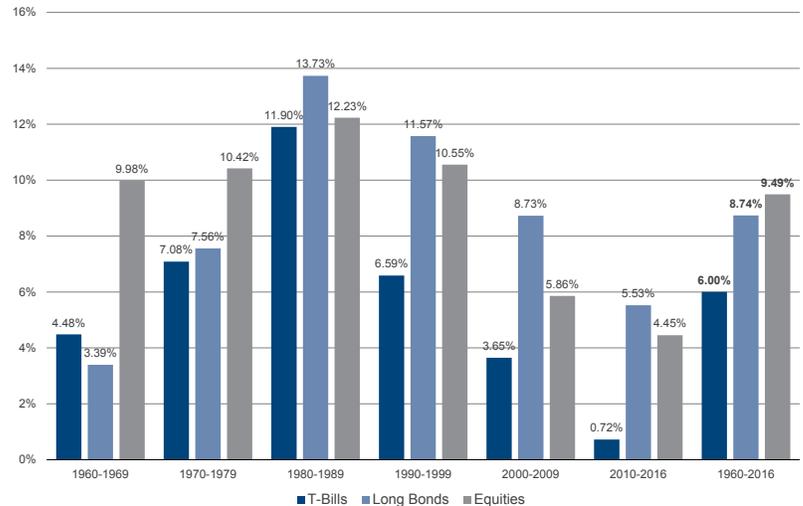
For investors, this has translated into a multi-decade run of solid returns from their fixed income portfolios. Canadian long bonds have provided a total return of 8.74% annually from 1960 through 2016, only slightly trailing the 9.49% return on the S&P/TSX Composite Index. Interestingly, since 1980, Canadian long bonds have actually outperformed equity markets, not only over the period, but in each decade since the change in central bank policies in the late 1970s.

The decline in yields has not been simply an inflationary phenomenon. Real yield (the return after inflation) has also fallen. The chart that follows graphs the yield of what was then the benchmark long bond in Canada, the 10.25% due March 15, 2021, in comparison to the Canada Real Return Bond (RRB) 4.25% due December 1, 2021. RRBs pay a rate of return that is adjusted for inflation – as CPI increases year over year, so does the principal, ensuring that investors maintain their purchasing power regardless of the rate of inflation. In addition, when compared to nominal bonds, they give a good indication of the market’s expectation of the average rate of inflation over the remainder of life.

In 1990, markets were pricing in over 4% of inflation for the next 30 years; today we are pricing in less than 2%, just below the average of the Bank of Canada’s target. In addition, real returns were above 4% in 1990; today short term RRBs have real yields below zero. Real rates are being depressed by central banks, who have kept short term rates below the rate of inflation since the financial crisis.

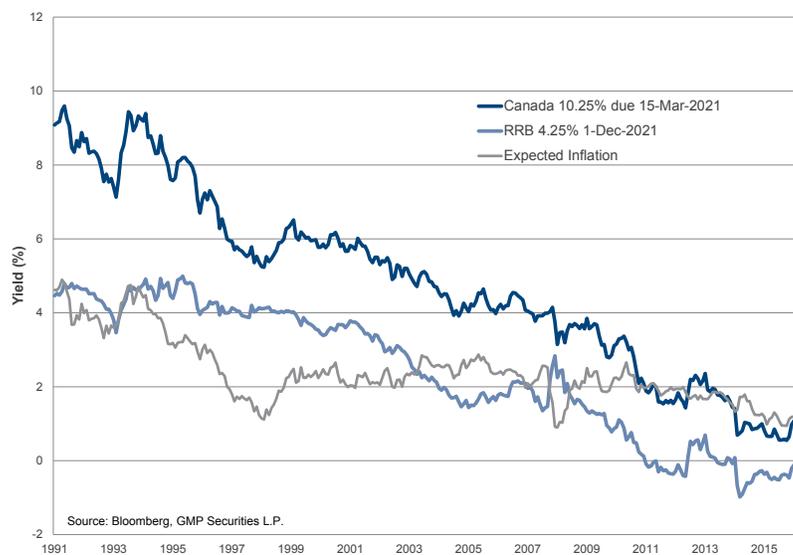
This leads us to the current dilemma facing fixed income investors. Absolute yields are very low, with longer term yields barely above the rate of inflation and short term yields producing negative real rates of return. When we take into account annual inflation

Canadian nominal returns by decade



Source: Bank of Canada, Bloomberg, GMP Securities L.P.

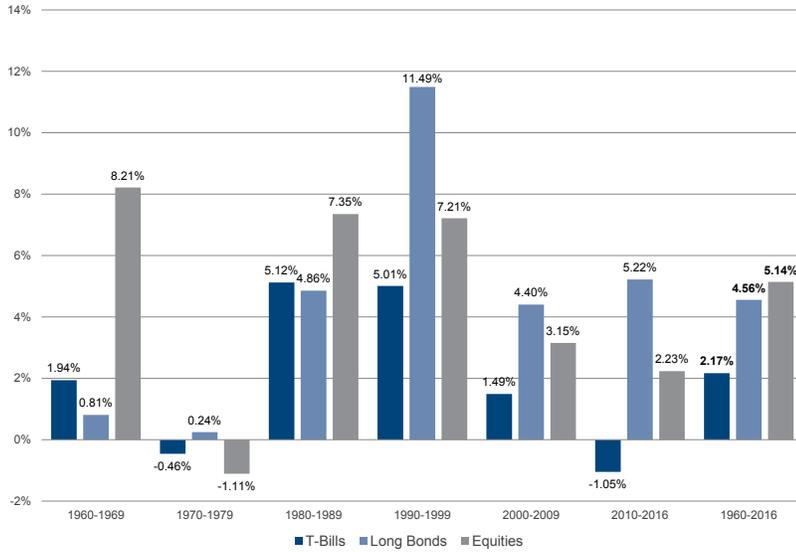
Nominal versus real yields in Canada



Source: Bloomberg, GMP Securities L.P.

Source: Bloomberg, GMP Securities L.P.

Canadian real returns by decade



Source: Bank of Canada, Bloomberg, GMP Securities L.P.

on the nominal return table (previous page), we get the chart to the left. Real returns have recently been dismal for T-Bill investors (2010-2016 has so far provided T-Bill investors with a greater loss in purchasing power than they experienced in the 1970s), and will likely remain dismal. With real yields so low, the current environment is a challenge for bond returns, to say the least.

Growth of \$100,000 in Different Asset Mixes (1990 - February 2017)



Source: Bloomberg

The classic 60/40 split

While we're taking a look back at fixed income markets, it's also worth taking a look at the classic 60% equity – 40% fixed income asset allocation split over time. As you can see in the chart that follows, the 60-40 split has served investors well – dampening downdrafts, and until recently providing all the return. However, considering current yields as can be seen by the very recent return, investors may need to reset their expectations going forward as historical returns may be hard to replicate.

Examining fixed income returns

Let's get technical and dig a little deeper and examine fixed income returns. Yield is a function of price, coupon rate and term to maturity.

Term structure, also known as the yield curve, reflects market expectations of future interest rates plus the term premium, which generally rewards investors for investing in longer term instruments. In a normal rate environment, the longer the term to maturity, the higher the yield. Yield can be further broken down into four components.

1. **The real yield**, which is based on the term structure of interest rates
2. **The inflation expectations** as yields incorporate both real return and inflation
3. **Credit risk** as investors demand greater yield in return for a reduced certainty of repayment
4. **The liquidity premium** as investors demand a greater yield in return for giving up liquidity

There are generally three ways to seek increased returns from fixed income holdings:

Increase term to maturity – This is called **duration risk**. If rates rise the price of bonds will fall. This is the trade off – to the longer the bond the larger price moves in response to changing yields, increasing volatility.

Increase credit exposure – The lower the credit quality, the higher the coupon. Investors can increase the return by having more exposure to “credit”. These higher returns come at the cost of increased risk – both of default and of portfolio volatility. The addition of credit risk comes with another hidden cost as it reduces the diversification benefits of bonds. During the 2008 credit crisis, corporate bond spreads increased dramatically and corporate bond portfolios fell in value alongside equities. An investor holding corporate and high yield bonds did not see their fixed income holdings appreciate, **reducing the diversification benefits of their** portfolio. The lower the credit quality, the higher the correlation with equities.

Give up liquidity – The inability to sell usually commands a yield premium over comparable issues of similar credit and term. This liquidity premium can enhance returns, but comes at the cost of reduced diversification as these securities do not increase in value in a falling rate environment (they are, in theory still more valuable though, but that value can't be realized). The lack of liquidity also prevents your ability to sell and rebalance or to mitigate losses in the case of a negative credit event (like a default).

There are a couple of other ways of attempting to enhance the returns from fixed income holdings. Look abroad to foreign markets where yields may be higher, though this brings volatility in the form of currency exposure. Investors can also get more tactical, trading term and credit premiums.

Given these strategies to increase returns in fixed income, we would remind you – **and this is one of the primary purposes of this study** – it is not just about maximizing returns. **The diversification benefits of traditional fixed income and capital preservation it provides are important considerations.** Portfolio theory aims to increase return AND lower volatility. Taking on any of the above risks in order to enhance return always comes at the cost of these two other pillars.

Now that we have a better understanding of fixed income returns and the costs and tradeoffs that come with them, let's examine some alternative fixed income securities, highlighting our three risks: duration, credit and liquidity.

Bonds and debentures: Finding more yield in traditional fixed income

Summary:

- True fixed income has a fixed coupon and a defined maturity date. When looking at traditional fixed income securities, these three risk components should always be evaluated: 1) **Duration/market risk**, 2) **Credit quality**, and 3) **Liquidity**.
- Investors can try to seek more return by exposing themselves to more of any or all of these three risks.
- Taking these risks on, however, can negate the portfolio diversification that a classic 60/40 portfolio has.

Let's start by defining these risks:

Duration – Expressed in years, duration is a measure of the sensitivity of the price of a bond to a change in interest rates. Duration measures rate sensitivity. Longer bonds have more duration and prices move more as a result to changes in rates. Another way to think of it is the amount of time it takes you to recover your initial investment.

Credit Risk – Examines the quality of the issuer and the likelihood that the principal is repaid at maturity. Credit risk measures likelihood of default. Traditionally, we look to the ratings agencies for this measure.

Liquidity – Describes how easily a bond can be bought or sold without a material change to price. It also deals with the defined liquidity provisions of funds. Liquidity measures price sensitivity to trading. In extreme cases, it contemplates whether or not a security can be sold at all.

Tradeoffs exist between these risk components, but basically giving up any of them will “buy” you more potential return. In a portfolio context, there is one other important risk to consider:

Lower Diversification – The mix of asset classes in a portfolio can make the portfolio as a whole more risky or less risky, depending on the asset correlations. As a real world example, those that have chosen to “give up credit” to gain returns by buying high yield (junk) bonds instead of government bonds, actually increase their correlations to equities – stocks and junk bonds tend to move together – amplifying the downside if and when markets drop.

Conclusion

It's fair to say that most people understand that government bonds are “less risky” than equities (they pose less credit risk and exhibit lower volatility), but the effect of total portfolio risk is just as important. It is not just taking more duration, credit and or liquidity risk in each holding, but how the final constructed portfolio behaves. For Example: The average 120 day correlation between S&P TSX equities and a government bond basket is -0.2, while for high yield bonds, it is 0.64. You can claim you still own fixed income, but the risk associated with your holdings and your total portfolio risk may have increased considerably.

Fixed Income Mutual Funds and Exchange Traded Funds (ETFs)

Summary:

- The Mutual Funds and ETFs industry is highly regulated and is therefore amongst the most transparent investment vehicles available to investors.
- Mutual Funds and ETFs are an efficient and cost effective way to gain broad exposure to the asset class.
- Investment manager selection should be based on the five P's: People, process, parent, performance, and price.
- Risks are disclosed in fund documentation and largely in line with those of their underlying holdings.

Overview

Funds and ETFs are governed by national securities rules (National Instruments). Therefore, they are subject to the most stringent industry standards of reporting and disclosure. This transparency and governance works to an investor's advantage and helps to compile, monitor, analyze, and report on holdings, managers and performance.

Duration, Credit and Liquidity Risks

Mutual Funds and ETFs are subject to the same risks as direct fixed income investing, with the addition of the risk of the manufacturer/fund firm. All potential risks that a product may face must be disclosed and explained in fund documentation that is made available to all investors.

How then, should an investor select the "best" fixed income fund? The fixed income universe is vast with virtually thousands of funds to choose from. While performance is indicative of a strong investment team, robust process and philosophy, and favourable pricing, it is not an unbiased predictor of future results. So, what then should an investor consider when selecting a fixed income fund?

Above all else, it is important to first pick the types of exposure you want for your portfolio (short/long, government/credit, investment grade/high yield, Canadian/global, etc.), prioritize these exposures, then screen your fund universe to narrow down your options. Your final list of funds will be based on a combination of the following factors: People, process, parent, performance, and price.

In the matrix on the follow page we will look at a number of fixed income type funds and summarize how these funds differ by examining duration, credit risk and liquidity.

Funds & ETFs	Liquidity ¹	Duration	Credit
Universe/Core Canadian Bond	High	Mid-term ²	Investment Grade
Government Bonds	High	Varies ³	N/A
Corporate Bonds	High	Varies ³	Investment Grade ⁵
High Yield	High	Mostly short-term ⁴	High Yield
Global Bonds	High	Varies	Varies

¹ Ability to redeem daily at NAV

² Short-term (1-5 yrs), Mid-term (5-10 yrs), Long-term (10+ yrs)

³ Varies based on Fund/ETF selected. In some cases, investors may select the duration exposure, whether short, mid, or long-term, i.e. ETFs

⁴ Average duration for most high yield bond funds is less than 5 years.

⁵ Corporate bond funds may have the flexibility to invest in non-investment grade issues. Check the prospectus for allowances, and fund fact sheets for top holdings.

Conclusion

- Identify the type of fixed income exposure that is required, and narrow down your search using this criteria
- Use the information that Fund/ETF manufacturers must report to your advantage. This information will help you examine a fund based on both qualitative and quantitative factors (think the five P's)
- Chosen wisely, Funds and ETFs can provide investors with access to efficient, cost effective, professionally managed investment solutions.

Preferred shares

Summary:

- Prefs are a traditional asset class that many investors have leaned to as a replacement for fixed income. While their properties are generally well understood, treating the permanent capital that prefs represent as true fixed income can be misleading.
- Pref correlation to equities in Canada is about 0.55

Overview

A more traditional asset class by any measure, prefs are quite familiar in the retail landscape. What is not, however, is the relatively new structure of prefs that has proliferated in Canada where coupons are variable and terms are permanent.

In 2007, the first rate-reset pref was introduced in Canada. The market lauded them as a great way to protect against rates rising, as the coupons would adjust every 5 years to be in line with market rates. Quickly, rate-resets became the majority of the issuance in the Canadian pref space, and now represent about three quarters of the prefs by market value.

What the market did not anticipate is that 6 years later, market rates would be substantially lower and the dividends paid by such instruments were being dramatically reduced.

This brought about the introduction of the minimum coupon, which is now becoming standard.

These are interesting innovations, but even though the mechanisms are relatively simple, as 2015 showed us, the market experience of a new product can be vastly different from what is anticipated. Thinking about what the recently introduced minimum coupon structure will bring, other than assurances for investors, leads us to think that call risk, which is largely being ignored, has been brought to the forefront, with implication yet to be seen.

Duration

The rate-reset preferred share has thrown a wrench into the understanding of market movements of preferred shares. Fixed-rate perpetuals, which used to be prevalent and still the vast majority of issuance in the USA, are very long duration, and as such prices are very sensitive to changes in interest rates.

What we have experienced from rate resets is negative duration. This means that the prices have fallen in response to falling interest rates. This is an important distinction and vital to understand in constructing a portfolio.

Credit Risk

While the majority of pref share issuers are of investment grade quality, it is important to remember that prefs sit just one notch above common shares on the balance sheet of a company. As such, in the event of default, it is rare for pref holders to be made whole (as opposed to many private debt loans, which are first in line to be repaid)

Also, the volatility of credit pricing in the market makes prefs subject to large price swings as well. When the market does not want to take risk, such as late 2008 or 2015 in Canada, pref shares suffer right alongside equities.

Liquidity

While it is improving, traditionally pref share liquidity is poor. In Canada, they are generally small issues and do not trade frequently. That being said, they do trade on exchanges and offer that form of transparency.

Liquidity is something that investors need to be aware of in the pref markets, but it is very easy to analyze and understand.

A few other notes on risks:

Call Risk – this is the risk that the instruments are called back by the issuer. It seems relatively minor, but it can result in prefs being called away from you at inopportune times forcing you into cash when rates are low.

We believe this risk is being terribly underpriced. Companies will call prefs away when times are good for them, meaning your re-invest prospects are likely to carry much lower yields.

Conclusion

- Prefs are not fixed income. Period. While it is tempting to lump them into this category, investors need to be cautioned that the correlation to equities, inverse duration characteristics of rate-resets and low placement on the balance sheet make them more like high income equities.
- While we encourage investors to have pref allocations to help satisfy their need for income in portfolios, they should not be thought of as bonds for the purposes of portfolio construction.

Hedge Funds and Private Debt

Summary:

- Long/Short credit managers have the tools to hedge out certain risks (like rising rates) and have become popular.
- Private debt is lending on bespoke terms to businesses and individuals, funding those loans from investor pools rather than bank balance sheets. The high yields provided are very attractive, but they warrant careful scrutiny as they take extreme amounts of liquidity risk and potentially credit risk which can be very difficult to measure.
- Both spaces can be attractive, but the mainstream narrative for choosing these strategies can be flawed. Picking the right managers is paramount.

Overview

2016 saw record fund flows into the High Yield bond market as investors sought higher returns from fixed income. At the same time, many have sought refuge with Long/Short (L/S) credit managers because “rates are going higher”, or in the Private Debt space where there is “no volatility”.

Hedge Funds: L/S credit managers have sought greater returns while also protecting investors from rate sensitivity, volatility, and drawdowns. In theory, the ability to go long and short while applying leverage allows them to achieve those results.

Private Debt: The argument has been that by giving up some liquidity, investors are able to access high quality private credit and generate better returns with less credit risk than public market equivalents. The shift towards public or private credit alternatives has been quite popular in the Institutional/Pension/Endowment/Sovereign fund space, with flows increasing exponentially over the past decade. Increased regulatory pressures on banks has opened the door to non-bank lenders finding excess returns in this space. We’ve also seen this trend with a growing number of Canadian investors allocating to L/S Credit managers, Mortgage Investment Corporations (MICs), other private real estate lenders, factoring/supply chain financing funds, asset backed lending (ABL)/mezzanine funds or other niche alternative lending strategies.

While all these alternative strategies have provided substantially higher yields versus the fixed income indexes, it is very important to keep in mind that the risks being taken and some key metrics to monitor before allocating to these strategies.

Duration

When examining duration, it’s worthwhile to find out how a L/S credit manager is investing your money. Questions you should ask include:

- What is the average duration of the portfolio?
- How is the manager taking out rate sensitivity through the L/S approach?

- How does the manager track rate sensitivity?
- What is the manager's track record when it comes to execution?

With private debt, rate sensitivity is low. The sensitivity is much more related to the type of strategy -- real estate versus ABL or factoring funds as an example. It's still important to ask and understand how rising interest rates may affect investor yield. As a general rule, the average term of the loans is important to note as lower terms on average reduce interest rate risk. Shorter is typically better, although this can be dependent on fund/style.

Credit Risk

With L/S credit managers, here are some questions to ask:

- How does the manager evaluate good credit vs bad credit?
- What is the manager's experience and track record in this space?
- How many positions does the manager hold and how are they sized? -- This is where they will add value and create alpha. They should be able to identify good credit and isolate rate sensitivity through short positions.

Crucial in the L/S credit manager's process is applying leverage. Understanding how much leverage and where it is applied is essential.

- Does the manager use leverage only on Investment Grade credit?
- How much leverage can they safely use? Leveraging bonds is not the same as leveraging equities. It does, however, magnify the credit risk/reward framework.

For Private debt managers, understanding their underwriting process is important.

- Who is involved, from sourcing to the final decisions, and what risk metrics are in place?
- What is the manager looking for prior to working with a borrower?
- Do they have a competitive advantage and with whom do they compete?
- Do they use additional leverage, if so how?
- What are their Loans to Value, and how is the value measured?
- In the mortgage space what is the ratio of first and second mortgages?
- How do they rate their borrower? (prime vs. near prime vs. subprime)
- How are the loans monitored once issued and how often?
- What covenants are in place to protect the investor?
- What is the ratio of non-performing loans?
- How many loans in the Manager's portfolio, to assess concentration?

A private debt manager should have a good credit monitoring team, third party experts to monitor their loans, as well as a proven team and process to resolve issues with non-performing loans. Lastly, it is also very important to note that since private debt managers do not trade their securities on any markets and do not mark to market, volatility is very low. However volatility is not a valid risk metric as compared to publically traded equities that mark to market daily.

Liquidity

Most L/S credit funds trade very liquid positions and thus, under stress the portfolio could normally be liquidated in a matter of a few days. With these strategies, liquidity should not be the primary concern, but **investors must pay attention to the liquidity provisions of the fund.**

“Illiquidity premium”, however, is an important driver of returns in private debt. Selling a private loan is a long tedious process (if it can be done at all) since the terms and conditions of each loan is bespoke. Some smaller, shorter duration, nimble private debt strategies can offer monthly liquidity to investors, but many larger established managers will have quarterly or even yearly investor liquidity, with one to five year initial lock-ups on capital. This provides the manager with a predictable capital base from which to properly execute the lending strategy while allowing them to operate through difficult market cycles without the issues faced by many publically traded strategies.

It is extremely important to understand and evaluate if the liquidity terms of a fund match the underlying strategy and loans. Many investment funds have failed because of issues that emerged from the mismatch between liquidity to investors (too short) vs. the term of their loans, as opposed to the failure of the loans themselves. Furthermore, if one or a few investors that represent a significant portion of the fund decide to redeem, the rest of the investors may be forced into a situation where they are unable to redeem until the fund is able to either find new investors or wind down their loans in an orderly fashion.

Other considerations for funds – operational risk:

- How large is the firm?
- What assets do they manage?
- How long have they been active?
- Who are the decision makers?
- Do they segregate operational, compliance and investment duties?
- How are they regulated?
- Who are their service providers?
- How concentrated is their investor base? (i.e. will they have to close shop if their biggest investor leaves).
- Can they provide financial statements to verify that they are profitable?
- Is there any open litigation involving the firm or principals?

Conclusion

- Hedge funds usually try to isolate one form of risk to profit from taking another. They rely on the managers’ ability to generate alpha in that particular area of risk-taking.
- Private debt funds take advantage of regulatory conditions preventing traditional lenders from participating, and take credit and liquidity risk to generate returns. These strategies are relatively new to retail investors, and have yet to be tested through any kind of economic cycle. As such, **extreme caution is warranted** and investors should be prepared for a situation where they are denied liquidity entirely.
- All fund types need to be reviewed for operational risk. The departure of a key manager or failure of a service provider could have adverse effects on the fund.

Mortgage Investment Corporations (MICs)

Summary:

- Though they are a form of Private Debt (mentioned previously) MICs are deserving of their own category in Canada. All the comments from the private debt section would apply, but further considerations are warranted.
- MICs are an easy way for investors to gain exposure to the high yield real-estate backed sector.
- MICs are early in their evolution for investors, and some contain structural flaws.

Overview

MICs account for the majority of unregulated mortgage lending in Canada. These entities typically invest in short duration, high yield mortgages and pay out 100% of their income as distributions to investors. This flow through structure allows them to avoid paying corporate taxes and to maintain a constant net asset value (NAV), assuming that interest income exceeds expense and losses. MICs are not allowed to reinvest their earnings. As such, they are dependent on new investor funds to grow. This is fine, as long as investors are willing to provide them with funding. In addition to the discussion concerning the three risk components that follows, we'd also highlight that MICs are subject to regulatory/structural risk. At present, MICs are regulated by OSFI – the bank regulator – and not necessarily by the Ontario Securities Commission or any of the securities regulators; however, that is likely to change.

MICs are not required to publish their NAVs, mostly because of the nature of short-term lending, where loan values are simply their face value unless they are impaired. MICs issue and redeem at a fixed price. While this keeps the structure simple, the U.S. money markets provide a good example of what could happen if those impairments happen. In Q4/16, U.S. prime funds were required to publish net asset values based on the current value of their assets. Prior to the implementation of this regulatory change, prime funds were able to preserve the value of their investments at \$1 a share, providing a certain sense of stability for investors. When that changed, investors sold their positions. The same kind of exodus would not be as straightforward for MICs, since their assets are highly illiquid, but the structural/regulatory risk remains.

We should note that there are many different types of MICs with differing risk profiles – residential, construction, commercial, etc. The risks that are inherent in one type of lending, may not be applicable to others.

Duration

In terms of duration, MICs are not very sensitive to rates because they generally invest in 6-24 month mortgages. Additionally, most MICs are made up of non-traditional debt with rates that far exceed the banks' posted mortgage rates. For this reason, they are less sensitive to change in market levels of rates.

Credit Risk

Most MICs are heavily exposed to credit. To call it subprime is a bit too simplistic, but their borrowers need flexibility for many reasons, including that they have bad credit, and do not conform to the standard CMHC insured loan in Canada (where it applies to residential mortgages). With many different credit profiles, varying income qualities, debt obligations, high leverage, short closing time required, or lack of income or asset verification, MICs can be particularly susceptible to a weakening economy or property market.

Liquidity

Perhaps the most important consideration for MIC investors is liquidity. Aside from the few publicly traded MICs, where liquidity is found from other investors in secondary trades, firstly, MICs differ in their redemption policies, from daily to annually. Secondly, because MICs are required to pay out all of their income, an investor's demand for liquidity must be met with one of: a) cash on hand, b) new investor money, c) a temporary debt facility, or d) portfolio maturities. Thirdly, defaults may complicate the liquidity situation for a MIC. If one mortgage goes into default, and the MIC ends up with the asset, it could take months or years to sell the property, tying up the capital unproductively in the meantime. Any losses would need to be absorbed by cash flows on the rest of the portfolio – reducing the available income to distribute to investors. Our primary concern is that this reduction would cause investors to want to sell – which would not be possible without worsening the situation. Should the defaults become systemic as happens in bear markets, this could be problematic.

Finally, we would note that the fee structure of MICs vary widely. Virtually all have a fee on assets, some have performance bonuses for meeting/exceeding benchmark returns. Also, given the variety of income sources, one must pay attention to what income the investor is entitled. Some pay out only interest to investors, keeping other fees such as closing, early payment, NSF, or renewal fees for the managers.

Conclusion

- MICs offer high current income, but their liquidity profile is worrisome. Given the current situation of high property prices and high household leverage ratios in Canada, we see them as being particularly risky.
- Only look for MICs with the highest levels of underwriting diligence, geographic diversification, and a high proportion of first mortgages
- Being a new offering, (and in a bull market), fee structures vary widely.
- Combining structural and liquidity characteristics, even a minor “rush to the exits” could prove damaging in the MIC space
- We have little history to go on in terms of portfolio diversification, since MICs are a relatively new asset class and have largely not been tested through a cycle.
- MICs are not a good replacement for classic fixed income, and especially poor as a place to “park cash”

Structured Notes

Summary:

- There are many varieties of structured notes, with returns that are linked to various underlying, including bonds, equities and even commodities.
- Only Principal Protected notes should be considered true fixed income alternatives.
- When built correctly, structured notes can be a useful part of a portfolio construction.

Overview

Structured notes come in all shapes and sizes, but the only one considered as a true alternative to fixed income is the principal protected note (PPN). A PPN is a debt obligation with a promise to repay 100% of capital at maturity along with an agreed upon payoff profile. PPNs are effectively created when a strip bond is purchased at present value and the difference between the present value and maturity value (par) is used to buy call options on a specific underlying, or in some cases generate a fixed coupon. The primary factors in determining the initial price of a PPN is the level of interest rates at which the strip bond is sold, and the volatility of the options being purchased.

Duration

As with any debt obligation or bond, there is interest rate sensitivity as it relates to the present value and term of the note. As such, any interest rate movements can temporarily affect the market price of the note on a daily basis, with the range of volatility primarily attributable to the term of the note.

Credit Risk

Structured notes are effectively a debt obligation of the issuing bank. Therefore, as with traditional plain vanilla bonds, the credit quality of the issuer will determine the likelihood of principal repayment at maturity. The guarantee of principal repayment is only as good as the bank providing the guarantee.

Liquidity

Although PPNs are designed to be held until maturity, clients may want to sell their notes before then. While a daily secondary market usually exists, there can be times when the credit and complexity of structured notes can cause the liquidity to dry up. Investors won't be given notification of this. There is little secondary trading as most dealers do not keep structured notes in inventory because of the differences between the various structures and payoff profiles.

Conclusion

- Structured notes come in all shapes and sizes to give investors returns exposure to many different markets, but only the PPN – with its issuer-provided guarantee of your capital being returned - should be considered a true fixed income alternative.
- The bespoke nature of many notes can make them very useful in filling “gaps” in portfolio construction
- Investors needs to be aware of the embedded complexity and costs

The overall conclusion

Analyzing the alternatives that are currently being used to act as fixed income within a portfolio generally leads us to the same conclusions. In almost all cases, with the exception of reaching for yield through extended duration on government bond portfolios, and well targeted geographic diversification, **the examined attempts to boost returns reduce portfolio diversification** – the asset classes are more correlated and will not perform as well in equity bear markets.

Structural issues may make certain asset classes appear less volatile than they actually could be. Don't confuse a lack of a daily mark to market for low volatility. Infiniti Sharp ratios do not exist. **Products which keep a constant NAV do not have a good track record in times of stress.**

Perhaps, the classic 60/40 needs to be re-thought and the amount of risk that one takes needs to be discussed more openly.

Risk free rates are very low, and all analysis of product returns should be made with the understanding that the risk free rate represents the zero duration, zero credit risk and infinite liquidity solution. Anything on top of that is moving "down the curve". Portfolios may need to accept higher levels of risk and lower diversification in order to achieve their goals.

Given the low expected returns in the traditional fixed income space, **honest conversations** about the risks that are being taken in the 3 major buckets (market/duration, credit and liquidity), as well as **how a portfolio will perform in times of stress** are a necessity in this market.

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