

INSTITUTIONAL

CAPITAL-EFFICIENT INVESTING FOR PROPERTY & CASUALTY INSURERS

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Summary

Today’s investing environment is a challenge for all Property & Casualty (P&C) companies and with the expectation of “lower for longer” now is a good time for companies to make sure they have an investment framework to help guide them, not just through this period but in any market environment.

Choosing between low rates and tight credit spreads can feel like being stuck between a rock and a hard place, add being in a regulated environment and things can be even more challenging.

In this article we examine what P&C companies are doing with their portfolios and how adopting a “risk-budget” framework can be used to improve investment decisions and how to look at some of the investment tools available.

Every insurer has their own risk tolerances, objectives and capabilities so there is no magic bullet to designing an investment strategy. Our aim is to help them understand the trade-offs between expected return, portfolio allocations and capital charges.

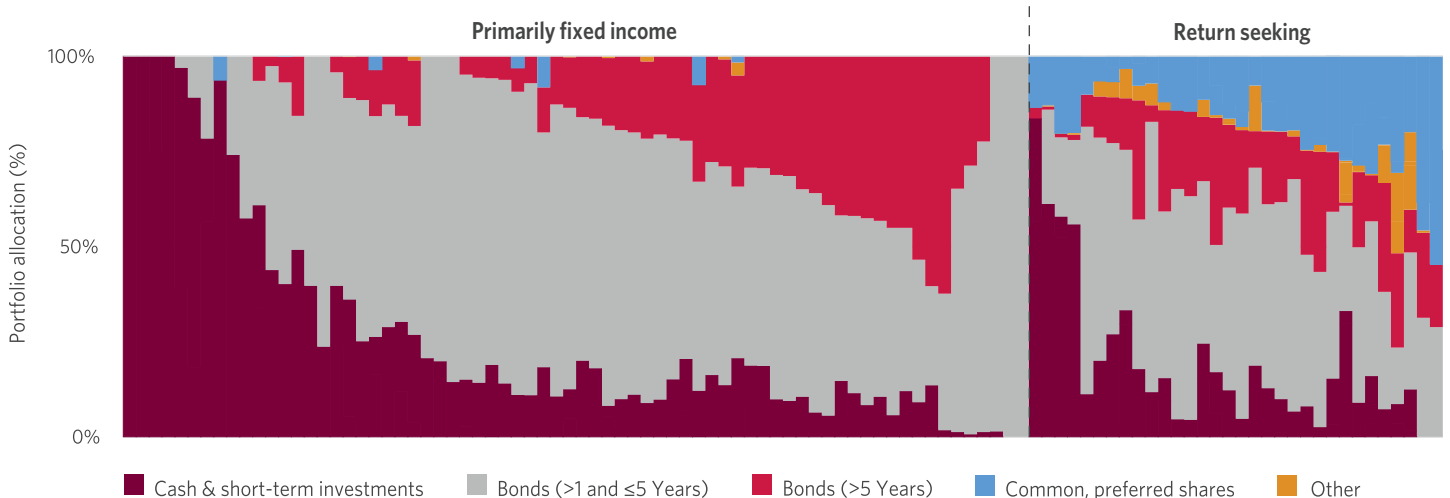
The Canadian P&C landscape

After analyzing a subset of insurers from the OSFI database using the most recent data (Q3 2020), we can get an understanding of what P&C insurers are investing in and how their risks charges are being allocated. After filtering based on a minimum size of investment and insurance portfolios then aggregating subsidiaries, we break the remaining 102 reporting entities into two groups:

- **Primarily fixed income:** Companies with >90% exposure to fixed income and cash (70 companies)
- **Return seeking:** Companies with >10% exposure to common shares, preferred shares, loans & other (32 companies)

Without knowing more about the individual company’s circumstances there are limited conclusions that can be drawn, however we see can see broad diversification amongst P&C companies in how asset allocations can differ (chart 1).

Chart 1 - Portfolio allocations of P&C insurers (Q3 2020)



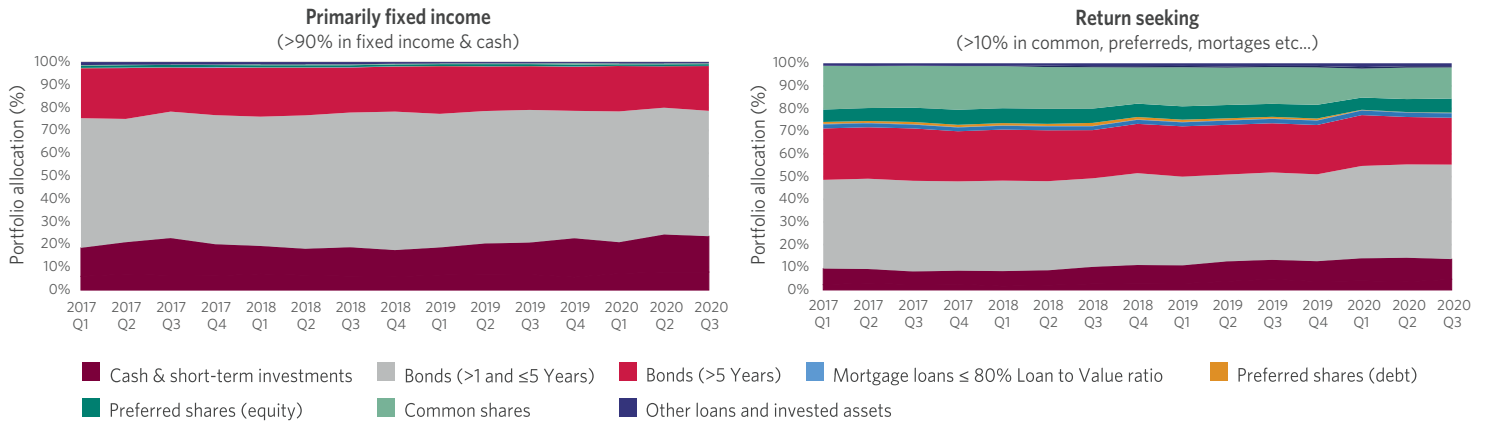
Source: OSFI, CIBC Asset Management. As at September 30, 2020.

P&C company investment profiles

Of the total assets reported by companies primarily allocated to fixed income, 78% are invested in securities with ≤5 years to maturity or cash; the investment types that have seen the biggest drop in yields (chart 2a).

Firms with >10% of their assets invested in return seeking assets have less exposure to short term fixed income (chart 2b), but cash and bonds maturing in ≤5 years now make up more than half of their exposure (55% versus 48% in Q1 2017).

Chart 2a & 2b - allocations over time



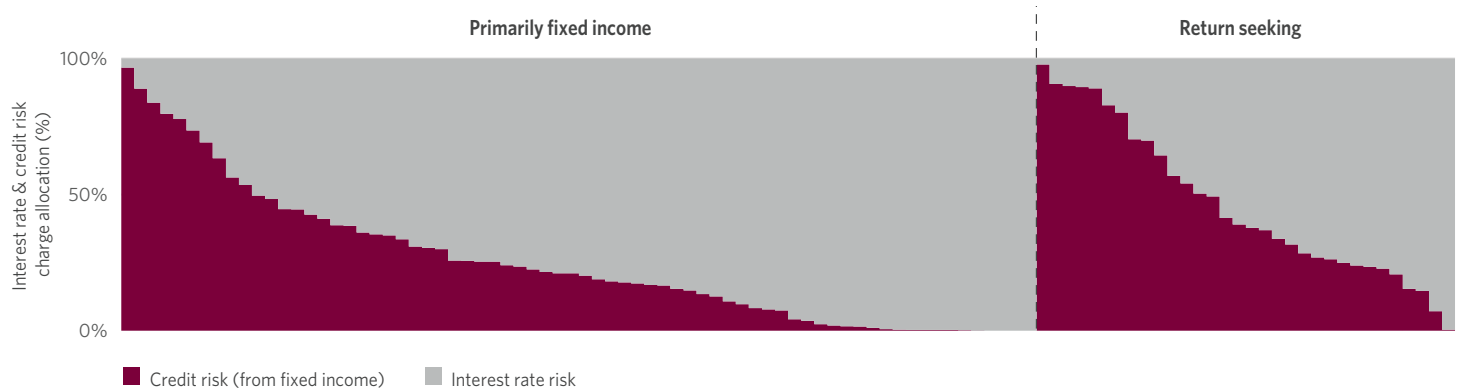
Source: OSFI, CIBC Asset Management. As at September 30, 2020.

Investment risk profiles

Fixed income investment decisions can influence the capital/margin charges in two ways, by changing the asset’s duration leading to increased asset-liability dollar duration mismatch (interest rate risk capital/margin charge), and incurring a capital/margin charge for investing in credit (credit risk capital/margin charge). Insurers can pull different levers to adjust capital/margin charges while targeting different expected returns.

How do insurers spend their “capital/margin risk charges” through investment allocations? Chart 3 looks at the relative size of capital/margin charges from credit associated with fixed income investments (i.e. excluding preferred shares, mortgages, unpaid claims etc...) and the overall interest rate risk coming from the dollar duration mismatch to interest rate sensitive liabilities.

Chart 3 - Risk budget breakdown of interest rate & fixed income credit charges



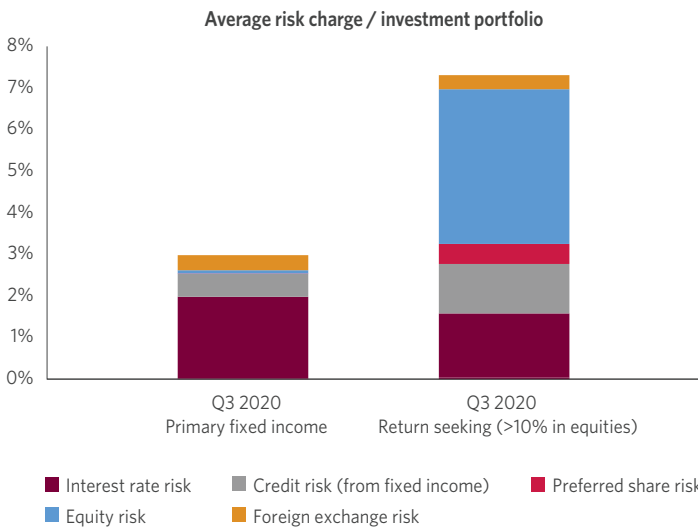
Source: OSFI, CIBC Asset Management. As at September 30, 2020.

An interesting consequence of how asset portfolios are invested is that we find that companies invested primarily in fixed income spend more of their total capital/margin charges on interest rate risk as opposed to credit risk charges (attributed to fixed income). However there is a tendency for larger companies to spend more on credit risk charges compared to smaller companies.

Companies that invest at least 10% of their portfolio in return seeking assets on average have nearly an equal share of capital/margin risk charges for credit (attributed to fixed income) and interest rate mismatch.

While this may be partly due to the lower dollar duration that comes from investing in certain return seeking assets (eg. common shares), Chart 4 shows the credit risk charges (attributed to fixed income) as a percentage of total investment portfolio is still significantly higher for the return seeking group.

Chart 4 - Risk charge as a percentage of investment portfolio



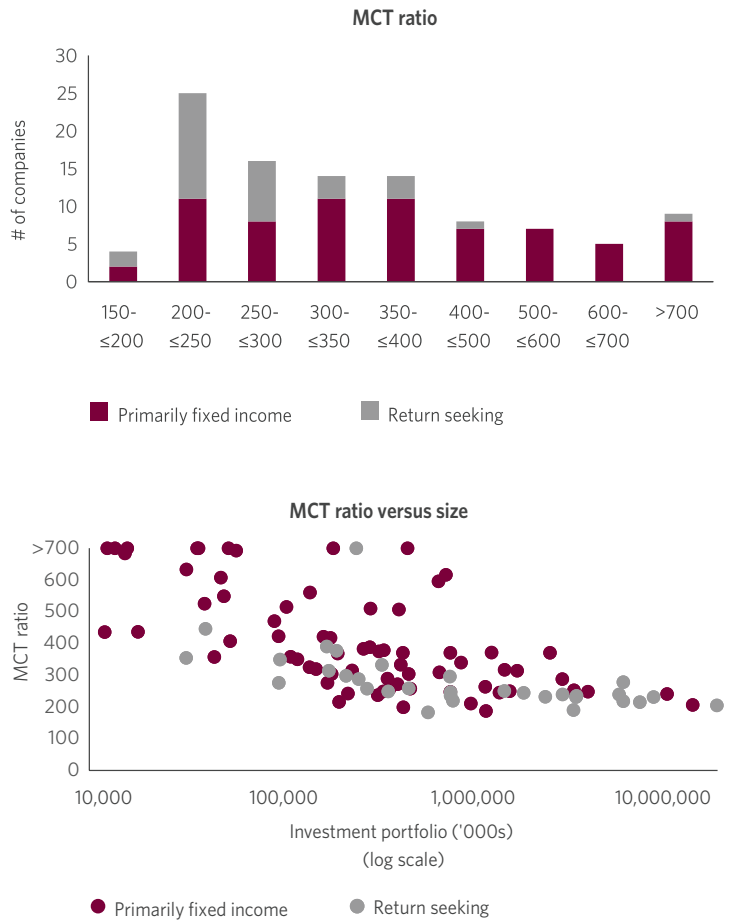
Source: OSFI, CIBC Asset Management. As at September 30, 2020.

Capital ratios

Despite the Minimum Capital Test (MCT) ratio being 150% for all P&C insurers we see a wide range across the industry and MCT ratios are distributed fairly evenly from 200% - 500%. We also see roughly 1 in 5 insurers have a capital ratio >500% as of Q3 2020 (chart 5a).

Larger companies and those with an allocation to return seeking assets have lower ratios as they either invest in more credit, increase capital/margin charges through return seeking asset classes or distribute excess capital to shareholders (chart 5b).

Chart 5a & 5b - MCT ratios Q3 2020



Source: OSFI, CIBC Asset Management. As at September 30, 2020.

Fixed income markets

Yield versus expected return

There is an important difference between **yield** and **expected return**. Yield is more commonly reported and represents how much a security would return if it has the same yield in one year (i.e. the yield curve is flat). Expected return represents how much a security would return over one year if nothing else changes, including the steepness of the yield curve "roll down."

The ultimate difference between yield and expected return depends on both the amount of roll down and the duration of the security. When yield curves are flat or duration is low, they can be close to the same. However, when interest rate curves are steep at mid durations there can be significant differences and relying on yield instead of expected return can underestimate the benefits of investing in mid-duration bonds. When we make investment decisions we always focus on expected return and we distinguish in our discussion when we use yield versus expected return.

Investing toolkit and capital charges

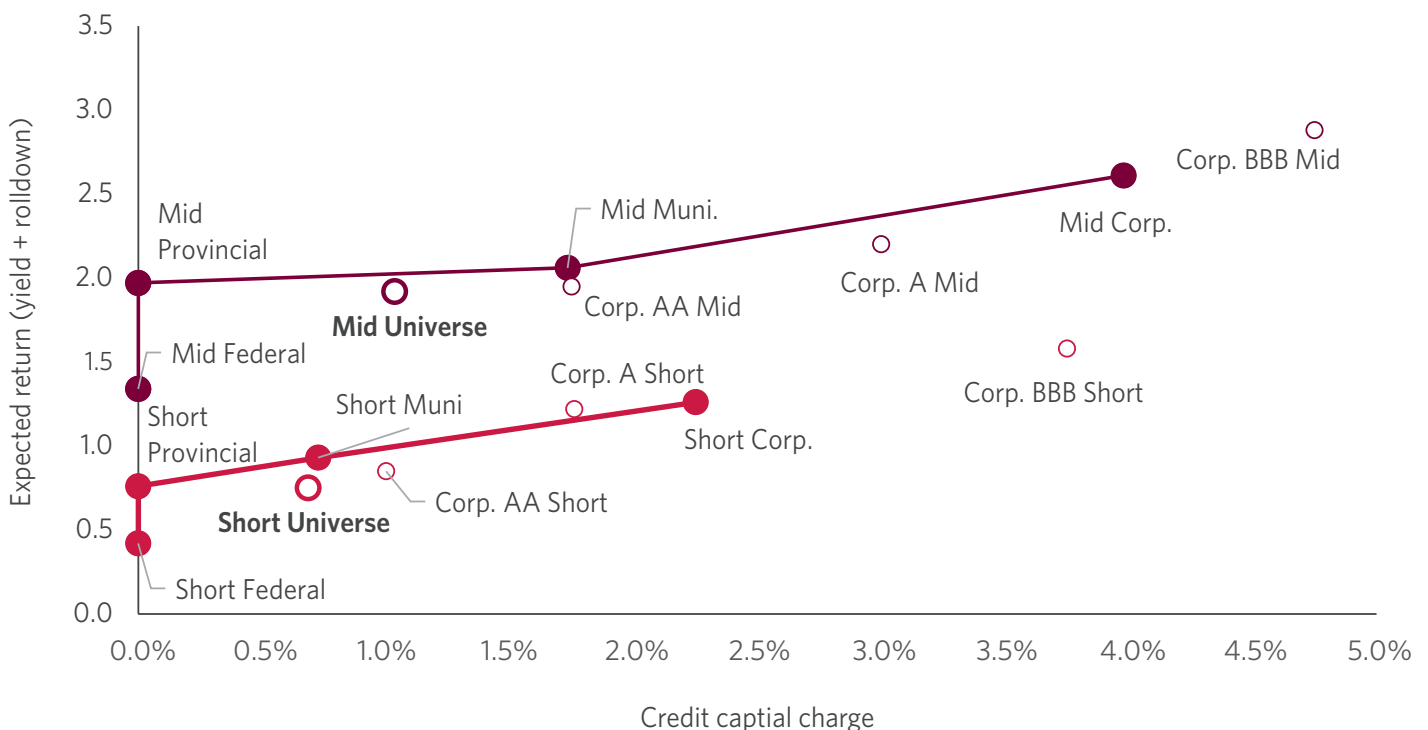
Federal bonds offer the least expected return and have nearly the same liquidity as most provincial bonds. All else equal, federal bonds protect less against rising interest rates because the lack of credit spread component to provide additional returns and diversification of risk.

Provincial bonds give additional yield through credit spreads without incurring any credit charges. These are powerful tools in any P&C investing toolkit. The right portfolio of provincial bonds is also extremely liquid so even for liquidity-conscious investors, these can be looked at to replace federal bonds.

Municipal bonds have the same credit charge of similar rated corporate bonds (except for provincially incorporated Quebec issuers) but at current yields, earn nearly the same as provincial bonds meaning insurers are not compensated for the additional capital charges incurred for investing in these at current levels.

The yield pickup on the **corporate bond** universe can justify an allocation for insurers comfortable with the additional risks, but the pickup notably comes from A or BBB rated bonds. Because of the wide range in expected returns and capital charges, active corporate bond management can add a lot of capital efficient value, especially if managers can consider capital charges as part of their criteria.

Chart 6 - Fixed income expected returns versus capital charge



Source: CIBC Asset Management, FTSE, OSFI. As at January 29, 2021.

¹ You can read more about LRCNs in our December 2020 Whitepaper titled "[Limited Recourse Capital Notes: A New Instrument in the Canadian Bond Market](#)"

Despite higher credit capital charges, the yield pickup on **commercial mortgages** can be significant and in low duration funds, it can mean allocating to them doesn't come with an additional interest rate risk charge. Commercial mortgage funds have less liquidity than publicly traded bonds so creating specific liquidity limits in the rest of the portfolio is likely advisable. It is also important to consider the insurance exposure profile of a P&C company and whether there is correlation to potential exposure in a commercial mortgage fund.

Because **equities** have no interest rate sensitivity, the 30% capital/margin charge is offset by lower interest rate risk charges which can allow the fixed income portfolio to invest in slightly longer bonds. If insurance companies with excess capital are considering spending some of their capital charge on an allocation to enhance returns, they should make sure they are looking at ways to improve expected returns per unit of MCT, not just automatically allocating to equity.

Preferred shares and **limited recourse capital notes (LRCNs)**¹ can provide a hedge against rising rates and offer a low correlation to a fixed income portfolio, but they can also be illiquid and experience drawdowns similar to equities. There is room in a capital efficient portfolio for them too. For example, expected returns on a P-2 rated preferred share can be comparable to high yield bonds but with a better capital charge and higher quality issuer exposure.

Putting It All Together

Even with historically low interest rates and credit spreads it is possible to construct investment grade fixed income portfolios that offer reasonable expected returns within a capital constrained framework.

For simplicity in our examples, we assume the insurance, operational, equity and non-fixed income credit capital/margin risk charges are constant regardless of fixed income portfolio allocation. We apply our framework in three ways:

1. Looking at investment options without impacting the current MCT ratio
2. Evaluating the benefit of reducing MCT ratio (for those that have excess capital)
3. Understanding the benefits of managing the portfolio using a “risk budget” framework instead of fixed constraints and the inefficiencies of pooled funds

Case study 1 - Getting more out of the current MCT

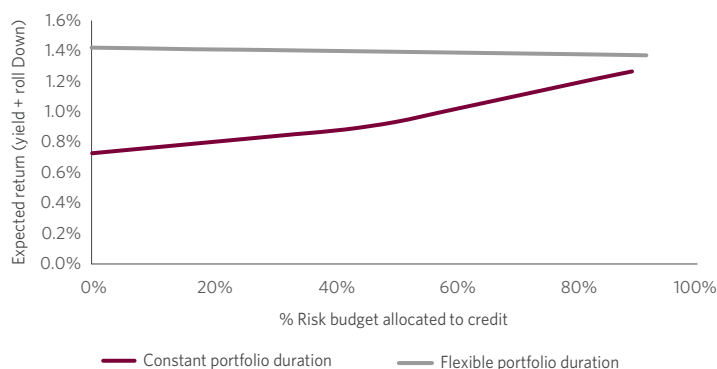
Many insurers are unable to reduce their MCT ratios so they should be focused on how to get the most out of their fixed income portfolios without taking additional capital charges. They may either be near the 150% minimum capital requirement or for risk management purposes, be near their own internally set target for their MCT ratio.

In the first hypothetical scenario, Company A has an MCT ratio of 200% invested entirely in fixed income and cash. They are evaluating how various passive investment strategies can be used to generate different portfolio expected returns.

Company A wants to see investment options for two sets of constraints:

- **Constant portfolio duration:** An investment frontier where the fixed income portfolio (excluding cash) has a duration cap of 3.5 years.
- **Flexible portfolio duration:** An investment frontier where the portfolio can invest in longer duration fixed income while keeping the overall capital charge constant.

Chart 7 - Investment trades-offs between credit and interest rate exposure



Source: CIBC Asset Management, OSFI, FTSE. Data as of January 29 2021.

Every portfolio on the frontiers in chart 7 has the same total capital/margin charge (credit + interest rate capital charges) yet expected returns range from 0.7% to 1.4%. This demonstrates that there remain places to find expected returns even in a capital constrained environment.

The **burgundy line** shows the frontier of expected returns versus credit capital/margin charge when the fixed income portfolio (excluding cash) has a duration limit of 3.5 years. The frontier is upward sloping showing that as more of the allocation is spent on credit, expected returns increase. To maximize expected returns, Company A would allocate as much as possible to a short corporate bond portfolio.

The **grey line** shows what the overall expected return would be if they allow for a barbell strategy (where the fixed income portfolio can invest in bonds that have 5-10 years in duration as well as cash with near zero duration). The reason this strategy generates so much in extra returns is that in addition to the extra yield mid-duration bonds offer, investors currently benefit from the “roll-down” effect as mid and long duration bonds see their yields rise.

It is not advisable to take a rigid approach to an investment strategy based on what the market looks like at a single point in time because the shapes of these frontiers can change.

Whenever possible we prefer using a “capital charge budget” to manage portfolios over market cycles. The objective is to take credit charges when the expected return on corporate bonds is greater than the expected return from investing in provincial bonds and take interest rate charges when curves are steep and the expected return for investing in longer duration bonds is rewarded. This is hard to do if the investment policy sets strict limits on corporate bond allocations and durations.

Case study 2 - Spending excess MCT

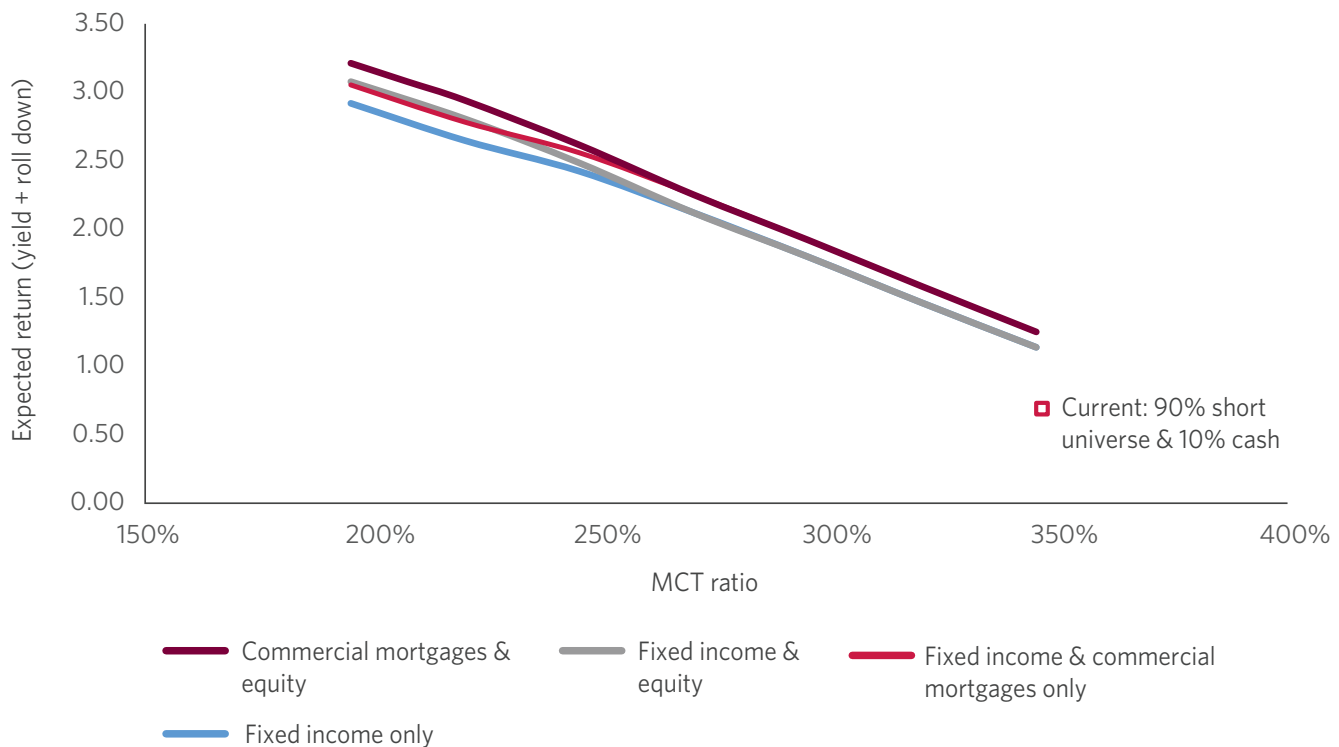
Chart 5 shows there are insurers out there who may be able to get more out of their investment portfolio by investing in assets that come with higher expected returns at the expense of the MCT ratio.

In our second hypothetical scenario, Company B is an insurer with an MCT ratio of 345% and is invested 90% in a short universe fund and 10% cash. They are willing to invest up to 10% each in commercial mortgages and equities but want to know what the trade offs are for reducing their MCT ratio down to a minimum of 195%. Equities have an assumed expected return of 6% and commercial mortgages have an assumed expected return of 3% with a duration of 1.8 years.

The initial improvement in expected return without changing the MCT ratio (chart 8) comes as a result of avoiding inefficient asset classes such as municipal and federal bonds that are part of the universe. This was the exercise in the previous case study but now as Company B looks at reducing their MCT they start seeing increasing expected returns which initially come by taking slightly more credit and interest rate charges.

For Company B, there is no need to allocate to equities until the MCT ratio is reduced to nearly 250% because the marginal benefit of investing in more credit/longer duration is greater than investing in equities per unit of MCT charge up to that point.

Chart 8 - Expected returns trade-offs versus lower MCT ratio



Source: CIBC Asset Management, OSFI, FTSE. As at January 29, 2021.

Through understanding the investment trade-offs of different strategies, Company B is able to determine how low they are willing to take their MCT ratio based on the potential benefits of different investment portfolios and include any asset class. They would also be able to look at other characteristics such as Value at Risk (VaR) and correlation to liabilities (ie. do they primarily insure an industry the assets have exposure to) before making a final investment decision.

By working with the investment manager and providing them with a total “risk-budget”, the portfolio manager can adjust the dollar duration and credit exposure to meet the desired targeted MCT ratio across different market environments.

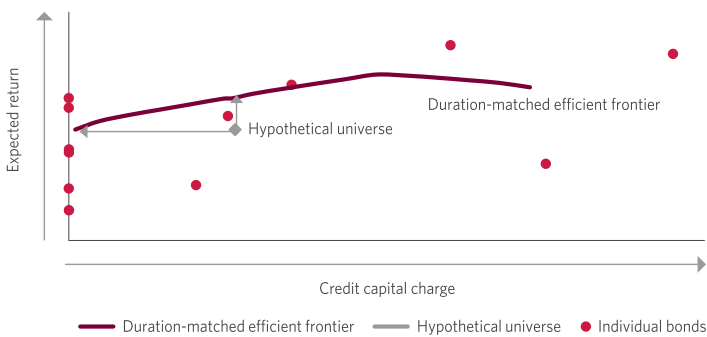
Improving capital efficiency by avoiding pooled funds

Pooled funds are designed to serve a wide variety of clients many of whom aren't subject to P&C capital charges. As a result, portfolio managers don't take into account impacts on capital charges when making investment decisions in pooled funds. For example, an active manager may be indifferent between the future prospects and expected return of a municipal bond and a similar rated provincial bond even though the provincial bond has no capital charge for P&C investors. A corporate bond fund may invest in a 'BBB' rated bond with only slightly better yield than an 'A' rated bond despite the higher capital charge.

The expected return in these different scenarios may be quite similar so most investors would be less sensitive to what's selected, but the capital/margin charge implications for P&C investors won't be included when portfolio managers make their investment decisions. Selecting the higher capital charge municipal or BBB bond in these examples could be inefficient for P&C investors but can be addressed through a separately managed account for clients able to invest in a way that benefits from an established model portfolio but customized to their needs. To demonstrate this, imagine an investing universe where there are only 12 equally weighted bonds which produce a hypothetical universe.

Chart 9 shows how an investor could invest in these securities (with an individual maximum allocation of 30%) and produce portfolios with the same duration but improved expected return/capital charge profiles.

Chart 9 - Hypothetical example - removing inefficiencies in universe funds



Source: CIBC Asset Management, OSFI, FTSE. As at January 29, 2021.

A custom strategy is capable of building portfolios that either have the same credit capital charge but increases gross expected returns or keeps the same gross expected returns but eliminates the credit capital charge by investing in provincial and federal bonds.

With traditional portfolio investment policy statements (IPS), rigid constraints on parameters such as term, sector, and rating exposure can handcuff a portfolio managers ability to exploit inefficiencies in the market, either through moving into higher capital charge securities where the compensation is sufficient to offset the charge or into lower expected return securities where they capital charge savings outweigh the diminished return expectations.

Policy constraints can and should still be included in the IPS, however they should ideally be paired with a capital budget and these two pieces calibrated together such that the total portfolio risk and capital charge objectives of the investor are maintained while providing greater flexibility for skilled active managers to produce better portfolio outcomes across market cycles.

Conclusion

The “lower for longer” market environment today is leading P&C companies to look at their investment strategies and how to look at getting more out of their assets in a capital constrained environment.

By adopting a “risk-budget” framework P&C companies can work with managers to develop a dynamic investment strategy that seeks to find expected returns in challenging market environments. Smaller firms not able to invest in a separately managed portfolio can still look to build a portfolio of funds that balance the expected returns and capital charges as effectively as possible.

Property & Casualty insurance is a very competitive industry and building an investment portfolio that can weather challenging markets is an opportunity to help give companies an edge.

Let's connect

Should you have any questions about this report or anything else, please do not hesitate to connect:

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