

Domestic vs. Global Fixed Income

New Zealand Fixed Income Research¹, 24 February 2012

- Investors face an asset allocation choice between holding domestic or global fixed income. Each can play a similar role in a diversified portfolio.
- In the mid 2000s, there was a compelling argument in favour of allocating into global fixed income. Making this choice worked very well through the 2000s.
- Given the sea change in NZ and global interest rates since the GFC, the influences on this asset allocation choice have moved considerably. In our opinion, the decision between domestic and global is now evenly balanced.
- For investors who jettisoned domestic bonds entirely, it is timely to review the potential to have a more balanced fixed income allocation.

A framework for domestic versus global fixed income

Investors in a balanced portfolio have a range of asset classes to allocate between in both domestic and global markets. These include cash, fixed income, equity, property, real assets and alternatives. Domestic and global fixed income can play similar roles in a portfolio. Both provide relatively stable returns and act as a hedge against risky asset classes, performing strongest in conditions where risky asset returns are weakest.

Given their similar roles, while some investors hold both domestic and global fixed income allocations, others choose to hold just one or the other. From the mid 2000s, there was a trend in the NZ institutional market of allocating towards global fixed interest. This decision was driven in part by market conditions in the early 2000s.

This paper provides an assessment of the factors that determine the choice between global and domestic fixed income, including:

1. Comparable running yields
2. Benchmark return characteristics
3. Ability to generate alpha over benchmarks

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1. Comparable Running Yields

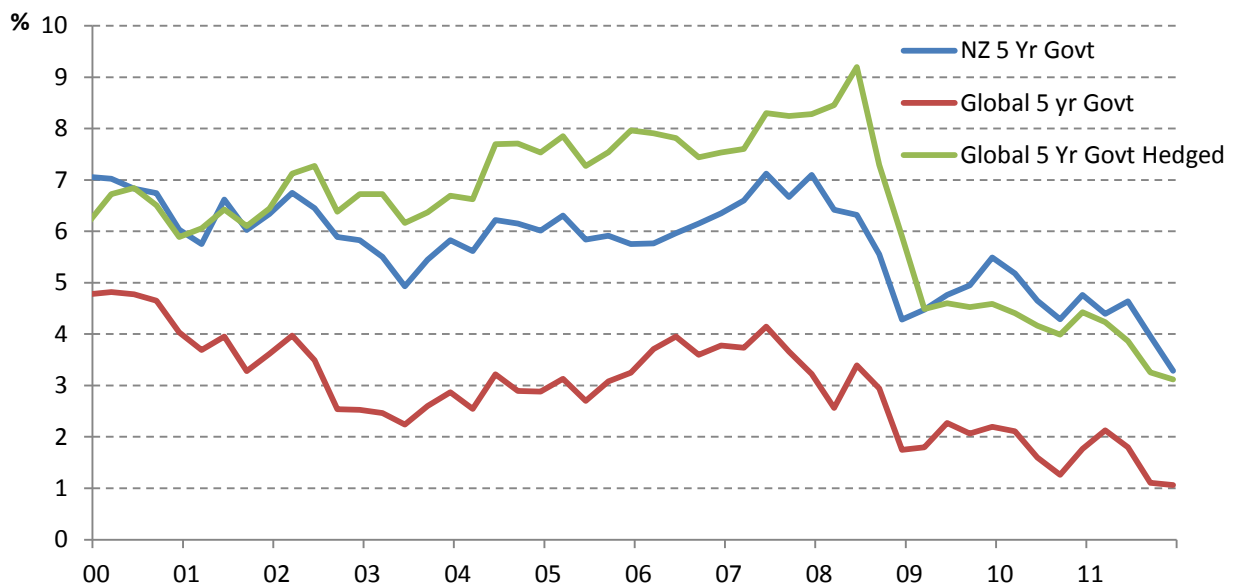
One key consideration in choosing between domestic and global fixed income is the running yield when hedged back into NZ dollars, which is driven by both the level and shape of yield curves in NZ and overseas.

The standard way to hedge global bond yields back into NZ dollars is through the foreign exchange forwards market, typically at a horizon of one-month ahead. The so-called 'forward points' for these transactions are determined by the differentials between NZ and global one-month interest rates. So

Global 5 Year Yield NZD Hedged	=	Global 5 Year Yield	plus	FX Forward Points (NZ 1-month interest rate less Global 1-month interest rate)
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For most of the period between 2000 and 2010, global bonds yields hedged back into NZ dollars were higher than NZ government bond yields (Chart 1).

Chart 1. NZ vs Global: 5 Yield Government Bond Yields



Source: Bloomberg and Barclays Capital. Global yield is Barclays Index weighted.

Rearranging the equation above, we can see that global bonds have higher hedged running yields if:

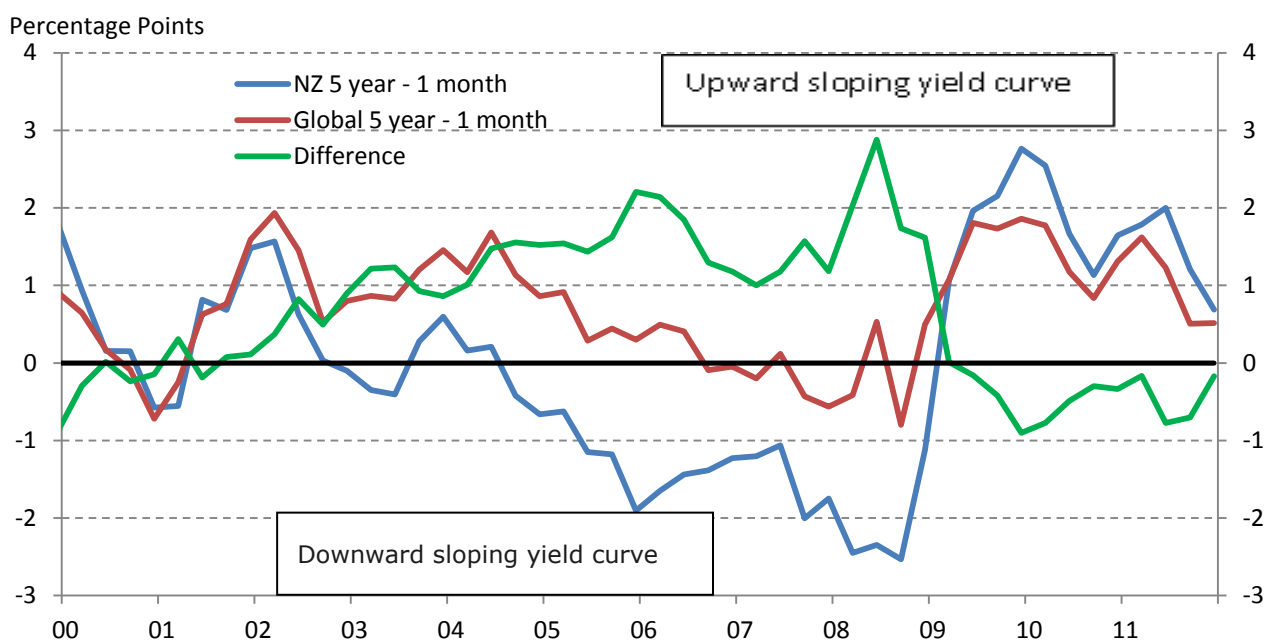
Global 5 Year Yield	less	Global 1-Month Interest Rate	>	NZ 5 Year Yield	less	NZ 1-Month Interest Rate
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In other words, the 'steepest' upward sloping yield curve offers the highest hedged yield.

Through the 2000s, NZ monetary policy was held tight by RBNZ, in the face of persistently strong consumption and housing demand fuelled by a build-up of household debt. The Official Cash Rate (OCR) reached a record high of 8.25% in mid 2008. This had the effect of keeping NZ one-month interest rates extremely high relative to the NZ long-term bond yield, making the NZ yield curve steeply downward sloping ('inverted').

As a result, this made it more attractive to buy global bonds and receive the forward points to hedge these back into NZ dollars. When the green 'difference' line in Chart 2 is positive (as it was for most of the 2000s), hedged global bonds provided a higher running yield than NZ.²

Chart 2. NZ vs. Global: 5 year yields less 1-month interest rates



Since the GFC first struck in 2007, NZ monetary policy has loosened significantly, with the OCR falling to a record low of 2.5%. At the same time global bond yields have also fallen significantly. As a result, the choice between the running yield on NZ bonds and hedged global bonds has become more evenly balanced (Table 1).

Table 1. NZ yields vs. NZD hedged global yields

	NZ 5 year	Global 5 year	FX Forward Points (NZ 1 month less Global 1 month)	Global 5 year NZD hedged	Global hedged less NZ
Dec 2006	6.15	3.77	3.71	7.78	1.33
Dec 2011	3.29	1.06	2.06	3.12	- 0.17

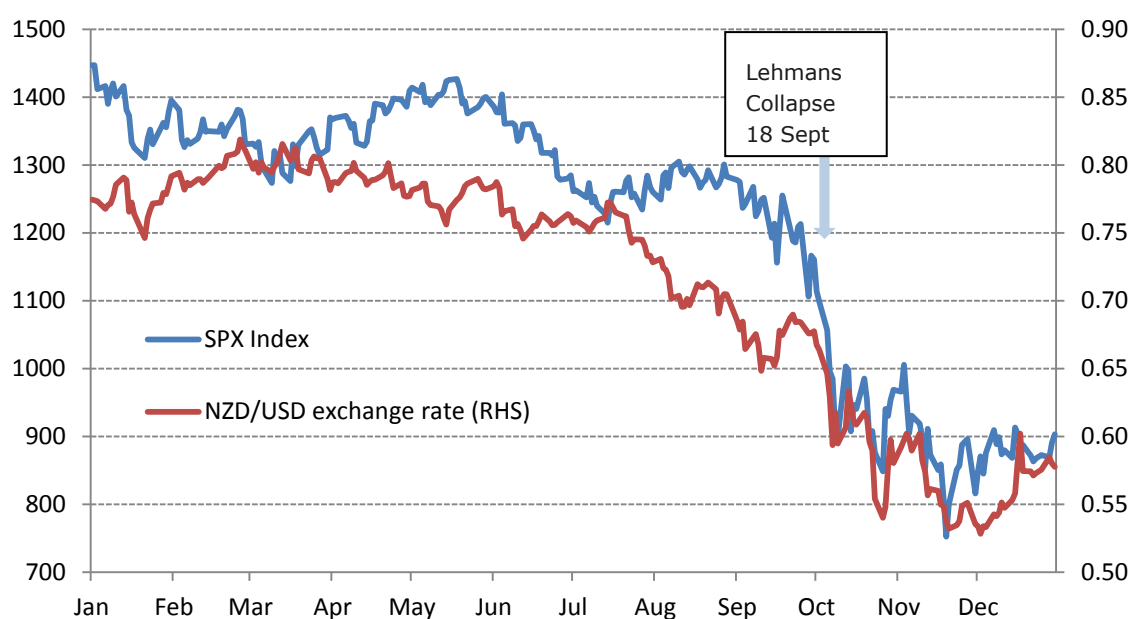
Source: Bloomberg and Barclays Capital. Global yield is Barclays Index weighted.

² Annex 1 considers an alternative comparison to complement this analysis of the slopes between 5 years and 1 month.

Over the next 3 to 5 years, we are not expecting that the steeply inverted NZ yield curve observed in the 2000s will be repeated. With NZ moving through a phase of household deleveraging, it is more likely the NZ yield curve will remain upward sloping for the foreseeable future. In that environment, it would be relatively less attractive to hold global bonds hedged back into NZDs.

Furthermore, the GFC highlighted that there can be costs associated with hedging foreign asset holdings. Over that period, the NZ dollar fell sharply in a period of heightened market stress (Chart 3). Investors who had been hedging their foreign bond holdings in the foreign exchange forwards market would have had certainty over the life of the hedge (typically one month), but each time their hedge was rolled over they would have required additional NZ dollars to re-establish the hedge on their existing holding of foreign currency bonds. Given the illiquidity of markets in these stressed conditions, this meant selling securities at a discount to raise cash to fund the hedging transaction, at a time when credit spreads were wide and equity markets were weak. The costs of this can be surprisingly high, with some investors suggesting costs as high as 300 basis points during 2008.

Chart 3. NZ dollar versus S&P 500 Equity Index – 2008 Case Study



Sources: Bloomberg

2. Benchmark return characteristics

Another key consideration when choosing between the NZ fixed interest and global fixed interest is the return characteristics of the market benchmarks, which are driven by:

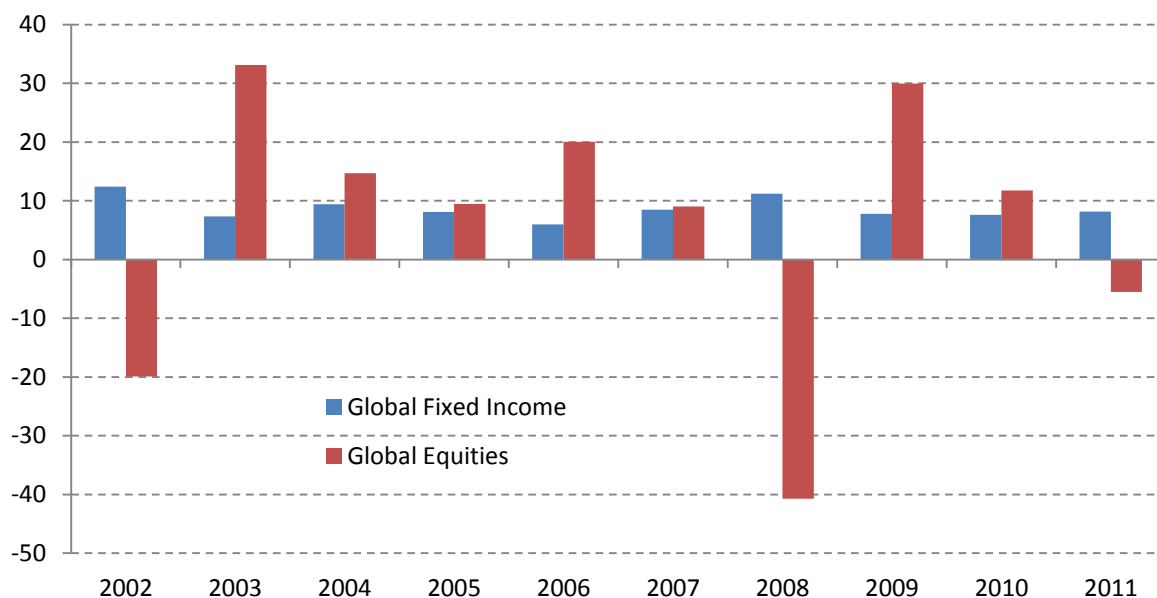
- i) The duration of the benchmark, determining the sensitivity to interest rate moves.
- ii) The composition of the benchmark, determining the sensitivity to underlying issuers.

Duration of benchmark

The duration of the Barclays global aggregate is nearly 6 years, which is significantly longer than either the NZ Government Stock Index (4.5 years) or the NZ Corporate A-Grade Index (2.5 years) - (see Annex 2). This makes returns on global bonds much more sensitive to level changes in bond yields, providing strong returns when interest rates fall and a greater risk of capital losses when interest rates rise.

Over the past 4 years, this longer duration has proved beneficial by allowing global bonds to be an effective hedge for weakness in risky asset classes since the beginning of the GFC. Since the end of 2007, as bond yields have fallen, global bonds have made cumulative return of 35 percent. So a significant allocation to global fixed interest would have been an effective hedge to the relatively weak return on global equities over the same period (Chart 3).

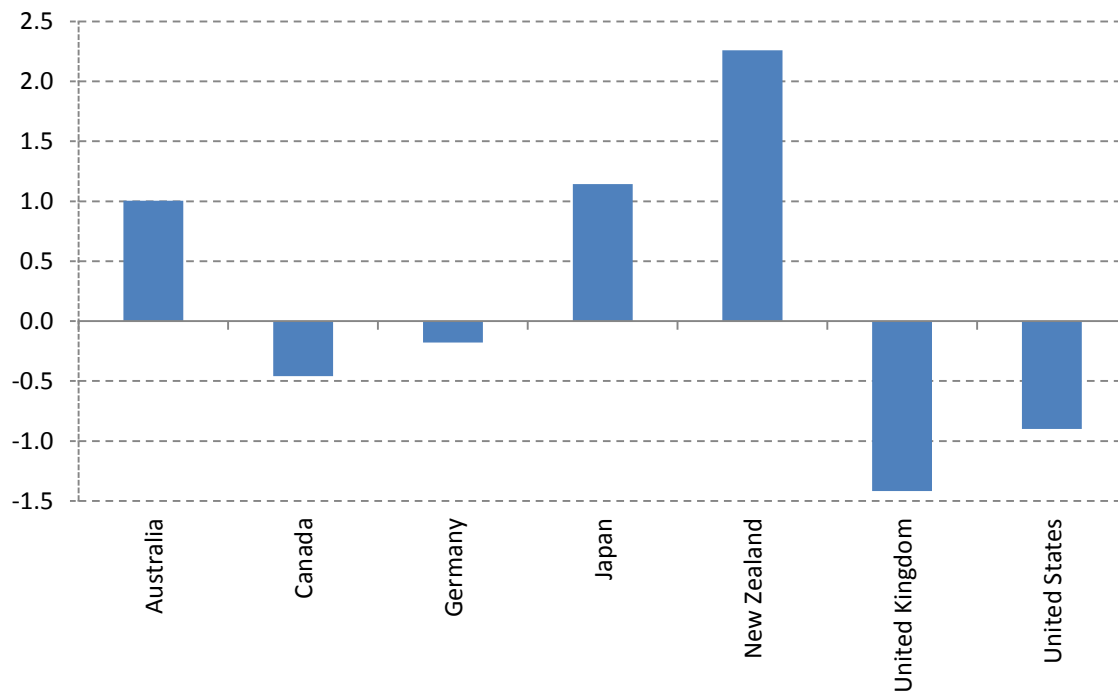
Chart 3. Annual Returns on Global Equities and Global Fixed Income



Sources: Morgan Stanley and Barclays Capital.

However, global bond yields are now at record lows, with real yields negative in many core developed countries (Chart 4). With limited scope for yields to fall lower still, global bonds are now much less attractive to hold as a hedge against possible weakness in risky asset classes. Arguably, over the medium to long-term the outlook for global bond yields is asymmetric, with more scope to rise back to more normal levels. In those conditions, the lower running yield and longer duration of global bonds translates to greater scope for capital losses from that asset class. In practice, global bond yields would only have to rise by around 50 basis points to experience a negative total return over 2012.

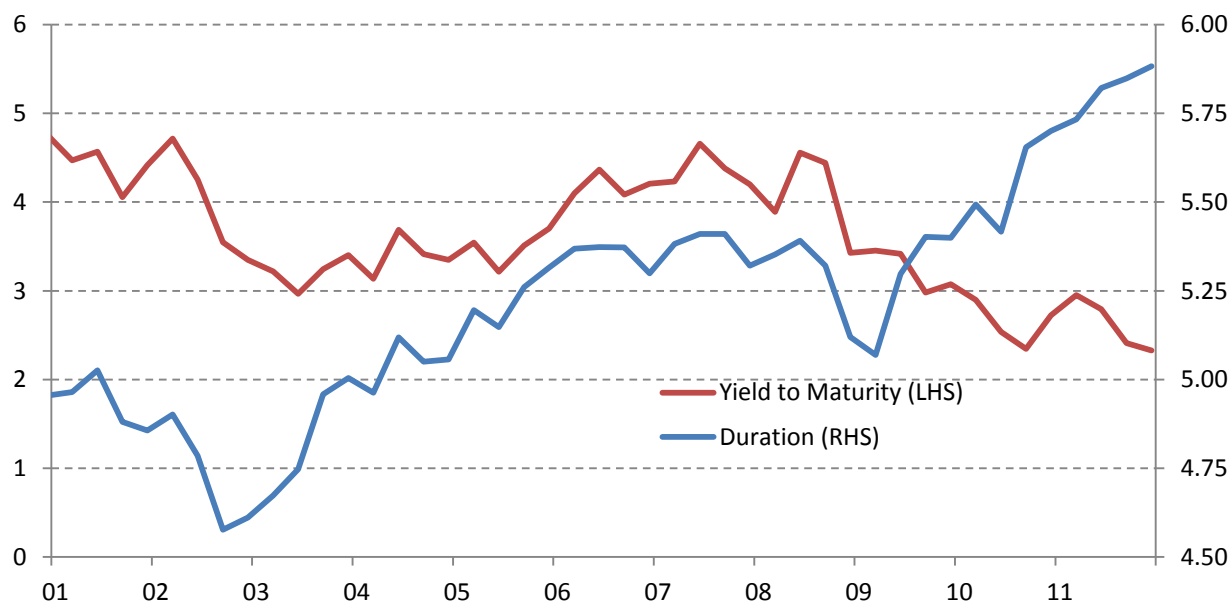
Chart 4. Real 10 Year Government Bond Yields



Source: Bloomberg. Real yields estimated by nominal yields less actual CPI inflation.

Indeed, as global interest rates have fallen to record lows, the duration of the global bond index has lengthened further (Chart 5). This has occurred as the index is issuance weighted, while governments and corporates have on average been issuing bonds with longer maturities to lock-in record low funding costs over longer periods. In other words, just when there looks to be more scope for interest rates to rise, returns to investors following the global bond benchmark are even more sensitive to changes in interest rates, increasing the chance of capital losses.

Chart 5. Global Bond Index – Yield to Maturity versus Duration



Sources: Barclays Capital.

Composition of global benchmark

In the early 2000s, the composition of the global fixed income benchmark also seemed to have some attractive qualities, offering greater diversification across countries and issuers, with a high average credit rating.

However, the GFC and European sovereign crisis highlighted an additional weakness of many fixed income benchmarks. Issuance weighted indices encourage investors to hold higher weightings of debt as an individual issuer borrows more, at the same time that their credit worthiness falls. As a result, the global index was weighted towards heavy issuers such as Italy (3.8%), Spain (2.9%) (see Tables 2 & 3). **These countries have been amongst the worst performing government bond markets as sovereign debt sustainability has come increasingly under the spotlight.** In addition, investors in the Barclays global aggregate need to be comfortable with a 20% allocation to Japanese fixed income, with its unique characteristics and domestic focus.

Table 2. Global Index by Country

	Percent
United States	36.0
Japan	20.4
United Kingdom	6.1
Germany	6.0
France	5.8
Italy	3.8
Canada	3.5
Spain	2.9
Netherlands	2.0
Supranational	1.8
Australia	1.5
S.Korea	1.1
Sweden	1.0
Belgium	1.0
Austria	0.9
Switzerland	0.8
Other	5.4

Sources: Barclays Capital

Table 3. Global Index by Sector

	Percent
Treasury	54.0
Government-Related	13.6
<i>Agency</i>	<i>7.5</i>
<i>Local Authority</i>	<i>3.2</i>
<i>Sovereign</i>	<i>1.1</i>
<i>Supranational</i>	<i>1.8</i>
Corporate	15.8
<i>Industrial</i>	<i>7.2</i>
<i>Utility</i>	<i>1.6</i>
<i>Financial Institutions</i>	<i>7.0</i>
Securitized	16.7
<i>MBS Passthrough</i>	<i>12.0</i>
<i>ABS</i>	<i>0.2</i>
<i>CMBS</i>	<i>0.7</i>
<i>Covered</i>	<i>3.9</i>

Sources: Barclays Capital

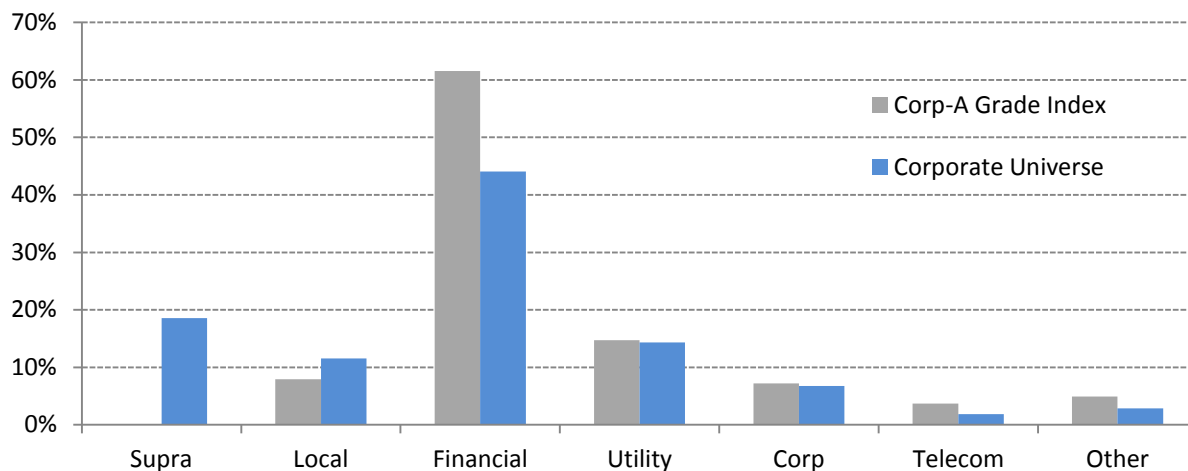
Composition of NZ benchmarks

Traditionally, NZ fixed interest managers have used the NZ Government Stock Index as their benchmark.

However, we believe a more appropriate benchmark for New Zealand fixed income is a 50:50 combination of the NZ Government Stock Index and Corporate A-Grade Index. Given that core NZ fixed income managers tend to hold a combination of NZ government bonds and highly-rated corporate bonds, it is the more representative of the underlying investment market and provides a more accurate measure of manager performance. Having a fixed weight between government and corporate issuers also makes it less susceptible to the weaknesses of issuance-weighted indices.

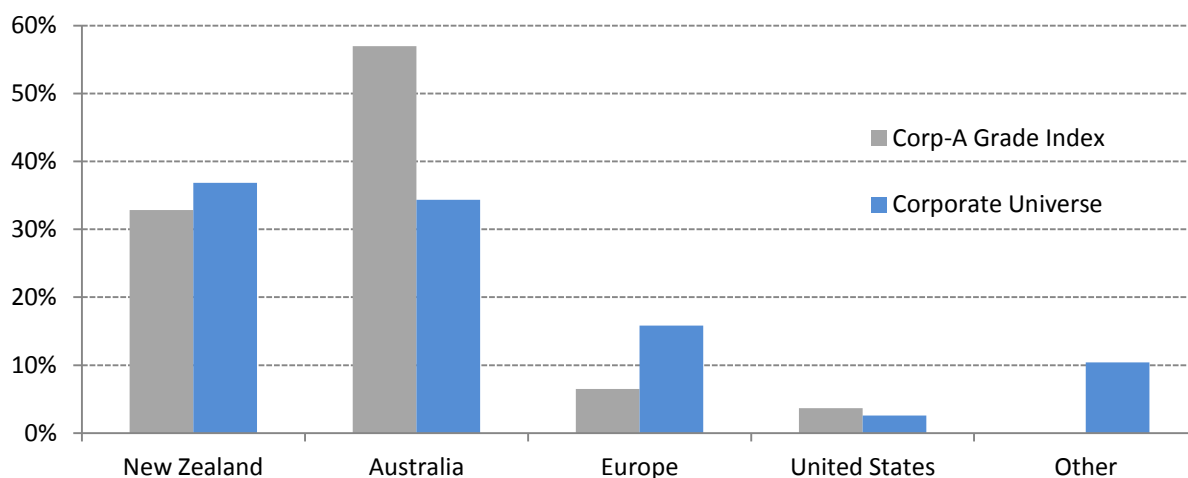
There is around \$43bn of NZD domestic credit on issue across 70 issuers, making it comparable in size to the NZ government bond market. The Corporate-A Grade Index captures liquid fixed rate domestic NZD corporate bonds with ratings of A- or better (Annex 3). There are over 30 issuers captured in the Corporate-A Grade Index, with a relatively high weighting towards Australasian banks and New Zealand utility companies (Charts 6 & 7, and Annex 4).

Chart 6: Sectoral profile of Domestic NZD Credit



Sources: Bloomberg

Chart 7: Parent countries of Domestic NZD Credit



Sources: Bloomberg

3. Ability to generate alpha over benchmarks

In addition to running yield and expected benchmark returns, a final consideration is the ability of an active manager to beat their benchmark return. This is a function of a number of factors, including the liquidity and volatility of the underlying market, the hedging tools and low-cost financial instruments available, and the skill of the manager.

Traditionally, the global fixed income market has been seen as deeper and more liquid than the NZ fixed income market, with a wider array of instruments and potential alpha sources.

However, the liquidity of the NZ government bond market has improved noticeably in recent years. In the mid 2000s, there were fears that the NZ government market may shrink to a size that was incompatible with active management in a liquid market. But since the late 2000s, the NZ government bond market has entered something of a 'sweet spot'. Liquidity has improved as issuance increased to meet larger budget deficits, at the same time that NZ's credit standing remained underpinned by a level of government debt to GDP that remains low by international standards.

The corporate part of the NZ market has many similarities with foreign corporate bond markets. Given the heterogeneity of individual corporate bond issues, with distinct maturities, seniority and optionality, corporate bond markets are inherently less liquid than government bond and interest rate swaps markets. This is true even in relative large countries, such as the UK and Australia. However, the NZ market has around two-thirds of its corporate bonds available to the retail market, providing an additional source of liquidity to supplement the wholesale investors. During the GFC, this helped provide the NZ corporate bond market with better liquidity than many overseas corporate bond markets.

The availability of hedging tools is also expanding. Like the global bond market, interest rates swaps have become an established low cost tool in New Zealand for managing overall duration risks and exploiting volatility in the spread between swap rates and bond yields. Similarly, credit default swaps (CDS) have become an established tool for global managers to manage credit risk, to individual issuers and in aggregate. In New Zealand, given the overlap between the main underlying issuers (i.e. Australasian financials), the Australian iTraxx credit index provides a new low-cost tool for NZ fixed income managers to actively manage credit.

In practice, over the past 10 years NZ fixed income managers have exceeded the returns on the NZ Government Stock Index by an average of 40 basis points. Global managers have exceeded the global benchmark by an average of 30 basis points, with a greater dispersion of returns between managers perhaps reflecting differences in mandates (Table 4). With global fixed income managers typically charging higher fees, the difference in actual performance is greater when assessed in terms of alpha after fees.

Table 4. Investment Performance – Returns, Dispersion and Alpha

	3 Years	5 Years	10 Years
Median Manager Return % pa			
Domestic	7.7	8.3	7.7
Global	10.1	8.9	8.9
Return Dispersion (High – Low) pp			
Domestic	1.2	1.6	0.8
Global	9.0	3.1	1.4
Media Return vs. Benchmark pp			
Domestic (NZ Govt Stock)	+0.5	+0.1	+0.4
Domestic (50:50 Govt Stock:Corp-A)	+0.1	0.0	+0.3
Global	+2.3	+0.3	+0.3

Sources: Melville Jessup Weaver

We believe that a well-designed NZ fixed income mandate with access to appropriate alpha sources and hedging tools should be able to achieve around 75 basis points of alpha against a 50:50 NZ Government Stock: NZ Corporate A-Grade Index.

Conclusions

In the mid 2000s, there was a compelling argument in favour of allocating into global fixed income and down weighting NZ fixed interest. Making this choice has worked very well for investors through the 2000s.

However, since the GFC there has been a sea change in level and shape of yield curves in NZ and overseas. As a result, the choice between global and domestic bonds is more evenly balanced.

- **Comparable running yields:** NZ and global bonds now have very similar running yields on a hedged NZ dollar basis, while a global allocation faces the potential costs associated with FX hedging in volatile periods.
- **Benchmark return characteristics:** NZ and global interest rates are at record lows, and the longer duration of global bonds make them more susceptible to capital losses in a rising interest rate environment.
- **Ability for managers to generate alpha over benchmarks:** Over the past 10 years, the performance of the average global and domestic fixed interest manager against their benchmark has been comparable. In more recent years, the liquidity of the NZ fixed income market has improved, as has the scope for local managers to generate alpha with access to an expanded set of low cost hedging tools.

Given these considerable changes in the factors that should determine the choice between domestic and global fixed income, in our opinion it is timely for investors to review their allocations.

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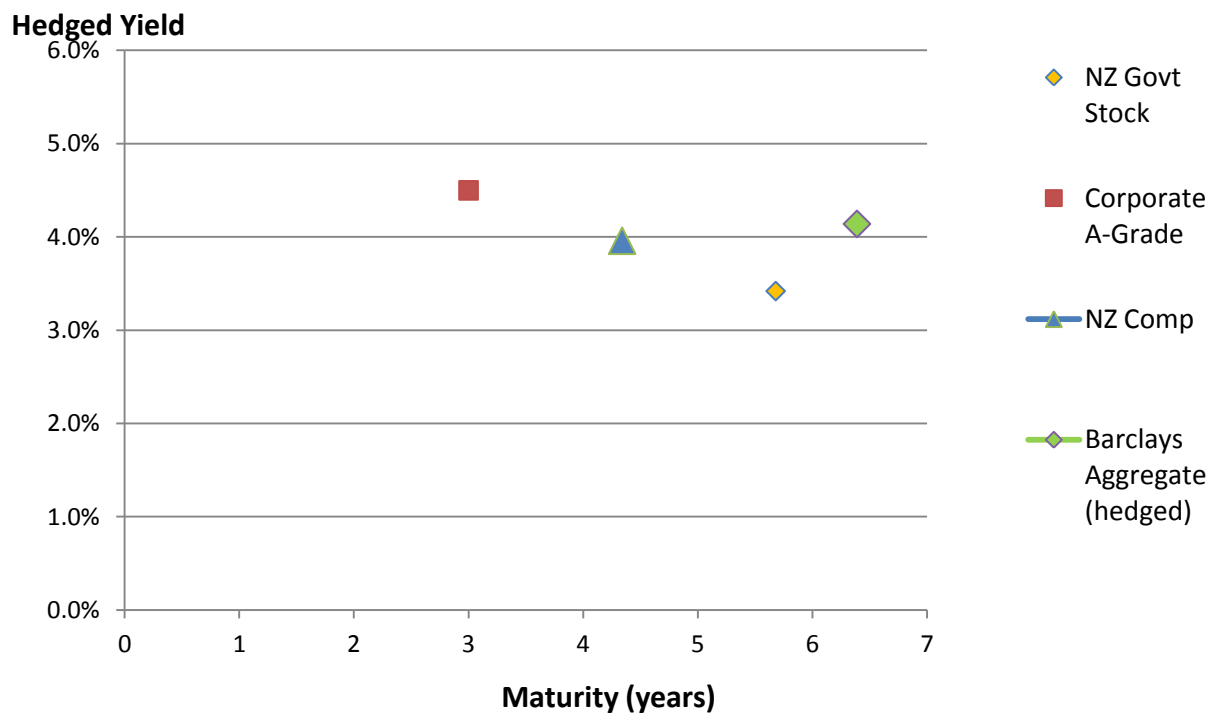
Annex 1. Domestic vs. Global Yield Curve Comparisons

An alternative approach to assessing the slope of domestic and global interest rates between 1 month and 5 years is to look at actual yields for the respective benchmark indices, making adjustments for their different composition and maturities.

While the Barclays Global Index hedged in NZDs has a marginally higher market yield, the average maturity is over two years longer.

The New Zealand curve is steeper and provides a higher yield for a given maturity.

Chart 8: Index Yields (in Hedged NZD Terms)



Sources: ANZ and Barclays Capital.

Annex 2. Duration of Global and Domestic Bond Indices

Global Indices	Duration
Global Aggregate	5.85
Global Aggregate - Corporate	5.84
Global Aggregate GDP Weighted	5.76
Global Treasury	6.86
Global Treasury GDP Weighted	6.41
Global Treasury Fiscal Strength Weighted	6.72
United States	
U.S. Universal	4.83
U.S. Treasury	5.83
U.S. Credit	6.81
U.S. Corporate High Yield	4.08
Europe	
Pan-European Aggregate	5.95
Euro-Aggregate	5.35
Euro-Aggregate: Corporates	3.9
Pan-European High Yield	3.74
Euro-Aggregate: Treasury	6.23
Emerging Markets	
Emerging Markets (U.S. Dollar)	6.56
EM Local Currency Government	4.57
Asia-Pacific	
Asian Pacific Aggregate	6.73
Global Aggregate Ex-JPY	5.49
Asian Pacific Japanese Yen	7.07
New Zealand	
NZ Government Stock Index	4.49
ANZ Corporate A-Grade Index	2.49
50:50 NZ Govt Stock:Corp A-Grade	3.49

Sources: Barclays Capital and ANZ.

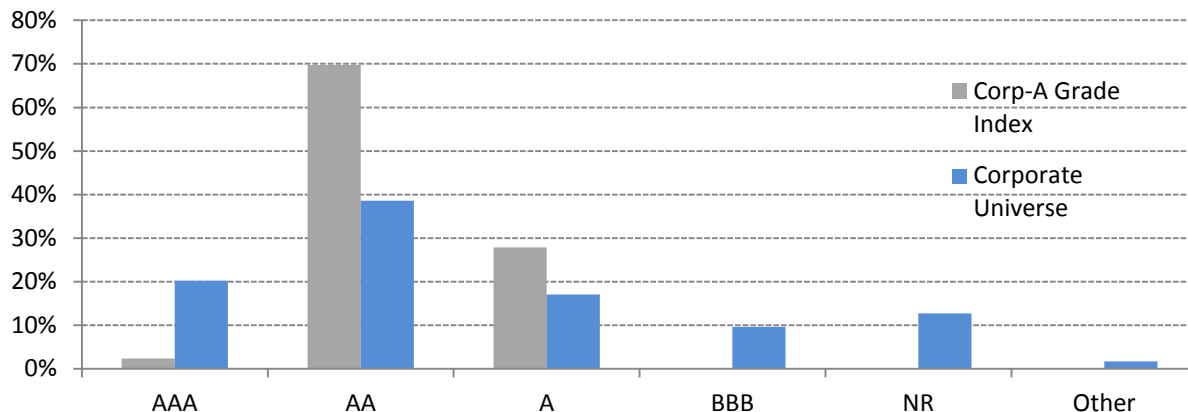
Annex 3. Corporate A Grade Index Criteria ³

- Securities must be issued in \$NZ into the NZ domestic market (EuroKiwis and Samurais are excluded.)
- Underlying credit rating of issuer or security issued (where a security is specifically rated) must be A- or better (Standard and Poor's) or A3 or better (Moody's).
- Minimum issue size: \$NZ50 million.
- All securities must bear fixed rates of interest.
- Securities may be senior debt, subordinated debt or capital notes. Collateralised Debt Obligations are excluded.
- The issue must be reasonably available for purchase by a range of investors. A security issued by private placement will usually be required to be well spread across a minimum of five unique institutional investors.
- Where securities have dual maturity dates or callable/puttable features, they will be priced to the first maturity date or call/put date, as is market convention.
- When a new tranche of corporate bonds is issued that satisfies the requirements of the index, it will be added to the portfolio at the end of the first month following the issue. Issues must have settled at least 5 days prior to the month end to be added to the index at the end of that month. Issues with a settlement date less than 5 days before the end of a month, will be added to the index at the end of the next month – provided they meet all of the requirements of the index.
- When a tranche is issued over a range of dates, it will be entered upon the first available month end if sufficient volume has been issued to that date to see it comply.
- When bonds are redeemed by the issuer, the appropriate adjustment will be made to its face value at the end of the first month following redemption.

³ <https://www.nzx.com/files/assets/ANZ%20Debt%20Indices%20Descriptions.pdf>

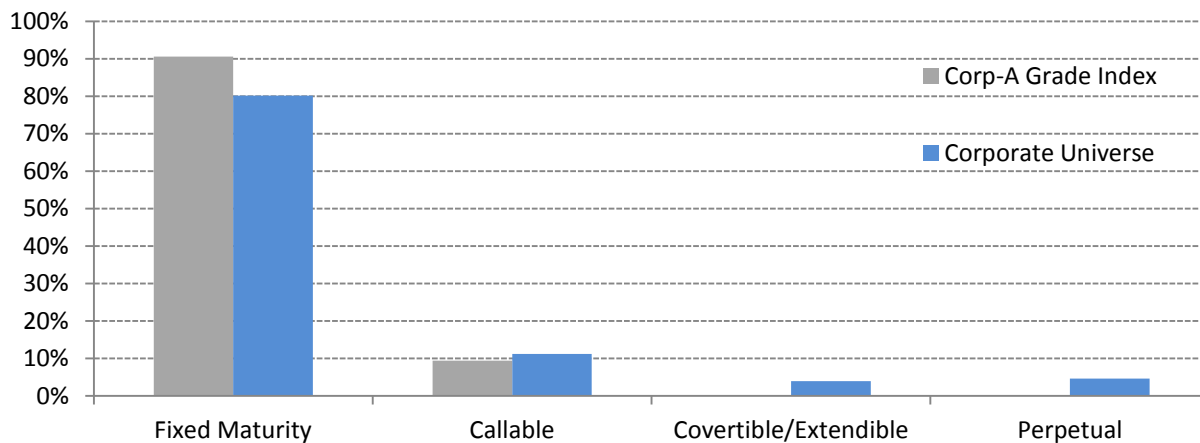
Annex 4. Composition of the NZ Corporate Bond Market

Chart 9: Ratings profile of Domestic NZD Credit



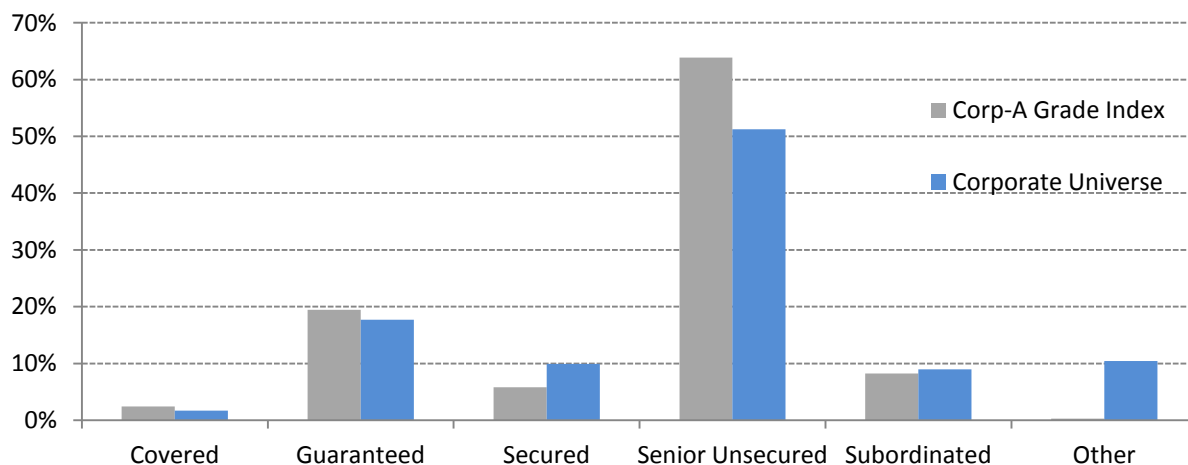
Sources: Bloomberg

Chart 10: Maturity characteristics of Domestic NZD Credit



Sources: Bloomberg

Chart 11: Seniority profile of Domestic NZD Credit



Sources: Bloomberg

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