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Our perspective on current and emerging investment issues

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Fixed income: a book with more than one page

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> *The world is a book, and those who do not invest globally only read a page.*
>
> Paraphrased from St. Augustine

> *In an integrated, competitive global capital market, the expected return from bonds of similar risk characteristics should be identical.*

Introduction

Fixed income investments are cornerstones of almost every institutional investment programme. Most investors use allocations to fixed income to create a balance to the more riskier assets in their portfolio. Traditionally, the starting point for investors was to buy bonds issued by their government or locally-domiciled companies. However, as global capital markets became more integrated, investors increasingly invested in offshore instruments as well, either directly or through managed funds.

Not surprisingly, offshore investments are particularly relevant for smaller economies, such as New Zealand. In fact, it is not uncommon to see New Zealand investment programmes without *any* dedicated domestic fixed income exposure. In contrast, especially in the retail market, some investors still rely exclusively on investing in New Zealand bonds.

So how should New Zealand investors decide on the split between domestic and offshore bonds? What trade-offs do they face in making this decision?

The beauty of hedging: why we can ignore differences in headline interest rates

A naïve investor just focusing on headline interest rates might conclude that it is not worth investing in offshore fixed income markets. Why invest offshore in markets like the UK, Europe or Japan - with long-term interest rates around 0-2% - when you can buy investments with double the yield in New Zealand? Furthermore, why invest offshore when you expose yourself to the fluctuations of the exchange rate by doing so?

This is where currency hedging provides an elegant solution. Investors enter into currency hedging arrangements to eliminate the risk of a large, adverse movement in the exchange rate. This negates the concern about the fluctuations of the exchange rate.

However, a somewhat less obvious consequence of currency hedging is the return component. A hedged investor essentially receives or pays the difference in interest rates as part of the hedging contract.[1] If rates offshore are lower, the investor gains the difference in rates as part of the currency forward contract. If rates offshore are higher, an investor must pay away the difference.

From a theoretical point of view, this should not be surprising: in an integrated, competitive global capital market, the expected return from bonds of similar risk characteristics should be identical. Differences in interest rates that can be exploited without risk should be eliminated quickly by arbitrage.[2]

1 This is because the instruments used for hedging - forward currency contracts - are priced based on the difference in interest rates. For a more detailed discussion of currency hedging see Johnson, A., The mechanics of currency hedging using forward exchange contracts, Russell Communique, Q4 2013.

2 In practice, currency forward contracts typically have significantly shorter terms than the bonds they are protecting in a diversified portfolio. This creates a mismatch that would require a sophisticated and detailed analysis of the yield curve differences between different countries, which is beyond the scope of this paper. We believe that the discussion of the difference in term premiums in the next section is an adequate approximation.

Table 1 shows that it would have been costly for New Zealanders investing in domestic fixed income to have been blinded by the illusion of higher headline interest rates. While there were periods of underperformance, investors in hedged offshore government bonds largely outperformed those with a domestic focus over the last three decades.[3] Furthermore, table 1 shows that hedged, global investors did not have a more volatile ride over this period.

Table 1 – Risk and return measures - January 1990 – March 2018

	GLOBAL SOVEREIGN BONDS NZD HEDGED	NEW ZEALAND GOVERNMENT BONDS
Annualised return	8.9%	7.5%
Annualised Standard deviation	3.2%	3.5%
Maximum monthly drawdown	-1.9%	-2.3%
Worst 12-month return	-1.8%	-3.9%

Data source: estimated using S&P/NZX NZ Government Bond Index, FTSE Government Bond Index. Indices are unmanaged and cannot be invested in. Past performance is not necessarily a good indicator of future performance.

Rather than focusing on the headline yields, we should always compare hedged offshore returns with New Zealand returns. Historical data shows not only a higher return for offshore investments, but also lower volatility and smaller drawdowns.

However, it is arguably more important to consider the forward-looking risk and return expectations when deciding how to allocate between investments. Consequently, we turn our attention to the inherent risks and related premia investors can earn off the underlying fixed income instruments, here in New Zealand and offshore.

Risk premia in fixed income markets – and how they stack up around the globe

In our view, investors can access three key premia[4] – over and above a cash return – in fixed income:

- Premium for default risk (*credit risk premium*): generally, investors are compensated with a higher yield for investing in securities with higher risk of issuer default.
- *Term premium*: investors can typically earn an additional return by investing in longer dated securities, which carry higher interest rates and inflation risks than shorter-term issues.
- *Illiquidity premium*: less liquid investments should have a higher return than more liquid investments.

These premia are not necessarily independent. For example, default risk and illiquidity are typically highly correlated. Nevertheless, by decomposing historical return premia we should be able to explain what led to the historical outperformance of global fixed income. We can then try and infer a forecast of return premia in fixed income and decide on whether New Zealand investors should access them onshore or offshore.

3 Given the regime shift that occurred in monetary policy in New Zealand as a result of the Reserve Bank Act 1989, we believe it is meaningless to analyse periods prior to 1990.

4 For a discussion of return drivers see Fitzpatrick, G. and Ross, L., Credit, illiquidity, term: a discussion of three fixed income return drivers, Russell Investments, February 2015.

Default risk

It is important to realise that government bonds also carry default risk. While yields on government bond are often used as 'risk-free' rates for valuation purposes – such as in the capital asset pricing model – it would be naïve to assume that they do not carry any risk.

One common approach to assess this risk is to use ratings issued by the major rating agencies (such as S&P, Moody's or Fitch). Other investors favour a more fundamental, purely quantitative analysis, for example using debt-to-GDP ratios as an indicator of risk.

However, rather than thinking about how to determine which rating agency is the most accurate or how to combine the different quantitative measures into one aggregate view, we believe it is more valuable to compare credit default swap (CDS) spreads.[5]

CDS data suggests that investing in offshore sovereign bonds has not led to a significant increase in risk for New Zealand investors. Even if the probability of a default event is higher, given the considerably better issuer diversification the average severity of a default event will likely be a lot smaller than in a New Zealand-only portfolio.

Term premium

Having ruled out default risk as a major driver of the historical return difference, we now turn our attention to the term premium. The term premium should compensate investors for taking on additional interest rate and inflation risk by investing in longer dated fixed income instruments.[6] A somewhat crude, but intuitive way to estimate the term premium is to deduct the return of a cash index from the return of a government index with longer duration.

Our analysis suggests that the term premium has, in the past, been a significant contributor to the return advantage of global markets. However, the data also illustrate that the difference is by no means constant over time. This should not be a surprise, as risk premia in financial markets are typically subject to fluctuations over time.

However, without knowing the direction of interest rates, the best forward-proxy for a potential difference in the term premium should be the difference in duration between the two markets. As we will see further below, this will lead us to assume that there could very well be a return advantage for offshore markets in the future as well.

5 A credit default swap (CDS) is a contract that insures the buyer against the default of an underlying bond issue. The insurance premium is typically known as the CDS spread.

6 For an in-depth discussion of the literature on the term structure and term premium see for example, Gurkaynak, R.S. and Wright, J.H., Macroeconomics and the Term Structure, Journal of Economic Literature, June 2012, Volume L, No. 2.

Illiquidity premium

The illiquidity premium is typically not directly observable. While for some of the biggest issuers – such as the US Department of the Treasury – a comparison of on-the-run and off-the-run securities allows some detailed measurement, investors typically have to make some approximation or rely on modelling to determine how much of the yield is due to a lack of liquidity.

In general, illiquidity is assumed to increase with credit spreads and term. While we have considered the default risk to be similar, the term is clearly longer for securities in the global market. In contrast, however, issuance size, another factor that has shown to be related to liquidity, is generally a lot smaller in New Zealand.[7]

Rather than doing detailed modelling of what is considered, outside of crisis events, a relatively small portion of bond returns, we inform our analysis based on conversations with market participants. This leads us to assume that the New Zealand fixed interest market is generally *less* liquid than global markets. As such, one would expect to access a return advantage when investing in New Zealand securities rather than in the global market.

Risk premium diversification

Our analysis above suggests that the main driver of the return advantage of global fixed income in the past was the term premium, and not the default premium or illiquidity premium. Having ascertained the impact of the different premia, we can now consider how much we can *diversify* these premia in New Zealand and offshore. To do this, we now include corporate issuance and government-related issues in our analysis.

Table 2 compares the Bloomberg Barclays Global Aggregate Bond Index with the S&P/NZX Government Bond Index and the Bloomberg NZ Credit 0+ Yr Index:[8]

Table 2 – Diversification potential in New Zealand and global fixed income

	S&P/NZX GOVERNMENT BOND INDEX	BLOOMBERG NZ BOND CREDIT 0+	TOTAL NZ (GOVERNMENT + CREDIT)	BLOOMBERG BARCLAYS GLOBAL AGGREGATE	NZ AS A PERCENTAGE OF GLOBAL
Amount outstanding (NZD)	63 billion	22 billion	85 billion	~50 trillion	~0.2%
Number of issues in the index	9	87	96	22,301	~0.4%
Average issuance size (NZD)	~7 billion	~250 million	~900 million	~2.2 billion	~40%
Estimated duration	4.8 years	2.9 years	~4.4 years	6.9 years	–

Data source: Bloomberg, S&P

7 However, there is a risk that average issuance size may lead one to confound the liquidity advantage with the default risk as well: the more debt issued, the more active and liquid a market may be but in that case the default risk should increase with additional (sizeable) issuance as well.

8 As at 31 July 2018.

Table 2 clearly illustrates that it is significantly easier to diversify by issuer in a global portfolio. Looking further below the surface, we also find significantly more sector diversification in global credit markets. In contrast, there is a large concentration in the banking sector in New Zealand.

On the flipside, investors need to accept a somewhat higher duration (i.e., interest rate risk) when investing offshore. However, this should be, compensated by an additional term premium, as illustrated above. In addition, higher duration in global fixed income should amplify the diversification benefits in the event of an equity market downturn. This is often the main reason for holding bonds in a multi-asset portfolio.

Other important considerations

There are other important considerations that investors may want to consider in their fixed income decision making. Most notably, we believe that at least some investors should have regard to duration matching. For all investors, it is also important to consider the role of active management.

Conclusion

Our analysis shows that global fixed income has provided a significantly higher return than New Zealand fixed income in the past. In large part, this has been driven by a higher term premium in offshore markets. In line with this, we should consider the interest rate risk (duration) to be higher in offshore markets as well. However, for a multi-asset investor, increased exposure to duration is often desirable as an offset to more risky assets.

Furthermore, the significant improvement in diversification improves the attractiveness of offshore investing. Finally, investors may find it more useful to delegate the country allocation to an active manager rather than trying to determine the optimal split in a static allocation themselves. For most investors, having no dedicated exposure to domestic markets is therefore a defendable starting point.

However, investors with a need to match the duration of contractual liabilities, or investors who face significant regulatory or peer risk may choose to allocate more significant parts of the portfolio to the New Zealand market.

In any case, we recommend that all New Zealand investors read more than the one page in the book of fixed income, and consider a material allocation to offshore markets in their fixed income portfolios.

To fear or not to fear the yield curve

By: Paul Eitelman, Senior Investment Strategist, North America

Paul Eitelman

Does the U.S. Treasury yield curve always foretell a recession?

With the spread between 10-year and 2-year Treasury yields down to just 17 basis points[1], an active debate is raging among economists about the efficacy of the yield curve as a recession indicator in the current cycle. Historically, an inverted yield curve is a tell-tale sign of a looming economic downturn—and markets have certainly taken note lately, with the S&P 500® Index tumbling approximately 14% in the fourth quarter as the spread between yields sharply narrowed.

Provided the Fed continues raising rates in 2019, it's quite possible that an inversion of the curve could occur this year. If this happens, history tells us that the U.S. economy could be at heightened risk of a recession in 2020. This is a warning signal that we believe should be taken seriously. To understand why, let's delve into exactly what an inverted yield curve means.

Why economists use the curve as a leading indicator

Conceptually, an inverted yield curve tells us that the stance of monetary policy is transitioning into restrictive territory. In very simple terms, the U.S. Federal Reserve (the Fed) controls the short (overnight) rate, and the market prices the long (10-year) rate based on its view of trend growth. Therefore, when the curve inverts, it signals the Fed has moved short rates above what the economy can sustain in the long run. With monetary policy acting as a hindrance to growth, a recession becomes more likely.

Empirically, an inverted curve has been the single best leading indicator economists have for modelling recessions. Indeed, every U.S. recession in the last 60 years was preceded by an inverted curve.[2]

Term spread versus term premium

You'll note that we use the phrases *slope of the yield curve and term spread* interchangeably to refer to the difference between long-term and short-term Treasury yields. For example, the 10-year / 2-year term spread is currently 17 basis points (as of January. 9). In other words, it's a 2.69% yield on the 10-year Treasury note minus a 2.52% yield on the 2-year Treasury note.

The bulk of the academic debate around the efficacy of the yield curve currently surrounds the notion of the *term premium*. It's important to note that a *term premium* is distinct from a term spread. This is because Treasury yields at any tenor can be broken down into two pieces:

1. The average expected short-term interest rate over the life of the bond (often referred to as the *risk neutral yield*), plus
2. A risk premium (or *term premium*) that compensates investors for the possibility that the actual path of short-term interest rates deviates from those expectations.

Term premia cannot be directly observed. Instead they are estimated with term structure models.

1 As of January 9, 2019

2 Source: https://www.frbsf.org/economic-research/publications/economic-letter/2018/march/economic-forecasts-with-yield-curve/

Some of the arguments today centre on the idea that the yield curve is flatter than otherwise would be the case because of unusually low *term premia*—the implication from this being that an inversion may prematurely signal recession risk relative to the historical experience.

Let's take a closer look at this argument.

Don't fear the yield curve

"Historically the inversion of the yield curve has been a good [sign] of economic downturns [but] this time it may not," because the normal market signals have been distorted by, "regulatory changes and quantitative easing in other jurisdictions… everything we see in terms of the near-term outlook for the economy is quite strong."
–Former U.S. Fed Chair Ben Bernanke, July 2018

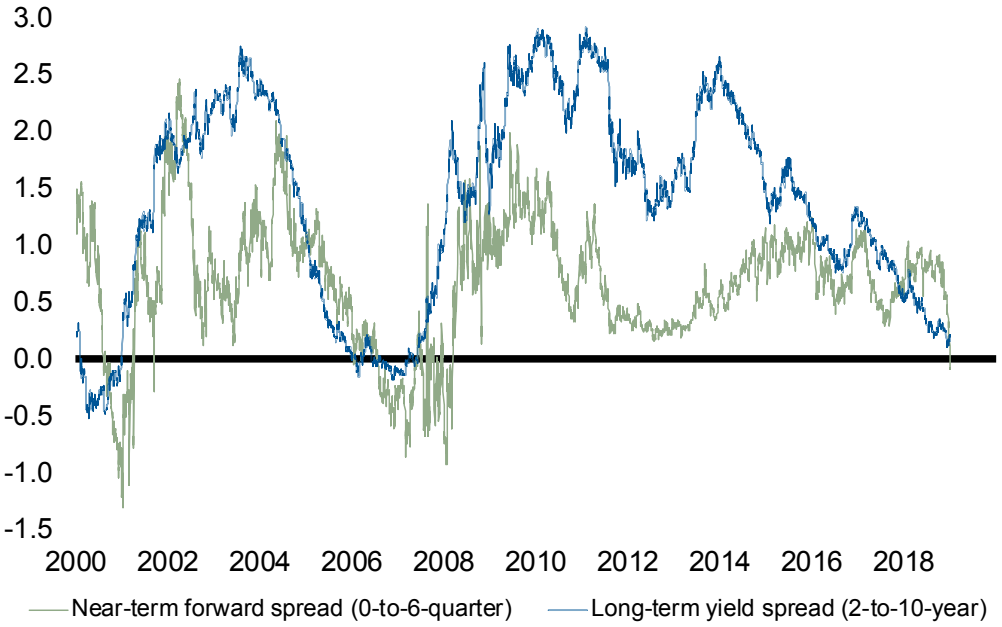
"I think that there are good reasons to think that the relationship between the slope of the yield curve and the business cycle may have changed…the fact the term premium is so low and the yield curve is generally flatter is an important factor to consider."
–Former U.S. Fed Chair Janet Yellen's final press conference, December 2017

These arguments are effectively saying that global quantitative easing (QE) leads to lower long-term U.S. interest rates—and that this will lead to a premature inversion that has little to do with U.S. fundamentals or the risk of recession. Conceptually, we believe the logic behind this is sound.

Based, in part, on this motivation, two staff economists at the Federal Reserve Board in Washington, D.C., recently published a note, entitled "(Don't fear) the yield curve". Their paper argues that, instead of the standard term spread, we should be looking at the 0-to-6 quarter near-term forward spread. In essence, this alternative indicator measures whether the market is pricing the Fed to cut rates over the next 18 months (something that usually happens in response to a recession). They argue that this indicator (green line below) is more intuitive, and they find that it statistically dominates the standard term spread when both indicators are included in a predictive model for recessions. Ironically, this indicator turned negative before the other, more-conventional term spread measures, as it logged an inversion on December 31st. Yikes! Nevertheless, we have a few concerns with this piece:

- We believe the intuition from term spread to policy stance to recession risk is already straightforward. The question is more about whether *term premia* are distorting that message right now.
- In the authors' own words "the near-term spread may only predict recessions because it impounds expectations that market participants have already formed"...
- ...and to the extent these expectations are embedded in asset prices already (in a probabilistic sense), the near-term spread isn't particularly helpful in formulating a forward-looking investment strategy.

Measures of the yield curve



Source: Russell Investments calculations, Thomson Reuters Datastream, Bloomberg. As of January 2, 2019.

That said, we are not ignoring this study and take the recent inversion seriously in our overall risk assessment. We do, however, have a few reservations with using it as a major pillar of our market outlook.

Fear the yield curve

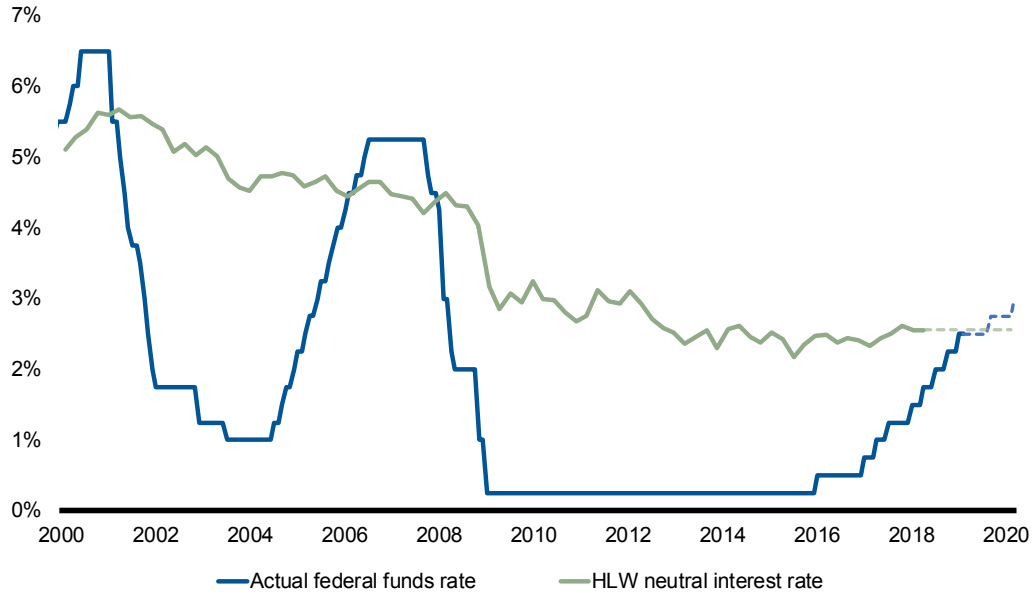
Economists at the Federal Reserve Bank of San Francisco recently tackled many of the counterarguments to this in an empirical piece titled "Economic forecasts with the yield curve". They used models to control for the fact that the absolute level of interest rates is much lower today than it has been in the past, and they decomposed the term spread into the expectations component of the path for short rates and the term premium. In all cases they concluded that the predictive power of the term spread remains intact. Their conclusion:

"While these hypotheses have some intuitive appeal, our analysis shows that they are not substantiated by a statistical analysis that incorporates the suggested factors into the type of predictive models we use. For example, including both a short-term and long-term interest rate in such models—and thereby allowing the level of interest rates to have a separate effect from that of the term spread—shows that only the difference between these interest rates, the term spread, matters for recession predictions. Separating the term spread into risk premium and expectations components does not improve the forecast beyond using only the term spread…these findings indicate concerns about the scenario of an inverting yield curve. Any forecasts that include such a scenario as the most likely outcome carry the risk that an economic slowdown might follow soon thereafter."

Obviously, there is risk in taking the results from a statistical analysis above the economic intuition of two former Fed chairs, but at the very least this stresses to us the importance of taking an inversion seriously from a risk management perspective in portfolios.

We can also check the signal from the curve by looking at the stance of U.S. monetary policy from other angles. The chart below plots the federal funds rate against our preferred estimate of the neutral rate of interest, and shows that U.S. monetary policy is getting very close to the point at which it turns restrictive. This is entirely consistent with the Federal Open Market Committee (FOMC)'s own discussions as detailed in its minutes from December.

When will Fed policy turn restrictive?



Source: Thomson Reuters Datastream, Federal Reserve Bank of New York, Russell Investments forecasts as of January 2019.

We'd also highlight the cautionary tales of economists mistakenly using the 'this time is different' argument with the yield curve in the past. For instance, Bernanke, who is in the don't fear camp today, made a very similar argument about low term premia back in 2006. In 2006, the story was about excess global savings and Chinese demand for Treasuries (rather than the impacts from global QE, which is his argument today). But the conceptual underpinnings for his optimism in 2006—i.e., don't worry—were similar to what he is basing his views on again today.

Ultimately, we believe that the conclusion reached by Federal Reserve economists Glen Rudebusch and John Williams in a 2008 research paper[3] still rings true today:

"For over two decades, researchers have provided evidence that the yield curve, specifically the spread between long- and short-term interest rates, contains useful information for signalling future recessions. Despite these findings, forecasters appear to have generally placed too little weight on the yield spread when projecting declines in the aggregate economy. Indeed, we show that professional forecasters appear worse at predicting recessions a few quarters ahead than a simple real-time forecasting model that is based on the yield spread."

To fear or not to fear the yield curve? Fear it.

3 Source: Rudebusch, Glen and Williams, John. Forecasting Recessions. July 2008.

The case for emerging markets

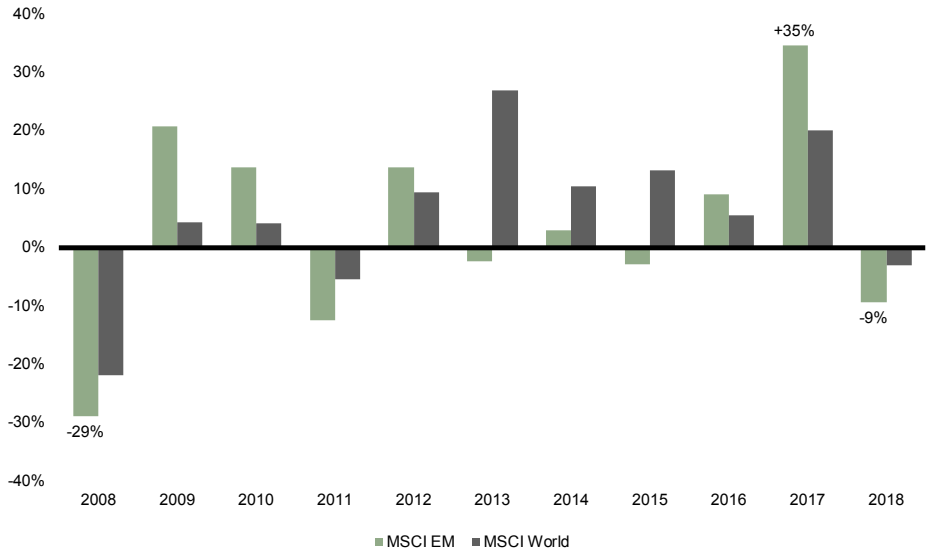
By: Ronal Prasad, Investment Analyst and Jim Wang, Senior Analyst

Ronal Prasad

Jim Wang

Emerging markets (EMs) have received a lot of attention of late – both positive and not so positive. Had this article been written this time last year, emerging markets would have been finishing 2017 with an eye-watering 35% return. However, as figure 1 shows, returns for emerging markets for 2018 were much less impressive with a high US dollar and tariffs collectively hurting these export-led markets. In this article, we look past the current trends and market news that have impacted returns and revisit the case for a long-term exposure to emerging markets – specifically the drivers of growth.

Figure 1: Calendar year returns (NZD unhedged)



First, what is an emerging market? Countries like Brazil, India, Indonesia, China and South Africa fall under the umbrella of emerging markets. The precise definition of these markets varies in the investment world, but generally these countries tend to have the following characteristics:

1. Rapid economic growth: Emerging markets and developing economies have been experiencing real GDP growth of around 4.7% per year compared to 2.4% for advanced economies.[1]
2. Low income per capita: China is the world's second largest economy but has GDP per capita of US$9,600 compared to US$48,000 in advanced economies such as the US and Canada.[1]
3. Immature capital markets: Emerging markets have a bigger proportion of companies that are unlisted (state-owned) and their capital markets tends to be less liquid. Corporate governance also tends to be relatively weaker in these markets.

1 International Monetary Fund. (2018). GDP per capita, current prices. Retrieved from: https://www.imf.org/external/datamapper/NGDPDPC@WEO/OEMDC/ADVEC/WEOWORLD/BLZ.

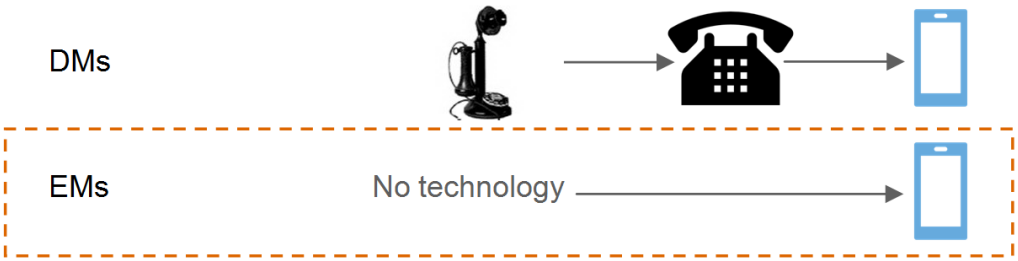
Having defined emerging markets, let's summarise the investment case for an allocation to these markets. The basic rationale is that, over time, as these economies transition from emerging to developed, they experience significant economic growth, driven by productivity gains, structural reforms and the rising middle-class. This economic growth widens the opportunities available to companies in these markets, improving their earnings potential and therefore the return potential for investors.

Long-term return drivers

Productivity growth

Productivity is defined as the output per unit of labour. Productivity growth in these markets is possibly best explained using the agricultural sector. Developed markets (DMs), like New Zealand, have over the years, replaced labour in agriculture with advanced machinery making agriculture more productive. In contrast, the transition from labour to capital is a much more recent phenomenon in emerging markets. This capital development has allowed them to move labour out of agriculture and into manufacturing, improving labour productivity and total output in the economy.[2] Essentially, emerging markets are experiencing catch-up growth, whereby they are taking lessons from the developed world and applying them domestically. That is, they are importing technology. Figure 1 shows a simple example of this catch-up growth.

Figure 2: Leapfrog in technology



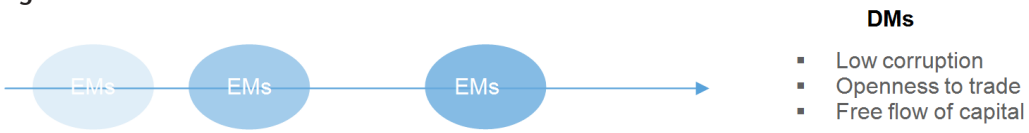
As shown in figure 2, developed markets have gone through phases of innovation in the telecommunications industry over decades – starting from phones with cords, building infrastructure along the way for each innovation, to where we are today with smartphones. Some emerging markets have bypassed the initial phases of phones and have directly adopted smartphone technology. The people using the technology have experienced a huge jump in productivity – going from no telecommunication to using smartphones to not only connecting but also using applications to conduct banking, invoicing and other business activities. The importing of technology allows the labour market to be more efficient enabling emerging market economies to produce more. It is this catch-up in technology that allows them to utilise their resources better and therefore grow more quickly than developed markets.

2 OECD. The future of productivity. (2015): 15. Retrieved from: https://www.oecd.org/eco/OECD-2015-The-future-of-productivity-book.pdf

Structural reforms

In addition to achieving production efficiency, it is equally important to put in place political frameworks and economic structures that can not only sustain production efficiency but further enhance it. Developed markets are characterised as having transparent, less corrupt governments, where there is free trade and free flow of capital (i.e., prices are primarily determined by supply and demand). Developed markets' political frameworks and economic structures promote allocation of resources to the most productive sectors of the economy with an overarching functioning government.

Figure 3: Structural reforms



As illustrated in figure 3, over time, emerging markets have moved structurally closer to developed markets by strengthening political institutions, reducing trade barriers, reforming agricultural and banking sectors and improving basic education. This has promoted economic growth.[3] Some of the recent reforms in these markets include:

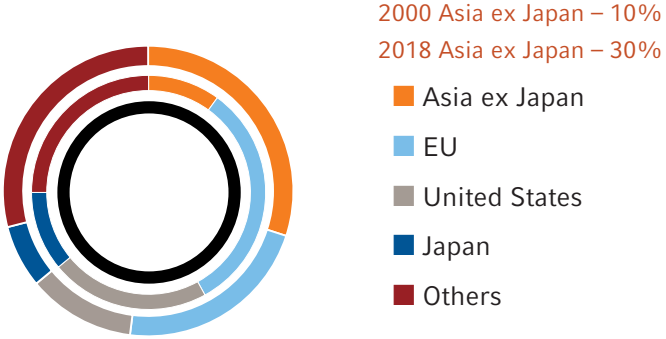
- In China, the "One Belt, One Road" initiative, which will connect China via transportation networks to Europe, the Middle East and Asia. The aim is to promote free trade and reduce trade costs. This will help stimulate economic growth by opening access to key industries.
- In India, the Government relaxed foreign direct investment regulations relating to its construction sector and rail network. These reforms have improved local infrastructure.
- In South Korea, the Government introduced a tax law to deter large businesses from hoarding cash on balance sheets without having efficient use for it. This will result in better shareholder protection and promote capital inflows, enhancing stock market liquidity.

Overall, as emerging markets move structurally closer to developed markets through reforms such as these, they have seen strong economic growth, experienced large flows of foreign direct investment and improvements in living standards (i.e., the rising middle-class).

Rising middle-class

The middle class are often referred to as the backbone of an economy. The middle class tend to spend a large percentage of their income feeding growth in the economy. The OECD defines the middle class as all those living with daily incomes of between US$10 and US$100.[4]

Figure 4: Shares of global middle-class consumption, 2000 - 2018



Source: The OECD

3 International Monetary Fund. Anchoring Growth: The Importance of Productivity-Enhancing Reforms in Emerging Market and Developing Economies. (2013). 20. Retrieved from: https://www.imf.org/external/pubs/ft/sdn/2013/sdn1308.pdf

4 Kharas, Homi. 2010. "The Emerging Middle Class in Developing Countries." OECD Development Centre Working Paper No. 285. Paris: OECD.

Figure 4 compares global middle-class consumption in the year 2000 with the 2018 forecast. In 2000, Asia excluding Japan made up around 10% of global middle-class consumption despite having most of the world's population. In 2018, the middle-class consumption from this region is forecasted to be around 30%. As emerging markets shift labour out of low-productivity agriculture into manufacturing, the labour force sees an increase in output and therefore receives higher wages. The higher wages put them in the middle-class bracket. This is evident in, say, NZ and Australia as the number of tourists coming from China, for instance, has increased markedly over the last decade, simply because they have more money to spend.

So, why is this relevant to investors? The growing middle-income class has been a key driver of consumption growth. Generally speaking, as people experience an increase in income, they spend more. The spending opens new opportunities for businesses to improve earnings potential, driving valuations higher. This improvement in valuations has seen the cumulative flow of funds into emerging markets increase markedly over the last decade.[5]

Risk

No investment is without risk, especially in EMs. Some of these risks include:

- Political risk: these are government policies that are unfavourable, such as trade barriers and tariffs. There can also be expropriation through new taxation laws. Weak legal framework and copyright laws are also sources of risk.
- Poor governance: shareholder protection may be weak in EMs. Agency problems exists – the objectives of company CEOs may not be aligned with those of the shareholders. Getting access to good quality information may also be difficult due to weaker accounting standards and disclosure requirements.
- Liquidity risk: this comes in the form of currency controls in some markets. Currency hedging can also be costly due to lack of trading. Similarly, the buying and selling of stocks may incur relatively higher transaction costs as market accessibility maybe poor.

Conclusion

While risk management is at the forefront of most investors' minds, generating strong returns from the growth component of a portfolio is still important. Emerging markets have experienced huge economic growth in the past but there is still a big gap in productivity with their developed counterparts. Emerging markets' political and economic structures are yet to reach the standard of developed economies, and middle-class consumption is forecasted to increase further. Collectively, these long-term drivers of growth can turn into enhanced returns for investors. To re-emphasise the basic rationale for investing in emerging markets: as they shift from agriculture to manufacturing and then eventually services, the growing middle class will benefit those companies servicing this demand, driving valuations higher and therefore investor returns.

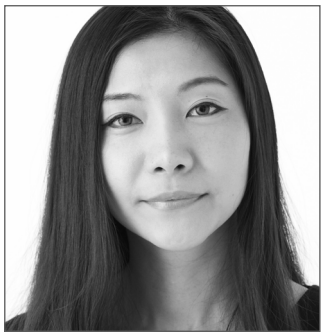
5 Institute of International Finance.

Managing success: How do active managers handle increasing AUM?

By: Leola Ross, Ph.D., CFA, Director, Investment Strategy Research,
John Forrest, CFA, Head, Research Practice and
Yuki Xi, Ph.D., Portfolio Analyst

Leola Ross

John Forrest



Yuki Xi

We've been talking a great deal recently about the debate between active management and passive investing. In our multi-asset approach, we take an active and passive approach to building portfolios. We firmly believe active has a place, but only when you have skill in selecting active managers. Finding the right managers is hard work.

Toward that end, we have our own sets of preferences, which we believe contribute to active manager outperformance. And it's no secret that we believe, all else being equal, active managers will do better with a relatively small amount of assets under management (AUM). The reasoning behind this is a combination of science (in the form of 15 years of data and in-depth analysis) and art (in the form of face-to-face meetings with managers, for nearly 50 years, and assessing multiple more nuanced factors). Less AUM to manage means, in the simplest terms, more nimbleness when it comes to finding upside opportunities and managing against uncompensated risk. This is especially true in portfolios with liquidity constraints.

Our early research on the "Perils of Success,"[1] and University of California Professor Jonathan Berk's[2] well-known 2005 conclusion that "competition between them increases the size of the fund and drives the alpha to zero. Instead the manager himself captures this value through the fee he charges" both support the preference for smaller AUM managers.

In all of these examples, the presumption is that size alone can erode success. The most damning, however, is Berk's conclusion. Is it true? Can active managers kill the goose that lays the golden egg? And why would investors continue to fund the active manager once the manager has extracted all value?

Yet, we note that some active managers have demonstrated the potential to generate strong performance, even with large AUM, across several equity and fixed income strategies and regions. The general data also show us that increasing AUM is not necessarily the kiss of death.

Exhibit 1 displays the interquartile ranges of one-year returns (2001-2015), broken out by AUM quintiles, for active managers across various equity regions and fixed income strategies. While we observe a (mostly) downward trend for the range of excess returns, as AUM increases in the equity regions, the third quartile performers have positive excess returns. Additionally, the median performers are mostly positive.

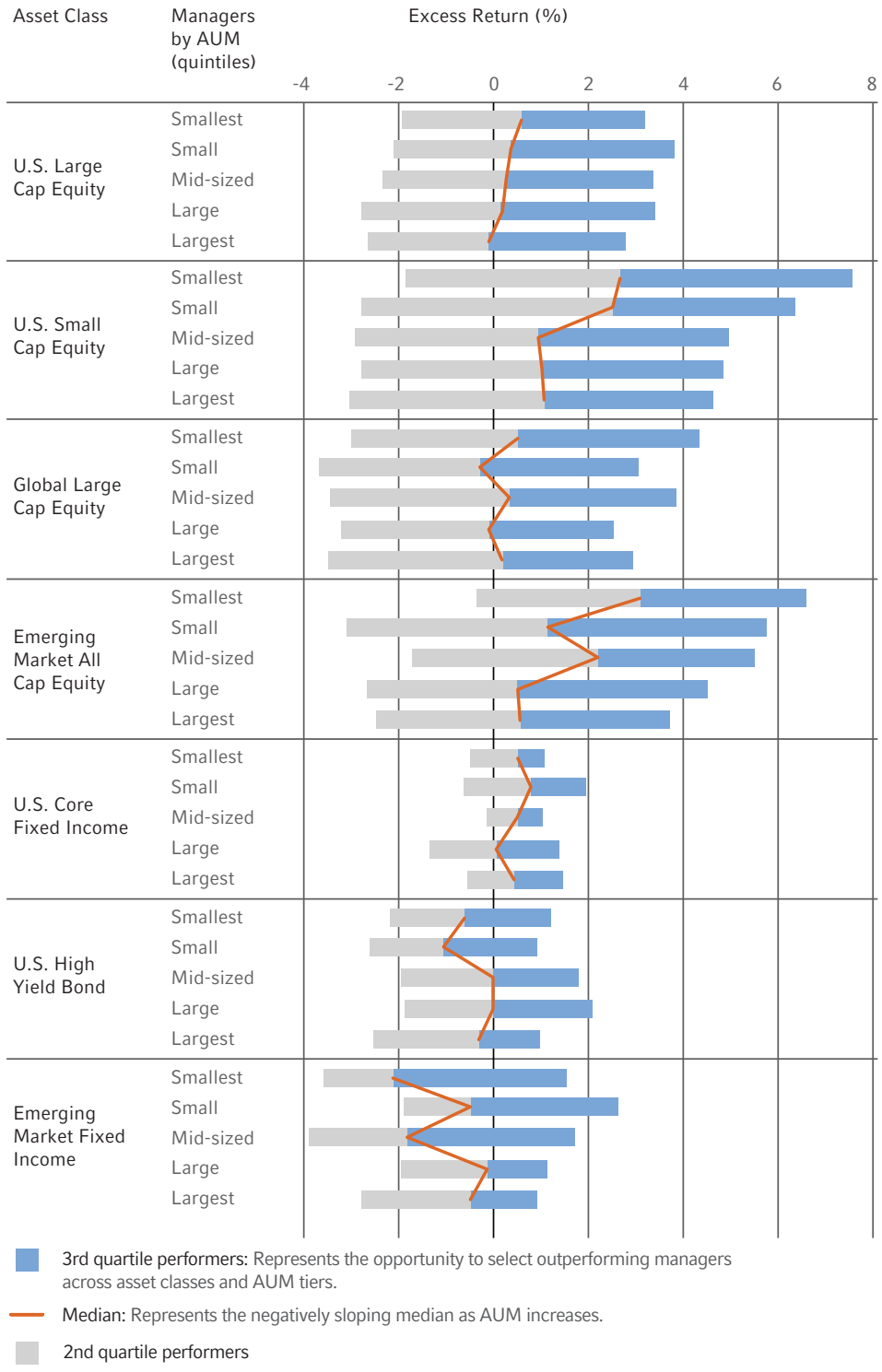
1 Christopherson, Jon, Zhuanxin Ding, Greenwood, Paul. (2001). "Perils of Success". Russell Investments.

2 Berk, Jonathon B., (2005). "Five Myths of Active Portfolio Management," The Journal of Portfolio Management, Vol. 31, Issue 3, Pages 27-31.

In the case of equity, we find the negative AUM size effect is strongest for U.S. small cap and emerging markets equity where, as investors would expect, liquidity is more of an issue. Yet even in the U.S. small cap space, we find that increasing AUM is not as strong a detractor as it was 15 years ago when we did our first study.

In the case of fixed income, a trend is not so clear. Yet, in the case of fixed income strategies, we also observe strong upside for the third quartile performers.

Exhibit 1: Can managers with more assets outperform?



While we observe a (mostly) downward trend for the range of excess returns as AUM increases in the equity regions, the third quartile performers have positive excess returns. Additionally, the median performers are mostly positive.

When market impact, costly trading and illiquidity are constantly nipping at their heels, how do these active managers manage their success?

Why? We suspect that skilled active managers may carefully manage their AUM to have it both ways. A reasonable strategy for them is to collect profits while also providing value to their clients in the long run. In a way, they are self-regulating.

So, if we have evidence of larger AUM managers producing strong returns (and indications that it's in their best interests to do so), how do these active managers manage their success? Especially when market impact, costly trading and illiquidity are constantly nipping at their heels.

We put these questions to our own team of specialist manager research analysts and captured a number of insights. We learned that the differences between an analysts' AUM 'watchpoint' and the reasonable upper limit of capacity—and indicators of rising AUM causing negative return impacts—vary considerably across asset classes and strategies.

Our analysts typically see active managers seeking to accommodate and manage rising AUM by increasing the number of holdings, reducing their active share, reducing turnover, moving toward more liquid stocks and even closing products to new AUM at reasonable capacity limits. Some managers do this better than others and, through our 48 years of researching managers, we've identified some of the better techniques used by managers to increase their chances of success.

Managers who accommodate AUM growth effectively tend to:

1. Manage growth, so that it doesn't come too quickly
2. Don't hide growth in multiple, similar products
3. Stay in their habitat (e.g., capitalisation, risk profile)
4. Stay invested (i.e., less in cash)
5. Play liquidity well and are mindful of their investment horizon
6. Are mindful of cash flow requirements
7. Employ wise use of derivatives and other capacity expanding securities

Ultimately, our conclusions support an investment community that is mindful of AUM limitations and has learned to manage AUM growth well.

Materiality matters

By: Noah Schiltknecht, Director, NZ Institutional

At Russell Investments, we believe that a sound awareness of ESG factors and a robust process can help to deliver strong investment returns and meet objectives over the long-term. So, we asked ourselves: Can materiality help to deliver strong performance?

Noah Schiltknecht

Materiality and the Task Force on Climate-related Financial Disclosures (TCFD)

Formed in December 2015, the Task Force on Climate-related Financial Disclosures developed some clear recommendations for disclosures. One of those recommendations is for companies to look at materiality. Philippe Désfosses, CEO of French pension scheme ERAFP said:

> *The more companies report effectively on climate related risks and opportunities, the easier it becomes for investors to allocate the substantial amounts of capital required to implement the Paris Agreement and to work on their own climate risk disclosure. There should be no resistance to the widespread adoption of the TCFD's recommendations given how – in most G20 countries – companies already have legal obligations to disclose material risks in their routine financial filings, including those that related to climate change.*

Not all ESG issues matter equally

The relevance of ESG issues varies industry to industry, company by company. For example, fuel efficiency has a bigger impact on the bottom line of an airline than it does for an investment bank. So, rather than adopt a one-size-fits-all approach, we have worked to develop a new ESG scoring framework that is specific or truly material to a company and their profitability.

Why? We have found that traditional ESG scores are composed of a large number of issues that are not material for every industry or company. Specifically, for two-thirds of all securities in a typical global equities universe, less than 25% of the data items in the traditional score are considered material.

So, to generate our new score, we have leveraged the traditional ESG scores provided by the data provider Sustainalytics alongside the industry-level materiality map developed by the Sustainability Accounting Standards Board (SASB). Then we asked ourselves, can this new score be used as an ESG signal for investment decision making?

Sustainability Accounting Standards Board (SASB) and Sustainalytics – who are they and what do they do?

Sustainalytics

Sustainalytics provides data for 145 sustainability categories divided into environmental (E), social (S) and governance (G) issues. Scores for these subcategories are then rolled up into aggregated E, S and G scores which are further rolled up into an aggregated ESG score for each company. Sustainalytics acknowledges that not every subcategory is relevant to every industry. To reflect this, data is not provided for each industry in each category.

SASB

The mission of the SASB is to develop sustainability accounting standards that help companies disclose value-relevant information to investors via standardised filings. SASB uses a six-step process before making a final determination that a sustainability issue is material. The SASB materiality map is the product of this, and explicitly identifies the material ESG issues to industry groups.

New material score methodology and findings

We used the materiality map released by the SASB to help us determine which of the 145 ESG issues from Sustainalytics data set could be deemed as material to companies' bottom lines. Following this, we used a number of statistical techniques to help formulate and standardise what we have coined 'the new material ESG score'.

By looking at the correlation between traditional ESG scores and the new material score, our research has indicated that there is indeed a meaningful difference between the two scores. We have found that there is a benefit to investors who differentiate between a company's financially material ESG issues and non-financially material issues.

So, does materiality matter? Yes.

Industry bodies actively promote and recommend that companies need to focus more on the material ESG issues that directly affect their bottom line. We have been able to do just that, and construct a new ESG score that focuses solely on material issues.

Ultimately, our new score allows us to differentiate between companies in a way that the traditional score does not facilitate. We can now distinguish between companies who score highly on ESG issues that are financially material to their business, from those who score highly on issues that are not financial material to their business. Our research suggests that the Russell Investments material ESG scores can provide insights beyond traditional ESG scores.

Learn more

If you would like to receive more information on this topic, please contact your relationship manager at Russell Investments.

Imperfect currency hedging

By: Ronal Prasad, Investment Analyst and
Andrew Johnson, Licensed Independent Trustee

It is generally accepted that currency hedging provides investors with, more or less, pure exposure to the returns (and risks) of underlying investment markets. However, in practice, the extent to which the returns differ can, at times, be reasonably significant.

In this paper, we find that imperfect currency hedging has adversely impacted returns for hedged global equities, by more than 0.5% p.a. over the past 30 years.[1] Perhaps surprisingly, however, we also conclude that this practical reality should have no bearing on an investor's currency hedging decision.

Ronal Prasad

Andrew Johnson

Why is the exposure only "more or less" pure?

Relative to the theoretical, pure exposure, the return from a currency hedged position will reflect:

- Forward points, which result from differences between:

  (i) the contracted exchange rates for converting the foreign currency exposure into NZD at a fixed future date; and

  (iI) current exchange rates.
- Gains or losses resulting from imperfect currency hedging.

Forward points

Relative to current exchange rates, forward exchange rates reflect the differences in interest rates between countries.[2] Hedging from a lower interest rate country into a higher interest rate country results in positive forward points, and vice versa. New Zealand interest rates have generally been higher than those offshore, particularly those of large, developed countries. As a result, forward points have usually enhanced local returns for NZD hedged investors. In fact, there have only been a handful of months in the past 30 years where the impact has been negative.[3]

Imperfect hedging

Imperfect hedging occurs for a number of reasons. These might include practical matters such as fund cashflows and the use of proxy currencies. However, more fundamentally, the reason that hedging is imperfect is that we don't generally know the future value of our asset in advance. That is, we hedge the beginning value, not the ending value of our investment.

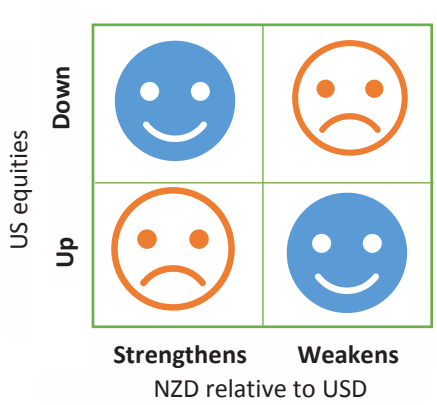
1 We have focussed this study solely on global equities. It is generally accepted that global fixed interest should be fully hedged. Moreover, most investors who seek residual foreign currency exposure achieve this through global equities (rather than, say, global listed property). Nonetheless, we have undertaken some high-level analysis for global fixed interest and conclude that the impact of imperfect hedging for this asset class is minimal (slightly positive for a sovereign-only exposure and slightly negative for an aggregate sovereign/credit exposure). While we have not considered the likes of global listed property, we surmise that the impact of imperfect hedging for other global growth asset classes would be similar to that for global equities.

2 Johnson, A., The mechanics of currency hedging using forward contracts, February 2014.

3 Forward points have been close to 3% p.a. in the period from January 1989, when a NZ dollar hedged version of the MSCI World Index was introduced, to September 2018. Currently, forward points are closer to 1-1.5% p.a. We continue to believe that New Zealand interest rates will, on average and over time, be higher than offshore interest rates and therefore provide a return premium for NZ investors.

Consider a simple example. I own US$1m of equities and want to hedge against changes in the NZD/USD cross-rate.[4] I enter into a forward exchange contract to sell US$1m/buy NZD in, say, 1 month at the forward rate. So far, so good. However, if the value of my equities increases to, say, US$1.1m, the US$0.1m gain is not covered by the hedging contract. That is, I'm under-hedged. Conversely, if my equities had fallen in value, I would be over-hedged. Whether the hedging mismatch has a positive or a negative impact will depend on what has happened to the NZD/USD cross-rate. This is demonstrated in figure 1.

Figure 1: Hedging mismatch – gain or loss?



Let's say my US equites increased in value and the NZD/USD cross-rate fell (bottom right quadrant). First, while my initial USD exposure is hedged, I now have an additional, unhedged USD exposure where the NZD value is subject to changes in the cross-rate. Second, the NZD has weakened, which means the USD has strengthened. So, relative to being perfectly hedged, I would benefit from this additional, unhedged exposure to a stronger USD.[5]

Alternatively, let's say my US equites dropped in value and the NZD/USD cross-rate fell (top right quadrant). First, my sell USD/buy NZD hedging contract is for a greater amount than the value of my US equities. Effectively, I have a short exposure to unhedged USD. Secondly, as above, the USD has strengthened. So, relative to being perfectly hedged, I would be worse off as a result of this short exposure to a stronger USD.

Has imperfect currency hedging impacted returns?

From figure 1, it is evident that imperfect hedging will have:

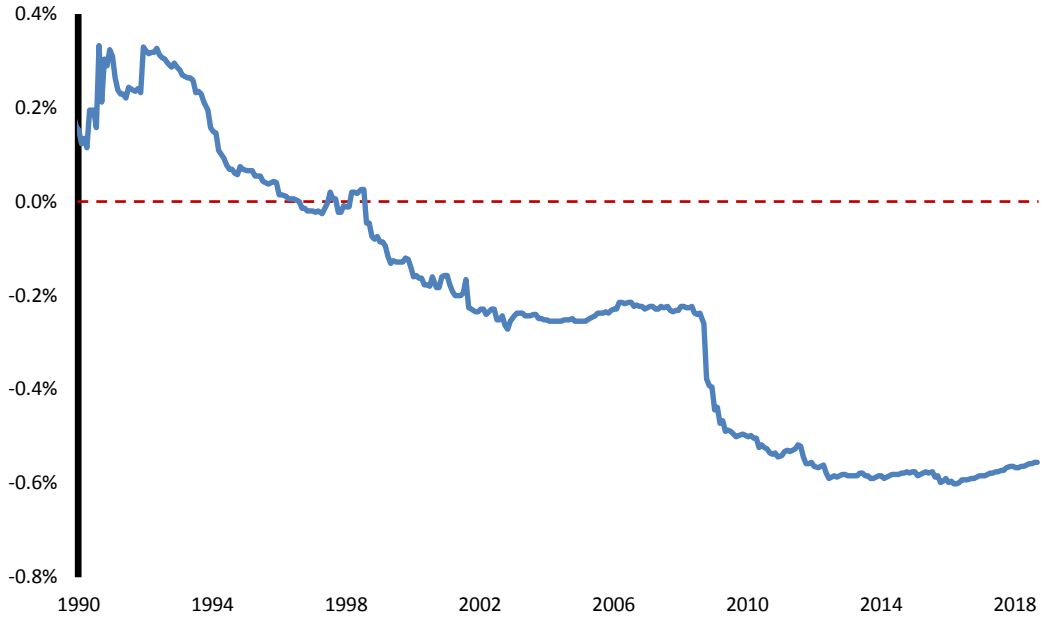
- A benefit, if the correlation between the foreign asset and the NZD/foreign currency cross-rate has been negative (i.e., when one is up the other is down – top left and bottom right quadrants).
- A cost, if the correlation has been positive (i.e., they are both up or down at the same time – top right and bottom left quadrants).

4 The NZD/USD cross-rate is how much USD can be purchased with NZ$1.

5 Strictly speaking, the NZD/USD cross-rate movement needs to be assessed relative to the forward rate rather than the start-of-period spot rate. For the purpose of this exercise, it is reasonable to ignore this detail.

For global equities, the correlation with the change in the NZD/foreign currency cross-rate over the last 30 years is approximately 0.4.[6] That is, more months fall into the bottom left and top right quadrants of figure 1 than into the other two quadrants. Accordingly, as shown in figure 2, the impact of imperfect hedging has been negative, averaging more than -0.5%.

Figure 2: Annualised impact of imperfect hedging for global equities (January 1989 to June 2018)



It is apparent from figure 2 that the impact of imperfect hedging is far from constant. While the overall impact is a reasonably-significant negative, there are periods where imperfect hedging has provided a benefit. It is also evident that events such as the global financial crisis have made a material contribution to the overall negative outcome. That is, the major sell-off in equity markets was accompanied by a material fall in the NZD. This was most pronounced in the month of October 2008 where global equity markets declined by more than 16% and the NZD was down by more than 11%. Despite forward points of close to 0.5%, the NZD hedged return lagged the local currency return by approximately 1.4%.

Overall, while forward points have enhanced the global equities return for fully hedged NZ investors, imperfect hedging has reduced the overall gain relative to the local currency return.[7]

We have focussed this study solely on global equities. It is generally accepted that global fixed interest should be fully hedged. Moreover, most investors who seek residual foreign currency exposure achieve this through global equities (rather than, say, global listed property). Nonetheless, we have undertaken some high-level analysis for global fixed interest and conclude that the impact of imperfect hedging for this asset class is minimal (slightly positive for a sovereign-only exposure and slightly negative for an aggregate sovereign/credit exposure). While we have not considered the likes of global listed property, we surmise that the impact of imperfect hedging for other global growth asset classes would be similar to that for global equities.

6 MCSI World Index in Local Currency and MSCI World Index in NZD January 1989 to June 2018.

7 The overall outperformance of NZD hedged global equities relative to the local currency return is approximately 2.5% p.a. for the period January 1989 to June 2018.

What are the implications of imperfect currency for an investor's currency hedging decision?

Absent what we've just learned above, the hedged return is often assumed to be:

- Local currency return (LC) + forward points (FP) [1]

Similarly, the unhedged return is often considered to be:

- LC minus change in NZD/foreign currency cross-rate (ΔNZD)[9] [2]

That is, when deciding to hedge or not, the return side of the decision would simplistically seem to come down to:

- If hedged – the investor picks up some forward points (which could, in fact, be negative); or
- If unhedged – the investor either: (i) foregoes some return if the NZD appreciates (foreign currency depreciates); or (ii) gains some return if the NZD depreciates (foreign currency appreciates).

However, as we have already seen, the actual return from being hedged is a bit more complicated than as shown in [1] above. The complete formula for the hedged return is:

- LC + FP – (LC x ΔNZD) [3]

The third term in [3] reflects the fact that a portion of our investment, being the change over the hedging period in the local currency value, is not hedged. That is, we hedged the beginning value only. As shown in the previous section, this will give rise to: (i) a loss where the market and the NZD move in the same direction; or (ii) a gain where they move in opposite directions.

Further, [2] above isn't the correct equation for the unhedged return. It ignores the fact that the change in the NZD/foreign currency cross-rate impacts not only on our original funds but also on the change in our asset value. The unhedged return is more accurately:

- (1 + LC) x (1 – ΔNZD) – 1 or LC – ΔNZD – (LC x ΔNZD) [4]

Comparing [3] and [4] and noting that both include an identical third term, we are left with the same difference between hedged and unhedged returns as we saw with the 'simplistic' equations, [1] and [2].

That is, whether or not we seek to hedge our exposure, the change in the local currency value of our investment will always be unhedged. Therefore, the return impact of the practical reality of imperfect hedging should not influence an investor's currency hedging decision.

[An example of each of formulae [3] and [4] in practice is shown in Appendix 1].

9 This needs to be expressed in the form of how much more/less NZD we will receive from selling our foreign currency, rather than how much less/more foreign currency we can buy with our NZD. If the opening and closing NZD/foreign currency spot rates are S0 and S1, respectively, the required calculation is: 1 – [(1 / S1) / [(1 / S0)] or 1 – (S0 / S1).

Appendix 1

Hedged example

At the beginning of the year, I have NZD100.00 that I convert at the spot exchange rate S0 of 0.70 into USD70.00 to purchase an investment. At the same time, I enter into a forward contract to exchange USD70.00 into NZD at a rate of 0.68 in one year's time. Over the year, the local currency return of my investment is 10.00%, meaning that I end the period with USD77.00. Of this, USD70.00 is effectively converted at the agreed forward rate of 0.68 = NZD102.94, while the remaining USD7.00 is converted at the end-of-period spot exchange rate S1 of 0.73 (an appreciation in the NZD/depreciation in the USD) = NZD9.59. In total, I now have NZD112.53. This represents a return of 12.53% on my initial capital.

From [3], my NZD return is LC + FP – (LC x ΔNZD). The component returns are:

- LC: 10.00%
- FP: This can be calculated from initial spot rate and the agreed forward rate as 0.70/0.68 -1 = 2.94%, but can more easily be determined from the NZD2.94 uplift in the conversion to and from USD of my original capital (NZD100.00).
- ΔNZD: From the formula at the bottom of page 5 [1 – (S0 / S1)], this is 1 – (0.70/0.73) = 4.11%

Putting this all together, my return is 10.00% + 2.94% – (10.00% x 4.11%) = 12.53% (as above). Relative to the local currency return of 10.00%, I gained 2.94% from forward points but lost 0.41% from imperfect hedging. Both the local investment and NZD appreciated over the period meaning that a portion of my investment was unhedged at a time when the currency (USD) in which my investment was denominated fell in value.

Unhedged example

At the beginning of the year, I have NZD100.00 that I convert at the spot exchange rate S0 of 0.70 into USD70.00 to purchase an investment. Over the year, the local currency return of my investment is 10.00%, meaning that I end the period with USD77.00. At end -of-period spot exchange rate S1 of 0.73 this is converted into NZD105.48. This represents a return of 5.48% on my initial capital.

From [4], my NZD return is LC – ΔNZD – (LC x ΔNZD). The component returns are:

- LC: 10.00%
- ΔNZD: 4.11%

Putting this all together, my return is 10.00% – 4.11% – (10.00% x 4.11%) = 5.48% (as above). Relative to the local currency return of 10.00%, I lost 4.11% from the conversion to and from USD of my original capital and a further 0.41% from the fact that the local currency gain on my original capital was also adversely impacted by the fall in the USD.

International Bonds Q&A

By: James Mitchell, Senior Portfolio Manager, Global Fixed Income

James Mitchell

Q1. The US Federal Reserve is expected to continue its rate hiking and the European Central Bank (ECB) is slowing its bond-buying programe. What can be done to protect investors from rising interest rates?

Some investors believe that a rise in interest rates will always be accompanied by a fall in the value of bond portfolios. However, this is not true, and we believe the case for investors to maintain exposure to fixed income remains strong.

Bonds are a good portfolio diversifier, offering a defensive hedge against many geopolitical risks and economic slowdown.

- Rising interest rates expectations are often already priced in by the market. Thus, investors should not expect bonds to lose value unless the expected rate increase is greater than what has already been priced in by the market.
- A long-term investor that reinvests the income generated by a bond may benefit from an interest rate rise over time. This is because despite the potential initial loss in market value from a higher interest rate, the income generated is reinvested at higher interest rates over time.
- Rising interest rates will impact some fixed income securities more than others. Therefore, we believe it's important to hold a diversified fixed income portfolio. For example, investors should diversify across different credit risk ratings, different types of issuers (e.g. securitised bonds, investment grade credit, local currency emerging markets debt, bank loans, high yield).
- An actively managed global strategy can also mitigate potential losses from rate rises by allocating to more attractive markets where yields have already risen and underweighting those where there is a greater risk of significant rate increases.

Q2. Why does Russell Investments see value in non-investment grade bonds?

Rating agencies such as S&P, Moody's and Fitch assess the credit quality of a large number of bonds and other fixed interest investments. While rating agencies provide a continuous scale of ratings, investors often split them into two distinct categories:

- Investment grade (IG, ranging from AAA to BBB- in S&P and Fitch's rating scale, and from Aaa to Baa3 in Moody's rating scale) and
- Non-investment grade (non-IG, BB+ and lower, or Ba1 and lower).

We believe that there are significant investment opportunities within the non-investment grade category for global bond investments. Bonds with non-investment grade ratings are typically riskier, however, we believe investors are often compensated for the risk that they are prepared to take. Beyond the higher expected return that typically compensates investors for the additional risk we see a variety of reasons why non-investment grade exposures have the potential to add value to global fixed interest portfolios.

These are:

- Deeper discounts in price exist after ratings downgrades due to the requirement of certain investors to rapidly exit their holdings;
- Ratings are often standardised, capped and don't necessarily reflect the investment value; and
- Ratings can artificially restrict the investment opportunity set.

We discuss each of these issues in more detail below.

Potentially deeper discounts after downgrade: Some investors have guidelines or are subject to regulations that do not allow them to invest in any instruments rated non-investment grade. Investors with more passive approaches are similarly impacted, since the Bloomberg Barclays Global Aggregate Index, does not include non-investment grade exposure.

In the case of downgrades below investment grade, these investors are often required to sell positions quickly. This creates opportunities for investors with the flexibility to hold non-investment grade positions to add value, since the selling pressure might lead to discounts that are not justified by the actual change in credit quality.

Additionally, a skilled manager might be able to identify securities before they are upgraded, for example, from BB+ to BBB-. This will usually increase the value of the security, but this approach is only possible when the manager is allowed to hold non-investment grade securities.

Ratings are standardised, not sensitive to pricing, and sometimes capped: Rating agencies often use quite standardised approaches to ratings, which might provide further opportunities for investors. As an example, no matter how solvent a company, its rating is typically capped by the rating of the country in which it is domiciled. In many emerging markets, it is possible to find companies with ratings that do not reflect the strength of their balance sheets.

Rating agencies may assign a non-investment grade rating to a security that is not expected to fully repay, however, this bond could be an extremely attractive investment if the price is low enough.

Access to specific markets and strategies: To achieve the best potential outcome for investors, we have a broad opportunity set for global fixed interest, which is not artificially restricted by a small rating difference. Two sectors with significant non-investment grade exposure are of particular interest to us: non-agency mortgage backed securities in the United States and emerging market debt.

Q3. Why does Russell Investments like non-agency residential mortgage backed securities?

Securitised products involve the pooling of financial assets, such as home mortgages, commercial mortgages, credit card receivables, auto loans, student loans and other financial assets, and turning them into tradable securities. The first products to be securitised were Mortgage Backed Securities (MBS) which are bonds typically backed by a large number of home mortgages[1]. These securities provide another way to take credit risk; diversifying corporate credit risk and providing exposure to a sector where there is strong potential to add alpha.

1 Bonds backed by non-mortgage-related financial securities are called Asset Backed Securities (ABS).

We first made a dedicated investment in non-agency MBS in June 2009; this was at the trough of the market – the aftermath of the GFC and sub-prime crisis. This timing was very opportunistic and allowed our funds to benefit from solid, but very undervalued securities. Since 2009 our dedicated securitised manager has added more than 500 basis points (bps) per annum.

We have moderated our exposure recently but we still have a 10% allocation to our securitised manager, Schroders, as we continue to see this area of the credit market as the most attractive. The sector has strong fundamentals; supported by strong consumer balance sheets, rising house prices and rating upgrades. While valuation is not as attractive as in the past, it still compares favourably to other sectors. Finally, the technicals remain very supportive with very strong demand and almost no new supply.

Q4. Is it prudent to hold non-rated securities?

While the vast majority of securities in fixed income markets have a credit rating from at least one of the major rating agencies, there are a number of securities that are not rated. This is typically because the company has decided not to ask for a rating, which they would have to pay for. While it is interesting to see what rating an agency may assign to a bond, we believe it is important to use managers that do their own credit research and evaluate every investment. It is also worth noting that non-rated bonds can actually have very high credit worthiness; it should not be assumed that a non-rated bond is an equivalent to a non-investment grade rated bond. Non-rated bonds can also offer some additional yield because of their lack of rating as some investors may not be able to buy non-rated bonds.

Q5. What is your outlook for the next year and how are you positioned for this?

We still see solid global economic growth over the next year and expect central banks to continue to normalise rates and reduce the size of their balance sheets. While this may sound bearish for bonds, there is already a lot of this priced into the markets; particularly in the US.

In contrast the European and Japanese markets still have very little priced in, in the way of rate hikes, and offer no premium to expected inflation. As a result, we maintain large underweights in Europe and Japan.

On the credit side, we still see potential for some sectors to outperform governments and so remain overweight credit risk. However, our overweight is much reduced from a year ago. In terms of relative value, we still see best value in the securitised area where we are overweight non-agency mortgages and some Commercial Mortgage Backed Securities (CMBS) and Asset Backed Securities (ABS). However, we are underweight the investment grade credit sector given the relatively high leverage and because we are late in the economic cycle.

Q6. Where do you expect excess returns to come from?

Over the medium term, we typically expect 35% of excess returns to come from active interest rate management, 25% from active currency management and 40% from active credit management. Over shorter periods, any one factor can dominate, and in the last couple of years credit has been a key driver. Looking ahead, we still see potential for excess return from our credit positioning, however, with our exposures much lower and spreads much tighter, we expect credit to take more of a backseat. We believe as more countries normalise their interest rates, we will see greater opportunity for added value in rates and currency markets.

GREAT MOMENTS IN FINANCIAL HISTORY

The long march of diversification—1500 BCE to today

The long run is a happy place for economists. Harry Markowitz wrote a paper in 1952, "Portfolio Selection," which the Nobel Prize committee waited nearly four decades to recognise (in 1990). Diversification—the subject of Markowitz's paper—has a longer history than that. The principle of spreading one's bets is as old as man.

We are born diversifiers. The human body itself is a marvel of diversification. As omnivores, we can eat almost anything—an essential trait for surviving ice ages and airport food courts. Human bodies are also notoriously frail and specialised for no specific strength, trait or habitat. Yet by having a diversified skill set, we survive and thrive in all climates, even including Arctic winters.

The ancients knew that for investing, diversification is a survival strategy. Diversification is described in the Babylonian Talmud, wherein we are advised to split a portfolio of assets into thirds: keep one part for business (working capital), one part liquid (gold) and one part in land.

The Talmudic rule of thirds was in recent times tested[1] against Markowitz's strategy of optimising a portfolio per the means, variances and pair-wise correlations of its constituent asset classes. The Talmudic rule did surprisingly well for individual investors, and the math was certainly easier. However, for the institutional investor with a large number of assets and a spreadsheet at hand, the rule of thirds was found inferior to Markowitz's strategy. But that perspective would have to wait another 3,500 years.

About 500 years after the Babylonian Talmud, King Solomon advised investors to "Cast your bread upon the waters, for after many days you will find it again. Give portions to seven, yes to eight, for you do not know what disaster may come upon the land."[2] If one could define what asset class counts as casting bread upon the waters, one could also test Solomon's advice.

Diversification remained part of a sound business, if not investment, strategy through the centuries. In The Merchant of Venice, Antonio confided that "My ventures are not in one bottom trusted, nor to one place; nor is my whole estate upon the fortune of this present year." Not putting all one's eggs in one basket was common business and investing sense—particularly as opportunities for individual investing expanded and grew.

Diversification as a means of sheltering wealth against extreme outcomes has a downside of inviting new risks. Benjamin Franklin commented upon how those with large families become a broader mark for sorrow. So it is that with every investment added, the opportunity for a loss increases. Diversification also means a compromise on the rewards that might be reaped from specialisation. Increasing allocations to truly defensive asset classes means accepting a lower expected return.

The Markowitzian diversification of the twentieth century was something entirely new, a finely tuned diversification on the margin which defies this trade-off. By tweaking the allocations and including in the mix assets with negative correlations to the others, Markowitz argued, one can afford to increase allocations to the higher-return asset classes and reap potentially higher returns with lower risk. This is what Burton Malkiel called one of economics' true free lunches. Realising that there is such a thing as a free lunch was a great moment indeed.

1 Duchin, Ran, and Haim Levy, "Markowitz Versus the Talmudic Portfolio Diversification Strategies." Journal of Portfolio Management, Winter 2009, Vol. 35, No. 2: pp. 71–74

2 Ecclesiastes 11:1–2

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