Moving forward with the normalisation of yields

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After five years of abnormality, many features of the post-crisis investment landscape seem to be in the early stages of reversion toward pre-crisis conditions. Growth has generally improved in the developed world, fiscal deficits have narrowed and - most critically for bond investors - the US Federal Reserve has begun tapering its asset purchase program. Some investors, perhaps not surprisingly, have allocated away from core bonds toward the extreme ends of the risk spectrum: cash, which is insulated from the negative impacts of yield increases; and, equities, which would likely benefit from accelerating economic growth.

Yet, by definition, cutting core bonds is an explicit de-optimisation of a broader portfolio. It can only be justified as a market-timing strategy - not only must the investor be right about rising yields, but yields also must rise within a narrowly predicted window of time. Those who flee to cash yielding near 0% may experience a "death by a thousand cuts" if yields don't rise as soon as expected. Those who increase equity concentrations may be overexposed to negative economic surprises - capital gains from bonds have tended to kick in just when equities sold off, helping to stabilise overall portfolio performance. So, while it may seem intuitive to reduce core bond holdings in anticipation of yield normalisation, many investors, if not most, may end up worse off by trying to time the market.

GRADUAL RATE RISES ARE NOT NECESSARILY SOMETHING TO FEAR

A review of past experience suggests that a gradual increase in interest rates may not lead to a terrible outcome for bond investors, particularly if investors are properly diversified. The Fed's 2004 to 2006 rate hiking cycle is a case in point. From 30 June 2004 to 30 June 2006, the Fed raised rates 17 times, taking the Fed Funds rate up 425 basis points from 1% to 5.25%. As might have been expected, this helped push the yield on the 10-year US Treasury note up from 4.58% to 5.14%. Yet over that same time period, the Barclays Global Aggregate Index (NZD-hedged) returned an annualised 7.7%, or a cumulative return of nearly 16%.

Some may argue that this example merely shows that markets are forward-looking - the Fed's rate hikes were expected, so the hikes themselves should not have led to a market reaction. So what about the period leading up to the rate hikes, during which the market began to "price in" the impending rate changes? In the 12 months leading up to the first hike in June 2004, the yield on the 10-year US Treasury note did in fact rise by more than 100 basis points with the Fed Funds rate still pegged at 1%. However, even in this environment of rising long-term US rates, a New Zealand investor who owned a global bond portfolio might not have been so unhappy. The return on the NZD-hedged Barclays Global Aggregate bond

index during that year was over 4%.

The upshot is that the return to a New Zealand investor who owned global bonds averaged over 6.5% annually during a three-year period (30 June 2003 to 30 June 2006) prior to and during Fed rate hikes of 425 bps and as the yield on the US 10-year Treasury note increased by over 150 bps.

How is this possible? It comes down to two important benefits of global bond investing – diversification and carry.

Diversification comes in many forms, but where changes in central bank policy are concerned, one of its most desirable forms is country diversification. This benefit is derived from the varying economic fundamentals (and, by extension, policy responses) from one country to another – with the result that not all yield curves move up and down together. In this particular instance, because the focus was on a potential (and, eventually, realised) change to US monetary policy, US bonds were the prime casualty, and a portfolio with exposures to diversified global bonds was not affected as much as one with exposure to only US bonds[1].

As for carry, in addition to bonds paying their coupons regardless of whether yields are rising or falling, New Zealand investors generally benefit from another sort of carry – the "cost" of hedging global bonds back to NZ dollars. Because short-term rates have generally been higher in New Zealand than in most other countries (Figure 1), this cost is actually negative much of the time. That is, investors based in New Zealand actually get "paid" to hedge! Adding in the fact that rising rates mean that coupons are reinvested at ever higher yields, the result can be (as it was over the period in question) relatively attractive returns.

Figure 1: Comparison of historical short-term interest rates since 2000
(as of 12 May 2014)

	Cash rate avg. since 2000 (%)	Vs. NZ (%)
New Zealand	5.0	
United States	2.2	-2.9
Eurozone	2.3	-2.7
United Kingdom	3.2	-1.9
Japan	0.2	-4.9
Australia	4.8	-0.2

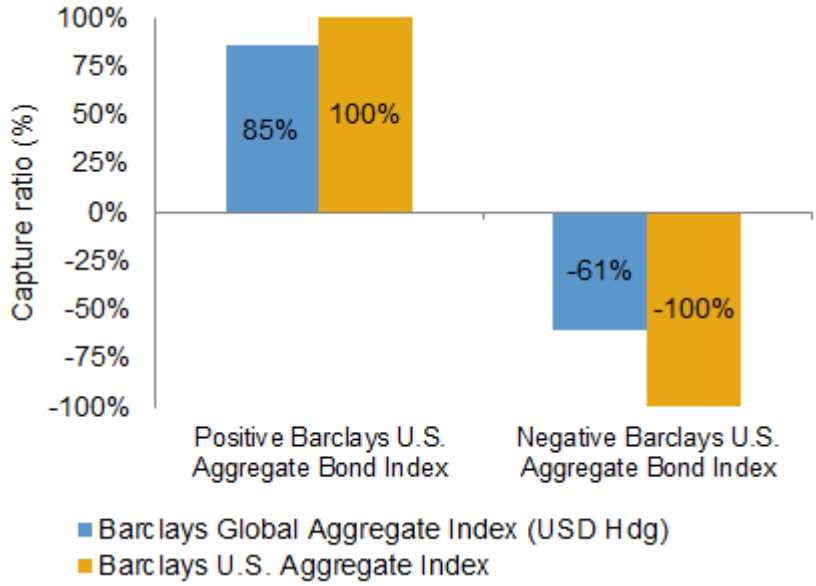
Bloomberg, as of 12 May 2014

While past results may not be an indication of future returns, the 2003 to 2006 experience should certainly be food for thought for those investors who may be considering reducing their bond exposures in anticipation of a change in US Fed policy over the next couple of years.

WHAT CAN INVESTORS DO?

A more thoughtful response is to consider retaining core bonds and diversifying the specific risk factor of concern – in this case, duration. In the past, global bonds have captured most of the upside but avoided a significant amount of the downside relative to domestic-only bonds. Indeed, the threat from yield normalisation is a somewhat nonsensical concept for investors with a global perspective. Based on monthly returns from March 1998 to January 2014, Figure 2 shows that the Barclays Global Aggregate Index captured 85% of the gains but only 61% of the losses of the US Aggregate Index. This is portfolio efficiency at its best.

Figure 2: Portfolio efficiency at its best – Upside/downside capture ratios
(March 1998 to January 2014)



Source: Barclays. Based on monthly returns from March 1998 to January 2014

Further, the market offers an additional opportunity for compensation against rising rates through roll down. In a market with an upward sloping yield curve. roll down is the gain that can be realised when a bond's yield declines and its price increases as it nears maturity, or 'rolls down' the yield curve. The amount of compensation from roll down can fluctuate dramatically over time and across countries. Active investors can potentially enhance the

average level of this compensation in their portfolios and, if market expectations are not fully realised, those investors may generate capital gains (in addition to coupon returns) even in a rising yield environment, as explained below.

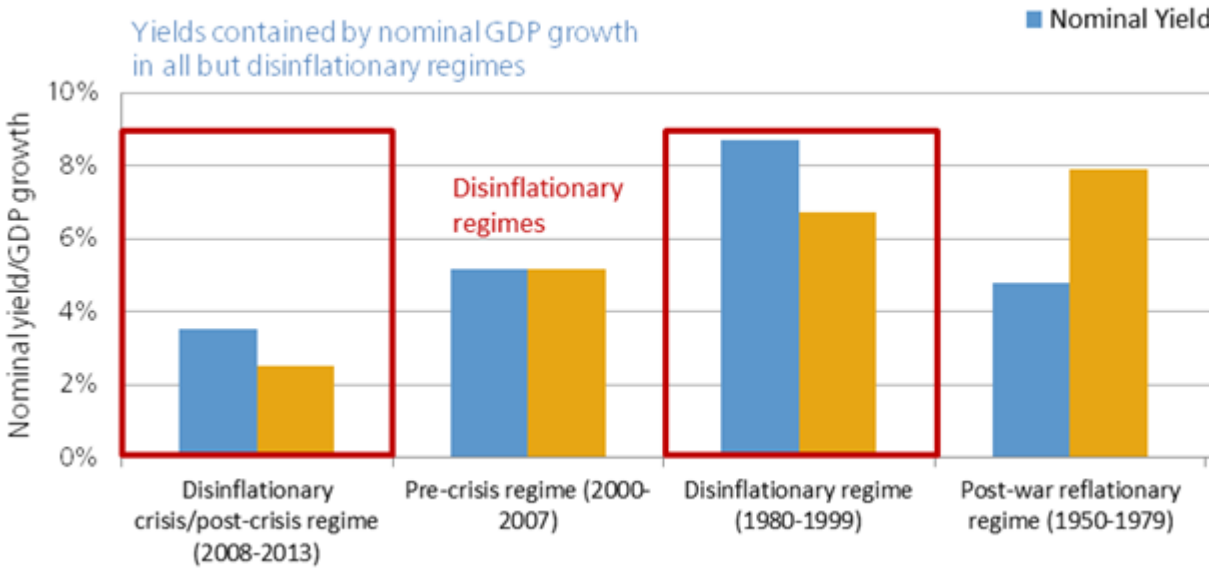
CONSTRUCTING A FRAMEWORK AND MANAGING THE FORWARDS

Generating capital gains from bonds in a rising yield environment requires defining concretely what yield normalisation means – where yields are going and when they will get there – and setting these expectations against forward market pricing, country by country.

So what does yield normalisation mean?

Nominal GDP growth anchors nominal yields (Figure 3). This makes sense. Lenders' expectations for a respectable return on capital, as well as borrowers' expectations for a reasonable cost of capital, are both conditioned by economic growth.

Figure 3: Nominal GDP growth anchors nominal yields
(as of 31 December 2013)



Sources: Federal Reserve and Haver Analytics.

As Figure 3 shows, it is most common for nominal yields to be bounded from the top by nominal GDP growth. The disinflationary regime of 1980 to 1999 (as well as the last few post-financial crisis years) is the exception. This was a unique phase when central banks set policy rates above equilibrium to lower nominal GDP growth (mostly via inflation) and, with a lag, nominal yields. The reverse occurred during the post-war reflationary regime (1950 to 1979) when policy yields were set below equilibrium, which in turn propelled nominal GDP

growth higher while yields adjusted to this new reality with a lag.

With inflation so low in the developed economies, it is likely that central banks will make reflationary rather than disinflationary efforts in the coming years. Nominal yields are unlikely to be as far below nominal GDP growth as they were during past reflationary regimes. Central banks have far more credibility and operate in a more liberalised financial system. Still, nominal GDP growth should serve as an upper bound for nominal yields.

The key question then becomes the outlook for nominal GDP.

The International Monetary Fund (IMF) projects nominal GDP growth over the coming three to five years will average 5.2% in the US, 4.25% in the UK and 4.0% in the eurozone[2]. However, beyond the next few years, trend growth is projected to decline due to demographic shifts and a slower pace of capital accumulation. Macroeconomic Advisors, for example, projects US nominal GDP growth will decline to 4.4% by 2020, consistent with the US Congressional Budget Office's own forecasts[3]. While imperfect, these figures serve as a good upper-bound estimate for yields over the next few years.

While real yields have tended to be a relatively small and stable component of nominal yields, their assessment should be more consequential in the years ahead. Real yields in the US averaged between 1.5% and 2.5% during the post-war era, depending on the maturity of the instrument. But, there are persuasive reasons to believe that real yields could be far lower going forward.

The supply of loanable funds, for instance, should be higher and the demand for loanable funds should be lower in an environment without balance sheet leveraging, both of which would put downward pressure on the market-clearing (equilibrium) level of real yields. It is not just domestic households in the US, UK, and Europe that are striving to save more, adding to the supply of loanable funds. Lenders in the emerging world will likely continue to supply loanable funds to globalised capital markets. (Former Fed Chairman Ben Bernanke described this trend in his widely accepted theory of the "global savings glut".)

Taking the argument a step further, there has been quite a bit of academic research, summarised recently by Larry Summers' forceful "Secular Stagnation" speech at the IMF in November 2014[4], showing that equilibrium real yields could be close to 0%, or perhaps even negative, in an economy without balance sheet leveraging. If true, this would explain disinflation in countries where policy rates have been set far below inflation for more than five consecutive years. It would also suggest that nominal yields may peak at a much lower level than they did in 2007, when they briefly touched 5.25% in the US.[5] According to secular stagnation theory, these levels were reached only because of an historic borrowing binge and a housing bubble.[3] Assuming borrowing-binge conditions are not repeated, nominal yields could peak at a much lower level the next time.

Putting it all together, the 10-year government yield (in the US and UK, at least) over the next three to five years should not likely go higher than 4.0% to 4.5%, with real yields slightly

below average and inflation premiums slightly above average.

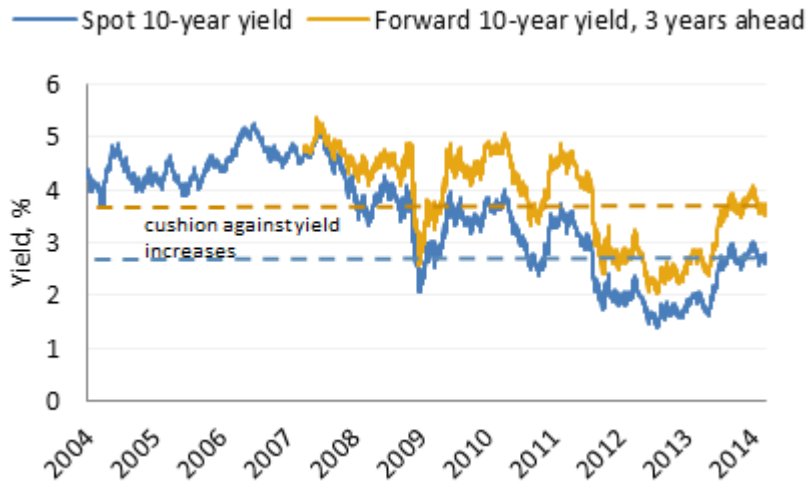
SETTING EXPECTATIONS AGAINST FORWARDS

Forward yields re-priced far more than spot yields during the 2013 bond market selloff (Figure 4), so bond investors not only enjoy higher yields today but also greater cushion against further yield increases. It depends on the maturity of the yield and the geography of the market, but longer-dated yields already help protect investors against a full normalisation over the next three to five years, at least according to the framework presented here. If yields peak at a lower level, or take longer to get there, bond investors would theoretically realise capital gains on top of their coupon returns even as yields increase.

Specifically, forward markets anticipate that 10-year US yields will rise to 3.6% over the next three years, and to 3.8% over the next five years (Figure 4).

Theoretically, if the US 10-year yield normalises at 3.75% over the next five years, core bond investors would realise a capital gain to augment their coupon return. The normalisation priced in to French forward markets at the moment is greater; in Canadian markets, worse.[6] And, by shifting exposure to those forward markets in different regions when they offer a compelling cushion against rising rates, quite a bit of excess return potential may be harvested.

Figure 4: Markets already priced for normalisation
(as of 12 March 2014)

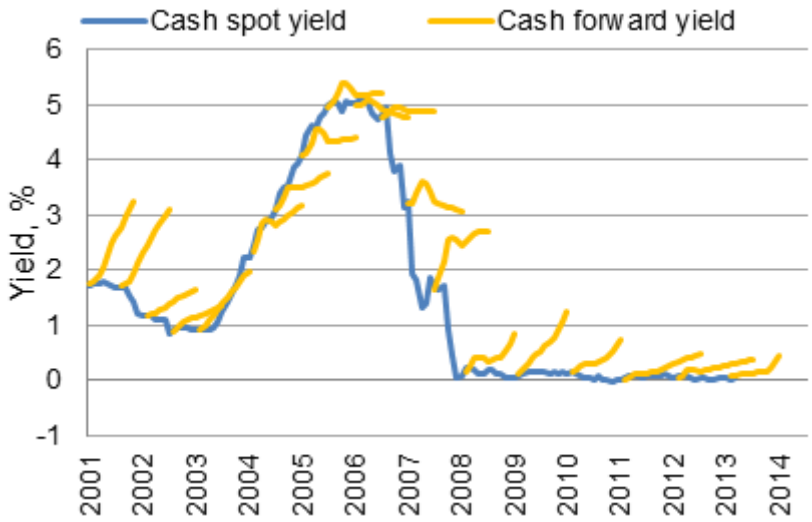


Source: Bloomberg.

Markets have historically offered a structural cushion against rising short-dated yields – a relatively small but stable uncertainty premium that active investors can potentially harvest

as excess returns if spot yields do not increase to "validate their forwards" (see Figure 5). This is quite common during phases when central banks are on hold.

Figure 5: Structural cushion against rising cash yields
(as of 28 February 2014)



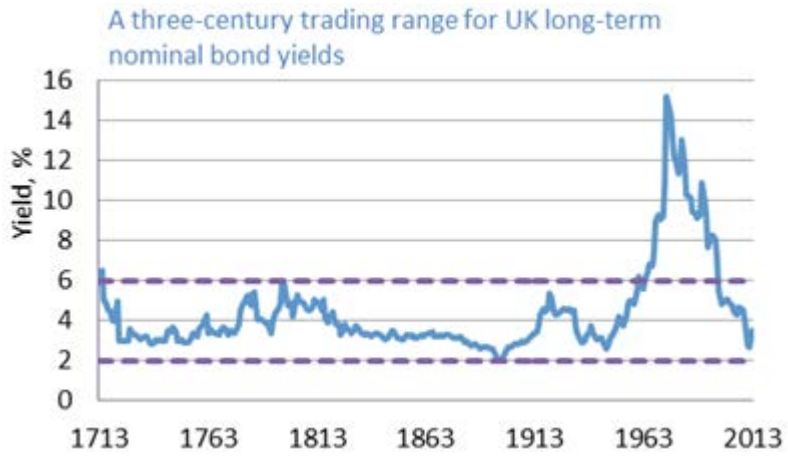
Source: Bloomberg. Note, cash yields (spot and forward) represented by the US 3-month T-Bill.

This uncertainty premium varies over time and across countries. For example, in May 2013, when the Fed first mentioned tapering its asset purchase program, this premium increased more in Europe than in the US. This didn't make sense. Why would forward yields increase to fortify investors against ECB policy rate hikes in Europe when it was the Fed that had changed its stance on US monetary policy? This opportunity began to disappear nearly as soon as it had surfaced, and was fully snuffed out when the ECB invalidated forward pricing completely by cutting its policy rate in November 2013. Many instruments sensitive to these dynamics – short-dated bonds but especially money market futures contracts – increased in price.

BACK TO THE FUTURE

Many investors subscribe to the notion of symmetry – the idea that there must be an equal and offsetting bear run in bonds as the natural counterpart to the bull run experienced during the past 30 years. But, in fact, this has already played out. The bull run from 1980 to the present in the UK was the counterpart to the bear run from 1950 to 1979, during what was an abnormal and temporary aberration from a centuries-old trading range (Figure 6).

Figure 6: UK bond yields: back to the future
(as of 31 December 2013)



Sources: Bank of England and PIMCO.

Rather than selling bonds in preparation for the return of such an abnormal environment, then, investors could focus instead on what is likely in the current macroeconomic environment – a rise in yields, perhaps, but one that is gradual and, ultimately, limited in scope. And, because market prices adjust to anticipate future yield trajectories, one could even claim that yield normalisation already occurred last May, when forward markets re-priced to reflect the expectation of rising yields.

ENDNOTES

1. From 30 June 2003 through 30 June 2006, the annualised return for the Barclays Global Aggregate Bond Index (NZD-Hedged) was 6.5% versus 5.8% for the Barclays US Aggregate Bond Index (NZD-Hedged).

2. See http://www.imf.org/external/pubs/ft/weo/2014/01/weodata/index.aspx

3. Macroeconomic Advisors and the Congressional Budget Office, as cited by Haver Analytics

4. See IMF 14th Annual Research Conference in Honor of Stanley Fisher at http://larrysummers.com/secular-stagnation/

5. See http://www.treasury.gov/resource-center/data-chart-center/interest-rates/Pages/TextView.aspx?data=yieldYear&year=2007

6. Bloomberg.

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