Defensive Asset Risk – a wolf in sheep's clothing?

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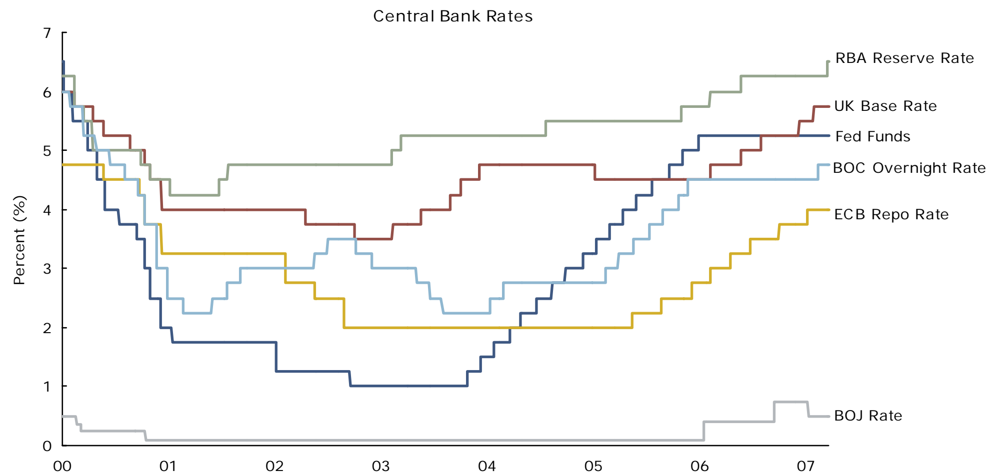
Investors in buoyant markets are often complacent about what risks really are, and this couldn't ring more true than in the current environment, where a realistic assessment of risk seems to have escaped the investment vernacular.

A journey through the depths of the fixed income asset class and the valley of the alternatives that are increasingly replacing it in a balanced portfolio, goes some way to reveal the enormity of the risks investors are taking on, and also demonstrates the role of true defensive assets.

Astute investors are aware that Markowitz'Modern Portfolio Theory teaches us to manage our assets in a portfolio context and that a mix of uncorrelated assets should provide, over the long term, a smoother stream of returns than any one particular asset class would on its own.The global fixed interest markets are bouncing back after what has been a tough year for bonds. For the financial year through to June 2007 global bonds have posted annual returns of 5.7%[1]. However, going back one year, all was not so rosy!

The annual return for Global bonds through to June 2006 was 1.2%[2]. Global central banks endeavoured to slow the global economy that has been charging forth at an immoderate pace over the last few years and traditional fixed interest investments suffered the wrath of the inverse relationship between global rate increases and capital returns i.e. as interest rates go up the price of a bond goes down.

Chart 1: Global Central Bank Interest Rates



Source: Bloomberg

[1] Global bonds performance is for the Lehman Brothers Global Aggregate Index hedged in AUD.
[2] Global bonds performance is for the Lehman Brothers Global Aggregate Index hedged in AUD.

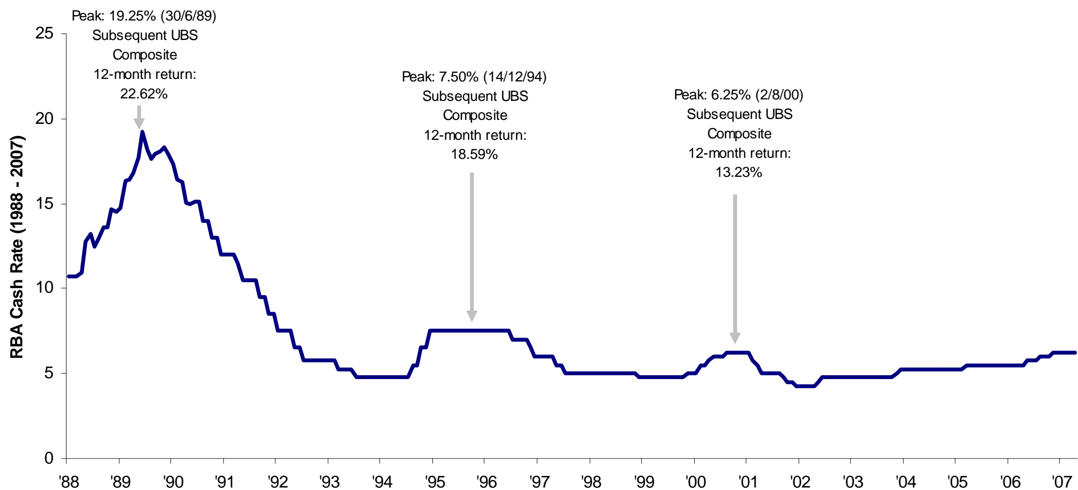
However, the ability for fixed interest markets to bounce back following periods of relatively poor returns is testament to one of the most enduring, fundamental characteristics of bond returns - **bonds are naturally mean reverting assets**.

Despite initial negative capital returns accruing to bond holders as interest rates increase, the benefits of reinvesting at higher yields will eventually more than compensate bond market investors in a higher rate environment. Further this effect is compounded by the likelihood of greater capital appreciation accruing to bond holders as central banks near the peak of their cycles.

This phenomenon is shown below for the Australian and US markets. The charts show the subsequent returns from bond markets following a peak in central bank hiking cycles. As it can be seen, it is not uncommon for double digit returns to be recorded once central banks have finished increasing interest rates.

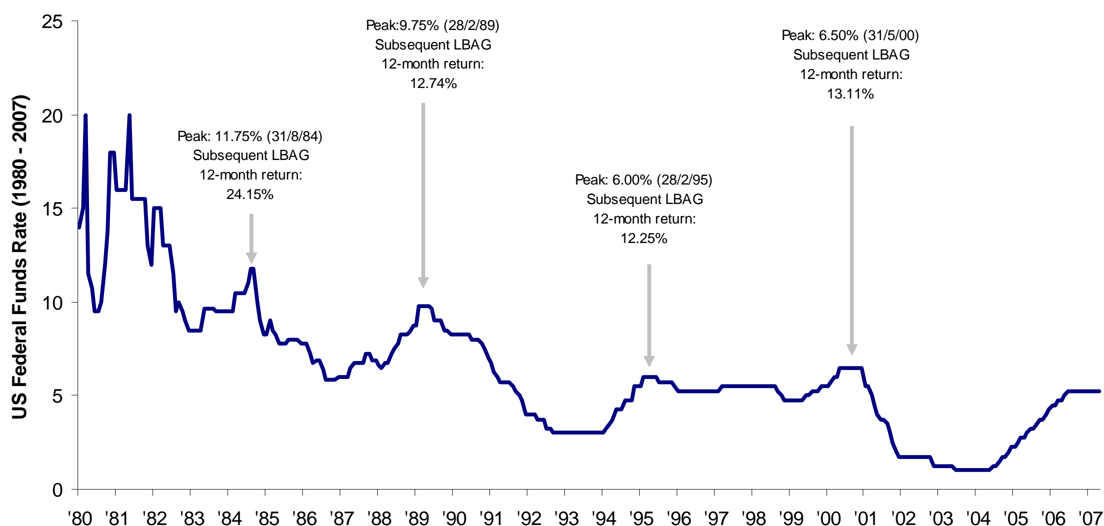
High Interest Rates - A Positive Climate for Bonds

Chart 2: The Australian Experience…



Source: Bloomberg and UBS

Chart 3: And in the US…



Source: Bloomberg and Lehman Brothers

In the context of the US Federal Reserve and Reserve Bank of Australia which PIMCO believes are close to or at the peak of their current tightening cycles, we expect to see an increase in bond returns.

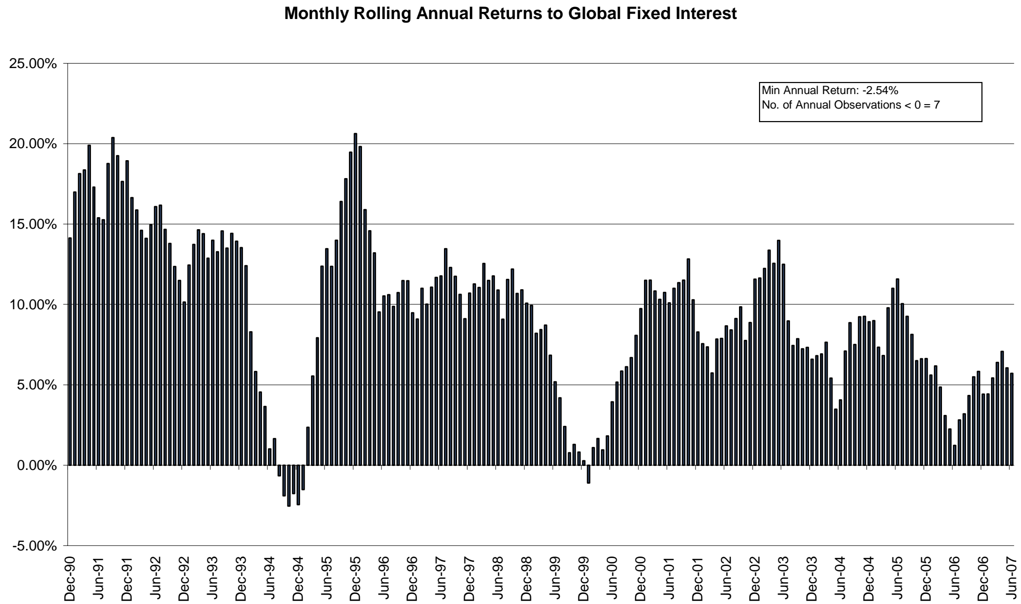
But this also raises another interesting point about fixed interest as an asset class and why, even when interest rates are rising it is not all bad, even for those who have endured some performance frailties. Namely, that **the probability of a negative return in fixed income is less than in other asset classes.**

Looking back to Chart 1 it is indisputable that we have been in an environment over the past two years that has not been favourable for fixed interest investments. As an example, the Federal Reserve Bank, has raised rates 17 times between June 2004 and June 2006, an increase of 4.25%.

However, throughout this whole period the Lehman Brothers Global Aggregate Bond Index never ventured into negative territory on an annualised basis, with the worst one year rolling return recorded in June 2006 at 1.23%. This is because the tail risk or the risk of a negative return is not as high for fixed interest investments as it is for other asset classes.

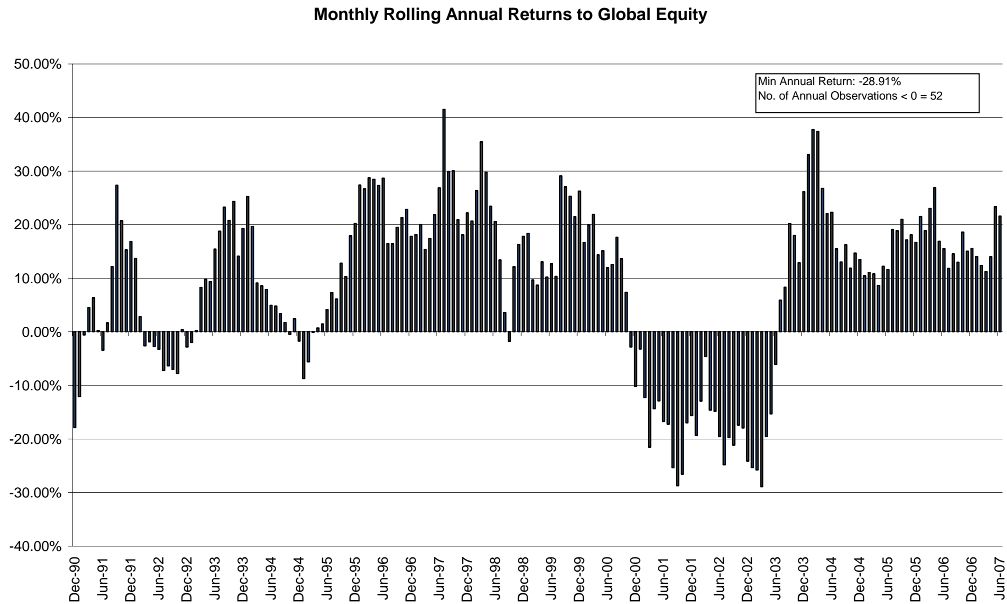
The following charts display the monthly rolling annualised returns for global bonds and global equities, demonstrating that, as you would expect, based on their risk/ return characteristics bonds venture into negative territory with far less regularity than equities.

Chart 4: Monthly Rolling Annual Returns for Global Fixed Interest as at 31/12/1990 – 31/12/2006



Source: Lehman Brothers

Chart 5: Monthly Rolling Annual Returns for Global Equity as at 31/12/1990 – 31/12/2006



Source: MSCI

The relationship can be expressed mathematically by looking at the probability of each asset class' returns falling below zero. To do this we assume that returns to traditional asset classes are randomly distributed around a normal distribution. Using past returns as a proxy for future returns as well as a standard probability table, we can then estimate the probability of returns to any one asset class falling below zero.

As displayed in the chart below, it is probable that global equity will post a negative return once every 3 years, while Australian equities is expected to post a negative return once every 6-7 years. However, the probability that fixed interest assets, domestic or global, will post a negative return we estimate on the basis of these figures as once in every 50-100 years.

The Probability of Negative Returns

Asset Class	Annualised Return	Annualised Standard Deviation	Probability of Negative Return
Australian Equity*	12.95%	12.18%	14.46%
Global Equity	6.94%	13.66%	30.51%
Australian Fixed Income	9.30%	4.30%	1.54%
Global Fixed Income	9.37%	3.18%	0.16%
Australian Property*	16.35%	8.22%	2.33%
Global Property	11.97%	15.69%	22.37%
Hedge Fund of Fund	9.80%	5.50%	3.75%

* Australian Equity Returns are as of 30/06/1992

**Australian Property Returns are as of 30/04/2000

Source: UBS, Lehman Brothers, MSCI, S&P, HFRI; ASX; Citigroup

Now this is only maths, and some readers will be sceptical of the claim that the probability of global fixed interest assets falling below zero is so low[3]. However, looking at the order of probability rather than the absolute numbers, the fact remains that fixed interest markets are far less likely to produce a return below zero than other traditional assets.

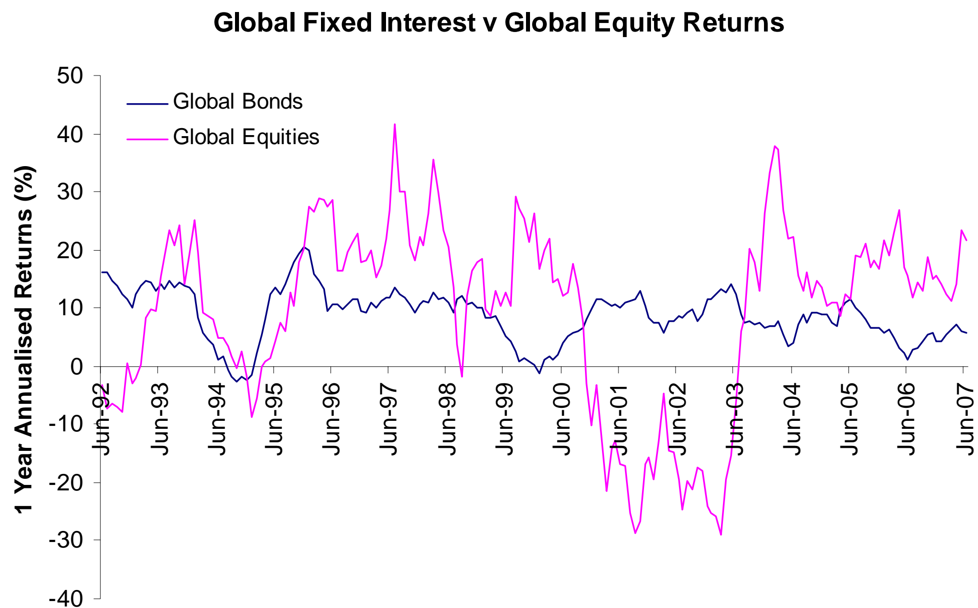
But, the astute reader may believe we missed a very important asset class in our analysis. Cash - the one asset class that never returns sub-zero. Well it is true, we don't need to use a standard probability table to know that the probability of cash returning negative returns is effectively zero. Couple this with the fact that in recent times cash has outperformed bonds and it is no wonder that the average allocation to fixed interest in a typical portfolio has fallen from 23% last decade to 16% today[4]

What about over the long term? Would an investor have been better off investing in cash rather than bonds or would they have given up significant returns? To find out PIMCO has calculated how much an investor would have made today if they invested $100 in cash[5] and $100 in global bonds[6] 15 years ago. If they had made the investment in June 1992 they would have receive $233 from the cash investment and $331 from the bond investment in June 2007. That means that the investor received 42% more by investing in bonds. Obviously it is difficult to analyse the risk reward ratio as cash is a risk free asset so to

[3] It is likely fixed interest returns are not well represented by a standard normal distribution as they have returns which are concentrated around the mean, with *very small tails.*
[4] Rainmaker Roundup
[5] The UBS Bank Bills Index has been used to proxy for cash returns.
[6] The Lehman Brothers Global Aggregate Index used to proxy for global bond returns.

put the level of risk the investor is exposed to by investing in bonds in perspective we made the same comparison with global equities[7]. Over the same period, we find that the investor would have returned $379 by investing in global equities. This is approximately 63% more than if they had invested in cash. But, what about the risk? Well if you invested in global equities you would have been exposed to risk measured by standard deviation of returns of 12.92%. However, if you invested in bonds the risk you would incur is 3.06%. This seems like a substantial amount of additional risk for a further $48 over 15 years. So, what does this mean? Well the variability in annual returns is much greater in equities than bonds so returns can swing from positive one year to negative the next. By investing in bonds the investor will receive returns that are much more closely in line with the variability of cash rather than equities.

Chart 6: Global Fixed Interest Returns are less volatile than Global Equities Returns



Source: Lehman Brothers; MSCI

So if investors had stayed with bonds and did not transfer to cash they would have received greater returns without adding a great deal of additional risk over this 15 year period. However, in the short-term, while bonds are producing low single digit returns, investors are being lured by the promise of returns above 8 per cent in products that are being touted as defensive but are best described as a wolf in sheep's clothing. It appears some investors lack sufficient understanding of the inherent risks in the underlying securities in which they are investing to gain those yields.

For many investors, in recent times the lure of higher yielding products has skewed that risk return trade-off, with returns being pursued at the expense of the portfolio's overall risk profile. As well, many products that offer higher yields have complex underlying structures, which, makes the assessment of their risk profile an often tedious and difficult process.

The mortgage trust sector….the hidden risks

[7] The MSCI World ex Aus Index has been used to proxy for global equity returns.

We only need to look at the growth in the mortgage trust sector, which as the general level of interest rates has fallen, has grown rapidly over the past decade. With that growth the sector has developed into one which is very competitive and increasingly diversified, with every mortgage trust containing a risk profile that is different.

In analysing these products investors and their advisers should closely analyse the underlying risks in these investments including:

- the robustness of the mortgage investment process;
- the level of investment in construction loans;
- diversification of mortgage investments across states, locations and property types;
- quality and independence of the property valuation;
- an assessment of borrowers ability to make repayments;
- whether the security offered is a first registered mortgage;
- whether the trust makes development loans; and
- level of the loan to valuation ratio (LVR).

Mortgage schemes must be registered with ASIC, and a liquidity strategy, the method by which the fund is able to meet the day-to-day withdrawal requirements, is required under the Corporations Act. Current regulations also oblige mortgage trusts to clearly identify in their Product Disclosure Statements ("PDSs") what type of mortgage investments they seek to invest in, including LVR, geographic and sector profile and the nature of property they classify as acceptable security.

The high yield mortgage sector was very sensitive to the collapse of Westpoint, and is being subjected to greater scrutiny. Investors and their advisers should be demanding more clarity around the underlying investments especially on construction and development loans.

In the latter half of 2004, ASIC undertook a surveillance campaign focusing on high yield debenture prospectuses – those offering returns 3 per cent or more above the bank term deposit rate. This has resulted in a **risk checklist** for investors.

The aim of the ASIC review was to see whether the issuers of high yield debentures were fully informing investors of the additional risks of investing in them. There was a concern that investors would not be able to discern or adequately price the risks involved.

ASIC's findings were very poorly publicised at the time, but points of interest for investors wishing to examine these products include:

- *capitalisation of interest* – some issuers are lending debenture funds to borrowers who cannot afford to pay interest out of their own cash flows, but this is not adequately disclosed;
- *type of security* – in some cases the type of security by which the debenture fund was secured was not disclosed so the investors could not assess the riskiness of the investment; and
- *bad or doubtful debts* – some debenture issuers who on-lent funds failed to disclose that some of these funds were not recoverable.

But these products are not a new phenomenon, it is just that, perhaps, investors have been slow to learn. Investors in assets whose liquidity lacks immediacy would do well to cast their minds back to the late 1980's. Back then, in a very different climate of high interest rates, declining inflation and apparently

booming economic times largely resulting from inflated asset values, investors also hunted for high yielding products.

One high profile example is Estate Mortgages who advertised their debentures as being “as safe as houses”, but ultimately collapsed under the weight of investors seeking redemptions when the fund was unable to provide liquidity.

And hedge funds…..even riskier?

It is here there are parallels with the more aggressive hedge funds, which have been typically shy about transparently stating the nature of their underlying assets.

According to the most recent Mercer survey of hedge fund users, which included 181 pension funds around the globe, only 23 per cent of respondents were satisfied with their fund of hedge fund investments. And yet 54 per cent intend to increase their allocation to hedge funds within the next two years.

Much of the dissatisfaction stems from a high expectation of what the hedge funds will return, but also investors felt that their funds managers were not transparent. In fact the survey found that only 58 per cent of respondents understood their fund-of-hedge funds manager’s investment approach. This raises questions about the transparency provided by the funds managers and goes a long way to demonstrate the point – investors do not know fully understand the risks they are taking.

Australia’s own local example of the riskiness of some hedge fund investments is still playing out. Basis Capital’s July 2007 notification to investors was that it was in default on margin loans and faced a forced sale of assets, highlights the problems around liquidity and transparency in hedge funds once again.

In June 2007 the Basis Yield Alpha Fund lost 14 per cent, and the Basis Pac-Rim Fund was down more than 9 per cent, with losses partly due to turmoil in the US subprime mortgage market[8]. Since then the Basis Yield Alpha Fund has failed to meet margin calls. A letter to investors said the fund had been hit by indiscriminate repricing of otherwise fundamentally sound collateral amid the crisis in US home loans to less creditworthy investors, even though it had deliberately avoided the worst-hit 2006 subprime loans.

Two of Basis Capital’s funds were linked to US mortgages and the crisis demonstrates how easily the wider financial community can be affected by a crisis in these sectors. In the US more than 600 subprime-backed mortgage securities have been put on watch by Standard & Poors and Federal Reserve Chairman, Ben Bernanke has said the losses could reach $US 100 billion.

Lax mortgage lending is now firmly under the radar of the watchdogs, but that doesn’t really help the investors already exposed. While Basis has hired an accountant to help with the orderly sale of assets at prices which reduce the losses to investors, it also told investors they may only achieve up to $0.20 in the dollar.

While this crisis certainly raises the question of hedge fund risk, it also goes further to cement the **mistreatment of hedge funds and other alternatives as defensive assets.**

[8] Bloomberg, Basis Hires Blackstone to Advise on Hedge Fund Losses, 24th July 2007

Investors whose portfolios have gained exposure to hedge funds, mortgage trusts or similar securities where those funds have been switched out of the more traditional defensive assets such as fixed income securities in order to gain a higher level of return in the short-term, are skewing the risk in their portfolio.

With investors increasing focus on yield, a continuing climate of low inflation and lower interest rates has seen them moving into products where the return may appear higher, but it comes with a corresponding increase in the level of risk. And this risk does not just involve the dependability of the income stream, but may also extend to whether or not the value of their investment may fall below the amount invested, as a result of the underlying nature of the securities not having the end certainty of full repayment which comes with buying a bond.

And as this paper attests, the most traditional of defensive assets - fixed income - is irrefutably transparent, liquid and has reliable returns.