

Risk in Sovereign and Corporate bonds

'Madness in great ones must not unwatch'd go' - Shakespeare.

Shakespeare's words reminded me of the performance of our political leaders as they try to resolve the debt crisis in Europe. The whole world is watching to see if the Prime Ministers and Presidents can engineer a recovery for the economies of the Eurozone. Whilst this tragic comedy continues to play in the political arena, equity and bond markets respond to the uncertainty with extreme volatility. For investors the immediate concern is the risk of default in the sovereign debt of the struggling Eurozone economies and the potential contagion resulting from such defaults on corporate debt and equity markets.

We can understand if our clients are unnerved by the headlines and might be concerned about the bonds we use in TRH portfolios. The aim of this note is to provide some detail on how we manage risk in bond investments and reassurance that our portfolio strategy is working through these challenging times.

1. The use of bonds in investment portfolios

The primary reason we hold bonds in our investment portfolios is to dampen the volatility (risk) expected from the equity and property asset classes. Consider the two tables below. Table 1 shows the expected range of annualised real (after a long term inflation assumption of 3%) returns from our full equity/property portfolio TRH 6. Table 2 shows the narrower range of returns expected from TRH 3 which has 60% invested in global short dated bonds.

The blue bars show 19/20, the red bars 2/3rds, of the range of expected future portfolio returns. 19/20 of return ranges for TRH 6 could be anywhere between plus 47% or minus 32% in any one year period. The longer the period the portfolio is held, the lower the volatility of expected annualized returns (1).

Table 1 – TRH 6

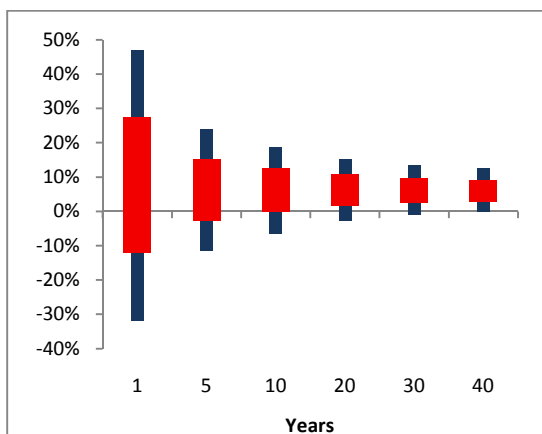
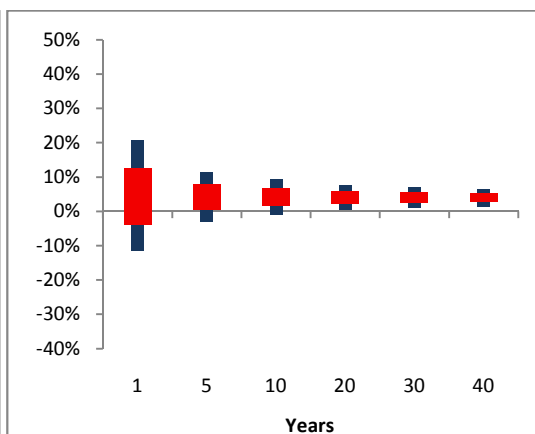


Table 2 – TRH 3



To achieve this dampening effect we require our bond investments to provide low risk, low volatile returns on a consistent basis. We also expect our bond investments to produce a long-term return greater than that available from cash. The bonds must therefore come with a greater risk than cash. How then do we identify the risk in bond investment and protect our clients? Does this strategy still work in these volatile times for bond holders?

2. Risk in bond portfolios

It is not possible to avoid all risk; without risk there would not be the potential for excess returns over cash. However by identifying the main risks, one can then decide the level of risk worth taking in relation to the reward one might receive. The main risks we address are:

1. Credit risk - The potential for the borrower to default.
2. Duration risk - The danger of being caught by fluctuations in interest rates over the longer term.
3. Exchange rate risk - Movements in currency markets affecting the value of non-sterling denominated bonds.

2.1 Credit risk

The potential for a bond to default has traditionally been measured by rating agencies such as Standard and Poor's and Moody's. A triple A rating, AAA, would indicate the strongest and most secure debt that warranted the lowest rate of interest. Debt below BBB would be sub investment-grade or 'junk' bonds. These carry much higher rates of interest to reward the greater risk the lender is taking. However the rating agencies have lost some of their credibility in recent years with their AAA ratings of the collateralized mortgage debt securities that caused the initial global financial crisis in 2008. Their influence on bond yields is also mixed; after the historic downgrade of US debt below AAA, the yield on US Treasury bonds declined rather than increased.

It is for this reason that we don't rely on credit ratings alone. We also look carefully at what the markets are indicating on bond values. For example AAA rated bonds can have different yields, a higher yielding bond is viewed by the market as higher risk. By looking at both credit ratings and markets, our bond managers are able to identify where disparities lie. To date these strict credit and market rating criteria have served our clients well with currently no exposure to holdings in troubled Eurozone countries debt.

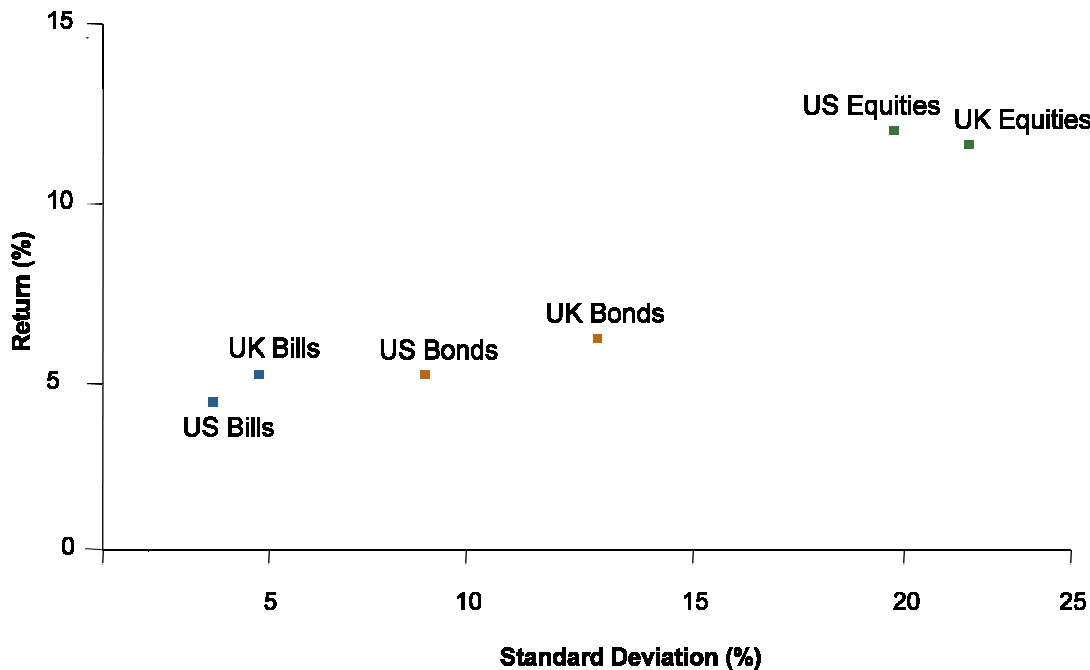
We also mitigate default risk through diversification. This is achieved by holding as many bonds as possible which meet the strict market and credit rating criteria.

TRH access the fixed interest asset class via the Dimensional Global Short Dated Bond Fund (DGSDBF). The fund currently has 105 holdings of which 60 are rated AAA and 45 rated double AA, the average rating being AA+ (2).

2.2 Duration (interest rate) risk

A bond's value is closely linked to interest rates. If general interest rates rise, investors will expect an equivalent rise in the yield they obtain from their bond holdings. For bonds in issue, that can only come with a decrease in the value of the bond. Future expected movements in interest rates are priced into the current market value of bonds. However, the longer the duration of the bond, the more unpredictable interest rate fluctuations become, therefore the more unpredictable the future value of the bond will be. We require our bond holdings to take only the duration risk that is rewarded with an increased return. This means constantly adjusting the average term the bonds have until maturity.

The chart below shows the outcome of a study comparing asset class returns (on the vertical axis) against the risk taken measured by standard deviation (the horizontal axis). US and UK equities show the expected high risk/high return characteristics. However note the results for the short term bonds (US and UK treasury bills) against long-term bonds. There is no significant excess return obtained through holding the long-term bonds but the risk is doubled (in US bonds) or nearly trebled (in UK Bonds) (3).



Our bond fund managers set a maximum duration of 5 years but the actual duration is managed constantly depending on the current economic climate. According to the last reported data the DGSDBF had a value of over £1.4 billion spread across 105 bonds. 102 have maturities between 3 and 5 years with the average duration being 4.10 years (2). This duration indicates that in current economic conditions, there is an excess return to be expected for taking some duration risk.

2.3 Currency Risk

Currently 26.81% of bond holdings in TRH portfolios are in Sterling. (2) We also access quality bond returns from other major developed markets in different currencies. To avoid our clients being affected by adverse currency movements, the DGSDBF hedges its exposure to foreign currency debt back to Sterling.

3. Summary

So have we achieved our objectives of a low risk and low volatile return from the bond holdings in our portfolios? We believe we have so far and have been pleased with the way the DGSDBF has delivered this performance through the testing economic times since we established our portfolios in the last quarter of 2007. The chart below shows the performance of this fund against a developed world equity index. The difference in volatility is immediately obvious. Over the period equities have outperformed bonds but with a high degree of volatility. The bonds also exhibit some volatility but have delivered a much smoother return over the period (4).

Growth of Wealth

Monthly: 02/2004 - 10/2011; Default Currency: GBP



The constant talk of crisis in bond markets has rightly worried many investors. In addition, the detail behind the way bonds work has been confusing to many. Crisis and confusion are not a good mix! We hope this note will both inform and reassure clients. Please do contact us if this note raises any queries or if you still have concerns over your exposure to bond risk.

Gareth Marr - The Red House - November 2011.

See over for notes, sources and risk warnings

Notes, sources and risk warnings

1. The Red House Portfolio Profiles 2011. Simulation method: This chart illustrates the approximate magnitude of the ranges that returns for the specific portfolios are expected to fall within over different time horizons, with different levels of probability. It is important to remember that outliers can occur that fall outside of the ranges indicated, 1973-1975 for example. This simulation is based on the risk and return parameters derived from the portfolio strategy asset allocations and the assumptions about asset classes made by TRH. No costs or fees of any kind have been deducted.
2. Dimensional Fund Advisors - Dimensional Global Short Dated Bond Fund. Portfolio Characteristics at 30/09/2011.
3. Dimson, Elroy, Marsh and Staunton, *Millennium Book 11: 101 years of investment returns*. (ABN AMRO and London Business School, 2001). This publication defines the data used for the chart and matrix used as follows: UK Bills are One-Month Treasury Bills (FTSE). UK Bonds are the ABN AMRO Bond Index. UK Equities are the ABN AMRO/LBS Equity Index. US Bills are commercial bills 1900-1918 and One-Month US Treasury Bills (Ibbotson) 1919-2000. US Bonds are government bonds 1900-1918, the Federal Reserve Bond Index 10-15 Years 1919-1925, Long-Term Government Bonds (Ibbotson) 1926-1998, and the J P Morgan US Government Bond Index 1999-2000. US Equities are Schwert's Index Series 1900-1925, CRSP 1-10 Deciles Index 1926-1970, and the DOW Jones Wilshire 5000 Index 1971-2000.
4. Dimensional Fund Managers Returns Programme November 2011. Performance data represents past performance. Past performance is no guarantee to future results and current performance may be higher or lower than the performance shown. The value of an investment can fall as well as rise and that investors may not get back the amount they invested. The past performance of the DGSDBF includes Dimensional's costs and charges but no additional cost that might be charged by TRH for advice and administration. MSCI data copyright MSCI 2010, all rights reserved, data provided by Northern Trust.
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