The role of fixed income as part of a diversified investment strategy

Executive summary. An allocation to fixed income assets can play a vital role in managing total portfolio risk for a balanced portfolio. This paper discusses the fundamentals of fixed income securities, and their role in broadly diversified investment portfolios.

Fixed income securities can provide four key benefits to investment portfolios:

- Fixed income securities are an important source of capital stability issued by investment grade entities such as sovereign governments, corporations and financial institutions.

- The coupon interest payments that accrue to many classes of fixed income securities constitute an important source of income to investors. Coupon income drives the majority of returns on fixed income assets, and also provides an additional buffer to declines in capital values should interest rates rise.

- Deep secondary markets exist for fixed income securities, and provide the ability for investors to readily liquidate or rebalance their portfolios should the need arise.

- Fixed income returns bear relatively low correlations to returns from typically riskier asset classes. Therefore there are significant portfolio diversification benefits from the reduction of portfolio return variability by including fixed income in a portfolio alongside other asset classes.
Introduction

Fixed income securities, or bonds, are securities that are defensive in nature which provide capital stability, income, liquidity and diversification to other growth-oriented asset classes such as equities and property. Despite these clear benefits, Australian investors to date do not appear to have embraced fixed income as a part of their typical asset allocation. Figure 1 shows the asset allocation in Australian managed funds over the past 23 years. In this time, the proportion of investors’ wealth allocated to domestic fixed income securities has steadily decreased. Over the same period, investments in equities have increased, as have investments in cash.

There may be a few key reasons why allocations to fixed income in this country are so low. First, Australian investors appear to be much more comfortable with equity investments. Given the relatively higher payout ratios and stable dividend rates compared with other developed economies along with the advantages from dividend imputation, Australian income-focused equity investors may be less likely to consider including other asset classes such as fixed income in their portfolios. Second, the low allocation to fixed income may be a consequence of higher levels of property ownership. Property can provide stable rental income and a reasonable inflation hedge as rents are renegotiated.

A further reason why allocations to fixed income are low is that Australian fixed income markets appear to many investors to lack depth and liquidity, and therefore flexibility. In addition there are a number of institutional hurdles to investing in fixed income securities that make it much harder for a retail investor or self-managed superannuation fund trustee to gain a direct exposure to the asset class with sufficient diversification to mitigate the possible impact of default. The transaction costs – measured through bid-offer spreads – to investing are high, and often large minimum parcel sizes are required to invest directly in fixed income securities.

In addition there appears to be a general lack of familiarity amongst many Australian investors with this asset class – fixed income securities typically use structures and investment concepts that may seem unusual, which could deter them from investing. However, this situation is slowly changing and in recent years we have seen increasing numbers of managed fund offerings that provide convenient access to the fixed income asset class to retail and institutional investors.

In this paper we explain how fixed income can play an important role in Australian investors’ portfolios. The apparent lack of familiarity and perceived lack of flexibility should not deter potential investors from considering carefully the role of fixed income.
in their portfolios, especially given the benefits that fixed income investments can provide in terms of income, capital stability, liquidity and diversification. The paper discusses the fundamentals of the fixed income asset class, and its key characteristics in comparison with other asset classes.

Why invest in fixed income?

It is important to reflect on the key features of fixed income securities and their proper role in portfolio construction. The traditional role of fixed income securities in an investment portfolio can be described as follows:

**Income stream**: The primary source of return for bonds is coupon income. Over a broad portfolio of bonds, these coupon payments constitute a reliable stream of income for investors in fixed income securities. The general level of income paid across the portfolio will change at the margin through time as coupons on new issues are set in accordance with prevailing levels of interest rates.

**Capital preservation**: Bonds also provide capital stability. By definition, principal is to be repaid to investors upon maturity of the instrument, and when this is combined with the strong credit-worthiness of many fixed income issuers, it provides an effective form of capital preservation. Consider government bonds, which are backed by the full faith and credit of a sovereign government. While it is theoretically unlikely that a sovereign government would default, the government could raise cash to meet its obligations by increasing taxes.

**Store of liquidity**: As fixed income securities are seen as close substitutes to cash, they can be treated as a store of liquidity. In recognition of this special status, many central banks around the world exchange cash for fixed income collateral when they implement monetary policy, and also when they act to stabilise turbulent markets. Fixed income funds allow smaller investors to access this liquidity in a cost effective way, and typically allow entry or exit on a daily basis.

**Diversification to growth asset risk**: Bond investing can be characterised as a defensive investment strategy which can reduce the variability of returns from holding a portfolio composed of growth assets such as equities. Bonds exhibit returns that are less volatile than equities and are negatively correlated to equity market returns. This reduces the chance of broader negative portfolio returns as bonds exhibit a flight to quality characteristic in declining markets since yields tend to fall, in turn increasing the value of existing securities.

These attributes of fixed income securities shape the distribution of fixed income returns, and the manner in which those returns co-vary with the returns on other asset classes.

Structure of the fixed income market

Fixed income markets are the largest capital markets in the world. The fixed income markets have significant liquidity, and play an important role in the world’s financial systems. The key players in the fixed income markets are governments, public sector agencies, private sector issuers, financial institutions (as both issuers and price makers) and investors/asset owners. The fundamental concepts that we have discussed so far come together in many similar ways across global fixed income markets. To give an idea of the breadth of the fixed income asset class, and the structure of the fixed income market:

**Markets**: Most economies have fixed income markets, each bringing its own set of issuers, investors and intermediaries, and its own set of fixed income securities. Primary and secondary markets for fixed income securities exist, whereby investors can purchase bonds when they are first issued, or from other investors through intermediaries, respectively. As Figure 2 shows, the amount on issue in various segments of the Australian bond market has increased significantly in the decade ending 31 December 2011.

**Issuers**: Fixed income securities are issued by public sector agencies such as the Commonwealth Government (via the Australian Office of Financial Management), the State Governments (via entities such as the Treasury Corporation of Victoria, and the New South Wales Treasury Corporation); by supranational entities such as the World Bank, Asian Development Bank, and the European Investment Bank; by financial institutions (the major Australian banks: Commonwealth Bank of Australia, Westpac, Australia and New Zealand Banking Group and National Australia Bank), and by prominent corporations.

**Securities and Managed Funds**: A wide array of investment options and classes of fixed income securities are available for investment. These include inflation linked securities, short term paper,
asset backed securities and others. Longer term securities are used as key funding vehicles, and shorter term securities for managing short term cash balances and timing mismatches between assets and liabilities.

Managed funds are also available, where investors can gain exposures to a range of fixed income securities. Funds can be either actively or passively managed.

**The nature of bond market returns**

Fixed income securities issued by governments and other high quality issuers are defensive types of assets by their very nature, which can be relied upon to anchor portfolio returns in times of poor economic growth, equity market downturns or market volatility. While valuations of other assets may fluctuate according to interest rate and economic cycles, the prices of fixed income securities are less volatile through time than stock prices and most other financial asset prices. As a consequence, the distribution of fixed income returns is significantly different to that for equities.

**Figure 3** shows the distribution of the monthly returns for Australian equities (represented by the ASX300) and Australian fixed income (UBS Composite) over the past 20 years. Fixed income returns are much more narrowly dispersed than equity returns. Furthermore, fixed income returns exhibit some negative skewness, indicating a lower likelihood of negative returns.

Fixed income returns tend to be positive even when equity returns are negative. This point is conveyed effectively by **Figure 4**, which shows annual returns on the ASX300 index and also returns on the UBS composite bond index over the past 20 years. This is the same data that underlies **Figure 4**, but now depicted in a time series format.

**Figure 4** shows how fixed income returns have been positive in 1992, 2002, 2008 and 2011, when equity returns were negative in this country. Rolling five year correlations between equity and fixed income returns are shown by the red line, and appear generally to tend negative through time.

There is a macroeconomic reason for why this might be the case. In particular, because the cash-flows attached to bonds are fixed in dollar terms at pre-determined points in time, they can be eroded away by inflation. This makes fixed income securities an attractive investment when inflation is below average, or expected to remain low over the medium term. When inflation is low and inflation

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1 While this is generally true in most macroeconomic conditions, an environment characterised by high inflation and a recession would likely lead to negative returns in both equities and fixed income.
expectations are anchored within a low band, it is often the case that economic growth is subdued. Hence, fixed income securities provide the ability to weather turbulent equity markets or periods of economic uncertainty. High quality fixed income securities, such as government bonds, are seen as safe haven assets in volatile markets, during which investors typically switch from equities into fixed income in a so-called “flight to quality”.

**The portfolio benefits of diversification**

Figure 4 showed the trend change over time to greater levels of negative correlation between fixed income and equity market returns. To more clearly illustrate the implications of this benefit we compare...
a portfolio holding a combination of equity and fixed income assets to portfolios that hold only exposure to each asset class. Due to the negative correlation typically observed between equities and fixed income, the combined portfolio can be expected to provide less volatile returns through time than the weighted average of the risk of each asset class.

Consider an investment of $10,000 in Australian equities on 30 June 1997 held until the end of 2011. This portfolio would have returned 7% pa and experienced volatility (or standard deviation of returns) of 13.4% pa. This is shown in Figure 5 by the green line. If the investment was solely in fixed income, it would have experienced a return of 6.6% pa and a volatility of 3.2% pa, shown in the graph by the red line, which coincidentally almost has the same endpoint as the green line, but experienced far less volatility along the way.

Finally, the blue line shows the returns from a balanced portfolio that hold 50% each in equities and fixed income. The returns on this investment strategy are marginally higher than those for equities and fixed income when considered in isolation. The returns have coincidentally provided similar outcomes – which would not necessarily be the same situation in the future. While this may seem counter-intuitive, it is most likely due to the compounding effects from co-varying market returns over this timeframe. More importantly however, the volatility of the balanced portfolio is 6.6% pa which is lower than the average volatility across equities and fixed income (8.3% pa). Hence, the benefits of diversification to lowly correlated assets classes will provide a lower than average volatility in portfolio return outcomes.

Diversification can also occur within the asset class. The Australian dollar fixed income market enables investors to gain an exposure to many different issuers across economic sectors. Figure 6 shows how pricing differs between bonds issued by four different issuers. This figure depicts yield curves, which are plots of yield versus time to maturity (“tenor”) for each issuer. Relative to the other issuers, the yields on Australian Government bonds are lowest across tenors. This reflects the strong credit quality and high liquidity of Treasury bonds in Australia. The bonds issued by state governments (eg. Queensland or Victoria) and major banks (NAB and Westpac) all are all priced at higher yields than Treasury bonds as a reflection of their creditworthiness and liquidity relative to the Australian Government. Yield curves reflect interest rate expectations and risk premia across tenors at a particular point in time, which change through time in response to new market information.

**Figure 5. Asset class and portfolio investment performance**

<table>
<thead>
<tr>
<th>Return</th>
<th>Volatility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equities</td>
<td>7.0%</td>
</tr>
<tr>
<td>50/50</td>
<td>7.1%</td>
</tr>
<tr>
<td>Fixed Income</td>
<td>6.6%</td>
</tr>
</tbody>
</table>

Sources: Standard & Poor’s, UBS, Vanguard calculations.
The yield curves in Figure 6 suggest that investors can diversify their holdings of fixed income securities by investing in bonds issued by different entities, and by buying bonds of different tenors. Each security of each issuer has a different risk and return profile – and can thereby provide an additional degree of income and liquidity to an investors’ portfolio.

Bonds or cash?
Figure 1 at the start of the paper demonstrates that cash as an asset class has seen a significant increase in usage since the 2008 financial crisis.

Cash could be better described as a savings vehicle rather than an investment asset class. Investing funds into cash instruments can help cover known short term liabilities or meet near term financial goals. Returns on cash are principally determined by the cash rate set by the Reserve Bank of Australia and the short term funding costs of the major financial institutions. As such, the results of holding cash over extended time periods are:

- Very high level of capital stability
- Very low volatility and low expected nominal returns
- Low real returns (including the possibility that cash may underperform inflation over medium term)

What is the difference between investment grade and high yield bonds?
Investment grade bonds are securities that have a relatively low probability of default. This is reflected in the comparatively higher pricing (lower yields) on the securities. Translating the credit risk associated with investment grade bonds into credit ratings, an investment grade bond would be rated BBB- or above by Standard & Poor’s and Fitch or Baa3 or above by Moody’s.

In contrast, the remainder of fixed income securities that cannot be classified as investment grade (in part because they do not meet the required rating thresholds) are known as sub-investment grade or high yield bonds. These securities typically have relatively higher yields (lower prices) to compensate investors for taking on the additional credit risk and lower liquidity.
Term deposits

Term deposits are a subset of the cash asset class that has seen a significant increase in usage since the 2008 financial crisis (Figure 7). These securities provide higher rates of interest for fixed terms than at call cash, but typically with a penalty fee for early recall.

Many Australian investors would have seen and possibly benefited from the intense competition for term deposit business in the banking sector through the aftermath of the 2008 financial crisis, which led to substantial increases in term deposit rates. The government’s deposit guarantee combined with ongoing concern over the direction of the equity market also contributed to the increased demand for term deposits.

Term deposits can form a useful part of an asset allocation strategy as a means of holding surplus cash or to help time the short term provision of liquidity. Given their very low risk and fixed maturities, investors can use them to manage the cash in their portfolios towards specific short term financial objectives.

However, there are drawbacks to holding term deposits, particularly for investors wanting to time their investments into equity markets. There are no duration benefits to investing in term deposits, which are offered predominantly at maturities of less than one year. There is also reinvestment risk at times, as shown by the steep decline in cash rates in late 2008. Term deposits are conventionally held with either one or a small number of authorised deposit taking institutions, so there is a degree of concentration risk.

In addition, penalty fees mean that holding investments in term deposits as a means to time market entry also introduces liquidity risk. That is, at the time that an investor wishes to invest, he or she may face some obstacles to quickly obtaining their cash.

![Figure 7. Term deposits](https://example.com/figure7.png)

Source: RBA, March 2012.
Figure 7 in the text box shows many investors consider cash (here defined as rolling investments in securities with maturities of less than one year) as an alternative to fixed income, given the apparent similarity between the two asset classes. Fixed income and cash both provide capital preservation, liquidity and income.

Cash returns have much lower volatility than bond returns. Importantly, however, bonds have higher expected returns than cash because of higher levels of interest rate risk and credit risk exposures from fixed income investments which are not present in cash investments due to their shorter maturity terms. These risk exposures also influence the slope of the yield curve, which typically associates higher interest rates for longer investment terms.

As an example, consider the outcome of two portfolios formed by pairing an allocation to Australian equities (represented by the ASX300 accumulation index) with a complementary allocation to defensive assets; one with fixed income (UBS composite index) and the other with cash (UBS bank bill index).

Figure 8 shows the risk and return characteristics of these portfolios for allocations between 100% equities and 100% in the defensive asset class (either cash or bonds) over the three-year period ending 31 December 2011, a period that coincides with the increased usage of cash since the 2008 financial crisis. The chart shows that for an investor willing to accept volatility of greater than 2% per annum, but less than equity market volatility (14% per annum), greater returns could be obtained for the same amount of risk from any portfolio comprising shares and bonds (the green line) relative to a portfolio that held shares and the equivalent allocation to cash (the blue line).

While this example illustrates the outcome over one investment period and point in time, an equivalent diversified allocation of bonds instead of cash typically provides an outcome with higher returns for similar levels of total risk over most timeframes other than short term horizons (less than 12 months).

Fixed income tends to provide better longer term outcomes compared with cash as an investment asset class because the interest rate risk characteristics of bonds provide on average higher yields as compensation for higher return variability.
Conclusion

In this paper, we have highlighted the benefits of holding fixed income securities as part of a balanced portfolio that are timeless. When held in a diversified form across many tenors and investment grade issuers, fixed income asset class returns provide a narrower, less volatile range of investment outcomes than equities. Fixed income securities as an asset class principally provides coupon income liquidity and high levels of capital stability. By including a fixed income allocation in a balanced portfolio, these features also provide portfolio efficiency gains from reducing the variability of returns below the levels of the weighted average of the combined asset classes.

Further reading


McIntosh, Roger and Rosemary Steinfort, 2012 (Forthcoming). The case for indexing in Australia. Melbourne, Australia: Vanguard Investments Australia Ltd.

