Dorset County Pension Fund

Strategic review

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1 Executive Summary

The main conclusion of our report is that a more efficient investment strategy can be achieved for the Dorset County Pension Fund ("the Fund"), in that it is possible to significantly reduce the expected level of risk (or volatility) for a relatively small reduction in expected return.

The estimate of the funding position as at 31st March 2013, as provided by the Fund Actuary is that the deficit was £448m giving a funding level of 81%. The value of liabilities was £2.327bn, whilst the assets were valued at £1.879bn.

Our asset modelling, which also takes into account current market conditions, shows that the current portfolio structure has a volatility of 7.9%. The model also shows an expected return, for this risk, of 6.2% from the strategic asset allocation.

We modelled a number of different portfolios before reaching a proposed portfolio that we believe offers the Fund a reduction in volatility and an increase in the level of expected return which will continue to meet the return requirements of the Fund.

Our proposed revised investment strategy is as follows:

- 78% in a diversified portfolio of Growth assets (including equities, alternative assets and property)
- 10% in a portfolio of Bonds focussed on Corporate Bonds
- 12% in a Contract of Insurance that consists of Bonds, Cash and Derivative instruments sensitive to movements in Interest and Inflation yields.

The volatility of this revised strategy is 7.5%, and the expected return is 6.4%. This gives a reduction in volatility of 0.4% with an increase in expected return of 0.2%.

The implementation of the strategy will require the amendment of the current portfolio in the following areas:

- The engagement of a new manager to manage the Infrastructure assets, with an initial asset value of approximately £75m.
- The above appointment will be funded by disinvesting entirely from Hedge Funds.
- There will be slight reductions in the holdings of UK and Overseas Equities to fund an increase in the holdings of DGF.
- There will be slight amendments to the LDI, Property and Private Equity assets in order to utilise the current cash balance.

The resulting strategy framework is as follows:

Asset Class	Exposure
Equities	
UK	25.0%
Overseas	22.0%
Emerging	3.0%
Bonds	
Corporate	10.0%
Property	10.0%
Alternatives	
Private Equity	4.0%
Diversified Growth	10.0%
Infrastructure	4.0%
Liability Hedging Programme	12.0%

We believe this structure will meet the objectives of the Fund, which are shown below and we are happy to make the recommendation for adoption of the strategy:

- Enable employer contribution rates to be kept as nearly constant as possible and at a reasonable cost to taxpayers, schedule, resolution and admitted bodies.
- Manage employers' liabilities effectively.
- Ensure that sufficient resources are available to meet all liabilities as they fall due.
- Maximise the returns from investments within reasonable risk parameters.

2 Introduction and background

An Actuarial Valuation as at 31 March 2013 is currently underway and the changes to strategy recommended are consistent with the preliminary results of this valuation.

The purpose of this report is to assist in the review the investment strategy of the Fund; with particular consideration of alternative asset allocations that will provide a more efficient risk adjusted return, but also allow for the current valuation of markets and the economic conditions being experienced.

This report will be presented to the Pension Fund Committee on 4 March 2014 and will be used to consider a revised investment strategy that could then be implemented. Training around the issues and opportunities raised within this report will also be given on the day.

The remainder of this report is therefore contained in the following sections:

- Section Three: Analysis of the current investment strategy
- Section Four: Analysis of potential investment strategies
- Section Five: Implementing the Strategic Changes
- Appendices:
  - Glossary of Terms
  - Assumptions

3 Analysis of the current investment strategy

Introduction

The following table shows the asset allocation of the Fund at 30 September 2013 and the current Strategic Asset Allocation ("SAA").

Asset Class	Value (£m)	%	SAA %
UK Equity	562.7	28.7	28.0
Overseas Equity	437.8	22.3	23.0
Emerging Market Equity	65.5	3.3	4.0
Private Equity	50.7	2.6	4.0
Diversified Growth Funds	91.4	4.7	5.0
Hedge Funds	87.2	4.4	6.0
Corporate Bonds	188.7	9.6	10.0
Liability Driven Investments	193.8	9.9	10.0
Property	171.6	8.7	10.0
Cash	112.5	5.7	0.0
Total	1,961.9	100.0	100.0

Figures may not sum due to rounding.

Objectives of the investment strategy

The full objectives of the investment strategy are formalised in the Statement of Investment Principles and any changes to the current investment strategy may require the Statement to be updated.

- The Investment policy of the Fund is intended to ensure that all statutory payments made from the Fund are at the least possible cost to local taxpayers.
- Investment returns are a key factor and achieving satisfactory returns will to a considerable degree reflect the risks taken.
- Consideration is given to the ongoing risks which may arise through a mismatch, over time, between the assets of the Fund and its liabilities.

The Fund's key funding objectives, as detailed in the Funds' Funding Strategy Statement, are as follows:

- To set levels of employer contribution that will build up a Fund of assets that will be sufficient to meet all future benefit payments from the Fund.
- To build up the required assets in such a way that produces levels of employer contributions that are as stable as possible.

At JLT we believe that these objectives continue to be relevant and can equally be applied to any newly proposed strategy that would be beneficial to the Fund.

All the above considerations could be summarised into a single aim; to ensure that the Fund has the most efficient investment strategy with respect to risk-adjusted return. Therefore, to design the most efficient investment strategy we will need to understand the drivers of both risk and return.

The risk / return trade-off

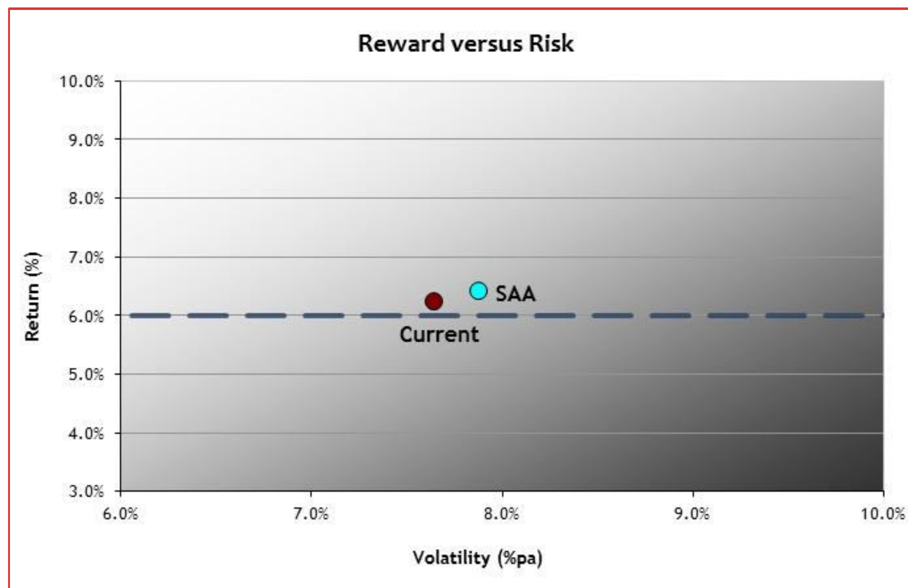
Investing heavily in higher risk assets (e.g. equities) would be expected to increase the long term returns achievable from the assets, and thus to reduce the contributions required to Fund the liabilities over time. However, this type of strategy would be expected to lead to volatile short to medium term results, both in absolute terms and, particularly, relative to the Fund's liabilities.

Equally, whilst investing in lower risk assets (e.g., bonds) would be expected to reduce risk within the Fund (in terms of the volatility of returns, the Funding level and contribution rates), this may not be desirable as it would lead to a lower expected return and hence higher contribution rates over the long term.

In considering the Fund's investment strategy, and when reading this report, one must therefore bear in mind this balance between risk and return. In practice, the investment strategy objective will be to achieve the highest possible return whilst minimising downside risk, within agreed parameters.

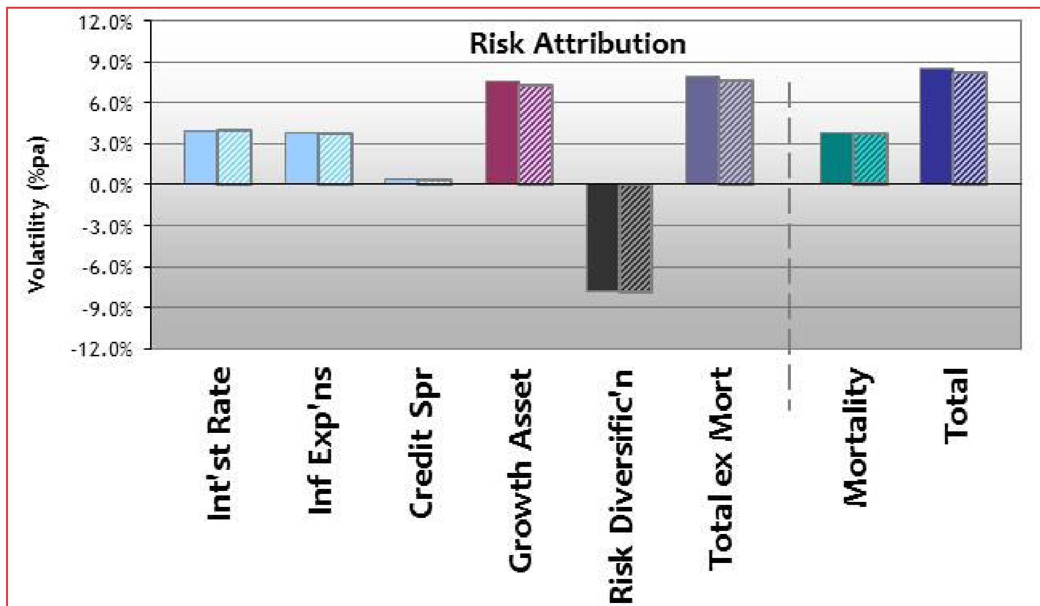
To assist the Committee in understanding the 'dimensions' of risk and return, we show below two charts from our Sensitivity Analysis of Investments and Liabilities (SAIL) model.

The first chart shows the risk and return of both the Strategic Target Portfolio and the Current Fund Asset Allocation.



The first chart shows that both the target allocation and the actual allocation as at 30 September 2013 were sufficient to generate returns above those required by the actuarial valuation. However, the 'price' for this was a significant degree of risk.

The second chart breaks down (or decomposes) the risks between a number of areas, including an allowance for the diversification of risk. The Target portfolio is represented by the left hand bars and the Current by the right hand.



The second chart highlights the key areas that impact on the risk numbers and it is quite clear that the major contributors to risk are the interest and inflation exposure as well as the underlying volatility of the growth assets.

In order to reduce the risk, the key element of our focus has been how we might reduce the exposure to Interest and Inflation yield sensitivity. However, this must be done without any significant sacrifice of return. Accordingly, we modelled and discussed with Officers and Alan Saunders (the Independent Advisor) a number of alternative portfolios. In the next section, we look at the results of this analysis.

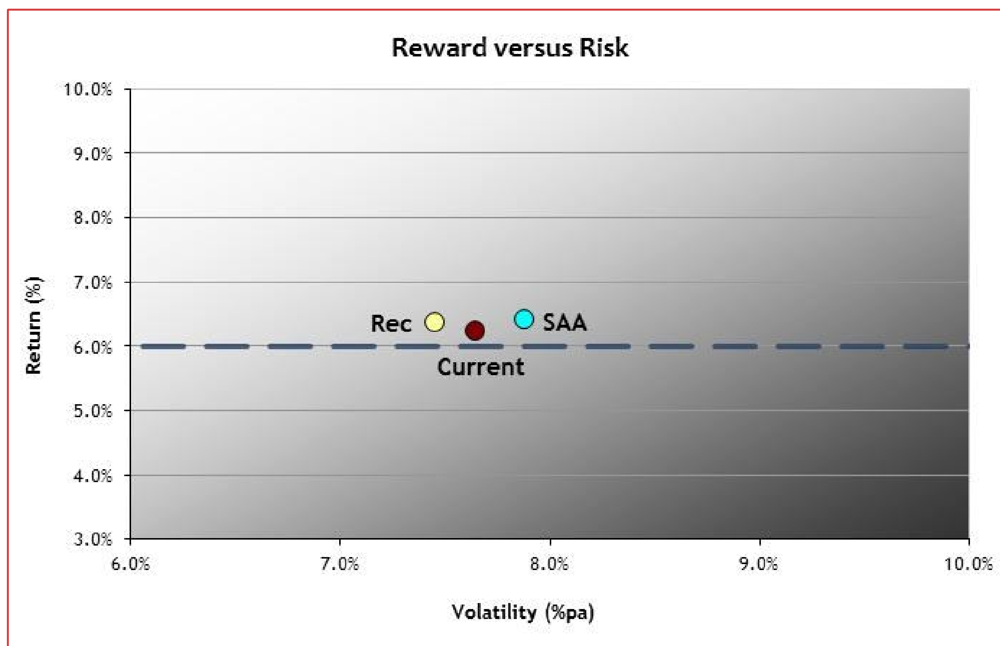
4 Analysis of potential investment strategies

Introduction

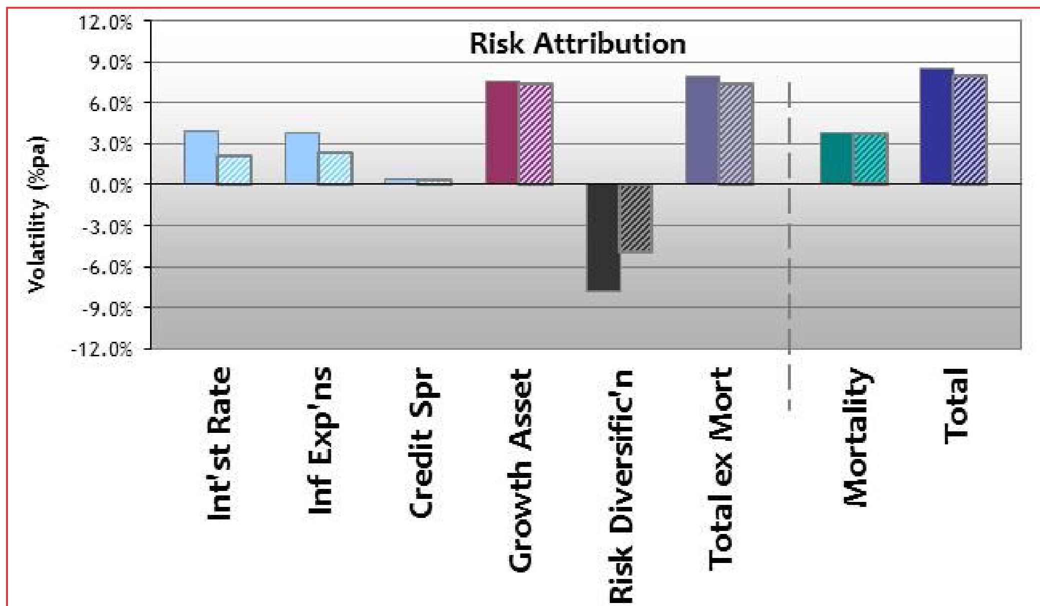
As we saw in the previous section, key risks that the Fund is exposed to are Interest rate risk and Inflation risk, although there are also risks within the Growth market portfolio.

To ascertain the risks (and rewards) of different strategies, we modelled a range of portfolios including various asset classes, further details of which are shown in the appendix (see section 6.2).

An allocation was determined following the modelling. We also incorporated the views of the Officers in determining the most appropriate asset allocation. The following chart shows the risk/return results from the modelling.



In terms of the risk decomposition, the analysis shows the following results, with the left hand bars being the SAA and the right hand the recommended strategy:



This chart highlights the significant reductions in risk. Within the current SAA, the volatility is 7.9%, whereas this is reduced to 7.5% in the recommended strategy, a significant risk reduction. Importantly, there is no reduction in the expected return. This portfolio does therefore seem to meet the key criteria required. It is worth noting that the nominal risk of the Fund is dampened down by the valuation methodology adopted by the Plan's Actuary.

5 Implementing the strategic change

As we saw in the previous section, the key risks the Fund is exposed to are Interest rate risk and Inflation risk, although there are also risks within the Growth market portfolio.

In order to establish a more optimal portfolio there are a number of changes that need to take place.

Within the Growth portfolio, it is possible to reduce the risks of market exposure slightly by increasing the allocation to the Diversified Growth portfolio. It is intended that monies to increase this portfolio (which will be by around 5% of the total assets) will be taken from the existing passively managed equity portfolios.

The current cash holding is intended to be distributed between the LDI fund, the Property funds and the Private Equity funds.

In order to establish an Infrastructure portfolio, it is intended that those monies currently invested with hedge fund managers are withdrawn and a new manager put in place to operate the contract, which will have to go to tender.

The following table shows the current SAA, the actual asset allocation as at 30 September 2013 and the recommended asset allocation as a result of the strategic review.

Asset Class	SAA (%)	30 Sept 2013 (%)	Recommended (%)
UK Equity	28.0	28.7	25.0
Overseas Equity	23.0	22.3	22.0
Emerging Market Equity	4.0	3.3	3.0
Private Equity	4.0	2.6	4.0
Diversified Growth Funds	5.0	4.7	10.0
Hedge Funds	6.0	4.4	0.0
Corporate Bonds	10.0	9.6	10.0
Liability Driven Investments	10.0	9.9	12.0
Property	10.0	8.7	10.0
Infrastructure	0.0	0.0	4.0
Cash	0.0	5.7	0.0

6 Appendices

6.1 Glossary of Terms

Term	Definition
Bond asset	Assets held in the expectation that they will exhibit a degree of sensitivity to yield changes. The value of a benefit payable to a pensioner is often calculated assuming the invested assets in respect of those liabilities achieve a return based on UK bonds.
Return Seeking asset	Assets held in the expectation that they will achieve more than the return on UK bonds. The value of a benefit payable to a non-pensioner is often calculated assuming the invested assets in respect of those liabilities achieve a return based on UK bonds plus a premium (for example, if holding equities an equity risk premium may be applied). The liabilities will still remain sensitive to yields although the Return Seeking assets may not.
Duration	The average time to payment of cashflows (in years), calculated by reference to the time and amount of each payment. It is a measure of the sensitivity of price/value to movements in yields.
Equity risk premium	The additional return expected from equities over and above that expected from UK Gilts. An equity risk premium is given as an example and other risk premia also exist.
Funded liabilities	The value of benefits payable to members that can be paid from the existing assets of the Scheme (i.e. those liabilities that have assets available to meet them).
Market volatility	The impact of the assets producing returns different to those assumed within the actuarial valuation basis, excluding the yield change impact.
Non-Pensioner liability	The value of benefits payable to those who are yet to retire, including active and deferred members.
Pensioner liability	The value of benefits payable to those who have already retired, irrespective of their age.
Standard deviation	A statistical measure of volatility. We expect returns to be within one standard deviation of the benchmark 2 years in every 3. Hence as the standard deviation increases so does the risk.
Surplus/ deficit	The estimated funding position of the Scheme. This is not an actuarial valuation and is based on estimated changes in liabilities as a result of bond yield changes, asset movements and, if carried out, output from an asset liability investigation (ALI). If no ALI has been undertaken the estimate is less robust.
Unfunded liabilities	The value of benefits payable to members that cannot be paid from the existing assets of the Scheme (i.e. those liabilities that have no physical assets available to meet them). These liabilities are effectively the deficit of the Scheme.
Yield (gross redemption yield)	The return expected from a bond if held to maturity. It is calculated by finding the rate of return that equates the current market price to the discounted value of future cashflows.

6.2 Assumptions

The table below shows the rates of return adopted by our asset models.

Asset Class	Expected Return
UK Equity	7.2%
Overseas Equity	7.2%
Emerging Market Equity	8.5%
Private Equity	9.0%
Diversified Growth Funds	7.2%
Hedge Funds	5.9%
Infrastructure	6.9%
Corporate Bonds	4.0%
Liability Driven Investments	2.7%
Property	6.5%
Cash	2.7%

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