Report & Accounts - CIPFA risk assessment

Addressee

This note is addressed to the Officers and Pension Committee ("the Committee") of the East Sussex Pension Fund ("the Fund"). Its purpose is to provide risk volatility numbers for the annual report and accounts for the Fund as at 31 March 2016 in accordance with the CIPFA Code of Practice for 2015/16. It has not been prepared for use for any other purpose. The paper should not be released or otherwise disclosed to any third party except as required by law or regulatory obligation or without our prior written consent.

The following Technical Actuarial Standards[1] are applicable in relation to this report:

- TAS R – Reporting;
- TAS D – Data;
- TAS M – Modelling; and
- The Pensions TAS

This report complies with each of the above standards.

Introduction

In its Code of Practice on Local Authority Accounting (2015/2016), CIPFA has specified that a section on risks arising from financial instruments should be included in the annual report and accounts for LGPS funds. In particular, the Guidance Notes for Practitioners (2015/2016) sets out the minimum requirements for disclosure of each of the following risks:

- Market risk (which is subdivided into "currency risk", "interest rate risk" and "other price risk" in the CIPFA sample accounts)
- Credit risk
- Liquidity risk

This note sets out our assessment of the risk specifically relating to "Market risk – currency risk", "Market risk - interest rate risk" and "Market risk – other price risk".

- In relation to "currency risk", we have provided the potential 1 year standard deviations of an individual currency movement.
- In relation to "interest rate risk", we have provided the duration of components within the Fund's bond portfolios, obtained from the fund managers.
- In relation to "other price risk", we have provided the potential 1 year standard deviations of returns for each of the major asset classes in which the Fund is invested. We then set out our estimate of the total asset volatility based on the asset split shown, the volatilities of each asset class and the correlations between them.

This note does not cover the disclosure requirements in respect of "credit risk", or "liquidity risk". Please refer to the CIPFA Code of Practice for guidance on the disclosure requirements for these risks. We would be happy to discuss these requirements further if required.

[1] Technical Actuarial Standards (TASs) are issued by the Financial Reporting Council (FRC) and set standards for certain items of actuarial work, including the information and advice contained in this report.

Breakdown of "Market risk – currency risk" as at 31 March 2016

The 1 year expected standard deviation for an individual currency as at 31 March 2016 is **10%.** This assumes no diversification with other assets and, in particular, that interest rates remain constant.

Breakdown of "Market risk – other price risk" as at 31 March 2016

Table 1: East Sussex Pension Fund – Market Risk

Asset class	1 year expected volatility (%)	% of Fund	Asset values as at 31 March 2016 £m
UK equities	17.1	12.7	351.6
Global equities (ex UK)	19.6	35.7	988.0
Property	14.7	11.7	324.8
Corporate bonds (short term)	7.1	2.4	67.4
Corporate bonds (medium term)*	9.5	4.1	112.5
UK index linked gilts (medium term)	5.1	1.5	41.1
UK index linked gilts (long term)	9.6	3.8	106.1
Cash	0.6	2.0	54.3
Private Equity	28.7	6.1	167.9
Infrastructure	20.3	2.1	58.0
Absolute Return/Diversified Growth	12.7	17.9	493.9
Total Fund volatility	**11.8**	**100.0**	**2,765.6**

Note: Numbers may not sum due to rounding. Asset values are taken at bid value where available.

The analysis shown in the CIPFA 'example accounts and disclosure checklist' is inconsistent with the Hymans Robertson model of risk and return. This is because CIPFA sums all of the potential changes in the asset class values to find the impact on the total Fund value, whereas our models take account of the diversification of assets. This difference in approach should be disclosed in the notes to the accounts.

The CIPFA 'example accounts and disclosure checklist' states that;

"This analysis assumes that all other variables, in particular foreign currency exchange and interest rates, remain the same"

This wording is inconsistent with the approach taken. We suggest the following wording is used to replace this;

"The total Fund volatility takes into account the expected interactions between the different asset classes shown, based on the underlying volatilities and correlations of the assets, in line with mean variance portfolio theory"

Breakdown of "Interest rate risk" as at 31 March 2016

Table 2 below shows the duration estimates for the different components within the bond portfolios held by the Fund.

Table 2: East Sussex Pension Fund – Interest Rate Risk

Asset class	Duration (years)
L&G Over 5 year Index-Linked Gilts	24.0
M&G Alpha Opportunities	0.0[1]
M&G Corporate Bonds	10.7

1 – The duration of the M&G Alpha Opportunities Fund is typically close to zero as the manager aims to hedge all of the duration exposure within the Fund

Application

"Market risk – currency risk"

The 1 year standard deviation for an individual currency should be applied to each asset class exposed to currency risk, as is shown in the CIPFA 'example accounts and disclosure checklist'. The sum of the monetary impact for each asset class will equal the total Fund impact as we make no allowance for diversification in the determination of the 1 year standard deviation for a single currency.

"Market risk – other price risk"

Funds are required to show the impact of an increase / decrease on the asset value at the accounting date. You will be required to apply the 1 year volatilities shown to the asset values at the accounting date to meet this requirement. For example;

- Increase = Asset value * (1 + 1year expected volatility%)
- Decrease = Asset value * (1 - 1year expected volatility%)

For example, if the Fund asset value was £2.766bn at 31 March 2016 and the 1 year expected volatility was 11.8% at 31 March 2016, the 'value on increase' would be £3.091bn and the 'value on decrease' would be £2.440bn.

Please note that due to the approach taken to determine the total Fund volatility (in which we recognise the impact of diversification), the monetary impact on the total Fund assets is determined using the **total** Fund volatility (shown in the bottom row of table 1 above) rather than the sum of the monetary impact for each asset class.

"Interest rate risk"

The interest rate sensitivity information required in the disclosures is calculated as:

- Value of bond portfolio * change in interest rate (%) * -Duration

We would suggest that a +/- 100bps change in interest rates is sensible for the interest rate risk sensitivity analysis. Note that an ***increase*** in the interest rates results in a ***decrease*** in the value of the bond portfolio and vice versa.

For example, if the value of the L&G Over 5 year Index-Linked Gilts within the Fund was £147.2m at the 31 March 2016 and given a duration of 24.0 years at 31 March 2016, an increase in interest rates of 100bps would lead to a **fall** in the value of the bond portfolio of -£35.3m (£147.2m x (+1% x -24.0)). A decrease in interest rates of 100bps would lead to an **increase** in the value of the bond portfolio of £35.3m (£147.2m x (-1% x -24.0)).

We look forward to discussing this paper with you in the near future.

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April 2016

For and on behalf of Hymans Robertson LLP

Appendix 1: Reliances and Limitations

The volatilities for each asset class and correlations used to create the total Fund volatility have been estimated using standard deviations of 5,000 simulated one-year total returns using HRAM, the economic scenario generator maintained by Hymans Robertson LLP. The overall Fund volatility has been calculated based on the asset valuations provided by the Fund's investment managers, as at 31 March 2016. The calibration of the model is based on a combination of historical data, economic theory and expert opinion. Liability values are not taken into account in calculating the volatilities.