

Proposals for a Portfolio Risk Measurement and Reporting Standard

15 July 1998

Malcolm Kemp, Martin Cumberworth, Daniel Gardner, Julie Griffiths,
Peter Rains and Christopher Sandford, U.K.

Abstract

This document contains draft proposals for a portfolio risk measurement and reporting standard. The Working Party which has prepared these proposals would like to discuss the proposals with other members of the actuarial profession, both in the U.K. and abroad. Specific questions on which comments would be appreciated are set out in Section 1.5.



Proposals for a Portfolio Risk Measurement and Reporting Standard

15 July 1998

1. Introduction & Summary

1.1 This note sets out draft proposals for an Industry Standard for portfolio risk measurement and reporting. The proposals are designed to:

- (a) Improve the standards of portfolio risk measurement and control within the fund management industry, and
- (b) Provide practical guidelines for the implementation of such activities within a fund management house.

1.2 The key proposals are:

- (1) The risk and performance requirements of each fund should be documented and should be framed so that they are not inconsistent with each other.
- (2) A formal monitoring of investment risk should be undertaken at least quarterly or whenever there is a major change to fund structure. More frequent monitoring should be undertaken if trading activity is high.
- (3) The monitoring of risk should, where possible, involve both ex-post and ex-ante measurement. Ideally this would involve a reconciliation of the ex-post and ex-ante measurements to assess model risk. Significant changes in risk parameters since the previous analysis should be explained.
- (4) The analysis should contain:
 - (a) Commentary on the models/methodology used, including when they are likely to break down (and hence suitable caveats/health warnings if appropriate), on any exercise of professional judgement and on the main tasks to which the analysis is or is not relevant.
 - (b) A statement the sources of data and on whether there are any assets (or liabilities) omitted, and the degree to which this might influence results

- (c) Levels of fund turnover and/or other commentary indicating the extent to which the analysis may no longer be relevant because of changes in fund disposition.
 - (5) The presentation of the results of the analysis should bear in mind the likely recipients of the analysis. In particular, it would generally be appropriate to supply Chief Investment Officers with more detail than most third-party clients would wish to receive.
 - (6) The analysis could include commentary on the typical risk stances of several portfolios, all run in a similar fashion. If so, the methodology used to construct these composites should be consistent with standard rules on composite construction for performance measurement purposes.
- 1.3 Brief rationales for the proposals are set out below.
- 1.4 This note has been prepared by a Working Party of the Institute and Faculty of Actuaries. The members of the Working Party are set out below. All are involved in portfolio risk measurement within their respective fund management companies:
- Martin Cumberworth, Prudential Portfolio Managers
Daniel Gardner, Commercial Union Investment Management
Julie Griffiths, HSBC Asset Management
Malcolm Kemp, Threadneedle Investment Managers (Chairman)
Peter Rains, Commercial Union Investment Management
Christopher Sandford, AXA Sun Life Investment Management
- 1.5 We are seeking views and, in due course endorsements, from within the actuarial profession and from others involved in the investment risk management process. In particular we would welcome comments on:
- (a) Would such a Standard be helpful to the industry? Are actuaries best placed to formulate and promulgate such a Standard?
 - (b) Do the proposals contained in this document address the right topics? If not, what else should they cover or what should be dropped?
 - (c) Would it be helpful to have a detailed description of the different sorts of risk measurement techniques together with the Working Party's views on which are most useful in which circumstances? If this was

considered helpful, should it be incorporated in the Standard itself, or published as a separate document/paper?

- 1.6 We plan to discuss these proposals at the Investment Conference of the Institute and Faculty of Actuaries and the AFIR Colloquium in September 1998. However, if you wish to make comments in writing outside the Conference/Convention, please do so to:

Malcolm Kemp
Threadneedle Investment Managers Limited
60 St Mary Axe
London EC3A 8JQ

2. **Is a Portfolio Risk Measurement and Reporting Standard Desirable?**

- 2.1 Active investment management is about adding value without taking undue risks.
- 2.2 Several industry-wide standards exist on how to measure and report "added value", i.e. investment performance. For example, there is the AIMR Standard used in the USA and its world-wide equivalent called GIPS (Global Investment Performance Standard). The use of time-weighted rates of return is now very widely accepted and much of the AIMR and GIPS standards relate to the ways in which composite performances across a range of similar accounts should be constructed. In the UK, the NAPF have published standards on the presentation of specialist performance. De facto industry standards also exist in the UK created by CAPS and WM.
- 2.3 The measurement and reporting of investment risk is less well developed. This is partly because investment risk is itself less clearly defined than investment performance.

There is also a clearly identifiable distinction between the measurement ex-post of past investment risks taken and the assessment ex-ante of risk stances currently being adopted. Past investment risk might perhaps be a matter of fact, like past investment performance, if we could agree on how past "risk" should be measured. Measuring current investment risk stances has no real analogue in terms of investment performance, except perhaps the investment target in the client's objectives. It involves subjective input.

- 2.4 However, this does not make measurement and reporting of investment risk any less important - it merely makes it more difficult to prepare suitable standards in this area. Two funds which have the same past performance might have

achieved this performance with vastly different levels of risk. Clients are becoming more aware of this fact, and are demanding better disclosure of information on risk. There has been significant growth in the activities of companies specialising in investment risk measurement. The leading UK institutional performance measurers are also developing services in this area.

- 2.5 One of the problems in preparing a Standard is the very concept of investment “risk”. Widely understood, the concept can have many facets, as explained in the Appendix.

The Working party discussed which of these components might be feasible to cover in these Standards. The Working Party decided that it would not be practical to cover within the Standard aspects principally linked to operational risk (e.g. fraud, mis-pricing of unitised funds etc.).

Instead, the Working Party decided it should concentrate its endeavours on the risk of underperforming the investment benchmark or objective set by the client.

- 2.6 The proposed Standard concentrates on mainstream institutional or retail fund management as this is the area that the Working Party thought would benefit most from such a Standard.

3. Brief Commentary on Our Proposals

3.1 Agreeing and Documenting Client Requirements

It is self evident that client requirements should be well documented and sensibly framed. Failure to do this leaves the fund management house open to the risk that the client interprets the requirements one way when the fund management house thinks that they mean something else. This is a recipe for client dissatisfaction and potentially litigation.

The main documentary repository for these requirements will normally be the client agreement between the client and the investment manager, although the manager might also prepare “norms” which it applies internally to clarify what may only be very general requirements expressed in client agreements/fund particulars.

3.2 Monitoring Frequency

Typically, third-party investment managers report to their institutional clients on a quarterly basis (although some report more frequently, e.g. monthly). Reporting is in the form of valuations, performance statements and investment commentaries. It would therefore be natural to report on investment risk somewhere within these statements.

How frequently a fund manager might want to carry out such analyses internally will depend on the speed at which portfolio risk measures change. If there is a major change in fund structure then the portfolio risk stance could, of course, change quite dramatically over a very short time frame. This would also be true for actively traded portfolios. However, for many mainstream portfolios the risk stances do not seem to change much even over a quarterly time period, and there may be no need to carry out regular analyses more frequently than quarterly.

3.3 Type of Risk Measurement To Be Carried Out

Clients (and fund management houses) should be interested in both ex-post and ex-ante measurements of risk. This is because an ex-post analysis is important in understanding whether the risks that have been run have been rewarded in terms of outperformance. An ex-ante analysis answers a different question, i.e. what might happen in the future. Of course, for many mainstream portfolios we would expect the two to show relatively similar results.

The process of identifying why or how risk stances have changed since they were previously reported (particularly ex-ante risk analyses) is useful for indicating changes in how the portfolio is being managed.

3.4 Contents of Analysis

There are different sorts of models and methods of calculating investment risk, some more quantitative in nature than others. There are also different ways of expressing investment risk, e.g. tracking errors or “value-at-risk”. The Working Party does not feel that it is appropriate to specify one method as being “the best”, feeling that this should be left to professional judgement. However, it is important that the recipients of the analysis know in general terms the methodologies being used, their strengths and weaknesses and to what tasks they are relevant.

Any analysis is dependent on the data used. This is not always as complete as the recipient might expect or the person carrying out the analysis might desire. If a small proportion of the underlying portfolio is missed out this may have little impact on the accuracy of the analysis, but if a large proportion is missed

out then the accuracy may be seriously compromised (and this fact may itself be suggestive of a breakdown in operational controls that might give rise to other sorts of concerns).

Forward looking analyses also require the portfolio to be reasonably stable over time to give meaningful information. The client needs to be aware if this is not likely to be the case.

3.5 Presentation of Results

Any presentation of results should reflect the likely recipients of the analysis. Otherwise the analysis could merely confuse rather than help. We would envisage fund managers supplementing raw numerical information with presentations and descriptions of the methodologies tailored to the client concerned.

3.6 Composite Construction

We can envisage fund managers who run large numbers of similar portfolios (e.g. segregated balanced pension fund portfolios) wanting to provide information on house average risk levels and variations in these risk levels. When doing so, it is essential that the composites used for risk measurement purposes match those used for performance measurement purposes. There are already standard rules on composite construction for performance purposes (e.g. AIMR/GIPS or the NAPF standards) which can therefore be carried over directly into these standards.

APPENDIX

Different types of investment “risk”

Risk in an investment context can be split into two main sorts:

- (a) **Operational risk**, e.g. fraud, mis-pricing of funds, breaching of regulatory constraints. Monitoring and controlling these sorts of risk properly fall within a compliance or internal audit role.
- (b) **Investment risk**, i.e. the risk that the fund performs “poorly”, not because it (or the fund manager) has broken any laws or regulations, but because of poor choice of investments to hold within the fund.

These Standards concentrate on Investment Risk of the sort described in (b). The main sorts for a fund management house are:

- (1) Risk of underperforming other similar funds
- (2) Risk of underperforming relevant market indices
- (3) Risk of loss of capital or failure to maintain an adequate level of income

All three can be thought of as variants of risk relative to some suitable *benchmark*. Thus measurement of risk nearly always involves some assessment of how far away from the benchmark the portfolio is, or has been, e.g. in terms of concentration to a single situation/company/sector.

Usually one of the three will be more important than the other two. This should be set out in the relevant client agreement.

For a pooled fund with several different owners, the fund manager may sometimes specify precisely which type of objective is most important. However, usually the fund’s objectives are more vaguely worded. The fund manager should then document internally which sort of objective takes precedence.