the role of the Independent Actuary, required by Section 49 to prepare a report on the proposed transfer, and in particular on the Guidance Note GN15 issued by the Institute. This was criticised both for extending the role of the Independent Actuary beyond that envisaged by Section 49 and for requiring consideration of the closed fund alternative. There were speakers both in favour and against this view.

Future Structure

The paper then went on to examine the various options available as regards the structure of the office following demutualisation. The

A payment is required by the purchaser to maintain policyholders' reasonable expectations

existing with profits business could be left in an open fund, or placed in a closed fund with or without any share of the emerging surplus being paid to snareholders. In the case of the open fund, non-participating business could remain in the open fund or be transferred to a 100% shareholders' fund. Whatever the eventual structure of the office, a payment is required by the purchaser to maintain policyholders' reasonable expectations, however these be defined. Typically, this will be calculated as the discounted value of the future stream of transfers to shareholders, at somewhere between the net earned and risk discount rates. To this may be added an amount in respect of goodwill and/or compensation for loss of membership rights. The latter items are less easy to quantify by actuarial techniques and may ultimately rest on the individual negotiating strengths of the parties concerned, as will the precise choice of rate to discount shareholders' transfers.

Investment Freedom

The Faculty paper contained details of a series of model office projections covering the financial development in terms of solvency, investment freedom and maturity values of a mutual office, both with and without demutualising, under a variety of scenarios. A number of interesting results

emerged, including the presence of a "flywheel effect", whereby the progress of the office was dominated for many years into the future by the effect of rapid new business expansion during the 1980s.

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In addition, the projections suggested that the degree of investment freedom available to a closed fund was significantly greater than commonly assumed, albeit with less resilience to sharp falls in asset values. However, one speaker suggested this may be a consequence of the steady investment conditions assumed by the model, a different conclusion perhaps applying under a stochastic approach.

Paul Downey

Measure For Measure

1. Discounted Value Return.
Nick Ryan and Jon Spain begin a series of articles on the monitoring of the investment performance of pension funds.

espite starting from very different vantage points, we came to remarkably similar conclusions on how to monitor the investment performance of long-term Pension

Funds, an issue which has has recently been the subject of a formal NAPF Report, to which we turn in a later article in the series. We consider it timely to offer an alternative view on an important aspect of the UK economy and make no apology for drawing

upon material previously published elsewhere, principally in *The Investment Analyst*.

Market Values

So far as we are aware, most monitoring of investment performance is based upon the use of market values. In relation to long-term Pension Funds, this is not only misguided, but there is also a better approach (described later in this series).

Objections to the use of market values are six-fold.

1. Definition

"Market values" are not always well-defined. Unquoted securities and property are important asset classes, not only for Pension Funds but for the whole economy; for these classes, market values do not exist. Even for beta stocks the market value may well be a less than rugged number.

2. Relevance

For some classes of asset (such as bonds held to maturity), the shortterm returns are not merely of no relevance; they can give the opposite signal to the true position.

3. Fluctuation

Market value is subject to fluctuation, frequently severe, over short periods. Therefore, it is not at all appropriate to regard the market value as any indicator of what might be regarded as a "store of value". The conclusion must be that the market value can provide virtually no useful information as a predictor of the all-important long-term future.

4. Planning

High end-point market values lead to the apparent conclusion that the investment manager has done well. However, this ignores two points, the first being that further contributions will purchase less than previously; this can hardly be good news.

Secondly, if the market value falls, then the investment return previously "disclosed" must have been too high, and hence an unreliable planning tool. Even if the market value increases, it is no more reliable, as the return would have been too low.

5. Risk

No account is taken of "risk", which is admittedly difficult even to define, let alone tackle. Nevertheless, this is an important aspect, as dissimilar Pension Funds may be compared, with unreasonable conclusions being drawn.

6. Time-weighting

Finally, on a technical point, the "time-weighted return" commonly published is an artificial concept, and is not a return which is actually achieved.

In brief, market value is for shortterm speculators, and not for prudent investors charged with meeting liabilities over a long period. Market value is not just the wrong unit for long-term investors; it goes deeper.

An electrical analogy is that resistance, reactance and impedance are all measured in the same unit, the ohm. If you use a resistor instead of a capacitor in a TV circuit, you may get the right number of ohms, but the picture will not appear. Instead, the set will probably blow up. Likewise, with market value, the wrong thing is being measured.

Discounted Value Return (DVR)

Our favoured statistic is called the "Discounted Value Return" (or DVR). Just as resistance, reactance and impedance are all measured in ohms, money-weighted returns (MWRs) and time-weighted returns (TWRs), as well as DVRs, are all measured in the same unit, namely percent per annum compound.

They are, however, very different things.

If Trustees were given the option, they would probably wish to be advised of the level of investment return which could be regarded as maintainable over a long future period, regardless of short-term price movements. Further, under such an approach, they would probably accept being "broadly right" as opposed to being "precisely wrong". Just as with the current approach generally adopted, the assessment is only in relation to investments already made; nothing is asserted as to the performance to be expected of future investments.

As an example of a "maintainable return", consider a high-covenant (i.e., high security) bond held to maturity. Here, the relevant statistic for the return is the initial redemption yield, rather than the series of "market-related" returns during the life of the bond.

What, then, do we advocate? We propose borrowing methodology already generally used by UK Actuaries in a related area, namely the funding of a defined-benefit pension scheme.

In valuing the assets, the prospective proceeds are assessed, which are then discounted back to the present. This helps avoid fundingrate volatility.

The same principle can usefully be applied to monitoring the performance, over a long period, of the assets.

Suppose that we thought we knew, in advance, the average return which could be earned over a long future period. Then the "true initial value" of the assets could be assessed, using this knowledge. If we were correct, then, over a long period, the fund figures would fall into pattern, using the same approach. This is why we postulate that the return so determined would be "maintainable", regardless of short-term price fluctuations.

As, of course, one cannot be certain of the future, it is necessary to make the best estimates possible, to be reviewed from time to time.

Moreover, one should consider not only central figures, but also probable ranges.

Such an approach may appear to be both highly theoretical and extremely subjective. There is nothing wrong with theory if it leads to practical results. In fact, everyone uses a theory - sometimes a mish-mash of theories - which they seldom make explicit, even to themselves. Our approach is open and conscious.

Further, the approach appears to be far more robust, and much less subjective, than might be thought, as will be shown later.

Nick Ryan Jon Spain