Investment Philosophy from the Viewpoint of a U.K. Actuary

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1. Introduction

1.1 I concern myself not with individual investments, which I see as being the province of the investment expert, but with the philosophy which I believe is fundamentally important to pension schemes in establishing, implementing and finally monitoring an investment strategy.

1.2 In my opinion the actuary cannot himself determine investment strategy, but he can provide invaluable education to pension scheme Trustees to help them understand the way their assets might be managed, why, and what effect alternative approaches might have.

1.3 I also feel that the investment manager should be a party to the discussions concerning strategy since it will be he who is asked to implement it. While investment management has its scientific side, I believe that in the final analysis it is an "art". As with any "art", the "oeuvre" produced is all the better for the wholehearted commitment and enthusiasm of the "artist".

1.4 By involving himself in these matters, I believe that the actuary is in the unique position of understanding the broad nature of a pension scheme's assets and liabilities, and their expected mode of behaviour both individually and relative to one another. What is more, the actuary is capable of seeing these things in the long term, while so many others are tempted to concentrate too highly on the short term.

2. The objectives of the parties involved

2.1 Firstly, therefore, let us consider the establishment of an investment strategy. Who are the parties involved and what are their objectives?

2.2 The first party is the Trustees. It is their objective to ensure that the benefits, as they fall due, are met out of the assets. In the U.K. Trustees are required by Trust Law to have regard to:

(a) the need for diversification of investments, in so far as is appropriate to the circumstances of the trust,

and

(b) the suitability to the trust of the investments.

Trustees must also manage the investments in a prudent manner, as they would their own affairs.

While this means that they have serious regard to the possible investment gains to be made from a particular strategy, it does not necessarily mean that their objective is the highest anticipated investment gain, no matter what, since this ignores "risk". Risk can mean:

(i) The risk of losing all your money, but on the other hand of making substantial gains – e.g. as when betting on the horses or when placing "venture capital".

(ii) Volatility of the market value of a portfolio of assets – i.e. a fund's "beta" value.

(iii) The likelihood of being mismatched to the liabilities of the fund – e.g. as when invested in fixed interest bonds with liabilities related to salaries.

In my opinion it is definition (iii) which is of most relevance to Trustees, although the other two are of interest.

2.3 The second party is the sponsoring company. While a trust is designed to be legally separate from the affairs of the company, the company nevertheless provides an important element of funding. In particular it often "carries the can" and meets the balance of cost after allowing for members' contributions. Also, there has recently been a judgement in a case brought before the U.K. courts where the judge made it clear that a sponsoring company is a beneficiary if it can take back funds in the event of a winding-up.

Also in the on-going situation, there is an increasing number of cases where companies are using a well-funded pension fund to have "contributions holidays".

Hence, despite the legally separate entity of a pension fund, there are good arguments for the sponsoring company being an interested part in investment strategy. The company's aims are:

(a) to achieve the highest possible investment performance in order to reduce its pension expense, and

(b) to achieve a relatively smooth pension expense from one year to the next, in order that the company's profit and loss account is not subject to undesirable fluctuation. In the U.S., of course, FAS 87 is intended to ensure relatively uniform and meaningful pension expense being shown in the company's accounts, although it is debatable whether the results will be as smooth as the accountants would have liked. This is most likely to be achieved by investing in assets which perform in a similar way to the liabilities

2.4 The third party is the members. Their objectives are:

(a) Security of long-term benefits – i.e. that in the on-going situation the investment strategy together with future contributions are likely, in combination, to produce the benefits

(b) Security of accrued benefits – i.e. that the accrued funds at any point are likely to be adequately covered by the assets at that time.

In essence, the members' concerns are to do with "risk", where risk means the likelihood that benefit coverage, whether of long-term benefits or accrued benefits, is below 100%. However, having said this, the members need only be concerned about an accrued benefit coverage of less than 100% if the plan is also

winding-up, since otherwise the situation is hypothetical. The accrued coverage is more likely to be stable (and hence reduce risk from the members' point of view) if the assets are "matched" to the nature of the liabilities – e.g. if the investments are in "real" assets in a defined benefit plan.

2.5 It is interesting to note that there is one objective which is common to all three parties. It is to invest in assets which are best suited to the nature of the liabilities – i.e. most suitable to the trust. This also helps to meet a further objective of the Trustees – to reduce "risk" which, in my opinion, means to reduce the likelihood of being mismatched to the liabilities.

2.6 The two remaining objectives are:

(a) Diversification (required by the Trustees)

(b) Highest possible investment performance (required by the Company)

3. The determination of investment strategy

3.1 All of these objectives are not inconsistent and can be framed into one overall requirement – i.e. to invest in diversified assets which are best suited to the liabilities of the trust in order to achieve superior investment performance.

3.2 Having now framed the one, all-embracing objective of the investment strategy, let us consider how to interpret it in different situations.

3.3 For a defined benefit plan it can reasonably be interpreted into a requirement to achieve a real rate of return (e.g. above price inflation) of, say, 5% per annum with that part of the fund relating to salary-related benefits and, say, 2% per annum above the interest rate used by the actuary in funding calculations for that part of the fund relating to fixed-money benefits

3.4 For a defined contribution plan the objective can be met by a requirement to achieve a return of, say, 1% per annum greater than a specified stock market index (or combination of indices).

3.5 This, therefore, establishes the investment strategy, the next part of the process is how to implement it.

4. The implementation of investment strategy

4.1 Implementation of the investment strategy is really a matter of finding the right investment manager for the strategy. U.K. actuaries typically become involved in this exercise quite frequently (more often than U.S. actuaries I suspect).

4.2 In broad terms, some alternative approaches which characterise investment managers are as follows:

(a) Aggressive v balanced. A "balanced" manager invests in a typical spread of investments with a typical spread (relative to the industry as a whole) between the different sectors. An "aggressive" manager is one who "sticks his neck out" by adopting an unusual stance. An alternative way of describing these alternatives might be "adventurous v cautious".

(b) Long-term view v short-term view. Some managers look for long-term growth prospects (e.g. in the technology industries or in small companies) while others look for short-term gains, arguing that the long term is simply a series of short terms. I believe that this argument is wrong because a long-term view can lead towards investment in some very different situations (e.g. small company stocks with long-term growth prospects) than a short-term view and this will inevitably lead to different results.

(c) Stock selection v sector selection. It is noticeable that some managers obtain their performance by increasing the proportion invested in the higher performing sectors at the right times Others obtain their performance by selecting the right stocks. Again, the two approaches are not necessarily mutually exclusive since a manager may obtain performance through both, or show no consistent pattern over a period of years.

A manager who decides on the sector split first, and on the stocks within each sector second, is call a "top-down" manager. One who concentrates on stocks and allows this to determine its own sector split is called "bottom-up".

It is possible, however, for a mixture of these to be found – e.g. a bottom-up approach for selecting stocks within each sector, the sector weighting itself being decided by a top-down approach.

(d) In-house research v research bought from outside. Some managers carry out their own in-house research, others buy it (in the U.K. at present, often at no cost, in return for stockbroking business, although this will change to some extent after deregulation of the U.K. securities markets) from stockbrokers (and others). In-house research is often associated with a more individual style of management.

(e) Small number of stocks traded v large number of stocks traded. Again, these two approaches are not necessarily mutually exclusive. However, managers who trade in a relatively small number of stocks often carry out in-house research whereas a balanced manager is likely to cover all the sectors (including industry sectors) and purchase a large number of stocks (based on research obtained from stockbrokers) as a result.

(f) Corporate house style v discretion to individual fund managers. Some management houses impose a rigid house style on all of their internal fund managers, while others give much scope for their own fund managers to apply their own skills. In the case of the latter the danger is that a client may happen to have a poor individual manager responsible for his own fund. The danger of the former is that it can demotivate managers and remove scope for flair and initiative. A middle-of-the-road approach works well for some successful managers.

In general terms the internal organisation, experience, expertise (and, in my opinion, enthusiasm) of a management house should

always be considered by Trustees as a guide to its effectiveness in achieving the desired aim.

4.3 Other factors which help to distinguish investment houses one from another are their attitudes towards:

(a) Small company stock. As mentioned above, the manager who takes the shorter-term view may not invest in such situations, because of their longer-term nature. This can act to the detriment of longer-term performance.

(b) Real property, often in the form of property unit trusts, except for the larger funds, where it can be direct.

(c) Property company shares can be an attractive alternative to direct or property unit trusts because of the ability to sell the shares more readily.

(d) Index-linked gilts, which at present in the U.K. offer real returns (over price increases) of 3,5% or 4% per annum.

(e) Currency hedging and overseas markets. If one accepts the theory of purchasing power parity, then those economies which are the strongest, which tend also to have the lowest rates of inflation, have currencies which depreciate the slowest, relative to others, in the long term. Such economies produce the highest overall returns when local stock market investment returns are combined with currency movements, in the long term. Hence, one should never hedge against that currency. Such a philosophy is essentially long term in nature and there will sometimes be violent swings in the value of one's overseas investment (converted into one's own currency) in the short term. Hence, to this extent "risk" (meaning volatility) is increased in the short term by not hedging.

(f) Trade options and Futures. In my opinion the use of futures and traded options is entirely up to the investment manager. I would comment, however, that the type of "risk" inherent in these devices is most like betting on the horses – it either pays off or it doesn't.

(g) Rate of "turnover" of the portfolio. A higher rate of "turnover" (or, more crudely, buying and selling) is more likely to be associated with a short-term view. However, a manager who concentrates on stock selection rather than sector selection may also experience a higher rate of turnover of the portfolio. This may likewise tend to apply to the manager who concentrates on a smaller number of stocks, and the manager who takes an "aggressive" rather than a "balanced" approach.

Theoretical research has been carried out, again by a U.K. actuary, into the effect that a philosophy of trading, rather than holding, stock is likely to have. An economic model for the rate of price inflation, earnings inflation, interest rate, dividend yield and dividend growth is constructed. Mathematical formulae link these items, but a random element is built into each one. Constants in these mathematical formulae are derived from historical data of the behaviour of the various factors. Using stochastic processes the returns under a portfolio (e.g. one invested fully in equity shares, or one invested fully in fixed interest Bonds, or a combination) over a period of years is then examined, assuming that the stocks are held throughout. The same projection, using the same stochastic processes, is then made, but this time the portfolio is switched into different investment sectors at the beginning of each year in the projection to take advantage of anomalies between the different investment sectors brought about by the random elements in the behaviour of the economic factors. The results show that expected performance is enhanced by such trading as opposed to holding, but that the standard deviation of the results is also increased. This in fact leads to an increased chance of "getting it wrong" when trading actively, but a bigger increased chance of "getting it right", as opposed to holding.

Hence, while expected performance is improved by trading actively, so is risk (in the sense of volatility) also increased.

4.4 "Index Fund" can have a place if the strategy is to track an index.

However, this concept has grown in importance because in practice it provides a means of beating the average manager consistently, by removing a large part of the dealing expenses of the typical "balanced" manager. In my opinion, however, this concept is only legitimate if the aim is indeed to track an index, rather than to beat it or to beat others.

4.5 Some managers have devised methods, which are mathematical in nature, whose output is a "buy" or "sell" signal. Such management methods are essentially cheaper to run, because they do not involve the expensive personnel involved in active fund management. While there are examples of such methods working very well for a number of years, they seem to break down eventually.

5. Monitoring of the investment strategy

5.1 Having established the investment strategy, whatever it might be, the final stage is to monitor it in order to ensure that it continues to meet its objectives.

5.2 The typical monitoring device has been investment performance measurement, based on market values, from which one's ranking amongst a universe of funds is calculated. This essentially compares one fund with another. Provided that the investment objective is to achieve performance of a certain ranking (e.g. at least 25th percentile) then this is fine. However, I have shown that I believe that this is never the objective. Therefore this type of monitoring is inappropriate.

5.3 If the objective is to obtain a long-term real rate of return (relative to price increases) of, say, + 5% per annum, then I believe there is a far better method to use.

5.4 This method relies on calculating one's investment return over a period, based not on market values, but on actuarial "calculated" values of assets. These "calculated" values, by looking at the expected stream of income from the investments over all future years, and then discounting this stream of income (using a pre-

determined rate of interest in doing so), show a smoother progression from one year to the next. Hence the investment returns from one year to the next likewise show a smoother progression than returns based on market values.

5.5 Put in a different way, the actuarial "calculated" value looks at the underlying "fundamental" value of the assets in the long term, and it knocks out market sentiment (or other factors) which might have had the effect of producing temporarily high or low market values. When the growth in this underlying "fundamental" value is added to the income yield actually received during the year, the overall "fundamental" performance is produced. This investment return calculated in this way shows a smoother progression from one year to the next than traditional market value returns.

5.6 The great value of this "calculated" value return is that it is far more suitable for comparison with price increases, since the index of prices itself progresses relatively smoothly from one year to the next.

5.7 In fact, if the strategy is to achieve (say) + 5% real returns, then I believe that this is the only effective way of monitoring whether the strategy is being met.

5.8 Even if the strategy is to produce a return of, say, 2% per annum above a certain index, this method can still be used to compare the calculated value return of the index with the calculated value return of the fund.

6. Conclusion

6.1 I have tried to discuss, in rather a brief fashion (of necessity) some of the issues to take into account in helping a pension fund client to determine his own investment philosophy or strategy. I do not claim to have any particular knowledge of individual investments. I am, rather, more interested in the general modes of behaviour of different types of asset in different situations. I feel that the actuary is in the unique position of having an understanding of the behaviour of both a pension fund's assets and its liabilities, and to be able to assist his client by (hopefully) imparting some of this understanding.