

Multi Asset Class
Investment Strategy

Guy Fraser-Sampson



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Introduction

The field of investment strategy is huge, and when one adds into the mix the question of the measurement and adequacy of pension funding then it rapidly becomes unmanageable within the confines of a single book. It may therefore be useful if we are clear from the outset what this book does and does not cover.

WHAT THIS BOOK IS ABOUT

It is first and foremost a book about investment strategy, and in particular about asset allocation based on a Multi Asset Class model. The most famous of such models is undoubtedly that used by the Yale Endowment and described by its creator, David Swensen, in his book *Pioneering Portfolio Management*. In this book, I will be describing my own model, which I have dubbed 'MAC investing'. Thus, while I will be describing and commenting on, where necessary, the Yale Model, the main purpose of this book is not simply to spread Swensen's message to a wider audience, but rather to offer my own arguments for and observations upon Multi Asset Class investing. I have a huge respect both for Swensen and for the model that he created, but anyone who wishes to study it in detail can do so from the horse's mouth by reading his book, and there seems little point in my merely recycling what he has to say.

I will attempt to explain the various aspects of financial theory that underpin MAC investing, some of which may be obvious, but others less so. Among the former are such things as correlation and benchmarking of returns. Among the latter might be numbered liquidity and risk. Some of these may seem such settled and established concepts

that there can be little new to say about them. In fact, I will endeavour to show that this is not the case and that a radically new and different approach is required to how we look at investment theory in order to accommodate Multi Asset Class models.

Having examined the conceptual framework that encloses MAC investing I then move to discussing the different asset classes that should be considered. Again, within the confines of a few chapters of a single book the list is not exhaustive, nor is it meant to be. There is, for example, no room to consider some of the interesting new currency and commodity-based products that are being launched, nor to do more than mention things such as the Private Finance Initiative and Public Private Partnerships in which some UK pension funds are becoming involved. Given the limitations of space I have deliberately limited myself to what I consider to be the mainstream areas of quoted equities (both domestic and foreign), hedge funds, private equity and property. Again in the interests of balance, I have limited my consideration of property to the UK. Had I not done so then this chapter would have become unmanageably large and complex; indeed, any one of these asset class chapters could easily have become a book in its own right. In mitigation, I would plead that while the property figures I use are UK specific, the principles are not, and are indeed capable of universal application. It will be an easy matter for a US investor to have access to US property data.

There are various matters that are sometimes put forward as possible alternatives to a Multi Asset Class approach, most notably Liability Driven Investment and Portable Alpha, and I deal with each of these specifically.

Finally, I will attempt to pull everything together and show how different portfolios might have performed over time. I concede that this is a speculative ‘what if’ exercise, but it is based on real historic performance figures and on asset mixes that could actually have been adopted at the time. Again, given the figures I have used for property investment performance, it seemed only logical to perform this exercise on the basis of a UK (or, at least, sterling-based) portfolio such as would be appropriate for, say, a UK pension fund, but it can very easily be duplicated using, for example, US dollar-based numbers.

WHAT THIS BOOK IS NOT ABOUT

I had not originally meant to deal with the question of pension funding at all. Indeed, this was at one time intended to form the subject of a

separate book based on my Total Funding Model for pension funds. Within such a book, it would have been possible to look in detail at such things as the relative maturity of different pension funds, differing situations in various countries, and the difference between Defined Benefit (DB) and Defined Contribution (DC) schemes. This book is about investment strategy, not pension funding.

However, it rapidly became apparent that this was a pious intention to which it would not be possible to adhere to religiously. In considering investment strategy one must discuss the setting of strategic objectives, and the only possible strategic objective of a pension fund can be to place itself in a position from where it will be able to discharge its funding obligations.

I therefore had to stray into this territory in Chapter 1, in which I give a condensed explanation of Total Funding and consider how a pension fund should go about assessing its funding requirement and fixing its target rate of investment return. This can be thought of as ‘the demand side’ of investment strategy, while the remainder of the book is concerned with ‘the supply side’. Thereafter, I largely ignore the question of, for example, the specific maturity of a pension fund although I do make various references to differing liability profiles, by which I mean the same thing as maturity where the investor concerned is a pension fund.

Early reviewers of the manuscript however, while acknowledging that the subject of the book was investment strategy rather than pension funding, felt that this left two unanswered questions hanging over the rest of the text. How should a MAC investment approach differ for (1) a DC as opposed to a DB scheme, and (2) a mature, possibly very mature scheme?

The problem is that to discuss this topic in the length that any proper consideration would demand would require at least an extra chapter and possibly two (for example, different situations apply in different countries – in the USA, for example, many employers have always run a DC scheme alongside a DB one, and many employees run their own hybrid personal pension scheme), and would definitely unbalance the book.

It is yet possible that the original book idea may see the light of day, but in the meantime I am very concerned at the widespread conception that I encountered during my research, namely that a DC scheme and/or a mature scheme had no place in their investment strategy for alternative assets, and so I have very briefly set out my views on DC schemes and on the question of mature pension funds in a separate note which

appears as Appendix 2, immediately after the tables of performance figures. For those who have a specific interest in the subject, I would recommend reading it immediately after Chapter 1. Those whose interest lies primarily in portfolio theory may happily disregard it entirely.

Briefly, my view is that there is little difference in funding (as opposed to legal) terms between a DB and a DC scheme save in the way in which the retirement benefit is actually delivered, and that the pension scheme's investment strategy should be much the same in each case. As for mature pension funds, for all except the extreme case of a scheme that is confidently expecting to pay out all its assets within the next decade and is fully funded on the basis of that assumption, then assets such as private equity still have a role to play. You will see, however, that the MAC investing model automatically compensates in any event for a shortening timescale by increasing the amount of the portfolio held in such things as bonds.

It lies beyond the scope of this book to comment on the current switch from DB to DC schemes but let me say that in purely financial terms, and specifically ignoring the various ethical and legal considerations that are involved, this seems to me to make little sense and, indeed, is likely to make it harder rather than easier to fulfil the scheme's funding obligations (which in my view remain the same regardless of the legal form employed).

WHY DO WE NEED MAC INVESTING?

It may seem strange, given the consistent success in recent years of the Yale Model, as described in David Swensen's best-selling book,¹ that a Multi Asset Class approach to investment strategy for institutions such as pension funds should still be a controversial subject, and require justification. Certainly many in the investment management industry have been arguing the case for Multi Asset Class investing for many years (in my own case for more than the last decade). However, institutions and their advisers have been slow to respond – tragically slow in some cases.

As I mention above, I will be demonstrating that the deficits now afflicting UK pension funds could have been almost entirely avoided had they been practising MAC investing (my own Multi Asset Class model, which I offer as an example of what might have been

¹ *Pioneering Portfolio Management* (2001).

achieved) during the relevant period, since such a strategy would have protected them from their massive overexposure to public equity markets and to bond yields during a period when both have fallen dramatically.

Perhaps this has something to do with the fact that at first glance the Yale Model appears to turn established thinking and investment practice on its head. Swensen's concept, at its simplest, is to divide a portfolio into about five roughly equal parts and invest each part in a separate asset class, with each class being as little correlated to the others as possible. Thus, so-called 'alternative' assets such as private equity and hedge funds, which do not feature in some portfolios at all, take pride of place on equal footing with more traditional investments such as quoted equities. We will be looking at MAC investing in general, and the Yale Model in particular, in much more depth later in the book, and you will see that I will be putting forward an individual model of my own, but I think it will be useful to have the basic idea in mind from the outset.

While it is dangerous to generalise, the situation varies with geography. I have referred in various articles and conference speeches to the equivalent of an international postcode lottery which affects members of pension schemes. The USA leads the pack, as so often with investment. In countries such as the Netherlands, Sweden and Australia progress may be discerned in moving away from the old 'what should our bond/equity mix be?' nursery talk towards something more intellectual. However, ignoring countries that do not have what might be termed the Anglo-Saxon pension model (the most obvious examples being France and Germany), UK pensioners find themselves at the very bottom of the heap in terms of investment thinking.

I use the word 'thinking' in the last paragraph deliberately, for the adoption of MAC investing does not only represent a progression from the 'old' to the 'new', but from the 'unthinking' to the 'thinking'. The old approach assumes that one's asset mix (and thus also the investment return which it produces) is essentially a given that cannot be changed, whereas the new approach calculates the investment return required and then sets out to adopt an asset mix appropriate to that target return (a process to which I have given the term Total Funding).

It also represents a change from a 'relative' or 'benchmarked' approach to returns, where one is striving to match the performance of one's peer group, to an 'absolute return' outlook, where one is striving to outperform by selecting those asset classes which, viewed entirely

rationally and dispassionately, seem likely to produce the best returns.

Finally, it marks a change from a short-term viewpoint obsessed with annual returns to a recognition that institutions such as pension funds are driven by the nature of their liabilities to take a long-term view, and to set targets not in terms of individual periodic returns but as a compound return to be earned over many years, within which annual fluctuations are largely irrelevant.

I will be developing all these points in more detail, but it is my firm contention that even if the precise Yale Model itself may not be ideal for all investors whatever and wherever they may be (because of different liability profiles, local differences in returns in some asset classes, exchange rate risk, etc.), nonetheless the basic approach of which it is a product (which I have chosen to call MAC investing) most certainly *is* of universal application. In this book I will be demonstrating how the returns of different asset classes may be analysed and compared meaningfully against each other, how a MAC investment strategy may be implemented, and why this can be shown to be infinitely superior to any existing approach.

Finally, I have mentioned briefly already the funding deficit currently afflicting the UK pension industry (and, to a lesser extent, those of other countries) but it would be wrong not to refer to it specifically at least this once, since this overshadows all investment discussion today. Pension funds, who are after all the overwhelming majority of institutional investment by size, simply no longer have the option of continuing with bond-type returns. They have no choice but to seek out asset classes that offer higher rates of return (sometimes much higher) but feel the lack of the expertise required meaningfully to consider them. It is precisely this area that this book is designed to address.

Unfortunately there are many who have a vested interest in traditional views not being disturbed, and they can and will attempt to denigrate and ridicule this book. In a sense I have made this easy for them since you will see that I reject, for example, accepted notions of risk as being simply immaterial to modern investment needs, and this is the financial equivalent of claiming that God does not exist. However, if any readers can suspend their scepticism long enough to follow my arguments with an open mind, then I am confident that they will become further converts to the cause of MAC investing.

ADDENDUM

Very shortly before this book was due to be published one of the major pension consultancy firms (Watson Wyatt) announced that henceforth they would be advising all their DC pension scheme clients to adopt Multi Asset Class investment strategies. Shortly afterwards another (Mercer) indicated that, while not prepared to go this far, they were now advocating this strategy. As the book was already at final proof stage it has not been possible to record this change of attitude in the body of the main text. However, I trust the reader will agree that any step in the right direction is to be welcomed.

Given that these very recent developments render the subject of Multi Asset Class investing more topical than ever, it is entirely likely that events may now move more quickly than originally anticipated. In these newly changed circumstances, could I beg the reader to bear in mind that the task of writing this book was completed in December 2005.

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Investment Strategy

WHAT IS STRATEGY?

It will come as no surprise, having read the title of this book, that it is going to deal with investment strategy, and a particular approach to investment strategy at that. Before we dive into our deliberations, however, it might be a good idea to consider briefly what strategy is, or should be, since I have been continually surprised over the years to find the basic concept so widely misunderstood.

In his classic work *On War*,¹ Von Clausewitz points out that strategy must have a tactical result in mind, which in turn is a means to achieving its ultimate objective. In military terms – the field in which strategy was most often applied until recently – this means that, to use his words, strategy has victory as its desired tactical outcome, which is the means to achieving the strategic objective, which is peace. My own definition of strategy would be: ‘an action plan designed to achieve specific objectives’, which I think is consistent with Von Clausewitz’s view.

Considerable confusion arises as to the difference between strategy and tactics, particularly in the world of investment, and this is such an important distinction that it is worth taking a little time to consider it, since it is in the failure to distinguish between tactics and strategy that most corporate ‘strategic plans’ fall down.

Tactics are the steps laid out in the action plan which, if properly carried out in the proper sequence, are designed to lead to the objective being achieved. Strategy is the totality of the whole process, which needs to take a broad view of the whole environment within which the plan has to operate, rather than the individual circumstances within which a particular action takes place. All too often one sees a particular approach being cited as a ‘strategy’ when it is not; it is an individual course of action that should be performed within the framework of an overall long-term plan, not seized upon as the totality of what is

¹ Penguin Books, London, 1982.

required. To go overweight in Japanese equities, for example, is not a strategy, though it may frequently be represented as one. It is a tactic. Whether or not it is successful must be judged by how well it helps to achieve the overall objective, whatever that may be.

I do not have the original German text available, but I suspect that what is translated in the English version as ‘a tactical result’ may well be one of those compound German words that could be equally well interpreted as ‘the result of tactics’. It is these individual tactical results that form the stepping stones by which we cross the river and achieve our objective of reaching the other side.

I introduced the phrase ‘long term’ deliberately since I think this is another valid distinction between tactics and strategy. Tactics often take the form of fairly instant action (the shifting of troops from one part of a battlefield to another) whereas strategy implies something that will take place over time (the winning of a war by the successive outcomes of a whole series of battles). In investment terms this is often a stumbling block, with most investors being obsessed with the cult of annual returns and short-term results, rather than recognising that investment objectives are essentially long term, and that individual annual returns within any given period are at best a distraction, and at worst immaterial, and we will be returning to this point in much more detail at various times.

So, if we can adopt as a working assumption the concept of strategy as an action plan designed to achieve specific objectives over time, then we can turn our attention to what investment strategy is, or should be. There are two parts to the exercise. We need to analyse our environment and identify our objective, and we will be covering this first part of the exercise in this chapter. In the following chapters we will be looking at what steps we might take to achieve our objective.

WHAT IS INVESTMENT STRATEGY?

As we have already seen, strategy does not operate in a vacuum. It can only be formulated with regard to the specific objectives to be achieved, and to the environment in which we find ourselves. The objectives must be precisely laid down so that there can be no possible misunderstanding about what they are, or what has to happen for them to be judged to have been achieved. They must be realistic, having regard to the environment, since there is no point in setting a strategic plan that

cannot succeed, having regard to all the surrounding circumstances. Most of all, they must be *vital*.

It is possible for an investor to think of many things he or she would like to achieve. To plan successfully, however, we need to clear away the mental clutter and identify those things that absolutely *have* to be achieved, things which, if not achieved, would perhaps threaten the very *raison d'être* and survival of the organisation. It is these things (and preferably just one thing, so as to allow total focus upon it) that will drive the investment strategy. This will form the end to which whatever tactics we lay out in our action plan will be the means.

Let us think in terms of an institutional investor. The institution may take many forms, but we will usually be adopting an occupational pension plan as our model for illustrative purposes. What does a pension fund absolutely *have* to achieve? I think the answer is obvious: a pension fund must be able to meet its liabilities to pensioners as they fall due. This is the only thing that matters, and everything else must be subordinated to it. This is the strategic end to which we need to find the means.

The objective has been identified. However, as yet it is stated in very general terms. We need to analyse further exactly what it is that needs to be achieved in order for our strategy to be judged to have succeeded. We need to think about the length of period over which our strategy needs to operate. We should try to understand how the objective fits into its surrounding environment. All of this will, of course, be done where possible by reference to the circumstances of the individual investor.

One final point before we move on. Strategic planning is a rational process. It requires the rigorous application of logic, and the ruthless suppression of emotional responses. Logic can be cruel and can produce unpleasant conclusions, but the fact that they may be unpleasant is not a reason for ignoring them. Throughout this book we will be attempting to find a simple starting point grounded in the real life circumstances of real world investors, and then to use logic to arrive at the correct outcome. There is no room in this process for blind prejudice. In particular, there is no room for unthinking support for, or dislike of, a particular asset class. We must be prepared where necessary to think the unthinkable, and not shirk from questioning accepted notions as illogical, even where these may have assumed the form of religious dogma. I ask you to bear this point in mind particularly when we consider the concept of risk in later chapters.

PLANNING TO ACHIEVE THE OBJECTIVE

1. Real and Artificial Liabilities

A pension fund has a stream of liabilities stretching out before it into time. It seems logical, therefore, to suggest that when a pension fund begins to plan its investment strategy it needs to think in these terms: cashflows over a long period. Unfortunately we immediately encounter an apparent problem here as pension funds do not exist in isolation. They are attached to a sponsoring employer (sometimes several sponsoring employers) and these have issues of their own which require them to take a very different view. It is most important that we should understand why this is, and why we need to keep the two totally separate.

Briefly, sponsors tend to deal in artificial liabilities whereas pension funds, which have the obligation of actually paying liabilities as they fall due, cannot afford to do this. Their planning process must be based on real liabilities. Unfortunately in practice the difference – and, in many cases, the conflict of interest between the sponsor and the pension plan – is often fudged, and the pension plan finds itself looking at discounted figures that are convenient for the sponsor's accounting purposes, but inappropriate for the pension fund's planning purposes.

This is not intended in any way as a criticism of those corporations and public bodies who sponsor pension plans. It is simply that their needs and requirements are separate and different. This ranges from the obvious to the relatively subtle. It is obvious that a company cannot make additional contributions to its pension fund without depriving either commercial projects of working capital or shareholders of dividend income. Similarly a Local Authority, say, cannot increase its pension fund contributions without either diverting money from public spending programmes (health, education, policing, etc.) or raising additional taxes. Thus in both cases the sponsoring organisation faces a conflict between the interests of different groups, to all of whom it owes a separate duty. That is not their fault. It is rather their misfortune that they are required to play God and attempt to resolve these conflicts of interest in the least objectionable way.

It is not so obvious that sponsor and pension plan should view the stream of future liabilities in different ways, because each is subject to different imperatives. For the sponsor, any deficit in the pension plan is both technically and legally a debt owed by the company to the pension fund. Their need is to find a figure to place in their accounts,

in respect of this liability, that is both as low as possible and acceptable to their auditors. This need has been met by the introduction of 'new world' accounting standards (FRS 17 in the UK, but similar schemes have been introduced both in the USA and in some European countries, the latter under the aegis of a European Union standard) which bring consistency and uniformity.

Both of these are admirable qualities in their own way and in the right context – and the world of financial accounting is undoubtedly such a context. Nobody can disagree that it is surely a good thing if all pension fund sponsors are required to account for their pension liabilities in the same way. Unfortunately, however, there is always a trade-off inherent in such situations, and here consistency and uniformity have been achieved at a price. That price is real world accuracy, and it is this lack of real world accuracy that makes them unsuitable for use by the sponsored pension plan.

All these accounting standards work in the same way. They look at the liabilities of the pension fund (and, arguably, not all the liabilities but only those that have already vested) and then discount them, usually by the relevant Government bond (Gilt) rate. Now, that is all very well for accounting purposes. Indeed, it is difficult to think of any way of treating them for accounting purposes that does *not* involve discounting. I have no problem, therefore, with FRS 17 and similar schemes as accounting standards.

Therein lies the crux of the problem, though. I take no issue with them *as accounting standards*, but the problem is that pension funds forget that this is what they are. Worse, it never seems to occur to them that not only are they accounting standards, but accounting standards of third parties. They do not apply to pension funds, but only to organisations that sponsor pension plans. Pension funds should simply ignore them as irrelevant when embarking upon their own planning process.

The conflicts of interest inherent in the system to which I refer above show graphically the importance of sponsor and pension plan being viewed totally separately² and this is a wonderful illustration of one

² Sadly, the UK Government does not agree and has recently passed a new Pensions Act which, rather than sweeping the conflicts away by requiring the appointment of independent trustees and in-house investment professionals, as recommended by the Myners Report, decided instead to perpetuate the existing conflicts by requiring that potentially all the trustees of a scheme should be either employees or directors of the sponsoring company.

specific example of this. A pension fund needs to know exactly what its future liabilities are likely to be. It needs to know, so far as is possible, the actual amounts and dates of future cashflows. It needs to consider future liabilities that have not yet accrued, not just the net present value of present liabilities projected into the future. I hope it will be clear from all this that FRS 17 and the like may do a great job as accounting standards, but as investment planning tools they are useless – worse, misleading.

All of which is rather a shame, because in the talks I have had with pension trustees and managers in the preparation of this book, they all seemed simply to be adopting the sponsor's accounting position and assuming it as their own. It did not seem to occur to them that their responsibility was to their members and to their liabilities, and not to the sponsoring employer. It is not their job to cause the sponsor as little trouble as possible. It is their job to safeguard the pension funds' abilities to pay all future liabilities as they fall due.

In all of these discussions, they were all able to tell me more or less instantly what 'their' obligations were under FRS 17 (these discussions all took place in the UK). Yet none of them was able to say what the real liabilities were, or what shortfall this implied in the overall funding of the scheme. Of course FRS 17 does not state 'their' liabilities at all, but the accounting treatment of the liabilities of the sponsor. My recognition that they seemed incapable of distinguishing between the position of the sponsor (a third party for their purposes as trustees) and the fund, and between an accounting position based on discounting and a real life situation based on actual liabilities, was one of many moments during the preparation of this book when I felt the mental equivalent of a bucket of cold water being poured over my head. (Another was when the NAPF released figures showing that the average UK pension trustee spent just four hours a year discussing investment matters. One pension professional told me: 'I'd be happy to get their attention for half of that'!)

So what we need are the real figures, the actual liabilities, not just a single figure that has been artificially arrived at – 'artificially' in the sense that it has been discounted on some arbitrary basis. I do not mean to imply that all systems that discount pension liabilities are simplistic; far from it. Some consultants have extremely complex models and, indeed, it was these very models that first drew attention to the staggering scale of the deficits to which many pension schemes are currently subject. Yet they all operate by discounting, and as part of

this discounting process they take account of notional investment performance during the period under review. This is the essential and fundamental problem with the system, and the one factor above all that condemns the strategic planning of pension funds as artificial.

We need to plan to achieve our objective. Our objective is to meet our liabilities as they fall due. We also need to calculate what target rate of investment return is required during the period under review to enable us to do that. We then need to plan our asset allocation in such a way that the target rate of return can be achieved. This is the crux of the matter, and where I part company intellectually from all that seems to be happening in practice.

In practice, it seems that the fund's rate of return is assumed to be a 'given', fixed and immutable. Either it is plucked out of the air as an arbitrary figure (for example, the Gilt rate used by FRS 17, or perhaps as some margin over the Gilt rate, or over inflation) or, at best, assessed on the basis of the fund's existing asset mix. This is nonsense. The target rate of return determines the asset mix, not vice versa. The target rate of return is not fixed and immutable; the asset mix operates as a dial on the dashboard which can be turned one way or another to alter the rate of return. It is not an arbitrary number; it can only have any meaning if it is calculated as the rate that will allow the fund to meet its liabilities. The present system is a perfect example of the tail wagging the dog.

Nor is it strategy. We need to be proactive, not reactive. Strategy is about planning how to shape the future as we would wish it to be. The present system consists of little more than being swept along passively by events.

2. Mapping the Liability Cashflows

Let us assume that we have finally got our hands on the real figures. We can now simply map these out into the future. What I have in mind here are the net outflows of the fund.

It may be convenient to think about this as a projection into the future of the fund's financial statements. These will show (1) the level of contributions (and value of transfers in), (2) the cost of administering the scheme and (3) the level of benefits payable (and the cost of any withdrawals). For example, the publicly available accounts of the London Pension Fund Authority for 2003/4 show:

	<i>£000</i>
Contributions and transfers in	141 066
Costs of administration	4 040
Benefits payable and withdrawals	198 780
Net liabilities before investment return	(61 754)

There are two things to note here. Firstly, we have stated the liability position before considering the effect of investment performance. Note please that this is not a term that appears in the accounts, and the omission shows that this is not the way in which pension funds have been encouraged to think about their financial position. This is highly significant because only by viewing accounts in such a way can they be used as a platform for investment strategy, rather than as a matter of financial record.

Secondly, the LPFA is already in a negative cashflow position before the impact of investment performance. In other words, the cost of benefits payable exceeds the value of the contributions which it is receiving. This is in fact typical of the current position of occupational pension funds in the UK, as may be seen from their membership profile. Scheme members may be thought of as ‘active’ if they are still in employment and having contributions made for them. The others are either ‘pensioners’, in which case they are retired and are receiving benefits payable by the fund, or ‘inactive’ (sometimes called ‘deferred’), in which case they have left the employment of the sponsor but have accrued rights that will kick in at some date in the future when they retire. The LPFA’s 2003/4 membership breakdown was broadly typical of UK pension funds:

<i>Members</i>	<i>% of total</i>
Current	29
Inactive	27
Pensioners	44

Thus it is hardly surprising that the cashflow situation is negative. Positive cashflow is attributable to just 29% of the membership, while negative cashflow is attributable to 44%. Given anticipated demographic changes and the fact that there will be a steady movement of ‘inactive’ members to ‘pensioner’ status, then this situation can only get worse.

Now imagine that we can give these figures not just for the current year but for future years as well. Why should this be so difficult? Companies which come to a public stock market by way of a flotation (IPO)