LESSONS FROM CLOSURE: AN ANALYSIS AND COMPARISON OF THE ISSUES FACING CLOSED LIFE FUNDS AND CLOSED PENSION SCHEMES

BY A. C. CAMPBELL, D. C. GRIMLEY, J. K. PALLISTER, A. M. STOKER, A. R. WALTON AND C. A. YIASOUMI

[Presented to the Institute of Actuaries, 22 May 2006]

FOREWORD

An observer of the United Kingdom financial services scene over the last few years will have noticed the rising numbers of closed with-profits funds and final salary schemes closed to new entrants. Closed funds were not previously unheard of, but until recently most life insurance and pensions actuaries would not have come across them in their daily work.

There can be no doubt that, when compared to open funds, the closed variety have different characteristics and their financial management requires different approaches. Life and pensions actuaries tend to operate in their own separate fields, largely oblivious to what their fellow actuaries in other practice areas are doing. The growth of closed funds gives the two major branches of the U.K. actuarial profession an ideal opportunity to explore what we can learn from each other.

I am very grateful to the authors for tackling this subject on behalf of the profession and hope that it will be the first of many examples of useful cross-fertilisation of ideas.

MICHAEL POMERY

KEYWORDS

Closure; Wind-Up; Sponsor Covenant; Funding; Investment; Closed Fund; Life Insurance; Run Off Plan

CONTACT ADDRESS

Mr D. C. Grimley, B.Sc., F.I.A., A.P.M.I., Hewitt, Colmore Gate, 2 Colmore Row, Birmingham B3 2QD, U.K. Tel: +44 (0)121 262 5094; E-mail: dominic.grimley@hewitt.com

1. INTRODUCTION

1.1 Closure has in recent years become a commonplace phenomenon for both life funds and pension schemes. Many of the issues which must be addressed on closure — the effect on the approach to funding and the significance of the solvency position, changes in investment strategy, potential cost pressures from meeting expenses from a shrinking fund, market capacity for transferring risk, potential changes to key decision makers — affect both the life and the pensions sectors.

1.2 The Staple Inn Actuarial Society has had two presentations on closed pension and life funds — 'The Management of the Discontinuance of Large Defined Benefit Schemes' was presented in November 2004, and "Management of Closed Funds" in November 2005. Both of these papers provide useful background to the issues affecting closed life and pension funds, and we have tried to avoid repeating their content here.

1.3 Michael Pomery, in his Presidential Address in 2004 (Pomery, 2004), commented on "the number of parallels which could be drawn between with-profits life insurance and final salary pension schemes." Given this apparent common ground, this paper has been prepared to consider the approaches taken to operating closed arrangements in both fields. The aim is to increase the understanding of actuaries specialising in each field, to place the issues which they face in a different context, and to see if there are ideas that could be transferred from one field to the other.

1.4 The paper considers the reasons why pension funds and life funds may close and then mature, how they are affected by closure, how liabilities can be removed on wind-up, how funding and investment strategies may be affected in the meantime, and who are the main parties involved in the running of these arrangements.

1.5 As United Kingdom actuaries tend to specialise in their own specific field after qualifying, a large part of this paper explains concepts which will already be familiar to actuaries working in the relevant sector. The paper largely provides explanation and comparison to promote discussion by actuaries in different fields, rather than aiming to break new ground in either field. It is hoped that areas for further study may be identified from this paper, and that this may act as a precedent in encouraging comparison of practices in different fields and for cross fertilisation of techniques and ideas.

1.6 In the paper, references to pension schemes assume a defined benefit (DB) arrangement, where the levels of emerging benefits are at a predetermined level (usually relative to earnings measured close to the date when the member ceased to accrue benefits in the scheme, with the benefits subsequently being linked to price inflation or being essentially fixed). References to life funds include all types of business — with-profits, non-profit and unit-linked; life, pensions and health; proprietary and mutual — although some of the issues are most likely to impact upon with-profits funds.

1.7 'Closure' is a term which can have a number of different meanings, and these are considered for the context of this paper in Section 2.5.

2. Background

2.1 Some initial similarities between the issues faced by pension and life funds can be drawn:

— Twenty years ago, life funds and pension schemes were both principally engaged in providing benefits relating to individual expectations (with-profits for life funds, pensions with discretionary increases and retirement terms for pension schemes).
— They have both faced crises from member expectations not apparently being met, which have resulted in changes in regulations, and indeed to changes to the oversight of the Actuarial Profession.

2.2 However, the following key differences apply:
— Pension schemes were historically unregulated (outside of trust law) both in relation to funding and communications whereas life funds have been strongly regulated for a long time. In particular, life funds are required to be fully capitalised at all times, whereas there is no explicit requirement that a pension scheme be fully capitalised (even now), which means that there is a plethora of funding approaches in pensions.
— The security of promised payments in a pension scheme typically depends on the financial position of an external entity (i.e. the sponsoring employer) over which the scheme managers (i.e. the trustees) have a potential legal claim, but not strong control.

2.3 For life funds, the problems relate to expectations rather than to insolvency (although, in the much discussed case of the Equitable Life Assurance Society, this was tied up with a question of what was guaranteed). For pension schemes, the problem is that 'guaranteed' benefits are proving difficult to meet in some cases after legislation which has effectively converted expectations into guaranteed benefits. If pension schemes were assessed in the same way as life funds, they would be mostly judged as insolvent.

2.4 Recent changes in the regulation of life funds have focused on marking to market and giving greater clarity around policyholder expectations, that is benefits in excess of guaranteed entitlements. Changes to the regulation of pension funds have focused on the introduction of the *Pension Protection Fund* (see Glossary in Appendix A) and remedial action to address pension scheme solvency, that is meeting guaranteed benefits.

2.5 *Closure*

2.5.1 The term 'closed' can unfortunately have different meanings attributed to it. A pension fund may reach a stage where new entrants are no longer allowed to join and earn benefits; there may be a later stage where no further benefits may be earned by existing members; and a potential further stage is 'wind-up', when the liabilities and assets are transferred to another arrangement and the pension fund is completely dissolved. If a scheme is backed by a strong employer covenant, then closure to new entrants or to further accrual may not act as a significant constraint on funding and investment policy, and the issues discussed in this paper may not be applicable. However, the issues associated with closure generally concern the majority of schemes, perhaps typically smaller schemes, where the employer covenant does not provide firm backing for the pension promise. Unless otherwise indicated, we refer to cessation of accrual of further benefits by the term 'closed' in this paper. Although not explicitly discussed, for schemes in which there is a small amount of benefit accrual in an otherwise mature pension scheme, similar concerns may apply as those discussed in this paper.

2.5.2 For a life fund, closure means that no further new business is taken on, but further benefits may accrue to existing policyholders and premiums can continue to be received on existing policies, and, indeed, some further individual members may be admitted to accrue benefits under an existing group policy. A life company may operate several separate life funds, and some may be open while others are closed. The wind up of a life fund also involves the transfer of assets and liabilities, although, as discussed later, there may be alternative options for the type of transfer available.

2.5.3 Whilst pension schemes and life funds have been closing for almost as long as they have been around, the focus on closure has increased recently partly as a result of an increase in the number and size of closures in both sectors. The life fund sector has seen the closure to new business of some high profile, household names, such as Equitable Life and Royal & Sun Alliance. Many defined benefit pension schemes have closed to new entrants since the late 1990s. Closure of pension schemes to future accrual has been a more gradual phenomenon, at least among larger schemes. In December 2005, Rentokil became the first FTSE 100 company to announce that it intends to take the step of closing its scheme to future accrual, and a number of other schemes have adopted revised benefit structures to limit the costs of new benefits being earned. It is difficult for surveys of pension schemes to give a complete picture of the extent of closures, as they often focus on larger schemes or schemes that still have a sponsoring employer. The 2004 GAD survey is more comprehensive, and suggests that (for schemes in the private sector, excluding sectionalised schemes) there were approximately 6,300, 8,690 and 3,160 defined benefit schemes which were open, closed to new entrants or closed to accrual, respectively. In addition, there were an estimated 5,800 private sector schemes already in wind-up (this figure includes some defined contribution schemes, and does not allow for many sections of sectionalised schemes that are in wind-up).

2.5.4 Closed life funds, regularly referred to in the press as 'zombie funds', have previously been viewed as the less attractive end of the life fund industry, with companies that specialise in acquiring closed life funds attracting labels such as 'vulture funds' or 'asset strippers'. However, market sentiment is changing, with the new closed fund consolidators finding it easier to raise capital than in the past and rising share prices of listed companies whose main business is the operation of closed life funds.

2.6 *Guarantees in Life Funds*

A life policy is a contractual right, purchased by the member, which generally contains a promise to provide particular benefits at particular points in time or on particular events occurring, such as death, provided that premiums are paid when due. Closure of the office to new business does not give the office any right to alter benefits or reduce guarantees. The level of solvency, whether the office is open or closed, is set such that there is a very low probability of the office being unable to meet the promises made. However, for with-profits business, part of the benefits may be discretionary, and, as a result of some such benefits having been reduced or cut, with-profits funds have been criticised for lacking transparency. The Financial Services Authority (FSA), which is responsible for regulating the life industry, has responded to such criticisms by:

— strengthening prudential supervision through the introduction of a solvency test which includes full allowance for the cost of guarantees and for discretionary benefits; and
— increasing transparency around the management of with-profits funds by asking companies to publish the *Principles and Practices of Financial Management* (PPFM) of these funds (and more recently also requiring a consumer friendly version of the document).

2.7 *Guarantees in Pension Funds*

2.7.1 The level of guarantee backing a pension promise has, until recently, not been clearly defined. Generally, an employer sponsoring a pension scheme was expected to pay contributions so that benefits could be paid as they fell due, but, if the employer ceased to sponsor the scheme, there may be a funding deficit which could ultimately be reflected in substantial benefit reductions for members. In practice, only members of a very small minority of schemes experienced such reductions in the past, but there has been a substantial increase in underfunded unsponsored schemes since the 1990s. Partly because of this, legislation has introduced and gradually strengthened a requirement for a final employer contribution when sponsorship ceases, so that the full cost of securing benefits on a guaranteed basis (under an annuity contract) now has to be funded, to the extent that the employer can afford this.

2.7.2 A key change to pension schemes over the last 20 years has been the replacement of discretionary benefits by guaranteed benefits, in particular increases to pensions in payment and in deferment. This change has often been presented to employees as part of their remuneration package, and has acted to make pension benefits appear much more like a contractual right and to increase the common ground between a pension fund and a life fund.

3. Reasons for Closure

3.1 *Triggers for Closure of Life Funds*

The number of funds closed to new business has increased over the last few years, especially with-profits funds. This has occurred partly as a result of the falls in equity markets in the early part of this decade and falls in interest rates at the end of the last one, and partly owing to with-profits generally falling out of favour with policyholders and advisors. The decline in popularity of with-profits has occurred on the back of falling bonus rates, the imposition of penalties on early surrender of policies and, for many funds, a shift in underlying investments away from equities. Some of those offices closing to new business have been high profile household names. There are many reasons for closure which can, but not always, result in the office having insufficient capital to write new business or not being able to write new business profitably. The underlying drivers for closure include:

— *changes in legislation or regulation*; e.g. the life fund loses its usual distribution channel for selling policies, or the capital requirements for the prime type of business become uneconomic to sustain;
— *changes in economic circumstances*; e.g. the company is unable to write policies profitably due to compliance or distribution costs or cannot write policies without adversely affecting existing policyholders;
— *changes in tax*; e.g. the tax advantages afforded to holders of certain policies may be removed, hence removing the market to sell such policies;
— *a management decision*; this may have been driven by one of the other causes such as changes in legislation, or may be caused by a change in senior management who wish to take the business in a different direction, or feel that life assurance is no longer part of the business's core operations; and
— *demutualisation and/or a requirement to* distribute the *inherited estate* (refer to the Glossary in Appendix A); in such cases new business may be written through another life fund within the group.

3.2 *Triggers for Closure of Pension Schemes*

3.2.1 The different forms of closure for a pension scheme — from closure to new entrants through closure to benefit accrual and ultimate wind-up — have tended to happen in response to events, rather than with much advanced planning.

3.2.2 Many employers in the private sector have closed their defined benefit (DB) schemes for new entrants, and have often set up a new defined contribution scheme as a replacement vehicle. This change has tended to occur for the following reasons:

— Legislative changes — the 'bells and whistles' attaching to a promise of a given amount of pension have been added to by successive legislation between 1984 and 1997, adding compulsory pension increases before and after retirement, adjustments to ensure equality of treatment and compulsory death benefits for most schemes. This has made the DB promise too expensive for some employers.
— The complexity of administration has also increased with legislative change and with the added issue of 'contracting-out'. This is the process whereby members give up an entitlement under the State Second Pension arrangement (this was formerly referred to as the State Earnings Related Pension Scheme, or SERPS) as their company pension schemes' benefits are intended to provide alternative provision. Contracting-out entails the scheme meeting specific requirements over the form of benefits offered, which have varied over time.
— Companies have also quoted the removal of tax relief on U.K. equity dividends as a major contributory factor in pulling out of DB provision, although the effect of this is difficult to ascertain.
— Cost control — the oft stated reason for establishing a defined contribution (DC) scheme has been to provide greater predictability of cost. However, in many cases, the change has also led to a substantial reduction in employer contributions towards new benefits. Members may not understand the impact of reduced employer contributions on their likely benefits (particularly as many employees underestimate the value of the final salary pension 'promise').
— Lack of competitive pressure — once rival firms stop offering DB to new hires, a company can follow suit without necessarily harming recruitment prospects.
— Adverse funding experience and recognition of the financial risks involved — the risks associated with pension promises were partly hidden when scheme costs were at least temporarily mitigated by positive investment experience or by profits from early leavers.
— Changes to funding practice and accounting standards have made the volatility of scheme funding positions more apparent, and have also moved liability valuations for company accounting purposes closer to a 'mark to market' basis.
— There has been a general move towards companies identifying and assessing risks in their businesses more thoroughly as part of corporate governance.
— Corporate transactions — these can lead to benefit reviews and to harmonisation of benefits for two previously separate employers; they can also lead to analysis of pension risks.

3.2.3 Whether closure to future accrual is possible can depend on the particular scheme's documentation — closure to accrual without triggering wind-up may not be permitted, or may require trustee consent. This can give the trustees a difficult decision, as wind-up would trigger the ability to claim a 'debt on the employer' — a one-off final contribution in respect of deficit funding, which may cripple the employer. Regulations on funding effected in 2005 are, however, expected to make it easier for an employer to stop further benefits being earned.

3.2.4 Current legislative changes are expected to increase significantly the appetite of many employers to close and, if practicable, to wind-up their defined benefit schemes:

— Fundamentally, the promise to provide a given level of pension became a guarantee because of changes in legislation effected between 2003 and 2005, which require the cost of securing benefits with an insurance company to be paid if an employer wishes to cease to sponsor a scheme (assuming that the employer can meet this cost);

— From 2005, levies became payable to fund the *Pension Protection Fund,* and from April 2006 these take into account the funding position of the scheme and the perceived likelihood of the employer becoming insolvent. These new levies can be volatile and will vary dramatically among schemes. From the viewpoint of employers which are struggling to meet the costs of removing a deficit (presently the majority), the *Pension Protection Fund* levies plus deficit funding can create a 'double whammy' of costs while the deficit persists.

— A new funding regime monitored by *The Pensions Regulator* (see Glossary) is being introduced, and formally takes effect for each scheme when an actuarial valuation falls due between September 2005 and August 2008 (valuations are traditionally only triennial, although annual monitoring is also being introduced). The presence of the Regulator is already encouraging faster deficit repayments and alternative security, such as charges on employer property. Members will start to receive annual funding statements from 2006 which are likely to provide much more information on scheme deficits than they have had before, which will also add pressure to the pace of funding.

— The *Pensions Regulator* now has powers which are largely untested to seek additional funding for a pension scheme from companies associated with the sponsoring employer or even, in some circumstances, from individuals. Employers can ask the *Pensions Regulator* to give clearance to certain corporate transactions and restructuring to give certainty that the *Pensions Regulator* will not subsequently take such action. However, the *Pensions Regulator* and trustees (who normally must approve a clearance application) may use this to negotiate enhanced funding or security for the scheme.

3.2.5 These changes, together with the trustees' existing power to set investment strategy, is making a defined benefit obligation now seem to many employers — smaller employers in particular — like a cost over which they have increasingly little control and which may damage or destroy their businesses.

3.3 *Similarities Between Life Funds and Pension Schemes*

3.3.1 *Timing of closure*

Closures typically happen in response to events rather than with much advance planning. In general therefore, both life and pension funds close too late (i.e. if the decision were taken earlier, then the financial position may well have been better). The option to close should be considered more thoroughly and realistically throughout the time when the fund is open and the true costs and the benefits of remaining open considered.

3.3.2 *Effect of equity falls*

Life funds and pension schemes have both suffered from the effects of a three-year spell of falls in equity values in the earlier part of this decade. In the case of with-profits funds, combined with the new regulations that came into force during the same period, the impact was to reduce payouts and to reduce equity investment to protect the solvency of the fund, particularly in the light of regulatory change. For pension schemes this has caused large deficits and some reduction in the allocation to equities.

3.3.3 *Member expectations*

Pension schemes have had to cope with a change in expectations of the level of benefits which are effectively guaranteed due to changes in regulation. Similarly, with-profits life funds have had to cope with a reduction in discretion over the management of these funds, due to the introduction of increased regulation and disclosure about the way in which funds are managed.

3.3.4 *Changes to the legislative framework*

3.3.4.1 Both life companies and pension schemes have faced significant regulatory change, leading in the case of pension schemes to an additional layer of supervision perhaps comparable with that provided by the FSA.

3.3.4.2 Legislative change is a key uninsurable risk for pension schemes and life funds. For pensions, the scope of a pension promise has been increased without the sponsor's consent. This reflects the wide social issues associated with retirement benefits, and acts as a huge disincentive for employers to provide any certainty to employees as to their retirement benefits. However, there is an argument that the scope for further Government intervention in employer pension provision within defined benefit schemes is reducing, although employers may be reluctant to test this. Life companies running with-profits funds have had discretion removed, as discussed above, and some would argue that the changes to the prudential regime have forced companies to take actions which have not been in customers' interests (such as a move out of equities and into bonds).

3.4 *Differences Between Life Funds and Pension Schemes*

3.4.1 *Supervision*

The regulation of pension schemes has seen substantial change in even the last two years, adding an additional layer of supervision which was perhaps already more prevalent for life funding under the supervision of the FSA.

3.4.2 *Risk assessment*

Appreciation of the financial risks involved in long-term benefit promises has, perhaps, been slower to develop for some key stakeholders of pension schemes compared with life funds, although, for the latter, this may reflect relative recent improvements.

4. What Happens on Closure

4.1 *Closing a Life Fund*

4.1.1 Once the decision to close to new business has been made, the management need to have a change in mindset from seeking to acquire new business to efficiency initiatives directed towards expense reduction and stability, whilst ensuring that the business is still run efficiently and compliantly. In the past, existing customers may have been unaware that the company with whom they took out their policy is no longer seeking new business, and in many cases this is still true. No formal announcements were necessarily made, and certainly none were made in advance of closure: awareness may only have come from reading the financial press. Management of the closure process and run off of the remaining business was, and still is, the responsibility of the management of the company.

4.1.2 With the increased interest in both with-profits business generally and closed funds, the Financial Services Authority (FSA) has recently implemented new regulations with regards to the closure of with-profits funds. These include rules on notification of closure to the with-profits policyholders and to the FSA (within 28 days) and submission to the FSA of a '*run off plan*'. Details of the *run off plan* are set out in the Glossary in Appendix A. The purpose of the rules is to ensure that holders of with-profits policies are aware of the status of the fund, the implications of closure and the likely impact of closure on their policy, so that they can make an informed decision on continuation of their policy. The *run off plan* is integral to this to demonstrate to the FSA that the management is aware of the issues associated with running off a closed with-profits fund in a solvent manner whilst treating customers fairly and equitably.

4.1.3 Regulations relating to closure to-date have concentrated on with-profits funds due to the amount of discretion which the managers of life funds have in managing such funds. No regulations exist as yet in relation to the closure of non-profit funds, but running such funds and planning the timing and method of wind-up of them is just as important as for with-profits funds (though it should have less impact on policyholders).

4.2 *Closing a Pension Fund*

4.2.1 A formal consultation process is generally required when benefits cease to accrue in a pension fund. There have been several recent cases where this has had a significant effect on employee relations. The level of risk in the scheme's investment strategy and deficit funding periods become key focuses for the trustees, who may gain the power to move the scheme to wind-up at a future time of their choice once benefits have completely ceased to accrue. This brings a number of potential trustee/employer conflicts into play.

4.2.2 The legislative requirements on the scheme are essentially unaffected by closure (until the wind-up of the scheme commences). There are no specific additional funding or investment regulations triggered until wind-up subsequently occurs, and few specific references to closure in professional guidance. As mentioned in later sections, closure will, of course, tend to affect advice given on funding and investment.

4.2.3 Fundamentally, the scheme is still an 'ongoing' entity and the running of the scheme is affected more by the strength of the employer, and, in particular, the speed at which any deficit can be funded and the level of investment risk which the trustees — consulting with the employer — are comfortable to take.

4.2.4 The employer may increasingly look for options which remove liabilities when the scheme becomes closed, such as actively communicating the transfer of benefits, the exchange of small benefits for cash or, in some cases, the voluntary surrender of benefits. There are limits on the scope of such activity under regulations and trust law, particularly as the trustee has a duty to protect benefit entitlements.

4.2.5 For pension schemes, closure has tended to bring to the fore issues which may have been ignored previously by some parties, such as:

— how the size of the deficit against the cost of securing benefits with annuity policies compares with the strength of the employer covenant;
— the level of volatility in funding implied by the mismatches in investment strategy, and the probability of deficit funding requirements reaching a level which is too high for the employer to accommodate;
— the need to think about an 'exit strategy' — such as securing annuity contracts or scheme merger — rather than assuming in funding

projections that the scheme will continue until all benefit promises are met;
- the long-term significance of mortality experience for funding;
- how the level of appreciation of employees of their pension benefits compares with the amount of financial risk being taken by employers making DB promises; and
- historic data maintenance.

4.2.6 The first three of these factors highlight gaps in funding and investment strategies which would not now be expected with the management of a closed life fund. These gaps can exacerbate conflicts between trustees and employers.

4.3 *Differences Between Life Funds and Pension Schemes — Run Off Plans*

4.3.1 Although closure changes the focus of both life companies and pension schemes towards run off and an ultimate exit strategy, there is no formal requirement on pension schemes to produce a run off plan.

4.3.2 Recent regulations on closure of with-profits funds mean that run off and associated issues related to closed funds need to be investigated and understood at the time of closure to a greater extent than previously. This understanding is just as important for non-profit funds and pension schemes. One would hope that the existence of these regulations does not postpone closure for longer than necessary because of a reluctance to prepare the run off plan or through a realisation of the implications and problems of closure. Indeed, an understanding of the issues of closure should be appreciated well before any decision to close is even contemplated.

4.3.3 A pertinent question is what a run off plan would look like for a closed pension scheme. It could give rise to a future discretionary Code of Practice from the Pensions Regulator. A detailed action plan/timetable is already common practice for pension scheme wind-ups and Pension Protection Fund entry cases, but not for the earlier stages of scheme closure.

5. Wind-Up

5.1 At some point, it becomes inevitable that a life fund or pension scheme cannot continue, and that it needs to transfer its obligations to policyholders or members to another legal entity. For the purposes of this paper, this process is defined as winding up the fund.

5.2 *Winding Up a Life Fund*

5.2.1 Provided that they are well managed (especially in respect of expenses), closed funds can run for a long time until they become too small to be viable to be run on a stand alone basis. There will come a time when the fixed costs of running a fund will be too disproportionate, and even variable costs may be difficult to keep under control. At this point the fund will have to be wound up, and the contractual promises made to policyholders will need to be honoured by passing these on to someone else.

5.2.2 Wind-up of a fund is not necessarily contemplated at the time when the policies are sold. In order to wind up a fund a court order will normally be required, necessitating a legal process. Such a process will involve an independent expert, who will opine on whether the security and benefits of both the closing fund and the accepting fund are not adversely affected. FSA approval will also be required.

5.2.3 'Wind-up' in relation to a life fund means the process undertaken so that the benefit promises made by the current fund are replaced by the same or similar promises made by an alternative fund. The alternative fund may be within the life company or may involve transferring the business to another company. In general, the benefits and guarantees to be provided cannot be less than those provided by the original fund without either policyholder agreement or a court order. In the case of with-profits policies, there may be a change in the benefits provided, but compensation would have to be paid for any loss of guarantees.

5.2.4 For with-profits funds, the time may come when the returns are too volatile for the fund to continue on a with-profits basis, even once all assets are in fixed interest securities, due to fluctuations in expenses, mortality and other factors. In these circumstances, the fund could be converted to non-profit and run off on this basis, until that too becomes too small to be viable. For with-profits policies the wind-up could take one of several approaches:

— Reinsure the business into another with-profits fund, allowing the policies to retain greater exposure to risky assets such as equities and remain with profits for longer.
— Convert the policies to a non-profit basis with guaranteed bonuses. This approach is more capital intensive, as the guarantees will have to be reserved for. Where the capital for the support is being provided from outside the fund, the cost of the capital may have to be paid for by the with-profits policyholders.
— The policies could be converted to unit-linked policies, enabling the policies to continue to benefit from some equity exposure, but this may be at the cost of losing some of the guarantees. Several companies have investigated the possibility of such an approach, but no large scale examples of a conversion to unit-linked policies exist.
— Transfer the business to another fund, either remaining with-profits or possibly converting to non-profit or unit-linked at the same time, using a *Part VII Transfer* under the Financial Services and Markets Act 2000 (refer to the Glossary in Appendix A).
— If the with-profits fund contains non-profit policies (such as annuities)

which are expected to mature later than the with-profits policies, then a sale or securitisation of the non-profit business may help in ensuring that the right policyholders get access to the profits emerging from the business.

5.2.5 For non-profit or unit-linked business there are fewer options on wind-up. The options available comprise:

— Reinsure the business into another fund or company. The ceding company would still need to maintain some of the regulatory capital margins previously required on the now reassured business, and would remain ultimately responsible for all aspects of the business, including the management and administration.
— Transfer or sell the business to another fund or company. Under this approach the vendor no longer needs to retain the regulatory capital and would also no longer have to spend time managing the remaining business.

5.2.6 Even by reinsuring the business, whether it is with-profits or non-profit or unit-linked, a sale or transfer at some point may not be avoided, as there will still be solvency margin and fixed costs to be covered by the wholly reinsured fund. Also, the wind-up will incur costs, administrative, legal and managerial, some of which will be fixed in nature. This needs to be borne in mind when considering the appropriate time to wind-up or to sell on the business, as these costs will be borne by both parties to the transaction.

5.3 *Winding Up a Pension Fund*

5.3.1 At the point of wind-up, a process starts which culminates in assets and liabilities being removed from the pension scheme, by securing members' benefits in other replacement pension arrangements, normally annuity contracts. Investments are commonly moved to bonds and cash at the start of the wind-up, which can represent a sudden significant switch of assets.

5.3.2 Wind-up can be triggered by several events, including:

— *Funding position* — the closed scheme's funding level has reached the point where the securing of benefits under insurance contracts becomes affordable. Although this should, perhaps, be the most natural wind-up trigger, this has been comparatively rare — schemes only tended to have sufficient assets to secure all guaranteed benefits in earlier periods when the level of guarantees were relatively low and employers still saw DB schemes as permanent parts of their employee benefits.
— *Insolvency* — the company ceases trading with insufficient funds to address the pension deficit. This had been a common trigger for wind-up. For insolvencies occurring from 6 April 2005, the wind-up process will often be replaced by admission to the new *Pension Protection Fund*, which will take on the scheme's assets and liabilities with the aim of

providing members with a minimum proportion of their defined benefit entitlement. Where the scheme is sufficiently funded to provide higher benefits, wind-up will instead proceed outside of the *Pension Protection Fund*.

— *Affordable corporate decision* — the employer decides to wind-up the scheme and pay in sufficient funds to secure benefits in full. This typically occurs where the scheme size is much smaller than the employer.
— *Historically, an opportunity to compromise benefit promises* — until June 2003, the statutory final payment by an employer (the 'debt on employer') was based on liability calculation below annuity buyout cost. This therefore left, legally, a substantial deficit within the scheme against the cost of buying out the benefits with annuities. This was only met if the employer chose to do so or if the trustees had additional powers under the scheme's governing documentation. Hence, some employers terminated their DB schemes and 'walked away' without fully addressing a scheme deficit. This created much negative press coverage, as DB benefit promises have often been presented as 'guarantees', with no warning to members of the potential consequences of wind-up. Changes in legislation, which took effect between 2003 and 2005, ensured that the full cost of securing benefits with annuities is payable by an employer when wind-up or corporate insolvency occurs (although there are still some flaws in this funding requirement from the viewpoint of member protection, not least that the pension debt forms an unsecured creditor of the employer, and so may not, in practice, be recovered in full).

5.3.3 At present, many employers cannot afford the debt payable on wind-up, and so new wind-ups may become rarer, at least while deficits are being addressed. It is possible that the 'next generation' of wind-ups may hence be better planned, with better funding levels, a reserve for wind-up expenses and a more staged approach to investment strategy.

5.3.4 Where the scheme's sponsor is part of a group operating several DB schemes, a scheme merger may occur instead of wind-up.

5.3.5 Pension scheme wind-ups tend to take some years to progress, with the main sources of delays being:

— The complexity of pensions legislation on wind-ups, which has regularly been amended.
— Data cleansing, such as reconciling certain scheme records with those of the Inland Revenue and tracing members who have lost contact with the scheme. The quality of data in more historic member records can vary dramatically — these records may not have been updated for many years and the administration staff or systems may have changed several times in the intervening period.
— Choosing the annuity provider, and agreeing terms, for securing benefits. In recent years there have only been two active players in the

bulk annuity market, but this has recently increased. Further entrants are expected, and some insurers are considering re-entry in an initially limited capacity. For very large schemes this could mean that overall market capacity remains a potential issue, at least in the short term.
— Pursuing funds from previous employers. A debt is payable immediately, but employers have sometimes negotiated staged payments on the grounds of affordability; where insolvency occurs, delays running into years can often ensue.
— Dealing with member complaints and queries, which may partly relate to the loss of their job as part of an insolvency event which triggered the wind-up. These queries can take some time to resolve, particularly when they become formal complaints which may involve the scheme's internal dispute resolution procedure, the Pensions Advisory Service and the Pensions Ombudsman at different stages.

5.3.6 Education for trustees and, ideally, members on the complexities of pension scheme wind-ups involves a steep learning curve. Most of the responsibilities for the wind-up process lie with the trustees rather than with the employer. Key points to appreciate include:
— that wind-up may take several years and the management of the scheme may become increasingly complicated in the meantime;
— that, for members, a shortfall in assets can mean that their DB promise is effectively replaced by an asset share, and so suddenly looks more like a DC entitlement, with the sharing of the assets biased towards some groups of members; and
— that trustees tend to be obliged to secure benefits under bulk annuity contracts on terms which may be perceived as being poor value by deferred members, because they involve the purchase of very long-term guarantees. Although deferred members do have the option of transferring funds elsewhere, most typically do not act on this.

5.4 *Market Capacity*

5.4.1 There is an established market for buying closed life funds, although, until recently, the market for large companies has been limited. Sales have generally been at a discount to the embedded value of the business (i.e. the present value of the future profits of the existing business) held in the vendor's books, but again it is only recently that shareholders have come to terms with a sale being at such a discount. Sales of pension schemes have only occurred where there is also a sale of the sponsoring employer.

5.4.2 At present the only exit route for most pension schemes is wind-up. Employers are increasingly asking whether there should be a more active market for buying pension scheme liabilities, perhaps in the same way that there has been for life funds. The *Pension Protection Fund* is effectively providing an alternative wind-up vehicle — albeit not one available by choice.

5.4.3 Occupational pension schemes have operated for decades without an option to reinsure pension risks other than through purchasing annuities.

5.4.4 Several employers have commented that they would like a less expensive solution than those offered by insurance companies under annuity contracts, but this may entail the use of arrangements which do not have to meet FSA solvency requirements leading to either lower guarantees for members or default risk.

5.4.5 This may offer an opportunity for other organisations, perhaps without the capital requirements of insurance companies, to offer innovative solutions to allow pension schemes to deal with their residual obligations, such as:

— employers considering the possibility of moving pension risks to a separate company subject to the approval of the *Pensions Regulator*;
— insurers considering mortality insurance products or staged buyout policies — the likely development of new securities to address mortality risk is analysed in Blake, Cairns & Dowd (2006) — these securities do not discharge the scheme's liabilities; and
— new entrants to the buyout market beyond annuity providers.

5.4.6 There has been some interest in investment banks looking at defined benefit pension risk products for the U.K. (the aggregate annuity buyout liabilities being estimated as in excess of £1,000 billion.). There are also a substantial number of different parties reported in the press as being in the process of constructing alternative buyout products. The main area of opportunity may relate to 'deferred members' — these are members not accruing benefits and not yet in receipt of pension, so there is a potential investment period for assets in respect of deferred members before any benefits are drawn. The use of organisations not holding the same level of capital required by insurance companies would expose pension schemes to a higher risk of failure than if benefits were transferred to an insurer, and may not provide a full discharge of liabilities.

5.5 *Planning for Wind-Up*

5.5.1 Leaving a life fund too long before it is finally wound up could be likened to a closed pension scheme with a deficit — such a situation could exist where a proper estimation of future costs, including those associated with winding up the fund, exceed the capital held and the margins within the business. At this point, the fund would become insolvent.

5.5.2 Consideration should be given to the extent to which closed pension schemes plan for future wind-up as part of their operation. This may entail for example:

— a gradual change in investment strategy, towards bonds and cash instruments;

— a funding target which allows for meeting the costs of annuity products after a given point in time;
— data cleansing and resolution of any historic uncertainties over benefit entitlements at an earlier stage than wind-up, when queries arising may be easier to resolve;
— advance reserving for future administration and other running costs;
— regular review of the extent to which discretion is exercised for any benefits provided on a discretionary basis;
— regular review of how cost neutral the pricing of any options which members may take (to exchange pension for cash, for instance, or vice versa) appears in prevailing market conditions; and
— most of all, continual monitoring of the employer covenant. This is discussed in the Sponsor Covenant Working Party Final Report (Sponsor Covenant, 2005).

5.6 *Similarities Between Life Funds and Pension Schemes — Wind-Up Security*

The objectives of the wind-up of life and pension funds are the same, i.e. benefit provision is transferred from one party to another. This does not mean that security issues can ever be completely removed. The security of life assurance policies is maintained by the security of the company to which the liabilities are transferred. This is assessed by the opinion of an independent expert who is appointed to report on the transfer. In extremis, protection is also provided under the Financial Services Compensation Scheme. For pension schemes, the employer covenant is replaced by the security of the life company writing the buy-out annuity. In practice, the value of the employer covenant is often lost, perhaps through insolvency, before wind-up occurs.

5.7 *Differences Between Life Funds and Pension Schemes — Funding Position on Wind-Up*

The final funding position of pension schemes in wind-up varies dramatically from one case to another, with many having entered wind-up with severe under-funding. This contrasts with life funds which are generally funded to a level that allows guaranteed benefits to be secured in full.

6. Valuation and Solvency Management

6.1 *Life Fund Solvency*

Life companies are expected to maintain sufficient assets to cover their liabilities at all times. The European Union and FSA are working towards a three pillar approach to prudential supervision of life companies, similar to that used for banking supervision.

— *Pillar 1* — the minimum capital requirements firms are required to meet;
— *Pillar 2* — the supervisory review process; and
— *Pillar 3* — market discipline arising from disclosure of risks and capital management.

6.1.1 Companies are expected to hold sufficient capital to meet the solvency test under Pillars 1 and 2 at all times. They are also expected to disclose sufficient information to allow the market to assess the company's solvency position. These are described in more detail in Appendix B.

6.2 *Effect of Closure on Life Fund Solvency Requirements*

6.2.1 Pillar 1 — the statutory valuation requirements for a life fund apply irrespective of whether the fund is open or closed. As a result, closure does not lead to any material change in the valuation approach or assumptions for Pillar 1. There are, however, some areas which should be considered on closure, as described below.

6.2.2 Pillar 2 — the starting point for the supervisory review process is the company's own assessment of the capital required to ensure that realistic liabilities can be met after one year in 99.5% of possible future scenarios. This is described as the Individual Capital Assessment (ICA). Following closure, the risks associated with writing new business are largely removed, but new risks, such as the risks associated with outsourcing administration, may be created. These changes to the risks of the fund are likely to impact on the amount of capital required under Pillar 2.

6.2.3 The FSA is now encouraging companies to consider longer durations, i.e. how much capital is required to ensure solvency over the run-off period (on a consistent basis). This is particularly relevant to closed life funds, which do not have the opportunity of increasing capital through the writing of new business and which face the challenge of maintaining sufficient capital for solvency purposes, whilst, at the same time, being equitable to different groups of policyholders.

6.2.4 Pillar 3 — companies need to maintain a certain level of financial strength if they are to attract new business. Once the company has closed to new business, this market discipline may be weakened, although closed fund consolidators may want to demonstrate capital strength as part of their proposition to potential sellers. Indeed, proprietary owners of closed funds will aim to release capital as quickly as possible. The owner of a closed fund is also far less likely to put new capital into the fund than the owner of an open fund. Hence, the FSA's Pillar 2 assessment is likely to be the most onerous of the three pillars for a closed fund, whereas, for an open fund, commercial drivers may mean that Pillar 3 is the most onerous.

6.2.5 Insolvency test — for a company which is failing to meet the regulatory solvency tests and is therefore under regulatory supervision, another solvency test is important, namely solvency determined in accordance with the Insolvency Act 1986. Such a company will almost certainly have already closed to new business. Under the insolvency test, a comparison must be made between the realistic value of guaranteed liabilities and the realistic value of assets. For the purposes of testing insolvency, it is only guaranteed benefits which have a value, i.e. discretionary future regular and terminal bonuses can be ignored. This contrasts with the Pillar 1 solvency test, which includes the value of discretionary benefits.

6.2.6 In the situation where it is unlikely that guaranteed liabilities can be met as they fall due, then — if liabilities cannot be reduced in some way — the life fund must be wound up. Wind-up is discussed in the previous section.

6.3 *Pension Fund Solvency*

6.3.1 In contrast to life funds, pension funds need not have sufficient assets to cover their liabilities. Instead, pension schemes have generally been funded under an approach which implicitly assumes that the scheme will continue to operate until all benefits have been paid, and the valuation of a pension scheme has predominantly focussed on establishing the future employer contribution rate. The future solvency of the pension scheme is therefore inextricably linked with the solvency of the employer and its willingness and ability to continue to support the pension scheme.

6.3.2 Independent assessment of sponsor covenant has only very recently started to become part of many trustees' management of pension schemes. This assessment may only indicate an employer's ability to pay a given level of contributions over a given period, which may be much shorter than the term for repaying an existing deficit.

6.3.3 A general outline of approaches to pension scheme valuations and solvency is included in Appendix C. There is no prescribed methodology or valuation basis for pension funds, but a code of practice set by the *Pensions Regulator* places some limitations on funding approaches under the new 'scheme-specific funding regime' introduced in late 2005:

— The *Pensions Regulator* has confirmed that "each scheme needs to take account of its particular circumstances, because there is no standard funding formula" (Section 2.3.1 of the Regulator's October 2005 Consultation Document "How the *Pensions Regulator* will regulate the funding of defined benefits") and is not expecting funding targets based on the full cost of securing benefits under insurance contracts (the 'buy-out' liabilities).

— The *Pensions Regulator* will undertake monitoring and may intervene in schemes which it perceives as having higher risk. Two measures which will be used to filter schemes that require closer attention are the funding target versus the annuity buyout cost (a funding target of less than 70% annuity buyout cost has been indicated) and the period over which the shortfall is been made up (ten years or more has been indicated as likely to attract attention).

6.3.4 The funding target for nearly all schemes is substantially less than the cost of securing benefits in full by buying them out with an insurance company on wind-up of the scheme. Some of the difference between the funding target and the cost of securing benefits with an insurance company can be explained by the following observations:

— Unlike life funds, pension funds generally reserve on a prudent best estimate basis, i.e. they do not hold reserves against adverse variations. These are assumed to be met by the employer through increased contributions as and when they arise.
— Explicit mismatching reserves, such as those held by life funds, are still uncommon.
— Unlike life funds, pension funds often do not reserve fully for future expenses in respect of the accrued liabilities. The employer is assumed to continue to pay for expenses.

6.3.5 Currently, many schemes have a substantial deficit against their funding target. This means that they are a long way from full coverage of a buyout basis, even without any margins against adverse experience.

6.3.6 There are no additional statutory requirements imposed by closure to new entrants or to future accrual. However, the focus on ongoing funding rather than on the solvency of pension schemes raises several concerns when closure is considered:

— *The funding target* — As the scheme passes through stages of closure, the case for making allowance in the funding target for meeting the costs of securing benefits on wind-up at some future stage becomes more appropriate. This could be achieved approximately if an assumption is made about the future timing of wind-up, by lowering the discount rate used in years beyond a specified initial period. This approach is not commonplace.
— *Future accrual and ageing* — The future service contribution rate needs to allow sufficiently for the effect of the expected ageing of the membership, which will normally accelerate on closure to new entrants. This may require a step increase in contribution levels on closure.
— *Deficit funding* — The method of funding any deficit may need to be reconsidered on closure. For an ongoing scheme this is usually expressed as a percentage of pay, and added to the future service contribution rate payable by the employer. There is a risk in a closed scheme that this rate becomes very volatile. The Code of Practice for the new funding regime recognises this, and suggests that any additional funding required to meet a deficit is expressed as capital amounts. More fundamentally, the focus may need to switch from meeting the funding target to meeting the buy-out cost of benefits. For monitoring employer covenant, the focus may, in some cases, eventually need to switch from the employer's ability to

meet a given level of cashflow over several years, to the recoverability of the buy-out cost in the event of forced insolvency.

6.3.7 *Market discipline*

6.3.7.1 It is worth noting that, as the market begins to better understand the long-term impact of poorly funded pension schemes, pension scheme funding is beginning to impact upon the market capitalisation of companies. The existence of deficits can also increasingly hamper corporate transactions, encourage greater interference from the Regulator (particularly as the scheme matures), and are bad for employee relations, especially as members are due to receive more information on funding levels from 2006.

6.3.7.2 Some employers may also speed up funding to reduce the *Pension Protection Fund* levies, which are largely risk based from April 2006, and so will reduce as the funding position improves.

6.4 *Key Assumptions*

6.4.1 *Discount rates*

6.4.1.1 Ongoing pension schemes have typically used a discount rate which takes some advance credit, at least in the pre-retirement period, for the anticipated out-performance of their assets over gilts. Investment in equities has traditionally been viewed as a very approximate hedge against the salary linked liabilities of active members. However, as a closed scheme matures, it is likely to look to invest an increasing proportion of assets in gilts or highly-rated corporate bonds (fixed or index-linked) to match its pension liabilities.

6.4.1.2 Although the financial assumptions are typically set by reference to current market rates, the additional return allowance in the discount rate tends to be chosen more subjectively, sometimes with reference to the scheme's actual asset allocation strategy.

6.4.1.3 Prudential regulation prescribes the discount rate used for life company valuation, with the discount rate being based on the yields on the underlying assets adjusted for prudence. Credit is taken for higher yields on corporate bonds than gilts, but allowance must be made for default risk. Under the realistic peak, with-profits liabilities are typically valued as the asset share plus an adjustment for the market consistent value of guarantees.

6.4.2 *Mortality*

6.4.2.1 For pension schemes, post-retirement mortality assumptions tend to be the most important demographic assumptions, and need to be continually reviewed. Few schemes have sufficient scheme-specific mortality data to vary from the use of standard tables, however the speed at which the latest standard tables are adopted can vary from scheme to scheme, particularly as formal valuations are normally only triennial.

6.4.2.2 The CMIB (Continuous Mortality Investigation Bureau) is conducting its first investigation into the mortality experience of occupational pension schemes. The initial results appear to indicate that the mortality of pension schemes varies significantly from scheme to scheme, but that it is overall worse than that experienced by life office annuitants (although the occupational pension scheme data analysed so far may be biased by the inclusion of a number of large blue-collar schemes). However, at present, it is unclear how much of this difference in mortality experience is reflected in the annuity rates charged to pension schemes when they ultimately buy-out benefits.

6.4.2.3 Differences in mortality assumptions between life funds and pension funds can be a cause of strain on the closure of a pension fund, unless schemes have already taken action to secure annuities previously for substantial parts of the membership. The speed at which the post-retirement mortality assumptions are brought into line with those used in insurance company rates, which would entail allowance for a margin for risk, is an issue for pension scheme funding.

6.4.3 *Expenses*

6.4.3.1 As noted above, some pension schemes do not fund to meet future expenses. Running costs tend to be incorporated explicitly into contribution rates payable, but only a few schemes hold an adequate reserve in respect of the future costs of administering benefits already earned. Where a reserve is held, it is not always as high as the reserve that would be set aside to meet costs on wind-up. This suggests a source of strain on wind-up. However, not all schemes wind-up ultimately — some merge into other schemes of the employer — and some schemes will only be able to wind-up and secure benefits outside the scheme when the size of the scheme diminishes substantially from the current level.

6.4.3.2 Since life funds open to new business are required to hold an expense reserve to cover the potential that they may close in the 12 months following the valuation date, closure should produce little impact on the liabilities of the life fund if the expense reserve held for closure to new business was adequate. However, in calculating this reserve, companies generally focus on the immediate costs of closure and not on the potential increase in unit costs resulting from the difficulty in reducing fixed expenses.

6.4.3.3 For closed life funds, consideration needs to be given to setting up a fixed expense reserve, to cover costs which are not variable, for example governance activity or audit fees which cannot be reduced as the book declines. Many funds use outsourcing to control their costs, as many outsourcers will offer a contract where fees decline as the book of business declines, with no fixed minimum payment. However, it is unlikely that all the functions of the office can be outsourced. In addition, it may be necessary to reserve for such issues as funding the costs of special events (data issues; regulatory reviews; legislative changes, etc.), as these are unlikely to be covered under most outsourcing agreements.

6.4.4 *Tax*

6.4.4.1 Company taxation does not directly affect the assumptions adopted for pension scheme funding.

6.4.4.2 Consideration of the future tax position of a life fund and an understanding of when and how this may change is an essential part of managing the closed portfolio, in order that the impact of such changes can be anticipated and allowed for. The tax position before closure and the type and age of business contained within the portfolio is going to impact on the future tax position of the fund.

6.4.4.3 Tax losses existing or generated post closure by a life fund need to be used efficiently. A strategy for tax management should be part of the management's *run off plan*. Companies with more than one life fund will obviously have more opportunities for tax restructuring.

6.4.5 *Persistency*

6.4.5.1 Longer term policyholder persistency is a key area of focus for closed life funds. Persistency needs to be monitored in order to gauge the pace of the run off of the fund and manage and govern effectively. Surrenders on some parts of the business can improve profitability, though generally poor persistency destroys value.

6.4.5.2 The introduction of new products in the market with lower charges could impact the persistency of the book. Alternatively, the closed fund could decide to re-price to maintain persistency, but this would impact the profitability of the book concerned (possibly by a greater amount).

6.4.5.3 The level of withdrawals is sensitive to many influences, and steps should be taken where possible to mitigate their impact. In many cases this may be achieved through improved policyholder communication covering the relevant issues. Improved communication to advisors may also be required.

6.4.5.4 Persistency may also be an issue for closed pension schemes. Although the Scheme Actuary can reduce transfer values to protect the solvency of the pension fund, if pension scheme closure comes at a time when the workforce is also reducing, then contribution rates as a percentage of payroll can increase dramatically.

6.4.6 *Maintaining solvency of closed life funds*

6.4.6.1 Maintaining statutory solvency (whether realistic or otherwise) whilst ensuring that the surplus is distributed to the appropriate policies and avoiding the tontine effect is a key challenge for most closed with-profits funds.

6.4.6.2 If the regulatory regime is unduly prudent, then closed funds could be forced to hold back surplus which could otherwise be distributed. Regulatory capital requirements relating to guarantees where they are reserved for on a prudent basis may force the company to make decisions regarding bonus rates to the detriment of policyholders, for example by declaring terminal rather than reversionary bonuses or by other means to hold back surplus to cover statutory solvency requirements. However, declaring terminal bonuses rather than reversionary bonuses can also benefit policyholders by allowing greater investment flexibility, such as a higher equity backing ratio.

6.4.6.3 As a closed fund shrinks, the impact and the variability of the various risks on the fund need to be considered. Reinsurance can reduce risk and volatility, which may be important in a closed fund. For example, the value of parts of the business can be fixed through financial reinsurance, so that it can be distributed in a more controlled manner and reduce the risks to the remaining policyholders. However, there is then an increase in credit risk.

6.4.6.4 Being part of a bigger group may reduce these problems significantly, but this will depend on the way the closed fund is structured within the organisation, i.e. on the way in which capital can move between the closed fund and the rest of the group. The issue can then be whether to charge for this support and how much. A number of different mechanisms might be used for providing capital support.

6.4.6.5 In running off a closed with-profits fund, consideration needs to be given to:

— maintaining equity between the classes and generations of policyholders;
— ensuring that returns on policies are in line with the *Principles and Practices of Financial Management* (*PPFM*) and treating customers fairly (TCF) (formerly referred to as policyholders' reasonable expectations or PRE) including avoiding undue volatility of returns;
— allowing for fluctuations in experience and providing for guaranteed costs;
— ensuring that statutory solvency is maintained;
— distributing the *inherited estate;*
— avoiding a tontine effect (indeed, FSA Handbook Conduct of Business rule COB 6.12.60 requires the distribution of *inherited estate* if it would not be treating customers fairly not to do so);
— ensuring that any profits on non-profit business which accrue to with-profits policyholders emerge over the lifetime of the with-profits business and can be distributed appropriately via the bonus system to the correct policies; and
— investment (discussed in Section 8).

6.4.7 *Managing solvency of closed pension funds*

6.4.7.1 Some of the assumptions made in the valuation of an ongoing scheme — such as turnover rates and salary increase assumptions — become less significant as a scheme closes and matures. These, together with the award of any discretionary benefits, tend to be the only areas where the employer can take action to affect the cost of benefits already earned.

6.4.7.2 Other than discretionary benefits, there is little that the employer can do to manage pension scheme liabilities. The focus is therefore likely to be on contribution levels (to try to meet the pension fund deficit) and asset management.

6.4.7.3 Investment of assets is discussed in Section 8.

6.5 *Observations*

6.5.1 *Closure and funding*

6.5.1.1 Historically, the difference between the pension scheme benefit and the life insurance contract has been evident in their respective valuation approaches. The valuation of a pension scheme has predominantly focused on establishing the future employer contribution rate. The future solvency of the pension scheme is therefore inextricably linked with the solvency of the employer and its willingness and ability to continue to support the pension scheme. On the other hand, a life fund valuation focuses on assessing whether the life fund has sufficient assets to meet future claims, allowing for the contractual premiums which it will receive.

6.5.1.2 As a result, the closure of a pension scheme has traditionally led to more material changes to the valuation method and assumptions than for a life fund. It is not clear whether closure will have less effect on pension scheme valuations in future, given the recent changes in the nature of pension promises and the changes in the funding regime.

6.5.2 *One size doesn't fit all*

6.5.2.1 The regulation of both life and pensions is moving away from a one size fits all approach to setting minimum reserves/capital requirements to one which requires that funding targets are be set by reference to the institution's particular circumstances. The regulator (FSA / *Pensions Regulator*) will then intervene if it is not satisfied with the level of solvency. However, for pension funds, the previous minimum requirement was relatively weak, and so the new 'scheme-specific' funding requirement is actually leading to convergence of higher funding targets — although not targets which appear strong when compared with life office funding.

6.5.2.2 There is no relaxing of any of the statutory requirements for closed life or pension funds, so that compliance can potentially be more onerous and lead to relatively higher levels of expenses.

6.5.3 *Valuation techniques*

Solvency valuation calculations for life funds generally include some elements of stochastic modelling. This may be to value guaranteed annuity options (or other embedded derivatives) or in order to comply with the FSA's Individual Capital Assessment regime. These techniques are not well established in the valuation of pension schemes. Pension scheme actuaries do use these techniques for advising on issues such as asset/liability matching, but not commonly for valuation purposes. This may be an area where the two specialisms can learn from each other.

6.5.4 *Pillar 2 solvency for insurers and their pension funds*

6.5.4.1 Under the original Pillar 2 solvency rules, there was concern that insurance companies would have to apply the same stress tests to their pension funds as they do to their insurance liabilities, and that they would then have to hold enough capital to meet any deficit under 99.5% of future scenarios.

6.5.4.2 However, the FSA clarified that the pension scheme itself is not part of the individual capital assessment (ICA) and that it is the insurer's contractual or constructive liabilities towards the pension scheme which are within the ICA. Companies are not required to include the pension scheme deficit in their realistic balance sheet/ICA, but must, instead, hold sufficient capital to cover payments which would need to be made to the scheme in addition to normal contributions (defined as equating to the current service cost as defined by the pensions accounting standard FRS 17) over the next five years.

6.5.4.3 Whilst this test seems reasonable for a life fund which is open to new business (since the profits arising from future new business are not generally allowed for in the Pillar 2 test) for a closed life fund looking at run-off solvency, it would appear to make more sense to apply the same stress tests to its pension funds as it does to its insurance liabilities.

6.6 *What Does a Liability Cost?*

6.6.1 For comparison purposes, Table 1 shows the typical reserve required for a £10,000 immediate annuity for a 65-year-old male on a range of bases. In practice, there is a wide range of possible values for reserves and purchase price depending on the life/pension fund's individual experience, investment strategy and methodology. The numbers in the table are intended

Table 1. A comparison of reserving — immediate annuity

Basis	Approximate reserve/price	Observations
Life fund		
Purchase price	£140k	Based on best buy tables.
Total reserve required	£149k	Reflects the total capital that a company will require to hold for a policy on a Pillar 2 (see Appendix B) basis. Ignores diversification benefits from writing other business.
Pension fund		
Reserve in employer accounts	£122k	Based on FRS 17 accounting standard.
Buy-out cost	£138k	Based on estimated typical bulk purchase rates.
Funding valuation	£125k	In practice a substantial range applies.

to be indicative only of the differences in the values resulting from the different bases.

6.6.2 The reserves required for life business are covered in more detail in Appendix B. In practice, the amount of capital and reserves which would be required to be held by the life fund for this policy would probably be the ICA reserve (depending on the financial position of the office).

6.6.3 The table demonstrates that the reserve and additional capital requirements in a life fund (using the ICA figure) are almost 20% bigger than the reserves required under a pension scheme valuation, based on market conditions in March 2006. The differences arise predominantly from stronger interest and mortality assumptions for a life fund, and the additional capital which is required to be held. The table significantly understates the differences in reserving for deferred annuitants where the effect of differences in assumptions leads to an even wider range of results. For example, if a reserve for the annuity is created when the member is age 45, the figure reserved in a pension scheme funding valuation may presently be little more than half of the estimated buy-out cost for the same liability.

6.7 *Similarities Between Life Funds and Pension Schemes*

The basic aspects of funding for life funds and pension schemes are broadly the same:

— Both pension schemes and life funds pre-fund many years in advance for future benefit payments.
— Both arrangements pool key risks, such as mortality risk, and face similar unknown items of future experience about which assumptions must be made in funding.
— Both pension schemes and with-profits life funds have tended to include an element of discretion in some benefit awards, to reflect uncertainty in funding or to reward good experience. These discretionary benefits have tended to be reduced in periods of poor investment experience, more dramatically in the case of pension schemes.

6.8 *Differences Between Life Funds and Pension Schemes*

There are several dramatic differences in the approaches to funding for pension schemes and life funds:

— The purpose of the valuation of a life fund is to establish reserves and additional solvency capital to ensure that the fund is highly likely to be able to pay out the promised benefits when due. The purpose of a pension scheme valuation is to establish the contributions due to meet the funding level required by the sponsoring employer and trustees.
— Life funds operate in a more tightly prescribed valuation regime, including holding additional solvency capital, which directly addresses solvency on closure and allows for explicit risk margins. Pension schemes

are not generally funded to meet benefits in full at 'buy-out' cost on discontinuance.

— Pension schemes' funding levels — and the strength of the funding basis used by pension schemes — vary dramatically between schemes. This makes it difficult to compare schemes' funding positions. These differences cannot be easily justified by the differing strengths of sponsoring employers' covenants. (There are also differences in the strength of valuation bases for life offices, which can make financial strength comparisons between life funds difficult.)

— Although an important part of the security available to many pension schemes, the degree to which the employers' covenant is assessed varies significantly from scheme to scheme. In contrast, the assets of a life office are all subject to valuation.

— The use of stochastic modelling is much more widespread in the valuation of life funds (predominantly the larger with-profits funds), largely as a result of the introduction of the twin peak solvency regime for with-profits funds. Use of stochastic modelling by pension schemes may also be constrained by budget limitations on advisers.

7. Governance

7.1 The structure, governance ownership and roles of the various actuaries related to life funds and pension schemes are summarised in Appendix F. This section looks at the impact of closure on the governance and management of life funds and pension schemes.

7.2 *Management and Staff Expertise*

7.2.1 The life company is operated by its directors, who have a responsibility to manage the policies in line with the policy terms and conditions, and have a duty to treat customers fairly and to take into account the policyholders' reasonable expectations. In the case of a proprietary office, the directors are also required to operate the business in the best interests of the shareholders. In addition, the directors of a company are required to comply with the FSA rules and to maintain assets in excess of the liabilities to a prescribed extent, in order to ensure solvency of the company.

7.2.2 The decision to close a life fund generally falls to the board of directors unless the decision is enforced by the FSA. It is not an easy decision, as not only is there a personal impact on the workforce, in particular those whose roles are directly related to sales and marketing, but there could be a perception that it is an admission of failure of the current management. Indeed, the positions of those making the decision may be directly impacted upon by the consequences of that decision. Closure of a company to new business should not, however, be viewed as an admission of failure — if the decision is taken at the right time and for the right reasons, then management should be commended for acting in the best interests of the policyholders and the shareholders to whom they are responsible.

7.2.3 Following closure, one of the issues faced by management is maintaining appropriately skilled and knowledgeable staff, in particular at the time of closure when redundancies are probably occurring, and on an ongoing basis as the portfolio declines and further reductions in staff are required or result as staff move on naturally. In addition, the skills of the management team themselves need to be reviewed to ensure that the skills are those required to run an efficient yet compliant business, as opposed to the skills required to design, market and attract profitable new business. Documentation is key to the retention of knowledge, especially as the fund runs down and the key knowledgeable staff leave. This needs to cover processes and procedures as well as product information. Outsourcing is additionally being used more as a method of not only containing expenses, one of the key risks for a closed fund, but also as a method of retaining skills and knowledge. Outsourcing itself will only work if the outsourcer can obtain a succession of contracts (including contracts with companies still open to new business), since without these the outsourcer will face the same issues.

7.2.4 One of the criticisms often directed at closed life funds is that they are ignored by management. In fact, the reverse may be true for companies having only closed funds, as the management team should then be focused on the ongoing management of existing policyholders rather than on new product design. However, there may also be a focus on acquiring additional closed books or on generating income from the customer base.

7.2.5 A pension scheme is operated by the trustees on behalf of the members, and the trustees have a fundamental duty to protect members' interests and, wherever possible, to treat members' interests equitably.

7.2.6 The majority of pension boards are made up of lay trustees. These are people who do not act as trustees on a professional, full-time basis, but act either because they are a member of that scheme and have been elected or nominated to become a trustee, or because they are a senior officer of the employer and have been nominated to become a trustee. There is an increasing trend for trustee bodies also to include a professional trustee.

7.2.7 The pension scheme trust relies on the sponsorship of the employer, and so the trustees must take into account the employer's views in determining investment strategy and (in most schemes) in agreeing contribution levels with the employer. However, some closed schemes continue to operate after the employer has ceased to exist, particularly if they remain relatively well funded.

7.2.8 Pension scheme liabilities may, over time, become dominated by ex-employees, in whom the employer no longer has any direct interest from a human resources viewpoint — this tends to happen even before closure —

and so the trustee role may become increasingly distinct from the employer's own objectives.

7.2.9 Traditionally, the decisions of the trustees — including on funding and investment strategy — have not been subject to review by other external parties, except where a complaint is made against the trustees. However, the *Pensions Regulator* (a role created in 2005 to replace the previous statutory pensions regulatory body, the Occupational Pensions Regulatory Authority, which had more limited powers) is now able to intervene to a greater extent in the operation of pension schemes, and looks likely to increasingly influence key trustee decisions. The Regulator may, for example, seek increasingly fast deficit funding as a closed scheme matures, and may, in future, seek an increasing focus on covering the buyout liabilities, although this is so far only conjecture. The Regulator may also act as an arbitrator where the trustees and employer cannot reach agreement on the critical issue of the pace of funding for a pension scheme, but is expected to see direct involvement as a last resort.

7.3 *Conflicts of Interest*

7.3.1 For life funds, the requirements of different stakeholders often force management to balance conflicts of interest. The decision to close can lead to conflicts of interest for the decision makers, but conflicts also arise from the ongoing management of the company. For instance, in a closed with-profits fund, the distribution of an *inherited estate* could require the fastest possible distribution in the interests of the shareholders, the slowest possible distribution to maintain solvency and the most equitable distribution to policyholders to ensure that each policyholder gets his/her fair share of the surplus. The method of distributing the surplus also leads to conflicts, as it is in both the policyholders' and shareholders' interests to convert the surplus into guaranteed benefits as soon as possible, whilst, for solvency purposes, management may prefer to defer distributing the surplus for as long as possible.

7.3.2 In the past, management and directors have been able to place a great deal of reliance on the Appointed Actuary for determining valuation bases and investment strategy. In the case of a with-profits office, the requirements on the Appointed Actuary quite often led to conflicts in terms of formulating bonus strategy and making bonus declarations versus maintaining solvency, in particular if the Appointed Actuary was also a director of the company concerned. This has been changed recently, with the separation of the role into that of Actuarial Function Holder and With-Profits Actuary, with the latter being prohibited from holding a board position. In addition, the responsibility of the board for such things as the value of the mathematical reserves has also been widened — previously it was the responsibility of the Appointed Actuary to set the assumptions, but this is now the responsibility of the board, acting on the advice of the

Actuarial Function Holder. Where the advice is not followed, then the Actuarial Function Holder is required to carry out the calculation on the alternative instructed. He or she also has a duty, if the alternative is unreasonable, to communicate the matter to the FSA, who can then intervene if they consider the issue to be material.

7.3.3 Previously, there has been no requirement for the results of the statutory life fund valuation to be reviewed independently. However, from the end of 2004 there has been a requirement for the statutory valuation to be included within the scope of the audit, and a Reviewing Actuary now has to review the assumptions and calculations in order for the auditor to provide an opinion in relation to completion of the FSA returns. The scope includes both the regulatory peak and the realistic peak, where applicable (as described in Appendix B).

7.3.4 For pension funds, the Scheme Actuary advises the trustees on funding and investment strategy. This can lead to a conflict of interest where the actuary also advises the employer — particularly if the employer is struggling to meet pension costs — and so employers are increasingly being advised by a separate actuary to the Scheme Actuary. This conflict will be a reflection of conflict between the trustees and employer, and so can also result in trustee resignations where (as is common) company directors also act as trustees, which can mean an important loss of knowledge among the trustee group. Some schemes are finding it increasingly difficult to obtain volunteers to fill trustee posts without incurring the costs of external professional trustees.

7.4 *Compliance*

7.4.1 Regulations relating to closed funds are no different to those applying to open funds, although additional rules apply, as described in Section 4, to with-profits funds which close to new business. There has been increased interest from the FSA in the management of closed funds, with a series of statements and briefing papers relating, in particular, to the regulation of closed with-profits funds. In the latest, published in November 2005 (Insurance Sector Briefing — Update on Closed With Profit Funds), the FSA state that closed funds continue to be high on their agenda, whether this is in relation to day-to-day supervision of closed funds, their role in protecting policyholders when such funds are sold or through the provision of information on closed funds on their website. Regulations applying to solvency standards, *PPFM* and treating customers fairly apply equally to closed as well as to open funds.

7.4.2 Many funds close as a result of company sale or demutualisation of the fund. Such funds are often then subject to formal rules set out in a scheme or under a court order. These rules may also be articulated in the fund's *PPFM*. The rules are designed to protect policyholders, and may include provisions, such as the level of expenses which may be charged, and sometimes the arrangements and timing of the wind up of the fund. Rules need to be drafted carefully to allow for future possible changes at the time when the scheme is established. They also need to be monitored and adhered to.

7.4.3 Where new business is being issued, there will still be compliance/disclosure requirements to be adhered to. The levels of new business may be low, but will still require a full compliance infrastructure which could be unduly burdensome if not available elsewhere in the group, for example closed funds are required to issue customer or consumer friendly *PPFM*s (*CFPPFM*) with other statutory documentation on increments. There is also a need to review compliance arrangements for existing business, for example, whether the growth rates assumed when producing benefit projections for policyholders remain appropriate under the current circumstances of the fund.

7.4.4 Until wind-up occurs, there are no explicit changes to the governance requirements for pension schemes, apart from administrative requirements to notify the Inland Revenue of some changes in scheme status.

7.4.5 Once wind-up occurs, the pension scheme trustees have to report to both the *Pensions Regulator* (annually from year three onwards) and to members (at least every 12 months) on progress with the wind-up. In the event of employer insolvency, a professional trustee which is independent from the employer may be appointed (and generally is appointed) by *the Pensions Regulator*. With no solvent employer remaining, the trustees may now need to develop knowledge of insolvency proceedings to understand the prospects for recovery of further funds. Where the pension scheme is being considered for entry to the *Pension Protection Fund*, the trustees will also need to communicate regularly with the assigned *Pension Protection Fund* contact, to provide regular updates on progress with such matters as finalising the scheme database and changes in investment strategy.

7.5 *Communication*

7.5.1 Closed funds are often associated with poor quality of service, because companies with closed funds no longer have to compete on quality of service to generate new business. Whilst this can be true in some cases, it is not true in all. As expense risk is one of the biggest issues for a closed fund, expense saving initiatives need to be carefully controlled to ensure that the level of service provided is adequate. The standard of service needs to be balanced with the cost of providing that service, otherwise the company could be faced with accusations of not treating customers fairly which, in turn, could result in FSA intervention or even a fine. High levels of complaints and delays in dealing with premiums and claims, in particular, can cause problems for management as a result of poor or inadequate service standards, as can the reputational impact on any open part of the group.

7.5.2 Closed funds are also often associated with an inability to obtain information regarding the company or fund, because such funds often refuse to take part in industry surveys, and this reluctance can be interpreted as an admission of failure or a weakness, or that the fund has something to hide. Policyholders in closed funds are entitled to the same level of information as those in open funds, and the information obtainable is specific to the policyholder's circumstances. The issue of policyholder communication problems is compounded where funds or companies are sold, in particular where there is a change of name, as multiple transfers can mean that policyholders lose contact with the company, even though companies are required to inform policyholders of a change in name or registered address.

7.5.3 Current regulations relating to with-profits funds mean that the holders of with-profits policies are notified in advance that the fund will be closing to new business. This is a recent requirement and, as no funds have closed to new business since the regulations were implemented, it is hard to say whether this is helpful for policyholders in such circumstances. In the past the fund would probably have closed with no advance notice, and only the bigger funds would have been reported in the general press. As a result, many policyholders were probably unaware that they were policyholders in a closed fund, though the FSA did require some closing funds to write to policyholders to alert them to the changing status of the business. Where press comment was made it was probably highly speculative. Notification by the company should enable the company to provide specific and accurate information relating to the impact of closure on with-profits policyholders. The rules only apply to new closures of with-profits funds, not to funds which are already closed nor to non-profit or to unit-linked funds. Closed with-profits funds do, however, have to produce *PPFM*s and, from 2006, consumer friendly *PPFM*s.

7.5.4 Members of pension schemes have to be informed of significant changes to their schemes, such as the stage of closure being reached. The quality of communication drafting varies dramatically from scheme to scheme, and members' level of understanding of the operation of the pension scheme tends to be relatively low. Pension schemes are faced with particular communication issues when a poor funding level develops, as defined benefit schemes have historically been portrayed as relatively safe vehicles, with little, if any, mention in historic communications of the potential risk of employer insolvency or default on pension scheme funding. Indeed, a Parliamentary Ombudsman enquiry has recently been considering whether the U.K. Government has portrayed defined benefit schemes as providing a guaranteed benefit in a manner which may have misled the public.

7.6 *Similarities Between Life Funds and Pension Schemes — Conflicts*

The management of a proprietary life fund needs to satisfy both policyholder and shareholder interests, which can often lead to a conflict of interests. In a pension scheme, the trustees have an obligation to safeguard the interests of the members, but must take into account the views of the employer. This will cause conflicts in itself, but the fact that some of the trustees might be senior management or directors of the employer adds another dimension to the potential for conflict.

7.7 *Differences Between Life Funds and Pension Schemes — Expertise*

Directors and approved persons in a life company are required to be 'fit and proper' persons and to have sufficient knowledge of the business of the company to run the business. Until recently they could rely on the advice of the Appointed Actuary, although now they are responsible for the decisions themselves, including the valuation basis to be adopted for the statutory returns, having had regard to the advice of the Actuarial Function Holder. Pension fund trustees (other than professional independent trustees) are not generally pensions experts, being nominated as either a member of the scheme or as a member of the sponsoring employer's management. As such, they have to rely on the advice of actuaries and other external advisors.

8. Investment

8.1 *Investments of Closed Life Funds*

8.1.1 Appendix D comments on the factors affecting investment strategy for life funds and current investment trends.

8.1.2 The life office solvency regime focuses the investment strategy of most funds on matching their liabilities. The investment approach is primarily determined by the following factors:
— type of fund and nature of business;
— representations made to policyholders;
— expected future cash flows;
— levels of guarantees; and
— financial strength.

8.1.3 The relative importance and hence impact of these factors will vary between closed funds, and hence they have to be addressed individually. However, it is unlikely that closure will have any immediate effect on the factors, and so many of the same considerations will, in general, apply on closure as they did before.

8.1.4 *Issues for a declining fund*

8.1.4.1 A key factor following closure is for how long the fund is expected to have a positive cash flow. Whilst there is still a positive cash flow, a similar investment approach can be constructed for a closed fund as when open.

8.1.4.2 For a unit-linked fund, the investment strategy is likely to have been defined fairly explicitly within policy literature and other formal and legal documents, as to the type of investments to be held and the performance requirements. If the fund is to continue, then the opportunity to change its strategy is very limited. The approach may be to offer, voluntarily or compulsorily, a switch to a second fund and then wind up the first fund. If, instead, the first fund is to continue, then there may have to be a change in the tactical approach to ensure that the investment strategy can still be met.

8.1.4.3 While a unit-linked fund still has a positive cash flow, the investment opportunities should not be unduly affected and the same approach can be continued as when open, though this does not preclude other options being adopted as the opportunity arises. Once the cash flow becomes negative, then to meet the declared strategy it may be necessary to adopt new tactics such as investing more in derivatives, if they are permitted, or in tracker type funds. However, this may be at odds with the fund wanting to operate in a simple manner as a closed fund or may introduce an additional level of cost.

8.1.4.4 In the context of with-profits funds, once the funds start reducing and/or the guarantees become a larger percentage of the fund, then more stable, less volatile, investments are likely to be sought. This will usually result in a move from equities into fixed-interest investments. The level of the *inherited estate*, and thus the scope for investment freedom, is critical in determining the asset mix and the closeness of matching. Specific consideration will need to be given as to whether the investment approach for the *inherited estate* is the same as that for the funds hypothecated to the liabilities or, if different, why and to what extent.

8.1.4.5 A particular change could be that, when the fund was open there was one overall equity backing ratio (EBR or the proportion of the fund which is held in equities), but, as the fund matures, the differences between different types of business increase, and it could be preferable and more equitable to have separate EBR for different classes of business or terms to maturity.

8.1.4.6 Unless the fund's position is appropriately hedged, the level of the EBR is also going to be affected by the state of the equity markets. A bear market may see a move to fixed interest taking place quicker than otherwise planned, to match the increasing guarantees and solvency requirements. When the market turns, there may be some scope for then increasing the EBR, but past action may make this difficult.

8.1.4.7 Once there is a larger fixed-interest content, the fund may also consider further the split between gilts and corporate bonds, the need to balance risk with return, and the amount of credit risk and diversification which is appropriate.

8.1.5 *Management*

8.1.5.1 A number of issues arise over the ongoing investment management of the closed fund. The fundamental point is that the fund should be treated with the same level of care, attention and professionalism which was given when it was an open fund. Contentiously, it may need more care and attention, as it could have been the lack of these which led to it becoming a closed fund in the first place. The number of closed funds in existence is rising, and there is a perception that these are treated as second class funds, particularly where the fund's investment strategy is more cautious. There is a responsibility to act and show that this is not necessarily the case.

8.1.5.2 Once the fund is reducing, this will have an impact on the investment expenses. There may also be challenges in retaining fund managers, who may prefer to be involved with new 'exciting' funds rather than with housekeeping mature funds. This is likely to be influenced by whether the fund is managed in isolation or as part of a portfolio.

8.1.5.3 It is essential that any change in requirements is clearly communicated to the fund manager, and that the manager is aware of any new targets and constraints. Good investment performance is still a requirement. The performance benchmark may have to be amended to reflect any new investment strategy or tactical change, but, within the new parameters, excellence should still be sought.

8.1.6 *Timing and impact of asset disposals*

8.1.6.1 *Disposals* — the timing of asset disposals, particularly where the fund owns a significant proportion of an asset, may have to be carefully managed to avoid adverse price movement. This could be a particular issue for property holdings. If the fund is within a group, then consideration may be given as to whether other funds within the group would be willing to purchase certain assets, at a fair price, both to avoid price distortion and to minimise on costs. Unitisation of property holdings as a unit trust or closed-ended vehicle can aid liquidity.

8.1.6.2 *Taxation* — as the fund declines or the EBR is reduced, then there is likely to be a significant realisation of assets. This could have tax implications, and these need factoring into the management considerations. In a unit-linked context, it is important that the provision for unrealised capital gains reflects the closed nature of the fund and its projected decline in future years.

8.1.6.3 *Strategic investments* — the original reason for holding any strategic investment may be less relevant once the fund is closed, and they may be less suited to the ongoing management of the fund. The investments should be reviewed and, if necessary, a plan of disinvestment implemented. Where the fund is part of a group of funds, there may be an opportunity to switch these assets, at fair market value, for more appropriate investments. If this opportunity is not available, then, depending upon the nature of the strategic investments, there may be some difficulties in disinvesting at a suitable time or price.

8.1.6.4 *Pricing basis* — a unit-linked fund will, at some stage, need to switch from an offer to a bid basis to reflect the disinvestment stance, and this will need to be managed to avoid unit price discontinuity as far as possible.

8.1.7 *Policyholder literature and expectations*

There must be full consideration of all external literature to ensure that investment actions taken are consistent with what has been previously stated to meet policyholders expectations. Conversely, if there is a change in investment approach, consideration should be given as to what information should be given to the policyholders as to why and how the investment approach has changed. For with-profits funds, this is in addition to formal *PPFM* changes and notification, and, at the very least, it will mean an update to the *CFPPFM*. Where a member feels locked into the fund, it is imperative that there is trust that the fund will continue to be rigorously managed. If doubts arise, then this can lead to a vicious circle, whereby the perception arises that being a closed fund will lead to reduced performance, so more members exit, leading to worsening cash flow and even more restricted investment opportunities.

8.2 *Investments of Closed Pension Funds*

8.2.1 The factors affecting the investment strategy of pension funds are examined in Appendix E.

8.2.2 Historically, most pension funds have operated on the basis that they would continue indefinitely with a sponsor prepared and able to fund the liabilities. This resulted in the investment strategies of many schemes not matching their liabilities closely. As a result, the closure of the pension scheme, particularly if it reflected a deterioration in the sponsor's financial position, led to a re-assessment of the investment strategy.

8.2.3 *Lifespan of the fund*

Once a scheme has been closed, it is clear that it has a finite lifespan. As a result, the opportunity to achieve out-performance from real assets is reduced. More cautious investment strategies, with the proportion of equities reduced, are often implemented.

8.2.4 *Closure to new accrual and removal of salary linkage*

This removes one of the risks inherent in a final salary scheme, namely future salary growth. It also reduces the uncertainties in generating benefit cash flows for matching purposes, although material uncertainties will still remain over longevity, benefit inflation and retirement patterns. Historically, investment in equities has been proposed as a way of hedging against the risk of unanticipated salary growth. With the removal of this element of risk, there is one less argument for equity investment. Matching with bonds will provide greater certainty, although the material uncertainties mentioned above remain.

8.2.5 *Asset/liability matching*

8.2.5.1 A series of quite recent changes to pensions — a move to market related valuations, debt on employer regulations, replacement of discretionary benefits with guaranteed benefits, the appearance of pension deficits on corporate balance sheets (combined with continued investment market volatility) have given a dramatic incentive for liability matching in investment policy. It is thought that one significant reason why this has not triggered a huge shift in pension scheme investment to date is the current funding position of schemes and a reluctance to sell equities while further equity market recovery is hoped for, in some cases as the only obvious option for addressing the deficit. In the longer term, pension investment strategy may much more consistently follow techniques used in the life insurance sector.

8.2.5.2 Certainly, the availability of pre-packaged liability driven investment products has increased dramatically since 2004, with managed funds available to match liabilities of given terms, for either increasing or non-increasing benefits. These products can remove a large part of the investment risk associated with a pension scheme, increasing the importance of mortality risk as a key concern.

8.2.5.3 Larger schemes will tend to construct a specific liability driven solution from direct purchases of derivative and bonds. This relies on a relatively high level of trustee and investment manager competence in this area, as well as a willingness to reduce risk exposure, and has so far only tended to be implemented for some large well-funded schemes.

8.2.6 *Financial weakness of sponsor*

If the financial weakness of the sponsoring employer is a reason for the closure, then the trustees may want to adjust the investment strategy. If the likelihood of the employer being in a position to provide additional contributions is reduced, then the trustees will probably want to adopt a cautious investment strategy, to protect the scheme's funding position. However, for a scheme in deficit, this will effectively crystallise the deficit, as the opportunity to achieve investment gains through mismatching will be reduced. This may becoming a less important disincentive for trustees, given that a substantial part of scheme benefits now tend to be protected by the *Pension Protection Fund.*

8.2.7 *Wind-up position*

Should winding up be triggered, then the future of the pension scheme is far more short term, and the trustees would normally seek to stabilise the funding position and to attempt broad matching of insurance company bulk annuity premium rates until they are able to purchase a bulk annuity policy. This would normally mean a switch into a mixture of sterling corporate bonds and gilts, fixed-interest and index-linked, depending upon the nature of the liabilities.

8.3 *New Approaches to Investment Risk Management*

8.3.1 Life companies have become much more sophisticated at assessing the risks to which they are exposed and in finding ways of mitigating those risks, especially when it comes to market risk. The investment banks have been very active in devising imaginative ways of mitigating market risk, and derivatives have had a key part to play. Derivatives were used widely in the late 1990s to protect offices from falls in interest rates, especially for offices with guaranteed annuities. In the early 2000s, with falls in equity markets, derivatives also became increasingly used to provide some protection from further falls in equity markets, while maintaining exposure to some equity upside.

8.3.2 In a pension scheme context, a number of investment banks are developing solutions which go beyond investment risk hedging, combining other keys risks, such as longevity risk and employer credit risk. Such solutions, should they materialise, could offer trustees very effective ways of managing their key risks. A number of potential mortality type bonds, swaps and derivatives are discussed in Blake, Cairns & Dowd (2006).

8.4 *Similarities Between Life Funds and Pension Schemes*

— Both life schemes and pension funds represent substantial investors in both the bond and equity markets. They generate substantial demand for bonds, particularly sterling denominated long-dated bonds for liability matching, and invest in a much wider variety of assets overall to achieve greater returns from taking risks in a controlled manner.
— Both with-profits life funds and pension schemes have historically, to some extent, mismatched assets and liabilities. Both are now looking to improve matching.
— In both cases, investment strategy has been influenced by the regulatory framework in which these arrangements operate.

8.5 *Differences Between Life Funds and Pension Schemes*

— Whereas mismatching of assets and liabilities by life companies is now generally reserved for funds which have large free reserves or liabilities which include a significant element of discretion, pension schemes have undertaken investment in higher risk assets when guaranteed benefits are not fully funded and no solvency margin exists. Indeed, the idea of 'investing your way out of trouble' has often been a consideration for sponsors of smaller pension schemes.
— The investment strategy for pension schemes has been subject to a typically sudden switch to largely bond investments on wind-up, compared with the more gradual change for a life fund.
— Use of derivatives, and closer liability matching in general, is more widespread and advanced for life funds, particularly larger funds, than for pension schemes.

9. Conclusion

9.1 Our analysis and comparison of the issues facing closed life funds and closed pension schemes, has suggested that there are many similarities between the two. In the process, we have identified a number of areas which would merit further consideration. These mainly relate to the closure of pension schemes. This is not to say that the management of closed and closing life funds is perfect. It simply recognises that the closed life fund sector is ahead of the closed pension scheme sector in considering some of these issues.

9.2 We can speculate as to the possible reasons for this. From a pensions viewpoint, legislation has only recently established that benefit promises should be a firm guarantee while the employer remains. From a life viewpoint:

— The near failure of Equitable Life in the life sector resulted in the FSA overhauling the system of prudential supervision of life companies generally and with-profits funds in particular.
— With the closure of Equitable life and other high profile large with-profits funds, because of the risk of consumer detriment, the FSA is very focussed on closed with-profits funds.
— Closed life funds have more options than closed pension schemes, because they are generally better funded, and the solvency of the fund is not dependent on future contributions from a sponsoring employer.
— Closed life funds may have more flexibility and can move more quickly, because changes in asset management do not have to be negotiated with trustees.
— Several companies have a business strategy for acquiring closed life funds, with the intention of improving the way in which they are managed, whereas sponsoring employers to pension funds are generally focused on running their own businesses.

9.3 Similarities between closure issues for pension schemes and life funds include:

— Closures typically happen in response to events rather than with much advance planning. In general, both life and pension funds close too late (i.e. if the decision were taken earlier, then the financial position may well have been better).
— Life funds and pension schemes have both suffered from major investment market movements, such as the effects of a three-year spell of falls in equity values in the earlier part of this decade. However, for with-profits life funds, the impact may be on discretionary benefits rather than on coverage for guaranteed benefits.
— Pension schemes have had to cope with a change in expectations of the level of benefits which are effectively guaranteed due to changes in

regulation. Similarly, with-profits life funds have had to cope with a reduction in discretion over the management of these funds due to the introduction of increased regulation and disclosure.

— A key uninsurable risk for pension schemes and life funds has proved to be legislative changes.
— The objectives of the wind-up of life and pension funds are the same, i.e. benefit provision is transferred from one party to another. This does not mean that security issues can ever be completely removed. The security of life assurance policies is maintained by the security of the company to which the liabilities are transferred. For pension schemes, the employer covenant is replaced by the security of the life company writing the buy-out annuity. In practice, the value of the employer covenant is often lost, perhaps through insolvency, before wind-up occurs.
— Both pension schemes and life funds pre-fund many years in advance for future benefit payments. Both arrangements pool key risks, such as mortality risk, and face similar unknown items of future experience, about which assumptions must be made in funding.
— Both pension schemes and with-profits life funds have tended to include an element of discretion in some benefit awards, to reflect uncertainty in funding and to reward positive experience. These discretionary benefits have tended to be reduced in periods of poor investment experience, more dramatically in the case of pension schemes.
— Conflicts arise for both pension schemes and life funds. The management of a proprietary life fund needs to satisfy both policyholder and shareholder interests. In a pension scheme, the trustees have an obligation to safeguard the interests of the members, but must take into account the views of the employer.

9.4 Differences between closure issues for pension schemes and life funds include:

— The regulation of pension schemes has seen substantial change in even the last two years, adding an additional layer of supervision which was perhaps already more prevalent for life funding under the supervision of the FSA.
— Appreciation of the financial risks involved in long-term benefit promises has, perhaps, occurred later for some key stakeholders of pension schemes, compared with life funds.
— *Run off plans* are required for closed with-profits funds, but not for closed pension schemes.
— The final funding position of pension schemes in wind-up varies dramatically from one case to another. Life funds are generally funded to a level which allows guaranteed benefits to be met.
— Life funds operate in a more tightly prescribed valuation regime that

directly addresses solvency on discontinuance and allows for explicit risk margins.

— Pension schemes' funding levels — and the strength of the funding basis used by pension schemes — vary dramatically between schemes.
— Although an important part of the security available to many pension schemes, the degree to which the employers' covenant is assessed varies significantly from scheme to scheme. In contrast, the assets of a life office are all subject to valuation.
— The use of stochastic modelling is much more widespread in the valuation of life funds.
— Directors and approved persons in a life company are required to be 'fit and proper' persons, and to have sufficient knowledge of the business of the company to run the business. Pension fund trustees (other than professional independent trustees) are not generally pensions experts, being nominated as either a member of the scheme or as a member of the sponsoring employer's management. As such, they have to rely on actuaries' and other external advisors' advice.
— Investment in higher-risk assets than government bonds is generally being undertaken for life funds in respect of benefits which are discretionary rather than guaranteed, and with a fund that has a solvency margin. Pension schemes hold such investments in respect of guaranteed benefits which are not fully funded.
— The investment strategy for pension schemes has been subject to a more sudden switch to largely bond investments on wind-up, compared with the more gradual change which has been more typical for a life fund.
— Use of derivatives, and closer liability matching in general, is more widespread and advanced for life funds, particularly larger funds.

9.5 Areas which we believe would merit further consideration include:

— Whether there would be benefit in pension funds producing plans around their eventual wind-up, in effect an exit strategy.
— Whether non-profit and unit-linked business should prepare a *run off plan* at the time of closure.
— Whether more emphasis should be placed on reserving for the costs of eventual wind-up for life funds (a requirement which is currently only implicitly recognised in the regulations).
— Whether it might be possible to identify some sort of consolidation vehicle for closed pension funds, as has happened in the life assurance sector. At least one company has recently been established for this purpose, and has raised £500m of capital.
— Whether pension funds should take into account the impact of potential future wind-up more explicitly when reserving. This could affect the choice of funding method and the choice of assumptions. There is a problem in accurately assessing the cost of securing bulk annuities, as

insurance companies' premium bases are not published. The Pensions Board paper "Estimating the cost of securing benefits with insurance companies" (2005) gives guidance in this area.
— Whether greater use could be made of stochastic valuation techniques in valuing pension scheme liabilities — this may provide a better estimate of the actual position.
— Whether there would be benefits for closed pension schemes in adopting more sophisticated investment strategies, such as a greater use of derivatives.
— Whether there should be a more consistent move towards relating 'actuarial factors' for pension schemes closely to market conditions. These factors determine the terms on which benefits are converted from one form to another, for example from pension to cash or from a normal retirement pension to one available on earlier retirement.

10. A Whimsical Comparison of Closed Life Funds and Closed Pension Schemes

10.1 This section contrasts the history of closed life funds and closed pension funds by considering what might have happened to life funds had they been run like pension schemes, and vice versa. This is intended to be light hearted, and aspects of each have been exaggerated to highlight some of the differences.

10.2 If closed life funds had been run like pension schemes:
— The life fund may have been very solvent in the 1990s, encouraging the company to improve benefits and to give policyholders premium holidays. (Actually life funds did improve benefits in the 1990s by increasing terminal bonuses, and have been reducing benefit accrual more recently by cutting reversionary bonuses and terminal bonuses). The fund may no longer be solvent on any basis if future contributions are ignored, and may therefore be trying to reduce future accrual of benefits and to increase policyholder premiums to ensure that solvency is achieved within 15 years, having reached an intermediate funding target in ten years. This shortfall would be increasingly hampering the life office's ability to enter corporate transactions, especially as it would only recently be recognised in its credit rating.
— Credit ratings would now be subject to regular fluctuation and may significantly affect a customer's choice of life office.
— Key decisions on funding and investment would be made by life office managers who may have no specialist knowledge in these areas. However, there would be increasing encouragement from the industry watchdog of maintenance of a prescribed level of knowledge and understanding.

— There would be concern in some parts of the press about life actuaries' increasingly cautious views on funding, and the effect on the bond market of life funds' increasing focus on liability driven investment. However, this would represent only a partial backlash against a growing trend.
— Surrender values for guaranteed benefits would be pitched at materially below the 'mark to market' value as a matter of routine, particularly if the life fund is poorly funded.
— In the event of wind-up, until recently policyholders could get nothing, particularly if they had not retired. Now a compensation scheme has increased member protection, but with some confusion among members over the level of benefit that is protected.
— Members in the with-profits fund would not be impacted by negative funding experience, except in the situation where this forces the employer to change the scheme rules. (This contrasts with the situation in life funds, where members of with-profits funds are generally exposed to miscellaneous profits and losses in the fund, subject to them receiving guaranteed benefits).

10.3 If closed pension schemes were run like life funds:
— The pension scheme would have a surplus which would be large enough for the fund to withstand a 1 in 200 years event.
— Only one pension scheme would have become insolvent in recent years.
— If the pension scheme were under-funded, then the parent would not be able to pay a dividend. (Indeed, there is now an expectation of depressed dividends from funding pension deficits, under the added pressure of *Pension Regulator* monitoring.)
— There would now be lots of interest in closed pension schemes from possible acquirers (Indeed, there is now!).
— Actuarial factors (used for converting pension scheme benefits from one form to another) would almost always be cost neutral.
— Fluctuations in the funding position from investment market movements would be dramatically restricted.
— Key decisions would be made by professional trustees.
— Some schemes would have encouraged members to join the pension scheme, even though they would get much better benefits with a personal pension policy! Some personal pension plan providers would have refused to take transfers back in from these mis-sales. (The contrast between promotion of final salary schemes and of personal pension policies is seen as less clear-cut, following the unfavourable Parliamentary Ombudsman report on Government representation of final salary schemes.)
— Historically, members leaving early would receive much less than their own contributions. (Pension schemes did not historically treat members

much better than this. Often members received only a return of member contribution on leaving the scheme in the first two years, without the benefit of the employer contribution made in respect of them, which they may consider as representing deferred pay, and the transfer value basis was often not particularly generous). Now all members would get fairer value.

— Members with money purchase benefits might be having benefits reduced to pay for guarantees being provided to final salary members. All members might be having discretionary benefits reduced as a result of poor fund performance and increasing longevity (in practice, discretionary benefits have been removed from many pension schemes, but this has tended to happen as a sudden complete removal).

Acknowledgements

The authors would like to give thanks to the three scrutineers and to Doreen Hart for their comments on this paper.

We would also like to thank Philip Tervit for his assistance with Appendix D and Rakesh Tanna for his assistance with Section 6.6.

Finally, we would also like to thank Nicola Clough, Honor Southam and Jane Ashford for formatting and editing this paper and for scheduling our meetings, and thank Maria Lyons and Clare Hobro for their encouragement and input.

Comments and inaccuracies in the paper remain the responsibility of the authors.

References

Blake, D., Cairns, A.J.G. & Dowd, K. (2006). Living with mortality: longevity bonds and other mortality-linked securities. *British Actuarial Journal*, **12** (to appear).

FSA (2005). Insurance sector briefing: update on closed with-profit funds, November. http://www.fsa.gov.uk/pubs/other/isb.wpfunds.pdf

FSA Handbook. http://fsahandbook.info/FSA/index.jsp

Pallister, J. *et al.* (2005). Management of closed funds. Paper presented to the Staple Inn Actuarial Society. www.sias.org.uk/siaspapers

Pension Board (2005). Estimating the cost of securing benefits with insurance companies. Institute of Actuaries, November. http://www.actuaries.org.uk/files/pdf/pensions/buyout.pdf

Pensions Regulator Consultation on Scheme Specific Funding (2005).

Pomery, M.A. (2005). Address by the President of the Institute of Actuaries, Restoring confidence in long-term savings. *British Actuarial Journal*, **11**, 1-39.

Sponsor Covenant (2005). Sponsor covenant working party final report. Institute of Actuaries.

2004 Occupational Pension Schemes Survey (OPSS). Government Actuary's Department.

Yiasoumi, C.A., Canham, D.J., Miller, J.D. & Wharmby, R.N. (2004). The management of the discontinuance of large defined benefit schemes. Paper presented to the Staple Inn Actuarial Society. www.sias.org.uk/siaspapers

APPENDIX A

GLOSSARY

A.1 *Glossary of Life Insurance Terms*

A.1.1 *Inherited estate*

Inherited estate, sometimes called orphan assets, is usually taken to mean the excess of assets held within the long-term fund over and above the amount required to meet liabilities. The liabilities, for this purpose, include those which arise from the regulatory duty to treat customers fairly in setting discretionary benefits, such as terminal bonuses. The *inherited estate* acts as working capital of the business. It is used to support the business by, for example, providing investment flexibility and a cushion against adverse stock market conditions. If not required for such purposes, distributions can be made from the *inherited estate* and shared between policyholders and shareholders.

A.1.2 *Run off plan*

The *run off plan*, required under FSA Handbook Conduct of Business rule COB 6.12.94R(2) to be submitted to the FSA, contains information on a number of areas relating to the changes to and ongoing management of the closed with-profits fund. The areas covered include:

— how management proposes to manage the run off of the with-profits fund, including the duration and costs of fully running off benefits, how the solvent run-off will be funded and details of the strategies to be used for managing run-off risks;
— an explanation of the investment strategy to be used, including matching with-profits liabilities and changes to investment strategy as a result of closure;
— an explanation of the strategy for managing credit and counterparty risk;
— an explanation of the strategy for managing operational risk, especially staffing arrangements, costs of operational changes including redundancy costs and details of any material outsourcing agreements to be entered into;
— an explanation of how reinsurance will be used and managed, including new inward or outward arrangements;
— details of any changes to corporate governance arrangements, costs charged to the with-profits fund, costs charged for guarantees, target maturity and surrender percentages of asset share, projection rates, surrender payment deductions or market value adjustments, open market options, mis-selling costs incurred in future;
— an explanation of when capital is anticipated to become available for distribution to policyholders and how it will be distributed (including any

inherited estate); also, how vesting annuities will be dealt with and the plans for distributing the value relating to other than with-profits business in or he'ld by the with-profits fund;
— details of any plans to expand any business elsewhere in the firm;
— various financial projections showing solvency, revenue accounts on statutory and realistic bases, revised capital assessment; and
— anything else of relevance.

A.1.3 *Principles and Practices of Financial Management (PPFM)*

A.1.3.1 The requirements of the *PPFM* are defined in the FSA Handbook Conduct of Business Rules (COB 6.10). A set of *PPFM* are required for each with-profits fund, regardless of size and whether open or closed to new business. Most companies publish their *PPFM* on their website.

A.1.3.2 Principles are enduring standards which the firm adopts in managing the with-profits fund, and describes the business model used to meet its duties and in responding to longer-term changes in the business and economic environment. Practices describe the firm's approach to managing the with-profits fund and to responding to shorter-term changes in the business and economic environment. They should contain sufficient information so that a knowledgeable observer can understand the material risks and rewards of a with-profits policy.

A.1.3.3 The *PPFM* content is fairly prescribed, and covers the amount payable including, *inter alia*, how the various types of bonus are derived and declared and in what circumstances they might be changed, investment strategy, the type and impact of business risk on the fund, how expenses to the fund are determined, including what are valid charges, the fund's approach to distribution of the *inherited estate*, amount of new business written and the arrangements for stopping taking on new business and how equity between shareholders and policyholders is managed.

A.1.4 *Consumer (or Customer) Friendly Principles and Practices of Financial Management (CFPPFM)*

The requirements for the consumer friendly *PPFM* are defined in the FSA Handbook Conduct of Business Rules (COB 6.10.9AR). These are essentially a version of the *PPFM* which describes, in clear and plain English that can be understood by a policyholder with no specialist knowledge, the most important information set out under each of the headings in the *PPFM*.

A.1.5 *Part VII transfer*

A.1.5.1 This is the enabling legislation under the Financial Services and Markets Act 2000 to allow a transfer of liabilities and assets from one insurer to another. The process requires, *inter alia*, Court Approval and a report to be written by an independent expert either approved or appointed by the

FSA, considering the effect of the transfer on all the policyholders, transferring, remaining or receiving. The FSA has a right to appear to be heard in court. The legislation contains all the requirements which have to be adhered to, including who has to be informed about the transfer, the documents required, and the timescales in which it can be achieved.

A.1.5.2 These were previously known as Schedule 2C, or Section 49 transfers under previously enabling legislation.

A.2 *Glossary of Pension Scheme Terms*

A.2.1 *'Discounted dividend' approach to valuations*

A.2.1.1 Under this approach, the liabilities were valued using long-term assumptions which were determined by the actuary on a subjective basis. Although there would be some reference to implied yields from bonds in deriving these assumptions, prevailing yields did not directly drive the long-term assumptions used to value the liabilities.

A.2.1.2 The assets were valued in a similar way, with the projected asset income being discounted to give an actuarial value of the assets. This resulted in the effect of volatility in asset values, particularly in the equity market, being substantially dampened. The justification for this was that the assets were long-term holdings, whose value was represented by the monetary dividend/coupon/rental income stream, not by a change in the potential sale value. If the market values were particularly low at the valuation date, the actuarial asset value would be higher (being read as an implication that the market value would recover in due course) and vice versa.

A.2.2 *Pension Protection Fund ('PPF')*

A.2.2.1 An industry wide safety net was introduced from 6 April 2005 by legislation to provide protection for a large part of member occupational scheme benefits in the event of employer insolvency. The *PPF* is not financially supported by Government, but is, instead, funded by levies on occupational defined benefit pension schemes and by the assets of schemes which are transferred to the *Pension Protection Fund.*

A.2.2.2 The coverage is broadly as follows:

Members over their normal pension age: 100% of their benefits. No annual pension increases in payment on benefits earned before 6 April 1997.

Members under their normal pension age (even if in receipt of a pension): 90% of their benefits are covered, subject to a cap, which for 2005/2006 is equivalent to £25,000 a year at age 65. No annual pension increases in payment on benefits earned before 6 April 1997.

A.2.2.3 If an employer which sponsors an occupational defined benefit pension scheme becomes insolvent the *PPF* will assess the scheme for entry. If an actuarial valuation shows that the scheme assets are unable to provide the *PPF* level of benefits through non-profit bulk annuity policies, the scheme assets will be transferred to the *PPF* and members will receive the *PPF* level of benefits. If the actuarial valuation shows that the scheme assets are able to provide in excess of the *PPF* level of benefits, the scheme will be wound up outside of the *PPF*.

A.2.3 *The Pensions Regulator*

A.2.3.1 This is the new statutory regulator for the pensions industry (since 2005) which has the following main objectives:

— to protect the benefits of members of work-based pension schemes;
— to promote good administration of work-based pension schemes; and
— to reduce the risk of situations arising that may lead to claims for compensation from the *Pension Protection Fund*.

A.2.3.2 The previous statutory regulator was the Occupational Pensions Regulatory Authority (Opra).

APPENDIX B

VALUATION OF LIFE FUNDS

B.1 *Approach to Valuation*

As discussed in Section 6, the European Union and the FSA are working towards a three pillar approach to prudential supervision of life companies, similar to that used for banking supervision:
— Pillar 1 — the minimum capital requirements firms are required to meet;
— Pillar 2 — the supervisory review process; and
— Pillar 3 — market discipline arising from disclosure of risks and capital management.

B.2 Companies are expected to hold sufficient capital to meet the solvency test under Pillars 1 and 2 at all times. They are also expected to disclose sufficient information to allow the market to assess the company's solvency position.

B.3 *Pillar 1*

Under Pillar 1, companies are required to establish adequate technical provisions. These provisions consist of:
— mathematical reserves, determined following prescribed rules and guidance; reserves are generally established using a prospective actuarial valuation based on prudent assumptions of all future cash flows;
— resilience capital requirement (RCR), which is the additional capital required to meet the liabilities under specified stress tests; and
— long-term insurance capital requirement (LTICR), which is a prescribed margin based on percentages of sum at risk and reserves, e.g. insurers must hold 0.3% of the sum assured at risk and 4% of the mathematical reserves.

B.4 There are also rules around the valuation of assets. For example, some asset classes are inadmissible and there are limits on the amount of certain other assets that can be included. This valuation is generally referred to as the 'regulatory peak', with the regulatory excess being equal to the value of admissible assets less the technical provisions.

B.5 For firms with with-profits funds in excess of £500m, calculations must also be performed on a 'realistic' basis — the realistic peak — and Pillar 1 solvency is assessed as the more onerous of the two peaks. Firms producing 'realistic basis' results are not required to make allowance for future regular bonuses in their 'regulatory basis' reserves, whereas firms producing results on the regulatory basis only must do so, assuming that future experience is in line with the assumptions used in the calculation of the mathematical reserves. Firms are not required to reserve for future terminal bonuses on the regulatory basis.

B.6 Under the realistic peak, firms are required to put a realistic value on with-profits liabilities, including a market consistent valuation of guarantees and options included within policies and a realistic valuation of future policy payouts, including future bonuses. In addition to realistic liabilities, a risk capital margin (RCM) must be held, which is the additional capital required to meet the realistic liabilities under specified stress tests.

B.7 Under the realistic peak, counterparty exposure limits are removed and assets can include the present value of in-force non-profit business written in the with-profits fund, as well as future charges on with-profits policies.

B.8 The realistic excess equals assets less liabilities less RCM (after assets and liabilities relating to non-profit business have been stripped out).

B.9 Figure B1 shows how this might work in practice. In the diagram, the Pillar 1 solvency requirement is represented by the highest bars, in this example the 'realistic peak' is the requirement to meet. Note that Guidance Note 45 (GN45) requires that the realistic excess for a closed fund is shown as zero by recognising that this is really a liability to be distributed as the fund runs off.

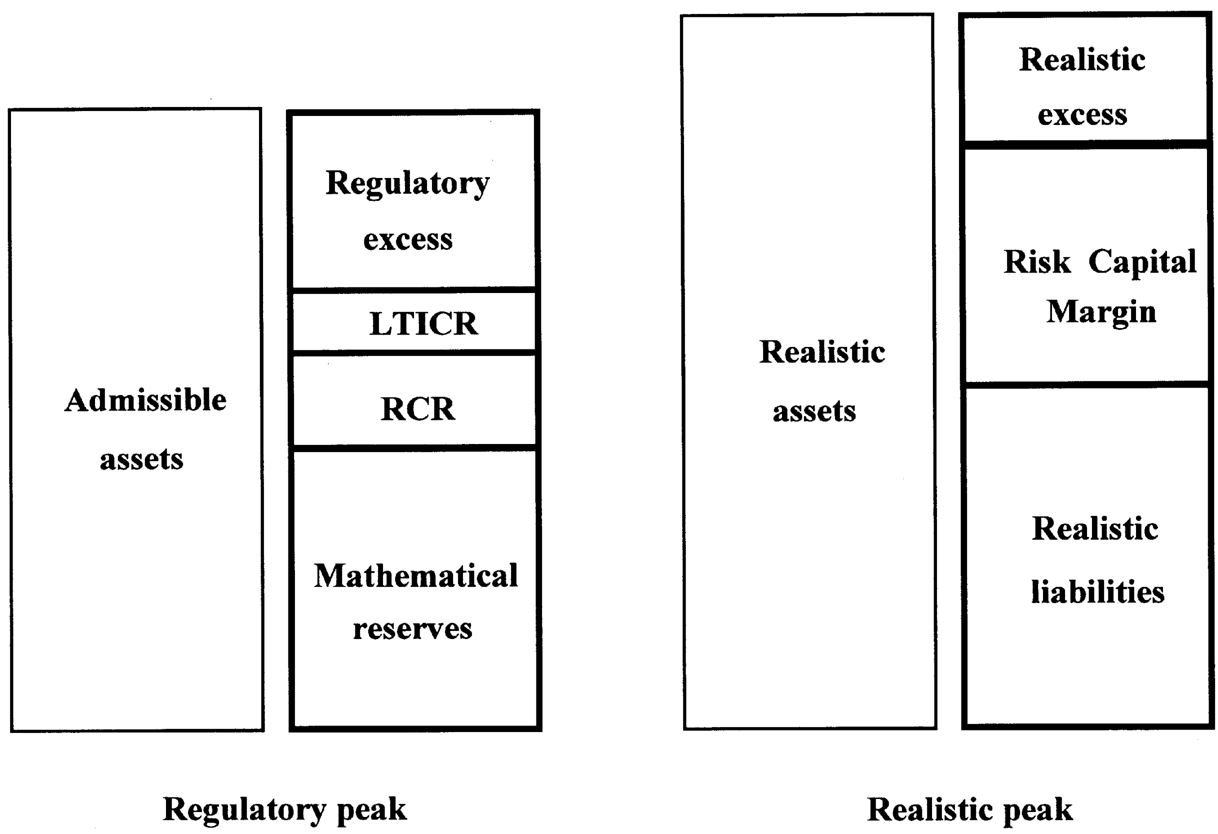


Figure B1.

B.10 *Pillar 2*

Under Pillar 2 solvency, firms are required to perform individual capital assessments (ICA), under which management assesses how much capital it is appropriate to hold. Companies generally produce this assessment by calculating the amount of capital which they would be required to hold to ensure that realistic liabilities can be met after one year in 99.5% of possible future scenarios (or using a lower probability with a longer time horizon), because this is the standard which the FSA uses. The assessment must consider all the risks to which the company is exposed, including:

— market risk — the risk that asset values fall or rise or volatility increases;
— credit risk — the risk that creditors default on interest or capital payments;
— liquidity risk — the risk that asset values cannot be realised at the time required;
— insurance risk — mortality and morbidity risk and persistency risk where values are dependent on the retention of business (or loss of it);
— operational risk — the risk that operational issues lead to losses and expense risk; and
— group risk — risks from other parts of the group which could impact the life fund or company, for example reputational or capital.

B.11 In making the individual capital assessment, companies can allow for diversification benefits and management actions, but must also allow for non-linearity, i.e. two events happening together having a larger effect than the sum of each happening separately.

B.12 The FSA then uses the ICA to set individual capital guidance (ICG), the amount the fund must hold as a buffer against adverse scenarios before regulatory intervention. Companies are not allowed to publish their ICG.

B.13 *Pillar 3*

The Pillar 3 solvency test recognises that firms may want to hold additional capital to ensure a particular rating from the rating agencies, as this can be a prerequisite for attracting new business or new funding.

B.14 *Assumptions*

B.14.1 *Economic*

B.14.1.1 Under the regulatory peak, rules govern the determination of discount rates for the prospective valuation. Discount rates are based on yields on assets, and must be less than 97.5% of the risk adjusted yield (gilt yield or risk adjusted yield on corporate bond or, for equities, greater of dividend yield and average of dividend and earnings yields).

B.14.1.2 Under the realistic peak, a market consistent valuation of with-profits liabilities is required, so that calculations will be based on the average of a large number of economic scenarios determined to ensure market consistency. New rules will force companies to produce market consistent valuations of in force business to the extent that this is included in the realistic peak.

B.14.1.3 Market and credit risk are key components of the ICA.

B.14.2 *Demographic*

B.14.2.1 Under the regulatory peak, companies cannot make allowance for surrenders and lapses, whereas these are permitted under the realistic peak. Persistency often deteriorates after a fund has closed to new business, particularly just after the announcement.

B.14.2.2 For the other demographic assumptions, under the regulatory peak, assumptions are generally based on a realistic assessment with a margin added for prudence. Margins are removed for the realistic peak.

B.14.2.3 Demographic assumptions, such as mortality, are stressed for the ICA. Some companies are beginning to consider use of stochastic mortality tests.

B.14.3 *Expenses*

B.14.3.1 Under the realistic peak, realistic assumptions are used. Additional liabilities would result where future expenses cannot be met from future margins.

B.14.3.2 Under the regulatory peak, expense assumptions must also include a margin. Reserves are also required to meet future expenses where these cannot be met from margins and to meet cost of closure of new business. No allowance can be made for future improvements in expenses.

APPENDIX C

VALUATION OF PENSION FUNDS

C.1 Pension schemes have generally been funded under an approach which implicitly assumes that the scheme will continue to operate until all benefits have been paid, and that advance allowance can be made for investment gains from holding riskier assets than government bonds.

C.2 Pension funding methods have evolved, with a key objective of maintaining a stable employer contribution rate having been abandoned in the late 1990s, as large emerging deficits made this impractical. However, funding calculations have tended to remain deterministic, with explicit reserves against such risks as investment mismatching or further longevity improvements being very uncommon.

C.3 A minimum level of funding — the Minimum Funding Requirement or MFR) applied until 22 September 2005, or a later date for some schemes, and a maximum level (in theory to address potential tax avoidance) applied until 5 April 2006. This maximum level has historically represented a barrier against employers adopting more prudent levels of funding (or some would argue a reason used to justify not adopting more prudent levels of funding).

C.4 Under the new Scheme Specific Funding regime (SSF), which applies to valuations with an effective date after 22 September 2005, the trustees and employer must agree a statement of funding objectives. This will specify, among other things, the method and assumptions which will be used to value a scheme's liabilities and the period over which any deficit will be cleared. This will give many trustees more influence on the pace of funding than they had previously.

C.5 Section 7 mentioned the potential conflicts between trustee and employer viewpoints. In particular, the trustees and the employer may have conflicting interests in issues such as the strength of the assumptions and the period required to make good any deficit. If they cannot reach agreement, then the *Pensions Regulator* may arbitrate (or perhaps more likely, encourage the use of mediation). One option is to reduce future benefit accrual in order to target the employer's available resources on meeting the accrued benefits.

C.6 Many schemes have calculated contributions required in respect of new benefits being earned under the 'projected unit method', which assumes a stable membership profile. Here the funding target, at any point in time, is the value of the accrued liabilities, allowing for the effect of future salary increases on accrued benefits, and the assessed cost of new benefits earned is effectively payable at the time when they are accrued.

C.7 The total company contribution rate payable has tended to be expressed as a percentage of the pensionable payroll of participating employees.

C.8 *Protection Outside the Pension Scheme*

C.8.1 There is no default protection insurance market for occupational pension scheme liabilities in the U.K., and so the only protection for members has historically been the scheme assets and the strength of the employer covenant. The employer covenant suggests a possible analogy with the capital requirements for an insurance company, except that it is presently relatively common for a pension scheme to have a bigger buyout deficit than the recoverable value of the employer, so there is simply less than 100% cover — with no solvency margins — for accrued liabilities.

C.8.2 Under the new funding regime, trustees are required to correct any shortfall as quickly as the employer can reasonably afford. This requires an assessment of the employer's covenant, to ensure that the employer will still be around to pay the contributions needed to fund the benefits. Formal assessment of covenants is a new development for most schemes, despite the lack of benefit coverage.

C.8.3 The emergence of the new funding regime and risk-based *Pension Protection Fund* levies have also encouraged trustees to seek contingent funding, such as a charge on employer property or a bank guarantee, payable in the event of employer insolvency. This means two important new means of protection — *Pension Protection Fund* backing plus the value of any contingent funding. Unfortunately, the employers least able to pay off deficits commonly have no contingent assets to offer.

APPENDIX D

INVESTMENT OF LIFE FUNDS

D.1 The determination of the investment approach to be adopted will primarily depend upon the type of fund, the expected future cash flow, the level of guarantees, and how this is expected to change, and the solvency level of the fund. These will be different for different closed funds and will have to be addressed individually, but the same steps should be taken into consideration. Consideration will also need to given as to whether the closure is permanent or just temporary.

D.2 *Investment Strategy*

D.2.1 For a unit-linked fund, the strategy is likely to have been defined fairly explicitly within policy literature and other formal and legal documents as to the type of investments to be held and the performance requirements. This may be expressed as an objective rather than as a commitment. If the fund is to continue, then the opportunity to change its strategy is very limited. The approach may be to offer, voluntarily or compulsorily, a switch to another fund and wind up the fund. If the fund is to continue, then there may have to be a change in the tactical approach to ensure that the strategy can still be met.

D.2.2 For non-profit and with-profits funds, the strategy at a high level is likely to be more generic in terms of aiming to achieve a good return whilst ensuring that guarantees and solvency requirements are met, and managing to a certain risk appetite. A main aspect is likely to be the approach to matching which, to an extent, is likely to depend on the level of solvency of the fund. There could be a separate investment strategy for the *inherited estate*, and this may extend to pre-planned changes to the asset mix as the fund runs off. There is likely to be comment in the stated strategy on the types of investments considered appropriate as liquidity, length of term, volatility and risk profile become increasingly important as a fund runs off.

D.2.3 The level of detail of the strategy is likely to determine whether there needs to be any changes to it on closure. For example, the need for a fair distribution of the *inherited estate* may lead to a less volatile investment policy.

D.2.4 A with-profits fund is likely to have its investment strategy detailed within the investment principles of its *PPFM*. Whether changes are required to this on closure will depend upon the level of detail in the principles and, if they were written when the fund was open, whether they fully catered for possible new circumstances if the fund became closed. Any change to a principle would require three months advance notification to affected policyholders before it could be effected.

D.3 *Investment Trends*

D.3.1 As has already been noted in Section 8, the investment approach adopted by funds is very variable, depending amongst other things on the nature of the business written and the financial strength of the fund; it is not primarily driven by whether a fund is open or closed.

D.3.2 The equity content of with-profits funds undoubtedly fell between 2000 and 2003, with the fall in equity markets and the consequent increased pressures on solvency. Indeed in this period, which also saw the much greater development and use of stochastic modelling and market consistent valuations of options and guarantees, some offices became forced sellers of equities. While equity markets have improved significantly since March 2003, the equity content of with-profits funds has not returned to its former level for many funds. This is, in part, because of the permanent damage done to some offices' financial strength with the equity falls and also because of a change in the regulatory regime, with a move to realistic reporting and a greater appreciation of the risks funds were running.

D.3.3 For those offices which have moved substantially out of equities and into fixed-interest investments and for those generally with high levels of guarantees within their funds, closer matching has become an important feature, with far greater emphasis on cash flow matching.

D.3.4 Asset/liability management within life funds has developed greatly in recent years, and the use of derivatives has expanded enormously to control the risks to which life funds are exposed. As an example, the *inherited estates* of many with-profits funds were invested in the same way as the underlying asset shares (i.e. predominantly in equities). With the growth in the cost of maturity and other guarantees and the appreciation of their true cost, many offices moved to a more defensive investment policy of their *inherited estates* with guarantees more closely matched. Some offices are now using derivatives or other means to gain a negative equity exposure in their *inherited estates*, because maturity guarantees increase in cost as equity values fall. Derivatives, such as swaptions, are also used to hedge guaranteed annuity options.

APPENDIX E

INVESTMENT OF PENSION FUNDS

E.1 *Who Sets the Investment Strategy and Manages the Assets?*

E.1.1 *Scheme rules*

Occupational pension schemes are generally governed by a Trust Deed and Rules (or some equivalent). Normally the trustees will have the power to invest the assets of the pension fund as they see fit. Pension schemes usually have very wide investment powers, and so it is rare that trustees will be unable to make an investment because of restrictions placed upon them by the scheme rules.

E.1.2 *Self investment*

There are some statutory restrictions on pension scheme investments, but these are not normally onerous. There is a restriction in investment in the sponsoring employer (known as 'self investment'). Self investment is limited to no more than 5% of the pension scheme assets, and this goes beyond holding shares in the sponsoring employer — self investment can cover other transactions such as owning properties leased by the employer. The Inland Revenue also places some limited restrictions on some types of activity, although these are very unlikely to have any practical effect for most schemes. Self investment in this context notably excludes a funding deficit, which is essentially a form of self-investment in the sponsoring employer.

E.1.3 *Employer consultation*

From 6 April 1997 the Pensions Act 1995 has required trustees to consult the sponsoring employers on the scheme investment strategy and the management of the assets. Often such consultation requirements did not actually result in any meaningful engagement, the employers' views often being expressed via trustees who were also senior officers of the employers.

E.1.4 *Delegation and advice*

To a point, the majority of trustee boards will delegate the day-to-day management of the scheme assets to a third party investment manager. They will also seek assistance from their actuary and investment consultant (often the same organisation or person) in setting their investment strategy and when choosing the investment manager to implement that strategy. Some of the largest pension funds may have their own in-house investment manager and also in-house investment expertise, which can partially replace the need to engage an external investment consultant.

E.1.5 *Statutory requirements*

Since 6 April 1997 under the Pensions Act 1995, trustees have been required to seek advice from a suitably qualified person on investment decisions. The Financial Services Act (FSA) can also, in theory, place restrictions on trustees in some of their investment related activities, but, given that trustees normally seek professional advice and appoint an investment manager to manage the assets on a day-to-day basis, the FSA does not normally impact.

E.1.6 *Governance*

As mentioned in Section 7, lay trustees tend to dominate trustee boards. Because of this, trustees rely heavily upon their actuary and their appointed investment consultant in determining their investment strategy, and in selecting and monitoring their investment managers. As many actuarial firms have their own investment consulting business, in effect this means that actuarial firms in one way or another influence materially the strategy adopted by the majority of occupational pension schemes.

E.1.7 Some trustee boards will establish an investment sub-committee which can devote the time required to deal with investment issues and invest the effort required to ensure that the trustees are knowledgeable enough to operate effectively.

E.1.8 The Pensions Act 2004 has introduced a requirement on trustees to be knowledgeable enough to fulfil their duties. The Code of Practice issued by the *Pensions Regulator* includes various topics which trustees would be expected to be conversant with, one being investment.

E.1.9 Since 6 April 1997, trustees have been required to put in place a Statement of Investment Principles (SIP), which documents such matters as the trustees' approach to risks and the targeted level of the return, the investment strategy adopted, and the investment manager arrangements. In practice, most SIPs are relatively unsophisticated in their depth, often making generic observations such as 'the trustees' key objective is to maximise return for an acceptable level of risk'. New legislation being introduced as a result of a European Directive will result in slightly altered requirements for Statements of Investment Principles. The most material difference compared to the existing requirements is that trustees will be required explicitly to disclose their risk management methodology, rather than simply their policy on 'risk'.

E.1.10 The Myners review, which was initiated by the Government, led to the establishment, in 2001, of various principles which are voluntary, but have generally been applied by many schemes. These 'Myners principles' are as follows:

— *Effective decision making*. Decisions should only be taken by those with the skills, information and resources necessary to take them effectively.
— *Clear objectives.* The trustees' investment objectives should set out how they intend to meet their liabilities, given the contributions which they expect to receive from the employer and their attitude to risk.

- *Focus on asset allocation.* Strategic asset allocation should reflect the fund's own characteristics, and not, for example, the average allocation of other funds. Proper attention should be given to asset allocation, reflecting the importance which it has in meeting the fund's investment objectives. No asset class should be excluded from consideration.
- *Explicit mandates.* Trustees should agree mandates with each of their investment managers which set out clearly the performance expectations, and trustees should have a full understanding on transaction costs.
- *Activism.* Trustees must have a strategy for their investment managers to intervene in a company, where it is in the interests of the shareholders and beneficiaries, and set out how they should intervene and how its effectiveness will be assessed.
- *Benchmarks.* Benchmarks should be appropriate.
- *Performance measurement.* As well as monitoring the performance of the investment managers, trustees should arrange for a formal assessment of their own procedures and decisions and those of their advisors and managers.
- *Transparency.* Greater transparency is in the Statement of Investment Principles.
- *Regular reporting.* Trustees should publish their Statement of Investment Principles and the results of their performance monitoring. Key points should be sent annually to fund members, including explanation of where the trustees have chosen to depart from any of these principles.

E.1.11 As already mentioned, since 6 April 1997 trustees have had to consult employers on their investments, although employers have often taken limited interest in pension investment strategy, despite holding the downside risk of adverse investment performance. However, the increasingly onerous funding framework surrounding pensions which has been introduced by the Pensions Act 2004, and recent pension shortfalls, have led to a rapidly increasing number of employers taking more proactive interest in the investment strategy of the schemes which they sponsor. Some employers seek to reduce risk to limit pension cost volatility, while others seek to maintain a high level of risk in the hope that future investment outperformance will improve the funding position.

E.1.12 The Pensions Act 2004 is also introducing a requirement for trustees to set up adequate internal controls. The draft Code of Practice includes reference to trustees setting out the arrangements and procedures to be followed for the custody and security of the assets of the scheme.

E.1.13 In terms of professional requirements, Scheme Actuaries have a professional duty under GN9 to comment on the appropriateness or otherwise of the investment strategy being following by a pension scheme as part of their (typically triennial) actuarial valuation. Trustees complete an undertaking when appointing a Scheme Actuary to inform the actuary should certain events/actions be taken in relation to the scheme, so that the actuary can provide advice as appropriate. These actions/events typically include changes in investment strategy, large changes in asset values and other events which might have an effect on investment strategy (e.g. winding up).

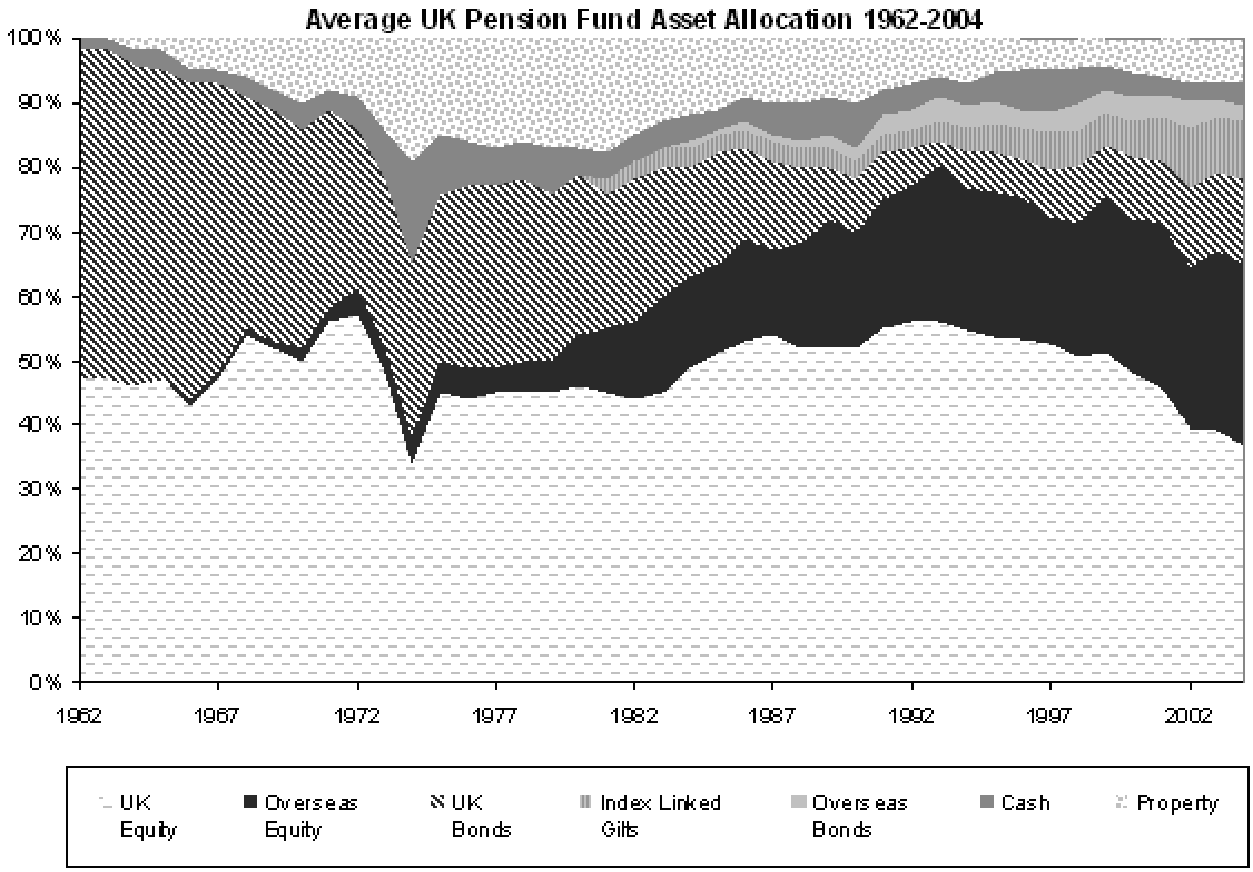
E.2 *External Influences on Investment Strategy*

E.2.1 Historic asset allocation across U.K. pension schemes is shown by Figure E2. There are many sources of the information in this chart, including National Statistics and internal survey information from the employer of one of the authors.

E.2.2 There are various influences on investment strategy driven or touched upon by the general regulatory pensions framework and/or actuarial practice.

E.2.3 *Discounted dividend approach to actuarial valuations*

E.2.3.1 Until the late/mid 1990s most actuarial valuations were undertaken



Source: National Statistics to 1992, WM from 1993

Figure E2.

on a '*discounted dividend*' approach (as described in the Glossary) rather than using market values. The extent to which this affected investment strategy is not clear, but, given that investment strategy would often be set by reference to volatility in the funding level, it would certainly have not detracted from investing in non-matched assets.

E.2.3.2 The Government Actuary's Department adopted a similar approach in the 1980s, when the Inland Revenue introduced surplus tests on pension funds to avoid excessive surpluses being built up.

E.2.3.3 However, since the mid to late 1990s there has been an increasing acceptance that the assets which best match the pension liabilities are long-dated bonds. This has found its way into actuarial valuations now being done on a 'market value' basis (assets taken at market value and liabilities discounted at market rates), with a corresponding effect on investment strategy.

E.3 *Minimum Funding Requirement (MFR)*

E.3.1 The MFR was introduced from 6 April 1997 as the statutory minimum funding level, with various rules on rectification periods for shortfalls. The MFR assumptions, in effect, implied gilts as the matching investment for pensioners, and U.K. equities as the matching investment for non-retired members (phased into gilts over the ten years leading to pension age). Following the introduction of the MFR, some schemes invariably started using this as a funding target or at least as a limit not to be breached, and so investment strategy was fixed by reference to risk against the implied MFR matching portfolio.

E.3.2 The MFR is now being abolished, and it will now not apply to any actuarial valuations with an effective date after 22 September 2005.

E.3.3 The MFR is being replaced by the new framework initiated by the Pensions Act 2004. The full details of this framework are not yet known.

E.4 *Pension Protection Fund (PPF) Levies*

E.4.1 A large part of the *PPF* levy is intended to be 'risk based', that is it will be higher the higher the assessed risk of a claim on the *PPF*.

E.4.2 One of the risk measures which the *PPF* is considering introducing is the investment risk being taken by a pension scheme. Assuming that this means that investment in non-matching assets will result in a higher levy to the *PPF* (and this is not yet known as the *PPF* has not yet issued any proposals in this area), this may increase movements into bonds for schemes which have relatively high levies (typically weaker employers with large shortfalls in their schemes). This, of course, can result in a Hobson's Choice scenario for employers, because increased bond holdings may mean a lower allowance for anticipated higher returns from investments, and perhaps lower returns in practice — leading to higher contributions — whereas a lower level of bond holdings could mean a higher *PPF* levy.

E.5 *Actuarial Guidance Notes*

E.5.1 The current actuarial guidance note on transfer values payable to members in lieu of their pension benefits (GN11) makes direct reference to the transfer value reflecting the expected cost to the scheme in providing that benefit. A scheme which invests in equities may justify relatively low transfer values on the basis that equities can be expected to give higher returns in the long term. Therefore, perhaps perversely, a pension scheme looking to reduce investment risk may find that it needs to increase the transfer values payable to members, even though, in reality, the economic value of the pension promise is largely unaltered.

E.5.2 GN11 is under review. A draft was issued for consultation in 2005 which largely broke the link between transfer values and scheme investment. A substantial level of comment was received on this via the consultation process. The profession has recently agreed with the Government that the Government should set the parameters for the calculation of transfer values rather than the profession (via GN11), and so the draft replacement GN11 may very well be significantly altered in future.

E.6 *Advance Allowance for Higher Investment Returns*

E.6.1 The way in which the contribution rate is set can be influenced by investment strategy and vice versa. In particular, if the funding strategy anticipates higher investment returns than bond yields, then any movement towards more matched investments could lead to the actuary having to make a smaller allowance for such higher returns. This would lead to increased funding requirements for the employer.

E.6.2 For this reason, occasionally in a pension scheme, where the employer sets the contribution rate (rather than the trustees), if the employer sets the contribution rate at a relatively low level so as to minimise cash flow to the scheme, the trustees may adopt a more matched investment strategy so as to essentially 'enforce' an increased employer contribution.

E.6.3 Until 11 June 2003 an employer could exit a pension liability at below solvency cost, so that members would receive reduced benefits. Consequently, in some cases, employers were happy to leave trustees to take equity risk, with the employer paying a lower level of contributions on the back of anticipated future higher returns from equities, since, if the 'bet' did not pay off, the employer could exit.

E.7 *Solvency*

E.7.1 In the 1980s many pension schemes were fully funded on a solvency or wind-up basis (on wind up, benefits are normally secured on a guaranteed basis with non-profit bulk immediate deferred annuities). The reason for this was that many benefits were discretionary, and pension schemes funded in advance for some discretionary benefits, such as discretionary annual increases to pensions in payment and to deferred pensions prior to payment. This pre-funding gave a margin against the contractual benefits which had to be secured on winding up.

E.7.2 Legislation introduced progressively by the Government since the 1980s has gradually changed many of these discretionary benefits into contractual benefits, eliminating such margins. Therefore, although some 20 or so years ago investment strategy would not have been materially affected by solvency concerns, the position has changed substantially since then, and solvency is more relevant. This encourages less investment risk.

E.7.3 However, because employers could exit a pension scheme in the majority of cases without fully funding it to a solvency level, this meant that pension provision was still thought by some as being discretionary. That is that delivery depends on sufficient investment returns being achieved. The legal requirement introduced from 11 June 2003 for employers to fully fund a pension scheme which terminates to a solvency level removed any doubt that pension liabilities are fixed and guaranteed in nature, with the employer being liable for any shortfall.

E.8 *Discretionary Benefits and Scheme Rules*

Where trustees have the power to grant discretionary increases to benefits if a surplus arises, members may benefit from investment in non-matched assets. If such discretionary powers are combined with the power for the trustees to set the employer contribution rate, then the trustees may feel more inclined to take investment risk, particularly if the employer covenant is strong. Discretionary benefits and the balance of powers in the scheme rules can therefore complicate investment strategy, particularly where there is a long history of such discretionary benefits being granted.

E.9 *Accounting for Pensions*

E.9.1 Corporate accounting treatment of pension schemes is relevant.

E.9.2 Before 'mark to market' approaches were introduced, such as FRS 17, pension cost reporting by U.K. companies was undertaken using SSAP 24, a very unprescriptive standard which allowed volatility in the funding position of the pension scheme to be smoothed out in the profit and loss (P&L) account and balance sheet.

E.9.3 Under FRS 17 (and the new international accounting standards IAS 19) the mark to market pension shortfall sits on the corporate balance sheet, therefore giving balance sheet volatility if an unmatched investment strategy is adopted. A company with small distributable reserves relative to the pension shortfall can find its ability to pay dividends constrained by adverse pension funding experience.

E.9.4 However, these mark to market accounting standards allow the expected return on the pension scheme assets to be a positive item in the P&L. As equities have a higher expected return, this means that, all things being equal, the P&L improves with a greater portion of equities held by a pension scheme. This feeds through to the headline earnings per share. It is not clear how consistently analysts and shareholders strip out this accounting effect. It can have a major effect on the P&L of some companies, and so a change in investment strategy of the pension scheme (which is driven by the trustees) can materially affect headline profitability (from a reporting view) of the sponsoring employer.

E.10 *Member Communication*

E.10.1 The investment strategy adopted by a pension scheme is relevant to members, since the security and delivery of their benefits may depend on how the investments perform.

E.10.2 Members have a right to request a copy of the Statement of Investment Principles.

E.10.3 Members can also request a copy of the scheme annual report and accounts. This will include an investment report describing investment performance over the year, and including details of the actual assets held.

E.10.4 Scheme Actuaries are required to provide an actuarial certificate (the Regulation 30 Certificate) when signing a formal actuarial valuation report. The Regulation 30 certificate comments on the ability of the scheme to meet benefits as they fall due. This certification, which is available to members in the annual report, refers to adequacy of contributions in the 'normal course of events', and so does not describe the types of investment market volatility and performance which could threaten the funding plan.

E.11 *'Herd' Effects*

E.11.1 Clearly, trustees will take into account what their peers are doing when setting their investment strategy, if only as a reality check in terms of whether they are doing something completely out of line with general practice. This will often be done implicitly through the advice from the actuary and investment adviser, as that advice will reflect advice to the trustees of other similar pension schemes.

E.11.2 However, one effect of note is that many trustees in the 1980s and 1990s adopted investment benchmarks measured against the median pension fund. Although investment manager mandates would permit managers to hold asset allocations different to the median, many would not drift far from the median to avoid excessive volatility between their portfolio returns and the benchmark. At some points the median allocation to equities was some 80% — very high by current standards, and, with hindsight, not an appropriate 'one size fits all' strategic allocation.

E.11.3 Since then a very large number of schemes have adopted scheme specific asset allocations rather than an allocation based on a median allocation.

E.12 *Investment Sectors*

E.12.1 A typical pension scheme will include a wide variety of asset types in its investment benchmark — typically equities (U.K. and overseas), bonds (U.K. corporates, gilts, and overseas bonds), and perhaps property.

E.12.2 The small size of many pension schemes means that holding assets outside of these sectors is inefficient (from a cost management angle).

E.12.3 Larger schemes may consider other sectors, such as venture capital, hedge funds, absolute return mandates, and options. Trustees are becoming more sophisticated in their asset allocation approaches, driven by the investment consultants, with trustees considering more explicitly how much risk budget they have and the extent to which it should be delivered through alpha and beta.

E.12.4 Increasingly, funds will adopt passive investment strategies for part or all of the portfolio. Bad experiences with active management from some of the major investment houses, and the growth of the passive fund market, has encouraged passive investment.

E.12.5 Many pension schemes have, in recent years, moved a greater proportion of their assets into bonds. For some, this was initiated by a drive to reduce mismatching risk, particularly following the adoption of market related actuarial valuation approaches in the mid to late 1990s. Others have moved more heavily into bonds, following the significant equity falls between 2000 and 2003. In reality, equities have significantly underperformed ultra-long-dated bonds (which are of a duration which best match pension liabilities) for over a decade leading up to this period, although this may have been less transparent, because equities were still producing positive absolute returns for much of this period and most schemes only switched to market related valuations part of the way through this period.

E.12.6 The bond holdings in many pension schemes do not match closely the characteristics of the benefit cash flows, quite simply because the bond holdings are not substantial, and so the volatility still inherent due to holdings in non-matched investments would make attempts to closely match the bond holding spurious. However, some schemes (typically better funded and relatively mature large schemes) have increased bond holdings to form the majority of the portfolio, and are often more closely examining the characteristics of the bond portfolio and any derivative portfolio versus the actual projected pension scheme benefit cash flows.

E.12.7 Cash flow matching is not common. In the past large holdings in equities meant that any attempt at cash flow matching was spurious. However, as the level of bond holdings increases, a point is reached where it makes sense to look at projected pension scheme benefit cash flows when choosing investments. This is an area which many investment managers and banks are exploring in terms of product development, with many having implemented cash flow matching solutions of varying complexity and sophistication. However, more sophisticated solutions, such as using swaps to convert, say, fixed-interest exposure to limited price inflation exposure (i.e. RPI floor of 0% and cap of 5% p.a.) to match pension increase terms, are not common.

E.12.8 Ultimately, the importance of achieving absolute cash flow matching (which is not possible in any case) will partially depend on the strength of the sponsoring employer. If the sponsoring employer is weak, close matching is more important, since the financial effect of adverse experience may exceed the employer's ability to finance it.

APPENDIX F

COMPARISON OF THE GOVERNANCE OF LIFE AND PENSION FUNDS

	Life fund	Pension fund
Legal existence	Company established under Companies Act. Needs to be authorised by the FSA to transact insurance business. Directors and other key officers have to be registered with the FSA and be 'fit and proper' persons.	Fund established as a trust, hence a separate legal entity to the employer with the trustees having significant powers in the operation of the fund. Trustees may be employer nominated, member nominated or independent, and only tend to be paid in the latter case. The balance of powers between the trustees and employer depends critically on the particular wording of the trust deed. From 2005, the *Pensions Regulator* sets trustee knowledge requirements and can, in extreme circumstances, replace trustees.
Owners	Either shareholders in the case of a proprietary office, or with-profits policyholders in the case of a mutual.	There is some ambiguity here. The trustees operate the trust on behalf of the members, but the employer sponsors the trust and usually meets the largest share of benefit costs. If a surplus arises, the question of whether the employer or members have a *right* to a surplus share has proved difficult to resolve.

	Life fund	Pension fund
Internal governance	By a board of directors nominated by the shareholders. Act on the advice of various advisers, actuaries, accountants, lawyers, compliance experts, etc.	By the trustees. Legal, actuarial, accountancy, investment and other advisers are appointed, with the advice usually provided by a party external to the trustees and employer.
Regulator	Financial Services Authority (FSA) Some standards also set by the Association of British Insurers (ABI) — an industry organisation which speaks out on issues of common interest; helps to inform and participate in debates on public policy issues; and also acts as an advocate for high standards of customer service in the insurance industry. An example is the requirement to send out projected benefit statements on endowment policies every two years. Actuarial profession, but in the process of being replaced by the Board for Actuarial Standards.	*Pensions Regulator*. Some investment advice regulated by FSA. Department of Work and Pensions sets requirements for schemes which provide benefits in place of state entitlements. Actuarial profession, but soon largely to be replaced by the Board for Actuarial Standards.
Roles of actuaries	Actuarial Function Holder — duties laid down in the FSA Handbook SUP 4.3.13R. Duties include, *inter alia*, advising on risks as they materially impact the liabilities or capital required, monitor those risks, advise on assumptions, perform and report on the findings of the actuarial valuation.	Scheme Actuary — advises the trustees on funding target (the funding target is then set by the trustees and the employer jointly under most trust deeds) and certifies resulting contribution levels. Advises on transfer value basis and advises on, or in some cases sets, other actuarial factors.

	Life fund	Pension fund
	With Profits Actuary — duties laid down in the FSA Handbook SUP 4.3.16AR. Duties include, *inter alia*, advising on the key risks which affect the with-profits business, advise whether the assumptions used for the calculation of the with-profits capital component are consistent with the firm's *PPFM*, report to the governing body on the application of the *PPFM* and the exercise of discretion, advise on bonus rates, surrender values, etc., as they apply to with-profits policies.	Some companies appoint a separate actuary to advise the company on pension scheme issues.
	With Profits Committee/ Independent Reviewer — agrees bonus rates, monitors the exercise of discretion (not all members are required to be actuaries, but generally some actuarial expertise is found on such committees)	
	Reviewing Actuary — independent (of the insurer) actuary reviewing the actuarial valuation of the fund for the auditor to enable him or her to sign off FSA returns.	
Relationship between legal entity and policyholders/ members	Policy documents. A legal contract setting down the benefits available to the owner and the premiums required to secure those benefits. Changes to the contract can only be made with the agreement of both parties, unless otherwise	The trust documents. Usually the trustees' consent and the Scheme Actuary's certification are needed to allow changes to benefit structures or scheme mergers proposed by the employer. From 2006, a member

	Life fund	Pension fund
	imposed in a court of law. In addition, statements made in marketing and other literature can also set expectations/liabilities, even if not covered, or conflict with statements in the policy document.	consultation process may also be required.
Recourse in the event of default	Financial Services Compensation Scheme under FSMA2000. The extent of recourse is 100% of the first £2,000 of benefit and 90% of remaining guaranteed benefits.	From 2005, *Pension Protection Fund* (and for schemes which had already commenced wind-up before 2005, the Financial Assistance Scheme) protect part or all of a member's benefits in the event of insolvency. The extent of recourse from the *PPF* is 90% to 100% of accrued pension, with a benefit limit for members under normal retirement age, and often reduced entitlements to future benefit increases in deferment and in payment. Fraud Compensation Scheme protects benefits in the event of fraud.
Member complaints	Initially raised with the company or Independent Financial Adviser. If unresolved or not resolved satisfactorily, it can, in certain circumstances, be referred to the Financial Ombudsman Service. Policyholder has recourse to the courts if still unsatisfied. Insurer may seek judicial review.	Initially raised with trustees through scheme's internal dispute resolution process. The complaint if unresolved may then be raised with the Pensions Ombudsman.

	Life fund	Pension fund
Role of auditors in relation to actuarial work	FSA returns are reviewed on behalf of the auditor by the reviewing actuary. In practice, the reviewing actuary generally also reviews the liabilities in the Companies Act accounts.	The auditor role is restricted to the assets and cash flows of a pension scheme, with no opinion being given on the value placed on the liabilities by the Scheme Actuary. This partial nature of a pensions audit is increasingly being questioned and may change.

Printed by Bell & Bain Ltd., Glasgow