Finance, Investment & Risk Management Conference 2007, Dublin

Regulations and investor behaviour – Ian Sykes

Scope

This session is about how regulation affects the investment behaviour of Irish occupational pension schemes. This is a very specific situation to look at, but a topical one given the location of the conference this year and an interesting one because the regulations and other factors were similar, but not identical to the UK until the Pensions Act 2004 changes. Since then they have diverged.

There is scope for futher work on this subject, looking at other institutions and regulatory regimes. Perhaps someone could pick this up at a future conference.

Main conclusions

My main conculsion is that direct investment regulations - and indeed funding regulations – seem to have little impact on investment behaviour. This reflects the fact that the regulation of pension funds is intentionally 'light touch' compared with, say, insurance companies.

As in the UK, the main drivers of investment behaviour are other less direct regulations.

The constitution of pension funds as trusts which are legally distinct from the company ultimately providing the benefits means that companies do not treat defined benefit pension liabilities in same way that they treat other corporate debt. The trustees, who are primarily responsible for determining investement strategy are generally not expert in investment issues and so will tend to follow the herd, or the advice of their investment consultants, or the wishes of the sponsor either directly or via sponsor representatives amongst the trustees. None of these strategies will necessarily lead to optimal investment policies.

Corporate accounting rules encourage defined benefit pension schemes to take investment risk because they can take advance credit for the rewards of risk without having to account for the cost of taking the risk in the first place.

Insurance companies and defined benefit pension schemes are in the same business of providing defined payments to customers/ beneficiaries. I think there should be consistent regulation.

Occupational defined contribution schemes are basically acting as investment managers for individual funds. They should be aiming to provide an appropriate range of investment funds providing the best possible rewards per unit of risk , net of expenses. One significant difference is that investment managers cannot provide direct investment advice to their clients. Pension schemes can, by the way they structure the fund choices available to their members. Most schemes shy away from exploiting this because they think that members are capable of making these decision for themselves. They offer a very wide range of funds and advice on how to choose between them. I think there is a missed opportunity here. Members in general do not want choice. Trustees and sponsors should work a lot harder to provide a small number of cheap alternatives which are aligned to the majority interest and indicating to members whether they fit this majority profile and what the can do if they want to opt-out. It may not be appropriate for regulation to force schemes to do this, but at least it should not actively discourage it.

My background

I should explain my own background as it inevitably colours my views.

First, obvious point: I am not Irish. I moved here 2 years ago from the UK, so I have a reasonably fresh perspective on the Irish situation. I am still learning, but there are some advantages in a top-down approach based on the big picture rather than the details.

I now work as an investment consultant, but my background is in corporate pension advice – particularly M&A and accounting issues. So I am used to seeing pension scheme assets and liabilities as part of the company rather than as stand-alone funds. As we all know, trying to apply risk management techniques to part of a company – in this case the pension scheme rather than over the company as a whole – leads to sub-optimal decisions as it ignores the correlations between risks in different parts of the business.

The theory of regulation

What would the world be like without any form of regulation at at all? I went to see the film 28 Weeks Later recently, which shows England overrun by rage-infected homicidal zombies. That would be my personal prediction for a world without regulation. Specifically: I don't think investment, or trade of any form could exist without some sort of legislation to enforce the contracts that are made. Pensions certainly wouldn't exist. We would be too busy running away from the zombies and finding something to eat. Others believe the world would be a whole lot better without any form of regulation. Which view is right? This question is too big for this conference – at least the sober bits of it - but the point I want to make is that it is hard, if not impossible, to separate the effect of one aspect of regulation from others.

Setting aside the general question, many people would argue that in an ideal economy, there would be no restrictions on investment behaviour and this would lead to optimal returns. Famously, the Teamsters pension fund in the US had superb returns. It also had the Mafia as its investment manager. Criminal activities are high risk/ return investments, but are seen by many people – usually the rich ones – as a bad thing.

Finance theory leads us logically to conclude that, based on certain assumptions, all investors will hold the same portfolio of risky assets, combined with a risk free asset. No-one thinks the assumptions are realistic. The power of the theory is that it indicates where to look to account for different behaviours. These assumptions are:

- Investors are sane (not rage infected zombies)
- They all have the same views about future asset returns (some zombie-like features)
- They all have the same, and complete information
- There are no taxes or other ‘frictional’ costs
- There are no constraints, either self-imposed or socially-imposed

In practice society imposes constraints on our behaviour which reduce potential returns in order to increase overall welfare. This is what I mean by regulations. These can be ‘sticks’ – do this and you will be punished – e.g. wind up your pension scheme and we will make you put more money in, or ‘carrots’ – e.g. set up a trust fund and we will give you tax exemptions.

Since these welfare benefits may not be easily measurable in monetary terms, it can be hard to measure how successful regulation is. And, often, the exact objectives of the regulations are not explicitly stated in the first place, making measurement even harder. I will assume that the general objective of pension regulation, in all its forms, is to provide members with the benefits they have been promised, without imposing undue costs on the company promising them.

Another problem is lack of a ‘control’ for the research– we cannot compare an Ireland with one set of regulations with an Ireland with other regulations because there is only one Ireland available. We can compare it with other countries, and with itself in the past, but these are not like-for-like studies.

Irish pension system

I will briefly set the background for those of you not familiar with the Irish pension system.

It has evolved from, and has tended to follow, until recently, the UK system.

Most schemes are funded, defined benefit arrangements, set up under trust, with tax incentives to do so. There are some significant differences from the UK:

- Schemes cannot contract-out of part of the state pension scheme. So typically schemes have large state pension offsets usually expressed as a deduction from salary used for pension purposes, but otherwise tend to follow the 60ths/ 80ths of final pensionable salary model. The benefits provided, and the hence the schemes themselves are consequently smaller than in the UK.
- There is no legal requirement to provide pension increases, although many schemes do so.

- Ireland has not adopted the 2004 Pensions Act model for managing employer default risk – there is no Pension Protection Fund, and employers may terminate pension schemes without securing accrued benefits in full with an insurer. There have been no big scandals involving the collapse of an Irish pension scheme – yet. I hope there will not be, but this is not a reason for believing that the regulations in this area are adequate.
- Instead, Ireland has adopted a stronger minimum funding standard than the UK – schemes have to fund pensions in payment up to, approximately, buy-out cost and other benefits on a cash equivalent basis which phase in to buy-out cost as members approach retirement. Schemes have 3 years to reach full funding, although this period may be extended on appeal. Irish schemes are not generally as mature as their UK counterparts, so whilst this is ultimately a strict funding regime, and the industry is lobbying to relax it, it is not yet causing severe problems for the Irish economy as a whole.
- Defined contribution schemes are becoming increasingly common, but defined benefit schemes are proving more robust than in the UK, with a couple of companies having to cancel plans to close their defined benefit schemes in the light of pressure from employees, trade unions and other bodies.
- It is not that long since Ireland adopted the Euro. Until then, investments would usually be in Punt or Sterling denominted assets. There is now a growing awareness of overseas investments and managers, but there is still a long way to go in developing exposures to these markets.
- The smaller population and economy mean that Irish pension schemes – with a few exceptions - are typically much smaller than in the UK. This has implications for the types of investment vehicles which are appropriate – as you will see later, unitised funds are very common.
- Companies are accounting under IAS 19/ FRS 17, as in the UK .

Having set the background, let’s look at the main pension regulations in Ireland

Constitution

Companies promise to pay benefits to employees. They could do so directly. This is the standard approach in Germany.

In Ireland, as in the UK, benefits are usually provided by via a legally separate trust. This has the advantage of providing some security to employees if the company goes bust. This approach is encouraged by giving big tax advantages to funded schemes – the trust’s investment income is largely tax free.

Many economists – firstly Fischer Black of Black Scholes fame, have noted that this tax advantage can be exploited. A company can borrow money to hedge it pension liabilities with bonds. It gets tax relief on these borrowings but pays no tax on the pension fund income. There is a risk free profit up for grabs. This is a simplified picture of what the

Boots Pension Fund did. It is surprising that so few other companies have followed, but other regulatory issues, which I will come to later, complicate the argument. Of course, if everyone did this, the rules would be changed. And if the government is losing tax revenue from one source, it will find it from another. But this sounds like the same argument against not picking up a fiver you see lying on the street: if it was for real someone else would have picked it up already.

These trusts are administered by trustees who are selected from amongst company management and employees, or third parties such as prfoessional trustees. The responsibility of these trustees will vary from trust to trust, but usually decisions on how to invest the fund are the responsibility of the trustees, not the company. Investment is a complicated business, and even experienced trustees may not have the expertise and/or the time required to make optimal decisions. Most trustees recognise this problem and either copy other funds – the standard model until quite recently - or hire consultants to help them.

There is a problem with using consultants. Consultants will make more money from complex and risky strategies than simple and safe ones, even if simple and safe ones are better. I am not saying that they will do this deliberately, but a number of other factors encourage this behaviour and the pay cheques do not discourage it.

The main job of the trustees is to make sure that the benefits that have been promised actually get paid. If they were given enough money, I assume they would insure the benefits and that would be the end of it. The problem is that the company usually cannot afford the cost of insuring the benefits it wants to provide, which leaves the trustees in a dilemma: they can either demand more money – and face the possibility that the scheme will be terminated without providing all the promised benefits –or they can agree to take some investment risk to hope to provide the benefits within the companies cost constraint. In the UK, trustees might be quite relaxed about this: the company has to pay up if something goes wrong and if the company goes bust, there is significant underwriting from the Pension Protection Fund. The situation is far less secure in Ireland, so you would expect the Irish trustees to be far more risk averse than UK trustees.This does not seem to happen in practice.

Investment regulations

The explicit regulations on investor behaviour are very few and very vague. They are the implementation of the European investment directive. Essentially, the investment regulations say:

- Investments must be consistent with the nature and duration of the liabilities;
- Investments must be mainly in regulated markets
- Undue concentrations of risk should be avoided
- Derivatives should only be used to control risk and improve efficiency, not for speculation

- DC plan members should be offered an appropriate range of investments and a default fund for those who can't or won't decide for themsleves.
- The trustees should prepare a statement justifying their investment policy.

Clearly, it is pretty easy to justify most strategies in these terms.

Funding regulations

The EU funding directive requires EU pension funds to cover their 'technical reserves' – otherwise known as liabilities - at all times. Different countries have adopted radically different interpretations of this admittedly cryptic directive.

The UK interpretation is pretty much business as usual, except that you have to write it down. Technical reserves do not have to be measured using buy-out cost – the cost of insuring the benefits - and relatively long periods (up to10 years) are allowed to restore full funding for under-funded schemes. However, the UK also adopted other measures – the Pension Protection Fund, a rage-infected regulator and the requirement to buy-out all accrued benefits on voluntary wind-up – which strenthen the security of member's benefits.

The Irish interpretation is that technical reserves are the buy-out cost for pensions in payment and the cash equivalent for other benefits. Cash equivalents are 'actuarial values' way below buy-out for youngsters as they allow for equity risk premiums but phase in to buy-out cost for those close to retirement. Schemes have three years to restore full funding – although longer periods may be allowed in exceptional circumstances. There is no requirement to buy-out in full on wind up.

In the long run, this is a better way of doing things. It avoids the compexity and cross-subsidies of the PPF approach. On the other hand, it does seem to offer employers the chance to terminate schemes now to avoid the stricter regulation and increased costs that will result later. Unsurprisingly this has happened, but not to any significant degree.

The pensions industry is lobbying for relaxation of the funding regulations. In the meantime those nasty men in Brussels are discussing whether the Solvency II, the regulations on insurance company solvency should also be applied to pension schemes. This would require pension schemes to hold very substantial mismatching reserves if they wanted to continue investing in mismatched assets. Clearly, this would be a major issue in Ireland.

Accounting regulations

Irish companies account for defined benefit pension liabilities under IAS19, the international accounting standard, or FRS 17, the UK standard. For the purposes of this discussion, the differences are not that important.

I will summarise the main features for those of you who don't know them already:

- Unfunded liabilities – liabilities less assets – are recognized on the balance sheet, either immediately or eventually, on a phased basis.
- The cost of pensions in a period is:
    - the cost of the new benefits accrued during the period plus
    - interest on the existing liabilities, less
    - the <u>expected</u> return on the assets, plus or minus
    - recognition of part of any previously unrecognized gains or losses
- Scheme assets must be measured at market value, or fair value if they are not marketable.
- Liabilities are based on accrued benefits, but allow for future salary increases, measured using best estimates of demographic factors, inflation, and discounted at AA rated corporate bond rates of appropriate currency and duration.

There are a number of features of these rules which are odd compared with other accounting standards.

Companies are allowed to take credit for expected asset returns over the period, rather than actual returns. The difference does not hit profits immediately and may never actually do so. Companies have considerable freedom in choosing what these expected returns should be subject to the best estimate requirement.

So, in theory, you could set up a company by borrowing money, investing in a passive equity portfolio and declare profits simply because the expected return on equities is greater than the actual cost of borrowing. The fallacy here arises because there needs to be a profit adjustment to allow for the risk – there is currently no requirement to do so. I hope there soon will be. Most people would see through this fallacy if this is all that companies did, but when it is hidden amongst lots of other activities as in a real life business, it can be harder to spot.

Liabilities are measured using AA bond discount rates – so there is allowance for default risk. This seems strange given that these are promises made to employees. Surely they should be discounted at risk free rates. On the other hand, the liabilities allow for future salary increases which are generally not contractual obligations. So the accounting measure of liabilities is not a sensible economic value – that would be the cost of buying-out or hedging the accrued liabilities based on current salary and service – simply one that has been reluctantly accepted as palatable. The accountants recognize this issue and encourage additional disclosure of the buy-out cost, but we are a long way from it being the standard accounting measure.

The effect of all this is that companies are encouraged to have their pension plans invested in equities and other risky assets as they are a source of profit, and to believe that they can provide benefits more cheaply than an insurance company because they do not have to price the liabilities in the same way.

I am emphatically not accusing companies of wilful manipulation here – they are simply following the accounting rules and determining their polices on the information that flows from doing so.

As far as the pension scheme itself is concerned, the rules are even stranger. The accounts that trustees publish show the assets of the scheme, but not the liabilities – just a statement from the actuary that everything is OK. It would be a giant leap forward if trustees, either by regulation or voluntarily, included the liabilities to give a proper set of accounts to their members – one with assets and liabilities in it. The new UK regulations require trustees to issue funding statements annually showing the buy-out balance sheet. There is no such requirement in Ireland, except for an annual statement as to whether the scheme is fully funded or not on the statutory basis.

Investment practice

So, against this background, what do funds actually get up to?

The Irish Association of Pension Funds produces a rather good annual survey of aggregate asset allocations. The latest survey was conducted in 2006 and it showed:

- Just under €90 billion in assets – DB and DC combined. The vast majority of this will be DB at the moment.
- About 10% is in insured schemes, 50% in pooled funds and 40% under segregated management. Most schemes are 'small' making insured or pooled funds the best investment vehicles.
- About 25% is managed passively, 75% actively. I do wonder whether the majority of trustees have got the time, expertise and nerve to manage assets actively – the survey doesn't allow us to look through to how this mix varies with scheme size.
- The average asset allocation is:
    - 63% equities – including 11% in Irish equities
    - 20% bonds – mostly conventional bonds of maturity 10 years or less
    - 10% property – half of which is Irish property, it was almost 100% until 2006.
    - 5% cash
    - 2% in alternatives – mainly currency and derivatives used for hedging

Defined benefit schemes

Most actuaries would agree that liabilities look a lot like long-dated index-linked bonds. But typical investments portfolios still mainly consist of equities (with a very heavy concentration in domestic equities) and conventional bonds of much shorter duration than the liabilities. This is not necessarily inconsistent with the liabilities if you are taking risks to achieve outperformance, provided that you are taking the right risks and are confident about the company's ability and willingness to underwrite any losses. Irish regulation does not require full underwriting by solvent companies, or provide compenation for insolvent ones. The funding regulations will do so in time, but at the moment, a lot of schemes are running big risks.

Inefficient concentrations of risk are easy to find.

The concentration in short dated, conventional bonds is risky compared with the liabilities. It reflects that fact that the Irish are great believers in active investment management – there are insufficient long dated index linked bonds around for active managers to play with. My own view – and those of many other investment consultants more distinguished and expert than myself – is that active managers show little ability to add value in the bond markets, and that, if anything, holding bonds of shorter duration than the liabilities will lose you money (the term premiums) rather than make it. The focus on conventional rather than index linked may similarly be explainable by the relative size of the markets, or perhaps because pension indexation is not mandatory and wind up priorities are pensions in payment first.

The average fund is about 11% invested in Irish equities. This is a whopping risk concentration if you consider that Ireland accounts for less than 1% by world market capitalisation , and these investments are in a handful of stocks mainly in the financial sector.

Historically, exchange rate controls prevented large investments overseas, but that is no longer an excuse. Irish inflation has been a lot higher than the rest of the Eurozone, so you could justify the large exposure if you believed that equities match salary inflation. There is little evidence to support this view. And of course, the Irish economy has been off like a rocket so this has been a successful punt (pun intended). But it is a very risky one.

Irish equities aside, equity portfolios show a marked ‘home bias’, i.e are overweight Eurozone and underweight the rest of the observable universe. This is chiefly due to concerns about currency risk. This should not really be a concern for trustees – in the long term the additional risk is outweighed by the additional diversification benefit. It might be a concern for companies, who have to recognise gains and losses on their balance sheet every year. This could easily be solved by hedging out the currency risk – particularly the dollar risk. In my experience trustees seem uneasy with the concept of currency hedging and feel that it is expensive. Perhaps because of this there are few global equity pooled funds hedged to the Euro available, even though this would be the ideal equity fund for many small schemes. Any managers out there please take note. The alternative approach is a 50/50 Eurozone/Rest of world fund. This model is gaining in popularity and it is probably good enough in practice.

Property exposure (almost 10% and half of it in Ireland) also seems high, but it reflects the Irish love affair with property. At the risk of immediate extradition, it seems to me that the Irish definition of diversification is owning more than one house. Again, this seems to be changing, with an increasing number of funds now believing that Irish property has peaked and seeking to invest elsewhere in Europe.

The regulations do not prohibit the use of derivatives, but they do not encourage it either – the very fact that they are mentioned in negative way makes trustees, many of whom are nervous of derivatives in the first place, even less willing to consider them. This is regrettable given their importance as a risk management tool. I find the concept of discouraging the speculative use of derivatives very odd. Presumably the directive would prohibit a scheme from holding mainly bonds and using call options to get some equity upside, but would allow a scheme to hold mainly equities and use put options to get downside protection, even though the two portfolios are trying to do much the same thing.

Although it doesn't show up in the statistics, I am optimistic that LDI approaches, that is to say using swaps to better match liabilities, will grow in populatity. And the move away from single managers to specialist managers for each asset sector is resulting in a growing interest in Global Tactical Asset Allocation products. So I think that the use of derivatives is likely to increase rapidly in the next few years.

Defined contribution schemes

Turning to DC schemes. These are small beer at the moment, but growing rapidly and will inevitably overtake DB schemes as the most common form of company pension scheme soon.

The IAPF survey does not provide very much information about DC scheme investment practice. Mercer produce a survey which gives more information, and apart from that, my comments are based on anecdotal evidence.

A typical Irish DC scheme offers 4 or 5 different investment funds. Usually:

- a balanced, actively managed fund. Balanced in the sense that it has the same asset allocation as a typical DB scheme, i.e. heavily invested in Irish equities and property (47% offer this according to the Mercer survey)
- a passive version of the same – a consensus fund (45%)
- an all equity fund (34%)
- a cash fund (41%)
- a bond fund (37%)

Consensus Funds are rapidly dominating – offered by about 45% of funds according to Mercer. But this consensus is based on mainly defined benefits scheme asset allocation and it is a long way from being optimal for individuals.

Back to financial theory. All you really need is:

- a risk free fund. In this context this would mean duration buckets of index linked bonds designed to guarantee a real income in retirement. There is an important role for swap based products here, to complete the durations, but the limited discussions on LDI have so far been about protecting companies rather individuals – which is a pity.

- a market portfolio. You could get fancy here and include all sorts of alternative assets, but a passive global equity fund hedged to the Euro or a 50/50 fund would do.
- Some simple tools to help people decide what combination of funds to invest in.
- a default fund that people who can't or won't make their own decision are automatically invested in. If people can't decide how to invest, this should be the risk free fund. I assume that some of you will strongly disagree with this assertion.

Lifestyling has started to become more popular as the default fund. Lifestyle funds are invested in all equities or a balanced fund, then move automatically into cash and bonds in the few years (typically the last five) before retirement. According to Mercer, about 20% of funds now offer a Lifestyle option. This is a lot better than expecting members to do dynamic asset allocation themselves, but it is based on the old fallacy that equity risk magically disappears over time. This is not a sensible way of managing investment risk, but it is sold to members as being so.

I find the requirement that DC members are offered an appropriate range of investment funds perverse. Maybe I am a bit of a fascist, but I don't think most members want to have to make choices – they want and expect someone who specialises in this area to do it for them. After all, this is how modern society works. We all specialize and delegate decisions outside our field of competence to others.

As in the UK, most Irish DC schemes offer a very wide range of funds and you see many members choosing portfolios which surely cannot be optimal. You know the sort of thing – equal proportions in every fund offered. There is a specific indemnity provided by the legislation for trustees who provide a range of funds and a default choice, but there is no indemnity if you only offer one fund. So, not surprisingly, choices abound.

Conclusions

To conclude:

- Pension legislation is at best light touch and at worst encourages risk taking without risk measuring or managing. Funding and accounting regulations should require explicit risk measures to be disclosed and managed. I am not a big fan of Value at Risk (my personal preference would be cost of hedging) but it would be a start and at least is consistent with banking and insurance practice)
- Irish funds show very large risk concentrations in domestic equities and property in particular – but this is changing.
- Legislation should encourage more thoughtful design of defined contribution schemes and discourage wide choices unless there is extansive support made available to members.