

THE UNIVERSITY OF MELBOURNE

**EFFECTIVE AND ETHICAL
INSTITUTIONAL INVESTMENT**

by

Anthony Asher
Witwatersrand University - Johannesburg

RESEARCH PAPER NUMBER 32

August 1996

Centre for Actuarial Studies
Department of Economics
The University of Melbourne
Parkville, Victoria, 3052
Australia.

EFFECTIVE AND ETHICAL INSTITUTIONAL INVESTMENT

Anthony Asher

Abstract

Those with responsibility for the assets of institutional investors have a fiduciary duty to attempt to earn the best possible risk adjusted returns without infringing reasonable ethical standards. A satisfactory resolution of these, and other, conflicting demands requires a coherent intellectual framework. Such a framework can be based on a traditional scheme that analyses the various components of profit in terms of the requirements of justice. The framework provides a basis for discussing the major challenges facing the institutional investors. These are seen to be their role in rational asset selection, effective corporate governance, job creation and the minimisation of environmental impact.

INTRODUCTION

This paper sets out to provide a framework for actuaries, and others, wanting to think about effective, and socially acceptable, institutional investment. Although it is not an exclusively actuarial subject - overlapping with philosophy, law, economics and the study of management - many actuaries come across the questions during the course of their jobs and may find other people looking to them for guidance. It is hoped that readers find the framework sufficiently helpful to compensate for the paper's length, its dense style and the cursory treatment of many issues.

The term institutional investors is used for the policyholders' funds of life assurers, retirement funds and unit trusts. For the purposes of brevity policyholders, members and unitholders are referred to collectively as beneficiaries, and those occupying the decision making roles in the institutions are referred to as trustees. Sponsoring employers in defined benefit retirement funds may also be considered to be beneficiaries - to the extent they share in the profits and losses from investment.

The first part of the paper looks at the standards which ought to be applied to institutional investment management. Most important are the objectives of return and security, but trustees also have to behave in a socially acceptable manner. The bulk of this part is devoted to outlining a traditional view of justice as the social standard of behaviour and applying it, in some detail, to the elements of profit - the source of investment returns. The third section attempts to defend the traditional view against some widely held, but more extreme, contrary views. The trustees' duties are necessarily intertwined with the concept of fiduciary duty which is discussed in the last

section. Also described in this part are two useful economic concepts that may not be familiar to readers: bounded rationality and the logic of collective action.

The second part of the paper looks at the behaviour of institutional investors and how it appears to fall short - when measured against the standards set earlier. The first section outlines a coherent logical framework for reconciling return and risk, and for the selection and monitoring of investment managers. The next three sections are based on political critiques of the present practices of institutional investors. The capitalist - or blue - concern is for the best interests of the shareholders; the socialist - or red - burden is mainly for employees and the unemployed; while the environmentalist - or green - stress is on the environment and future generations. The final section briefly discusses some moral aspects of investment that may impinge on the consciences of beneficiaries.

Part three contains a conclusion and some remarks to Christian readers.

I. THE STANDARDS

1 THE MAIN OBJECTIVES

Day and Jamieson (1975) provide a summary of the objectives of institutional investors :

- "(1) The liabilities of the fund must be met as and when they arise.
- (2) (1) must be met with as much surplus (or as little cost) as possible.
- (3) The range of the possible in (2) above will be limited by the priority of (1) above. In other words the risk involved in maximising the return must not be so great as to imperil the fulfilment of the liabilities."

The precise wording has been widely debated in the actuarial and financial literature, but it is generally agreed that maximising the returns - subject to acceptable risk - is the principal objective of investment. The purpose of this first section is not to deny the primacy of these objectives, but to point out that they set an, unattainable, standard of perfection.

Herbert Simon's (1979) work on decision making behaviour suggests that maximising standards will not often be attained. His concept of "bounded rationality" - for which he received the Nobel prize for economics - holds that our rationality is bounded not only in the sense that we have insufficient information and cannot process all we have, but that the application of our rational facilities to find better solutions normally ceases when the outcome satisfies our aspirations. This outcome is likely to fall short of the maximum satisfaction possible, and so people are better described as "satisficers" - not maximisers.

If true, then it would be surprising to find that institutional investors did maximise their risk adjusted returns. Behaviour can, however, be improved. Bounded rationality provides guidance as to how this can be achieved by suggesting three sources of improvement: more information, better processing and higher aspirations.

2 JUSTICE: THE SOCIAL CRITERION

2.1 The Art of Balancing

Day and Jamieson add a further investment objective:

- "4. The Investment should not be objectionable to the original savers on social or ethical grounds, and subject to rules 1, 2 and 3, investments should be those which can be held most beneficially on such considerations."

It might be thought that differences between people are too wide to allow agreement on social and ethical issues. This section, however, attempts to outline the traditional view - held by philosophers and political writers from the earliest times - that the principal social and ethical virtue is justice. (Justice is used here as having wider applications than equity or fairness - but the words are often interchangeable.)

The claim that justice is the primary social criterion is not made lightly, nor in an attempt to squeeze a complex problem into a simple answer. It is rather because societies require a balance between the needs, actions and values of different individuals - and justice is the name given to the art of finding this balance. Justice, therefore, rules over other social objectives - such as liberty, prosperity, equality or peace - because it functions to balance them against each other.

Its key characteristic is a recognition of the dignity and individuality of each member of a society. This is the basis of its concern for a reasonable balance between the particular interests of each individual. It is, as a result, also concerned with desert: with appropriate rewards and punishments. It is also particularly concerned with the protection and dignity of the poor and otherwise defenceless. This personal aspect of justice perhaps explains the anger felt - often on someone else's behalf- when people are faced with injustice .

Because it is justice that ought to rule the relationships people have with each other, it can provide a basis for compulsion. This partly explains the many conflicting definitions of justice. Redefining justice in order to favour one's own values and interests not only makes for satisfying, if not constructive, argument, but also provides a justification for overruling the interests of others. There may be differing, but legitimate, interpretations of what constitutes a just balance of interests. Indeed, individuals in different societies do come to different answers as shown in a summary of empirical work by Le Grand (1991).

A discussion of justice could not be complete without mentioning Rawls (1971). His theory of justice rates liberty highest, and then balances equality, prosperity and need - by a rule that requires the interests of the worst off to be maximised. The Rawlsian approach is widely used but seems eccentric in ignoring desert - which Lucas (1980) would not be alone in considering pre-eminent in distributive justice. It does not rule out alternative rules of distribution - and is thus compatible with this paper's definition of justice.

Justice can also be spoken of in terms of rights - which can be seen as defining the boundaries of just behaviour. Rights are not absolute; even rights to life and liberty must sometimes be balanced with the rights of others (especially to life and liberty). Claiming a right does not establish its validity. It is regrettable that calls for greater rights are often rhetorical and simplistic. Millennia of legal development have shown that rules that work, and are fair to all, are often complex and require trade offs.

2.2 Why it is Needed

The complexity of finding a balance - between multiple objectives sufficiently acceptable to all those concerned - is another reason for differences of opinion over the meaning of justice. A just balance must, however, be found if cooperation is to occur. As Lucas puts it: "Justice is the bond of society ... the condition under which I and every man can identify with society, feel at one with it, and accept its rulings as my own." Certainly the need to

eliminate situations where people do not identify with society is more pressing for those who live in places where the alienated more readily resort to violence - but the point has universal validity.

Society can be widely or narrowly defined. Those thought to be guilty of injustices are likely to find themselves excluded from all sorts of groups - economic and social. Ignoring the rules of criminal justice can lead to gaol. Failing to adequately address the interests of staff or customers can mean losing them. In personal relationships, not least marriage, justice guards the trust and friendship that provides much of life's meaning.

Justice also provides a (deontological) standard of virtue for those who are uncomfortable with the above argument - based as it is on pragmatic (teleological) grounds. Some of the oldest statements of the standard can be found in the prophets: "What does the Lord require of you, but to do justice..." (Micah 6:8) Justice is a characteristic of mature people.

Many writers - religious and otherwise - have laboured to show that justice is also based on reason. It is embodied in the balance and consistency of the golden rule: we ought to consider the rights of others as we do our own. The need for consistency also applies to the relationship between ideas and behaviour. Justice is also, therefore, a characteristic of reasonable people - behaving reasonably.

Reason and religion can both be cowed. Doing justice can be costly - as with the pursuit of all virtue. In the first place it means refraining from taking unfair advantage of others; in the second it can mean having to confront unjust actions by people who have some power over us.

2.3 More Practically

Justice is concerned with collaboration between people and so - especially when compulsion is involved - with the agreements they make. Justice means, therefore, conforming to the rules with which any collaborative venture is governed.

In society (a venture in which we all collaborate of necessity), justice is concerned firstly that basic human interests - in life and freedom - are defended. This explains the common use of the word to describe the state's fight against crime. Justice, moreover, means obeying all laws, not only those against violence. This may at first sight appear trite but has particular relevance in the application of the common law of trusts - as is discussed later in sections 5 and 7.2.

This is not to argue that laws are necessarily just. If they are to be changed, however, just processes should be followed. (A just process will not necessarily justify an unfair outcome, nor an equitable outcome compensate for an unjust process.) The process of making laws ought, therefore, to be democratic - in the sense that all interested parties should have the right to be heard and their interests considered.

This is not to say that laws should never be broken. A law may justifiably be disobeyed if the harm it does outweighs its benefits - and the damage created (through uncertainty or lawlessness) by it being broken.

Commercial arrangements are governed by contracts - explicit and implicit - and justice ordinarily requires the fulfilment of such contracts. It is usually seen to be one of the responsibilities of governments to enforce contracts that are explicit - and sometimes those that are implicit.

Contracts too may be unjust to one or other party. It is clearly just to alter patently unfair contracts - but their alteration is likely to create some tension. It is widely agreed that the loss of existing privileges is often suffered more acutely than gain is appreciated. This has been called hysteresis and may not be merely a psychological phenomenon; it may well include the costs of adapting to new circumstances. It underlines that justice will not break contracts without due cause. Justice is, however, neither conservative nor radical as it reins in the excesses of both.

In the absence of any prearranged contracts, some writers suggest that a just recognition of others' interests means not knowingly doing them harm and offering "easy rescue". These are difficult to legislate - as each issue requires a proper consideration of the balance of the costs and benefits. (Harming a neighbour's quiet by driving a motor cycle is knowing but probably insignificant - unless the bafflers are off.) Justice cannot compel one sided sacrifices to be made: they derive from greater virtues.

The traditional picture of justice summarises her most important characteristics: blindfolded to special pleading, with a sword in one hand to enforce agreements, and with a balance in the other to weigh the interests and values of each person.

3 SOME OBJECTIONS

This section briefly responds to a few objections that readers may have to section 2.

3.1 *Contra* Libertarianism

The first of these objections is likely to come from those who believe that a free market will best provide for all society's economic needs - without state intervention. The more thoughtful objectors in this line do recognise the importance of justice in defining what - perhaps the most influential of the economists of this school - Milton Friedman (1987) terms "the rules of the game." Friedman clarifies his objection to government interference as one against the "present doctrine of 'fairness'" which he likens to a football game where the "referee would be required ... to move the ball backward or forward enough to make sure that the game ended in a draw!"

Proponents of the free market often, however, seem to be too single minded in their faith in the power of free markets. Olson (1965) provides a balance when he writes about the "anarchistic fallacy", which is the "illusion that mutually useful relationships will spontaneously evolve in a free society". He

shows - in his *The Logic of Collective Action* - that, assuming self interest only, individuals will not work to produce public goods unless their personal benefits exceed their personal costs. Unless each individual can be persuaded to contribute to the cost of the group benefit, the optimal level of public good will not be provided. On the other hand, where the public good is already being provided, if group members are not prevented from free riding (not pay their fair share of the cost, which is the self interested thing to do); then the resources to provide the public good will dry up.

Olson does not deny the effectiveness of free markets. His main theme is that small groups that do succeed in organising collectively frequently do so in order to create and maintain sectional interests that obstruct markets and economic growth. The point is that free markets need both to be supplemented by state or volunteer action and to be defended from sectional interference.

Applying the standards of justice to judging free markets means evaluating whose interests and which social objectives they foster. On the positive side, it is clear that they enhance freedom. It also appears that free markets provide the best signals and incentives for overall economic efficiency and for development. Other arguments for their freedom can be based on the dubious intentions and competence of governments. On the negative side free markets offer little protection against uncertainty, are unlikely to produce an equal distribution of resources (even after allowing for different inputs and choices of output), nor will they adequately compensate for hardship or effort, nor do they inevitably provide for the basic needs of all participants. It can also be argued that their competitive nature creates unnecessary divisions in society. Shand (1990) discusses the issues in greater depth and provides references to the better known champions of the market such as Popper, Hayek and Nozick.

The case for relying exclusively on free markets does not seem to be overwhelming. It is, therefore, not surprising that all economies are mixed - although in varying ways.

There is also the danger that an extreme libertarian faith will undermine the effectiveness of the market. Markets depend on the energy and skills of participants; there is less incentive to apply either energy or skills if it is believed that the market will automatically produce the optimum quantity at the optimum price.

3.2 **Contra Cynicism**

Adam Smith's conclusion that others benefit when business people pursue their self-interest is a key stone of economic thought - but is not remarkable. Business people do claim to satisfy their customers - but seldom profess altruism in doing so. Claiming that charity workers, or those that seek to do justice, are usually self-interested is, however, not observation but cynicism.

Stigler (1982) discusses the cynicism of many economists and the role of self-interest and ethics in some depth, but he descends into cynicism with his prediction that self-interest will normally overwhelm ethical values - if and when it is tested. It is suggested that this view is not only uncharitable

(which may not be regarded as a criticism at all) but dangerous in that it promotes selfish behaviour (which Stigler, ironically, argues to be counterproductive), unscientific in that it provides an arbitrary *a priori* view of behaviour, and mischievous in that it makes frivolous accusations of hypocrisy against anyone who might claim to be altruistic. In support of the dangers, Frank, Gilovich and Regan (1993) present evidence that economists are likely to be more cynical than other graduates, and that their training appears to encourage selfish behaviour.

It may provide comfort to see that the views of a thorough going cynic cannot be trusted (because by his own admission they are based on his own self interest). This provides a powerful argument to silence cynics, but does not necessarily invalidate their views. A minimal degree of introspection, however, shows the cynical view to be untenable in its extreme form. Almost everyone will sometimes speak truth even when against their interests to do so, and behave altruistically when dealing with family and friends. Self interest is a motivating force, but it is not necessary to jump to the conclusion that all people work solely - or even largely - to achieve their own interests. A juster, and perhaps more fruitful, hypothesis would be that people are motivated in the way they claim to be. Another precept of justice is that a person is seen as innocent until proved guilty: the onus is on the cynics to prove their accusations of hypocrisy.

People are fallible and the cynical view can prove accurate, but even when people fail to live up to the standards they set themselves "... social reality can be viewed with cynicism or compassion: both are compatible with clear sightedness." ¹

3.3 *Contra* False Prophets

False prophets take an unwarranted sense of comfort in projecting selected aspects of the past into the future. They fall into two categories.

Utopian predictions of perfect societies are easily discredited, but all prognostications based on the inevitability of evolutionary progress fall into the same category. Civilizations do decay and take centuries to recover - if at all. Institutional investors are not necessarily doing a better job than they did last year; trustees will not necessarily learn to behave justly.

Statistics describing human behaviour (of which economic and investment data form a substantial subset) also provide temptations to use history for false prophecies. Statistical models, even the most complex, describe what has happened and cannot predict the future. Life consists of more than the numbers with which we measure it.

¹ I copied this down as a first year student and ascribed it to Peter Berger, but have since been unable to find the reference.

4 PROFITS AND JUSTICE

The requirements of justice can be reconciled with the principal investment objective of maximising the return by looking at the contribution of return (profit) to some of the more important social objectives, and then deciding on how they ought to be balanced.

Profit itself consists of different elements - some of which are sometimes mistaken for the whole. This section outlines what could be called a traditional scheme - for the justice, or otherwise, of profit - where the contracts that govern the distribution of each of the elements of profit are examined in terms of desert, and of their contribution to prosperity, liberty and equality.

In order to avoid any confusion with capital profits, the first four parts of this section consider profits in the context of one time period only.

Profit is taken to exclude payments to individuals for services rendered - and adjustments for a change in the purchasing power of money.

4.1 Pure Interest

Pure interest provides a consistent way to ration capital resources - between uses and over time. It is the means whereby capital is attracted from those who can delay consumption, and made less attractive to those who would spend or invest. An idea of its level is provided by the rate on riskless government instruments. It can be zero if capital is not scarce; and even negative if capital is plentiful, there is little demand for capital, and a cost to finding alternative stores of real value. A perfectly competitive market will set pure interest rates so as to allocate capital in such a way as to provide a Pareto maximum of society's prosperity. (No one can be made better off without others being made worse off.)

Pure interest needs to be distinguished from the common use of the word interest to describe contractual payments from borrowers to lenders. The common usage includes a payment of pure interest but also inflation adjustments, risk premiums and costs.

There are those who see it as unjust for capital to be rationed in this manner. Two alternatives are suggested: allocations based on the strength of personal relationships, or by central planning. Both are utilised extensively.

Loans between members of close communities, especially families, are frequently made for purposes other than the earning of interest. They find moral support in the ban on usury - found in the Old Testament (Deuteronomy 23:19), in medieval times and under Islamic law. The original assumption seems to have been that the ability to earn interest depends on some personal wealth and ought to be weighed against the needs of the poor - particularly those in close proximity. The original ban expressly allowed the earning of interest from foreigners.

It would seem that this argument against the charging of interest relies on both the contrast between wealth and poverty and the personal relationship between lender and borrower. Absent either and it loses force. It would seem wrong to discourage the poor widow from charging interest on a loan to her high earning nephew. On the other hand it may stretch justice too far to require the wealthy to seek out strangers to whom to lend their money at no interest.

When, however, both poverty and relationship are present the argument may have validity. Institutional investors may justly lend to poorer beneficiaries or their dependents at less than market rates of interest - as long as their needs are balanced against those of the other beneficiaries.

A centralised economy could ration investment without charging interest. Schumpeter (1943) makes the point, however, that rational decision making requires the use of notional interest. This is not always appreciated, not least by the many public institutions that have separate accounts for current and capital expenditure and do not allocate interest (or depreciation) in the expense accounts. The advantages of the conventional accounting approach - that converts capital costs into expense charges - is that the capital and running costs are directly comparable. In particular, it becomes possible to make economically rational decisions about benefits to be gained from new equipment.

Separate fund accounting (for capital and running expenses) may be of less importance if government pays a market related interest rate on its borrowings - as the cost of borrowing is then known and can be used. In those countries where investors are required to provide for government borrowing at less than competitive rates, investment decisions must be even less rationally made - without knowledge as to the market rate of interest. It is suggested that, in general, irrational decisions are less likely to contribute to equality or benefit the poor than those made rationally; it is the powerful that are most likely to benefit from hidden subsidies.

Some governments raise funds by requiring institutional investors to lend to them. Even where the projects concerned may appear to benefit the poor, this may still be a regressive action. Poorer people are often net savers in these institutions - because of the greater risks they face and their difficulty in accessing capital from the formal markets. The lower interest rates earned by these institutions may, therefore, cost the poor more than the benefits they receive. Other instruments such as direct taxation would be more likely to achieve a redistribution of wealth.

Pure interest should normally, therefore, be allocated to the providers of capital on grounds of desert and efficiency. Liberty too would be satisfied if this were allowed through a free market. Such an allocation may make no contribution towards equality or the needy, but - loans to close personal contacts aside - no other method would seem to necessarily serve this objective.

4.2 Risk Premium

The risk premium reimburses the capital providers for uncertainties. The expected value of the risk premium would be zero if providers of capital were entirely risk neutral, but investors are normally assumed to be risk averse and to demand a positive risk premium.

The risk premium is a random variable and the actual value realised in any one period may be negative.

Knight (1921) described the risk premium as the entrepreneurial profit. Knight viewed "entrepreneurship ... as essentially a device for specializing uncertainty-bearing" where uncertainty is distinguished from risk in that it cannot be measured statistically from previous experience. It is suggested here that his distinction between risk and uncertainty is not entirely helpful as there is a continuum between risks that are statistically stable - and can be subject to extensive statistical testing - on the one hand, and single events where there is no previous experience, on the other. Insurance markets - of one sort or another - can be found for almost all conceivable risks. These risks need to be distinguished from the creative aspect of entrepreneurship which is covered in the next section.

The risk premium is directly analogous to an insurance premium: it is paid when the risk of random loss is redistributed among the stakeholders in the business (shareholders, employees, customers, suppliers and even government). The theory of insurance is of relevance - in particular the problem of moral hazard.

The ancient condemnation of usury described in the previous section could apply to the charging of a risk premium. It has some modern counterparts in legislation prohibiting discrimination between different types of borrowers. Such prohibitions tend to reduce the amount of capital available to the riskier borrowers and so are often counterproductive. In order to avoid this deadweight loss, such a prohibition would again require differences in wealth and a personal relationship. It is difficult to see how this can be applied to institutional investors, except in the rare case where needy beneficiaries are themselves involved in business.

The possibility of state provision of risk bearing capacity also has analogies with the discussion of pure interest. A charge would have to be made for the provision of insurance capacity in order to provide a rational basis for its allocation. The charges should be comparable with those charged in the private sector in order to be economically optimal. Where there is a difference between pure interest rates and risk bearing is that governments will frequently be able to make a contribution to risk bearing capacity, and so to overall economic wellbeing. Their issue of stocks guaranteed in nominal or real terms, support for the banking sector, and the provision of insurance and risk benefits are all consistent with this thought.

In terms of desert and efficiency, the risk premium is due to those exposed to the risks. It recompenses for the job of evaluating the risk and the worry that money might be lost. It is not due exclusively to the providers of capital nor in proportion to capital employed. Risks borne by employees also require compensation.

Of particular concern in this context is the breaking of implicit employment contracts that had implied that fluctuations in a firm's income would be born by the providers of capital - and not by the layoff of workers. This breaking of an implicit contract is a typical distributional injustice - the exploitation of a weaker partner in a collaborative venture.

The risk premium will normally accrue to the more wealthy and is unlikely to reduce equality or provide resources to those in need. Its random nature may, in fact, create inequalities in wealth. While government action might reduce the size of the premium, it is difficult to see how the state could distinguish the random element - and deal with it fairly. Letting the risk profit accrue to the bearer of the risk, therefore, appears to be the most just.

4.3 Innovation

Knight's definition also confuses because it does not correspond to the etymology of *entrepreneur*, nor to its general usage. Enterprise means doing something and implies innovation and energy as well as risk. Schumpeter (1961 - first edition 1911) may be closer to the more common meaning of the term when he describes the reward for innovation as entrepreneurial profit.

There is a difference between innovation and risk bearing. An innovator will frequently need to find a partner to assume the financial risks surrounding a new project. The division of the spoils between the partners is a subject for distributive justice. Other things being equal, the innovator deserves to be paid the reward of innovation, the risk bearer deserves the risk premium.

Innovation may derive from individual genius - in which case the genius should be remunerated. Schumpeter (1943) suggests that the potential for innovation can be built into the structure of an organisation. If the profit from innovation derives from this structure, or from luck, the proceeds are due to shareholders; in the first case as a reward for creating innovative structures, in the second as a reward for business risk.

If not kept secret or otherwise protected, innovations become a common good and may not be remunerated at all. This lack of either incentive or just reward can be seen as a collective action problem - and explains the development of the laws of intellectual property.

Innovations are likely to increase inequality and may contribute to greater neediness amongst those whose technology becomes outdated. This may be aggravated by intellectual property laws which inhibit the copying of new techniques. Baumol (1993) discusses the important contribution that copying makes to economic growth. He favours the Japanese patent system which encourages the patenting of inventions by awarding the patent to the first to file - not necessarily the inventor. It also precludes patentholders from preventing the copying of the innovation - but allows the courts to award reasonable royalties.

The destructive short run consequences of innovation can present major problems: the unemployment effects particularly so. In addressing these problems, it would not be unreasonable for governments to place some short term restrictions on innovation - or limit the profits to be made. The openness of modern economies to foreign competition make it likely, however, that such interventions will prove ineffective and may aggravate the total costs of adaptation to the new technology.

Part of the profits from innovation, therefore, can accrue - justly - to the innovator. The balance belongs to all users of the innovation.

4.4 Rent

Profits may also include economic rents. Rent can be defined as that proportion of the payment to an input that elicits no increase in output. This means it describes not only payments for the use of natural resources, but also the extra price extracted by monopolists. (A monopoly charges more than charged in a freely competitive market, and will usually produce less.)

Monopoly rents are controversial. Some feel that they are practically insignificant in Western economies. Excessive rents are unlikely because competitors will soon enter any inefficient market; rents that can only be appropriated in the short run are not properly so described because they serve as incentives for entrepreneurs to seek out inefficient markets. Many economists take this view and go to some pains to prove the efficiency of particular markets.

It would, however, be absurd to argue that all markets were always perfectly efficient. People's perceptions of the significance of economic rents depend to a degree on whether they pay, or receive them. If the power to charge more without giving more is seen to be illegitimate, then economic rents can lead to anger and social unrest.

There may be innocent reasons for the absence of perfect competition in a market. Indivisibilities (where the market is too small) and transaction costs (of setting up in a new market) may be responsible. There are other less innocent sources of monopoly power: fraud (misleading customers), conspiracy (with other producers to keep prices high) and force. These are unjust and most jurisdictions act against them. A state's use of force to extract rents from non-citizens is also unjust, but this leads us beyond the scope of this paper.

Whether derived unjustly or not, it is suggested here that monopoly rents belong - by desert - to the overcharged customer. The just man may increase his charges to reduce the demand for his goods or services to that which he can readily produce, but it would be unjust to become rich at the expense of his fellows merely on the grounds that it was possible to do so. It is suggested that there is no social or economic justification for charging monopoly prices, and other members of society, therefore, have no reason to conform to contracts that permit monopolies - except a concern not to change contracts lightly. According to de Roover (1958) this view has been the traditional view of Christian theologians.

This makes it unjust for an investor to participate in a company that extracts monopoly rents - either by paying workers too little, or charging customers too much. This does not imply the impoverishment of the just investor for she is still entitled to a market return - in a one period world it means foregoing the period's extra return.

From a policy perspective, the state must balance the monopolist's right to freedom with the evils caused by the charging of rent. Rent that is sufficiently large and persistent, however, would be a legitimate target for taxation: if taxation is seen as a necessary evil then it would be better to visit it on miscreant monopolists than other, more innocent, citizens. It is, however, practically difficult to separately identify that portion of profit attributable to monopoly rent and few attempts are made to do so. The easier approach is to encourage competition.

As natural resources are not contributed by any individual the benefits that accrue should be equally distributed to everyone in society. Seabright (1993) points out, however, that the institution of private property is an efficient solution to the "tragedy of the commons" (the degrading of land through lack of collective action). This is because each person is given an incentive to develop his land.

Monopoly rents are, therefore, unjust - but rent on land and natural resources appears acceptable.

4.5 Capital Profits

In a multiple period world, changes in the expected future level of each of the elements of profit can lead to capital profits or losses.

Capital profits or losses that arise from changes to the expected future level of interest rates, or of risk premiums, arise from unforeseen changes in the supply and demand for capital, or risk, and are business risks. They are due to those who previously agreed to take the risk - even if implicitly.

Future entrepreneurial profits will be capitalised to the extent it becomes probable that they will be earned. This capital profit is due to the entrepreneur (whether genius or institution). It must not be confused with capital profits or losses that arise from changes to future expectations. These are business risks - and include the risk that the innovation may be copied and become a common good.

The same applies to capital profits or losses that arise from changes to the expected level of rents. That part which arises from expectations of higher (or lower) rent payments is also rent, the rest are business risks.

Owners of capital hold their assets by virtue of contracts recognised by society. Accepting that contracts should only reluctantly be set aside, arguments can be made firstly for the confiscation (or taxation) of capital unfairly derived from - and secondly of capital now invested in - economic rents. The confiscated capital could be restored to those oppressed by the monopoly or used for general purposes if this is more practical.

In the first case, the argument is based on the injustice of contracts that give rise to the rents - they gave value to some parties to the contract without any compensation to the other side. There is, therefore, little advantage to society (economic or social) in recognising such contracts - except perhaps in maintaining a quieter life. Confiscation of the proceeds will, however, provide an incentive for businesses to focus on innovation and not on monopoly profits.

The argument for the confiscation of capital invested in rents is related to efficiency: states must be free to replace monopolies with competition without having to compensate the monopolist. Competition would eliminate future rents, and their present capital values, and so amounts to confiscation. Owners of such capital may plead the innocence of the means whereby they obtained their money, and ignorance as to its uses or the risk of confiscation. The first plea is irrelevant: the tools used for crimes are often innocently produced. Their ignorance is culpable: using a tool without proper thought for the consequences. Again, the risk of such losses provide an incentive not to pursue monopoly gains.

Capital profits and losses can, therefore, be fitted into the same categories as the profits in a one period world.

4.6 The Labour Theory

Although most Marxists - such as Meek (1973) - deny that the labour theory of value is a theory of justice, the moral indignation that pervades their writing gives credibility to the views, such as those of Schumpeter (1943) and Polanyi (1958), that it is its sense of injustice that makes Marxism so appealing - to many.

Mandel (1965) suggests that Marx's approach of subsuming the elements of pure interest, risk premium and rents into a single category of surplus involves a scientific advance - in that it provides a more parsimonious explanation for the function of profit. It is suggested here that his own defence requires too many adaptations to make it any simpler than the above scheme.

It is also suggested that the Marxist critique fails to distinguish between just and unjust capital formation and ownership. The importance of the institutional investors, representing the capital of ordinary individuals, demonstrates that capital can derive from innocent savings - not only from the exploitation of others. Pure interest and risk premiums, therefore, can be seen to be justly earned by savers and risk bearers respectively.

Seabright's insights into the place of private ownership in providing a just answer to the question of the commons - illustrated by the apparent failure of collective farming - further takes the sting out of the Marxist critique.

4.7 Summary

The table below summarises this section. The scheme it outlines provides little that is startling - as it can account for the similarities and differences between modern mixed economies. It does provide a basis for analysing such differences and of proposing changes to policy. It also gives an indication of the legitimate arguments that might be made for and against such proposals.

It is not suggested that contracts that justly allocate profit are all that is required for a just distribution of wealth in a society. Governments may well wish to redistribute assets and income in order to promote equality - for instance - but this would go beyond the scope of this paper.

Table 1 A TRADITIONAL SCHEME FOR JUSTICE AND PROFIT

	DESERT	EFFICIENCY & PROSPERITY	EQUALITY AND NEED	COMPLETELY FREE MARKETS
PURE INTEREST	Capital	Capital	Related poor	Capital
RISK PREMIUM	Risk bearer	Risk bearer	Related poor or Government	Capital
<u>INNOVATION:</u> GENIUS ----- INSTITUTION	Entrepreneur ----- Capital	Entrepreneur ----- Capital	Everyone	Everyone
<u>RENT:</u> NATURAL ----- MONOPOLY	Everyone ----- Customer	Capital ----- Everyone	Everyone	Capital

5 TRUSTEESHIP

The standards to which trustees should aspire include the fulfilment of their common law fiduciary duties. If the assets were directly owned, there would be little to say about their investment - the owners could do as they pleased. Trustees, however, have a delegated authority (a collaborative agreement) to control the assets of others: they are, therefore, subject to the constraints of justice.

Their legal duty is to act strictly in the interests of beneficiaries - and to eschew personal gain beyond a reasonable remuneration. They must avoid conflicts of interest. The first part of Bayne (1986) sets out fiduciary obligations in great detail - although not in the context of institutional investment.

That fiduciary duties ought to govern the behaviour of those who purport to look after the interests of others, is barely considered in the economic literature of what Ross (1973) described as the principal-agent problem. This omission again appears in the fifth objective suggested by Day and Jamieson:

"5. When rules 1 to 4 are satisfied, the investment manager should choose the investments which do most to further the other objects of his business."

Bayne quotes a nineteenth century judgement worth repeating:

"no agent in the course of his agency, in the matter of his agency, can be allowed to make any profit without the knowledge and consent of his principal; ... that rule is an inflexible rule, and must be applied inexorably by this Court, which is not entitled ... to receive evidence .. as to whether the principal did or did not suffer any injury ..; for the safety of mankind requires that no agent shall be able to put his principal to the danger of such inquiry as that.

Parker v McKenna 10 LR - Ch 96,124-25 (Ch APP 1874) (James L J)

Actions taken to follow Day and Jamieson's fifth objective would, therefore, be illegal if each case was not disclosed to the trustees and approved by them. In some cases, it might be appropriate to extend such knowledge and approval to the beneficiaries.

This does go to illustrate that fulfilling fiduciary responsibilities is not always obvious, and the need to obey the law is not a trite requirement.

II. THE CRITIQUES

6 TECHNICAL

Whatever their other responsibilities, the trustees' primary investment responsibility is economic, and is the allocation of capital to where it will contribute most to the prosperity of their beneficiaries. This is achieved by attempting to maximise returns - which means the appropriate selection and pricing of assets.

This will also make the greatest contribution towards the prosperity of all - if investment markets are free and efficient. Sections 7, 8 and 9 deal with some possible inefficiencies in the market - and to that extent will modify the conclusions of this section. Other things being equal, however, the social responsibility of trustees is the maximization of returns.

6.1 Setting The Strategy

6.1.1 The Justification for Utility Theory

Von Winterfeldt and Edwards (1986) provide the supporting arguments for using utility theory to analyse whether objectives are consistent with each other. Their book discusses the problems of using utility theory in the light of extensive evidence that people do not always act rationally. They make two claims: "One is that rationality of inference and rationality of decision are obtainable goals... The second is that the technologies needed to attain rationality are more often than not demanding to learn and difficult to use ... The cost of systematic, careful thought using formally appropriate tools is high enough that even experts do not routinely or casually incur it. ... careful analysis is worthwhile when the stakes are high *and* the inference or decision is intellectually difficult or insecure."

Those influenced by rational expectations theory - which assumes people always behave rationally - may balk at these conclusions. Evidence of investor behaviour is divided. O'Barr and Conley (1992) - in a careful two year study of the culture and behaviour of nine large pension funds in the USA - confirm the author's experience of "surprising and sometimes disturbing" evidence of "an unsystematic approach" to investment decisions. On the other hand, Miller (1991) provides compelling evidence of efficiency and rationality in the investment markets.

Smith (1994) provides a resolution of the paradox. He describes laboratory type experiments that have shown how competitive markets can help even muddled individuals to make wise decisions. This is because the presence of a few rational arbitrageurs brings about a convergence of the market price to the real value of the items traded which protects ill informed participants from mistakes - from selling too cheaply or buying too dearly. The experiments show that continuous double auctions (published bid and put prices) and derivative instruments contribute to efficiency.

Another of Smith's findings is that markets are more efficient when participants are repetitively involved; they do not work particularly well with once off decisions. This may explain the common finding, such as by Coggin,

Fabozzi and Rahman (1993), that while investment managers make good decisions about stock selection, they usually fail on questions of market timing. As the market seldom repeats itself, timing is usually a once off decision.

The experiments described by Smith have also produced evidence that participants' actions often result in an optimal outcome when they are relying on intuition - that cannot be fully explained. Although this might be explained as doing the right thing for the wrong reason, even Von Winterfeldt and Edwards do not dismiss intuition as an input in the decision process. Perhaps it is better explained using Polanyi's concept of "tacit knowledge". Tacit (or subconscious) knowledge can be demonstrated but not explained: one example he gives is the teaching of medical diagnoses where there are too many, almost imperceptible, clues to be explained - but not too many to be, subconsciously, observed and learnt by observing an experienced doctor. This would imply that talk about the "feeling" of the market may not be irrational.

Subjective utility theory denies neither reason, the market nor intuition; it provides a basis for using them all more fruitfully. The stakes are surely high enough, and the problems intellectually demanding enough, to justify its use.

6.1.2 An Explicit Model

Utility theory is applied to investment decisions by assigning a utility value to each possible outcome (ultimate surplus amount) at the end of a given period. The probability distribution of the outcome of different investment strategies is also determined over the same period. The best strategy is the one which maximises the expected total utility - when weighted by the probability of each outcome being achieved.

Trustees have to derive common organizational objectives that blend their personal views. It is somewhat disconcerting that O'Barr and Conley find that this question was not debated in the organizations they examined, and that trustees tended to - unquestioningly - follow "tradition": what happened last year. The application of the utility approach can provide an explicit basis for discussing and evaluating objectives.

6.1.3 Properties of Utility Functions

The graph of total utility as returns increase will be increasing - possibly at a declining rate. A few discontinuities of special importance can be identified. Most important for a life office would be the point (or perhaps segment) between statutory solvency and insolvency, but also those points below which it would be necessary to provide additional comfort to the regulators, to materially alter the investment mix, to reduce new business or benefit expectations, or to raise capital. Retirement funds would have discontinuities at the first two points and again where additional contributions were required - or where benefits would be reduced.

These discontinuities arise partly from the discrete nature of outside interventions, but also from hysteresis. The point of insolvency is particularly important for these reasons, and also because it forms a boundary marking the beneficiaries' legal rights. Another point - at a higher level of return - will mark

their reasonable expectations. This point is more difficult to define but is also an important boundary between justice and injustice - and has legal force in South Africa and the United Kingdom.

There is another curve (confirmed by the interviews of O'Barr and Conley) which measures utility to investment managers by measuring performance relative to that of their competitors. Its shape may display greater risk aversion (a small outperformance may be worth almost as much as a large one) and it will have discontinuities at those points where remuneration is affected - in particular where people can be fired or relationships terminated.

A third, and perhaps fourth, curve measures the utility of returns in nominal terms or relative to inflation. Hysteresis creates discontinuities at zero - measured in nominal and in real terms.

The optimal investment strategy would be one that maximised a weighted sum of the utilities produced by multiplying the utility mapped by each of these curves with the corresponding probability of achievement. Von Winterfeldt and Edwards discuss some of the approaches that can be taken in these "multi-attribute" problems in more detail.

If all this were not complex enough, there is also the principal-agent problem. Beneficiaries may have utility functions (of all three types) that differ from those of the trustees and of the investment managers. It would be comforting if the utility functions of the agents and principals could be matched by the appropriate design of benefits and remuneration. This is not, however, essential. The case is similar to that against cynicism, and is bolstered by the law of trusts: trustees, and investment managers, are required to act in the interests of beneficiaries even if they are given the opportunity, and face financial incentives, to act otherwise. In the author's experience, many do place the interests of beneficiaries first.

6.1.4 Approximations

The complexity can appear overwhelming - and O'Barr and Conley find that retirement fund trustees do have difficulty in coping with it. They are often thrown back on an approximation of the utility function that will - in bounded rationality terms - suffice.

The investment objectives set out by Day and Jamieson in section 1 above are such an approximation. The discontinuity at the point of ruin is so exaggerated that utility can be seen to be negative and infinitely large below it - and linearly increasing above it.² This may well exaggerate the problems associated with ruin, and is clearly unsatisfactory to the extent the other discontinuities are

² Maximising the expected return, means maximising:

$$\int x f(x)$$

where $f(x)$ is the density function of the return - restricted to zero for x less than the return required for solvency. This is equivalent to maximising a utility function $U(x) = x$.

important. The straight line above the point of ruin implies a risk neutrality in this range that also should be tested against the aims of the organization concerned - which may well be risk averse. (Von Winterfeldt and Edwards do suggest that while risk aversion makes sense in the context of single gambles where the subject faces ruin, it is less needed if the gamble is repeated often - because the distribution of the sum of payoffs from all gambles is so clustered around the expected. Institutional investors may well fall into this category - once solvency is assured.)

Modern financial theory takes another approach to approximating the utility curve and reduces the question to a trade off between expected returns and risks - usually measured by the historical variance of investment returns. Justifications for this approach in the early days of the development of this theory can be found in Moore (1972). There is a link between the probability of ruin, and the mean and variance of the investment return distribution - but the nature of the link requires simplifying assumptions about the distribution of the returns or the utility function. Dinenis and Scott (1993) and Ramsay (1993) and discussants provide an explicit treatment of the assumptions and show how the two approaches can be compatible. It seems unlikely that the assumptions provide a sufficient foundation for the mountain of mathematics - published and unpublished - that has been built upon them. In the absence of a demonstration that modern financial theory provides the same results as utility theory, it is suggested that the latter is a more appropriate tool.

Trustees might like to consider the methods suggested by Von Winterfeldt and Edwards, but might find them too complex. It is suggested that - individually and corporately, trustees and their advisers - should at least consider the mean and the cumulative distribution function of alternative investment strategies, and in particular the values at each of the points of discontinuity.

6.1.5 The Distribution of the Outcomes

Deriving the cumulative distribution functions of the outcomes is itself complex. In the past actuaries might have gained some idea of the variability of investment returns by determining the value of the institution's surplus under a range of investment assumptions. Computers have changed that. Stochastic modelling of the distribution of investment returns (and their relationship with the emerging liabilities) now allows actuaries or investment managers to create a credible probability distribution of outcomes with which to match a utility function. Wilkie's (1995) paper is the latest published development in this field which he has pioneered over the past 15 years. His work uses time series techniques to describe the historical movement of some economic and investment variables - that take into account lagged and simultaneous correlations between a number of variables relevant to investment markets. (Neither its sophistication, nor lack of familiarity with the concepts, should mask the reality that this work is descriptive and not predictive. Care must still be taken in modelling the future.)

Wilkie suggests that the incorporation of exogenous variables (such as government policy and the state of investment markets) into models of this type may be one of the more fruitful areas of future research.

He particularly focuses on the long term tendency of equity markets to revert to an average dividend yield. A recent example of a bubble bursting is the Japanese share market of the early nineties - which fell at one time to some 40% of its peak level. He suggests that a wider realisation of this tendency might help reduce the size of market bubbles. If the models used to set investment objectives took the possibility of bubbles into account, such wider realisation would follow sooner rather than later. Interestingly, one of the experiments mentioned by Smith is of a model market of shares paying dividends for a finite period only. Bubbles frequently occurred - even though they can have no logical basis - when all the players were new to the game (although not necessarily to investments). Participants did, however, learn quickly and no bubbles occurred when all the players had played twice before.

Wilkie's models - and probably most that are currently used - only distinguish between different classes of assets and between currencies. Future developments may make finer distinctions.

6.1.6 Best Practice

It is, therefore, contended that best actuarial practice is to use an asset liability simulation approach together with an explicit utility model. Reports from the Institute of Actuaries' (1995) 2nd FIMAG Asset Liability Convention provide some support for this contention. 25% of United Kingdom funds apparently use asset liability techniques to monitor investment strategy, while the recognition that "pension fund risks are multi-dimensional" suggests that models are more closely following the structure of utility described in this paper.

Of concern are the 75% of funds in the United Kingdom (and probably a similar percentage elsewhere) that have not adopted the latest technology. In bounded rationality terms, aspirations could be higher.

6.2 Choosing the Managers

However technical the image of investment management, and in spite of its enormous costs, O'Barr and Conley observe that "relationships are often more important than managing the bottom line in evaluating and deciding whether to retain managers." As anthropologists they welcomed the recognition of the human element in circumstances where significant objective measures were hard to obtain - but also recorded their feelings that, in the situations they had observed, "the balance had tipped too far".

There is no need to debate the overall validity of their observations. What is sought here are reasonable criteria to apply to the selection - and evaluation - of investment managers.

6.2.1 Fundamental Analysis

A significant proportion of the share portfolios of pension funds, especially in the USA, are formally indexed - shareholdings in each company are proportional to the company's weighting in a selected stock exchange index. If markets are

efficient, and can be relied upon to remain so, then no prices are cheap or expensive. Indexation is then a type of free riding - that will save investment management expenses. (If markets are truly competitive there is no reason to systematically index a portfolio - a random selection of shares will provide the same free ride.)

An indexed portfolio will earn the same return as the index being followed only to the extent that it is not necessary to deal. It may, however, lose money at times when money needs to be realised or invested, or when the portfolio requires rebalancing because of a change in the index. The amount lost will depend on the dealing strategy used by the investment manager - and the imperfections in the market at the time. Indexation may, therefore, be expensive if the market is not efficiently pricing shares.

If the market is efficient then fundamental research will yield no revenues and arbitrageurs may leave the market. On the other hand, too many free riders will increase the costs of indexation and the profits from good fundamental analysis - and so provide incentives for more arbitrage and more efficient markets. History will, however, provide little guide as to the future costs of indexation. The more rapid the change in the structure of investment markets - in our day caused by computerisation and globalisation - the less predictable they may become.

Lowenstein (1991) is one who criticises indexation as being too reliant on the efficient market hypothesis - and also as a "metaphor" for the over reliance of modern financial theory on formulae. The other formulae based approach is technical analysis - whether it involves the interpretation of charts or the most sophisticated financial theory. It appears to have a fascination for some people that distracts from comprehensive - fundamental - analysis. The latter, however, can provide information not present in the variables (often only the historical prices) considered by the technicians.

The formulae based approaches that ignore large amounts of the information available are, therefore, gambles. Trustees' fiduciary responsibilities rule them out as being inconsistent with due care. Assets should be purchased only after their value has been carefully and fundamentally appraised.

6.2.2 Timing and the Herd

As mentioned earlier, Coggin, Fabozzi and Rahman note the failure of American pension fund managers to time their entry into different asset markets. This implies that they buy when prices are high - because everyone else is buying. Fuller, Huberts and Levinson (1993) have found that although analysts fairly accurately predict the relative earnings growth of companies, the market in the USA has tended to overprice growing companies in the periods they have investigated. They also reported a tendency to under value less successful companies that have a high ratio of book value to share price. These, together with Wilkie's comments on share bubbles, all seem to illustrate a tendency of investors to be insufficiently critical of some common wisdom and to herd together.

Following the herd has its cost when prices resume their fundamental value, but this takes time. Wilkie reports it takes some 7 years in the data series he has analysed. Profits in the intervening period may be lost: if prices are going to rise, then it pays to buy even when there is little fundamental value on offer - as long as you are ahead of the herd.

The contrast between the analysis and decisions required in stock selection and those required in timing decisions may not always be fully appreciated. Timing is a judgment made once in time and requires knowledge of international macroeconomic trends and of market psychology. It is a degree of magnitude more complex than stock selection - where a single individual can provide a really thorough analysis of an individual company. It would seem, therefore, that timing would be more likely to be mistaken than stock selection.

It is impossible to ignore the problem - even using asset liability techniques. Some conscious decision should be made about the "bubble" elements in a market - before simulating its future direction. Actuaries and investment managers should, perhaps, have a common view of the level of investment markets - if the institutional investor is to have a coherent investment strategy.

It is suggested that timing decisions should be made consciously with a view to both fundamental and psychological factors, and that their complexity and international nature requires a team approach that includes members from different markets and disciplines. Foreigners might also help to add perspective to other herding tendencies in local markets.

6.2.3 Evaluation of Performance

Investment managers are normally evaluated on the aggregate return and sometimes on some measure of variability of return over a period as in Knox and Prowse (1989). They ought also to be subject to attribution analysis - as to the relative contribution of timing (strategy) and of stock selection.

Day, Green and Plymen (1994) describe a more detailed model that examines the contribution of each decision to the manager's relative performance. Their model should make it easier to judge decisions within a shorter period than the three years usually suggested for the evaluation of aggregate performance.

Certainly it can only help the investment manager concerned to be aware of the success or otherwise of each of her decisions. It makes sense, therefore, to prepare the schedules that would be required for this type of evaluation, and to make them available to those wanting to assess the manager's ability. It will seldom be entirely clear whether these failures were due to inadequate analysis or to bad luck, but explanations given to justify incorrect decisions should help satisfy whether the initial analysis was sufficiently thorough.

An investment management organization is normally organised into three sections - analysis, portfolio management and dealing. The performance of the dealing function also needs to be evaluated. It is suggested that it should be measured by comparing the price of purchases and sales with intra day, and perhaps weekly, highs and lows. (This comparison would also serve to check the integrity of the investment manager.)

7 BLUE OR CAPITALIST

At stake in the capitalist critique is whether trustees have adequately husbanded the property rights of the beneficiaries. As Lowenstein (1991) puts it: "Power without accountability to someone *in particular* is not accountable at all, and our entire economic system is organized in a way that makes shareholder interests primary ... In a capitalist system there is no substitute for the capitalists."

This section looks at various ways trustees should exercise their voting responsibilities - individually and collectively - and especially at their potential role in a better system of corporate governance.

7.1 Management Remuneration

Trustees cannot avoid the controversy over management remuneration as it touches them twice: in determining their own, and in approving that of the directors and management of the companies in which their institutions have invested. Many people serve as both. Berle and Means (1968 - first edition 1932) discuss the divorce of ownership from control in modern public corporations, pointing out that the interests of "owners most emphatically will not be served by a profit-seeking controlling group" - unless appropriate restraints are imposed. It is clear that trustees have some responsibility (and their votes at shareholders' meetings give them the power) to ensure that such restraints are exercised - in order to protect the value of the assets in their care.

If all markets were free and efficient, directors would be paid the market rate: the price sufficient to encourage enough competent people to serve in their positions. The company does not need to pay them more nor can it afford more - because of competition with firms that do not pay more. Although this can be a source of unhappiness (to directors and workers alike) it is the logic of the market - which does not guarantee a reward for merit but only the matching of supply and demand.

Fama (1980) suggested that there might be a market in directors, but there is general agreement that it is too small and specialised to be completely efficient. Directors are often in a position to determine their own remuneration, and may vote themselves incomes in excess of the market rate - the excess being an economic rent.

Many argue that a link between the remuneration of management and the profits paid to shareholders will provide better incentives. This may be true, but is often a smoke screen for greed - and studies of the relationship between pay and performance frequently fail to show any positive link. A link needs to be carefully designed in order to identify those aspects of profit under the control of management: business risk and innovation. Approaches to executive reward such as EVA™ (economic value added in excess of risk adjusted cost of capital), reported by Monks and Minow (1995), have a logic which is absent in incentives that depend on share price increases - most of which are beyond management's control. Worse still, these incentives often offer one sided options that give management an incentive to increase the business risk. (The

more risk the greater the expected value of a one sided option.) Sharing in business risk must mean exposure to both profits and losses in order to be just - and to provide proper incentives.

Some executives do possess a genius that should be paid a great deal in order to retain its services. A significant increase in profits after the appointment of a new CEO may not, however, be due to such genius. It may be that the previous incumbent was incompetent. It may be luck. Evidence strongly suggests that many directors are paid more than their market wage. Anecdotal evidence is sufficient to prove the point and Crystal (1992) provides detailed accounts of a number of extreme cases. He describes some of the ways that chief executives are able to manipulate the reports of consultants, and to browbeat their fellow directors.

He also gives evidence that over payment has increased over the past thirty years. The average remuneration package of chief executive officers in the USA has increased from 35 times the average wage in 1974 to 120 times in 1991. Comparative figures for the later date are 35 times in the United Kingdom, and 20 times in Japan and Germany. It would be difficult to reconcile these figures with a free market in directors as the supply of competent and educated people would appear to have increased; more probable is a growing ability to extract economic rents from shareholders.

Crystal believes that the loss to the shareholders is not limited to the direct costs, quoting Murphy of Capital Cities/ABC: "if the boss is chiselling, everyone else will feel they have a right to chisel."

Drucker (1985), the doyen of management consultants and long an opponent of excessive executive remuneration, suggests a limit of 25 to 1 on the ratio between the highest and the lowest wage within a company - with each person earning of the order of 40% more than their subordinates. His suggestions provide a rule of thumb for limiting remuneration when it is not governed by market considerations.

Trustees need to recognise that the interests of management are, in this respect, opposed to those of their beneficiaries - and that there are no just reasons why management should earn a monopoly rent.

7.2 Trust Law

The common law of trusts also applies to directors: they have a fiduciary duty to shareholders.

Berle and Means accept that "the common law has at its command tools adequate to meet the situation in sufficiently competent hands" but conclude that "the extreme expense and difficulty of litigation still leave the stockholder virtually helpless." They also suggest that passive shareholders have rendered themselves unworthy of the profits created by the active management of the corporation - and that these should accrue to the managements who create them. They, therefore, find trust law inadequate: neither practical nor just.

It is suggested - in the light of the previous section and the earlier discussions of justice, profit and conformity to the law - that they misunderstand the problem because of their inadequate view of profits. At stake, it appears, is the shareholders' share of the profits from innovation - because shareholders must deserve pure interest and a premium for the risks they bear - while neither they nor management can be said to deserve economic rents. The argument of section 4.3 above was that rewards to innovation were not rents in that they provided incentives for creativity. These entrepreneurial profits partly derive from the structure of firms - created over time by managements who were paid for their labour. The structures are, therefore, part of the capital assets of the firm - and belong to shareholders. Managements' just reward is the market price of their creative and administrative genius - as is the case with all employees. They have no greater moral entitlement to profits than the cleaners.

The reason advanced by Berle and Means for the practical failures of trust law also needs challenging. The law does frequently fail to redress injustices because of the expense and difficulties of litigation, but these are not obstacles to larger institutional investors. O'Barr and Conley put their finger on a more likely reason why the common law has not been more vigorously applied in the defence of shareholders' interests. They define the golden rule of pension fund investment: "Do unto other companies as you would have their pension funds do unto your company." Call it fellow feeling or class interest, or whether it stems from complicity in similar offences, idleness, ignorance or fear (especially of losing potential customers), trustees of institutional investors do appear reluctant to enter into litigation against the directors of companies. Bayne does give examples of where trust law has been used to force miscreant directors to disgorge their gains, but none appear to have been initiated by an institutional investor.

As argued above, it is not that the problem is seldom encountered. There are many examples of the unbridled looting of companies by management: Lowenstein (1988) provides a few more that are almost entertaining. The business press provides new illustrations frequently.

Where the investments in their care have been impaired, it is suggested here that trustees have an obligation to obtain legal counsel as to the possibility of recovery from the management concerned. To be realistic, fewer cases will be prosecuted than ought to be - much will depend on the determination of the people concerned ... to do justice.

More generally trustees have the legal right as shareholders - and consequently the fiduciary obligation - to take possession of the all the profits earned by the companies in which they invest. Those profits that arise from monopoly power are included: although unjustly earned, the proper response is to reduce prices and increase production - and not to pay management extra.

7.3 The Contractarian View

Fama - and others - would rely less on trust law and more on the law of contract. Companies are seen as a complex set of contracts - explicit and implicit - between the various stakeholders. The profits of an enterprise are seen as not belonging to any of the stakeholders - and so may be appropriated

by management as a reward for its co-ordinating role. Shareholders are seen to be entitled to a reasonable return in the same way that lower ranked employees are entitled to a reasonable wage.

Kaufman, Zacharias and Karson (1995) ask - in the light of this theory - whether "investors need *ex ante* protection of their contractual rights by proper information or the *ex post* protection of fiduciary law?"

It is not clear that this is a dilemma; investors ought to want both, and often can have both. Why should shareholders wish to enter into contracts with managements that free the managers from the constraints of trust law? To do so would mean that they would surrender a number of rights (such as those to information, and protection against conflicts of interest) that have been developed over centuries, arguably in such a way that they do not inhibit agents from fulfilling the ambitions of their principals. To do so would be incongruent with their own fiduciary role.

The fact that the provisions of the common law of trusts are not always enforced is evidence neither of its inefficiency nor of its lack of legal validity - just as the existence of theft does not prove the laws against it are inefficient or unjust. It does provide evidence of injustices, and the contractarian view - if used to undermine the provisions of the law - is a rationalization of the illegal looting of shareholders' interests.

7.4 Donations and Corruption

As argued earlier, economic rent is a legitimate target for taxation. Governments find it difficult to do so because of the problems of isolating the rent; because they are often the source of the monopoly power that creates the rent - not least in the supply of arms; and because the revenues can be used to buy them off. There are few countries where this never happens - either through lobby groups, donations to political parties, or more brazenly to individuals.

Apart from the injustice in creating monopoly rents of this sort, it is unlikely that the overall interests of beneficiaries are served by preserving the economic rents in any one company in which they have invested. This is because their investment in any one company is likely to be a small proportion of their assets. It is suggested here, therefore, that trustees have a responsibility to oppose all lobbying and political donations by the companies in which they have shares. This will, however, be limited by fears that other companies will step in to the detriment of their beneficiaries. It calls - perhaps - for collective action by institutional investors.

There are many who oppose all donations by companies. Kaufman *et al* note the long standing concern that big business not use its wealth to dominate other institutions. Drucker (1977), too, sees all "social impacts" outside the "mission" of the business as being socially undesirable. The argument is that managements have no proven ability and no brief to commit shareholders' resources to charitable projects.

It may be, however, that charitable donations or projects enhance the image of the company or contribute to a greater sense of solidarity amongst staff. Some balance is obviously acceptable.

7.5 **Complacency**

It is not only management's appropriation of the profits of the company that is at stake here. The failure of managers to achieve the best possible return can also be due to complacency and incompetence. As Charkham (1994) graphically puts it: "Across the bleak economic landscape have struggled in recent years the tattered remnants of once proud companies led towards defeat by a charismatic chairman cum chief executive with a weak board."

It is not merely particular companies but whole industries that have been shown to be complacent and inefficient - when faced with new international competition. The shareholders, and their representatives on boards of directors, cannot escape being implicated. Charkham quotes Knowlton and Millstein (1987 - "Can the Board of Directors Help the American Corporation to Earn the Immortality it Holds so Dear?"): "In their permissive and passive stance, most boards ... have a tendency -

- 1) not to appraise the performance of CEO's critically enough;
- 2) to overestimate the ability of managers to manage different kinds of businesses well;
- 3) to allow managers to build enterprises that are too large and diversified for anyone to manage well; and
- 4) to wait too long to respond to ongoing political, social and economic change."

Calpers (1995) - the Californian public pension system - has been prominent as a vocal shareholder. Although its portfolios are indexed, it takes an active interest in companies it feels are poorly managed, and reports significant improvements in management, and increases in share prices, as a result.

Lowenstein (1991) also argues for - and provides some evidence for the success of - relationship investment, which describes investors who concentrate on shares in a relatively few companies which they thoroughly understand - and to which they can contribute by monitoring management. Pound (1993) refers to an unpublished report that has investigated Lowenstein's ideas of relationship investment and found that it can add value but does so "less often than investments that are not fully friendly and negotiated."

There is, therefore, evidence that shareholders can play a role in reducing managerial complacency.

7.6 **Mergers and Takeovers**

It has been suggested that the risk of takeover provides a sufficient restraint on managements. Like litigation, however, mergers and takeovers are expensive and difficult. They have also provoked extensive criticism.

Firstly, Kaufman *et al* say their survey of the "research showed unambiguously that managers typically acquired firms and fended off hostile takeovers in order to promote their own careers." As Berle and Means suggest, those interested in the motives of the CEO's of large corporations may learn more by "studying the motives of an Alexander the Great, seeking new worlds to conquer, than by considering the motives of a petty tradesman of the days of Adam Smith." The takeover panders too much to ambition to be an effective disciplinary tool.

Secondly, Charkham points to their considerable internal costs when he says that "to require a takeover to change a CEO is like needing a revolution or foreign conquest to change a government." Both the human costs and the disruption to the productive capacity of the affected organizations need to be considered. The latter cost may explain part of the apparent failure of most mergers and takeovers to improve profitability.

Lowenstein (1991) supplies a third criticism. "A company will be better managed, and its workers and suppliers will be more motivated and loyal, if the major shareholders know something about the company and share some measure of that loyalty." Seabright writes of loyalty as another social virtue that supports collective action. It is equivalent, in this context, to a recognition of implicit contracts between the shareholders and the other stakeholders of the firm. Selling control to a disreputable shareholder who will break these contracts is, he argues, "itself a disreputable act" - and an unjust one; the risk of this occurring undermines the value that might otherwise be gained from collaboration - in particular training of employees in firm specific skills.

These views offer a counter to the idea that the fiduciary duty is always to accept what appears to be a good price for shares in a company targeted for takeover. Of course, the other counter is to argue that there is little evidence that markets are imperfect: the shares must be worth the price offered and so there is no reason to sell.

The fourth critique has policy implications. Loescher (1984) believes that "the strongest case to be made for decentralized private enterprise stems from its tendency to enrich diversity by experimentation, as decision makers possessing different perceptions of alternative outcomes enlarge the portfolio of explorations... Through such diversity society increases the chances that its best bets will be both uncovered and acted upon." Mergers and takeovers always reduce this diversity, and so can be argued to be socially undesirable - even when they are not aimed at the creation of monopoly rents.

Loescher suggests legal changes that require bidding company shareholders to approve takeovers in the USA. This certainly would be appropriate if the size of the takeover is significant: shareholders should in any event want public companies to include such provisions in their articles.

Trustees should not always oppose mergers and acquisitions, but it is suggested that instructions to investment managers should be to question the economic rationale deeply, and to vote against proposals if in any doubt that the benefits of the proposed transaction will be material.

7.7 Dividends

Lowenstein (1991) devotes much space to a criticism of the Miller and Modigliani (1961) dividend irrelevance proposition - that investors do not mind whether they are paid dividends or not. As long as the market is efficient and the company earns an acceptable return on its assets, they argue that investors can always sell their shares if they need cash. Lowenstein, on the other hand, believes that shareholders want larger dividends because they base their lifestyles on the income they receive.

The needs of institutional investors are not the same as individuals, but bigger dividends would enhance their liquidity and reduce their exposure to market risk. The institutions would be subject to a reinvestment risk, but their reinvestment options are essentially the same as any company's management. The investors would, however, have the freedom to make decisions that best fitted their liability profiles - rather than be forced to accept the decision of the management.

The accumulated evidence discussed by Kaufman *et al* is against greater retentions. Company managements tend to retain more of their earnings than required to expand their businesses, and the cash so accumulated tends to "burn a hole" in the corporate pocket. It is then spent on less than economic projects, greater executive remuneration or unnecessary takeovers.

Lower dividends may be desirable for tax reasons - or if the company is expanding internally and the costs of raising new funds are significant. The suggestion in this paper is that trustees should - in other cases - encourage the payment of greater dividends. It is also suggested that it would be justifiable to lobby against tax rules that discourage the payment of dividends: they flagrantly favour the vested interests of established companies and managements - by making it more difficult for newer companies to raise capital.

7.8 Collective Action

One reason for the problems discussed in this section is the collective action problem: costs of shareholder intervention are high and the likelihood of success low. Ostrom (1991) has developed a list of prerequisites for successful collective action in the face of this problem. She suggests:

- there must be a common judgement as to the harm,
- it should affect all the parties that can act,
- parties should take a long term view,
- there should be low information, transformation and enforcement costs,
- norms should be shared and there should be mutual trust, and
- the targeted group should be small and stable.

Institutional investors probably satisfy most of these requirements - especially as there seems to be a growing agreement as to the harm caused.

Institutional investors are frequently organised in industry groups that undertake collective action in a number of spheres. This also takes the form of lobbying on various issues, and has - in places - taken the form of action on

corporate governance. Coffee (1991) points out that this collective action has, however, been "characterised by a short term focus on crises, free riding and inevitable managerial manipulation".

The issue has also been controversial - predictably so as it addresses injustices. The Harvard Business Review (1991) published an agreed statement by some of the protagonists in the debate as to what they saw as the rights and responsibilities of boards and shareholders. They agreed that:

- institutional investors should see themselves as owners, not just investors,
- they should not be involved in day to day operations of companies,
- they should evaluate the performance of directors,
- they should be informed about the directors and the business of the company, and
- the common goal of both would be the prosperity of the company.

The question arises as to how this agreement might be implemented. The answer appears to be in a growing focus by trustees, directors and policymakers on appropriate corporate governance.

7.9 Corporate Governance

Monks and Minow (1995) define corporate governance as "the relationship between the tripod of shareholders, the board and the management in determining the direction and performance of organizations." More simply, it is the management of management - and involves the appointment, monitoring and remuneration of the board of directors.

Monks and Minow, Kaufman *et al* and Charkham each deal with the issues in some depth - the latter including a description of international practice and a copy of the British Cadbury Code of Best Practice.

A number of other codes and recommendations are mentioned in these books. This section looks at some common themes. The codes are normally the result of compromise: they may not have adequately balanced the interests of shareholders with those of the directors and others sharing similar class interests.

7.9.1 Appointment

Proper procedures ought to cover the method of appointment of, and the functions to be allocated to, different members of the board.

Directors have a fiduciary duty to all shareholders regardless of to whom they owe their appointment but the structures of election procedures may constrain them. Those that do not promote the interests of the shareholders who appointed them (often the largest shareholder) may find themselves replaced. This is why all shares should have equal weight, and provides a case for the proportional representation of minority shareholders. The former is widely accepted, the latter is not. Branson (1993) says that some dozen American

states allow for minority representation in the form of a cumulative voting system. He refers to evidence that share prices are negatively affected by the removal of such minority representation.

Institutional investors are normally minority shareholders and so have an interest in minority representation. They will, however, have to act collectively to take on controlling shareholders - who are unlikely to voluntarily relinquish absolute control.

Employees are also represented on boards in continental Europe. This can be justified not only as breaking a class monopoly, but opens additional channels of communication with employees - and can also help them protect their interests to the extent that they are exposed to business risks. As Continental pensions are often funded from the company's balance sheet, these risks are even higher on the Continent than elsewhere in the world.

An Anonymous (1982) comment in the University of Pennsylvania Law Review also suggested that union directors might have additional information to offer other directors and perhaps more time than other outside directors to contribute. Williamson's (1984) response to the comment worries about the appointment of union directors "deflecting strategic decision makers from their main purposes ... by forcing them to address operating level complaints..." and "...more serious the problem of opportunism that inclusion of partisan constituencies on the board invites." He suggests that "irredeemable conflicts of interest" will arise.

Conflicts of interest of this sort arise whenever directors are appointed by constituencies whose financial interests are at odds with some or other shareholders. This, however, applies to representatives of shareholders, management and labour - as well as other "related parties" including auditors and legal advisors. The ultimate protection is the common law of trusts, but all codes of corporate governance also encourage the appointment of non-executive directors with no such conflicts. Most also suggest that the chair should be non-executive - as it is inordinately difficult for a board to impartiality and critically evaluate the performance of its chair.

Charkham in the UK, and Gilson and Kraakman (1991) in the USA suggest that there is a need for "a core of professional directors" with the necessary skills and independence to function as independent directors. In their absence, it is necessary to recruit suitable retired people, foreigners, academics and others with some spare time.

The codes normally suggest that the responsibility to find suitable directors be given to a nomination committee of the board - which should itself be made up of non-executive directors.

The final point raised in connection with the appointment of executive directors is that their contracts should not be of inordinate length, nor provide for excessively generous termination compensation - or golden parachutes. The Cadbury Code suggests three years as a limit unless approved by shareholders directly. It is, however, far from clear why an executive director should be treated any differently from other employees - or contractors - in this respect.

7.9.2 Monitoring

Boards need to evaluate the performance of the company and that of the executive directors - especially the chief executive.

Kaufman *et al* record that the compulsory external audit was a corporate governance innovation brought about in response to management excesses in the nineteen twenties. The codes normally make suggestions for strengthening the outside audit, and for the appointment of an audit committee to which the auditors should report.

Drucker (1991) suggest that institutional investors - especially if they cannot easily sell their shares - need an institutional structure to supervise management. He suggests an outside business audit covering the company's:

- mission and strategies
- marketing
- innovation
- productivity
- people development
- community relations, and
- profitability.

Even if this is not made compulsory, shareholders might take more action in setting standards for what ought to be included in companies' annual reports.

The evaluation of the chief executive cannot, however, be a public event. Monks and Minow quote guidelines from Lipton and Lorsch ("A Modest Proposal for Improved Corporate Governance"). Their suggestion is that each director should first make an individual assessment of the chief executive's performance - against previously agreed standards. The results should then be synthesised and fed back in a confidential manner by the non-executive chair. The chief executive should then be allowed to respond to any criticisms in a suitable way. Needed is both a just process and a just outcome.

7.9.3 Remuneration

The codes all recommend that executives' pay should be set by a remuneration committee - made up of outside directors.

Crystal's experience as a compensation consultant and journalist who now "works for shareholders" because of his concern over "the excesses of American overcompensation" put him in a position to make suggestions. He proposes that the remuneration committee should have direct access to a compensation consultant who should attend all their meetings and give a written report annually. The report should include the level of remuneration, its sensitivity to profit changes, and comparisons within and outside the company. The consultant's name should be reported in the annual report. If a consultant is fired, this too must be noted and the fired consultant should be given the right to report the reasons to shareholders.

It is also normally suggested that top executives' salaries should be reported individually - with details of bonuses and perks. Monks and Minow note that an appropriate value of stock options should be, but are not normally, given - and quote an analyst as saying that three large US corporations would see earnings drop by up to 10% if the value of options was deducted from profits.

Crystal suggests that outside directors should be paid the median for comparable companies.

7.10 Politics

Pound (1993) develops the case for "informal, political mechanisms" which fulfil the need to be "flexible, less disruptive (than takeovers) and ... politically sustainable". Political sustainability is important; he points to government action against voting trusts (which were a form of collective shareholder action) in the nineteenth century because of fears that they would become too powerful.

He suggests that the political process with its parties, lobbies, and gradations of discipline against misbehaviour could function as well in business as in government. Ultimately his call is for a "renewed tolerance for insurgency in the corporate sector ... because ... insurgency, contention and debate are fundamental to effective corporate governance."

This approach has much to recommend it, but Pound (1995) goes on to propose a model he calls the "governed corporation", where outside directors take an active role (at least 24 days a year) - particularly in strategy formulation. He proposes that they be remunerated by some form of profit share. It is suggested here that this latter proposal (whatever its other merits) does not address the main issue of corporate governance: the need to ensure that those that manage the corporation are controlled and that profits are justly allocated.

Trustees will face contention when they enter the field of corporate governance. They will unearth numerous conflicts of interest. Fund managers will not want to cross company clients - an especial problem where the managers are related to banks and insurers; universities and foundations may not want to displease major donors; fellow trustees may have interlocking directorships.

These conflicts are unavoidable; no system will avoid their necessity. As Eliot (1934) observed:

*"Why should men love the Church? Why should they love her laws? ...
She tells them of Evil and Sin, and other unpleasant facts.
They constantly try to escape
From the darkness without and within
By dreaming of systems so perfect that no one will need to be good."*

8 RED OR SOCIALIST

Socialists are often guilty of such dreaming, but their indignation at greed and injustice is often justified. (It would be appropriate, however, to sound Polanyi's warning against the "magic of Marxism": that Marxists lose their intellectual defence against tyranny if they pretend - to themselves - that their indignation is based on a science of economics and not on justice.)

The socialist critique is particularly concerned about inequalities - both of money and status - and with the needy. There is often a focus on unemployment. Bruyn (1987), in a discussion of socially desirable investment from a respectable left wing perspective, regards the effects of large scale shutdowns on unemployment as sufficient cause to abolish the entire capitalist system. Naive though such suggestions may be, they can be felt so fiercely that they ought not to be ignored.

Justice is concerned about the poor - and trustees need to consider accusations that they, or the companies they own - are responsible for harm to the needy. This section considers the responses that trustees might make to the problems of particular importance to the left.

8.1 Corporate Governance and Class Interests

The red critique is not unconscious of the role of class interests in the corporate governance debate. O'Barr and Conley's golden rule can be seen to be sinister: part of an implicit conspiracy by the ruling class to entrench its power. Mandel fulminates against the "'great families', who remain supreme at the summit", and it could be argued that a wider class of professionals and graduates - from the better universities - has been co-opted to keep a closed grip on economic power in most countries.

Trustees who allow miscreant managements to extract significant rents from the companies in which they invest are ignorant, or shirking work they are legally obliged to perform, or effectively conspiring to raise the overall level of directors' remuneration in the hope they will be paid more themselves. The last is a serious offence, but justice presumes innocence until proved otherwise, and the burden of proof is on the accusers. Those who wish to make specific accusations ought to bring them to court - or be proved, themselves, to be frivolous or confused.

Absence of such proof does not, however, prove that this problem does not exist. Allowing for union appointed directors is a response, although even this could be regarded as, or turn into, further co-option. It does appear to work in some European countries and seems an approach worth pursuing.

8.2 Entrepreneurial Rules of the Game

Baumol explores the differences between profit seeking activities that are genuinely entrepreneurial (that is are creative) and those that largely involve rent seeking. "If entrepreneurs are defined, simply, as persons who are ingenious and creative in finding ways to add to their wealth, power, and prestige, then it is to be expected that not all of them will be overly concerned

with whether an activity that achieves these goals adds much or little to the social product or, for that matter, even whether it is an actual impediment to production."

On the basis of some historical data, he goes on to make three propositions - which on his numbering are:

"Proposition 2.1: The rules of the game that determine relative payoffs of different entrepreneurial activities *do* change dramatically from one time and place to another.

"Proposition 2.2: Entrepreneurial behaviour changes direction from one economy to another in a manner that corresponds to the variations in the rules of the game. (e.g. In ancient Rome, wealth from land, lending or political office was valued - and yielded more - than income from industry or commerce.)

"Proposition 2.3: The allocation of entrepreneurship between productive and unproductive activities, though by no means the only pertinent influence, can have a profound effect on the innovativeness of the economy and the degree of dissemination of its technological discoveries."

Trustees of institutional investors are not in control of the rules of the game that determine profitability, but they have a direct responsibility in determining the power and prestige given to directors and managements. The power to appoint the boards lies largely with trustees, and the function of these boards is to judge management against previously agreed objectives.

It is suggested firstly that directors should be required, in setting directions, to make a distinction between the creative and the rent seeking. The former is worthy of praise, the latter is degenerate and reprehensible. Some obvious points of difference are set out below:

Table 2

	Monopolist	Entrepreneur
The objective is to maximise:	Market share Cost savings	Turnover Efficiency
Particular Behaviour:	Lobbying Restrictive practices	Research Innovation

This is not to hold that cost savings or market share are unimportant, but rather that efficiency and turnover reflect greater aspirations - both for the financial success of the firm and the prosperity of all.

Arguments against lobbying and restrictive behaviour are more difficult to sustain - in that trustees who, collectively, opposed such behaviour would expose their beneficiaries to exploitation by free riders who practised the restrictive behaviours. The same problem has been addressed in section 7.4 above - but without suggesting government intervention, which should more appropriately be positioned within the red critique.

Lobbying is clearly political. In a vigorous attack on rent seeking behaviour Tullock (1993), reports on studies that indicate a relatively small effect in the USA, but that it reduces economic activity by over a third in developing countries - or rather those that have failed to develop. All suggestions to combat rent seeking eventually reduce to finding a sufficiently widespread agreement that it is unproductive - so that legislatures will not listen, and those that do try to lobby are somehow disciplined. Ostrom's requirements for successful collective action, mentioned in section 7.8, are again relevant. It is possible that the group of investors and legislators necessary to enforce such disciplines is sufficiently small and stable - and can develop the foresight - to make collective action possible.

Government intervention in preventing restrictive and monopolistic practices is more controversial - as it must (from table 1) be traded off against liberty. Different approaches will be acceptable in different environments. As a minimum standard, it should be clear that monopolistic behaviour is unjust, and that lobbying can only be justified when undertaken as a defence against other lobbying and aggressive free riding.

8.3 Job Creation

An economic explanation of unemployment is that it derives from the inflexibility of labour markets: employers are not prepared to offer employment, or the unemployed not prepared to accept jobs, at the prevailing wage levels. The argument often polarises along class lines with unions being blamed for insisting on wages too high to be economic, and employers criticised for offering wages too low to be worthwhile.

A more sociological approach would be to speak of institutional failure - based perhaps on a rejection of the term labour market as reducing people to the level of commodities. This approach also becomes polarised in blaming one or other structure as the creature of the opposing class. Both approaches are consistent with the idea that unemployment reflects a widespread inability to respond sufficiently rapidly to economic, technical or demographic changes.

The polarization suggests that feelings of injustice run high. This does not imply that change necessarily brings injustice, but may mean that previously acceptable agreements need renegotiation. The legitimate concerns of both sides need to be satisfied. If there is a need for people to accept new jobs, lower pay or lower rates of profit, it must be in a venture where everyone's shares are seen to be under investigation, and the interests of all are considered. The process of achieving this must also be seen to be fair - which provides an additional justification for appropriate corporate governance.

Institutional or market failures occur because individuals - and consequently groups and organisations - fail to respond appropriately to new circumstances. The failure may be ascribable to incompetence (which may or may not be blameworthy), malice or inertia. Trustees, in their own capacity and as overseers of company managements, may also be guilty.

The existence of unemployed individuals is not only a social tragedy but a business opportunity. Unused labour is an unutilised resource and provides potential for profit. The elimination of unemployment will need people who grasp this opportunity; trustees can perhaps contribute by raising aspirations. It is urged - in the name of humanity and profitability - that boards should make job creation one of the objectives against which management will be measured.

8.4 **Small Businesses**

Frequently laid as a charge against institutional investors is their failure to invest in small businesses. The response of investment managers is that it is relatively less efficient to carefully investigate the investment merits of a smaller investment than a large. This must, however, be balanced against the potential for higher earnings.

The real question is whether investment managers continually make this calculation, or whether their failure to do so is another example of Simon's satisficing. Trustees ought to inquire.

8.5 **Training and Affirmative Action**

Polachek and Siebert (1995) provide an recent overview of human capital theory, which provides an empirically verified basis for the widespread belief that education is a good investment.

Both employers and employees have an interest in greater productivity, and can adapt the employment contract to equitably share the costs and benefits of training. (This can take the form of reductions in wages during periods of training or of suitably designed retrenchment packages - and early leaver penalties in retirement fund benefits.) Firm specific training provides greater challenges because both parties must want to continue to work together - in order to enjoy the full fruits of the investment. The firm that wishes to make full use of investment opportunities in human capital needs the commitment of its employees. This again requires a just balance of interests between all the stakeholders - and provides another reason for remonstrating against disloyalty to employees - as in sections 4.2 and 7.6.

The development of people is, therefore, not just a socially desirable activity, but an essential part of a firm's economic function.

The returns to education appear to be higher for earlier years of education. This provides a justification for affirmative action - if it means giving additional training to those who have received an incomplete education. It should be distinguished from calls for companies to make good more general injustices in society. If legislatively required this presents no problem; the laws ought to be obeyed. If not required by law, then it should be seen as a type of donation subject to the considerations mentioned in section 7.4 above.

Again, the successful training - and retention - of staff is an objective against which management's success should be measured.

8.6 ESOPs

Estrin (1989) makes a strong case for employee share ownership plans (ESOPs): "...the fragments of evidence so far accumulated suggest that increased employee participation in profits, in shares or in decision making, is often associated with improved industrial relations, organizational efficiency, factor productivity and profitability." (They are also discussed in Kaufman *et al.*)

It is suggested that the analysis of profit developed earlier highlights why ESOPs are not - and need not be - more widely embraced. The employees have a justifiable interest in that part of the profit attributable to the risks they bear, the innovations they contribute and in monopsony rents extracted from them in the form of low wages. These should, however, be paid to them as higher wages - and should not be shared with shareholders. (They may also demand a share of monopoly rents unjustly extracted from customers - but they are no more justly entitled to this than the shareholders.)

Employees do not, however, have a just interest in that part of the profit due to pure interest, nor the business risk accepted by the shareholders, nor from innovation resulting from institutional structures. They may also be wise not to accept any additional business risks - correlated as these risks are with the employment risks they are already exposed to. (Limitations on the self investment of retirement funds are analogous, and are usually justified financially.)

It seems that advocates of ESOPs fall into two main categories. The first believe that people work better only when given economic incentives; the second that the rent portion of profits is high and worth fighting for. The first view is partly true - but appropriate incentive packages should exclude sources of profit not under the control of the employees concerned - which ESOPs fail to do. The second view is degenerate and reprehensible: prices should rather be reduced.

Weitzman (1989) suggests that profit sharing arrangements will also contribute to wage flexibility (the profit part can drop) and thereby to greater employment. His proposal is based on the idea that many industries are naturally monopolistic because of infinitely reducing returns to scale: only large companies can compete. His proposed reduction in the cost of labour would lead to greater employment and increased production - but could also lead to lower overall wage income and increased monopoly profits. His is, therefore, not necessarily a just solution. Monopoly profits that arise from returns to scale are unjust, and legitimate targets for taxation, policies that may introduce foreign competition, or regulation. Just - and prudent - shareholders and managements would reduce prices and expand production.

ESOPs, therefore, earn a greater share of profits for employees only by exposing them to the full range of business risks. It is suggested that they offer little value - to any party.

8.7 Easy externalities

Leeman (1982) proposes that socially desirable institutional investment should aim at positive externalities. He considers job creation and housing particularly, and suggests that investors should accept lower returns if the useful externalities are high.

If such externalities involve an insignificant cost, then investors should clearly try to provide them. The argument is, however, that of easy rescue - which it was suggested in section 2.3 required a greater virtue than justice and could not be legislated. If those who would benefit from the externalities are related to the beneficiaries of the institution then the arguments used against usury would apply.

If those who might benefit are more distant and the costs significant, then such actions would need to be considered as a donation - as discussed in section 7.4.

9 GREEN OR ENVIRONMENTAL

The green critique decries the despoliation of the environment and the exhaustion of non-renewable natural resources. Alternatively put, it argues that companies sometimes unjustly expropriate the economic rent of natural resources which belongs to all - including future generations.

9.1 Non-renewable resources

The green critique will coincide with the blue if the capitalised value of the rents deriving from non-renewable resources are not recorded in the accounts of companies. The discovery of a rich oil field, for example, is a natural rent, capital profit for the exploring firm. Shareholders, existing and potential, would be better able to evaluate the value of the firm if the extent of the rents were disclosed. The interests of shareholders and society coincide once the field has been found: to maximise the value of oil extracted.

The right to exploit newly discovered natural resources can represent a distributional problem - as some people (perhaps with the right connections) may exclusively enjoy a natural windfall. It can be solved by allocating rights to prospect for natural resources to state owned firms - or by auctioning the rights if it is felt the market will function efficiently. What is clear that the basis of the taxation of prospecting profits should be agreed in advance - in order to be just.

More of a problem is whether non-renewable natural resources are correctly priced. The market would allocate proper prices if participants were able to predict future supply and demand, and were to face the same cost of capital as society as a whole. The green critique appears partly to be based on a feeling that the resource companies are myopic. If correct, this provides possibilities for profit. It may transpire that our generation has dissipated the world's natural resources and condemned future generations to considerably lower

standards of living. One of the reasons will be that those with the foresight did not have the courage of their convictions to buy up resources for later use. This means that it is not a collective action problem.

The problem is, however, obviously a once off question of the type considered in 6.2.2 - that will not necessarily be solved by the market. It calls for detailed multi-disciplinary teamwork. Trustees of larger institutional investors should consider investment in non-renewable resources as a possible source of profit - and a social contribution to the unborn.

9.2 Pollution

The other thrust of the green critique covers the externalities the activities of a firm may visit on the rest of society. Environmental pollution is the main issue.

Pollution is unjust if it leads to self enrichment at the expense of one's fellows - as is the case with monopoly rent. The problem is considerably more complex if there is no self enrichment. Coase (1960) warns against the inconsistencies in the idea that governments should impose fines on environmental offenders. Greater overall welfare may be achieved if the polluter were to reimburse those that suffer. He suggests that the problem should, therefore, be met by extending property rights so that victims can claim in court.

Legal developments have tended to move in this direction, and the lesson of the past half century is that claims for damages (to health principally) can arise after a considerable time. The changes in the legal system that have allowed such claims - although they reflect a type of *ex post* contractual adjustment - provide an example of how such adjustments may be seen as being just.

Shareholders certainly have an vital interest in ensuring that proper account is taken of environmental damage - particularly that for which claims may be made in future. Such information should be included in a business audit.

10 PURPLE OR MORAL

There may be some business activities that are morally abhorrent to a majority of the beneficiaries of a fund: prostitution and the manufacture and distribution of certain drugs and arms provide obvious examples. This section is classified as purple - partly to suggest a combination of the other colours, and partly because of its moral and ecclesiastical usages.

A detailed examination of what should be morally acceptable is beyond the scope of this paper - which will merely support Day and Jamieson's fourth objective and suggest that the moral sensibilities of the beneficiaries should be considered. This will not impair the returns of those institutional investors that choose to avoid morally suspect investments - if they are insignificant participants in the investment markets and the markets are perfectly competitive.

If, however, a sufficiently large number of investors take the same view, then the returns to investment in these immoral activities will be higher than those for morally acceptable investments. One interpretation of the fiduciary

responsibilities of trustees - as suggested by the British courts (Cowan and others v Scargill and others [1984] 2 All ER 750) - would be that they should restrict themselves to pursuing the financial interests of the beneficiaries. This would mean that they should take advantages of higher returns offered by companies engaged in immoral activities. The court was in this case, however, reviewing an extensive set of restrictions on the fund's investment that was largely politically - and not morally - inspired. It is suggested here that it would be monstrous to compel trustees to indulge in moral arbitrage - to take advantage of the moral qualms of other investors - unless the beneficiaries can be shown not to share those qualms.

Fiduciary responsibility to look after the interests of beneficiaries should then include a view as to their moral sensibilities especially when the market appears to support such views - as it does when returns appear higher than average on morally suspect assets. Some assets may, therefore, be justly avoided on moral grounds.

III. CONCLUSION

Trustees have wide ranging responsibilities in overseeing the investment of the assets under their control. They may find the tasks somewhat daunting. In bounded rationality terms, the purpose of this paper is to throw a more light onto the issues and raise aspirations. Trustees can do more - every little bit may help.

Required is a commitment to fulfilling fiduciary responsibilities justly, intelligently and energetically. It requires persistence and not a little courage, for it will inevitably involve some confrontation. Is it worth it? To do justice will mean balancing the costs with the benefits - personal and societal.

What will they say, or whisper, at your funeral?

University of the Witwatersrand
13th June 1996

I would like to express my gratitude to my wife, Jane - Redington's ideal intelligent woman - for her help, direct and indirect, in preparing this paper.

Special thanks are due to David Knox and the staff of the Centre for Actuarial Studies at the University of Melbourne where most of the preparation of this paper took place - and for publishing it.

Thanks are also owed for the help given by my colleagues at the University of the Witwatersrand, especially Rob Thomson and Graeme McLean, to those associated with the Community Growth Fund - a socially responsible unit trust - especially Mark Anderson, and to others who have served with me as directors and trustees, for their help with these ideas.

(This should not suggest that anyone mentioned agrees with me.)

EPILOGUE

My experience is that Christians in a pluralist, or post Christian, society battle to reconcile the doctrines of their faith with the assumptions and behaviour of their colleagues. A particular problem is the extent to which others can be required to behave ethically without infringing their rights or dignity. I have certainly battled - in business, in academia and in volunteer organizations - and this paper is the outcome.

It would be inappropriate to rely on Biblical texts as proofs, but those familiar with the scriptures will hopefully see the parallels. Simon's bounded rationality is a modern exposition of St John's: "if we say we have no sin we deceive ourselves ...", while the issues of collective action, job creation and training are intimately linked to questions of how we love our neighbour. Fiduciary responsibility - stewardship - is also affirmed by Him, who Bayne calls the "Chancellor of Galilee", and St Paul underlines it: "It is required of stewards that they be found trustworthy" (1 Corinthians 4:2).

I would also like to make some additional comments on a Christian view of justice. Firstly, justice is a minimum standard which is fulfilled and surpassed by the law of love: "the fulfilment of the law." (Romans 13:10). Christians will seek to give more - even in their commercial relationships - than that required by strict justice. (This should make them excellent people to do business with ...)

Secondly, justice is - etymologically in both the original languages of the scriptures - linked to righteousness. The good news - that our righteousness is the gift of God in Christ (Romans 4:3 ff) - is, therefore, directly relevant to the questions raised in this paper. Doing justice is part of the calling we have - and in the economy of God there is both the power to do it when we choose, and forgiveness when we fail.

BIBLIOGRAPHY

- Anonymous (1982) *An Economic and Legal Analysis of Union Representation on Corporate Boards of Directors* University of Pennsylvania Law Review 130: 919-956
- Asher A (1994) *Managing The Financial Costs of Housing*, Journal of Actuarial Practice, vol 2.1: 125-144
- Baumol W J (1993) *Entrepreneurship, Management and the Structure of Payoffs* MIT Press, Cambridge Mass
- Bayne D C (1986) *The Philosophy of Corporate Control* Loyola University Press, Chicago
- Berle A A and Means G C (1968) *The Modern Corporation and Private Property* (3rd ed) Harcourt, Brace and World
- Branson D M (1993) *Corporate Governance* Michie, Charlottesville
- Bruyn S T (1987) *The Field of Social Investment* Cambridge University Press, Cambridge
- Calpers (1995) *Why Corporate Governance Today? A Policy Statement* California Public Employees' Retirement System, Sacramento
- Charkham J P (1994) *Keeping Good Company: A study of Corporate Governance in Five Countries* Clarendon, Oxford
- Coase R H (1960) *The Problem of Social Cost* Journal of Law and Economics 3:1-35
- Coffee J C (1991) *Liquidity vs Control: The Institutional Investor as Corporate Monitor* University of Columbia Law Review 91(6) 1278-1368
- Coggin T D, Fabozzi F T and Rahman S (1993) *The Investment Performance of U S Equity Fund Managers: An Empirical Investigation* Journal of Finance 43(3) 1039-1055
- Crystal G S (1992) *In Search of Excess: The overcompensation of American Executives* Norton, New York
- Day J G and Jamieson A T (1975) *Institutional Investment* Institute and Faculty of Actuaries
- Day N, Green S J and Plymen J (1994) *Investment-Assessing a Managers Skill and Monitoring of Risks* Journal of the Institute of Actuaries 478: 69-103
- Denison E F and Poullier J P (1967) *Why growth rates differ* Brookings Institute, Washington

- Dinenis E and Scott A (1993) *What Determines Institutional Investment - An Examination of Pension Funds in the 1980's* Oxford Economic Papers - New Series 45.2: 292-310
- de Roover R (1958) *The Concept of a Just Price: Theory and Economic Policy* Journal of Economic History 18(4): 418-434
- Drucker P F (1977) *Management Pan*, London
- Drucker P F (1985) *The Changing World of the Executive* Times Books, New York
- Drucker P F (1991) *Reckoning with the Pension Fund Revolution* Harvard Business Review March/April: 106
- Estrin S (1989) *Profit Sharing, Motivation and Company Performance in Making the Economy Work* Shields J (ed) Macmillan, London
- Fama E F (1980) *Agency Problems and The Theory of the Firm* Journal of Political Economy 88: 288-307
- Frank R H, Gilovich T and Regan D T (1993) *Does Economics Inhibit Cooperation?* Journal of Economic Perspectives 7.2: 159-171
- Friedman M (1987) *Fair vs Free in The Essence of Friedman* Hoover Institution Press, Stanford
- Fuller R J, Huberts L C and Levinson M J (1993) *Returns to E/P Strategies, Higgledy-piggledy Growth, Analysts' Forecast Errors and Omitted Risk Factors* Journal of Portfolio Management 19(2): 13-34
- Gilson R J and Kraakman R (1991) *Reinventing the Outside Director; An agenda for Institutional Investors* Stanford Law Review 43: 863-906
- Harvard Business Review (1991) *A New Compact for Owners and Directors* July/August: 141-143
- Institute of Actuaries (1995) *Risk and its management in Financial Institutions; 2nd FIMAG Asset Liability Convention* British Actuarial Journal 2: 373-392
- Kaufman A, Zacharias L and Karson M J (1995) *Managers vs. Owners: The struggle for Corporate control and American Democracy* Oxford University Press, New York
- Knight F H (1921) *Risk, Uncertainty and Profit* Houghton Mifflin, Boston

- Knox D and Prowse R (1989) *The Measurement of Investment Performance Transactions of the Institute of Actuaries of Australia II: 1060-1088*
- Leeman M G (1982) *Socially Desirable Investments, Contractual Savings Institutions and the Redistribution of Income Transactions of the Actuarial Society of South Africa IX (II): 92-122*
- Le Grand J (1991) *Equity and Choice: An Essay in Economics and Applied Philosophy Harper Collins, London*
- Loescher S M (1984) *Bureaucratic Measurement, Shuttling Stock Shares and Shortened Time Horizons: Implications for Economic Growth Quarterly Journal of Economics and Business 24:4 8-23*
- Lowenstein L (1988) *What's Wrong with Wall Street: Short-term Gain and Absentee Shareholder Addison-Wesley, Reading Mass*
- Lowenstein L (1991) *Sense and Nonsense in Corporate Finance Addison-Wesley, Reading Mass*
- Lucas J R (1980) *On Justice Clarendon Press, Oxford*
- Mandel E (1962) *Marxist Economic Theory Merlin Press, London*
- Meek R L (1973) *Studies in the Labour Theory of Value Lawrence and Wishart, London*
- Miller M H (1991) *Financial Innovations and Market Volatility Blackwell, Cambridge, Mass*
- Miller M H and Modigliani F (1961) *Dividend Policy, Growth and the Valuation of Shares Journal of Business 34.4: 411-432*
- Monks R A G and Minow N (1995) *Corporate Governance Blackwell, Cambridge, Massachusetts*
- Moore P G (1972) *Mathematical Models in Portfolio Selection Journal of the Institute of Actuaries 98: 103-148*
- O'Barr W M and Conley J M (1992) *Fortune and Folly: the Wealth and Power of Institutional Investing Business One Irwin, Homewood, Illinois*
- Olson M (1965) *The Logic of Collective Action: Public Goods and the Theory of Groups - Harvard University Press, Cambridge, Mass.*
- Ostrom E (1991) *Governing the Commons: The Evolution of Institutions for Collective Action Cambridge University Press*

- Polachek and Siebert (1995) *The Economics Of Earnings* Cambridge University Press, Cambridge
- Polanyi, Michael (1958) *Personal Knowledge* Routledge & Kegan Paul, London
- Pound J (1993) *The Rise of the Political Model of Corporate Governance and Control* New York Law Review 68(5): 1003-71
- Pound J (1995) ?? *Corporate Governance* Harvard Business Review March April: 89
- Ramsay C M (1993) *Loading Gross Premiums for Risk without Using Utility theory* Transactions of the Society of Actuaries XLV: 305-350
- Rawls J (1971) *A Theory of Justice* Belknap, Cambridge Mass
- Ross S A (1973) *The Economic Theory of Agency: The Principal's Problem* American Economic Review 58.2: 134
- Schumpeter J A (1943) *Capitalism, Socialism and Democracy* George Allen and Unwin, London
- Schumpeter J A (1961) *The Theory of Economic Development* Oxford University Press, New York
- Seabright P (1993) *Managing Local Commons: Theoretical Issues* Journal of Economic Perspectives 7.4: 113-134
- Shand A H (1990) *Free Market Morality: the political economy of the Austrian School* Routledge, London
- Simon H A (1983) *Reason in Human Affairs* Basil Blackwell, Oxford
- Smith V L (1994) *Economics in the Laboratory* Journal of Economic Perspectives 8(1): 113-139
- Society of Actuaries (1992) - Committee on Actuarial Principles: *Principles of Actuarial Science*. Transactions of the Society of Actuaries XLIV, 565-628
- Stigler G J (1982) *The Economist as Preacher* Basil Blackwell, Oxford
- Tullock G (1993) *Rent Seeking* Edward Elgar, London
- Von Winterfeldt D and Edwards W (1986) *Decision Analysis and Behavioural Research* Cambridge University Press
- Weitzman M L (1989) *The Case for Profit-Sharing in Making the Economy Work* Shields J (ed) Macmillan, London

Wilkie A D (1995) *More on a Stochastic Asset Model for Actuarial Use* British Actuarial Journal V.5: 777-964

Williamson O E (1984) *Corporate Governance* Yale Law Journal: 1197-1230

RESEARCH PAPER SERIES

No.	Date	Subject	Author
1	MAR 93	AUSTRALIAN SUPERANNUATION : THE FACTS, THE FICTION, THE FUTURE	David M Knox
2	APR 93	AN EXPONENTIAL BOUND FOR RUIN PROBABILITIES	David C M Dickson
3	APR 93	SOME COMMENTS ON THE COMPOUND BINOMIAL MODEL	David C M Dickson
4	AUG 93	RUIN PROBLEMS AND DUAL EVENTS	David CM Dickson Alfredo D Egidio dos Reis
5	SEP 93	CONTEMPORARY ISSUES IN AUSTRALIAN SUPERANNUATION - A CONFERENCE SUMMARY	David M Knox John Piggott
6	SEP 93	AN ANALYSIS OF THE EQUITY INVESTMENTS OF AUSTRALIAN SUPERANNUATION FUNDS	David M Knox
7	OCT 93	A CRITIQUE OF DEFINED CONTRIBUTION USING A SIMULATION APPROACH	David M Knox
8	JAN 94	REINSURANCE AND RUIN	David C M Dickson Howard R Waters
9	MAR 94	LIFETIME INCOME, TAXATION, EXPENDITURE AND SUPERANNUATION (LITES): A LIFE-CYCLE SIMULATION MODEL	Margaret E Atkinson John Creedy David M Knox
10	FEB 94	SUPERANNUATION FUNDS AND THE PROVISION OF DEVELOPMENT/VENTURE CAPITAL: THE PERFECT MATCH? YES OR NO	David M Knox
11	JUNE 94	RUIN PROBLEMS: SIMULATION OR CALCULATION?	David C M Dickson Howard R Waters
12	JUNE 94	THE RELATIONSHIP BETWEEN THE AGE PENSION AND SUPERANNUATION BENEFITS, PARTICULARLY FOR WOMEN	David M Knox
13	JUNE 94	THE COST AND EQUITY IMPLICATIONS OF THE INSTITUTE OF ACTUARIES OF AUSTRALIA PROPOSED RETIREMENT INCOMES STRATEGY	Margaret E Atkinson John Creedy David M Knox Chris Haberecht
14	SEPT 94	PROBLEMS AND PROSPECTS FOR THE LIFE INSURANCE AND PENSIONS SECTOR IN INDONESIA	Catherine Prime David M Knox

15	OCT 94	PRESENT PROBLEMS AND PROSPECTIVE PRESSURES IN AUSTRALIA'S SUPERANNUATION SYSTEM	David M Knox
16	DEC 94	PLANNING RETIREMENT INCOME IN AUSTRALIA: ROUTES THROUGH THE MAZE	Margaret E Atkinson John Creedy David M Knox
17	JAN 95	ON THE DISTRIBUTION OF THE DURATION OF NEGATIVE SURPLUS	David C M Dickson Alfredo D Egidio dos Reis
18	FEB 95	OUTSTANDING CLAIM LIABILITIES: ARE THEY PREDICTABLE?	Ben Zehnwirth
19	MAY 95	SOME STABLE ALGORITHMS IN RUIN THEORY AND THEIR APPLICATIONS	David C M Dickson Alfredo D Egidio dos Reis Howard R Waters
20	JUN 95	SOME FINANCIAL CONSEQUENCES OF THE SIZE OF AUSTRALIA'S SUPERANNUATION INDUSTRY IN THE NEXT THREE DECADES	David M Knox
21	JUN 95	MODELLING OPTIMAL RETIREMENT IN DECISIONS IN AUSTRALIA	Margaret E Atkinson John Creedy
22	JUN 95	AN EQUITY ANALYSIS OF SOME RADICAL SUGGESTIONS FOR AUSTRALIA'S RETIREMENT INCOME SYSTEM	Margaret E Atkinson John Creedy David M Knox
23	SEP 95	EARLY RETIREMENT AND THE OPTIMAL RETIREMENT AGE	Angela Ryan
24	OCT 95	APPROXIMATE CALCULATION OF MOMENTS OF RUIN RELATED DISTRIBUTIONS	David C M Dickson
25	DEC 95	CONTEMPORARY ISSUES IN THE ONGOING REFORM OF THE AUSTRALIAN RETIREMENT INCOME SYSTEM	David M Knox
26	FEB 96	THE CHOICE OF EARLY RETIREMENT AGE AND THE AUSTRALIAN SUPERANNUATION SYSTEM	Margaret E Atkinson John Creedy
27	FEB 96	PREDICTIVE AGGREGATE CLAIMS DISTRIBUTIONS	David C M Dickson Ben Zehnwirth
28	FEB 96	THE AUSTRALIAN GOVERNMENT SUPERANNUATION CO-CONTRIBUTIONS: ANALYSIS AND COMPARISON	Margaret Atkinson
29	MAR 96	A SURVEY OF VALUATION ASSUMPTIONS AND FUNDING METHODS USED BY AUSTRALIAN ACTUARIES IN DEFINED BENEFIT SUPERANNUATION FUND VALUATIONS	Des Welch Shauna Ferris
30	MAR 96	THE EFFECT OF INTEREST ON NEGATIVE SURPLUS	David C M Dickson Alfred D Egidio dos Reis
31	MAR 96	RESERVING CONSECUTIVE LAYERS OF INWARDS EXCESS-OF-LOSS REINSURANCE	Greg Taylor

32	AUG 96	EFFECTIVE AND ETHICAL INSTITUTIONAL INVESTMENT	Anthony Asher
33	AUG 96	STOCHASTIC INVESTMENT MODELS: UNIT ROOTS, COINTEGRATION, STATE SPACE AND GARCH MODELS FOR AUSTRALIA	Michael Sherris Leanna Tedesco Ben Zehnwirth
34	AUG 96	THREE POWERFUL DIAGNOSTIC MODELS FOR LOSS RESERVING	Ben Zehnwirth