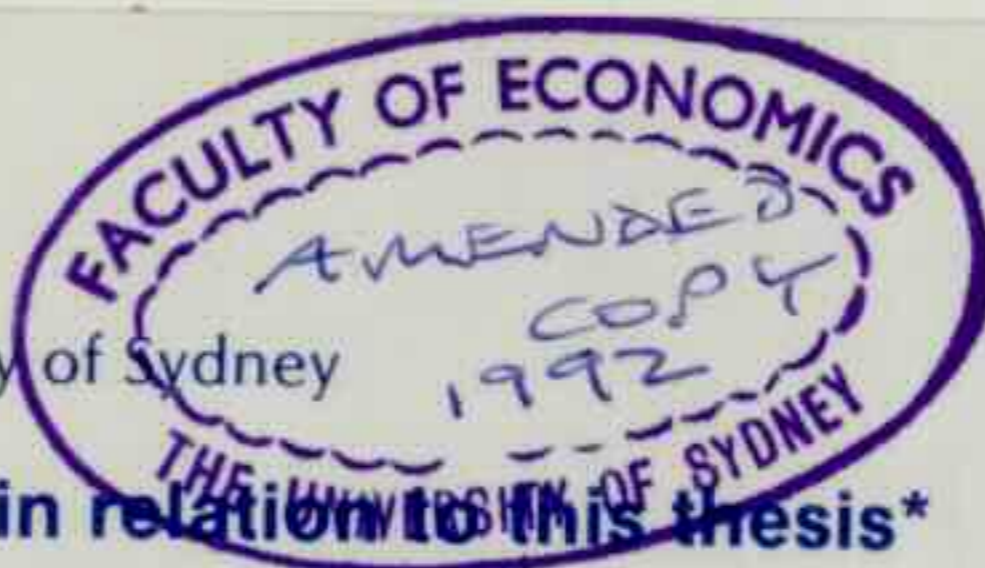


Blair, Mark

Ph.D.

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The University of Sydney

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**CHOICE OF OWNERSHIP STRUCTURE IN THE
AUSTRALIAN LIFE INSURANCE INDUSTRY**

by Mark Blair

A thesis submitted in fulfilment of the requirements
for the degree of Doctor of Philosophy

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**Department of Accounting
The University of Sydney**

ABSTRACT

The Australian life insurance industry is characterised by a variety of ownership structures, the most prevalent of which are companies and mutuals. This thesis develops and tests a number of hypotheses concerning the choice of ownership structure by life insurers. It is predicted that this choice is related to the types of policies offered. The principal hypotheses state that mutuals specialize in, and dominate the market for, *traditional permanent* policies (i.e. whole of life and endowment assurances), while companies specialize in, and dominate the market for, *term life* policies. The reasoning for this is as follows: traditional permanent policies pose certain contracting problems for insurees that are best handled by a mutual structure, while term life policies present a different set of contracting problems that are more appropriately dealt with by a company structure. It is further suggested that the position regarding *pure endowments* and *insurance bonds* is less clear: they have features that mitigate contracting problems associated with both ownership structures.

These 'line-of-business' hypotheses are evaluated in two ways. First, they are tested against the historical record in Australia. This analysis traces the evolution of *ordinary* life insurance firms from the 1830's through to 1886, during a period when they were essentially unregulated and did not pay direct taxes. It also examines the development of the *industrial* life insurance market from the early 1870s to 1920. Second, the hypotheses are tested cross-sectionally in a contemporary regulated environment, both before and after the innovation of insurance bonds.

The historical analysis suggests:

- Life mutuals arose as a response to incentive conflicts between shareholders and holders of *traditional permanent* policies. Life companies were generally unable to offer adequate contractual safeguards for such insurees;
- Life companies had most of their success with *term* policies. While a small number of companies achieved limited success in offering traditional permanent policies, they did so by mimicking the attributes of mutuals (i.e. offering participating policies);
- Companies were the first structure to successfully offer *industrial* life policies. As these policies were typically permanent in nature, this finding appears anomalous. However, it can be explained, at least in part, by particular bonding practices employed by shareholders; and
- The initial attempts at forming life companies and mutuals included voluntary restrictions on dividend and investment policies, which are consistent with an analysis of the contracting problems associated with each structure.

The contemporary analysis suggests:

- The product line distinction between life companies and mutuals continues to exist, even subsequent to the introduction of insurance bonds;
- Neither companies nor mutuals possess a comparative advantage in offering pure endowments or insurance bonds; and

- More extensive life insurance regulation has not altered the pre-regulation match between ownership structure and product line.

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All sources and references used in the writing of this thesis are duly noted. The remainder of the thesis represents the author's work.

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CHAPTER 1

INTRODUCTION

In recent years there has been a considerable amount of interest regarding matters of organizational choice, including a number of studies examining various aspects of organizational ownership. This latter research has included studies considering the effect that certain operating characteristics have on ownership structure,¹ and others examining alternative ownership structures within specific industries.²

This thesis is concerned with alternative ownership structures that govern insurance activities, in particular *life* insurance. The insurance arena has been chosen for two main reasons. First, there are few industries in which the *mutual* form of ownership plays such a dominate role. Post (1976:45-46) asserts that the American insurance industry:

... has been characterized by organizational and conceptual diversity since its earliest days. Indeed, new organizations have been a standard social response to the absence of risk-avoidance mechanisms. When existing insurers refused, or were unable, to assume new classes or risks of insurance, new kinds of insurers were formed. So prevalent was this pattern that even the operations of the technical core of the enterprise (underwriting and investment) were often determined by the founding organizational scheme - e.g. tontine, mutual benefit society, or fraternal association.

-
1. For example, Jensen (1986) and Williamson (1988) consider the influence that the nature of investment has on firm ownership. From a different angle, Jensen and Meckling (1979) consider the circumstances that result in workers being given control rights.
 2. These have included a variety of industries. For instance, banking [Rasmusen (1988)], health care [Hansmann (1981), Foster (1987)], savings and loan [Nichols (1967), O'Hara (1980)], dairy [Porter and Scully (1987)] and insurance industries [Mayers and Smith (1988)].

Second, while the insurance industry provides a potentially fruitful avenue in which to consider a number of corporate governance issues, relatively little consideration has been given to the effect that the choice of ownership structure has on insurance activities, or the more fundamental question of why alternative structures arise in the first place.

A major theme of this thesis is that certain incentive problems in the life product market (which exist for some types of life policies but not for others) result in the failure of the company form and provide an impetus for mutuals. However, the mutual form of ownership does not completely replace the company form across all lines of life insurance as it poses its own problems. In particular, residual claimants (policyholders) in mutuals face a control problem concerning managers, difficulties in obtaining firm finance (e.g. they can't issue shares), and risk-bearing disadvantages. Consequently, the choice between ownership structures by policyholders involves weighing the contracting costs associated with shareholders against the contracting costs associated with the mutual structure. As Demsetz (1983:384) states:

The structure of ownership . . . is an endogenous outcome of competitive selection in which various cost advantages and disadvantages are balanced to arrive at an equilibrium organization of the firm.

Chapter 2 of this thesis outlines and evaluates previous research that has examined alternative ownership structures in the *property/casualty* and *life* insurance industries. Mayers and Smith (1981) and Hansmann (1985) are the two main studies in this area. The former employs a costly contracting framework to consider how the choice of ownership structure affects an insurance firm's operations. The authors examine the incentive conflicts inherent in mutuals and companies, and predict a number of cross-sectional differences in their

operational behaviour. Of particular interest is the hypothesized effect of ownership structure on the types of policies offered. Mayers and Smith state that they do not expect mutuals and companies to write different forms of policies within a given line of insurance. However, they argue that companies will dominate (i.e. have a comparative advantage in) "high-discretion" lines of insurance, while mutuals will dominate "low-discretion" lines. Hansmann (1985) extends the analysis of Mayers and Smith by providing an explicit explanation for the existence of mutual insurance firms and devoting more attention to the life insurance industry. He argues that life *mutuals* were established because of problems associated with long-term life policies. The chapter identifies a number of limitations associated with the Mayers and Smith, and Hansmann studies. In particular, that they do not fully elaborate on the hypothesized differences between mutuals and companies, and that they provide little evidence that the differences exist in practice.

Chapter 3 provides a detailed consideration of the nature of incentive problems associated with different types of life policies. The analysis suggests that incentive conflicts between shareholders and policyholders are most severe for traditional permanent policies (a particular class of long-term policy), as a result of their "guarantee" and "lock-in" features. At the other extreme, it is argued that term life policies pose the least potential for opportunistic behaviour by shareholders. Following Mayers and Smith (1981) and Hansmann (1985), it is argued that where policyholder-shareholder conflicts are severe, ownership of the firm by policyholders (mutualisation) is likely to represent an efficient solution. This is based upon the assumption that the disadvantages associated with the mutual form (e.g. contracting costs associated with mutual managers) do not completely outweigh the benefits that result from removing incentive conflicts associated with shareholders. Given this argument, a number of hypotheses are

developed concerning the match between ownership structure and policy type (the lines of business written). In particular, *mutuals* are expected to specialize in, and dominate the market for, traditional permanent policies, while *companies* are expected to specialize in, and dominate the market for, term life policies.

In relation to the other types of long-term life policies (insurance bonds and pure endowments), the relative positions of mutuals and companies are less clear. While they do not pose the same level of incentive conflicts between shareholders and policyholders as traditional permanent policies do, they help to mitigate contracting problems associated with the mutual structure. As neither companies nor mutuals appear to possess a comparative advantage in relation to these policies, it is hypothesized that there is no significant difference in the holdings of either type of policy by mutuals and companies.

Following Post (1976) and Mayers and Smith (1981), Chapter 3 also examines whether different life ownership structures can be expected to exhibit differences in investment and reinsurance practices. In relation to reinsurance practices, it is argued that while previous research has concentrated on the effect that ownership structure has on the amount of reinsurance, an alternative (perhaps more desirable) dependent variable is the type of reinsurance arrangement (e.g. facultative versus obligatory).

Chapter 4 tests the principal "line-of-business" hypotheses against nineteenth century developments in the Australian *ordinary* life insurance market. This period involved the introduction of both life mutuals and life companies, at a time when the life insurance market was essentially unregulated and firms were not required to pay direct taxes. As such, the potentially confounding influences of regulation and taxes are avoided. A number of trends in life office formation (mutual versus companies) are identified, and an examination is made of the product attributes of these firms. This analysis provides support for the existence

of an association between ownership structure and product line of the type hypothesized in Chapter 3, although there is less information available on life companies than life mutuals. The various rules governing the early life firms are also examined, and a variety of monitoring and bonding practices are observed. In particular, and as predicted by Mayers and Smith (1981), shareholders in the early life companies voluntarily restricted the amount of dividends they could receive in an apparent attempt to minimize potential conflicts of interests between policyholders and shareholders. This practice has since been institutionalised in the life insurance legislation.

Chapter 5 extends the historical analysis, by considering the development of the *industrial* life insurance market in Australia from the early 1870's to 1920. A study of the evolution of this sector of the life market reveals an apparent inconsistency with the arguments of Chapter 3: while industrial life policies were essentially in the nature of whole of life or endowment assurances, they were written (at least initially) most successfully by companies. Potential explanations for this phenomenon are examined.

Chapter 6 tests the line-of-business hypotheses developed in Chapter 3 using more recent, cross-sectional data. This contemporary analysis is undertaken for two main reasons. First, while the historical analysis presented in Chapters 4 and 5 provides important qualitative evidence, it does not permit a direct test of the principal hypotheses developed. Second, the contemporary analysis allows an examination of the effect of the introduction of *insurance bonds* in the 1970's on the choice of ownership structure. As noted above, it is not clear whether mutuals or companies will specialize in or dominate this market segment. The results suggest that, even in the current regulated environment, there is an association between product line and ownership structure in the way predicted.

Chapter 7 reiterates the main findings of this thesis.

CHAPTER 2

PREVIOUS RESEARCH

An implication of the work of Coase (1937;1960) is that in a zero contracting (transaction) cost world, the choice of ownership structure has no effect on the value of a firm. Indeed, there would be no reason for firms to exist at all. Subsequent studies have shown that when contracting is costly, incentive problems among firm participants may motivate a particular ownership structure.¹ Moreover, because incentive problems sometimes differ between activities, a number of ownership structures are likely to co-exist. Consistent with this, in practice we observe a variety of ownership structures conducting economic activities including share capital companies (ranging from those with single-owners to those with widely-held shares), producer-owned co-operatives, consumer-owned co-operatives, unincorporated joint ventures, trusts, and partnerships.

There are two main forms of ownership prevalent among insurers: *mutual* and *company* (or proprietary) forms. The central difference between these organizations concerns the ability of residual claimants to transfer or dispose of their claims for an amount that reflects their market value. Residual claimants in insurance *companies* (shareholders) have an unrestricted residual claim that is easily alienable at the prevailing market price. They are not required to have any other role in the firm. In contrast, the residual claimants in insurance *mutuals* are

1. For instance, Fama and Jensen (1983a) show that where there are acute conflicts of interest between managers and residual claimants the two functions are merged (e.g. professional partnerships). In a similar vein, Bonin and Putterman (1987:64) argue that workers may be given control rights in a firm because of imprecision associated with labour contracts leading to potential opportunism (a "hold-up") if shareholders had control.

also customers (policyholders) of the firm who may not be permitted to transfer their claims or dispose of them at a contemporary market-based rate. Restrictions on transferability need to be imposed on traditional long-term life policies because of an adverse selection problem. This is discussed further in section 2.2.

The purpose of this chapter is to review previous research that has examined different ownership structures within the insurance arena. Section 2.1 outlines and evaluates a series of studies by Mayers and Smith which consider how the mutual and company forms of ownership influence insurance activities (for instance, the type of products offered or the types of investments made). Section 2.2 reviews the study by Hansmann (1985) which attempts to provide an explicit rationale for the existence of life insurance mutuals. Finally, section 2.3 considers a study by Boose (1990) that explicitly examines whether life mutuals are generally less efficient than life companies.

2.1 The Mayers and Smith Studies

In a series of closely related papers, Mayers and Smith (1981;1986;1988;1990) employ a costly contracting framework to explain the form of existing insurance contracts and the structure of the insurance industry. A costly contracting perspective involves the recognition that contracts are an important means of conflict resolution, and that different contractual solutions (e.g. different ownership structures) entail different costs. It also involves an explicit examination of the costs associated with alternative modes of contracting.²

2. Contracting costs include: (1) transaction costs; (2) agency costs [refer to Jensen and Meckling (1976)]; (3) renegotiation costs; and (4) bankruptcy costs.

In examining ownership structures prevalent in the insurance industry, Mayers and Smith first consider insurance *companies*. There are two main sets of agency conflicts inherent in these firms: those between shareholders and managers, and those between policyholders and shareholders. To simplify the analysis, the authors initially assume that the owner-manager conflict can be costlessly controlled.

With regard to policyholder-shareholder conflicts, Mayers and Smith argue that policyholders of life companies are confronted with incentive problems that are analogous to those faced by lenders in bond markets. That is, shareholders have incentives to change the company's dividend, financing, and investment policies, after bond or life insurance contracts are written, so as to increase the value of their residual claims at the expense of policyholders' fixed claims. Following Smith and Warner (1979) they identify incentive problems associated with excess dividends, underinvestment, asset substitution, and claim dilution.

Rational policyholders (like bondholders) recognize these potential incentive conflicts, and price protect in the product market. Mayers and Smith hypothesize that, in order to reduce the extent of this price protection, shareholders will contractually restrict the amount of dividends paid (thereby mitigating any excess dividend problem), or the kind of investments they undertake or risks they underwrite (thereby reducing their ability to increase the variance of the firm's operating cash flows). Alternative contractual solutions include the issue of participating (or mutual-based) policies. The participatory element mitigates incentive conflicts in much the same way as a convertibility provision in a corporate bond contract, except that bondholders receive a proportion of share (economic) value, while policyholders receive a proportion of

accounting profits. In this way, policyholders share in firm profits, whether gained opportunistically or otherwise.

Mutual ownership (the removal of shareholders) is regarded as another (albeit extreme) way of controlling the conflict between policyholders and shareholders. Mayers and Smith argue (1981:427):

. . . contracting costs arising from differential incentives between policyholders (as principals) and equityholders (as agents) are reduced by making the members of these groups coincident.

For this reason, mutuals are regarded as a potentially efficient form of ownership (termed here, the "mutual-efficiency" hypothesis).

Mayers and Smith subsequently relax the assumption that owner-manager conflicts can be costlessly controlled, and recognize that the mutualisation solution to incentive problems comes at a cost - there are fewer disciplinary forces controlling mutual managers than there are controlling company managers. In particular, there is no market for corporate control [Jensen and Ruback (1983)] acting on mutual managers. They continue (1981:427):

. . . the advantage mutuals have from elimination of contracting costs imposed on policyholders by stockholders is thus offset by increased contracting costs between the owners [policyholders] and managers of the firm.

2.1.1 The Predictions

Mayers and Smith devise a number of predictions concerning mutuals and companies based upon the control problem associated with mutual management. In relation to underwriting activities, they maintain (1981:427) that there will exist little difference in the types of insurance coverage offered or the form of

contracts written by mutuals and companies, and that the major difference between these forms of ownership lies in which lines of insurance each form of ownership will dominate. In particular, they argue (p.427) that mutuals are more prevalent in lines of insurance where managers exercise little discretion in setting rates. The rationale for this specialization is that mutual management avoid high-discretion lines of business as a form of bonding. The authors (1988:361&427) also maintain that, for the same reason, mutuals offer insurance across fewer product lines than companies, and that mutuals are more geographically concentrated than companies.

Mayers and Smith (1986:75) subsequently argue that mutuals will also be more prevalent than companies in those lines of insurance where contracts are long-term. They contend that increasing the length of the contract increases the opportunities for shareholders to behave opportunistically. Potential conflicts are aggravated because long-term policyholders need to be "locked into" contracts in order to overcome a problem of adverse selection (discussed in Chapter 3).

Mayers and Smith also maintain that there is likely to be a difference in the amounts of reinsurance demanded by insurance mutuals and companies. In their initial analysis (1981:430) they suggest that mutuals are likely to have a greater demand for reinsurance than companies because of a regulatory restriction on the ratio of capital to insurance (in force). This requirement is more severe for mutuals as they have fewer sources of finance (e.g. mutuals don't have the option of issuing shares). Reinsurance can be regarded as a specialized form of financing available to mutuals that increases the capital of a firm, while decreasing the insurance in force. Mayers and Smith subsequently (1990:22-23) argue that the demand for reinsurance differs between companies (and may be greater than the demand by mutuals). They suggest that the demand for reinsurance by companies is related to factors such as:

- (1) the concentration of share ownership;
- (2) the magnitude of the underinvestment problem associated with the company; and
- (3) whether the company is a member of a corporate group.

In relation to the first factor, the authors argue that closely-held corporations are more likely than firms with less concentrated ownership to demand reinsurance due to risk aversion on the part of their shareholders. Regarding the second factor, reinsurance helps to overcome shareholders' underinvestment incentives, as it reduces the extent to which they can influence the variability of their firm's future cash flows. Finally, where the company is a subsidiary, reinsurance with the parent company can allow asset control to be maintained within the group, while helping the former to meet regulatory requirements.

Mayers and Smith (1981:427-428) predict the relative size of mutuals and companies. They argue that, assuming voting rights can be more easily concentrated in smaller companies, policyholder-shareholder conflicts are more pronounced for smaller companies. This suggests that mutuals are relatively efficient for "small" operations. As a result, it is hypothesized that in a given line of insurance, mutuals will be the smallest firms (measured by total assets). The authors (1981:427) envisage (but do not test for) a systematic difference in the amount of monetary compensation received by mutual and company managers. They argue that because mutual managers have fewer controls acting on them than their stock counterparts, they are more likely to engage in on-the-job consumption. Residual claimants recognizing this will price protect in the labour

market. As such, managerial compensation (salary plus bonus) is expected to be higher for companies than for mutuals.

2.1.2 The Evidence

Mayers and Smith (1986) attempt to test their mutual-efficiency hypothesis by considering an exhaustive list of thirty mutualisations (changes from company to mutual form) between 1879 and 1977 in the U.S. life insurance industry. The authors suggest that if these mutualisations are shown to be value increasing, the hypothesis is confirmed. They note (p.77) that a sufficient (although not a necessary) condition for mutualisation to increase the value of a firm is that each of the classes of claimholders (shareholders, managers and policyholders) gains. Conversely, a necessary (but not a sufficient) condition for mutualisation to be value decreasing is that one of the classes of claimholders systematically loses in the process. The authors test whether any participatory group suffered adversely as a result of the ownership change. An examination of mutualisation premiums revealed that shareholders earned an average excess return of 57%. While this figure appears high, Mayers and Smith cite a number of studies that suggest that high returns are not atypical in buyout situations. An examination of the annual growth rates in premium income of these life firms (after controlling for industry growth rates) revealed that there was no decline in sales. This suggests that policyholders did not perceive a shareholder expropriation or a decrease in firm value. The authors also study managerial turnover rates before and after the announcement of mutualisation. These provide evidence that managers were not adversely affected. Mayers and Smith conclude (p.90) that the evidence on life mutualisations is more consistent with the mutual-efficiency hypothesis than an expropriation hypothesis.

In relation to line-of-business changes following mutualisation, Mayers and Smith (1986:82-84) examine the product mixes of individual firms (long versus short-term policies) five years before and five years after mutualisation. Of the mutualised firms for which product mix information was available (17 in total), Mayers and Smith report (p.84) an average holding of long-term policies (*whole of life* and *endowment assurance* policies) in the vicinity of 78% five years before mutualisation, and 68% five years after mutualisation. After adjusting for industry trends in product lines, the authors find no statistically significant difference in product mixes before and after mutualisation. A conclusion that can be drawn from this product mix analysis is that mutualisation of the sample firms occurred at a time when they held a high proportion of long-term life policies. While there does not appear to be any change in a firm's product mix following mutualisation (after adjusting for industry factors), it could be argued that management adjusted their behaviour prior to mutualisation in anticipation of the ownership change.

It was noted above that one of the main advantages that a company has over a mutual is the existence of a market for corporate control. Mayers and Smith (1986:90-95) examine ownership concentration just prior to mutualisation, and show that closely-held companies (where the market for corporate control is relatively weak) experienced a significant increase in premium growth rates following mutualisation. In contrast, those firms with a widespread ownership tended to suffer a significant decline in growth rates. The authors conclude (p.94) that:

. . . the evidence for the entire sample of firms is consistent with a differential, observable response in the output market depending on the control implications of the transaction.

That is, when evaluating the ownership change, policyholders took into account the degree to which the market for corporate control previously acted as a disciplinary mechanism.

The line-of-business and geographical concentration hypotheses were the principal focus of Mayers and Smith (1988). That study examined 1058 companies and 319 mutuals listed in the 1981 Best's Insurance Reports (U.S.). Geographical concentration was proxied by the number of state licenses a firm held. After controlling for size (total admitted assets), the authors found evidence that mutuals were significantly more geographically concentrated than their stock counterparts. In order to test the line-of-concentration hypothesis, Mayers and Smith examine the extent to which individual mutuals and companies concentrated their activities within 26 product lines. Contrary to expectation, they find no significant difference between the range of policies offered by mutuals and companies. Using factor analysis they show that the mutuals and companies can be differentiated on the basis of product lines offered. That is, mutuals and companies tended to have different lines of insurance as their main activities. The *ability* to discriminate between the policies offered by mutuals and companies is interpreted by the authors as evidence in support of the line-of-specialization hypothesis. However, they do not identify the specific product lines that mutuals or companies specialized in.

Mayers and Smith (1990) examine the reinsurance amounts of 854 companies and 320 mutuals included in the 1981 Best's Insurance Reports (U.S.). They provide evidence that cross-sectional variation in the level of reinsurance can be explained in part by ownership structure. Their evidence suggests (p.36) that widely-held stocks (companies with more than 100 shareholders) reinsure *less* than either single-owner stocks (companies with at least 50% owned by a single family) or mutuals. This can be interpreted as being consistent with their

ownership concentration prediction (noted above). There is also weaker evidence to suggest that single-family stocks reinsure more than mutuals. Finally, evidence is provided that the demand for reinsurance is a direct function of whether a company is a member of a corporate group (although the authors are unable to distinguish between intra-group and external reinsurance transactions).

2.1.3 An Evaluation

While Mayers and Smith imply that mutuals arise in response to contracting problems in the product market, they do not identify the specific factors that make mutuals the most efficient contractual solution for policyholders (rather than, for example, shareholders restricting dividend, underwriting, or investment policy). That is, they do not identify the reasons for "contract failure" with companies. Instead, they form predictions concerning differences in operational behaviour, given that both ownership structures are in place.

There are also a number of other shortcomings of the Mayers and Smith analysis. First, in relation to their prediction that companies will tend to be larger than mutuals (within a given product line), it is by no means clear why a concentration of shares (and associated voting/control rights) necessarily implies a greater potential for opportunistic behaviour. Further, this prediction does not accord with the Australian or U.S. life insurance experience [Chapter 6 *infra*; Black and Skipper (1987)]. Second, as noted above, Mayers and Smith do not identify specific product lines that mutuals or companies appear to possess a comparative advantage in when testing their line-of-specialization hypothesis. Finally, the authors restrict much of their empirical analysis to the U.S. *property/casualty* insurance industry. They concede (1988:374) that the power of their tests would be strengthened by an examination of *life* insurers, such as that

attempted in Chapters 4 to 6 of this thesis. Given that there is a greater likelihood of shareholder opportunism with long-term contracts [Mayers and Smith (1986:75)], and that life insurers often write long-term assurance contracts (with a guaranteed maturity value³), an examination of the life insurance industry would seem to offer a fertile ground for testing their hypotheses.

2.2 Hansmann's Study

Hansmann (1985) extends the Mayers and Smith analysis by providing an explanation for the prominence of mutuals in insurance markets, and by giving explicit consideration to contracting problems associated with life insurance policies.

Hansmann begins his analysis (p.126) by outlining two broad conditions for the existence of consumer co-operatives such as insurance mutuals. First, there must be a relatively severe "market failure" in the firm's product market, such that shareholders do not provide adequate contractual safeguards to customers. Second, customers must be able to assume effective control of the firm without incurring excessive costs. If either of these conditions is not satisfied, share capital companies are likely to represent the most efficient form of organization.

Market Failure

Hansmann recognizes that markets are merely one way of governing transactions. "Market failure" is used to refer to the situation where "market solutions involve relatively large costs for those involved" (1985:126). This

3. Which is to say that their "bond analogy" is perhaps more appropriate for this industry.

implies the choice of an alternative mode of governance (e.g. some form of vertical integration such as mutualisation).

Hansmann argues (p.129) that:

Three related factors combine to make competition alone an insufficient source of discipline for proprietary firms marketing life insurance and consequently create . . . an incentive for the adoption of the mutual form.

That is, there are three factors that together promote "market failure". These are:

- (1) the difficulty of writing an adequate long-term contract between a life insurance company and a policyholder;
- (2) an information asymmetry between a life insurance company and policyholders regarding important aspects of the company's performance; and
- (3) the need to lock policyholders into contracts in order to avoid an adverse selection problem.

In relation to the first factor, Hansmann maintains (p.129) that the central problem associated with long-term contracting in the life insurance market (from a policyholder's perspective) is ensuring that companies maintain adequate financial reserves, such that claims under policies can be met. He recognizes that shareholders have incentives to behave opportunistically in respect of setting both the *level* and *riskiness* of reserves (equivalent to the dividends and asset substitution problems noted by Mayers and Smith (1981)).

Hansmann (pp.129-131) provides an example of an insurance firm issuing traditional long-term life policies (*whole of life* policies) and poses the question,

what is the appropriate level of reserves for long-term policies? He highlights the fact that because of a variety of intervening factors (e.g. mortality risk, investment risk, inflation rates) claimholders in life firms are unable to prespecify an unambiguous rule that clearly defines an acceptable level of reserves for different sets of circumstances. Given this, shareholders in companies may have opportunities to deteriorate reserves below the necessary level.

Hansmann asserts (p.132) that the second factor causing "market failure" - the asymmetric information that exists between policyholders and shareholders regarding product quality - gives rise to a potential "lemons" problem [Akerlof (1970)]. That is, because insurees have difficulty in judging product quality, they will price protect themselves and "good quality" insurers (in the absence of guarantees) will be forced out of the market.

Finally, Hansmann notes (p.132) the need to "lock" policyholders into traditional long-term contracts, through low surrender or exit values, in order to overcome a problem of adverse selection (section 3.2 *infra*). Two consequences of this are that policyholders cannot costlessly switch firms as a form of protest to shareholders, and the product market is not a compelling disciplinary force on insurers. These, in turn, increase the likelihood of shareholder opportunism.⁴

Costs of the Mutual Form

Hansmann argues that the control of mutuals is a relatively difficult (costly) exercise for two main reasons (p.134). First, there is usually a large

4. As noted above, Mayers and Smith (1986:75) subsequently adopt a similar position. They argue that the incentive conflicts between policyholders and shareholders are a direct function of the length of the contract. Further, they argue that these conflicts are increased because long-term policyholders are "locked into" contracts.

number of policyholders who are typically geographically dispersed. Second, there is an absence of a market for corporate control. Hansmann claims that the first feature has led to apathy on the part of voters, allowing management to be self-appointing. The absence of a market for corporate control means that an important disciplinary force on managers is not exerted.

Costs of the mutual form are said to include:

- (1) an increased likelihood (relative to companies) of managerial behaviour not being in the interests of residual claimants (p.134);
- (2) problems in obtaining external financing (policyholder premiums being the only substantial source of capital funds) (p.134);
- (3) the inability of residual claimants to diversify risk directly through the equity market (p.127); and
- (4) difficulties in imputing a return to capital, which gives rise to a problem of intergenerational wealth transfers (p.127).

However, elsewhere Hansmann (1988:299) argues that:

... considerations of risk-bearing are strongly in favour of customer rather than investor ownership.

He maintains (p.299) that investors in companies will require a return (charge a premium) for general mortality and economic (e.g. inflation, interest rates) risks, whereas the mutual form of ownership eliminates these costs for policyholders since:

. . . through the adjustment in patronage dividends according to experience, only diversifiable risk is insured.

2.2.1 The Evidence

Hansmann evaluates his argument for the formation of life mutuals by briefly examining the history of life firms in the United States (1985:135). He notes that U.S. life mutuals arose in the 1840's at a time when there was a dramatic shift in the demand for policies, from short one-year and seven-year terms to long-term (whole of life) business, when actuarial tables were "crude" (unreliable), and when reserves were not subject to State regulation.

The asserted shift in demand to whole of life policies meant that policyholders had to be tied to contracts (to avoid adverse selection), and this brought with it problems of long-term contracting under uncertainty. Further, the fact that actuarial tables were crude meant that policyholders had difficulties in judging product quality.⁵ Finally, the absence of regulations meant that shareholders were not policed, and so were more likely to engage in opportunistic behaviour.

Hansmann further asserts (p.136) that the market share of companies increased in the 1850's and 1860's as a consequence of State regulation of reserves and investment policies. That is, he contends that mutual ownership and Government regulations act as substitutes: they both help to mitigate conflicts of interest associated with long-term policies.⁶ He states (p.135):

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5. In contrast to Hansmann, Mayers and Smith (1981) argue that where there is relatively high discretion involved in setting premium rates, life companies should dominate.
 6. His explanations for the continuing existence of the mutual life firm are (p.136): (1) mutual managers lack appropriate incentives to demutualise (change from mutual to company form), as this will expose them to the

Whether the mutual form adds any important degree of protection from market failure today, now that actuarial science is relatively reliable and a well-tested system of reserve regulation is in place, is unclear . . .

Hansmann also refers (p.137) to recent developments to support his proposition that mutuals have become anachronistic in the U.S. life insurance industry. He points out:

- (1) the mutuals' share of life insurance in the U.S. has fallen from 69% in 1947 to 43% in 1983;
- (2) the number of U.S. life mutuals declined from a high point in 1954 of 171 firms to 135 firms in 1981, while the number of life companies increased from 661 to 1,823 during the same period; and
- (3) between 1966 and 1981 there were only two mutualisations (changes from company to mutual form), but five demutualisations (changes from mutual to company form).

2.2.2 An Evaluation

Hansmann's study extends previous research by providing a more thorough analysis of factors giving rise to life insurance mutuals. However, in the context of the present study, it has a number of limitations. First, Hansmann's first reason for the existence of life mutuals - the difficulty of writing an adequate long-term life contract with companies - needs to be refined. It is maintained here that the policyholders' problem is not with the length of the contract *per se*,

threat of takeover and job displacement; and (2) a tax bias has existed in favour of mutuals. No empirical support is provided for either assertion.

but rather with enforcing guarantees associated with traditional long-term assurance policies (cf Chapter 3).

Second, Hansmann's third reason for the existence of life mutuals - asymmetry of information between insurers and insurees - is not necessary to motivate the existence of life mutuals; the first and second reasons (problems with traditional long-term life contracting and "lock in") are by themselves sufficient (cf Chapter 3). Further, in arguing that the information asymmetries inherent in life policies help to cause "market failure", he does not consider the possibility that policyholders are free to purchase expert advice, just as insurance firms would be to warrant product quality [Akerlof (1970)].

Finally, it is by no means clear why, for a given set of non-diversifiable risks, shareholders in companies will generally require a greater return than policyholders in mutuals. Further, this argument appears to be inconsistent with modern risk theory, which implies rational policyholders would price such risks.

Caution should also be taken in accepting Hansmann's conclusion that increased regulation of life firms has resulted in an increase (decline) in the popularity of companies (mutuals). Hansmann does not consider the composition of total demand for life policies. For instance, he does not comment on the type of business that companies wrote (e.g. whole of life or term life) when their market share increased during the 1850's and 1860's. It may have been the case that companies and mutuals in the 1850's and 1860's were undertaking fundamentally different types of business, and that the market segment companies specialized in (e.g. term life) increased. Moreover, it is not clear that increased regulation would help to overcome the contracting problems involved; nor is it clear why externally imposed regulations could overcome these contracting problems, while companies (through voluntary monitoring and bonding practices) could not.

In relation to Hansmann's reference to the recent "decline" of mutuals, over the period of concern there has been an increase in the market proportion of term-based and unbundled policies (refer to Appendix 2, Mayers and Smith (1986)). A theme of this thesis is that mutuals tend to specialize in traditional long-term assurance policies, while companies specialize in term-based policies. With this, the correlation between the decline in total market share of mutuals, and the increase in market proportion of term-based and unbundled policies, is not surprising and can be explained independently of regulation effects.

Possible extensions of Hansmann's analysis include a consideration of how the analysis would relate to other types of life policies (e.g. pure endowments and the recent product innovation of insurance bonds), and how the match between ownership structure and policy type influences other activities of a life firm (e.g. investment policy).

2.3 Other Empirical Studies

Both Mayers and Smith (1981) and Hansmann (1985) suggest that a necessary condition for the formation of mutuals is that agency costs of equity are not "excessive". Given the control problem associated with mutuals noted above, it could be postulated that expenses incurred by mutual managers will exceed those incurred by their stock counterparts (better-monitored agents). Alternatively, it could be argued that policyholders foresee such opportunistic behaviour and price protect themselves accordingly in the product and/or managerial labour markets, resulting in mutual managers restricting their behaviour to assure policyholders that they are not acting opportunistically. While a number of studies conducted during the 1970's have suggested that there is no statistically significant difference in the expense levels of insurance mutuals and insurance companies, none of these have explicitly addressed the cost-

efficiency issue.⁷ This section evaluates a recent study by Boose (1990) which attempts such an analysis. However, this issue is not explored further in this thesis due to data restrictions.

Boose (1990) examines 41 U.S. life firms for the period 1966 to 1984 in an attempt to study whether ownership structure (mutual or company) and regulatory regime (strict or otherwise) influence the level of firm expenses. The author forms predictions based upon a number of alternative theories. Specifically, she predicts that: (1) mutuals will have greater expenses than companies; and (2) the level of these differential expenses will be eroded where there is a strict regulatory regime. She differentiates the regulatory pressure faced by firms on the basis of whether they operated in New York (a highly regulated State), or some other (less regulated) State. Boose's sample is summarized in table 2.1 (below).

While controlling for differences in product mix between mutuals and companies, Boose tests her hypotheses using three main expense models: (1) general expense; (2) commission; and (3) "general expense plus commission" models. General expenses are defined to include rent; salaries and wages; employee and agent benefit plans; legal, accounting and actuarial fees; medical examination and inspection fees; travel; advertising; postage, printing and stationary; depreciation of furniture and equipment; books; dues; and insurance. "Commissions" are defined as the total sales commissions paid by a firm over a year.

7. These studies include Houston and Simon (1970), Pritchett (1971), Colenutt (1977) and Geehan (1977). In contrast, a number of studies have explicitly addressed this issue in the context of the U.S. Savings and Loan Industry [e.g. Nicols (1967) and O'Hara (1981)]. The results of these latter studies suggest that, *ceribus paribus*, mutual expenses are significantly higher than company expenses.

TABLE 2.1
A BREAKDOWN OF THE SAMPLE USED BY BOOSE (1990)

| Regulator | Ownership Structure | | Total |
|------------------|---------------------|-----------|-------|
| | Mutuals | Companies | |
| New York | 20 | 1 | 21 |
| Outside New York | 7 | 13 | 20 |
| Total | 27 | 14 | 41 |

Boose finds that: (1) the general expenses of mutuals were significantly greater than those of companies ($p=.0001$); (2) the reverse was true for commissions ($p=.0001$); and (3) there was no statistically significant difference for the "general expenses plus commissions" model ($p=.4518$).

The finding that there existed no significant difference in the expense levels of mutuals and companies once salesmen compensation was considered was interpreted (p.515) as:

... evidence that the differences in expenses was due only to differences in the sales departments expenses, and not to agency theory costs ... [and as indicating] ... that the sales department of mutual companies offer sales representatives lower commission schedules, but higher benefits.

Consequently, Boose argues (p.516) that there was no significant difference between the levels of agency costs associated with mutuals and companies.

In relation to the regulatory hypothesis, Boose found that New York firms had significantly lower commission and/or expense levels than those that operated in less regulated States. This suggests that a regulator plays a role in reducing agency costs faced by firm participants.

There are a number of problems associated with Boose's analysis. First, she uses general expenses as a proxy for agency costs. Jensen and Meckling (1976) define agency costs to include: (1) monitoring costs; (2) bonding costs; and (3) a residual loss. While Boose's definition of general expenses includes certain monitoring expenditures (e.g. auditors fees) and residual loss elements (e.g. perquisite consumption), it does not capture all agency costs. Consequently, whether the results have implications for agency theory is open to debate. Second, Boose offers no explanation for why the compensation package of mutual agents is different to that of company agents. The difference in commissions may reflect price protection by principals. Finally, there appears to be a problem with Boose's sample. A significant proportion of mutuals were from New York (74%), while the companies were almost all from less-regulated States (93%). This by itself may influence the ownership structure results. The predicted expense level behaviour is more likely to occur in less regulated environments, where mutual managers have fewer controls upon them. The way the sample was structured (e.g. the small representation of mutuals in the sample from the less regulated State) limits the extent to which conclusions can be drawn regarding differences in agency costs of mutual and company managers.

2.4 Summary

This chapter has examined previous studies of the choice of ownership structure by insurers. The studies suggest that the mutual form arises as a consequence of two main factors: (1) the existence of incentive conflicts between shareholders and policyholders; and (2) the inability of shareholders to offer adequate contractual safeguards. In the case of life insurance, mutuals are established because of contracting problems associated with long-term life policies. However, the mutual form of ownership does not completely replace

the company form as it has its own problems. In particular, there are few controls forcing mutual managers to act in policyholders' interests. This has led some researchers to postulate that expense levels are likely to be higher in insurance mutuals than in insurance companies, although the evidence on this is mixed.

Previous research has a number of shortcomings, which this thesis will address. First, it does not fully elaborate on the reasons why life mutuals and life companies exist. That is, existing hypotheses require further development. Second, empirical evidence on the hypothesized differences between mutual and company insurers is scant.

CHAPTER 3

HYPOTHESIS DEVELOPMENT

The extant literature suggests that the activities of life mutuals and life companies are likely to differ in a number of important respects, although arguments as to why this should be the case, and evidence that it is the case, are both limited. The purpose of this chapter is to develop a set of formal hypotheses concerning the activities of these alternative ownership structures so that they can be tested in the Australian environment.

The chapter begins with a discussion of the main types of life insurance policies (section 3.1). This is followed by an examination of the potential conflicts of interests that arise between policyholders and shareholders (section 3.2), and between policyholders and mutual managers (section 3.3). The analysis involves a consideration of the possible contractual solutions in each case, and a discussion of the incentive conflicts associated with different types of life policies. Next, section 3.4 develops a number of hypotheses concerning the match between ownership structure and policy type (the lines of business written). Following Mayers and Smith (1981) and Hansmann (1985) it is argued that where policyholder-shareholder conflicts are severe, ownership of the firm by policyholders (mutualisation) represents an efficient solution. In particular, it is maintained that life mutuals exist principally because of severe incentive conflicts associated with the "guarantee" and "lock-in" characteristics of traditional long-term contracts. The influence of ownership structure on a number of other activity choices (investment policy, reinsurance arrangements) is considered in section 3.5. A summary of the chapter is contained in section 3.6.

3.1 Types of Life Policies

The life insurance market is characterized by a variety of products, described in detail in Appendix 2. These can be classified as either pure-protection, pure-savings or mixed policies. Pure-protection policies (i.e. policies with no savings element) include term life, credit life, group life, and accident/disability policies. These are similar in many respects to general insurance contracts, and will be collectively termed *temporary life* policies. Pure-savings policies (i.e. policies with no protection element) have typically been in the form of "pure endowments". For these latter policies, insurers are only required to return premiums plus any accumulated interest if the insuree dies during the contract period. Mixed policies have both protection and savings elements. These elements may be bundled (i.e. not separately identifiable), as in the case of whole of life and endowment assurance policies, or unbundled, as in the case of insurance bonds.

Term life policies offer the most basic form of life cover. Premiums are paid either in a lump sum at the commencement of the term (often one year), or at regular intervals during the term (e.g. monthly). If the policyholder dies during the stipulated term, the insurer pays an amount to the beneficiary named in the policy; if he/she does not die, the insurer is not required to make any payment and the contract ceases. Policyholders do not usually share in bonus distributions, nor do their policies acquire surrender (cash) values. Temporary policies can also protect an individual against financial loss arising from accidents and/or disability (accident and disability policies), or can be used in conjunction with amounts owed (credit life policies). Further, they can be sold on a group basis (group life policies).

Life insurers have traditionally had the option at the end of each term to refuse to insure a term policyholder because of failing health. However, today

term life contracts typically provide for automatic renewal (also known as guaranteed renewal). While term policies may have automatic renewal, the amounts of future premiums are not guaranteed (and are generally higher with the presence of this option). Rather, they can be increased at the discretion of the insurer.

Although not very common today, a number of life offices have issued *pure endowment* policies. These policies involve the payment of a fixed premium over a specified period (typically ranging from 10 to 30 years). A guaranteed face value is received by the insuree only if he/she survives to the maturity date. If the individual dies before that date, or if he/she decides to surrender the policy, premiums plus interest are returned. Of course this latter payout is 'guaranteed', but is an uncertain amount.

Whole of life policies usually provide for the payment of a specified amount (plus any accrued bonuses) on the death of the insuree, whenever that may be. *Endowment assurance* policies provide for such a payment on the death of the insuree or on the maturity of the policy, whichever comes first. In both cases premiums are fixed for the duration of the contract. They are payable in the sense that premiums may be paid, and if they are, the insurance firm must accept them. If the policyholder chooses not to continue premium payments, he/she can surrender the policy and receive a surrender value (proxying the amount of accumulated savings). However, these policies do not generally have any surrender value for the first two or three years, since early premiums are typically applied to agent commissions.

The premium amounts for whole of life and endowment assurances are calculated as average protection payments, spreading the increased cost of protection in later life to earlier payment periods. Consequently, payments in early years will contain a protection element for the current period as well as an

additional amount for future periods. This additional amount is invested to provide for future payouts. In this regard, policyholders can be said to pay a "risk" as well as a "savings" premium. As noted above, they are bundled products, in the sense that the savings and protection components are not readily identifiable. Hereafter, whole of life and endowment assurances will be referred to as *traditional permanent* policies.

Insurance bonds were introduced in Australia during the 1970's, at least partly as a response to concerns expressed regarding the inflexibility, and the damage done to, traditional permanent policies during periods of high inflation and rising interest rates. The demand for such bonds increased during the 1980's as a result of favourable tax concessions available to insurees under the *Income Tax Assessment Act 1936*.¹ There are two main types of insurance bonds: *investment account* and *investment linked* policies. These are typically written for periods ranging from 10 to 30 years, and often have large savings components. Neither type of bond suffers from the same metering problems as *traditional permanent* policies because they both separate the administrative, protection, and savings components of premiums (i.e. they are unbundled; refer to Appendix 2). As with traditional permanent policies, both types of bonds are only cancellable at the option of the policyholder (assuming no fraud or misrepresentation on

1. Accruing bonuses are specifically exempted from Capital Gains Tax for the original owner and incur no income tax until "cashed in". If the bonds are kept for 10 years, all proceeds are free of income tax and if cashed in the 9th and 10th year attract tax on part of the bonuses. If cashed in before eight years have expired, the bonuses attract income tax at the normal rates but the tax-payer can claim a 39% rebate (previously 29%). These benefits are not transferable from one firm to another (in contrast to superannuation benefits). To the extent that they stand to lose tax benefits if they withdraw their funds early, insurees are tied to a particular insurer.

their part). However, if the policyholder chooses to surrender an insurance bond, an exit fee is often payable.

3.2 Incentive Conflicts Between Shareholders and Policyholders

The central problem associated with life insurance contracting from a policyholder's perspective is ensuring the adequacy of the insurer's reserves in the event of death or the policy maturing. That is, will the reserves be sufficient to pay the amount promised? As Mayers and Smith (1981) and Hansmann (1985) observe, a policyholder's problem is analogous to the one faced by a bondholder in a share capital company. That is, in the presence of fixed claims (such as those held by policyholders), shareholders have incentives to behave opportunistically in respect of both the *level* and the *riskiness* of reserves [refer to Smith and Warner (1979)]. The ways in which these incentives might manifest themselves, and the contractual measures by which they might be controlled, are the subject of this section.

One of the most obvious techniques by which shareholders can adversely affect the level of policyholders' reserves is to change the dividend policy of the company. If the company sells policies on the understanding that a certain dividend rate will be maintained and this rate is subsequently increased, wealth is transferred from the policyholders' reserves to shareholders. If the increased dividend rate is financed by sacrificing profitable investment opportunities or by reducing investment, it might also result in a reduction in overall firm value.

Another way in which shareholders can deteriorate the value of policyholders' claims is to have the company take on debt commitments involving a payment priority that is similar to, or higher than, that held by policyholders (the claim dilution problem). Further, shareholders could sell new policies at

premiums that are not commensurate with the risk involved, causing an inter-generational wealth transfer between policyholders.

There are two main practices that shareholders could employ to increase the riskiness of the company's reserves, thereby transferring wealth from policyholders to themselves. The first involves altering the company's investment policy, while the second concerns the types of risks that are insured. In relation to the company's investment policy, shareholders could substitute higher variance projects for lower variance investment projects (the risky investment problem). With respect to the company's underwriting policy, they could take on relatively large life risks (the risky underwriting problem).

3.2.1 Contractual Solutions

In rational insurance markets, policyholders recognize the shareholders' incentives and price-protect. Where such a market is unregulated, shareholders might seek to reduce the extent of this price protection by contractually restricting their behaviour [Jensen and Meckling (1976)]. Indeed, Mayers and Smith (1981:426) hypothesize that in an unregulated insurance market shareholders could be expected to contractually limit both dividend and investment policy, as occurs in the bond market [Smith and Warner (1979)].

Contractual solutions to both the claim dilution and risky underwriting problems might also be expected. *Claim dilution* could be mitigated by placing limitations on the amount the firm can borrow, or in the context of inter-generational transfers between policyholders, by employing an actuary.

Actuaries ensure that a firm complies with the sharing rules laid down in its memorandum and articles of association. They are also involved in setting premium limits for policies and determining the appropriate amount to hold as reserves. As such they have the ability to effect wealth transfers between new and

old policyholders, and between different classes of firm participants (shareholders, non-participating policyholders, participating policyholders). In the former case, they can help to prevent new policyholders from "getting in cheap" (i.e. paying a premium that imposes an intergenerational wealth transfer). In the latter case, they can determine the amount of bonuses to be paid to participating policyholders and how much is available to shareholders for distribution as profits.

One way of mitigating the *risky underwriting* problem is to place a limit on the maximum amount of insurance that can be effected on any one life. In this way, the variability of cash flows and the size of potential casualty losses are restricted, limiting the extent to which any one death can deteriorate the reserves of the firm. An alternative solution is to initiate reinsurance arrangements [Mayers and Smith (1990)]. Reinsurance involves an insurance firm (the reinsured) reducing its maximum possible loss by ceding a portion of its premium to another insurance firm (the reinsurer). Reinsurance arrangements are discussed at greater length in section 3.5.2.

The potential for shareholders to gain from opportunistic behaviour can also be constrained by including a participatory element in policies [Mayers and Smith (1981)]. Participating policyholders share in the profits of the insurer, whether earned opportunistically or otherwise. The participation right is analogous to a convertibility option in a corporate bond, except that bondholders receive a portion of firm *value*, while policyholders receive a portion of the firm's (accounting) *surplus*.

Yet another means of mitigating conflicts of interest between policyholders and shareholders is to appoint an auditor. Accounting figures are often an important valuational tool in contracts that are used to determine payoffs to firm participants. Participants have difficulty in prespecifying

accounting techniques to be followed for all possible states of nature. Auditors can be viewed as arbitrators, assessing the adequacy of accounting rules techniques adopted for financial reports, which in turn influence participant payoffs [Ball (1985)].

Chapter 4 shows that most of these contractual solutions were evident in one form or another in the constitutions of the earliest firms to write life policies in Australia. Chapter 6 discusses the manner in which many of these practices have since been institutionalized in legislation presently governing the industry.

3.2.2 Shareholder-Policyholder Conflicts Associated with Different Types of Life Policies

Note that to this point no distinction has been made between the different classes of life policies outlined in section 3.1 (i.e. term life, pure endowments, traditional permanent policies, and insurance bonds). By implication, the incentive problems discussed above are relevant to each. However, there are at least three reasons for believing these problems are likely to be more pronounced for *traditional permanent* policies. First, as Hansmann (1985) and Mayers and Smith (1986) observe, there are more opportunities for shareholders to change investment, underwriting, or dividend policy with long-term policies. Second, as Hansmann (1985:132-133) demonstrates, "adverse selection" and "lock-in" associated with these types of policies mean that the product market is unlikely to provide an effective disciplinary mechanism on shareholders. The third reason relates to the nature of the product *per se*, rather than the market in which it is traded - the structure of guaranteed payouts associated with traditional permanent policies increases the potential for shareholders to behave opportunistically with respect to surplus (i.e. to pay themselves excessive dividends).

Adverse Selection and Lock-in

With *traditional permanent* insurance contracts, policyholders have the ability to cancel their policy and receive a surrender value. In contrast, insurers are not able to terminate relations unless the policyholder has made fraudulent representations. Because policyholders have the ability to switch firms, insurers face a problem of adverse selection. The problem is that at some point in time after an insurance firm issues long-term policies with fixed premiums, individuals who can demonstrate that they are "good risks" are likely to switch insurers (surrendering their policy) in order to take advantage of cheaper rates. The original insurer is then left with only average and poor risks. That is, the policyholders have self-selected in a way detrimental to the insurer. This problem is less severe for *term life* policies and *insurance bonds*, as protection premiums can be periodically increased or decreased by the insurer, and does not exist in the case of *pure endowments*, as they have no protection element.

One solution to the problem of adverse selection associated with traditional permanent policies is to "tie" (lock-in) insurees to the firm. This is typically achieved through, for instance, low surrender values for policies. Because surrender values are deflated, these policyholders are unable to discipline shareholders in the product market. In contrast, holders of *term life* policies recontract frequently (e.g. annually), and can discipline shareholders for opportunistic action by switching insurers at relatively low cost. Likewise, holders of *insurance bonds* can discipline shareholders by withdrawing their accumulated savings, which acts as a form of partial liquidation.

As discussed in Chapter 2, product market "failure" is a necessary, but not a sufficient, condition for the existence of mutuals. Failure of each of the other contractual solutions discussed above is also necessary, as is the customers' ability

to assume control at low cost. While Hansmann (1985) recognizes the importance of low cost customer control, he overlooks alternative contractual solutions to the incentive problems associated with long-term life contracting.

The Problem with Surplus

An insurance firm's surplus can be defined as the amount by which its (pooled) funds exceed those necessary to cover future guaranteed payouts provided by policies. This definition distinguishes it from economic and accounting notions of profit [refer to Parker, Harcourt and Whittington (1986)]. A number of different examples involving conventional life policies can be used to demonstrate how a surplus might arise.

Case 1: A life insurance firm issues *term life* (pure-protection) policies. Assume that these policies are issued on the first day of each year and are all for a one year term. Each policyholder pays a premium into a pooled life fund. The premium amount is based upon mortality considerations such as age and prior health, and upon selling and administrative costs (e.g. the agent's commission). During the term one or more of the policyholders may die; if so beneficiaries (specified in the policies) are paid the insured value from the fund. The value of the fund may increase because of either investment returns or lower than expected expenditure (e.g. mortality and/or operating costs). Any amount remaining in the fund at the end of each year can be regarded as surplus, out of which residual claimants can be paid (i.e. there are no guaranteed policy payouts remaining). The process can begin again the following period.

Case 2: A life insurance firm makes a one and only issue of *pure endowment* (pure-savings) policies upon formation, each with a 30 year term. Each

policyholder contracts to pay a fixed annual premium during the specified period. These premiums are paid into a pooled life fund. The policies are priced such that their savings component is expected to equal their face value at maturity. The price (premiums) will be determined given various assumptions regarding long-term investment and administrative cost rates. If a policyholder dies before the maturity date, the firm is required to pay accumulated premiums plus interest to specified beneficiary(ies); otherwise it must pay the guaranteed face value plus any accrued bonuses at maturity. Are the funds of the firm sufficient to meet guaranteed payouts? Management need to determine the present value of guaranteed maturity payments using an appropriate rate (e.g. the expected rate of return faced by the life firm). This can then be compared to existing funds plus the present value of future premium payments. If the present value of guaranteed maturity payments is the lesser of the two amounts, the difference can be regarded as surplus to be divided among claimants.

Case 3: A life insurance firm makes a one and only issue of *endowment assurance* policies, each with a 30 year maturity term.² Each policyholder pays a fixed annual premium into a pooled life fund. The premium amount is based upon various assumptions regarding long-term investment, mortality and administrative cost rates. The firm guarantees the payment of the maturity amount, plus any accrued bonuses from the life fund, at maturity or upon the death of the policyholder if this occurs prior to maturity. These policies thus have

2. As noted in Appendix 2, a whole of life policy can be likened to an endowment assurance policy that is written for an unlikely age (usually 90 to 100 years of age). The policy is priced such that accumulated reserves equal the policy amount at that age. If that age is achieved, policyholders can usually surrender and receive the maturity amount.

a savings as well as a protection component. The protection component of each policy is conceptually the same as *annual renewable term*, except that the "sum insured" decreases each period as savings increase. Are funds sufficient? Management need to estimate the likely pattern of policy payouts on the basis of well established mortality tables, and discount them using an appropriate rate. The present value of these estimated payouts can then be compared to existing funds plus the present value of future premium income. If the present value of estimated payouts is the lesser of the two amounts, the difference can be regarded as surplus to be divided among claimants.

Case 4: A life insurance firm issues a number of *investment account* policies (a type of insurance bond³). Each policyholder pays a series of fixed annual premiums. In exchange, the firm promises to pay the sum insured to a specified beneficiary(ies) should the policyholder die during the term; otherwise the policyholder receives accumulated savings plus any associated bonuses at maturity date. Each annual premium is divided into protection and savings elements. The savings element is used to purchase units in a trust (the "savings fund"), while the protection element is committed to a "protection fund". As with endowment assurance policies, the protection component of each bond is conceptually the same as *annual renewable term*. However, in this case future protection premiums can be increased should mortality conditions warrant it. As such, there is no need to accumulate "protection" reserves as individual policyholders bear the risk of worsened mortality conditions. There is no inevitability that the sum insured will have to be paid by the firm; instead the

3. As noted above, the other main type of insurance bond is the *investment linked* policy. There is no significant difference between either type of bond with respect to the difficulty of determining surplus.

policyholders may receive only accumulated savings and bonuses. As regards calculating *surplus* at end of each period, management is only concerned with the past year's activities, not with future estimates; there are no guaranteed payouts at the end of each year, although there is the possibility that savings may have to be returned to policyholders (if a surrender takes place). The amount of savings can be made easily observable and secure. The amount of interest earned during the period can be readily identified, as can the balance of protection monies and any administrative charges.

In the first and fourth cases (term life and insurance bonds) an insuree is guaranteed a pre-specified payout, only if he/she dies during the period.⁴ Any protection or savings component of premiums is readily identifiable, and if necessary, the protection component can be increased at the discretion of the insurer. The examples presented above demonstrate that in such cases, the determination of surplus can be viewed *ex post* and is relatively unambiguous.⁵

In the second and third cases (pure endowments and endowment assurances), each policyholder pays a series of *fixed* premiums in exchange for a guarantee by an insurer of a pre-specified payout at some time in the future (for pure endowments, only if the policyholder survives the contract period). The examples demonstrate that an *ex ante* view of surplus is required, and as a result, surplus determination becomes more judgemental. However, the problem of

4. As noted above, insurance bonds may be capital-guaranteed or capital-stable, but this feature does not have a material affect on surplus determination.

5. Where term life policies or insurance bonds are staggered throughout the year, the calculation of surplus becomes more difficult. Some policyholders will still have an interest in "protection" funds at balance date.

determining surplus associated with pure endowments is not as severe as in the case of endowment assurances. While the date at which any pre-specified amount becomes payable under a pure endowment policy is known (i.e. the maturity date, if the policyholder survives), it could be payable at any time under a endowment assurance policy (depending upon when the insuree dies). Consequently, the reserve estimates are more complex for endowment assurances, and are potentially subject to greater manipulation.

If the insurance firm is a share capital company, an incentive problem arises when an *ex ante* view of surplus is required. Shareholders have incentives to employ optimistic estimates, thereby decreasing reserves and increasing the amount of surplus they can be allotted. For example, optimistic estimates of earnings rates or operating costs can be used to justify lower reserves, thereby increasing the amount of surplus that is available for division among residual claimants. The effect of optimistic forecasts is compounded as the estimates are interrelated. For instance, the amount available for investment is influenced by future mortality and administrative costs (i.e. payouts to insurees and administrative charges reduce the amount that can be invested by a firm).

While competing claimants can pre-specify property rights regarding surplus at low cost (e.g. maximum and/or minimum entitlements), it is costly (if not impossible) to pre-specify the assumptions to be made when long range forecasts for a multitude of interrelated variables are required. The problem of determining surplus in a life insurance company can be reduced by the appointment of an actuary, and/or by the reporting of the various mortality, administrative and investment rate assumptions used to arrive at the surplus figure. However, the problem cannot be eradicated.

In summary, the problem of allocating life funds between *reserves* and *surplus* arises where competing claimholder groups (i.e. shareholders and

policyholders) exist, and is of most concern where life contracts are long-term and policyholders pay a series of *fixed* premiums in return for a guarantee by the insurer of a pre-specified payout at some future date. As such, the problem is likely to be greatest for companies offering *traditional permanent* policies (as in case 3, provided above). The evaporates if companies do not offer such policies, or if mutualisation occurs.

An implication of the foregoing analysis is that in the presence of *insurance bonds* much of the rationale for mutualisation might disappear. That is, as the "guarantee" and "lock-in" features of traditional permanent policies are absent, mutuals have no obvious comparative advantage in writing them. As noted above, insurance bonds were introduced in Australia during the 1970's, and have since become a popular form of insurance (Appendix 2). The effect of the introduction of insurance bonds on the activities of mutuals and companies is considered further in section 3.4 and in Chapter 6.

3.3 Incentive Conflicts Associated with Management

In a similar manner to Mayers and Smith (1981), the first part of this chapter has concentrated on incentive conflicts between shareholders and policyholders. Another important relationship in a life firm is the one that exists between residual claimants (shareholders in companies, policyholders in mutuals) and management. This section discusses contracting problems associated with management, and considers the extent to which these problems differ between companies and mutuals.

There are two main incentive conflicts between residual claimants and managers [Masulis (1988)]. First, managers have incentives to consume excessive perquisites and expend lower effort levels. Excessive perquisite consumption might include unnecessary travel by the manager, while lower effort might entail

taking shorter working days. Second, managers have incentives to undertake actions that reduce the volatility of the firm's cash flows, thereby reducing the risk of firm bankruptcy and smoothing the flow of perks. In this respect, managers as traditional fixed claimants (unlike residual claimants) do not benefit from risk-seeking behaviour. This can be referred to as the risk aversion problem.

While mutuals do not have incentive conflicts associated with shareholders, they are likely to have greater incentive conflicts than companies concerning management [O'Hara (1980); Mayers and Smith (1981); Porter and Scully (1987:497); Boose (1990)]. This latter proposition rests, in part, on the basis that mutual managers are unable to absorb losses by issuing shares (as managers of companies can), and because policyholders in mutuals (unlike shareholders in companies) lack a secondary market to transfer or dispose of their claims. The "new capital" problem increases the incentives for mutual managers to reject risky projects, even if they have a positive net present value (i.e. it aggravates the risk aversion problem noted above). The non-transferability problem means that mutual policyholders have no impartial valuation tool (i.e. a market determined security price) to aid them in monitoring managerial performance.⁶ Because there is no such tool, it is more costly for policyholders to monitor mutual managers than it is for shareholders to monitor managers of companies. Moreover, due to the inability of mutual policyholders to accumulate voting rights, the gains to be captured by detecting inefficient managers are limited.

6. Jensen and Meckling (1979) examine the non-transferability problem in the context of co-determined firms.

3.3.1 Contractual Solutions

The ways in which the incentives of management and shareholders can be aligned are well documented [Fama (1980); Masulis (1988)]. This section is mainly concerned with incentive conflicts that exist between policyholders and mutual managers.

There are a variety of means by which incentive conflicts between policyholders and mutual managers can be reduced. First, they can utilize similar practices to those employed in companies. These include executive remuneration packages based upon firm performance or financial position, or the appointment of independent monitors (e.g. a board of directors, auditors, actuaries).

It appears relatively difficult to structure an executive remuneration package in mutuals that aligns the incentives of managers and policyholders. This is, in part, the result of the absence of a secondary market for life insurance claims (contrast the position of shares or options in a listed company). Moreover, where mutual managers are given a residual claim (e.g. a share of firm surplus), this introduces the types of incentive problems that are associated with shareholders in companies (e.g. underinvestment incentives). One partial means of aligning the incentives of mutual managers and policyholders might be for managers to take out a life insurance policy with the firm.

A board of directors can represent an important control mechanism concerning managers [e.g. Baysinger and Butler (1985)]. Boards are usually comprised of both 'outside' (independent) directors and executive directors. Outside directors monitor factors such as the setting of managerial compensation, and help to settle disputes among decision agents.

Auditors and actuaries were discussed in section 3.2, in the context of shareholder-policyholder conflicts. They also help to reduce conflicts between policyholders and mutual managers. Auditors help to ensure that managers

provide accurate accounts, while actuaries help to ensure that there are sufficient reserves in place, and premiums are not set too low (e.g. to attract new business).

Bonding practices, over and above what company managers use, may be employed. It was noted in Chapter 2 that Mayers and Smith (1981) suggest that mutual managers, as a form of bonding, are more likely than company management to conduct activities that are restricted to low discretion insurance lines and that are concentrated on a geographical and line-of-business basis. It may also be argued that they will place particular restrictions on the firm's investment policy (section 3.5.1 *infra*).

3.3.2 Policyholder-Manager Conflicts Associated with Different Types of Life Policies

The contracting problems associated with mutual management are likely be pronounced for policies that are bundled. For such policies it is difficult to ascertain management fees and charges precisely. Such problems are increased where policyholders need to be tied to a particular life firm (as is the case for traditional permanent policies).

Other types of life policies have features that mitigate contracting problems between management and policyholders. Managerial performance with respect to say, *term life* business, is relatively easy to ascertain, and policyholders can discipline managers by switching firms. *Pure endowment policies* help to mitigate contracting problems associated with mutual managers in two main ways. First, policyholders have the ability to withdraw their funds from the life firm, resulting in a direct loss of control by mutual management. That is, surrendering a pure endowment policy acts as a form of partial liquidation [Fama and Jensen (1983a:317)]. This is a stronger disciplinary force than the mere loss of patronage by non-equity customers (as is the case with term life business).

Second, the asset holdings of the firm may be structured in such a way that performance of mutual managers can be easily assessed. Finally, the unbundled nature of *insurance bonds* allows mutual managers to be monitored at relatively low cost (compared to traditional permanent life policies), and as in the case of pure endowments, policyholders can individually threaten an act of partial liquidation.

3.4 Ownership Structure: the Influence of the Product Market

As Mayers and Smith (1981) note, the choice of ownership structure in the insurance industry involves a comparison of the contracting costs associated with shareholders in companies and managers in mutuals. The analysis presented in the preceding sections suggests that such contracting costs are likely to differ between the various types of life policies.

It was argued in section 3.2 that incentive conflicts between shareholders and policyholders are most pronounced for *traditional permanent* policies because:

- insurers have greater opportunities (than under to short-term policies) to alter investment, financing, or dividend policies of the firm to the detriment of insurees;
- holders of such policies need to be tied to contracts in order to overcome a potential adverse selection problem; and
- there are difficulties in pre-specifying rules for surplus determination, arising from the structure of premium payments and guaranteed payouts.

Conversely, the analysis suggests that the policyholder-shareholder conflicts are least pronounced for *term life* policies because:

- these policies are relatively short-term, with no savings element (bundled or otherwise);
- insurees have the ability to switch insurers at low cost; and
- the determination of surplus is relatively unambiguous.

These observations lead to the prediction, consistent with Hansmann (1985) and Mayers and Smith (1981), of an association between product market (line-of-business) and ownership structure (mutual versus company). As the policyholder-shareholder conflicts are most pronounced for *traditional permanent* policies, it is expected that this would be the main type of policy mutuals issue. However, if Mayers and Smith are correct and the main advantage that mutuals have over companies is the elimination of such conflicts, it is not clear why mutuals should possess any comparative advantage in relation to *term life* policies. Moreover, because mutuals suffer from the absence of important disciplinary forces acting on management (section 3.3), and from financing and risk-bearing disadvantages arising from their structure (refer to Chapter 2), it can be argued that companies are more likely to issue *term life* policies. More formally, it is hypothesized that:

H1: Life mutuals carry a higher proportion of *traditional permanent* policies in their underwriting portfolios than do companies, while companies carry a higher proportion of *term life* policies.

It is maintained here that contracting problems associated with different ownership structures will also be reflected at the aggregate demand level, not just in the underwriting portfolio of individual firms. In other words, mutuals should write the bulk of *traditional permanent* policies while companies should dominate the market for *term life* policies. More formally:

H2: Life mutuals have a higher market share of *traditional permanent* policies than companies do, while companies have a higher market share of *term life* policies.

The position regarding *pure endowment* (relatively long-term, pure-savings) policies is less clear. On the one hand, the surplus determination problem associated with pure endowments is not as severe as the one arising from *traditional permanent* policies, reducing the benefits of mutualisation (section 3.2). On the other hand, pure endowment policies may help to mitigate contracting problems associated with mutual managers (section 3.3). As such, the following null hypotheses are put forward:

H3: There is no significant difference between the proportion of *pure endowments* in company underwriting portfolios and the proportion of *pure endowments* in mutual portfolios.

and:

H4: Neither life companies nor life mutuals dominate the market for *pure endowments*.

If the arguments of sections 3.1 and 3.2 are correct, the above hypotheses should characterize the insurance market prior to the introduction of unbundled

life policies. They should also characterize the relative positions of companies and mutuals in traditional life products, even after the product innovations of the late 1970's.

As with pure endowments, the position regarding *insurance bonds* is not clear. While insurance bonds are typically long-term and have both savings and protection elements, they do not possess the same guarantee or lock-in characteristics as *traditional permanent* policies (section 3.2).⁷ Given the disadvantages arising from the mutual form (noted above), it might be argued that life companies will dominate the issue of insurance bonds. However, as noted in section 3.3, the unbundled nature of insurance bonds allows mutual managers to be monitored at relatively low cost, and (as in the case of pure endowments) policyholders can individually threaten an act of partial liquidation. There is no way of identifying analytically which of these considerations dominates, and hence whether mutuals or companies should dominate the issue of insurance bonds. Thus the following null hypotheses will be examined:

H5: There is no significant difference between the proportion of *insurance bonds* in company underwriting portfolios and the proportion of *insurance bonds* in mutual portfolios.

and:

H6: Neither life companies nor life mutuals dominate the market for *insurance bonds*.

7. However, note that where the demand for insurance bonds is driven largely by tax incentives, policyholders may be locked into firms (e.g. tax benefits may not be transferable from one firm to another) resulting in the potential for opportunistic behaviour by shareholders.

3.5 Additional Hypotheses

It was noted in Chapter 2 that Mayers and Smith (1981;1988;1990) put forward hypotheses concerning differences in the investment and reinsurance behaviour of companies and mutuals. The purpose of this section is to develop these hypotheses further. However, they will not be the subject of empirical testing in later chapters.

3.5.1 Investment Behaviour

Mayers and Smith (1981) argue that a potential source of policyholder-shareholder conflict concerns a company's investment policy or asset structure. They recognize that shareholders have incentives to change the firm's investment policy, substituting high variance for low variance projects, with the effect that wealth is transferred from policyholders (discussed in section 3.2). The authors suggest (p.426&429) that this incentive conflict can be mitigated by shareholders restricting their investment set and/or matching the maturity of assets held with the duration of policies issued. The latter solution is based upon the analysis of Myers (1977).

While Mayers and Smith speculate that incentive conflicts affect the investment behaviour of companies, they apply no such analysis to mutuals. Section 3.3 noted the contracting problems associated with mutual managers, arising from the existence of incentives to restrict investment to low-risk projects and to misapply funds for perquisite consumption. It could be argued that the matching principle might equally be adopted by mutual management as a form of bonding.

It was argued above that mutuals specialize in selling *traditional permanent* policies while companies specialize in selling *term life* policies (hypothesis 1). Given that both shareholders and mutual managers are expected to bond

themselves by employing the matching principle, it is argued that mutual investments will tend to be "locked-in" for longer periods of time than company investments. Examples of locked-in investments include private placement loans (e.g. loans on policies or mortgages), or certain types of property investment (e.g. direct ownership of shopping complexes or commercial property developments).

There is another reason to expect that mutuals will hold a larger proportion of long-term or "locked-in" assets. It can be argued that the total premium income in force is more stable for long-term policies than it is for short-term policies. This is principally the result of deflated surrender values associated with long-term bundled policies, which make renewal premiums more likely to continue. Given the above, it could be hypothesized:

H7: Life mutuals hold a higher proportion of long-term (locked-in) investments in their asset portfolios than life companies do.

Notwithstanding the above arguments, it is maintained that shares may represent an important form of investment for mutuals. First, policyholders (residual claimants) in mutuals suffer from a diversification problem.⁸ While they may have a considerable portion of their wealth invested in the firm, they do not possess a claim that can be sold at a value that reflects the worth of the firm. This induces a constraint on policyholders when diversifying their portfolio, and they are forced in aggregate to incur risks that are otherwise diversifiable. Because they have troubles in diversifying on their own account, the firm needs to

8. Refer to Jensen and Meckling (1979) and Porter and Scully (1987:497) for a detailed discussion of this problem.

do this for them. Shareholders of listed companies do not have this problem.⁹ Second, in order to allow policyholders to assess the performance of managers (in the absence of a share price), assets of mutuals must have easily determined values [Fama and Jensen (1985:114), Hansmann (1985:127)]. Share investments allow the performance of managers to be more effectively monitored. More formally, it is hypothesized:

H8: Life mutuals hold a higher proportion of shares in their asset portfolios than life companies do.

3.5.2 Reinsurance Arrangements

As noted above, Mayers and Smith (1990) argue that reinsurance can be regarded as a bonding device employed by shareholders to assure policyholders that the risk-seeking problem concerning the firm's underwriting portfolio has been mitigated (noted in section 3.2).¹⁰ While there may exist non-participating policyholders (fixed claimants) in mutuals, there are a number of factors that suggest they do not face these agency problems. First, participating policyholders (residual claimants in mutuals) are unable to capture gains from risk-seeking behaviour because their claims are nontradeable.¹¹ Second, assuming managers have effective decision control over mutuals (as the residual claimants suffer from a control problem), it is not clear that they have these particular incentives.

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9. It is well established in modern finance theory that there is no added value by a company diversifying its activities. For example, refer to Brealey and Myers (1988:140-142).
 10. This assumes that the issue of participating policies does not represent a less costly or completely substitutable solution.
 11. This assumes that there are restrictions placed upon the size of bonus payments to policyholders.

Mayers and Smith also recognize that reinsurance can be regarded as a specialized form of financing. Given the financing problems associated with mutuals (e.g. they can't issue shares), it can be argued that they will also demand reinsurance as a direct consequence of their form.

Mayers and Smith (1990) examine the relative demand for reinsurance by companies and mutuals. Their analysis suggests that the *amount* of reinsurance demanded by companies could be more or less than the *amount* demanded by mutuals, depending upon factors such as whether the company is a member of a corporate group, the extent of the risky underwriting problem, and the concentration of share ownership (refer to Chapter 2). It is argued here that a more purposeful way of considering the reinsurance issue is to examine the *types* of reinsurance arrangements demanded by mutuals and companies.

There are two main methods of reinsurance: *facultative* and *obligatory*. Under *facultative* reinsurance, there is no obligation on the part of the direct underwriter to offer particular risks, nor on the reinsurer to accept them. Under the *obligatory* method, the direct underwriter is obliged to cede all amounts of cover included in the treaty, and reinsurers are required to accept them (i.e. reinsurance is automatic). A combination of the two is also possible ("facultative/obligatory" treaties), where the direct underwriter is not obliged to cede amounts of cover, but reinsurers are required to accept any cover offered under the treaty.

There are also two main categories of reinsurance: *proportional* and *non-proportional*. With *proportional* reinsurance, the relative proportions of a claim to be paid by the direct underwriter and the reinsurer are fixed at the time the risk is reinsured, although they are not necessarily constant over time. With *non-proportional* reinsurance, the respective "shares" of the liability depend on the amount of the claim. More specifically, the reinsurer makes a payment to an

insurer where losses exceed a predetermined retention level. The latter category is relatively uncommon in Australian life insurance, although some reinsurers write "catastrophe" cover.

The two main types of proportional reinsurance are termed *coinsurance* and *risk premium* reinsurance. Under coinsurance, the reinsurer accepts the direct underwriter's premium rates, bonus rates, etc., for the life of the policy and usually pays an up-front commission. In addition, there may be annual payments by the reinsurer to cover the administrative costs of the ceding company. Under risk-premium reinsurance, the mortality risk is reinsured on a year to year basis using the reinsurer's premium rates.

In the absence of regulatory factors, it is argued that companies are more likely to employ an *obligatory* method of reinsurance than are mutuals. In attempting to overcome the risk-seeking problem, shareholders are likely to forgo the ceding option. In this way shareholders cannot selectively retain the full exposure under high risk policies. At the other extreme, it is argued that mutuals are more likely to undertake a *facultative* or *facultative/obligatory* method. These methods (i.e. retaining the option to cede an amount) allow mutual managers to tailor the amount of reinsurance to their financing needs.

It is also maintained that there will be differences concerning the demand for *coinsurance* versus *risk-premium* reinsurance. In particular, mutuals are more likely to demand *coinsurance* contracts as they provide an immediate financing benefit (a type of partial factoring). It is therefore hypothesized that, other things constant:

H9: Companies are more likely to demand *obligatory* contracts than mutuals are. Conversely, mutuals are more likely to demand *facultative* or *obligatory/facultative* contracts.

and:

H10: Mutuals are more likely to demand *coinsurance* arrangements than companies are. Conversely, companies are more likely to demand *risk-premium* arrangements.

3.6 Summary

This chapter has examined the specific factors promoting the existence of life companies and mutuals, as well as the effect that the assignment of ownership rights has on the investment and reinsurance practices of a life insurance firm. The discussion began with a consideration of the attributes of different types of life policies, followed by a study of the contracting problems that each presents. The analysis suggests that a particular class of long-term life policy - *traditional permanent* policies - poses the greatest incentive conflicts between shareholders and policyholders in companies, and provide an impetus for the formation of life mutuals. In particular, the nature of premium payments and guaranteed payouts associated with traditional permanent policies (i.e. whole of life and endowment assurances) makes surplus or reserve calculations more complex than under other life policies. Shareholders have incentives to increase surplus to the detriment of policyholders, and are unable to write a contract pre-specifying the rules (assumptions) that will be employed in its determination. The potential for opportunistic behaviour is increased because holders of traditional permanent policies need to be tied to contracts in order to avoid a potential adverse selection problem (i.e. product market discipline is unlikely to be effective). At the other extreme, *term life* policies (which are typically short-term and have no savings element, bundled or otherwise) do not present the same severe surplus determination problem, and holders of such policies are able to discipline shareholders by switching insurance firms.

An examination was then made of incentive conflicts between management and residual claimants. The means by which these problems can be mitigated were briefly examined (e.g. remuneration packages, independent monitors). In line with previous studies, it was argued that contracting problems associated with managers are greater in mutuals than companies. The analysis also suggests that contracting problems associated with mutual managers are likely to vary between the different types of life policies.

Following the discussion of contracting problems, a number of hypotheses were formalized. In particular, it was put forward that mutuals will specialize ⁷, and dominate the market for, *traditional permanent* business, while companies will specialize in, and dominate the market for, *term life* policies. The position regarding the other types of relatively long-term life policies - *pure endowments* and *insurance bonds* - is less clear. On the one hand, they do not pose the same high level of incentive conflicts between policyholders and shareholders that traditional permanent policies do, hence reducing the benefits of mutualisation. However, they both have features (e.g. the threat of partial liquidation, relatively low monitoring costs) that mitigate disadvantages associated with the mutual structure.

Based upon previous research, it was further hypothesized that life mutuals will tend to hold a higher proportion of long-term (locked-in) investments and shares in their asset portfolios than life companies do. The choice of ownership structure is also expected to influence the nature of a firm's reinsurance arrangements, rather than simply the amount a firm reinsures.

CHAPTER 4

TESTING THE HYPOTHESES AGAINST THE HISTORICAL RECORD

It is argued in Chapter 3 that mutuals are more likely than companies to specialize in, and dominate the market for, whole of life and endowment assurances, whereas companies are more likely than mutuals to specialize in, and dominate the market for, term life policies. The main purpose of this chapter is to test these line-of-business hypotheses against nineteenth century developments in the Australian life insurance industry. An examination will also be made of the monitoring and bonding practices of the earliest life firms.

Table 4.1 (below) provides a status report of Australian-owned *ordinary* life insurers as at 1900. It is evident from the table that mutual life offices dominated ordinary business among domestic insurers - issuing approximately 85 percent of new policies, writing 90 percent of new sums insured, and receiving 95 percent of renewal premiums. In particular, the Australian Mutual Provident Society (the A.M.P.) issued more than one third of the new policies for the year, and held roughly one half of all renewal premiums in force and two thirds of total life funds. Seven Australian companies were still in the life insurance business at the turn of the century, but only one of these (the Citizens' Life Assurance Company Limited) was actively issuing ordinary life policies.¹

Appendix 1 provides a detailed summary of Australian life insurance firms formed up to 1900. Table 4.2 (below) is based on the Appendix and indicates

1. The criterion for inclusion in Table 4.1 was the size of life funds. Three relatively small companies are excluded: the Australian Metropolitan Life Assurance Company Ltd. (established 1895), the People's Prudential Benefit Society (est. 1896), and the Standard Life Association Ltd. (est. 1899). These companies are discussed in Chapter 5. Their exclusion is unlikely to influence the conclusions drawn.

**TABLE 4.1
ORDINARY LIFE BUSINESS REPORTED DURING 1900 BY THE ELEVEN LARGEST LOCAL LIFE FIRMS**

| Name ^d | Date Formed | Type of Firm | New Policies | | New Premiums | Renewal Premiums | Funds at Start of Year |
|---------------------------------------|-------------|--------------|--------------|--------------|--------------|------------------|------------------------|
| | | | Number | Sums Insured | | | |
| | | | | £ | £ | £ | £ |
| A.M.P. | 1848 | M | 16,713 | 4,224,106 | 151,216 | 1,382,456 | 16,074,740 |
| Victoria Life & General ^b | 1859 | C | n/a | n/a | n/a | 4,451 | 225,392 |
| Australian Alliance Assurance Company | 1862 | C | 4 | 1,360 | 28 | 14,871 | 273,154 |
| Adelaide Life Assur. ^c | 1866 | C | n/a | n/a | n/a | 780 | 36,930 |
| Mutual Life Assoc. | 1869 | M | 2,441 | 622,682 | 22,767 | 150,454 | 1,359,362 |
| National Mutual | 1869 | M | 5,336 | 1,288,456 | 48,572 | 321,577 | 2,951,501 |
| Aust. Widows' Fund | 1871 | M | 3,060 | 637,627 | 23,007 | 144,101 | 1,368,770 |
| Colonial Mutual | 1872 | M | 2,772 | 610,638 | 21,167 | 290,038 | 2,385,266 |
| T&G Mutual | 1876 | M | 2,320 | 399,852 | 19,140 | 33,474 | 228,224 |
| City Mutual | 1878 | M | 2,222 | 281,593 | 11,923 | 37,713 | 191,366 |
| Citizen's Life Ass. | 1886 | C | 7,072 | 1,052,143 | 35,477 | 94,778 | 297,558 |

(a) Refer to Appendix 1 for the full names of these firms; (b) At this stage Victoria Life & General was a closed fund (i.e., it wrote no new life business); (c) Adelaide Life Assurance ceased writing new life business in 1888.

Source: Australasian Insurance and Banking Record (1901:490).

that 41 life firms were established during the nineteenth century, approximately half being companies and half being mutuals. From the table it is apparent that until the formation of A.M.P. in 1848, companies were the only ownership structure offering life insurance. The next four decades witnessed an increase in the popularity of mutual life offices, with the last life mutual being formed in 1886. Nevertheless, it remains the case that over this same interval life company formation remained stable, with approximately three companies per decade being established. After 1886 the emphasis switched back to the formation of life companies.

TABLE 4.2
NUMBER OF NEW AUSTRALIAN-OWNED LIFE OFFICES
FORMED AND OPERATING BETWEEN 1836 AND 1900

| Years | No. of Companies | No. of Mutuals | Total |
|--------------|------------------|----------------|-----------|
| 1836 to 1839 | 4 | 0 | 4 |
| 1840 to 1849 | 1 | 1 | 2 |
| 1850 to 1859 | 4 | 1 | 5 |
| 1860 to 1869 | 3 | 2 | 5 |
| 1870 to 1879 | 4 | 9 | 13 |
| 1880 to 1886 | 3 | 6 | 9 |
| 1886 to 1899 | 3 | 0 | 3 |
| Total | 22 | 19 | 41 |

Source: Appendix 1.

Two potentially important determinants of organizational choice are Government regulations and taxes. Section 4.1 discusses the extent to which either of these influenced the nature of ownership in the life insurance industry in the nineteenth century.

Table 4.2 suggests that the history of life office formation during the nineteenth century can be usefully broken down into three main sub-periods, defined relative to the formation of the first and last mutual life offices. Such is the strategy adopted in this thesis. Sections 4.2 and 4.3 provide a detailed review of life firms established in the first two sub-periods. The principal objective in each of these sections is to determine the consistency or otherwise of the historical record with hypotheses 1 and 2 from Chapter 3. A major feature of the third sub-period is the development of an *industrial* life insurance market. The discussion of this sub-period is undertaken separately in Chapter 5.

The remainder of the chapter is structured as follows: section 4.4 provides a discussion of key corporate governance features evident in the first life insurance companies and mutuals, while section 4.5 summarizes the results of the historical analysis.

4.1 The Influence of Regulation and Taxes on Ownership Structure

The conduct of life operations in Australia remained largely unregulated until the 1870's. In time, the State Parliaments introduced life insurance legislation based upon the United Kingdom's *Life Assurance Companies Act*, 1870: Victoria in 1873, Tasmania in 1874, South Australia in 1882, Western Australia in 1889, and Queensland in 1901. The exception was New South Wales (N.S.W.) where, apart from a *Companies' Act* of 1874, the only regulation of life firms occurred when they extended their operations to other States.

The State Acts required life insurers, whether proprietary or mutual, to lodge deposits with the relevant Treasury as a form of assurance that the firm could meet policy commitments. The Acts also required the sanction of the Courts before an amalgamation of life offices could take place, the lodging of annual returns with a Government Authority, and an actuarial valuation of

policyholder liabilities at least once every five years. However, the legislation placed no substantive restrictions on the operational activities of life firms (e.g. their investment and underwriting policies). Thus the organizational and activity choices of life firms can be studied in what may reasonably be described as a relatively unregulated environment.²

The first taxes on Australian firms were imposed by the Colonial Office of the United Kingdom. These were wholly indirect, and principally in the form of tariffs [Van Driesen and Fayle (1987:27)]. Responsible Government was conferred on the eastern States of Australia between 1855 and 1857 and on Western Australia in 1890. This gave State legislators the power to impose taxes on individuals and firms. However, attempts at introducing new taxes met with strong opposition until the 1880's and 1890's, when the need for greater Government funding became apparent.

The first step towards the introduction of a comprehensive income tax occurred in Tasmania during 1880 with the passing of the *Real and Personal Estates Duties Act*. This Act imposed a tax of nine pence in the pound on the value of real property and incomes arising from dividends, annuities, and rent charges.

The first State to impose a fully fledged income tax was South Australia. The *Taxation Act* 1884 introduced a land tax at a rate of 1/2 penny in the pound on the "unimproved value" of privately owned land; the "unimproved value" being the capital value of the bare land irrespective of any buildings or improvements erected on it. This Act also levied an income tax of three pence in the pound on income derived from personal exertion, and six pence in the pound on income being the "produce of property". By an Act of 1887 the income of a "Company"

2. Indeed, it was not until 1945 that a uniform *Commonwealth Life Insurance Act* was introduced in Australia (discussed in Chapter 6).

was declared to be chargeable as being the "produce of property" [Carment (1904:538)]. In addition, during 1885 a tax was levied on "profit" arising from life insurance policies in force in the State [Gray (1977:272)].

The next State to impose a direct tax was Tasmania in 1886. It introduced a property tax at a rate of 1/2 penny in the pound on the entire capital value of land and premises owned. Gray (1977:272) notes that there was a proposed tax on surrender values in 1888, a levy of 2.5 percent of premiums received in 1892 and a tax on investments in 1893, but these were defeated.

The other States soon followed suit with taxes affecting life insurance firms. In Queensland the *Dividend Tax Act* 1890 introduced a tax on life insurances offices at a rate of one percent of premium receipts. In New South Wales the *Land and Income Assessment Act* 1895 imposed a land tax at a rate of one penny in the pound upon the "unimproved value" of all land belonging to an individual or firm. The N.S.W. Act also imposed an tax on income derived from interest on mortgages less expenses incurred in producing income. Carment (1904:538) notes that by 1904 life offices had to pay tax in all States except Western Australia.

In summary, for the most part of the nineteenth century Australian life offices were largely unaffected by Government regulations and direct taxes. Further, it is not clear that their eventual introduction biased either mutual or company formation. Given that both mutual and company ownership structures arose before specific regulations or taxes, these factors can be dispensed with as determinants of the *initial* ownership choices. Some other explanation for the co-existence of mutuals and companies is required.

4.2 Life Firm Formation: 1830 to 1849

4.2.1 Early Attempts at Forming Life Insurance Firms: 1832 to 1834

The earliest attempts at forming a life insurance firm in Australia appear to have been made in Hobart during 1832,³ where public interest had been generated for such a venture. The Hobart Town Courier of 14 April, 1832 stated (p.2) that:

... the subject of life assurance is now occupying much public attention, especially among the more responsible and influential portions of the community, who are likely to give a tone and effect to the furtherance of so glorious and beneficial a thing as an establishment of the kind in this colony could be.

However, there was doubt as to the basis upon which such a firm should be constituted. The Hobart Town Courier of 14 April, 1832 asked the question (p.4):

... whether the ends intended by those 'influential individuals' may be more effectively and liberally obtained through the medium of a Life Assurance *Company* or of a *Mutual* Benefit and Banking Union Association. [emphasis added]

The solution to be proposed was the Van Diemen's Land Life Assurance Association.⁴ It was to be constituted as a share capital company with a nominal capital of £60,000 divided into 600 shares of £100 each, and issued shares at a

3. These attempts have not been well documented in the historical literature. Melville (1835:159-160), Hartwell (1954:180) and Gray (1977:20) make only passing reference to them.

4. Van Diemen's Land is the name originally given to Tasmania. The capital of Van Diemen's Land, Hobart Town, was one of the main commercial areas in Australia during the 1830's and 1840's [Hartwell (1954)].

subscription price of £5 each.⁵ An initial meeting of shareholders was held on 25 June 1832, at which time shareholders voluntarily agreed to a number of rules, entering into a "deed of settlement".⁶ The company was formed and ready for operation by 16 July, 1832.⁷

The affairs of the company were to be conducted by seven directors (appointed by shareholders): three constituting a quorum except when funds were invested, at which time a quorum of five was required.⁸ Two directors were to retire annually by rotation, but they were eligible for re-election by shareholders. The deed of settlement of the company also provided for the appointment of an actuary by shareholders. The actuary was to be responsible for preparing the accounts of the company, receiving proposals for assurances, issuing policies, and receiving premium payments. Second, the number of votes a shareholder was entitled to was directly related to the number of shares held. However, no individual could hold more than ten shares. Finally, no dividends or directors salaries could be paid for the first three years following formation (i.e. until 31 July, 1835).

The company offered both term and whole of life policies. A crude table of rates was employed, which was based upon those used by English firms.⁹ There were three sets of rates published - for a one year term, for a seven year

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5. Refer to Hobart Town Courier (15 June, 1832) and Launceston Advertiser (17 July, 1832).
 6. The notion of a "deed of settlement" company was adopted from English practice [Ford (1982:8)].
 7. Refer to Hobart Town Courier (3 August, 1832).
 8. Refer to Launceston Advertiser (17 July, 1832).
 9. Printed in Launceston Advertiser (17 July, 1832) and Hobart Town Courier (12 October, 1832).

term (renewable annually by the policyholder), and for the whole of life, although there was an advertisement that stated directors were "ready to accept proposals for assurances for the whole life or *any* shorter period" (emphasis added).¹⁰ A restriction on policies to be issued was that individual life assurances were limited to £1,000 for the first three years of operations.

The whole of life policies offered a participation in profits via a terminal bonus system.¹¹ That is, if the company made a profit, a proportion of it (one half of the profit after deducting 12.5 percent per annum based upon paid-up share capital) would be added to the maturity value of whole of life policies. After the expiration of seven years (i.e. in July 1839), a further division of profits was to be made. While participating in profits, policyholders did not have any voting rights.

After some criticism by policyholders that they had no voice in the management of the company, two further meetings of shareholders were held on 27 July and 8 August, 1832.¹² A number of changes to the deed of settlement were made to try and overcome this conflict of interest between shareholders and policyholders. First, the number of directors was extended to twelve. Second, four auditors were to be appointed initially by shareholders. Two of these auditors were to retire annually by rotation, although both were eligible for re-

10. Refer to Hobart Town Courier (3 August, 1832).

11. Refer to Launceston Advertiser (17 July, 1832). Mayers and Smith (1981:426) state that the first participating policy was not issued in the United States until 1836. The first successful attempt by a firm to issue participating policies in Australia was not until 1849 by A.M.P. (at that time a friendly society).

12. Refer to Hobart Town Courier (3 August, 1832) and Launceston Advertiser (21 August, 1832).

election. Of the new auditors, one had to be elected by shareholders and one by the policyholders. Third, it was decided that policyholders were entitled to receive one share (non-voting) for every £100 insured.¹³ Finally, all whole of life policyholders who had an insured value of at least £500 and who had owned a policy for a minimum of four years were to have at least one vote at all meetings.

A number of opponents to proprietary (i.e. shareholder controlled) insurance firms sought to form a rival insurance firm known as the Equitable Life Assurance Society.¹⁴ An invitation to the public for subscriptions appeared in the Hobart Town Courier of 3 August, 1832. The firm was advertised as a "mutual benefit society". It was stated in the advertisement that "the entire profits as of right will, at the termination of every six years be added to the policy". A meeting of members was scheduled at a time when one hundred applications for policies had been received. There is no evidence either that this prerequisite was satisfied, nor of the proposed number (if any) of directors, actuaries or auditors.

There is no evidence that policies were written by either of the above insurance firms. Hartwell (1954:180) makes a brief reference to two *abortive* attempts at forming insurance firms in Hobart during 1832. Melville (1835:159-160) provides some insights concerning both the above-mentioned firms when he states:

Among the public mearuaes of this year [1832], a Life Assurance Company was started, and this institution would no doubt, have been fairly established, to the benefit of the community, had not one or two individuals objected to the principles upon which it was to be grounded, and by means of starting an opposition company, destroyed both.

13. Refer to Hobart Town Courier (3 August, 1832).

14. There is scant information available on this firm. It is unknown whether a deed of settlement was ever formalized.

Another attempt to form a local insurance company in Hobart occurred during the first half of the 1830's. The Hobart Town Courier of 26 May, 1834 reported the attempt to establish a fire, life and marine concern to be named the Tasmanian Fire, Life and Marine Insurance Company. The company was to have a nominal capital of £100,000 divided into £100 shares. Initial paid-up capital was to be £10 per share. The minimum subscription level was set at 500 shares (nominal capital of £50,000). This level was achieved during September, 1834.¹⁵

At a meeting of promoters held on 15 September 1834, it was decided that control of the company should be vested in 7 directors (3 constituting a quorum) and 2 auditors (elected by shareholders).¹⁶ In contrast to the first attempt at forming a life company, there does not appear to have been a requirement for directors or auditors to retire. Further, there does not appear to have been a restriction on the payment of dividends.

An advertisement appearing in the Hobart Town Courier of 26 September, 1834 included a schedule of rates for each type of insurance offered by Tasmanian Fire, Life and Marine. The only form of life insurance that this company appears to have offered was term life of one year. Policyholders were not given voting rights or participation in firm profits. The maximum amount that could be insured on any one life was £2,000. However, there is no evidence of actual operations.

The Hobart Town Courier of 30 January 1835 reports the "re-establishment" of the Tasmanian Fire and Life Insurance Company with a minimum subscription of 400 shares (nominal capital of £40,000) being met. Control of the company was vested in the hands of 7 directors (3 constituting a

15. Refer to Hobart Town Courier (19 September, 1834).

16. Refer to Hobart Town Courier (26 September, 1834).

quorum). From the listing of company officers provided in the newspaper, this company appears to have arisen from Tasmanian Fire, Life and Marine. However, a number of important differences between these two firms are apparent. First, the deed of Tasmanian Fire and Life imposed a requirement that 3 directors retire annually by lot. Further, it included a restriction that dividends could not be paid during the first three years of operation.

There is no suggestion as to the type of life policies offered by Tasmanian Fire and Life, although the deed of the company includes the restriction that life policies could not be issued with a maturity value greater than £2,000. As with its predecessor, the company appears to have experienced difficulties with *life* operations, there being no evidence of any *life* policies written.¹⁷

The deeds of settlement of the early companies indicate that concern with potential conflicts of interest between policyholders and shareholders (the focus of this thesis) manifested itself in the very first attempts at establishing life insurance companies in Australia. The manner in which this concern is evidenced in these (and subsequent) companies is discussed in section 4.4.

4.2.2 The First Companies to Write Life Business: 1836 to 1839

New South Wales¹⁸ experienced a boom in company flotations during the mid to late 1830's [Salsbury and Sweeney (1988:10)]. A similar but more short-lived boom occurred in Van Diemen's Land from late 1838 to early 1840

17. A deed of settlement dated 7 February, 1835 (printed in 1847) is available from the Mitchell Library, Sydney. The firm was acquired by Alliance Assurance Company Ltd. (U.K.) in 1892.

18. New South Wales at this time covered the entire east coast of the Australian mainland. This was to change with the succession of Victoria in 1851 and Queensland in 1859. The capital of New South Wales, Sydney, represented one of the early commercial centres in Australia (along with Hobart, the capital of Van Diemen's Land).

[Hartwell (1954:215)]. During these rushes to float local companies, a number of life offices were formed.

The Australian Fire and Life Assurance Company was established in Sydney during January of 1836 with a nominal capital of £200,000 divided into shares of £100, each paid up to £5.¹⁹ This firm is usually acknowledged as the first Australian life office to actually write any life business [refer to Salier (1936) and Gray (1977)]. The next two life insurance companies to successfully commence operations were formed in Van Diemen's Land during 1838. They were named the Derwent and Tamar Fire, Life and Marine Insurance Company and the Van Diemen's Land Fire and Marine and Life Annuity Company. These firms were followed by the Sydney Alliance Marine and Fire and Life Assurance Company, which was established in Sydney during 1839.

The activities of these early life companies were not limited to life insurance activities. They also offered fire and/or marine policies. Scant evidence exists regarding early underwriting practices of these companies. In respect of life operations, the evidence which is available suggests that Australian Fire and Life offered one-year term, seven-year term, and whole of life policies. An advertisement in the Sydney Gazette of 6 August, 1836 stated that the firm would pay £100 to an individual's heirs if the former made a specified annual payment relating to his/her age. The premium rates were as follows:

| <u>Age</u> | <u>Amount</u> |
|------------|---------------|
| 20 | £2 0/- 7d |
| 30 | £2 14/- 1d |
| 40 | £3 13/- 2d |
| 50 | £5 3/- 7d |
| 60 | £8 10/- 5d |

19. Refer to Sydney Gazette (5, 12, 16, 19, 23, 26 and 30 January, 1836).

A complete table of rates including both one and seven year term premiums could also be located.²⁰

On 30 June 1837 the company had sums totalling £17,400 insured under life policies. By 30 June 1838, sums insured had increased to £22,750, the company had received £1,102 10/- 5d in life premiums, and no life claims had been made.²¹ William Barton, a prominent businessman of the time and one of the early promoters of the company, commented (1838:13):

Considering the value of life, at the maturity of age, in New South Wales, (as far as it has been ascertained) compared with England, I do not think the rate is sufficient to afford any reasonable expectation of profit to the shareholder, even were Insurances effected to some extent. Nor do I think that the security offered by the Company to the assured, *for the period of his life*, is sufficiently stable.

In retrospect, Thomson (1886:111-112) stated:

Having a substantial backbone, its founders were justified in taking large risks on individual lives, and they expected in the due course of only a few years that their life business would grow to considerable magnitude. Their expectations were not realised.

Thomson goes on to claim (p.112) that when Australian Fire and Life was wound up during the depression of the mid-1840's it had only 26 life policies in force, issued to leading citizens, with individual sums insured between £1,000 and £3,000.²²

20. This table of rates, together with an unprocessed claim form (dated August, 1836), is located in the Mitchell Library, Sydney in "Papers on Education, etc." (1804-1868) p.147 [Reference Code - MS A357].

21. Refer to Sydney Gazette (21 July, 1838).

The first policy issued by Derwent and Tamar was for a sum insured of £2,000, with an annual premium of £73 5/-, on the life of the company's manager, Mr Thomas Hewitt.²³ The fact that when the company was dissolved it "bought up" (granted surrender values on) a number of existing policies suggests that it sold savings-based policies, which were typically long-term.²⁴ The deed of Van Diemen's Land Fire and Marine restricted life insurance activities to annuities. The deed of Sydney Alliance provided that the company could issue survivorships, endowments, and annuities, although there is no evidence it ever wrote any life business.

4.2.3 The Depression and its Aftermath: 1840 to 1849

An Australia-wide depression commencing in 1840 saw a spate of company failures in New South Wales and Van Diemen's Land.²⁵ No life firms were formed during the early 1840's (refer to Appendix 1). This was in line with a general decline of interest in floating new firms.²⁶ The depression had a devastating effect on existing Sydney-based insurance companies. Both Sydney firms ceased life operations during the height of the depression in 1843. All

22. The apparent discrepancy between the advertised premiums, the total premiums received, and the number of policies in force can be explained by the practice of the period. Policyholders often made multiple payments of premiums in order to secure a higher maturity value under a policy.

23. Refer to The History of Derwent and Tamar Company Ltd. (1938:7&11).

24. Ibid, p.12.

25. The remainder of Australia was still largely unsettled at this time. Refer to Salsbury and Sweeney (1988: 10-13) on the depression in New South Wales and Hartwell (1954: 214-230) on Van Diemen's Land.

26. Salsbury and Sweeney (1988:10) note that there were only two attempts (albeit unsuccessful) at forming share capital companies in Sydney over the period 1842 to 1845. See also Hartwell (1954).

operations of Sydney Alliance were wound up after apparent dissatisfaction with directors, while Australian Fire and Life transferred its life business to the Australasian Colonial and General Life Assurance and Annuity Company (an English firm).²⁷ All the Tasmanian insurance companies survived the depression years, only to cease life operations soon afterwards (Derwent and Tamar in 1845 and Van Diemen's Land Fire and Marine in 1849).

In marked contrast to their lack of success in writing *life* policies, the *general* insurance activities of those life companies which survived the depression continued to operate profitably, until well into the 1890's or later (refer to Appendix 1 and section 4.2.4 *infra*).

The 1840's also witnessed the introduction of mutual insurance in Australia. The first *mutuals* commenced operations in Sydney during the 1840's and offered *general* insurance.²⁸ These firms were named the Mutual Idemnity Assurance Society (1840-1840), the Mutual Fire Insurance Association (1841-1845) and the Sydney Fire Insurance Company (1844-1855). At least part of the reason for the formation of these mutuals appears to have been trenchant criticism of the then operating marine and fire *companies*. In newspapers of the

27. Refer to the Cyclopedia of New South Wales (1907). Thomson (1886:112) erroneously recollects that Australian Fire and Life ceased life business "about the year 1846". A number of other authors have relied on this [e.g. Gray (1977)]. Barton (1838:13) makes reference to the success of the fire operations of Australian Fire and Life, but expresses doubt regarding the viability of life operations.

28. While the idea of mutual insurance had been firmly established for some time, no Australian insurance mutuals had been successfully established prior to this time. Babbage (1826) provides an early exposition of the principles of mutual insurance in the United Kingdom. The events of 1832 in Van Diemen's Land (section 4.2) demonstrate that the notions of "mutual benefit society" and "participating" policy were recognized in the Australian business community. Refer also to Sydney Gazette (10 February, 1827: page 1).

period it was argued that Sydney marine insurance companies declined to insure vessels engaged in the "coasting trade" except under "very high rates", and that these companies were reluctant to insure vessels under a certain tonnage.²⁹ It was also argued that fire insurers either refused to take on fire insurance operations, or if they did they were "neither wealthy nor enterprising enough to insure to a requisite amount".³⁰ In the midst of these criticisms it was decided to form separate marine and fire mutuals which would undertake such risks.³¹

The first *life* mutual to be formed in Australia was the Australian Mutual Provident Society (the A.M.P.). It was registered as a "friendly society" on 28 December, 1848 under the *Friendly Society's Act* [N.S.W., 7 Vic. No. 10, 1843], and commenced operations early in the following year. The establishment of A.M.P. occurred at a time when the friendly society movement was gaining widespread support in Australia and the United Kingdom [Nobbs (1978)]. Members of such societies were afforded limited liability [Salier (1936:136), Gray (1977:32)]. While friendly societies usually involved the payment of contributions for the mutual relief or maintenance of members or their nominees in the event of an accident or sickness, A.M.P. was formed for the purpose of issuing: (1) assurances on lives (term and whole of life); (2) endowments; and (3) deferred annuities.

29. Editorial, The Australian (22 February, 1840).

30. Editorial, The Australian (21 March, 1840).

31. It is not clear why these criticisms *per se* would lead to the establishment of mutuals instead of companies. Another factor might have been the shortage of capital funds during the 1840's depression [refer to Post (1976:43&46) on the U.S. position]. Salsbury and Sweeney (1988:10) note that there were only two attempts (albeit unsuccessful) at forming share capital companies in Sydney over the period 1842 to 1845.

The success of A.M.P. and subsequent mutuals in writing life business stands in marked contrast to the results of their initial attempts at writing general insurance.³² These attempts are discussed below.

The Mutual Indemnity Association was formed in Sydney during early 1840 for the purpose of affording protection to vessels in the coasting trade. Membership was limited to owners of vessels belonging to the Port of Sydney. It was proposed that all Colonial vessels less than twelve years old and "in good condition" and all British vessels of an age "to be agreed upon", should be insured for not more than £800 nor less than £200, provided these limits did not exceed three fourths of the ship's value. Vessels were not to trade northward of Moreton Bay or southward of Twofold Bay. Little other information exists on this Association. Its activities appear to have been very shortlived (i.e. less than twelve months in duration).³³

The Mutual Fire Insurance Association was formed in Sydney during April of 1840 to conduct fire insurance.³⁴ Twenty one directors were appointed to the board, more than twice the usual number for insurance companies of the time. Policyholders of the firm were divided into three groups depending on their assessed risk (type of residence). Each class of policyholders paid a particular percentage of their insured value as premium. All policies were renewed on an annual (term) basis. Any surplus (funds above a specified reserve level) was to be returned to policyholders in proportion to sums that they had already paid to

32. In the context of the discussion in Chapter 3, it also stands as a useful counterpoint to the comparative success (failure) of the proprietary company in general (life) insurance activities.

33. Cyclopedia of New South Wales (1907:564).

34. The "Resolutions of the Mutual Insurance Association" are dated 27 April, 1840 (available from the Mitchell Library, Sydney).

the firm. Every policyholder who had an insured value greater than £500 was entitled to vote at general meetings. The number of votes a policyholder had was determined by the size of his/her insured value. The policies issued were "assessible" in proportion to the insured value (i.e. there was unlimited liability for members as with shareholders of unlimited companies), notwithstanding a reinforcing Bill of the N.S.W. Parliament [Act 5 Vic. 1841]. The fire association had an insured loss eventuate on 28 May 1845, but the directors had problems collecting funds from policyholders. The directors subsequently dissolved the association later that year. In this regard the Cyclopaedia of N.S.W (1907:564) was to note:

... [The Association] ... is a story of the perfervid philanthropy of two or three good souls, inducing leading members of the community ... to make eminent asses of themselves, by giving countenance and practical support to one of the wildest fancies ever hatched for mischief in the brain of a 'wildcat-cat' promoter.

The third Australian-owned insurance mutual, the Sydney Fire Insurance Company, was formed on 18 October 1844.³⁵ This office restricted its activities to fire insurance. No single risk was to exceed £3,000. The constitution of the firm stated that the liability of policyholders was limited to four times the amount of annual premiums paid and this ceased when a policy expired. No claims were made in its first five years of operations [Australian Almanac (1850:63)]. However, this was to change with numerous instances of arson [Cyclopaedia of N.S.W. (1907:566)]. With this, Sydney Fire experienced difficulties and was wound up in 1855. The assets and management of the company were transferred to the Sydney Insurance Company, Fire, Life and Marine (a proprietary concern formed for this purpose).

35. Refer to Lows Directory: City and Districts of Sydney (1847).

4.2.4 Summary

A number of empirical regularities emerge from a review of life firm operations from 1830 to 1849. First, initial attempts to write life policies in Australia were all undertaken by proprietary vehicles, which typically also conducted general insurance activities. These companies were notably more successful in the latter than the former activity. Indeed, by the end of 1849 there were no Australian-owned companies writing life business.³⁶ Second, the first Australian-owned mutuals were set up to write general insurance. In contrast to the proprietary concerns, and their own subsequent success with life activities, they were notably unsuccessful.

The failure of the early proprietary concerns with life operations could be a result of a number of factors - a lack of demand, the depression, or, as hypothesized in Chapter 3, a lack of fit between organizational form and product line. In an analysis of the kind undertaken here it is difficult (if not impossible) to disentangle the relative importance of each of these factors. However, the following observations are germane.

Table 4.3 presents data on the population size in Australia between 1830 and 1900. As at 1840 there were only 127,468 residents in New South Wales and 45,999 residents in Tasmania. It can be determined that approximately 40 percent of the population of these States at this time were convicts, who

36. There is however evidence of at least two English *companies* conducting life operations: the Alliance British and Foreign Life and Fire Assurance Company (est. 1824) and the Australasian Colonial and General Life Assurance and Annuity Company (est. 1840). Refer to Gray (1977:14-20).

TABLE 4.3
ESTIMATED POPULATION OF AUSTRALIA: 1830 to 1900

| Year Ended | New South Wales | Victoria | Queensland | South Australia | Western Australia | Tasmania | Northern Territory | Total |
|------------|-----------------|-----------|------------|-----------------|-------------------|----------|--------------------|-----------|
| 1830 | 44,588 | | | | 1,172 | 24,279 | | 70,039 |
| 1840 | 127,468 | | | 14,630 | 2,311 | 45,999 | | 190,408 |
| 1850 | 266,900 | (a) | (a) | 63,700 | 5,886 | 68,870 | | 405,356 |
| 1860 | 348,546 | 538,234 | 28,056 | 125,582 | 15,346 | 89,821 | | 1,145,585 |
| 1870 | 497,992 | 723,925 | 115,272 | 184,546 | 25,135 | 100,886 | | 1,647,756 |
| 1880 | 741,142 | 858,605 | 211,040 | 276,393 | 29,561 | 114,790 | | 2,231,531 |
| 1890 | 1,113,275 | 1,133,728 | 392,116 | 318,967 | 48,502 | 144,787 | (b) | 3,151,355 |
| 1900 | 1,360,305 | 1,196,213 | 493,847 | 357,250 | 179,967 | 172,900 | 4,857 | 3,765,339 |

(a) Previously part of New South Wales.

(b) Previously part of South Australia.

Source: Official Year Book of the Commonwealth of Australia (1953:520).

presumably would not have bought life insurance.³⁷ Subsequent to 1840 the population of all States grew significantly (600 percent within the next two decades), and this no doubt would have enhanced the viability of life operations. However, it is not possible to determine whether demand prior to 1840 was insufficient to sustain life operations. An argument to this effect would also need to explain why there was apparently sufficient demand for general insurance products.

Companies may have ceased life operations as a direct result of the depression. However, while the subject companies all ceased *life* operations soon after their formation, several continued *general* insurance activities until the 1890's or later. Tasmanian Fire and Life Insurance Company (1835) continued fire operations until being absorbed by the Alliance Assurance Company Ltd. (U.K.) during 1892. Australian Fire and Life (1836) continued marine business until 1890 when it was absorbed by the Alliance Marine and General Assurance Company Limited (U.K.). Finally, Derwent and Tamar (1838) continued until it was absorbed by the London and Lancashire Life Assurance Company (U.K.) during 1912. There is no obvious reason why the depression should differentially impact life and general insurance operations.

Finally, the failure of life companies might be explained by a "lack of fit" between ownership structure and the types of policies offered. It was argued in Chapter 3 that *companies* are best suited to short-term contracts and *mutuals* to long-term contracts, principally because of reserve problems associated with the latter. The evidence presented above (section 4.2.2), suggesting that early

37. Refer to Hartwell (1954:68) and Coghlan (1894:72). Transportation of convicts ended at differing times in each of the Australian States: New South Wales (1840); Tasmania (1852); and Western Australia (1868). In total approximately 175,000 convicts were transported to Australia (roughly 165,000 of these to the eastern coast).

insurance *companies* had much more success with general or term insurance activities than they did with their life assurance operations, is consistent with this view. The evidence that *mutuals* were relatively unsuccessful with general (term) policies (section 4.2.3) is also consistent with this argument.³⁸ Of these plausible explanations, the latter one sits most comfortably with both of the major empirical regularities identified above.³⁹

4.3 Life Firm Formation: 1850 to 1886

4.3.1 The Rise of Life Mutuals: 1850 to 1869

As discussed above, A.M.P. was the first successful life office established in Australia. While initially set up as a friendly society, it was empowered to write

38. Note however that the mutual or co-operative form of ownership may be efficient for certain types of short-term contracts [refer to Porter and Scully (1987)]. Hansmann (1985:125) states that mutuals account for almost one quarter of all U.S. property and liability insurance. Since the 1840's the mutual form of ownership has not had a strong representation in the Australian general (non-life) insurance industry. While a large proportion of general insurance companies offered participating policies towards the end of the nineteenth century, a likely motivating factor was the loosening of premium rate regulations [Pursell (1964), Hansmann (1985:144)].

39. Hansmann (1985:135) discusses roughly parallel trends in the U.S. life insurance industry. He states that prior to 1843 all life insurers were share capital companies. These firms offered life policies as "a side line" and "even the most successful of them succeeded in selling only several hundred life policies in total". The main type of life policy issued was term life of one or seven years. In 1843 the first mutual life office was formed (six years before Australia), and this was followed by six more mutuals by 1847 (no companies being formed). These firms were relatively successful, offering mainly whole of life business. Hansmann also observed that after regulation was introduced during the 1850's and 1860's companies began to increase their total market share. In contrast to the United States experience, state legislation was not introduced in Australia until 1873 or later.

traditional life insurance business. It was to remain the only life mutual office for some 20 years; the second such office, the Mutual Life Association of Australasia Limited, being established in 1869.⁴⁰

Table 4.4 provides data showing the growth in Australasian life business between 1849 and 1901. Figures supplied between 1849 to 1869 are based solely on the activities of A.M.P. (little information exists on the proprietary firms formed during this period). The table highlights a substantial growth in the business (sums insured and premium income) of the firm. By 1869 the Society had new sums insured for the year of £572,809 and was receiving annual premiums totalling £147,419.⁴¹

However, in order to sustain the rate of growth, A.M.P. had to escape an 1853 amendment to the *Friendly Society's Act* 1843 which placed a restriction upon the maturity value of policies issued by friendly societies.⁴² A.M.P. was

40. Nobbs (1978:248) notes that the Marine, Life and Casualty Assurance Society was formed during 1853, but there is no evidence of any life business written.

41. Gray (1977:50) provides information on the relative success of life firms formed in the United Kingdom and in Australia. He notes that out of all these firms A.M.P. was in third place in terms of size of new sums insured as at 1869. By 1886 A.M.P. had more new sums insured than any Australian or U.K. life firm.

42. This amendment restricted the amount payable as a benefit to a maximum of £100 at death and £30 a year in annuity. Previously, the maximum benefit at death had been £2,000, and there had been no restriction on annuity amounts. This amendment reflected the fact that the usual business of friendly societies was essentially that of accident and sickness benefits. Refer to the *Friendly Society's Act* [N.S.W., 17 Vic. No. 26, 1853] and pages 2 and 3 of the *Act to Incorporate the Australian Mutual Provident Society* [Assented to 18 March, 1857].

TABLE 4.4
AUSTRALASIAN ORDINARY LIFE INSURANCE: 1849 to 1901¹

| Year | No. of Firms | New Business Sums Insured £ | Premiums Received £ | Life Insurance Funds £ | Sums Insured In Force £ |
|------|--------------|--------------------------------|------------------------|---------------------------|----------------------------|
| 1849 | 1 | 10,100 | 197 | 61 | 96 |
| 1850 | 1 | 15,115 | 589 | 53 | 558 |
| 1851 | 1 | 25,050 | 1,287 | 345 | 1,789 |
| 1853 | 1 | 33,670 | 2,095 | 334 | 3,128 |
| 1854 | 1 | 35,080 | 2,916 | 1,914 | 6,583 |
| 1855 | 1 | 43,975 | 4,066 | 508 | 7,785 |
| 1856 | 1 | 98,250 | 6,257 | 664 | 10,076 |
| 1857 | 1 | 140,860 | 10,437 | 431 | 16,914 |
| 1858 | 1 | 133,845 | 17,320 | 472 | 41,609 |
| 1859 | 1 | 146,050 | 22,858 | 603 | 57,144 |
| 1860 | 1 | 203,650 | 28,029 | 755 | 77,277 |
| 1861 | 1 | 248,925 | 37,374 | 3,123 | 107,807 |
| 1862 | 1 | 285,275 | 48,982 | 590 | 145,598 |
| 1863 | 1 | 370,770 | 61,613 | 1,345 | 198,615 |
| 1864 | 1 | 471,589 | 80,002 | 3,070 | 243,369 |
| 1865 | 1 | 598,573 | 92,877 | 1,359 | 309,922 |
| 1866 | 1 | 476,622 | 102,747 | 4,269 | 389,190 |
| 1867 | 1 | 504,735 | 114,632 | 1,638 | 476,430 |
| 1868 | 1 | 514,507 | 140,163 | 4,064 | 602,085 |
| 1869 | 1 | 572,809 | 147,419 | 1,803 | 678,954 |
| 1870 | 4 | 761,622 | 179,762 | 3,486 | 809,196 |
| 1871 | 5 | 898,406 | 207,275 | 4,421 | 964,180 |
| 1872 | 6 | 1,243,317 | 243,398 | 6,970 | 1,157,772 |
| 1873 | 6 | 1,591,599 | 298,145 | 7,471 | 1,382,835 |
| 1874 | 6 | 2,152,619 | 346,811 | 4,752 | 1,653,562 |
| 1875 | 7 | 2,842,315 | 417,120 | 11,917 | 1,896,478 |
| 1876 | 7 | 3,216,646 | 500,555 | 7,630 | 2,245,422 |
| 1877 | 7 | 3,965,100 | 600,537 | 14,524 | 2,690,658 |
| 1878 | 8 | 4,606,832 | 700,902 | 2,022 | 3,206,819 |
| 1879 | 8 | 4,938,378 | 805,277 | 4,605 | 3,716,525 |
| 1880 | 9 | 5,494,135 | 909,504 | 5,886 | 4,402,474 |
| 1881 | 9 | 5,907,555 | 1,033,358 | 9,854 | 5,139,087 |
| 1882 | 9 | 7,779,720 | 1,256,205 | 22,835 | 6,047,649 |
| 1883 | 10 | 8,086,307 | 1,358,476 | 10,325 | 7,078,054 |
| 1884 | 10 | 8,561,873 | 1,499,068 | 8,524 | 7,998,685 |
| 1885 | 10 | 10,210,281 | 1,707,891 | 16,555 | 9,104,284 |
| 1886 | 10 | 9,486,427 | 1,869,274 | 10,573 | 10,325,594 |
| 1887 | 10 | 10,155,210 | 2,122,868 | 19,285 | 11,736,898 |
| 1888 | 11 | 8,997,641 | 2,093,395 | 33,053 | 13,063,327 |
| 1889 | 10 | 9,685,848 | 2,270,026 | 19,643 | 14,566,816 |
| 1890 | 10 | 9,630,259 | 2,342,954 | 23,402 | 16,078,397 |
| 1891 | 10 | 9,263,940 | 2,448,085 | 42,394 | 17,633,267 |
| 1892 | 10 | 8,197,845 | 2,517,833 | 28,780 | 19,091,028 |
| 1893 | 10 | 6,753,580 | 2,522,764 | 34,408 | 20,377,912 |
| 1894 | 10 | 6,789,357 | 2,514,987 | 26,979 | 21,441,298 |
| 1895 | 10 | 6,993,853 | 2,542,961 | 51,939 | 22,679,135 |
| 1896 | 10 | 7,499,653 | 2,585,970 | 65,086 | 23,820,927 |
| 1897 | 10 | 7,587,700 | 2,632,734 | 61,355 | 25,018,347 |
| 1898 | 9 | 9,193,602 | 2,787,313 | 68,380 | 26,243,065 |
| 1899 | 9 | 9,748,648 | 2,927,323 | 82,671 | 27,854,472 |
| 1900 | 9 | 9,767,226 | 3,060,919 | 92,134 | 29,450,806 |
| 1901 | 9 | 9,630,329 | 3,188,902 | 122,938 | 31,033,325 |

(1) The table includes the domestic and overseas business of Australian-owned life firms as well as those of the New Zealand Government Life Insurance Department (est. 1869). It excludes smaller offices (e.g., the Victoria Life and General Insurance Company and Savings Institute and the Adelaide Life Assurance and Guarantee Company), although this would not have a material effect on the values in the table. Moreover, the effect of this would be to *understate* the actual life business written. Premiums in this table include annuity business and sums insured include reversionary bonuses.

Source: Carment (1904:542).

eventually forced to relinquish friendly society status, and was incorporated on 27 March 1857, by a special Act of the New South Wales Parliament.⁴³

A.M.P. appears to have had most success with whole of life policies. As at 31 December 1856, the society had 750 policies on issue: 693 whole of life, 40 pure endowment, 17 annuity, 9 term policies.⁴⁴ Table 4.5 provides evidence of the product mix of A.M.P. over the period 1859 to 1873. From the table it is apparent that the significance of endowment assurance policies rose at the expense of traditional assurance policies over the period. Unfortunately, the figures for "assurance policies" incorporate both term and whole of life business. Table 4.6 indicates that at least as far as A.M.P. is concerned, the bulk of assurance business was whole of life rather than term.

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43. Refer to the *Act to Incorporate the Australian Mutual Provident Society* (1857). This Act is of historical significance for a number of reasons. First, it included a provision (clause no. 14) that protected the proceeds of those life policies and annuities from the claims of creditors in the event of the bankruptcy of policyholders. It stated: "The property and interest of every member . . . shall be exempt from liability to any law now or hereafter in force relating to bankruptcy or insolvency, or to be seized or levied upon by the process of any court whatever". For this to apply assurances had to have been in force for at least two years and annuities for six years. This represented the first time in any country that such a clause had been used [Salier (1938:136)]. Further, the provisions of this Act were to form the basis for future State and Commonwealth legislation [Gray (1977:63)].
44. Refer to the Eighth Annual Report of A.M.P.. Presented to Members on 13 January, 1857.

TABLE 4.5
RELATIVE IMPORTANCE OF VARIOUS MARKET SEGMENTS TO
THE AUSTRALIAN MUTUAL PROVIDENT SOCIETY
POLICIES IN FORCE: 1859 to 1873

| Date | Assurance Policies ^a | Endowment Assurances | Pure Endowments | Annuities | Total No. of Policies |
|-----------|---------------------------------|----------------------|-----------------|-----------|-----------------------|
| Feb. 1859 | 90.7% | 2.6% | 5.1% | 5.1% | 1,229 |
| Feb. 1864 | 75.3 | 10.6 | 13.3 | 1.6 | 4,338 |
| Feb. 1869 | 68.9 | 17.5 | 12.4 | .8 | 8,888 |
| Feb. 1873 | 65.1 | 26.5 | 7.7 | 1.2 | 17,511 |

(a) Assurance policies are defined to include term and whole of life policies. Table 4.6 indicates that "term life" is likely to be a relatively small component.

Source: Based on table 3 in Carment (1904:543).

In the twenty-year hiatus before the formation of a second successful life mutual, seven local life companies were formed. These included the Colonial Insurance Company of Victoria (est. 1854), the Sydney Insurance Company, Fire, Life and Marine. (1855), the Australasian Fire, Life and Marine Insurance Company (1857), the Victoria Life and General Insurance Company and Savings Institute (1859), the Australian Alliance Assurance Company (1862), the United Fire and Life Insurance Company of Sydney (1863), and the Adelaide Life Assurance and Guarantee Company (1866). In stark contrast to A.M.P., these companies appear to have had limited success in writing life business.

The most successful of these companies were Adelaide Life, Australian Alliance and Victoria Life and General. By the close of 1880, Adelaide Life had 262 policies in force [Australasian Insurance and Banking Record (1881:28): hereafter the A.I.B.R.]. Although Australian Alliance was formed in 1862, it did not commence life operations until 14 April, 1864. During 1877 it reported £94,232 in life funds, and had new assurances for 1877 totalling £92,849 [Salier

TABLE 4.6
NUMBER OF POLICIES IN FORCE - PARTICIPATING (P) & NON-PARTICIPATING (NP)
AUSTRALIAN MUTUAL PROVIDENT SOCIETY : 1869 to 1883

| Year | Whole of Life Policies | Endowment Assurances | Child Endowments | Annuities | Term | Other | Total |
|---------|------------------------|----------------------|------------------|-----------|------|-------|--------|
| 1869 P | 6,081 | 1,550 | 1,105 | 106 | 39 | 7 | 8,888 |
| 1873 P | 11,349 | 4,643 | 1,348 | 128 | 39 | 4 | 17,511 |
| 1878 P | 21,911 | 11,225 | 825 | 93 | 64 | 2 | 34,120 |
| 1878 NP | 378 | 0 | 681 | 35 | 58 | 3 | 1,155 |
| 1883 P | 32,922 | 20,407 | 421 | 72 | 0 | 2 | 53,824 |
| 1883 NP | 572 | 0 | 1,044 | 85 | 49 | 2 | 1,752 |

Source: A.M.P. Quinquennium Reports. Note that an amendment to the 1857 A.M.P. Act in 1874 allowed the issue of non-participating policies.

(1936:142)]. Funds at the close of 1883 totalled £191,068 [A.I.B.R. (1884:532)]. However, by 1889 the firm had only 2,902 policies in force [A.I.B.R. (1889:427)]. As at 31 December 1882, Victoria Life and General had 837 policies in force [A.I.B.R. (1883:323)]. There is scant information available on the number of policies written by the other companies, suggesting that they did not have extensive life operations (refer to Appendix 1). As with the earlier companies they appear to have had much more success with general operations.⁴⁵

4.3.2 The Mutuals Flourish: 1870 to 1886

By February of 1869 A.M.P. had 8,888 policies in force insuring £3,966,191.⁴⁶ Around this time plans were underway for the formation of a second life mutual in Sydney, the Mutual Life Association of Australasia Limited. The reason for the formation of this firm has been summarised as follows [Salier (1932:248)]:

The story goes that it suddenly dawned on the minds of members of a yachting party that should they be drowned where they then were, outside Sydney Heads, their life policies would be void. The conditions of the early Australian Mutual Provident Society policies provided that if the assured 'shall go on the sea, unless passing direct from one part of the colony of New South Wales to another in vessels exceeding fifty tons

45. The companies continued general operations for varying lengths of time: Colonial Insurance (1854-1865), Sydney Insurance (1855-1880), Australasian Fire, Life and Marine (1857-1872), Australian Alliance (1862-1909) and United Fire and Life (1863-1960). For further detail on these companies refer to Pursell (1964). An examination of the relative success of companies and mutuals concerning the different lines of general insurance is beyond the scope of this thesis.

46. A.M.P Quinquennium Report (dated 1869).

burthen', the policy would be void. As a result of this incident the Mutual Life Association was established . . .

The Association commenced business on 1 July 1869 [Gray (1977:33)]. The liability of its members was unlimited (there being no general companies legislation in New South Wales at the time), until a special Act of Parliament was passed in 1873.⁴⁷

The success of A.M.P. in Sydney also helped to prompt the development of the National Mutual Life Association of Australasia Limited in Melbourne. It was registered as a *company limited by guarantee* on 12 August 1869, under the *Victorian Companies' Act* of 1864. As such, policyholders had limited liability. National Mutual had a "parent company", the National Insurance Company. This latter firm was a proprietary fire and general insurance concern, formed in the previous year. The first prospectus of the National Mutual provides some background concerning the formation of the mutual. It states [Nobbs (1978:86)]:

For some time, in their capacity as directors of the National Insurance Company, they had considered the establishment of a life insurance branch on the proprietary system; but at last were led to relinquish the idea, the result of their enquiries being that everywhere the system was becoming less and less popular, whilst *the mutual system was growing just as steadily into the public favour*. [emphasis added].

During the 1870's and 1880's the mutual form of ownership flourished. Between 1870 and 1886 there were 15 mutual life offices established, compared to 7 companies (refer to table 4.1 and Appendix 1). Several of these mutuals were formed in Melbourne under the *Victorian Companies' Act* of 1864, shortly after the National Mutual. The Mutual Assurance Society of Victoria was

47. While the 1869 Constitution of Mutual Life Association could not be located, the 1873 Act was available from the Mitchell Library, Sydney.

registered as a company limited by guarantee on 22 December, 1870. The Australian Widows' Fund Life Assurance Society was registered on 28 November 1871, modelled on the Scottish Widows' Fund (U.K.).

Other significant mutuals of the period included the Colonial Mutual Life Assurance Society Limited, the Australasian Temperance and General Mutual Life Assurance Society Ltd., and the City Mutual Life Assurance Society Limited. The Colonial Mutual was formed during 1872. Although it was originally registered as a company limited by shares, it operated following the mutual principle. Instead of shares being issued, proprietors received foundation life policies. Temperance and General Mutual was registered as a company limited by guarantee under the *Victorian Companies' Act* on 6 December, 1876. Before its incorporation it was a branch of a friendly society (the Independent Order of Rechabites). The new firm offered lower rates of insurance to abstainers, believing they represented a lower risk than non-abstainers. City Mutual was registered as a company limited by guarantee on 20 November, 1878 under the *N.S.W. Companies' Act* of 1874. It was the last successful mutual office. While a number of smaller mutuals were formed, there is little evidence concerning their activities (refer to Appendix 1). The last Australian-owned life mutual, the Australian Mutual Prudential and Medical Assurance Society Ltd., was established during 1886. The society restricted its activities to sickness and "industrial" life insurance (discussed in Chapter 5), and was wound up after 6 months of operations.

What type of ordinary life insurance business did these mutuals write? Panels A to C of Table 4.7 provide summaries for three of the larger mutuals for which it was possible to find data - National Mutual, Australian Widows' Fund and Mutual Life Association. While the policy mix changes over time, it is

TABLE 4.7
NUMBER OF POLICIES IN FORCE - PARTICIPATING (P) & NON-PARTICIPATING (NP)
VARIOUS MUTUALS

| Year | Whole of Life Policies | Endowment Assurances | Child Endowments | Annuities | Term |
|---|------------------------|----------------------|------------------|-----------|------|
| PANEL A : NATIONAL MUTUAL LIFE ASSOCIATION OF AUSTRALASIA - 1874 to 1886 | | | | | |
| 1874 P | 841 | 128 | 0 | 0 | 0 |
| 1874 NP | 0 | 0 | 0 | 0 | 4 |
| 1877 P | 1,876 | 862 | 30 | 0 | 0 |
| 1877 NP | 0 | 0 | 0 | 0 | 4 |
| 1883 P | 8,400 | 5,801 | 513 | 0 | 0 |
| 1883 NP | 37 | 0 | 0 | 7 | 29 |
| 1886 P | 10,603 | 8,974 | 756 | 0 | 0 |
| 1886 NP | 54 | 15 | 0 | 12 | 55 |
| PANEL B : AUSTRALIAN WIDOWS' FUND LIFE ASSURANCE SOCIETY - 1876 to 1891 | | | | | |
| 1876 P | 1,373 | 642 | 38 | 0 | 0 |
| 1876 NP | 0 | 0 | 0 | 0 | 0 |
| 1881 P | 2,558 | 1,991 | 114 | 0 | 0 |
| 1881 NP | 0 | 0 | 0 | 1 | 3 |
| 1886 P | 7,091 | 9,680 | 675 | 0 | 0 |
| 1886 NP | 0 | 0 | 0 | 2 | 12 |
| 1891 P | 8,516 | 12,429 | 1,175 | 0 | 0 |
| 1891 NP | 0 | 0 | 0 | 15 | 2 |
| PANEL C : MUTUAL LIFE ASSOCIATION OF AUSTRALIA - 1874 to 1891 | | | | | |
| 1874 P | 875 | 314 | 127 | 0 | 0 |
| 1874 NP | 4 | 0 | 0 | 1 | 6 |
| 1879 P | 3,149 | 1,674 | 364 | 0 | 0 |
| 1879 NP | 15 | 0 | 0 | 3 | 4 |
| 1884 P | 5,526 | 4,616 | 710 | 0 | 0 |
| 1884 NP | 9 | 0 | 0 | 6 | 21 |
| 1889 P | 7,424 | 7,047 | 900 | 0 | 0 |
| 1889 NP | 0 | 0 | 0 | 24 | 43 |

Sources: National Mutual Life Assurance Association of Australasia, Actuarial Investigations; Australian Widows' Fund Life Assurance Society, Quinquennium Reports; and Mutual Life Association of Australia, Quinquennium Reports. Each of these is available from the A.M.P. Archives, Sydney.

apparent that, as with A.M.P., the vast majority of policies were whole of life or endowment assurances (i.e. long-term assurances as distinct from term life).

Seven proprietary life offices were formed in Australia between 1870 and 1886. These were the Australian Mutual Assurance Company Ltd. (1874), the Legal and General Life Assurance Society of Australasia (1875), the Australian Standard Life Assurance Company (1878), the New South Wales Widows' Fund (1878), the Intercolonial Life Assurance, Annuity and General Association Ltd. (1880), the Australasian Trust Management Assurance and Investment Company (1885), and the Citizens' Life Assurance Company Ltd. (1886). As with earlier attempts, and again in stark contrast to the mutual life offices, the majority of these life companies were unsuccessful (refer to Appendix 1). One exception was the Citizens' Life Assurance Company Ltd. (discussed in Chapter 5).

4.3.3 Summary

Table 4.8 provides financial data on the ordinary business of the twelve largest Australian-owned life firms operating during 1886. An examination of Appendix 1 suggests that there were at least fifteen Australian-owned life firms writing ordinary life business at this time, and several smaller mutual offices are excluded from table 4.8 (the Victorian and New South Wales Post Office Mutual Life Assurance Societies and the Federal Mutual Assurance Association of Australia). However, these excluded firms are unlikely to have any material effect on the inferences drawn.

It is evident from table 4.8 that *mutuals* dominated ordinary business among local life insurers. In particular, A.M.P. issued approximately one third of the new policies for the year, and had roughly one half of all renewal premiums in force and two thirds of total life funds. The next tier of firms included Australian Widows' Fund and National Mutual, each with approximately 15 percent of new

TABLE 4.8
ORDINARY LIFE BUSINESS REPORTED DURING 1886 BY THE TWELVE LARGEST LOCAL LIFE FIRMS

| Name ^d | Date Formed | Type of Firm | New Policies | | New Premiums | Renewal Premiums | Funds at Start of Year |
|--------------------------------------|-------------|--------------|--------------|--------------|--------------|------------------|------------------------|
| | | | Number | Sums Insured | | | |
| | | | | £ | £ | £ | £ |
| A.M.P. | 1848 | M | 11,237 | 4,016,211 | 125,777 | 674,240 | 5,371,466 |
| Victoria Life & General ^b | 1859 | C | n/a | n/a | n/a | 10,388 | 220,076 |
| Australian Alliance | 1862 | C | 168 | 63,389 | 4,171 | 33,024 | 205,205 |
| Adelaide Life Assurance ^c | 1866 | C | 1 | 600 | 18 | 2,152 | 42,129 |
| Mutual Life Association | 1869 | M | 2,685 | 641,247 | 13,751 | 103,355 | 405,513 |
| National Mutual | 1869 | M | 4,682 | 1,080,162 | 32,591 | 132,214 | 480,938 |
| Mutual Assurance | 1870 | M | 3,272 | 817,346 | 24,762 | 97,584 | 257,771 |
| Australian Widows' Fund | 1871 | M | 4,854 | 1,140,047 | 33,231 | 102,661 | 297,094 |
| Colonial Mutual | 1872 | M | 3,691 | 1,161,030 | 32,534 | 164,017 | 471,353 |
| T&G Mutual | 1876 | M | 317 | 51,400 | 1,568 | 7,807 | 30,719 |
| City Mutual | 1878 | M | 1,238 | 233,350 | 7,600 | 27,120 | 14,411 |
| South Australian Mutual | 1881 | M | 183 | 34,150 | 1,406 | 5,257 | 8,370 |

(a) Refer to Appendix 1 for the full names of these firms; (b) At this stage Victoria Life & General was a closed fund (i.e., it wrote no new life business); (c) Adelaide Life Assurance ceased writing new life business in 1888.

Source: A.I.B.R. (1887:44); (1887:177-178).

policies. The largest *company* and the only one that appears to have been actually writing life at this time, Australian Alliance, had less than one percent of new policies and 2.5 percent of renewal premiums.

At first glance the "success" of a proprietary concern at writing life policies seems inconsistent with hypothesis 1. However, an inspection of the deed of Australian Alliance reveals that the company issued participating (or mutual-based) policies. In particular, participating policyholders were entitled to 75 percent of the profits of the life department. Promoters claimed⁴⁸ that the company was:

. . . based on a system acknowledged as equitable and secure . . .
[combining] . . . the advantage of an ample Share Capital with a full regard for the Mutual principle . . .

That is, it was a "mixed" company, in apparent contrast to both Victoria Life and General and Adelaide Life (the other "large" companies in table 4.8).⁴⁹ In addition, table 4.9 provides information on the types of policies held in force by Australian Alliance between 1873 and 1883. While whole of life and endowment assurances accounted for almost all of the policies issued by the company, most of

48. Australian Alliance Assurance Company, Information Booklet (undated, but appears to have been written in the mid 1860's). Available from the Mitchell Library, Sydney.

49. The deed of Victoria Life and General was not available. However, the A.I.B.R. consistently classifies it as "proprietary". The deed of Adelaide Life (available from the Mitchell Library, Sydney) states that the firm could only issue non-participating policies. An actuarial investigation into the affairs of Adelaide Life as at 30 June, 1887 indicated that the company had 197 non-participating policies in force, comprising 185 whole of life contracts, 9 endowments, 2 annuities and 1 "joint life" policy [A.I.B.R. (1888:47)].

this business was, in fact, participating. Thus, the only proprietary concern to successfully write life policies appears to have done so by mimicking the product

TABLE 4.9
NUMBER OF POLICIES IN FORCE
PARTICIPATING (P) & NON-PARTICIPATING (NP)
AUSTRALIAN ALLIANCE ASSURANCE COMPANY : 1873 to 1883

| Year | Whole of Life Policies | Endowment Assurances | Annuities | Term | Total |
|---------|------------------------|----------------------|-----------|------|-------|
| 1873 P | 887 | 19 | 0 | 0 | 906 |
| 1873 NP | 461 | 5 | 2 | 2 | 470 |
| 1878 P | 1,168 | 28 | 0 | 0 | 1,296 |
| 1878 NP | 486 | 15 | 6 | 6 | 513 |
| 1883 P | 1,440 | 652 | 0 | 0 | 2,092 |
| 1883 NP | 439 | 24 | 4 | 4 | 471 |

Source: Australian Alliance, Reports to the Registrar General (available from A.M.P. Archives, Sydney).

attributes of mutuals.⁵⁰

In summary, between 1850 and 1886 life companies continued to be established, although life office formation in the latter half of this interval was dominated by mutuals. The main types of policies issued during this period appear to have been of a long-term, bundled nature. Consistent with the two

50. However, even this did not guarantee success. The deed of Legal and General Life Assurance Society of Australasia (available from the A.M.P. Archives, Sydney) provided for separate "mutual" and "proprietary" departments. Policyholders were entitled to 75% of the mutual department's profits. However, this firm was wound up the year following formation. In addition, Gray (1977:24-27) states that the deed of the Australasian Fire, Life and Marine Insurance Company allowed it to offer participating policies. Again, the company appears to have had little success.

principal hypotheses of Chapter 3, individual mutuals carried a larger proportion of such policies in their underwriting portfolios than either term life or general insurance, and, on aggregate, dominated the long-term segment of the life market. There is less evidence available on the policies offered by Australian life companies. This is, in part, due to a survivorship bias: life companies proved less likely to survive than life mutuals. The evidence which could be obtained suggests that life companies, in marked contrast to life mutuals, exhibited much more success with general insurance policies than with traditional long-term life business.⁵¹

4.4 Corporate Governance in the Early Life Firms

The preceding analysis has examined the match between ownership structure and product line. This section conducts a more general analysis of the corporate governance features of the earliest life firms. In particular, it builds upon the discussion of incentive conflicts between policyholders and shareholders and between policyholders and mutual managers, presented in sections 3.2 and 3.3.

Constitutions could be located for five of the earliest life insurance firms, including the first four firms to actually write life business - the Tasmanian Fire and Life Insurance Company, the Australian Fire and Life Assurance Company, the Derwent and Tamar Fire, Life and Marine Insurance Company, the Van Diemen's Land Fire and Marine and Life Annuity Company, and the Sydney

51. Gray (1977:21-23) notes that British life companies also made little headway in Australia between 1850 and 1890. He suggests that 23 British life companies commenced operations in Australia between 1850 and 1879. However, none of these remained by 1893.

Alliance Marine and Fire and Life Assurance Company.⁵² All were established between 1835 and 1839 and were constituted as share capital companies with a deed of settlement (refer to sections 4.2.1 and 4.2.2). Likewise, newspaper accounts of the two earlier unsuccessful attempts to form life companies (section 4.2.1) provide some details of their Constitutions and also represent a source of evidence (admittedly less direct) regarding corporate governance in the earliest companies.

There are few details of the precise nature of the 1832 attempt at forming a mutual. However, Constitutions (e.g. Memorandum and Articles of Association) could be located for three of the first four mutuals to successfully write life business - the Australian Mutual Provident Society, the National Mutual Life Association of Australasia Limited and the Mutual Assurance Society of Victoria. These were established in 1848, 1869 and 1870 respectively. The Constitution of City Mutual Life Assurance Society Limited (est. 1878) was also available.⁵³

It was observed in section 4.2.1 that, at the time the first life firms were formed in Australia, concern was expressed regarding conflicts of interest facing firm participants. The manner in which these concerns manifested themselves is reviewed below. Summaries of the main features of first life companies and mutuals are contained in tables 4.10 and 4.11 respectively.

52. These company documents were obtained from the Mitchell Library, Sydney.

53. The Constitutions of A.M.P. (1848;1857) and National Mutual (1869) were obtained from the A.M.P. Archives, Sydney. The Constitution of Mutual Assurance (1870) is located at the Mitchell Library, Sydney. Finally, the Constitution of City Mutual (1878) was obtained from the Corporate Affairs Commission of New South Wales.

**TABLE 4.10
CORPORATE GOVERNANCE CHARACTERISTICS OF THE FIRST LIFE COMPANIES**

| | Van Diemen's Land Life Assurance Association | Tasmanian Fire Life and Marine Insurance Company | Tasmanian Fire and Life Insurance Company | Australian Fire and Life Assurance Company | Van Diemen's Land Fire and Marine Insurance and Life Annuity Company | Derwent and Tamar Fire, Life and Marine Assurance Company | Sydney Alliance Marine and Fire and Life Assurance Company |
|--|--|--|---|---|--|---|--|
| Date of Deed | 1832 | 1834 | 7 February, 1835 | 1836 | 17 September, 1838 | 24 October, 1838 | 14 January, 1839 |
| Life Operations Ceased | No evidence of any | No evidence of any | No evidence of any Company acquired in 1892 | 1843 | 1849 | 1845 | No evidence of any Company wound up during 1843. |
| Nominal Capital | 600 £100 Shares | 100 £100 Shares | 200 £100 Shares | 2,000 £100 Shares | 1,000 £100 Shares | 2,000 £50 Shares | 6,000 £50 Shares |
| Paid Up Value per Share | £5 | £10 | £5 | £5 | £5 | £10 10/- | £2 15/- |
| Maximum Number of Shares per Individual | 10 | 7 | No Maximum but Directors Approval Required for Share Transfers | 50 | 20 | No Maximum but Directors Approval Required for Share Transfers | 100 |
| Attempt to Limit Liability of Shareholders | No | No | No | Yes | No | No | No |
| Number of Directors | 12 | 7 | 7 | 12 | 7 | 9 | 12 |
| Directors Required to Retire | Yes | No | Yes | Yes | Yes | Yes | Yes |
| Minimum Director Shareholding | None | 5 Shares | 5 Shares | 20 Shares | 20 Shares | 10 Shares | 30 Shares |
| Quorum of Directors | 3 for Most Cases out 5 When Investing | 2 | 3 | 4 | 3 for Most Cases but 4 When Over £500 was Being Invested or £250 Was Being Paid | 3 | 3 |
| Appointment of an Auditor by Shareholders | Yes | Provided for Auditor Appointed by? | Yes | Yes | Yes | Yes | Yes |
| Appointment of an Actuary by Shareholders | Yes | No | No | No | Yes | No | No |
| Limits on Maturity Value | £1000 for first 3 years of operations | £2,000 | £2,000 | None | None | None | None |
| Number of Years Before a Dividend Could be Paid | 3 | n/a | 3 | 3 | 3 | 2 | 5 |
| Nature of Life Policies | Participating | Non-participating | Non-participating | Non-participating | Non-participating | Non-participating | Non-participating |

Sources: Deed of the Tasmanian Fire and Life Insurance Company (1835); Deed of Settlement of the Australian Fire and Life Assurance Company (1836); Association Deed of the Van Diemen's Land Fire and Marine Insurance and Life Annuity Company (1838); Deed of Settlement of the Derwent and Tamar Fire, Life and Marine Assurance Company (1838); and Deed of Settlement of Sydney Alliance Marine and Fire and Life Assurance Company (1839). Each of these is available from Mitchell Library, Sydney. Also 1832 and 1834 editions of the Hobart Town Courier and the Launceston Advertiser (refer to footnote numbers 5 to 16).

TABLE 4.11
CORPORATE GOVERNANCE CHARACTERISTICS OF LIFE MUTUALS : 1848 to 1878

| | Australian Mutual Provident Society | National Mutual Life Association of Australasia Limited | Mutual Assurance Society of Victoria | City Mutual Life Assurance Society |
|--|---|---|--|---|
| Date of Registration | 28 December, 1848 | 18 March, 1857 | 12 August, 1869 | 20 November, 1878 |
| Type of Constitution | Friendly Society | Company limited by guarantee | Company limited by guarantee | Company limited by guarantee |
| Life Operations Ceased | Continues today, but Constitution changed during 1857 | Continues today | Merged with <u>National Mutual</u> during 1896 | Continues today |
| Number of Directors | 6 | 7 | 6 | Minimum of 5 |
| Directors Required to Retire | Yes | Yes | Yes | Yes |
| Directors Required to Hold Life Policy | No | Yes. Minimum of £1,000 assured | Yes | Yes. £100 assured or paid-up value of £25 |
| Quorum of Directors | Majority present | Majority present | Majority present | Majority present |
| Appointment of an Auditor by Members | 2 or more | 2 or more | 2 | 2 |
| Actuarial Investigation | Every 5 years | Every 3 years | Every 5 years | Every 5 years |
| Appointment of an Actuary | Yes | Yes | Yes | Yes |
| Limits on Maturity Value | No | No | £1,000 | No |
| Nature of Life Policies | Participating | Participating & Non-participating | Participating & Non-participating | Participating & Non-participating |

Sources: Rules and Regulations of the Australian Mutual Provident Society (dated 1849); Memorandum and Articles of Association of the National Mutual Life Association of Australasia (dated 1869); Memorandum and Articles of Association of the Mutual Assurance Society of Victoria (dated 1870); and Memorandum and Articles of Association of the City Mutual Life Assurance Society (dated 1878).

4.4.1 Governance in Life Companies: 1830 to 1839

Membership

During the early nineteenth century, English insurance companies successfully limited the liability of their members by issuing policies containing a statement to that effect [Ford (1982:8)]. In this regard, the deed of settlement of Australian Fire and Life included a clause that was inserted in all policies written (pp.12-13). In part it read:

. . . [the company] . . . shall alone be answerable for any demands thereupon under this Policy, and no member of the said Company shall, under any circumstances, be subject or liable for more than the amount of his Share of the said Capital Stock or Funds of the said Company.

However, shareholders of the other life firms formed in Australia during this period did not attempt to limit their liability in this way.

In addition to each company having a deed of settlement, State legislators typically passed Bills that formally recognized their establishment, allowing the firm to sue and be sued as well as nominating some officer as the person through whom business might be transacted. As was common for the time, incorporation was explicitly avoided by legislators. Consequently, shareholders of these companies were not afforded limited liability by the State.⁵⁴

54. English insurance companies were not generally afforded liability by the State until the passing of the *Companies Act* 1862 (U.K.). The various Australian States later introduced their own legislation based upon this Act: Queensland in 1863, Victoria in 1864, South Australia in 1864, Tasmania in 1869, New South Wales in 1874 and West Australia in 1893 [Refer to Gray (1977:2)].

Boards of Directors

The number of directors constituting a board for the first life companies ranged from seven to twelve (refer to table 4.10). A quorum was either three or four directors, and decisions were determined by a majority of votes by those present.

A number of managerial bonding practices are evident in the early Constitutions. First, the company deeds usually required two directors to retire annually by rotation, and be subject to re-election by shareholders. Second, directors were invariably required to be shareholders. Both these restrictions would serve to bond directors' interests to those of shareholders.

Auditors and Actuaries

It was noted in section 3.2 that conflicts between claimants in life companies can be mitigated by the appointment of auditors or actuaries. An examination was made of the company deeds to determine whether they provided for them.

Each of the early company deeds provided for the appointment of auditors. The deed of Tasmanian Fire and Life required audited annual reports, although there was no reference as to how the auditors should be appointed or dismissed. The deeds of Australian Fire and Life and Sydney Alliance allowed the appointment of auditors by shareholders at a general meeting if they deemed it necessary. The auditor of Van Diemen's Land Fire and Marine was to be elected by shareholders at the first general meeting, and was required to retire annually and apply for re-election. The deed of Derwent and Tamar provided that an "accountant" be elected by shareholders, but hold office until "death, resignation, incapacity, disqualification or removal". Unlike the other deeds, the auditor of Derwent and Tamar was required to pay a bond of £2,000 (p.8).

The deeds of the first life companies did not typically provide for the appointment of an actuary. One *prima facie* exception was Van Diemen's Land Fire and Marine. The deed of the company provided (p.8) for the appointment of an actuary by shareholders at the first annual general meeting. The remuneration of the actuary was to be set and altered by shareholders (p.9). As a form of guarantee, the actuary was required to "give security by bond himself in the sum of £1,000 and two or more sufficient sureties in £1,000, for the faithful discharge of his functions" (p.11). However, the responsibilities of the actuary were limited - to "keep the accounts and books of the Company", "receive and lay before the directors all proposals for insurances" and "issue and register policies and pay monies and generally conduct the details of the Company subject nevertheless in all things to the orders and instructions of directors" (pp.10-11). Further, actuarial investigations were not required to be conducted.

Investment Policy

Mayers and Smith (1981) suggest that shareholders will voluntarily restrict their investment set in order to mitigate conflicts of interest associated with policyholders (sections 2.1 and 3.2). There is scant evidence regarding the investment behaviour of the first life companies. The deed of settlement of Australian Fire and Life (1836:15) allowed directors to purchase a variety of assets. These included freehold or leasehold estates, Government or Public Securities, shares in Australian banks, shares in Australian canals or railways, mortgages, the discounting of bills of exchange and promissory notes, and other advances "upon such security as directors thought fit". However, as at 30 June 1838, the company had all of its available funds in discounted bills.⁵⁵

55. Refer to Sydney Gazette (21 July, 1838).

Hartwell (1954:180-181) maintains that the Tasmanian insurance companies invested their funds primarily in discounting promissory notes and in mortgage loans. The deed of settlement of Tasmanian Fire and Life (1835:5) authorized directors to ". . . make purchases mortgages and other contracts . . . [and] . . . to invest surplus monies at interest". The deed of Derwent and Tamar (1838:4-5) states that directors were authorized to ". . . make loans and purchases and enter into mortgages and other contracts . . . [and to] . . . invest the monies of the Company at interest or in the discounting of bills and notes". The deed of Van Diemen's Land Fire and Marine (1838:9) empowered directors to invest ". . . upon such securities as they may think proper". However, restrictions concerning the latter company included a special quorum of four directors (normally three) if over £500 was being invested (or £250 was being paid), and the sanction of a general meeting of shareholders for the purchase "landed property" (p.9).

Dividend Restrictions

As noted in section 3.2, one of the most obvious sources of conflict between policyholders (*qua* fixed claimants) and shareholders concerns the amount of dividends the latter is paid. Mayers and Smith (1981) predict that, in order to mitigate this, shareholders of companies will contractually limit dividend payments. Consistent with this, in all but one of the early Constitutions (the exception being the Tasmanian Fire, Life and Marine Insurance Company) there is a prohibition on the company paying any dividends for a specified term after formation. This term ranged from two to five years (refer to table 4.10).

Product Attributes

Attributes of life contracts *per se* (rather than the Constitutions of the firms selling them) can also serve to mitigate incentive problems. To illustrate, shareholders can increase the variance of a firm's cash flows through risky underwriting. It appears that the earliest companies attempted to limit this problem by restricting the amount that could be paid on any one life (table 4.10).

Likewise, participation rights serve to mitigate problems of risk-shifting through, for example, asset substitution or risky underwriting (section 3.2). Whilst this right was offered by the first company set up to write life policies, it was not a practice followed in any other of the companies surveyed here. It will be recalled that these companies were relatively unsuccessful in writing life business. By way of contrast, it is worth noting that for all those companies that were subsequently to write whole of life policies successfully (post 1850), participation was an important attribute of the policies sold.

Summary

The proprietors of the first life companies voluntarily submitted to restrictions on their underwriting and dividend behaviour. They also allowed the appointment of independent monitors (e.g. auditors) and offered, at least in one case, a product that implicitly recognized the inherent conflict of interest between shareholders and policyholders (i.e. participating policies).

4.4.2 Governance in Life Mutuals: 1848 to 1878

Membership

Each of the early mutuals examined issued participating policies and made participating policyholders the "members" of the firm. In the case of A.M.P. (1848), every policyholder paying an annual contribution of at least £2 was

entitled to vote at all annual and special meetings, with one extra vote for each additional £2 of contributions (Rule No. 27). In contrast, the other mutuals conferred voting rights in relation to the maturity value of policies issued.

The original 1848 Constitution of A.M.P. did not allow for the issue of non-participating policies. This was subsequently changed with an 1874 amendment to the Society's Constitution.⁵⁶ Non-participating policyholders were given voting rights equivalent to those held by participating members. In contrast, each of the other mutuals allowed the issue of non-participating policies from the time of formation. Further, non-participating policyholders were not given any voting rights.

One problem with mutuals has been that because individual policyholders cannot accumulate residual claims (section 3.3), they have little voice in the management of their firm. The 1848 Constitution of A.M.P. included a conflict resolution mechanism that appears to have been implemented to overcome contracting problems faced by policyholders. In contrast to earlier firms, any disputes between residual claimants (policyholders) and management were to be referred to arbitrators in pursuance with state legislation (Rule No. 30).

A unique feature of National Mutual was that it introduced a non-forfeiture clause to policies (which is a statutory principle today).⁵⁷ Up to this point, if a policyholder failed to meet a premium payment, the company/mutual would forfeit his/her policy. The National Mutual introduced a scheme whereby

56. Refer to *An Act to Amend the Act to Incorporate the Australia Mutual Provident Society* [Assented to 13 January, 1874]. During the nineteenth century the amount of non-participating business written remained a very small proportion of total sums insured.

57. Gray (1977:58) notes that by 1880 this non-forfeiture provision had been copied around the world, and was enacted in Australian legislation as early as 1882.

any surrender value would be automatically applied against amounts owing by the policyholder.

In contrast to the other mutuals, the Articles of City Mutual (article 68) gave non-participating policyholders the right to change to participating status upon payment of the increased premium rate. This convertibility option would serve to reduce conflicts of interest between the two classes of policyholders.

Boards of Directors

It was noted in section 3.3 that contracting costs associated with mutual managers are generally greater than contracting costs associated with company managers. This is, in part, due to the fact that mutual managers have relatively few forces acting upon them to ensure that they will act in the policyholders' interests. An examination was made of the board of directors of the early mutuals to determine whether they served as a monitoring device.

The original board of A.M.P. comprised six directors elected by policyholders. A point that distinguished A.M.P. from earlier life firms (companies) was the fact that its patrons and board of directors were comprised of prominent political and business identities, as well as members of the clergy. Patronage was provided by the Governor of New South Wales, the Chief Justice, the Colonial Secretary, the Attorney-General, the Solicitor-General, and the Surveyor-General. In relation to the company representatives, Gray (1977:31) states:

It would be difficult to imagine a more illustrious list; the like would only be possible today with such a body as the Heart Foundation of Australia.

These promoters/managers bonded their interests to those of policyholders by "holding out" their reputations (i.e. risking their future income).

The number of directors on the boards of the sample mutuals ranged from five to seven. Decisions of the board were to be determined by a majority of directors present. There were a number of conditions associated with being a director. One of these was the requirement that they periodically retire (generally annually by rotation), and if they wanted to continue in office they had to be re-elected by policyholders. The Articles of City Mutual required that the entire board of directors retire at the first annual meeting of the Society, and at every subsequent annual meeting "the three who have been least frequently present at meetings of the board shall retire" (Article 42).

In most cases directors were also required to hold a life policy with the firm. The Articles of Mutual Assurance included a general provision that directors must be policyholders of the firm (Article 38). The Articles of National Mutual were more specific - directors were required to hold a life policy with a maturity value of £1,000 (Article 46). Finally, the Articles of City Mutual imposed a requirement that directors must be members of the firm with a policy "for a sum of one hundred pounds at least or a paid-up policy on which not less than twenty-five pounds shall have been paid" (Article 36). Each of these provisions would clearly serve to bond directors' interests to those of policyholders.

In the cases of A.M.P. and National Mutual, directors also guaranteed to provide money to the firm if funds were necessary. The Articles of National Mutual provided that if there was a shortfall within the three years following incorporation, directors were required to contribute funds. These advances were to be repaid out of Association funds (with interest) when circumstances permitted. Article 47 stated:

In case . . . the funds of the Association shall be insufficient to satisfy the claims arising or expenses incurred in carrying on the business of the Association each of the first Directors shall . . . advance to the Association one-seventh part of the amount which shall be necessary for

those purposes but no one of such Directors shall contribute a greater sum in whole than one thousand four hundred and twenty eight pounds eleven shillings and sixpence . . .

The directors of A.M.P. gave promissory notes to the firm, although they were never called upon. Further, no directors received any remuneration from the firm during the first 16 months of operations [Gray (1977)].

Auditors and Actuaries

An examination was also made of other external monitors in the early mutuals. Each of the early mutual Constitutions required at least two auditors, elected by the members, to examine the firm's annual accounts.⁵⁸ The Articles of City Mutual provided for the appointment of two auditors until the event of:

. . . death, resignation or insolvency or compromising with creditors or conviction of any misdemeanour or offence punishable by the superior courts.

The Constitutions of the other three mutuals provided for the election (or re-election) of auditors at each annual general meeting. An amendment to the A.M.P. Constitution in 1885 provided that each auditor must be a policyholder of the firm.⁵⁹

Provision was also made for the appointment of an actuary, and for an actuarial valuation of assets and liabilities at least once every five years (three

58. Refer to the various Constitutions: A.M.P. 1848 Constitution - Rule No. 29; National Mutual - Article 110; Mutual Assurance - Articles 91 and 92; City Mutual - Article 54.

59. Refer to the By-Laws of A.M.P. [Assented to 24 June, 1885]. By-Law No. 10.

years in the case of National Mutual).⁶⁰ Directors were responsible for appointing actuaries.⁶¹ The approval of an actuary was required before a bonus could be paid.⁶² The Articles of National Mutual and City Mutual also required the approval of an actuary before directors could set or alter rates.⁶³

Investment Policy

It was suggested in section 3.5.2 that mutual managers may restrict their investment behaviour. The early mutual Constitutions restricted the investment set of mutual managers. For example, the A.M.P. Constitution of 1857 (p.8) restricted investment to:

- (1) Mortgages on Real or Leasehold Property;
- (2) Government Securities;
- (3) Loans to Members on Policies; and
- (4) Buildings and Offices for use by the Society.

The Memorandum of National Mutual (1869) restricted investment to:

- (1) British Government or British Government Guaranteed Securities;
- (2) Government Securities in "the Australasian Colonies (including Tasmania and New Zealand)";
- (3) Real Securities (e.g. mortgages) in those countries;

60. Refer to the various Constitutions: A.M.P. 1848 Constitution - Rule No.32; National Mutual - Article 85; Mutual Assurance - Article 73; City Mutual - Article 70.

61. Ibid. A.M.P. 1848 Constitution - Rule No. 32; National Mutual - Article 73; Mutual Assurance - Article 73; City Mutual - Article 70.

62. Ibid. A.M.P. 1848 Constitution - Rule No. 32; Mutual Assurance - Article 74; City Mutual - Article 70.

63. Ibid. National Mutual - Article 77; City Mutual - Article 72.

- (4) Shares or Deposits in Australian Investment and Building Societies;
- (5) Deposits in Incorporated Banking Companies; and
- (6) Advances on Policies.

The Memorandum of Mutual Assurance (1870) only allowed directors to invest in:

- (1) Government or Real Securities in the Australasian Colonies or in Great Britain;
- (2) Public Stock Funds or other Government Securities of the United Kingdom and Ireland;
- (3) Deposits in Incorporated Banking Companies; and
- (4) Advances on Policies.

There is evidence to suggest that over time the above restrictions were loosened [Gray (1977:270-272)]. For example, A.M.P. subsequently gained policyholder approval to invest in securities issued by the government of Great Britain (during 1874), and to invest in municipal loans (during 1887). Given this relaxing of restrictions, it is not surprising that later mutuals expanded the range of allowable investments. The Memorandum of Association of City Mutual (1878) allowed management to:

. . . invest the money or funds of the Company in and upon such property and securities of all descriptions as the Directors of the Society shall subject to the provisions of the Articles of Association approve.

Product Attributes

It was noted in sections 4.3.1 and 4.3.2 that early mutuals tended to specialize in permanent life products. For reasons outlined in Chapter 3, these products give rise to contracting problems with *companies*. Mutualisation is one way of avoiding these.

There is evidence that at least one of the early mutuals restricted the amount that managers could insure under individual policies. The directors of Mutual Assurance were prohibited from issuing policies that had a sum insured greater than £1,000 (Article 62). While there was no restriction in the 1848 Constitution of A.M.P. regarding individual sums insured, Nobbs (1978:271) suggests that the Society, perhaps as a matter of policy, limited policies to sums insured of under £500. No evidence of such restrictions could be located for National Mutual or City Mutual.

Summary

A number of managerial bonding practices can be observed in the early life mutuals. Managers tied their wealth to the financial position of the firm by holding life policies, delaying compensation, and providing financial guarantees during early years of operations. As with the earlier companies, they appear to have restricted their underwriting policy. However, the mutuals appear to have had more extensive restrictions on investment policy and more stringent monitoring requirements (both the appointment of actuaries conducting regular valuations and multiple auditors).

4.5 Summary

The history of life insurance organizations in Australia can be divided into three main periods. First, during a "companies boom" of the latter half of the 1830's, a number of insurance *companies* commenced *life* insurance operations. These operations were not extensive, and by the end of 1849 they had all ceased writing new life business. Several of these companies, however, continued successful *general* insurance operations until the 1890's or later. It was also noted

that during the 1840's depression, several *mutuals* made unsuccessful attempts at conducting a *general* insurance business.

Second, 1848 heralded the beginning of an era of mutual *life* insurance with the formation of the Australian Mutual Provident Society. While it was twenty years before the next successful life mutual was formed, mutuals became the most popular form of new life venture between 1870 and 1886, and dominated the sales of life policies. Although companies did not achieve the same level of success at life operations during this period, they continued to be established at a fairly constant rate (with three or four new firms per decade).

Finally, following the formation of the last life mutual during 1886, emphasis switched to the formation of share capital companies. These companies concentrated on offering *industrial life* policies. The analysis of this market segment was deferred to Chapter 5.

There are a number of observations that provide support for hypotheses 1 and 2. First, early insurance companies had their main success at both the individual and market level with *general* (term) business, while the earliest insurance mutuals failed at such operations. Second, throughout the latter half of the nineteenth century, the principal demand by insurees appears to have been for permanent life policies. While there is less information available on the products offered by life companies than by life mutuals, it appears that companies tried to meet this demand but had limited success. The available evidence suggests that they were typically more successful with *term* or *general* than with *permanent life* insurance. In contrast, mutuals dominated the *permanent life* market, and had a large proportion of their individual underwriting portfolios represented by such policies.

This chapter also examined the monitoring and bonding practices employed by the earliest life companies and life mutuals. It was shown that

shareholders voluntarily submitted to restrictions on their underwriting and dividend behaviour, in addition to providing for the appointment of independent monitors and offering (at least in one case) participating policies. Mutual managers tied their wealth to the success of their firms by holding life policies, delaying compensation, and providing financial guarantees during the early years of operations. There is also some evidence that mutual managers restricted underwriting policy. Relative to early companies, the mutuals appear to have had more extensive restrictions on investment policy and more stringent monitoring requirements.

CHAPTER 5

INDUSTRIAL LIFE INSURANCE IN AUSTRALIA

Chapter 4 tested the line-of-business hypotheses developed in Chapter 3 against nineteenth century developments in the Australian *ordinary* life insurance market. It was noted that during the 1880's and 1890's there was an apparent switch from life mutual to life company formation, the last life mutual being formed during 1886. This switch coincided with the development of a new market segment, known as *industrial* life insurance. Indeed, all of the life companies formed between 1886 and 1900 concentrated on selling such policies. This chapter will examine the relative efficiency of mutuals and companies (both observed and expected) in offering industrial life policies.

Gray (1956;1977) provides a detailed historical account of industrial life firms in Australia, and much of the evidence presented in this chapter draws upon his work. Gray suggests that the earliest attempts at offering industrial life policies in Australia occurred during the early 1870's, although it was not until 1887 that they were actively sold.¹ Based upon Gray's analysis and additional independent reference to original documentation, table 5.1 presents a summary of the local firms that commenced this type of business up to 1909 (the date that the last mutual office entered the field). It is evident from this table that, as with ordinary life business (refer to Chapter 4), the current analysis can be broken down into a number of sub-periods, which can be summarized as follows. First, there were a number of early attempts by companies to write industrial life during the 1870's and early 1880's. Second, between 1884 and 1886 there was a flurry of life mutuals entering the field.

1. By way of contrast, industrial life insurance began in England during the 1850's [Eedy (1901)].

TABLE 5.1
LOCAL FIRMS COMMENCING INDUSTRIAL LIFE INSURANCE IN AUSTRALIA UP TO 1909

| Name of Firm | Firm Type ^a | Date Formed | Began Industrial | Industrial Life Operations Ceased |
|---|------------------------|-------------|------------------|--|
| Australian Life Association | ? | ? | 1870s | 1870s |
| Australian Mutual Assurance Company Ltd. | C | 1874 | 1870s | 1870s |
| Intercolonial Life Assurance Annuity and General Association Ltd. | C | 1880 | 1881 | 1880s |
| Industrial Mutual Life Assurance Society of Aust. | M | 1884 | 1884 | Wound up during 1888 |
| South Australian Mutual Life Assurance Society | M | 1881 | 1884 | 1890 to <u>Australian Temperance and General</u> |
| City Mutual Life Assurance Society Ltd. | M | 1878 | 1884 | 1885 to <u>Citizens' Life</u> |
| Australasian Temperance and General Mutual Life Assurance Society Limited | M | 1876 | 1885 | 1980s |
| Australian Mutual Prudential and Medical Assurance Society | M | 1886 | 1886 | Wound up during 1887 |
| Citizens' Life Assurance Company Ltd. | C | 1886 | 1886 | Continued by <u>Mutual Life and Citizens'</u> after 1907 |
| Australian Metropolitan Life Assurance Company Ltd. | C | 1895 | 1895 | 1980s |
| People's Prudential Benefit Society | C | 1896 | 1896 | Wound up during 1930 |
| Standard Life Association Ltd. | C | 1899 | 1899 | 1910 to <u>Colonial Mutual</u> |
| Phoenix Mutual Provident Society | F | 1846 | 1902 | Wound up during 1931 |
| Australian Life Association Ltd. | C | 1904 | 1904 | 1906 to <u>Phoenix Mutual Provident Society</u> |
| Australian Mutual Provident Society | M | 1848 | 1905 | 1980s |
| Colonial Mutual Life Assurance Society Limited | M | 1872 | 1909 | 1970s |

(a) Firm Type: C=Company; M=Mutual; F=Friendly Society.

Sources: A.I.B.R., Cyclopedia of New South Wales (1907) and Gray (1956).

Third, there was an apparent swing to company formation from 1886 until 1905, although the depression would have interceded during the early 1890's. Finally, two large mutuals entered the industrial life field - one in 1905 and the other in 1909.

Section 5.1 discusses the nature of industrial life policies. Next, sections 5.2 to 5.4 provide a review of firms commencing industrial life business during the first three sub-periods. Section 5.5 then presents an industry profile as at 1902. The fourth sub-period is discussed in section 5.6, followed by an industry profile as at 1920 in section 5.7. The 1920 cut-off is used because by this time the main market participants were well founded. Section 5.8 undertakes a costly contracting analysis of the historical evidence. Finally, a summary of the main findings of this chapter is presented in section 5.9.

5.1 The Nature of Industrial Life Policies

Industrial life policies began as insurance for the working classes. They were originally regarded as "burial benefit" policies. That is, policyholders put an amount aside each period (e.g. weekly) that would provide enough money to meet burial costs in the event of their death. They were typically in the form of *whole of life* policies. Towards the close of the nineteenth century there was an increase in the popularity of *endowment assurances* (with typical terms of 20 years), promoting the role of industrial policies as savings vehicles. This trend continued at least until the 1950's [Gray (1956:118)].

Industrial life policies of the late nineteenth and early twentieth centuries can be contrasted with *ordinary* life policies in a number of respects [Eedy (1901), Gray (1956)]. First, while ordinary life premiums were paid by policyholders at a life office, industrial life premiums were collected from the home of each insuree by agents. The "door-to-door" approach of industrial life business resulted in significantly increased selling and administrative costs. Second, while ordinary life

premiums tended to be paid on a quarterly, half-yearly or yearly basis, industrial life premiums were usually paid weekly. Third, holders of industrial life policies were generally insured for a relatively small sum, ranging from say, £5 to £100. Indeed, in contrast to ordinary life policies, burial policies have an implicit upper bound. Fourth, the sum insured under an industrial policy was the varying factor, while the premium was the unit of account (e.g. in multiples of one penny). In contrast, the sum insured under ordinary policies was the unit (e.g. in multiples of £100), while the premium was the varying factor. Fifth, industrial life policies generally took longer than ordinary policies to acquire a surrender value, due to higher selling and administrative costs. Sixth, industrial policies had a high lapse rate relative to ordinary policies, particularly in times of economic down-turn.

5.2 The Earliest Attempts at Industrial Life: 1870 to 1883

Gray (1977:87) suggests that there is evidence of at least three attempts by firms at issuing industrial life policies during the 1870's and early 1880's: the Australian Life Association (formation date unknown), the Australian Mutual Assurance Company Ltd. (established 1874) and the Intercolonial Life Assurance, Annuity and General Association Limited (est. 1880) [refer to Appendix 1]. However, the evidence regarding the activities of these firms is sketchy. Gray states (p.87) that the Australian Life Association, ". . . probably in 1872 offered pure endowment policies (i.e. no death risk) with weekly premiums ranging from up to ten cents". While it could be ascertained that the Australian Mutual Assurance Company Ltd. was a proprietary concern established in 1874, both the exact date that it commenced industrial business and the type of industrial life policies it offered, are unknown. Finally, the Intercolonial Life Assurance, Annuity and General Association Limited announced in 1881 that it was about to commence a industrial life business [A.I.B.R. (1881:107)]. Prior to this date, the firm offered

policies with sums insured of as low as £50, and premium payments as frequently as monthly.² However, no evidence of actual industrial life operations could be located.

5.3 Industrial Life Mutuals: 1884 to 1886

Five mutual life offices commenced *industrial life* operations between 1884 and 1886 (table 5.1). Two of these were formed specifically for this purpose; the other three had previously conducted ordinary life operations.

The first mutual to commence industrial life operations appears to have been the Industrial Mutual Life Assurance Society of Australia Limited. The society was registered on 1 February 1884, in Brisbane, for the purpose of transacting this type of business. During its first eleven months of operations it issued 600 policies, insuring £85,092, including 76 *pure endowments* insuring £7,725 [A.I.B.R. (1885:112)]. Table 5.2 shows that after 1885 the number of new policies declined each year, until the society was wound up during 1888, principally as a result of a "heavy rate of expense" [A.I.B.R. (1889:282)]. The table also indicates that from 1884 to 1886 the Society issued new policies with average sums insured ranging from £99 to £142. These sums were considerably greater than those insured by industrial life *companies* of the nineteenth century (discussed below).

2. From an undated pamphlet issued by the company and held in the A.M.P. Archives, Sydney.

TABLE 5.2
NEW POLICIES ISSUED BY THE INDUSTRIAL MUTUAL LIFE
ASSURANCE SOCIETY OF AUSTRALIA LIMITED: 1884 TO 1888

| Year | Number of Policies | Total Sums Insured (£) | Average Sum Insured (£) |
|------|--------------------|------------------------|-------------------------|
| 1884 | 600 | 85,092 | 142 |
| 1885 | 602 | 59,971 | 99 |
| 1886 | 531 | 54,523 | 103 |
| 1887 | 431 | 48,561 | 113 |
| 1888 | 21 | 2,800 | 133 |

Sources: A.I.B.R. (1885:224); (1886:226); (1888:250); (1889:282).

The second mutual to commence industrial life operations in 1884 was the South Australian Mutual Life Assurance Society Ltd. (est. 1881). During its first year of industrial operations, it issued 734 industrial policies and paid 2 claims totalling £8 11/- [A.I.B.R. (1885:236)]. The following year it issued 1,358 industrial policies and paid 5 claims totalling £42 14/- [A.I.B.R. (1886:291)]. However, by 1890 there only remained 734 industrial policies insuring £121,644 (an average sum insured of £166) and 548 ordinary policies insuring £105,662 (an average sum insured of £193) [Gray (1977:107)]. No evidence of the nature of industrial policies issued could be located. At this date the operations of the Society were absorbed by the Australasian Temperance and General Assurance Society Ltd. (discussed below).

The City Mutual Life Assurance Society Limited (est. 1878) was the third mutual to offer industrial life policies during 1884. During its first year of industrial operations, the Society issued 9,452 industrial policies insuring £183,740 - an average sum insured of £19 9/- [A.I.B.R. (1885:112)]. The following year it issued 5,303 policies insuring £118,927 [A.I.B.R. (1886:165)]. However, by the close of 1885 the Chairman of City Mutual stated [Gray (1977:90)]:

Your Directors have to report that the Industrial Branch of the business has been disposed of in order that it may be *more effectively worked in the form of a Proprietary Co. as most Industrial offices in England . . .* Your Directors received the sum of 10,000 Pounds and transferred all assets and liabilities to the purchasing company. [emphasis added]

Elsewhere, the Chairman remarked that the ". . . industrial branch had been worked at the expense of the ordinary business" [A.I.B.R. (1887:177)].

The Australasian Temperance and General Mutual Life Assurance Society Ltd. (est. 1876) was the only *mutual* life office to have any sustained success with industrial life during the nineteenth century; but at the same time, it did not have great success with ordinary life. On 16 January 1885, policyholders of the Society agreed to their directors' recommendation to commence industrial business, nine years after its formation. It was proposed that industrial assurances could even be for sums less than £5, collected weekly, with premiums as low as 1d [A.I.B.R. (1885:112)].

Table 5.3 summarizes the new policies issued by Temperance and General Mutual between 1891 and 1902. By 30 September 1895, the firm had issued 44,927 industrial policies, although only 9,800 policies insuring £154,702 were in force - an average sum insured of £16 [A.I.B.R. (1895:836)]. Table 5.3 indicates that the year 1897 marked a considerable increase in new business.

TABLE 5.3
NUMBER OF NEW POLICIES ISSUED BY
THE AUSTRALASIAN TEMPERANCE & GENERAL MUTUAL LIFE
ASSURANCE SOCIETY LTD: 1891 to 1902

| Year | Industrial Branch | Ordinary Branch | Combined |
|------|-------------------|-----------------|----------|
| 1891 | 4,721 | 1,093 | 5,814 |
| 1892 | 1,878 | 1,106 | 2,984 |
| 1893 | 1,076 | 902 | 1,978 |
| 1894 | 1,551 | 920 | 2,471 |
| 1895 | 1,570 | 775 | 2,345 |
| 1896 | 5,474 | 1,056 | 6,530 |
| 1897 | 27,148 | 1,163 | 28,311 |
| 1898 | 36,467 | 1,358 | 37,825 |
| 1899 | 33,353 | 1,931 | 35,284 |
| 1900 | 22,822 | 2,320 | 25,142 |
| 1901 | 34,787 | 2,434 | 37,221 |
| 1902 | 36,492 | 2,328 | 38,815 |

Source : A.I.B.R. (1891-1902).

It is apparent from table 5.3 that Temperance and General Mutual did not become an important industrial life insurer until after 1896. The average sums insured for new policies from 1896 to 1902 are listed below [Gray (1956:42)]. An upward trend in these is apparent, as is a jump in new sums insured in 1897 (from £15 to £19) as new business suddenly increased.

| | | | |
|--------|-----|--------|-----|
| 1895 - | £15 | 1899 - | £21 |
| 1896 - | £15 | 1900 - | £21 |
| 1897 - | £19 | 1901 - | £21 |
| 1898 - | £21 | 1902 - | £23 |

As noted in Chapter 4, the Australian Mutual Prudential and Medical Assurance Society Ltd. (est. 1886) was the last life mutual formed in Australia. This society was set up to write sickness and industrial life insurance. It was wound up approximately 6 months after being formed [Cyclopedia of New South Wales (1907:594)]. No evidence on the nature of life policies issued (if any) could be located.

No other mutual offices appear to have offered industrial life policies during the nineteenth century. As a result, Temperance and General Mutual was able to advertise for almost twenty years as the only mutual office offering industrial life policies in Australia [Gray (1977:89)].

5.4 The Success of the Industrial Life Companies: 1886 to 1899

The largest industrial life firm of the nineteenth century was the Citizens' Life Assurance Company Limited. It was established on 31 December 1886, to take over the industrial life business of City Mutual.³ The nominal capital of the company was £200,000, divided into 20,000 shares of £10 each. All of these shares were subscribed for at a price of 10/- each. Half of the capital subscriptions (£10,000) were used to purchase the industrial policies of City Mutual (noted above).

Citizens' Life commenced writing life business in New South Wales and Queensland, and by the end of the first year of operations the company had issued 19,557 policies (refer to table 5.4 below). Eedy (1903:46) notes that branches were subsequently opened in Victoria (1888), South Australia (1888), Western Australia (1890), Tasmania (1890) and New Zealand (1894). The Cyclopedia of New South Wales (1907:590) states:

3. The Managing Director of City Mutual (James P. Garvan) was also the Managing Director of Citizens' Life for 1887 and 1888 [Gray (1977:90)].

It is inconceivable that such an astonishing expansion would have followed if the company had been constituted on any other basis. The Industrial classes of the Commonwealth would have to wait a long time . . . [before] . . . their assurance needs were adequately provided for by an office of the so-called mutual type.

At first the Citizens' Life only issued *non-participating industrial* life policies. However, this was to change on 10 May 1888, when it also began issuing *ordinary* policies (both participating and non-participating). By the Articles of Association of the company, the ordinary and industrial departments were liable only in respect of policies issued by them (Article 124). Participating policyholders in the ordinary branch were entitled to 80% of the divisible profit attributable to that branch, although they were not conferred any voting rights (Article 121).⁴ All the expenses of the company in the first instance were paid out of the industrial department (Article 118). An annual amount was then charged to the ordinary department, although this was limited to a maximum of 15% of the total annual income (Article 118).

Citizens' Life was a great success at industrial life operations. An actuarial valuation of the company as at 31 December, 1895 revealed that after only nine years in business the company had 173,949 policies in force insuring £4,418,041.⁵ Of these, 164,232 were industrial policies insuring £3,274,931 (an average sum insured of £20), and 9,717 were ordinary policies insuring £1,143,110 (an average sum insured of £118). In terms of industrial business, Citizens' Life was considerably more successful

4. Citizens' Life Assurance Company Limited, Articles of Association (dated 1891). Article No. 121. Available from the Mitchell Library, Sydney.

5. Annual Report of Citizens' Life Assurance Company Limited (1886).

than its main competitor, the Temperance and General Mutual, which as noted above, had only 9,800 industrial policies in force at 30 September, 1895.

Whole of life assurances were the main type of policy issued by Citizens' Life. The 173,949 industrial policies held by the firm as at 31 December, 1895 included 123,293 whole of life policies (76%), 9,324 endowment assurances (5.7%), 13,020 semi-endowments (7.9%), and 17,041 pure endowments (10.4%). Of the 9,717 ordinary policies, 8,551 (88%) were written on a participating basis.

As at 31 December 1895, the funds of the ordinary and industrial branches of Citizens' Life were £79,451 and £172,949 respectively. Panels A and B of table 5.4 show the growth in business of the firm over selected years between 1889 and 1907. They indicate a substantial increase in ordinary business, and a continuation of the success with industrial life.

From Appendix 1, no local life offices were formed between 1886 and 1895. This phenomenon can be explained in part by a serious financial crisis that occurred in Australia between 1888 and 1896 [Pursell (1964:238), Salsbury and Sweeney (1988)]. Gray (1977: 101-102) provides evidence that premium income began to stagnate in 1888, and forfeitures increased during the early 1890's. Moreover, a number of existing life firms were amalgamated or absorbed. In particular, over one third of the existing mutuals were absorbed by larger ones: the two Post Office Mutual Life Assurance Societies in 1889, the South Australian Mutual Life Assurance Society Ltd. and the Federal Mutual Assurance Association of Australasia in 1890, and the Mutual Assurance Society of Victoria in 1896.

In line with the success of Citizens' Life, all the firms formed during the 1890's were local companies that concentrated on industrial life policies. These included the Australian Metropolitan Life Assurance Company Ltd. (established 1895), the People's Prudential Benefit Society (est. 1896), and the Standard Life Association (est. 1899).

TABLE 5.4
THE CITIZENS' LIFE ASSURANCE COMPANY:
SUMMARY OF BUSINESS

| PANEL A : NUMBER OF POLICIES ISSUED - 1887 to 1896 | | | |
|--|-------------------|-----------------|----------|
| Year | Industrial Branch | Ordinary Branch | Combined |
| 1887 | 19,577 | 0 | 19,577 |
| 1888 | ? | ? | 34,684 |
| 1889 | ? | ? | 57,325 |
| 1890 | ? | ? | 65,595 |
| 1891 | ? | ? | 105,978 |
| 1892 | 95,700 | 2,048 | 97,748 |
| 1893 | 78,345 | 2,116 | 89,461 |
| 1894 | 98,713 | 3,523 | 102,236 |
| 1895 | 80,724 | 4,199 | 84,923 |
| 1896 | 80,415 | 4,753 | 85,168 |

| PANEL B : ACCUMULATED FUNDS - 1889 to 1907 | | | |
|--|-------------------|-----------------|-----------|
| Year | Industrial Branch | Ordinary Branch | Combined |
| | £ | £ | £ |
| 1889 | ? | ? | 50,998 |
| 1892 | 130,624 | 20,180 | 150,804 |
| 1895 | 172,949 | 79,451 | 252,400 |
| 1898 | 210,805 | 214,094 | 424,900 |
| 1901 | 298,847 | 491,600 | 790,448 |
| 1904 | 424,083 | 922,522 | 1,346,606 |
| 1907 | 659,347 | 1,417,840 | 2,077,188 |

Source: Annual Reports of the Citizens' Life Assurance Company (available from the Mitchell Library, Sydney).

The Australian Metropolitan Life Assurance Company Ltd. was established with an issued capital of £12,000, paid up to £5,000. The company issued new industrial policies in 1898, 1899, and 1900, numbering 2,960, 3,777, and 4,325 respectively (refer to A.I.B.R. for these years). In comparison, new ordinary policies for the same years numbered 223, 267, and 396. By the close of 1900, Metropolitan Life had 5,193 industrial policies in force, insuring £116,070 - an average sum insured of £22 [A.I.B.R. (1901:139)].

The People's Prudential Benefit Society was formed with a nominal capital of only £10,000, represented by 10,000 shares of £1 each.⁶ At that date the "Society" purchased the business of the People's Mutual Medical Benefit Fund for £3,500, and started offering its own medical, industrial, and accident insurance policies. Profits were shared between policyholders and shareholders once every year in the ordinary branch, and once every five years in the industrial branch. By 31 August 1901, the Society had 6,178 industrial and 117 ordinary (including 114 non-participating whole of life) policies in force [Gray (1956:44)].

The Standard Life Association Ltd. was established with a nominal and issued capital of £200,000, paid up to £10,000. The Association had a hybrid ownership structure. The Association's ordinary branch was conducted on a *purely mutual basis*, all profits therein belonging to policyholders. In the industrial branch, policyholders were entitled to 80% of branch profits as bonuses, after allowing shareholders a return on capital invested (a maximum of 10%) [A.I.B.R. (1900:663)]. During its first 14 months of operations the firm issued 24,035 policies (ordinary and industrial). As at 30 June 1903, the firm had in force 20,139 industrial policies insuring £367,592 (an average sum insured of £18), and 1,422 ordinary policies insuring £138,622 [Gray

6. The subscribed capital of the Society could not be ascertained. The A.I.B.R. (1902:882) states that the issued capital of the firm consisted of 3,500 fully paid shares and that £1,195 had been paid-up on contributing shares.

(1956:47)]. Of these 20,139 industrial policies, 13,409 (66.6%) were short-term *pure endowment* policies.

5.5 An Industry Profile as at 1902

Table 5.5 presents data on industrial life business in Australia as at December 1902. It reveals that there was 298,452 industrial policies on issue insuring £6,494,813. Citizens' Life continued to dominate business in force, holding 65.95% of policies on issue, and 64.62% of sums in force. The second largest company, Standard Life, held only 7.32% of policies on issue, and 6.08% of sums insured. Temperance and General Mutual was still the only mutual offering industrial life, accounting for 18.43% of issued policies, and 16.33% of sums insured.

Based upon an examination of the individual company accounts for 1902, Eedy (1903:48) suggests that not more than 23% of industrial policies in force were *whole of life* assurances, and approximately 16% were *pure endowments*. The remaining 61% of policies were principally endowment assurances. He goes on to state (p.56) that the five industrial life firms also transacting ordinary life business held 44,000 ordinary life policies in force insuring £6,100,000. Further, 70% of this business was held by one firm, Citizens' Life.

5.6 The Second Wave of Industrial Mutuals: 1905 to 1909

During the nineteenth century Citizens' Life, a relatively new life office, was able to obtain a large proportion of the industrial life insurance market, while the large life mutuals (discussed in Chapter 4) choose not to enter the market. The actuary of the Australian Mutual Provident Society (est. 1848) had proposed to the directors of the firm to commence an industrial life business as early as 1889, but they were reluctant to do so [Gray (1956:57)]. This was to change during the early years of the twentieth century. The A.M.P. entered the industrial life field in 1905.

TABLE 5.5
AUSTRALIAN INDUSTRIAL LIFE BUSINESS IN FORCE
AS AT DECEMBER 1902

| Name | Firm Type ^a | Policies on Issue | Total Sums Insured | Average Sum Insured |
|---------------------------------------|------------------------|-------------------|--------------------|---------------------|
| Citizens' Life | C | 65.95% | 64.62% | £21 |
| Temperance & General Mutual | M | 18.43 | 16.33 | 19 |
| Standard Life | C | 7.32 | 6.08 | 18 |
| Provident Life Assurance ^b | C | 4.03 | 4.71 | 25 |
| Australian Metro. Life Assurance Co. | C | 2.9 | 6.57 | 49 |
| People's Prudential ^c | C | 1.36 | 1.69 | 27 |
| Total | | 298,452 | £6,494,813 | £22 |

(a) Firm Type: M=Mutual; C=Company.

(b) A New Zealand-owned company.

(c) As at December 1901. The medical benefit business of the company is excluded.

Source: Coghlan (1903:1035).

The Colonial Mutual Life Assurance Society Limited (est. 1872) followed suit during 1909.

The A.M.P. commenced industrial life business on 1 January 1905, offering policies with sums insured ranging from £5 to £50 [Gray (1956:56)]. The Society's industrial life department was financed by a £12,000 loan from its ordinary department, and this was subsequently repaid after two years. During its first year of industrial operations, the Society issued 12,540 industrial policies insuring £328,841; 8,114 of these, insuring £207,027, being still in force at the end of 1905 [A.I.B.R. (1906:507)]. By 31 December 1909, the Society had a total of 42,830 participating and 3,115 non-participating industrial policies in force [A.I.B.R. (1910:434)]. The average sum insured was £31 13/-. By 31 December 1920, this had jumped to 252,844 participating policies and 1,196 non-participating policies [A.I.B.R. (1921:298)]. The average sum insured was £43 7/-.

The A.M.P. issued only *endowment assurances* and *whole of life* industrial policies. The 31 December 1909 actuarial valuation of the firm revealed that *endowment assurances* constituted 83.53% of industrial participating policies and 100% of industrial non-participating policies [A.I.B.R. (1910:434)]. The 1920 valuation showed *endowment assurances* constituted 92.33% of industrial participating policies and 100% of industrial non-participating policies [A.I.B.R. (1921:298)].

The Colonial Mutual commenced industrial life business during June of 1909. As in the case of A.M.P., a loan was made from the ordinary to the industrial department (this was subsequently repaid during 1914). It also took over the industrial business of Standard Life during 1910. By 31 December 1920, the Society had 100,342 industrial policies in force, insuring £3,036,700 [A.I.B.R. (1921:460)]. No details of the precise nature of these policies could be located.

5.7 An Industry Profile as at 1920

Table 5.6 (below) provides a summary of the industrial life market shares of companies and mutuals for the year ending 1920. This date is chosen because the four main industrial life firms of the twentieth century (Citizens' Life, Temperance and General Mutual, A.M.P. and Colonial Mutual) were soundly established [Gray (1977:137)]. The table indicates that by 1920 mutuals held 64.3% of industrial policies in force, and 72.47% of associated sums insured.⁷ The market share of the Mutual Life and Citizens' Assurance Company Ltd. (formerly Citizens' Life: refer to Appendix 1) had more than halved since 1902 (from 69.14% to 21.01% of sums insured).

Based upon an examination of the published valuation reports of the four largest life offices, Gray (1956:118) states that as at 1920 industrial policies were represented by: whole of life policies (11.8%), endowment assurances (83.6%) and pure endowments (4.6%).

5.8 A Costly Contracting Explanation

The above historical review suggests a seemingly anomalous position in terms of hypotheses 1 and 2 - companies dominated industrial life business during the nineteenth century, and these policies were typically of a permanent nature. The review gives rise to three main questions within the context of the costly contracting framework developed in Chapter 3. First, why were companies (in particular Citizens' Life) successful with industrial life and not with earlier ordinary life business? Second, were why the early attempts by mutuals to write industrial life

7. Even during 1947 the three mutuals continued to hold 69.93% of the 3,430,484 industrial life policies in force, and 72.48% of the £178,565,321 insured under them [Source: calculated from the Third Annual Report of the Insurance Commissioner (31 December, 1948)].

TABLE 5.6
AUSTRALIAN INDUSTRIAL LIFE BUSINESS IN FORCE
FOR YEARS OF ACCOUNTS ENDING 1920

| Name | Firm Type ^a | Policies on Issue | Total Sums Insured | Average Sum Insured |
|---|------------------------|-------------------|--------------------|---------------------|
| Temperance and General | M | 30.64% | 27.26% | £26 |
| Mutual Life and Citizens' Assurance | C | 29.44 | 21.01 | 21 |
| A.M.P. | M | 23.92 | 35.32 | 43 |
| Colonial Mutual Life | M | 9.73 | 9.89 | 30 |
| Australian Metropolitan Life Assurance Company Ltd. | C | 4.63 | 5.03 | 32 |
| People's Prudential Assurance Company | C | 0.62 | 0.55 | 26 |
| Co-operative Assurance Co. | C | 0.57 | 0.55 | 28 |
| Life Insurance Company of Australia | C | 0.45 | 0.39 | 25 |
| Total | | 886,611 | £25,722,589 | £29 |

(a) Firm Type: M=Mutual; C=Company.

Source: Official Year-book of the Commonwealth of Australia (1922:711).

business relatively unsuccessful? Third, why were larger mutuals slow to enter this field and yet, ultimately, successful?

5.8.1 The Success of Companies at Industrial Life Operations

There appear to be two factors that might explain the initial success of companies in the industrial life field. The first factor concerns the nature of industrial policies, while the second relates to a bonding practice employed by shareholders.

It is possible that the life policies offered by the industrial companies did not present the same contracting problems as the traditional long-term life contracts that gave rise to life mutuals. In particular, Citizens' Life issued mainly *whole of life* policies with relatively low sums insured. The comparatively small sums insured would have helped to mitigate the risky underwriting problem (refer to Chapter 3). Further, at least one of these companies (Standard Life) specialized in a type of policy that did not have a surplus problem of the same severity as the one associated with traditional bundled policies - *pure endowments*.

Additionally, it is conjectured that shareholders were able to bond their wealth to policyholders' interests in a way not considered by previous insurance studies or the previous chapter - by the use of uncalled capital. Uncalled amounts on issued shares represent a guarantee fund to policyholders. By having large portions of uncalled capital, shareholders could assure policyholders that they would act in their interests. The two most successful industrial life companies of the nineteenth century had shares with considerable uncalled proportions: Citizens' Life with 80% uncalled (representing a reserve of £180,000 for policyholders), and Standard Life with 90% uncalled (a reserve of £190,000 for policyholders). In contrast, the other, considerably less successful, companies did not employ this practice.

It is difficult to quantify the effectiveness of the "uncalled capital" of Citizen's Life and Standard Life as a bonding mechanism for long-term policyholders. Nevertheless, it can be said that this bonding mechanism was more likely to have been effective in the case of low value industrial life policies than traditional ordinary life business (where average sums insured were typically 10 times greater).

5.8.2 The Initial Failure of Mutuals

It was noted above that the first mutuals to offer industrial life policies were relatively unsuccessful. These tended to be the smaller mutual offices. The larger mutuals delayed their entry to the industrial life field; but when two of them finally entered the market they were extremely successful.

Two life mutuals were set up during the 1880's, specifically for the purpose of writing industrial life business (section 5.3). These firms were probably wound up as a result of a combination of the high expense rates associated with industrial life operations, and the financing disadvantages of the mutual form. Indeed, it might be argued that a new mutual office is not well suited to industrial life business.⁸

What about the existing life mutuals with large reserves? It is contended here that the principal reason for the reluctance of large mutual life offices to enter the industrial life field was a potential conflict of interest between ordinary and industrial life policyholders. It was noted above that the distribution and collection costs associated with industrial life policies were considerably greater than those for ordinary policies. The conflict concerned the allocation or division of those costs. It is possible that mutual management were unable to determine an adequate *cost-sharing rule* concerning both types of business.

8. Gray (1956:51) states that while the first U.S. life offices entering the industrial field were companies, they were mutualized at a later date.

There is anecdotal evidence that the ordinary policyholders of A.M.P. recognized this problem, at least in hindsight. In a letter to the editor of the Sydney Morning Herald (15 May, 1907: page 9), a policyholder complains that the allocation of costs between ordinary and life business was not equitable.⁹ He/she states:

As a policyholder of the ordinary department I strongly object to the present method of charging the expenses. Surely the industrial department should pay something for directors' services, yet no charge is made. Again only £75 per year is charged to rent, yet space is given to the industrial department in all the States.

In another letter to the editor of the Sydney Morning Herald (15 May, 1907: page 11) an A.M.P. policyholder complains:

. . . What kind of a business proposition is it to collect moneys for ordinary life assurance and to apply the money to industrial life assurance, without the consent of or consulting members contributing? . . . When combining to co-operate as members of an ordinary life assurance society, there was no suggestion of joining in another philanthropic institution.

Why then did the large mutuals enter the industrial life field if a cost allocation problem existed? Over time, the differences between industrial and ordinary life policies were eroding. In particular, the average sums insured under industrial life policies were increasing, while the average sums insured under ordinary policies were decreasing [Gray (1956)]. The chairman of A.M.P. is on record as having said that a constant reduction (and expected future reduction) in the sum insured under ordinary life policies was an important factor in the decision to undertake industrial life [A.I.B.R. (1904:390)]. He also noted:

9. This reference was obtained from Gray (1956:58).

By the introduction into the conditions of State and Commonwealth Employment of the provision of life insurance, we have in recent years been compelled to issue policies for as low a sum as £50. We have in fact been doing a considerable amount of industrial business without the detailed machinery requisite to doing it efficiently.¹⁰

A.M.P., Temperance and General and Colonial Mutual continued industrial life operations until the 1970's or 1980's, at which time the remaining local life companies also ceased such operations. The adverse effect (if any) that industrial life operations had on the mutuals' ordinary business is a matter for speculation.

5.9 Summary

This chapter has outlined a number of trends in life office formation associated with the development of the industrial life insurance market in Australia. Several mutual life offices were among the first on the scene. However, they either failed shortly after being formed or struggled along during the nineteenth century. In contrast, the company form of ownership was successful. Between 1905 and 1909 two large mutuals entered the industrial life field. They did so with apparent success.

The comparative success of early industrial life companies is *prima facie* anomalous - Chapters 3 and 4 suggested that mutuals should dominate industrial life business as it is comprised mainly of whole of life and endowment assurances. It was conjectured in section 5.8 that companies were initially successful with industrial life operations for two main reasons. First, shareholders were able to offer policyholders an effective bond in the form of a significant uncalled portion of shareholders' capital. This was possible because of the relatively small sums insured under industrial life policies. Second, mutuals either had financing problems (associated

10. Refer to Sydney Morning Herald (5 May, 1904: page 6).

with high-cost industrial life operations), or difficulties in establishing a cost sharing rule for industrial and ordinary policyholders. As the differences between ordinary and industrial policies began to erode, mutuals were able to offer these policies successfully.

Consistent with hypotheses 1 and 2 and the evidence presented in Chapter 4, companies did not have any marked success in applying the proprietary principle to traditional *ordinary* life business. The two most successful companies mimicked the attributes of mutuals: Citizens' Life, wrote predominantly participating business in its ordinary branch, while Standard Life wrote ordinary policies on a *purely mutual* basis.

CHAPTER 6

TESTING THE HYPOTHESES AGAINST THE PRESENT INDUSTRY STRUCTURE

The previous two chapters have tested the costly contracting hypotheses developed in Chapter 3 against nineteenth and early twentieth century developments in Australia. Overall, the historical analysis supports these hypotheses. The main purpose of this chapter is to provide a direct test of the line-of-business hypotheses. Such a test could not be undertaken in Chapters 4 or 5, given the available historical data. The chapter will also examine the effect that the introduction of *insurance bonds* in the 1970's had on the choice of ownership structure.

Section 6.1 outlines the structure of the Australian life industry as at 31 December, 1989. Next, section 6.2 discusses the sample and data collection procedures. Potential pitfalls of the analysis are examined in section 6.3. Sections 6.4 and 6.5 report the results of the analysis. Finally, a summary of the findings is included in section 6.6.

6.1 Present Industry Structure

As at 31 December 1989, there were 49 direct underwriters registered under the *Life Insurance Act* 1945, consisting of 6 mutuals and 43 companies.¹ These can be further sub-divided into 4 local mutuals, 2 foreign-owned mutuals,

1. In addition there were 5 state government bodies engaged in direct underwriting, and 6 professional reinsurers. Appendix 3 classifies each firm on the basis of ownership. This was accomplished by reference to the firms' constitutions, as well as ownership details provided by the various reports issued by the Insurance Commissioner.

18 local companies, and 25 foreign-owned companies (refer to Appendix 3). However, for the purposes of analysis, the local/foreign distinction will be ignored in this chapter.

While share capital companies have become the most prevalent organizational form in the life insurance industry, mutuals still represent major market participants.² Table 6.1 suggests that mutuals continue to hold a significant market share of policies offered. In particular, panel A of the table shows that they held 47% of the total ordinary sums insured as at 31 December 1989; while panel B shows that mutuals accounted for 45.7% of new single premiums, and 66.9% of new annual premiums, for the year ended 31 December 1989.

2. The relative size and market characteristics of life mutuals in Australia are not dissimilar to the United States' experience. In 1984 share capital companies comprised 94 percent (2,079 firms) of private underwriters in the United States, mutuals accounting for the balance (131 firms). Mutuals tended to be older and larger than their stock counterparts. In this regard, mutuals controlled 53 percent of assets held by commercial life firms (total industry assets of \$US826 billion). In addition, during the 1980's U.S. life mutuals accounted for just over 40 percent of life business in force (1984 - 41.5 percent of the \$US7,136 billion of life insurance in force). Refer to Yahr (1980:9), Hansmann (1985:125), Mehr et.al (1985:Chapter 22), Black and Skipper (1987:187) and Athearn et. al. (1989:83).

TABLE 6.1
ORDINARY LIFE BUSINESS IN AUSTRALIA BY TYPE OF FIRM
FOR THE YEAR ENDED 31 DECEMBER, 1989

| PANEL A: TOTAL SUMS INSURED AS AT 31 DECEMBER, 1989 | | |
|---|--------------|------------|
| Firm Type | Amount (\$m) | Percentage |
| Mutuals | 77,607.34 | 47 |
| Companies | 87,445.32 | 53 |
| Total | 165,052.66 | 100% |

| PANEL B: NEW PREMIUMS FOR THE YEAR ENDED 31 DECEMBER, 1989 | | |
|---|---------------------|---------------------|
| Firm Type | Single Premiums (%) | Annual Premiums (%) |
| Mutuals | 45.7 | 66.9 |
| Companies | 54.3 | 33.1 |
| Total | 100% | 100% |

Source: Compiled from Insurance Commissioner's Quarterly Statistical Bulletin (December, 1989).

Tables 6.2 and 6.3 provide an indication of the relative sizes of mutuals and companies based upon total assets in statutory funds (ordinary and superannuation business) as at 31 December, 1989.³ Statutory funds are in the nature of trust funds and are discussed in section 6.3.2. These two tables highlight the fact that, on average, mutuals were considerably larger than their stock counterparts, with approximate mean assets of \$7.67 billion (median assets of \$2.18 billion). The Australian Mutual Provident Society was the largest life firm with almost \$23 billion of statutory assets. The next largest firm was the National

3. Since 1984 the Life Insurance Commissioner has combined what were termed earlier in this text, industrial and ordinary life insurance under the title "ordinary" life insurance. This can be distinguished from "superannuation" business, a special class of life business concerned with the provision of death and retiring benefits for workers (refer to Appendix 2).

TABLE 6.2
TOP 15 NON-GOVERNMENT LIFE FIRMS RANKED BY TOTAL ASSETS
AS AT 31 DECEMBER, 1989
ORDINARY AND SUPERANNUATION STATUTORY FUNDS

| Firm Name ¹ | Firm Type ² | Non-Investment Linked Business (\$m) | Investment Linked Business (\$m) | Total (\$m) |
|------------------------|------------------------|--|--|----------------|
| A.M.P. | M | 16,077.5 | 6,744.5 | 22,822.0 |
| National Mutual | M | 9,931.0 | 5,886.9 | 15,417.9 |
| MLC Life | C | 4,341.1 | 1,217.1 | 5,558.2 |
| Colonial Mutual | M | 3,951.1 | 398.5 | 4,349.6 |
| Mercantile Mutual | C | 2,631.6 | 256.0 | 2,887.6 |
| Capita | M | 2,465.3 | 152.6 | 2,617.9 |
| Prudential | C | 1,656.0 | 367.3 | 2,023.3 |
| Legal&General | C | 1,382.8 | 438.4 | 1,821.2 |
| Norwich Union | C | 884.4 | 231.7 | 1,116.1 |
| Aust. Eagle | C | 401.7 | 553.6 | 1,055.3 |
| Friend's Provident | M | 540.7 | 258.4 | 799.1 |
| National Aust. | C | 660.6 | 0 | 660.6 |
| Westpac Life | C | 20.7 | 532.9 | 553.6 |
| ANZ Life | C | 306.2 | 238.9 | 545.1 |
| Citicorp Life | C | 425.2 | 0 | 425.2 |

(1) Refer to Appendix 3 for a list of full names.

(2) Firm Type: M=Mutual; C=Company.

Source: Insurance Commissioner's Quarterly Statistical Bulletin (December, 1989).

Mutual Life Association of Australia Limited, with approximately \$15.4 billion worth of assets. In fact, the combined statutory assets of A.M.P. and National Mutual accounted for just over a half of the combined statutory assets of all life firms.⁴ Life companies had average statutory assets of \$530.65 million (median assets of \$161.6m). The largest life company was the MLC Life Limited with approximately \$5.5 billion of assets. It was followed by the Mercantile Mutual Life Insurance Company Limited (\$2.88 billion), and the Prudential Assurance Company Limited (\$2 billion).

TABLE 6.3
SUMMARY STATISTICS ON FIRM SIZE OF DIRECT UNDERWRITERS
AS AT 31 DECEMBER, 1989.
ORDINARY AND SUPERANNUATION STATUTORY FUNDS

| Firm Type | n | mean size (\$m) | median size (\$m) | standard dev'n (\$m) |
|------------------------|----|--------------------|----------------------|-------------------------|
| Mutuals | 6 | 7,669.47 | 2,179.9 | 8,485.73 |
| Companies ¹ | 41 | 530.65 | 161.6 | 994.08 |
| Combined Sample | 47 | 1,441.99 | 230.1 | 3,966.09 |

(1) There were 43 registered companies. However, two of these had no statutory assets (e.g. due to transfer of business to another firm).

Source: Compiled from Insurance Commissioner's Quarterly Statistical Bulletin (December, 1989).

4. Total investment and non-investment linked statutory assets of all life firms as at 31 December, 1989 amounted to \$72,799.2m [Source: Quarterly Statistical Bulletin, December 1989].

6.2 The Sample and Data Collection

The remainder of this chapter tests the line-of-business hypotheses developed in Chapter 3 (hypotheses 1 to 6). It was noted in Chapter 3 that the product innovation of insurance bonds (unbundled policies) occurred during the 1970's. As this has come to represent a significant market segment, it was decided to examine the hypotheses before and after the introduction of unbundled policies. The years 1970 and 1989 were arbitrarily chosen as it was clear that respectively, they represented dates before and after the establishment of the insurance bond market in Australia (refer to Appendix 2).

The main source of data used for testing the hypotheses was information that firms disclosed to the Insurance Commissioner under the requirements of the *Life Insurance Act* 1945 (in particular "Schedule 1" statements). Prior to 1980 the Commissioner reported this information in Annual Reports. It was subsequently reported in various Quarterly Statistical Bulletins and Half Yearly Statistical Bulletins.

As at 31 December 1970, there were 48 life firms registered under the *Life Insurance Act* (refer to Appendix 3). These included 42 direct underwriters (33 companies and 9 mutuals), and 6 professional reinsurance companies.

The line-of-business data of 2 companies were not included in the Insurance Commissioner's Reports (e.g. due to a transfer of business), reducing the number of sample companies to 31. In addition, it was decided to drop the Cuna Mutual Insurance Society (a U.S. owned firm) from the sample, reducing the number of mutuals to 8. This society was registered under the *Life Insurance Act* during 1969, and can be contrasted to the other mutuals operating in Australia in a number of important respects. First, it specialized in selling *credit life* policies. Other mutuals generally offered a wide range of policies, including those written on a *permanent* basis. Second, its statutory assets were considerably

lower than those of other mutuals. The total assets of Cuna Mutual as at 31 December, 1970 were only \$293,571 (compared to \$3.67m in 1980).⁵

One problem concerning the 1970 data was that the sample firms did not necessarily report at the same point in time. For example, one firm may have had a March year end, while another reported in December. Further, due to reporting delays by life firms, 1970 data may not have appeared until the Commissioner's Report of 1971. Consequently, both the 1970 and 1971 Commissioner Reports were used to obtain the relevant information.

The information collected from the 1970/1971 Annual Reports included the number of each type of policy on issue by individual sample firms, related sums insured, and annual premium income. It also included details of policies issued during the twelve months prior to balance date.

As noted in section 6.1, there were 49 direct underwriters (43 companies and 6 mutuals) registered under the *Life Insurance Act* as at 31 December, 1989. The 1989 line-of-business data was extracted from the Quarterly Statistical Bulletin (December, 1989). In contrast to the 1970 data, each firm had the same reporting date (31 December, 1989). The line-of-business data of 3 registered companies were not included in the Insurance Commissioner's Report (e.g. due to amalgamations or liquidations in progress), reducing the number of sample companies to 40. In addition, 1 or 2 companies occasionally reported either no new policies, or no policies with annual premiums. As a result, the sample size for companies varied from 38 to 40, depending on the characteristics of policies that were examined. The sample size will be reported for each set of results.

5. Refer to 1971 and 1980 Annual Reports of the Life Insurance Commissioner.

6.3 Potential Confounding Factors

6.3.1 Size and Age Concerns

Hypotheses 1 and 2 maintain a relationship between the nature of ownership and the type of policies issued. In testing these hypotheses, it is necessary to determine whether the relevant variable is the nature of ownership itself, or whether it merely proxies for some other factor(s). In particular, Australian life mutuals tend to be larger and older than their company counterparts (refer to Chapter 4). Older firms (mutuals or companies) may tend to hold longer-term contracts as these policies are "left over" from a period when they were once popular, while newer firms experience a demand for different products. Further, larger firms may write more long-term business as they have greater reserves in place. Because Australian mutuals are, on average, considerably older and larger than companies, this could result in their policy structure being as predicted in Chapter 3. Consequently, these size and age correlations could potentially confound results.

The size concern can be dismissed for policies. If the history of life mutuals is examined it would be observed that even when they were at their early stages of development (were small in size), they had a bias towards issuing whole of life and endowment policies (refer to Chapter 4, Gray (1977), Nobbs (1978)). In relation to the age concern, an examination will be made of new business to see whether mutuals currently write a higher permanent component than their stock counterparts.

6.3.2 Legislation

The above hypotheses are also potentially confounded if mutuals and companies are treated differently under government regulations. The main body of legislation regulating life insurers in Australia is the *Life Insurance Act 1945*.

Prior to its enactment, life firms were regulated by various State Acts (discussed briefly in Chapter 4). While there are specific sections of the *Life Insurance Act* that relate to companies (e.g. concerning share capital), there are no differential restrictions concerning the operational behaviour of companies and mutuals. The current regulatory requirements are briefly reviewed below.

A prominent feature of the *Life Insurance Act* (hereafter referred to as "the Act") is the requirement that firms maintain at least one *statutory fund* for all life insurance business.⁶ As noted above, a statutory fund is in the nature of a trust fund. All monies received from a life insurance business become assets of a statutory fund. These assets are kept separate and distinct from any other assets of the life firm. They cannot be mortgaged or charged, except by bank overdraft [section 38(3)]. A firm cannot apply or distribute any part of the assets of a statutory fund, except to meet liabilities under policies secured on the fund, to meet related expenses, or for transfers in accordance with section 40 (transfer of an old fund to a new fund), section 40A (a change in type of business under a policy), or section 50 (allotment of surplus to shareholders) [refer to section 50(1)].

The Act also restricts the amount of dividends that companies can allot or pay to shareholders. This restriction is not based on the amount of surplus *per se*. As noted in Chapter 3, such a basis could be subject to manipulation by shareholders. Instead, section 50(3) states that shareholders cannot be allocated or paid more than 25% of the amount of *surplus that is allocated or paid to participating policyholders* [section 50(3)]. However, shareholders are entitled to

6. Refer to section 37(1). Further, the Life Insurance Commissioner (now known as the Insurance Commissioner) has issued two circulars (No.'s 231 and 235) that require separate statutory funds for investment-linked policies.

all the surplus arising from non-participating business, provided that separate accounts are maintained for it.

In relation to underwriting practice, the Act was written on the basis that:

. . . the life insurance business of a company is more likely to prosper, and the interests of its policyholders are more likely to be protected, if it is permitted to classify risks and fix rates of premium in that business in accordance with its own judgement founded upon the advice of actuaries and the practice of prudent insurers.⁷

However, the Act requires that management obtain an actuary's certificate before it issues a new class of life policy, and the firm is then specifically excluded from paying commissions in excess of those taken into account by the actuary when certifying the premium rate [sections 78 and 79].

Section 39 of the Act governs the investment of assets in statutory funds. The general rule is that management of a life office can invest as they see fit, as long as this doesn't contravene that firm's constitution [section 39(1)]. However, there are a number of restrictions, as well as cases where the Commissioner's approval is required [section 39(2)]. These mainly relate to investments in related companies (other than subsidiaries) or trust schemes.

The Act also requires the appointment of a number of monitors/arbitrators. First, an auditor must certify that the balance sheet "truly represents the financial condition of the company" [section 45]. Second, the Act requires an actuary to prepare reports (at least once every five years) on the financial condition of the firm [section 48(1)], to allocate any surplus [section

7. Australian Mutual Provident Society v Goulden & Ors (1986) 60 ALJR 368 at 369.

50(2)] and, as noted above, to approve premium rates [section 77(1)].⁸ In the course of their investigations, actuaries must certify that the valuation of liabilities/reserves is on a basis not less stringent than the one provided in the Fourth Schedule to the Act [section 49]. The Fourth Schedule refers to specific investment rates, mortality tables, and expense allowances. In addition, section 49(5) of the Act states that intangibles assets, which have been highly susceptible to accounting manipulation, are to be excluded from reserve calculations.

The above-mentioned requirements of the *Life Insurance Act* serve to mitigate some of the incentive problems associated with companies (refer to Chapter 3). The requirement for a statutory fund is indicative of the sensitivity of life business to incentive problems; the restriction on dividends would help to mitigate the "dividends" problems; and the requirement for actuaries to certify premium rates, conduct a periodic investigation (using a minimum valuation basis), and calculate surplus would help to overcome the "risky underwriting" and "surplus" problems. The various regulatory provisions noted above are also consistent with bonding and monitoring activities of life companies prior to the introduction of insurance legislation (refer to Chapter 4).

6.4 The 1970 Results

6.4.1 Hypotheses 1 and 3

To test hypotheses 1 and 3 a breakdown of the "average portfolio holdings" of mutuals and companies was determined. Portfolio percentages were calculated for each firm, and then averaged for mutual and company groups. A

8. Sherris (1986: 1133-1138) and Gray (1977) examine a number of nineteenth century examples of voluntary actuarial usage.

number of measurement bases were used for both new and in force business: (1) the number of policies issued; (2) sums insured; and (3) annual premiums.

Table 6.4 provides information on the portfolio weightings of *sums insured* for mutuals and companies as at their 1970 year end. The results for the "numbers of policies" and "total annual premiums" in force were generally consistent with these, and for this reason are reported in Appendix 4. It may be argued that sums insured and total annual premiums are the better proxies in the present context as they reflect the amount of financial capital that policyholders are prepared to put at risk with mutuals or companies. Any important differences in results using the different proxies are noted below. Because some of the hypotheses examined are non-directional, two-tailed probabilities are reported. In the case of whole of life, endowment assurances, and term policies (for which there are directional hypotheses), these probabilities need to be halved.

Consistent with hypothesis 1, Panel A of table 6.4 indicates that, on average, mutuals had a significantly higher percentage of their sums insured from *whole of life* policies than companies did (58% and 43.8% respectively).⁹ However, Panel A also shows that there was no significant difference between the sums insured from *endowment assurance* policies. These conflicting results might be explained by differences in the average length of each of these types of policies. Whole of life policies tend to be of a longer expected duration than

9. The results concerning the number of whole of life policies in force and associated annual premiums are marginally less significant (refer to Appendix 4). A statistical analysis of this data revealed the following one-tailed probabilities - number of policies in force (Mann-Whitney and Student's t probabilities of 0.115 and 0.107 respectively); total annual premiums (Mann-Whitney and Student's t probabilities of 0.057 and 0.056 respectively).

TABLE 6.4
INSURANCE PORTFOLIOS OF FIRMS FOR THE YEAR ENDING 1970

PANEL A: SUMS INSURED IN FORCE (%)

| Policy Type | Firm Type | | Two-Tailed Probabilities | |
|-----------------------------|-----------|-----------|--------------------------|-------------|
| | Mutuals | Companies | Mann-Whitney | Student's t |
| <u>Whole of Life</u> | | | | |
| Mean | 58.01 | 43.80 | 0.099 | 0.096 |
| Median | 56.71 | 45.56 | | |
| Standard Dev'n | 15.99 | 22.0 | | |
| <u>Endowment Assurances</u> | | | | |
| Mean | 22.25 | 27.81 | 0.553 | 0.400 |
| Median | 22.91 | 27.04 | | |
| Standard Dev'n | 11.63 | 17.41 | | |
| <u>Pure Endowments</u> | | | | |
| Mean | .79 | 1.58 | 0.169 | 0.184 |
| Median | .64 | 1.05 | | |
| Standard Dev'n | .01 | 1.59 | | |
| <u>Other¹</u> | | | | |
| Mean | 18.93 | 26.80 | 0.876 | 0.454 |
| Median | 16.34 | 20.27 | | |
| Standard Dev'n | 14.59 | 28.24 | | |
| n = | 8 | 31 | | |
| df = | | | | 37 |

(1) "Other" policies were comprised of term life, credit life, and accident and disability policies.

TABLE 6.4 (Continued)
INSURANCE PORTFOLIOS OF FIRMS FOR THE YEAR ENDING 1970

PANEL B: NEW SUMS INSURED (%)

| Policy Type | Firm Type | | Two-Tailed Probabilities | |
|-----------------------------|-----------|-----------|--------------------------|-------------|
| | Mutuals | Companies | Mann-Whitney | Student's t |
| <u>Whole of Life</u> | | | | |
| Mean | 61.05 | 46.4 | 0.139 | 0.124 |
| Median | 65.88 | 46.64 | | |
| Standard Dev'n | 17.97 | 24.59 | | |
| <u>Endowment Assurances</u> | | | | |
| Mean | 17.06 | 21.70 | 0.476 | 0.417 |
| Median | 19.37 | 18.86 | | |
| Standard Dev'n | 6.97 | 15.45 | | |
| <u>Pure Endowments</u> | | | | |
| Mean | 1.0 | 1.70 | 0.434 | 0.223 |
| Median | 0.99 | 1.09 | | |
| Standard Dev'n | 0.56 | 1.59 | | |
| <u>Other¹</u> | | | | |
| Mean | 20.9 | 30.2 | 0.715 | 0.374 |
| Median | 19.50 | 22.99 | | |
| Standard Dev'n | 14.55 | 28.04 | | |
| n = | 8 | 31 | | |
| df = | | | | 37 |

(1) "Other" policies were comprised of term life, credit life, and accident and disability policies.

Source: Compiled from the Insurance Commissioner's Twenty-Fifth and Twenty-Sixth Annual Reports (1970 and 1971).

endowment assurances. This longer duration increases the potential for opportunistic behaviour by shareholders.

The Life Insurance Commissioner did not provide separate data for *term life* policies as at 1970. Instead, they are included in the "other" category. Table 6.4 suggests that there is no significant difference between mutuals and companies regarding this broad classification of policies.

Panel B of table 6.4 provides a policy breakdown of the new sums insured by mutuals and companies for the 12 months prior to their 1970 year end. The results concerning whole of life, endowment assurances and "other" policies reinforce those obtained in Panel A, and also suggest that the "age" concern (section 6.3.1) can be disregarded.

Panels A and B of table 6.4 also provide data on the holdings of *pure endowments* policies. Consistent with hypothesis 3, they suggest that neither companies nor mutuals have a comparative advantage with pure endowments.

6.4.2 Hypotheses 2 and 4

To test hypotheses 2 and 4 the market shares of mutuals and companies were calculated. This was achieved by combining the raw holding of each type of firm, and then determining what percentage of the market the mutual and company groups held. The same three bases were used as for the individual portfolio analysis (i.e. the number of policies, sums insured, and annual premium income). As above, the results were consistent for each base, so only those for sums insured are reported here.

Table 6.5 indicates that mutuals had a clear dominance in all lines of life business. This is not entirely consistent with hypothesis 2, as companies were expected to dominate *term* business. Further, hypothesis 4 suggests that there would be no significant difference in the market positions of companies and

mutuals concerning pure endowments. Table 6.5 also provides data on the new sums insured for 1970. It shows that mutuals dominated all segments of *new* business as at 1970, not just the business *in force*.

TABLE 6.5
MARKET SHARES (%) OF SUMS INSURED
FOR THE YEAR ENDING 1970

| Policy Type | Mutuals (n=8) | | Companies (n=31) | |
|------------------------------------|---------------|----------|------------------|----------|
| | In Force | New Sums | In Force | New Sums |
| Whole of Life Endowment Assurances | 69.85 | 64.0 | 30.15 | 36.0 |
| Pure Endowments | 62.18 | 59.37 | 37.82 | 40.63 |
| Other ¹ | 64.37 | 69.64 | 35.63 | 30.36 |
| | 72.32 | 68.76 | 27.68 | 31.24 |

(1) "Other" policies were comprised of term life, credit life, and accident and disability policies.

Source: Compiled from the Insurance Commissioner's Twenty-Fifth and Twenty-Sixth Annual Reports (1970 and 1971).

6.5 The 1989 Results

6.5.1 Hypothesis 1

Panels A to C of table 6.6 provide information on the "average portfolio holdings" of companies and mutuals as at 31 December, 1989. During 1989 the Insurance Commissioner did not separate whole of life, endowment assurances and pure endowment policies for reporting purposes. However, based upon previous reports, pure endowments would have represented a relatively small proportion of these policies (less than 5%).

Consistent with the 1970 analysis, each panel suggests that, on average, mutuals held a considerably higher proportion of *traditional permanent* policies

TABLE 6.6
INSURANCE PORTFOLIOS OF FIRMS AS AT 31 DECEMBER, 1989

PANEL A: AVERAGE NUMBER OF POLICIES (PERCENTAGES)

| Policy Type | Firm Type | | Two-Tailed Probabilities | |
|--|-----------|-----------|--------------------------|-------------|
| | Mutuals | Companies | Mann-Whitney | Student's t |
| <u>Whole of Life/ Endowment Assurances</u> | | | | |
| Mean | 48.9 | 18.9 | 0.037 | 0.017 |
| Median | 54.44 | 7.71 | | |
| Standard Dev'n | 29.31 | 27.39 | | |
| <u>Individual Term</u> | | | | |
| Mean | 18.97 | 34.44 | 0.234 | 0.280 |
| Median | 6.93 | 25.11 | | |
| Standard Dev'n | 29.03 | 32.69 | | |
| <u>Insurance</u> | | | | |
| <u>Bonds¹</u> | | | | |
| Mean | 24.39 | 32.91 | 0.870 | 0.535 |
| Median | 22.07 | 22.41 | | |
| Standard Dev'n | 18.12 | 31.67 | | |
| <u>Other</u> | | | | |
| Mean | 7.75 | 13.75 | 0.463 | 0.576 |
| Median | 6.64 | 1.95 | | |
| Standard Dev'n | 7.83 | 25.65 | | |
| n = | 6 | 40 | | |
| df = | | | | 44 |

(1) Insurance bonds include investment account and investment linked contracts.

TABLE 6.6 (Continued)
INSURANCE PORTFOLIOS OF FIRMS AS AT 31 DECEMBER, 1989

PANEL B: AVERAGES OF ORDINARY TOTAL SUM INSURED (%)

| Policy Type | Firm Type | | Two-Tailed Probabilities | |
|--|-----------|-----------|--------------------------|-------------|
| | Mutuals | Companies | Mann-Whitney | Student's t |
| <u>Whole of Life/ Endowment Assurances</u> | | | | |
| Mean | 26.20 | 12.46 | 0.061 | 0.191 |
| Median | 31.61 | 2.10 | | |
| Standard Dev'n | 16.68 | 24.37 | | |
| <u>Individual Term</u> | | | | |
| Mean | 35.95 | 56.56 | 0.121 | 0.146 |
| Median | 39.71 | 63.25 | | |
| Standard Dev'n | 20.09 | 33.07 | | |
| <u>Insurance Bonds¹</u> | | | | |
| Mean | 10.22 | 9.07 | 0.176 | 0.881 |
| Median | 8.98 | 1.39 | | |
| Standard Dev'n | 7.69 | 18.46 | | |
| <u>Other</u> | | | | |
| Mean | 27.60 | 21.90 | 0.353 | 0.690 |
| Median | 8.98 | 1.39 | | |
| Standard Dev'n | 37.48 | 31.79 | | |
| n = | 6 | 40 | | |
| df = | | | | 44 |

(1) Insurance bonds include investment account and investment linked contracts.

TABLE 6.6 (Continued)
INSURANCE PORTFOLIOS OF FIRMS AS AT 31 DECEMBER, 1989

PANEL C: TOTAL ANNUAL PREMIUMS (%)

| Policy Type | Firm Type | | Two-Tailed Probabilities | |
|--|-----------|-----------|--------------------------|-------------|
| | Mutuals | Companies | Mann-Whitney | Student's t |
| <u>Whole of Life/ Endowment Assurances</u> | | | | |
| Mean | 35.79 | 15.36 | 0.075 | 0.069 |
| Median | 41.84 | 3.10 | | |
| Standard Dev'n | 25.56 | 24.79 | | |
| <u>Individual Term</u> | | | | |
| Mean | 5.96 | 19.38 | 0.0002 | 0.132 |
| Median | 6.05 | 10.31 | | |
| Standard Dev'n | 2.80 | 30.54 | | |
| <u>Insurance Bonds¹</u> | | | | |
| Mean | 33.57 | 32.34 | 0.694 | 0.922 |
| Median | 28.16 | 29.51 | | |
| Standard Dev'n | 24.69 | 29.10 | | |
| <u>Other</u> | | | | |
| Mean | 24.67 | 23.07 | 0.720 | 0.905 |
| Median | 11.03 | 10.02 | | |
| Standard Dev'n | 36.81 | 29.76 | | |
| n = | 6 | 38 | | |
| df = | | | | 42 |

(1) Insurance bonds include investment account and investment linked contracts.

Source: Compiled from Insurance Commissioner's Quarterly Statistical Bulletin (December, 1989).

(whole of life and endowment assurance policies) in their portfolios than companies did.¹⁰ Panel A shows that mutuals wrote an average of 48.9% of their policies on a traditional permanent basis, compared to 18.9% for companies. Panels B and C indicate that mutuals also tended to have more than twice the proportion of sums insured or total annual premiums from these types of policies. Each of these differences appears significant.

During 1989 the Insurance Commissioner reported separate figures for *individual term* policies.¹¹ Panel A of table 6.6 shows that, on average, companies had 34.44% of their policies on a individual term basis, compared with 18.97% for mutuals. From panel B, it is apparent that companies had an average of 56.56% of their sums insured from term policies, while mutuals had only 35.95%. This difference is also reflected in the total annual premium data supplied in panel C which shows that companies tended to have more than three times the proportion of *term* premiums than mutuals did (19.38% and 5.96% respectively). Two of the three measurement bases (the exception being number of policies in force) provide results that are statistically significant at conventional levels.¹² The

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10. The 1970 analysis presented above suggests that there is no significant difference between the holdings of endowment assurance policies by life mutuals and companies. As such, it may be the case that the observed difference in permanent life policies for the 1989 data is attributable to whole of life policies. As noted in section 6.4.1, this would not be inconsistent with hypothesis 1.
 11. This practice began in the Life Insurance Commissioner's Thirty-Third Annual Report (1978).
 12. The analysis presented in Table 6.6 reveals the following one-tailed probabilities - number of policies in force (Mann-Whitney and Student's t probabilities of .117 and .14); total sums insured (Mann-Whitney and Student's t probabilities of .06 and .073); and annual premiums (Mann-Whitney and Student's t probabilities of .0001 and .006).

overall statistical results suggest that there is a line-of-business specialization concerning term life policies of the type suggested by the analysis in Chapters 3 and 4.

Table 6.7 provides data on the policies written by mutuals and companies for the twelve months ending 31 December, 1989. The results are consistent with those obtained for business in force.¹³ The reported probability values suggest that the "age" problem can again be dismissed.

6.5.2 Hypothesis 2

Table 6.8 shows the percentage of each market segment held by mutuals and companies. Consistent with hypothesis 2, mutuals had a clear dominance in relation to *traditional permanent* policies. The six mutuals held 64.06% of whole of life/endowment assurance policies in force, representing 68.32% of total sums insured and 72.95% of total annual premium income from permanent policies.

13. The median percentage holding of new whole of life/endowment policies by the companies sample was zero, for each base. A closer examination of the data revealed the following numbers of companies with zero holdings: new policies (19 out of a sample of 40 companies); new sums insured (23 out of 39 companies); and new annual premiums (23 out of 39 companies).

TABLE 6.7
ADDITIONS TO THE INSURANCE PORTFOLIOS OF FIRMS
FOR THE YEAR ENDED 31 DECEMBER, 1989

PANEL A: NEW POLICIES ISSUED (%)

| Policy Type | Firm Type | | Two-Tailed Probabilities | |
|--|-----------|-----------|--------------------------|-------------|
| | Mutuals | Companies | Mann-Whitney | Student's t |
| <u>Whole of Life/ Endowment Assurances</u> | | | | |
| Mean | 14.54 | 9.36 | 0.057 | 0.560 |
| Median | 16.61 | 0 | | |
| Standard Dev'n | 11.33 | 22.17 | | |
| <u>Individual Term</u> | | | | |
| Mean | 23.45 | 37.90 | 0.263 | 0.298 |
| Median | 12.34 | 30.92 | | |
| Standard Dev'n | 32.29 | 31.12 | | |
| <u>Insurance Bonds¹</u> | | | | |
| Mean | 53.46 | 35.01 | 0.249 | 0.210 |
| Median | 5.74 | 24.32 | | |
| Standard Dev'n | 32.38 | 32.92 | | |
| <u>Other</u> | | | | |
| Mean | 8.55 | 18.35 | 0.802 | 0.405 |
| Median | 53.57 | 4.86 | | |
| Standard Dev'n | 9.30 | 26.73 | | |
| n = | 6 | 40 | | |
| df = | | | | 44 |

(1) Insurance bonds include investment account and investment linked contracts.

TABLE 6.7 (Continued)
ADDITIONS TO THE INSURANCE PORTFOLIOS OF FIRMS
FOR THE YEAR ENDED 31 DECEMBER, 1989

PANEL B: NEW SUMS INSURED (%)

| Policy Type | Firm Type | | Two-Tailed Probabilities | |
|--|-----------|-----------|--------------------------|-------------|
| | Mutuals | Companies | Mann-Whitney | Student's t |
| <u>Whole of Life/ Endowment Assurances</u> | | | | |
| Mean | 23.5 | 10.41 | 0.174 | 0.229 |
| Median | 20.0 | 0 | | |
| Standard Dev'n | 18.01 | 25.18 | | |
| <u>Individual Term</u> | | | | |
| Mean | 35.5 | 58.26 | 0.044 | 0.135 |
| Median | 41.0 | 64.0 | | |
| Standard Dev'n | 25.28 | 35.06 | | |
| <u>Insurance</u> | | | | |
| <u>Bonds</u> ¹ | | | | |
| Mean | 10.33 | 6.54 | 0.184 | 0.494 |
| Median | 8.0 | 0 | | |
| Standard Dev'n | 9.89 | 12.86 | | |
| <u>Other</u> | | | | |
| Mean | 30.66 | 24.69 | 0.922 | 0.687 |
| Median | 19.0 | 7.0 | | |
| Standard Dev'n | 38.07 | 32.99 | | |
| n = | 6 | 39 | | |
| df = | | | | 43 |

(1) Insurance bonds include investment account and investment linked contracts.

TABLE 6.7 (Continued)
ADDITIONS TO THE INSURANCE PORTFOLIOS OF FIRMS
FOR THE YEAR ENDED 31 DECEMBER, 1989

PANEL C: NEW ANNUAL PREMIUMS (%)

| Policy Type | Firm Type | | Two-Tailed Probabilities | |
|--|-----------|-----------|--------------------------|-------------|
| | Mutuals | Companies | Mann-Whitney | Student's t |
| <u>Whole of Life/ Endowment Assurances</u> | | | | |
| Mean | 31.0 | 8.97 | 0.020 | 0.035 |
| Median | 29.0 | 0 | | |
| Standard Dev'n | 27.56 | 22.47 | | |
| <u>Individual Term</u> | | | | |
| Mean | 4.50 | 29.82 | 0.007 | 0.043 |
| Median | 4.0 | 19.0 | | |
| Standard Dev'n | 3.78 | 29.40 | | |
| <u>Insurance</u> | | | | |
| <u>Bonds¹</u> | | | | |
| Mean | 42.33 | 34.15 | 0.504 | 0.572 |
| Median | 43.5 | 27.0 | | |
| Standard Dev'n | 32.70 | 32.78 | | |
| <u>Other</u> | | | | |
| Mean | 22.17 | 27.21 | 0.841 | 0.717 |
| Median | 8.5 | 14.0 | | |
| Standard Dev'n | 37.76 | 30.53 | | |
| n = | 6 | 39 | | |
| df = | | | | 43 |

(1) Insurance bonds include investment account and investment linked contracts.

Source: Compiled from Insurance Commissioner's Quarterly Statistical Bulletin (December, 1989).

TABLE 6.8
MARKET SHARES (%) OF LIFE FIRMS AS AT 31 DECEMBER, 1989¹

| PANEL A: MUTUALS | | | |
|--------------------------------|-------------------|--------------|-----------------|
| Policy Type | Policies In Force | Sums Insured | Annual Premiums |
| Whole of Life & Endowment Ass. | 64.06 | 68.32 | 72.95 |
| Individual Term | 18.26 | 36.28 | 33.45 |
| Insurance Bonds | 40.69 | 41.34 | 62.09 |
| Other | 21.18 | 36.74 | 48.19 |

| PANEL B: COMPANIES | | | |
|--------------------------------|-------------------|--------------|-----------------|
| Policy Type | Policies In Force | Sums Insured | Annual Premiums |
| Whole of Life & Endowment Ass. | 33.14 | 30.41 | 25.24 |
| Individual Term | 69.82 | 49.42 | 54.39 |
| Insurance Bonds | 53.83 | 49.52 | 36.11 |
| Other | 72.90 | 54.29 | 38.65 |

(1) The market shares of mutuals and companies do not sum to 100% as the business of professional reinsurers and State Government life offices has been excluded from the analysis.

Source: Compiled from Insurance Commissioner's Quarterly Statistical Bulletin (December, 1989).

The results concerning *term life* policies are also consistent with hypothesis 2. Table 6.8 shows that companies held 69.82% of term life policies in existence, accounting for 49.42% of total market sums insured and 54.39% of total market annual premium income from term life policies. In contrast, mutuals held 18.26% of term policies in existence, accounting for 36.28% of total sums insured and 33.45% of total annual premium income for this market segment.

Table 6.9 shows the respective market shares of new life policies for mutuals and companies. The results are consistent with those reported in table 6.8.

TABLE 6.9
MARKET SHARES (%) OF NEW LIFE POLICES
FOR THE YEAR ENDED 31 DECEMBER, 1989¹

| Policy Type | Mutuals (n=6) | Companies (n=40) |
|--------------------------------|---------------|------------------|
| Whole of Life & Endowment Ass. | 58.93 | 38.83 |
| Individual Term | 13.84 | 74.85 |
| Insurance Bonds | 47.38 | 47.32 |
| Other | 14.92 | 82.10 |

(1) The market shares of mutuals and companies do not sum to 100% as the business of professional reinsurers and State Government life offices has been excluded from the analysis.

Source: Compiled from Insurance Commissioner's Quarterly Statistical Bulletin (December, 1989).

6.5.3 Hypotheses 5 and 6

Tables 6.6 to 6.9 present data on the relative importance of *insurance bonds* to mutuals and companies for the year ended 31 December, 1989. They suggest that neither companies nor mutuals possessed a strong comparative advantage in relation to insurance bonds. Tables 6.6 and 6.7 indicate that there is no significant difference in the portfolio weightings of insurance bonds for mutuals and companies, although there is some discrepancy between the two sets of test results. Table 6.8 shows that, as at 31 December 1989, companies held 53.83% of insurance bonds on issue (accounting for 49.52% of sums insured from bonds), while mutuals held only 40.69% (accounting for 41.34% of sums insured from bonds). However, the insurance bonds held by mutuals accounted for 62.09% of total annual premiums for this market segment (the commensurate

figure for companies was only 36.11%). Further, table 6.9 suggests that there is virtually no difference in the market shares of new insurance bonds for mutuals and companies.

6.6 Summary

This chapter provides additional test results to those presented in Chapters 4 and 5. The findings suggest that even in today's regulated environment there is an association between product line and ownership structure in the way hypothesized, i.e. mutuals specialize in, and dominate the market for, traditional permanent life business. Consistent with the arguments presented in Chapter 3, this association appears strongest for whole of life policies. There is weaker evidence that companies specialize in, and dominate the market for, term life policies. As suggested in Chapter 3, the relative efficiencies of mutuals and companies in offering pure endowments or the recent product innovation of insurance bonds (unbundled products) are less clear. The results are consistent with the arguments that mutuals arise in response to contracting problems associated with traditional permanent life policies, and that these problems cannot be completely overcome by regulation.

CHAPTER 7

SUMMARY AND CONCLUSIONS

In line with a growing body of research considering matters of organizational choice, this thesis has examined factors influencing the choice of ownership structure in the life insurance industry and, to a lesser extent, the effect that the assignment of ownership rights has on other activities of life insurance firms.

Chapter 2 outlined and evaluated previous studies examining the choice of ownership structure by insurers. A number of limitations were identified with that research. In particular, reasons why predicted differences between life mutuals and life companies should be the case have not been fully elaborated, and there is little evidence that the hypothesized differences do, in fact, exist.

Mayers and Smith (1981) note that both company and mutual ownership structures pose potential contracting problems for policyholders. Shareholders in companies have incentives to behave opportunistically towards policyholders' reserves. On the other hand, mutuals have a control disadvantage in that mutual managers have fewer disciplinary forces acting upon them than their stock counterparts. The authors suggest that the choice between mutual and company forms is related to the magnitude of contracting costs associated with shareholders and mutual managers. However, they do not identify the specific factors promoting the existence of the alternative ownership structures. Instead, they take these structures as given and suggest how shareholders and mutual managers can engage in bonding and monitoring activities to lower contracting costs. They note that shareholders can reduce contracting costs by restricting their dividend, investment, or underwriting behaviour, or by issuing policies that allow policyholders to participate in company profits. Mutual managers are able to reduce contracting

costs by limiting the amount of discretion they have (e.g. in terms of products offered or geographical dispersion).

Hansmann (1985) and Mayers and Smith (1986) suggest that the choice between mutual and company ownership structures is related to the length of life policies. Mayers and Smith point out that as the duration of a policy increases, so do the contracting costs associated with shareholders - shareholders have more opportunities to expropriate policyholders' wealth through dividend, investment, or financing actions. Hansmann argues that mutuals arise in the life insurance industry partly because of difficulties in pre-specifying an appropriate level of reserves for long-term life policies, and partly because of problems regarding adverse selection and identifying product quality.

Chapter 3 provided an explicit consideration of the attributes of different life policies, paying particular attention to the contracting problems that each presents concerning shareholders in companies and managers in mutuals. The analysis suggests that contracting problems between shareholders and policyholders are greatest for *traditional permanent* policies (i.e. whole of life and endowment assurances). In particular, the determination of surplus is complex for traditional permanent policies due to the nature of their premium payments and guaranteed payouts, and where the insurer is a company, shareholders have incentives to manipulate the calculations (maximizing surplus) to the detriment of policyholders. The financial consequences of opportunistic behaviour by shareholders are increased because holders of such policies need to be locked into contracts to avoid an adverse selection problem. Shareholders are unable to provide adequate contractual safeguards (e.g. to pre-specify the basis upon which these figures will be derived) for this class of policy, resulting in a "contract failure" with companies. In contrast, holders of *term life* policies (which contain no savings element, bundled or otherwise) do not face the same severe surplus determination or reserves problem

that holders of traditional policies do, and are able to discipline shareholders by switching insurance firms.

As Mayers and Smith (1981) suggest, policyholders must weigh the contracting costs associated with shareholders against the disadvantages imposed by the mutual form (e.g. contracting costs associated with managers). Chapter 3 noted the ways in which these latter problems can be mitigated (e.g. the appointment of an actuary, or independent directors). After a consideration of the contracting problems associated with different types of life policies, hypotheses 1 and 2 were developed. These state that mutuals will specialize in, and dominate the market for, *traditional permanent* life business, while companies specialize in, and dominate the market for, *term life* policies.

The relative efficiencies of mutuals and companies in offering both *pure endowments* and the recent product innovation of *insurance bonds* are less clear. While both types of policies are typically long-term, the incentive conflicts that arise between shareholders and policyholders when they are issued by a company are not as severe as those associated with traditional permanent policies. Further, pure endowments and insurance bonds both have characteristics (e.g. the threat of partial liquidation, relatively low monitoring costs) that help to mitigate incentive problems arising from the choice of a mutual structure.

Based upon previous research, it was also hypothesized in Chapter 3 that life mutuals will tend to hold a higher proportion of long-term (locked-in) investments and shares in their asset portfolios than life companies do. Further, the choice of ownership structure is expected to influence the nature of an insurance firm's reinsurance arrangements. However, these investment and reinsurance hypotheses were not the subject of empirical analysis in the later chapters.

Chapter 4 tested the principal line-of-business hypotheses against nineteenth century developments in the Australian *ordinary* life insurance market.

This period involved the introduction of both life mutuals and life companies, at a time when the life insurance market was essentially unregulated and firms were not required to pay direct taxes. The findings (summarized below) provide support hypotheses 1 and 2, although there was substantially less information available on life companies than life mutuals.

The first attempts at forming life companies in Australia occurred during the 1830's. These companies did not have *life* extensive operations and appear to have had considerably more success in issuing *general* (term-based) policies. While all of these firms had ceased writing life business by the close of 1849, several of them successfully conducted general insurance operations until the 1890's or later. The first insurance mutuals to commence operations were formed in Sydney during the early 1840's. These firms restricted their activities to *general* (term-based) insurance, but were markedly unsuccessful.

The year 1848 heralded the beginning of an era of mutual life insurance in Australia with the formation of the Australian Mutual Provident Society. While it was twenty years before the next successful life mutual was formed, mutuals became the most popular form of new life venture between 1870 and 1886. In contrast, the formation of companies remained relatively constant from the 1850's to the 1880's, with three to four companies being formed per decade. Throughout this period, the principal demand by insurees was for *permanent life* policies. The available evidence (albeit limited) suggests that companies tried to meet this demand but were generally unsuccessful. Those that achieved limited success in this market segment resorted to issuing participating policies (i.e. to mimicking the attributes of mutuals). The company structure appears to have been generally more effective for contracting *term* or *general* insurance. In contrast to the poor performance of companies at permanent life operations, and the failure of the earlier mutuals at general insurance operations, mutuals dominated the sales of

permanent life policies and had a large proportion of their individual underwriting portfolios represented by such policies.

The last life mutual to be formed in Australia commenced operations during 1886. For the remainder of the nineteenth century, emphasis switched to the formation of share capital companies which tended to specialize in *industrial* life business. The discussion of such policies was deferred until Chapter 5.

It was observed in Chapter 4 that concern over the choice of ownership structure was expressed even during the first attempts at forming a life office. An examination was made of the monitoring and bonding practices associated with the earliest life companies and mutuals. It was shown that shareholders voluntarily submitted to restrictions on their underwriting and dividend behaviour, as well as allowing the appointment of independent monitors (e.g. auditors), and offering (at least in one case) a product that implicitly recognized the inherent conflict of interest between shareholders and policyholders (i.e. participating policies). Mutual managers bonded themselves to policyholders' interests by holding life policies, delaying compensation, and providing financial guarantees during the early years of operations. Relative to early life companies, they appear to have had more extensive restrictions on investment policy and more stringent monitoring requirements, in the appointment both of actuaries conducting regular valuations, and of multiple auditors. At least one of the mutuals also restricted underwriting policy in a similar fashion to the early companies.

As noted above, Chapter 5 examined the development of the *industrial* life insurance market in Australia. An apparent inconsistency with the line-of-business hypotheses was discovered: even though industrial life policies were typically of a permanent nature (whole of life or endowment assurances), companies dominated the market for them during the nineteenth century, while smaller mutuals failed or struggled along, and larger mutual offices chose not to enter the field. As at

December 1902, companies held over 80% of the existing industrial life business. However, this was to change in the early twentieth century after two large mutual offices commenced industrial life operations. These firms were successful, and by 1920 the mutual form of ownership accounted for over 60% of industrial life business in force.

It was conjectured in Chapter 5 that the initial success of companies can be attributed to two main factors. First, given the relatively small sums insured under industrial policies, companies were able to offer an effective bond to industrial policyholders in the form of significant uncalled portions of shareholders' capital. This acted as a guarantee fund. Second, mutuals had difficulties in offering such policies: small mutuals had trouble (relative to companies) in financing the high-cost industrial life sales, while large mutuals were reluctant to enter the field because of the difficulty of establishing a cost-sharing rule for industrial and existing ordinary business. Mutuals penetrated the field as the differences between the industrial and their existing business began to erode.

Consistent with hypotheses 1 and 2 and the evidence presented in Chapter 4, the proprietary principle was not successfully applied by the industrial life companies to traditional *ordinary* life business. The most successful of these, Citizens' Life, wrote predominantly participating business in its ordinary branch (i.e. it mimicked the mutuals). The only other successful company, Standard Life, wrote ordinary policies on a *purely mutual* basis.

Chapter 6 tested the line-of-business hypotheses using recent Australian data. It expanded the analysis of Chapters 4 and 5 in two main respects. First, it provided a direct cross-sectional test of the hypotheses. Second, it examined the match between ownership structure and the recent product innovation of *insurance bonds*. The findings indicate that even in today's regulated environment there is a significant association between product line and ownership structure in the way

hypothesized: mutuals specialize in, and dominate, traditional permanent life business. There is weaker evidence that individual companies specialize in, and dominate the market for, term life policies. Further, as suggested in Chapter 3, neither companies nor mutuals appear to possess a comparative advantage in offering pure endowments or insurance bonds. The results are consistent with the argument that it is not problems with long-term contractual relations *per se* that give rise to mutuals, but rather problems arising from the lock-in and guarantee features of traditional permanent policies. The evidence also suggests that these latter problems cannot be easily overcome by increased regulation.

APPENDIX 1
LIFE INSURANCE FIRMS FOUNDED IN AUSTRALIA
DURING THE NINETEENTH CENTURY

Sources

Table A1.1 (presented below) presents a detailed summary of Australian-owned life insurance firms formed during the nineteenth century. The main source of information used to compile this table was original company documentation (e.g. annual reports and articles of association). Most of this was obtained from the Mitchell Library and the A.M.P. Archives (both located in Sydney). Other contemporary sources of information included newspapers and almanacs. A number of historical studies were also used. These latter studies can be summarized as follows.

The Cyclopedia of New South Wales (1907) provides a descriptive account of *life* and *general* insurance companies operating in New South Wales during the nineteenth century. In a similar manner, Salier (1938) summarizes the first one hundred years of *life* insurance in Australia. Pursell (1964) undertakes a detailed account of the development of Australian *general* insurance firms, with particular reference to post-1880 events. In doing so, Pursell provides a detailed listing of general insurance firms formed prior to 1877, some of which had life operations. Gray (1977) and Nobbs (1978) were both useful for details of *life* insurance firms formed before 1900. Gray provides details of both life companies and mutuals, while Nobbs focuses upon life mutuals. Nobbs also attempts (pp.246-247) a listing of life firms up to 1900, but there appears to be a number of errors and omissions associated with this.

Some of these historical studies occasionally presented conflicting data. Any discrepancies were resolved by reference to original documents. The

Australasian Insurance and Banking Record (A.I.B.R.) was also used to determine, and cross-validate, those life firms formed between 1877 and 1900.

It is important to remember that the information presented below (particularly prior to 1877) is based upon fragmentary details. As such the table may have missing items.

TABLE A1.1
LIFE OFFICES FORMED IN AUSTRALIA TO 1900

| Name of Firm | Date Formed | Head Office ¹ | Type of Firm ² | Members' Liability ³ | Types of Policies ⁴ |
|--|-------------|--------------------------|---------------------------|---------------------------------|--------------------------------|
| Australian Fire and Life Assurance Company | 1836 | S | P | S | L,F. |
| Derwent and Tamar Fire, Life and Marine Insurance Company | 1838 | H | P | U | L,F,M. |
| Van Diemen's Land Fire and Marine Insurance and Life Annuity Company | 1838 | H | P | U | L,F,M. |
| Sydney Alliance Marine and Fire and Life Assurance Company | 1839 | S | P | U | L,F,M. |
| South Australian Marine and Fire and Life Insurance Company | 1844 | A | P | - | L,F,M. |
| Australian Mutual Provident Society | 1848 | S | M | LF | L |
| Marine, Life and Casualty Assurance Society | 1853 | S | M | - | L,M. |
| Colonial Insurance Company of Victoria | 1854 | M | P | S | L,F,M. |

1. Location of Head Office: S = Sydney; H = Hobart; M = Melbourne; L = Launceston; A = Adelaide; B = Brisbane.
2. Type of Firm: P = Proprietary; M = Mutual.
3. Members' Liability: U = Unlimited; L = Limited to par value of shares or a guaranteed amount by one of the Companies' Acts; LF = Limited by a Friendly Society's Act; LA = Limited by a Special Act of Parliament; S = An attempt was made to limit liability via the firm's deed of settlement and policies written. Limited liability was given to shareholders generally under the Companies' Acts passed in the various States: Queensland in 1863, Victoria in 1864, South Australia in 1864, Tasmania in 1869, New South Wales in 1874 and Western Australia in 1893 [Gray (1977:2)].
4. Types of Policies: L = Ordinary Life; F = Fire; M = Marine; S = Sickness; I = Industrial Life.

TABLE A1.1
LIFE OFFICES FORMED IN AUSTRALIA TO 1900 (Continued)

| Name of Firm | Date Formed | Head Office | Type of Firm | Members' Liability | Types of Policies |
|---|-------------|-------------|--------------|--------------------|-------------------|
| Sydney Insurance Company, Fire, Life and Marine. | 1855 | S | P | - | L,F,M. |
| Australasian Fire, Life and Marine Insurance Company | 1857 | M | P | - | L,F,M. |
| Victoria Life and General Insurance Company and Savings Institute | 1859 | M | P | U | L |
| Australian Alliance Assurance Company | 1862 | M | P | U | L,F,M. |
| United Fire and Life Insurance Company of Sydney | 1863 | S | P | LA | L,F |
| Adelaide Life Assurance & Guarantee Company | 1866 | A | P | LA | L |
| Mutual Life Association of Australasia Limited | 1869 | S | M | U | L |
| National Mutual Life Association of Australasia Limited | 1869 | M | M | L | L |
| Mutual Assurance Society of Victoria | 1870 | M | M | L | L |
| Australian Widows' Fund Life Assurance Society | 1871 | M | M | L | L |
| Post Office Mutual Life Assurance Society | 1871 | M | M | L | L |

TABLE A1.1
LIFE OFFICES FORMED IN AUSTRALIA TO 1900 (Continued)

| Name of Firm | Date Formed | Head Office | Type of Firm | Members' Liability | Types of Policies |
|--|-------------|-------------|--------------|--------------------|-------------------|
| Colonial Mutual Life Assurance Society Ltd. | 1872 | M | M | L | L |
| Emerald Hill & Sandridge Mutual Provident Association | 1873 | M | M | L | L |
| Australasian Civil Service Mutual Assurance Company | 1874 | S | M | L | L |
| Australian Mutual Assurance Company Ltd. | 1874 | S | P | L | L |
| Legal and General Life Assurance Society of Australasia | 1875 | M | P | L | L |
| Australasian Temperance & General Mutual Life Assurance Society Ltd. | 1876 | M | M | L | L |
| Post Office Mutual Life Assurance Society | 1876 | S | M | L | L |
| Australian Standard Life Assurance Company | 1878 | S | P | L | L |
| New South Wales Widows' Fund | 1878 | S | P | L | - |
| City Mutual Life Assurance Society Limited | 1878 | S | M | L | L |
| Intercolonial Life Assurance, Annuity and General Association Ltd. | 1880 | S | P | L | L |
| South Australian Mutual Life Assurance Society Ltd. | 1881 | A | M | L | L |

TABLE A1.1
LIFE OFFICES FORMED IN AUSTRALIA TO 1900 (Continued)

| Name of Firm | Date Formed | Head Office | Type of Firm | Members' Liability | Types of Policies |
|---|-------------|-------------|--------------|--------------------|-------------------|
| Hobart-town and Launceston Industrial Guarantee, Life Endowment and Annuity Company | 1881 | H | M | L | L |
| Colonial Mutual Life and Fire (Insurance Society?) | 1882 | M? | M | L | L,F. |
| Industrial Mutual Life Assurance Society of Australia, Limited. | 1884 | B | M | L | I |
| Federal Mutual Assurance Association of Australasia | 1884 | M | M | L | L |
| Australasian Trust Management Assurance and Investment Company | 1885 | S | P | L | L |
| Australian Mutual Prudential and Medical Assurance Society Ltd. | 1886 | S | M | L | I,S. |
| Citizens' Life Assurance Company Limited | 1886 | S | P | L | I |
| Australian Metropolitan Life Assurance Company Ltd. | 1895 | B | P | L | L,I. |
| People's Prudential Benefit Society | 1896 | S | P | L | L,I. |
| Standard Life Association Ltd. | 1899 | S | P | L | L,I. |

Additional Information

Further details of firms listed in table A1.1 are presented below. This information should be read in conjunction with Chapters 4 and 5.

Australian Fire and Life Insurance Company [1836] appears to have been the first Australian-owned firm to successfully commence life insurance operations. A marine branch was added to the company during 1839 [The Australian (5 January, 1839)]. As a result, it was renamed the Australian General Life and Marine Association. The company's life insurance business was transferred to Australasian Colonial and General Life Assurance and Annuity Company (U.K.) during 1843, resulting in another name change - this time to the Australian General Assurance Company. A reinforcing Bill, dated 27 October 1845, enabled it to sue or be sued. A Statute of 12 February, 1857 incorporated the company, but without limited liability. Shareholders of the company were granted limited liability during 1865. In 1890 the company was acquired by Alliance Marine and General Assurance Company Limited (U.K.).

Derwent and Tamar Fire, Life and Marine Insurance Company [1838] was initially formed for a 14 year period. It appears to have been very successful with general insurance [Chitty (1921:89)]. Management decided to drop life insurance in 1845, and started buying up existing policies. The company was absorbed by London and Lancashire Life Assurance Company (U.K.) during 1912.

Van Diemen's Land Fire and Marine Insurance and Life Annuity Company [1838] was wound up in 1849. Refer to Chapter 4 for a detailed discussion of this firm.

Sydney Alliance Marine and Fire and Life Assurance Company [1839] was the last of the Australian life companies formed prior to the 1840s depression. A N.S.W. Bill (Act 3 Vic. 1839) formally recognized this firm (a copy is available from the Mitchell Library, Sydney). However, there is no evidence that it actually issued any life policies [Gray (1977:20)]. The company was wound up during 1843, after apparent dissatisfaction with directors [Cyclopedia of New South Wales (1907:563)].

South Australian Marine and Fire and Life Insurance Company [1844] appears to have been wound up during 1846. Little other information exists on this company.

Australian Mutual Provident Society [1848] was registered on 28 December 1848, under the *Friendly Society's Act* (N.S.W., 7 Vic. 10) of 1843. It commenced operations on 6 February, 1849. A.M.P. was the first firm to sell endowment assurance policies in Australia. During 1857 it was incorporated under its own Act of Parliament. Today, it is one the largest life insurers in Australia.

Marine, Life and Casualty Assurance Society [1853] was established to issue policies from the office of the P & O Company. Nobbs (1978:248) refers to this firm, but notes that there is no evidence that it wrote any life business.

Colonial Insurance Company of Victoria [1854] was registered by a deed of settlement, dated 23 August 1854. The nominal capital of the company was £200,000, divided in 40,000 shares of £5 each. The deed of settlement stated that the company could only issue non-participating policies (clause 75). It also included a limitation on shareholders' liability, which was to be inserted in each

policy issued by the company. Colonial Insurance appears to have been wound up during 1865.

Sydney Insurance Company, Fire, Life and Marine [1855] evolved from the Sydney Fire Insurance Company (est. 1844). It was eventually absorbed by the Commercial Union Assurance Company of Australia (U.K.), during 1880.

Australasian Fire, Life and Marine Insurance Company [1857] had a life insurance branch which was protected by a special Act of Parliament, against claims arising out of its fire and marine insurance branch. The company's fire and marine business was absorbed by the Australian Alliance Assurance Company (est. 1862) in 1872, through a sale of shares. Its life business continued, although existing policyholders were given the option of transferring to the latter company.

Victoria Life and General Insurance Company and Savings Institute [1859] conducted a life, fidelity guarantee, and reinsurance business for its parent company, the Victoria Insurance Company Ltd. (est. 1849). The life policies issued by Victoria Life provided for an annual *guaranteed terminal bonus*, which was not contingent upon its performance [Gray (1977:26)]. As such, the policies have been classified here as non-participating. The company's general insurance operations were transferred to Victoria General Insurance and Guarantee Company during 1889. Its life insurance business was wound down to the point where operations were voluntarily liquidated in 1928.

Australian Alliance Assurance Company [1862] was constituted by a deed of settlement. It appears to have been extremely successful with general insurance

operations during its first few decades of operation [A.I.B.R. (1880:351)]. While formed in 1862, it did not commence life operations until 14 April, 1864. The life fund of the company was wound up during 1953, with a payment on the last existing policy [Gray (1977:27)].

United Fire and Life Insurance Company [1863] had a nominal capital of £500,000. It is referred to by Gray (1977:24). Little other evidence exists on this company. It appears to have been wound up during 1863 or 1864.

Adelaide Life Assurance & Guarantee Company [1866] was formed by a deed of settlement, dated 29 November 1865. The nominal capital of the firm was £100,000, divided into 20,000 shares of £5 each. Directors subsequently applied for incorporation under a Private Act of Parliament, which was assented to during January of 1866. Shareholders were liable for double the par value of their shares. As at 30 June 1867, the company had 96 life policies in force, with sums insured of £33,100 [Prospectus and Tables of Rates (1867), available from the Mitchell Library, Sydney]. Policyholders were not given voting rights. The company ceased writing new life business in 1888. It continued its guarantee business until 1901. The company went into voluntary liquidation during 1910.

Mutual Life Association of Australasia [1869] commenced business in Sydney on 1 July, 1869. The liability of policyholders was unlimited until a special Act of the N.S.W. Parliament was passed in January of 1873. In order to raise preliminary capital, the firm issued forty-nine fully-paid policies for single lump sum premiums. The Cyclopedia of New South Wales (1907:575) states that these founding policies were granted upon select lives:

. . . for such sums as would include an addition, by way of a guaranteed bonus, beyond the amounts that the same premiums would purchase under the ordinary Tables.

These policies were identical to later policies in all other respects. Mutual Life merged with Citizen's Life Assurance Company Limited (est. 1886) in 1908 to form the Mutual Life and Citizens' Assurance Company Ltd., a proprietary concern.

National Mutual Life Association of Australasia Limited [1869] was an offshoot of the National Insurance Company (est. 1868), a fire and general insurance company. The Cyclopedia of New South Wales (1907:581) states that, with the latter:

. . . it soon became evident that a proprietary life office in Victoria had little chance of succeeding, and that the only plan was to adopt the mutual system.

The National Mutual is one of the largest life insurers operating in Australia today.

Mutual Assurance Society of Victoria [1870] merged with the National Mutual (est. 1869) on 30 December, 1896. The firm is discussed in detail in Chapter 4.

Australian Widows' Fund Life Assurance Society [1871] was based on the Scottish Widows' Fund (U.K.). It was incorporated as a company limited by guarantee under the *Victorian Companies Act*. The life business of the Fund was transferred to the Mutual Life and Citizens' Assurance Company Ltd. (est. 1908) during 1910.

Post Office Mutual Life Assurance Society [1871] restricted its membership to employees of the Post Office of Victoria. Little other evidence exists on this Society. It was wound up during 1899 after it transferred all of its policies (185 in total) to the Australasian Temperance and General Mutual Life Assurance Society Ltd. (est. 1876) [Gray (1977:106)].

Colonial Mutual Life Assurance Society Ltd. [1872] was formed in Melbourne during 1872, and almost simultaneously opened offices in Sydney, Brisbane, Adelaide, Perth, and Hobart. The Mutual's articles permitted the board of directors to issue foundation policies. The holders of such policies were referred to as "shareholders". Colonial Mutual introduced policies with very broad terms. Policies were advertised as "unconditional, unchallengeable and indefeasible on any grounds whatever". They were also advertised as not being voided by "voyage, travelling, change of residence, occupation or suicide" (even hanging). The Society is still in existence today.

Emerald Hill & Sandridge Mutual Provident Association [1873] ceased writing life business during the nineteenth century.

Australasian Civil Service Mutual Assurance Company [1874] was incorporated by a special Act of Parliament. The firm had investment and insurance departments. It sought to raise debenture funds of £100,000, offering debenture holders 6% on amounts paid up, 10% of the profits in the insurance department, and all of the profits from the investment department. Half of the debenture funds had to be invested in government securities, and the remaining half, in real or personal property and loans upon personal securities approved in connection

with life assurance of the firm. The debentures were to be issued for a fixed term, renewable from time to time until the firm determined to pay off the debt. There were no restrictions on the transferability of debentures. A copy of the prospectus is held in the A.M.P. Archives, Sydney. All debenture holders and policyholders were entitled to vote. There is no evidence of any life policies being sold by the firm.

Australian Mutual Assurance Company Ltd. [1874] was established in Sydney. An undated advertisement for this company exists in the A.M.P. Archives, Sydney. Little other evidence of this company's activities could be located.

Legal and General Life Assurance Society of Australasia [1875] entitled participating policyholders to 75% of its actuarial surplus. It was taken over by Australian Alliance Assurance Company (est. 1862) during 1876, after mismanagement [A.I.B.R. (1877:16)]. An information booklet on this firm is held in the A.M.P. Archives, Sydney.

Australasian Temperance and General Mutual Life Assurance Society Ltd. [1876] developed from the Independent Order of Rechabites, a friendly society registered in 1869 for the benefit of total abstainers. At the end of 1875, the society had only 128 policies in force, assuring £14,310. As a result of this disappointing performance, it was decided in 1876, to form a life insurance branch as a separate entity which would not be limited by the policy restrictions of the *Friendly Society's Act*. Temperance and General Mutual was registered as a company limited by guarantee under the *Victorian Companies' Act* on 6 December, 1876. On 16 January 1885, policyholders of the firm adopted their directors' recommendation to add an industrial department. During 1974 the

name of the firm was changed to the T & G Mutual Life Assurance Society. It was later absorbed by National Mutual (est. 1869) during 1982.

Post Office Mutual Life Assurance Society [1876] transferred its business to Australasian Temperance and General Mutual Life Assurance Society Ltd. (est. 1876) during 1889 [Nobbs (1978)].

Australian Standard Life Assurance Company [1878] had an initial paid-up capital of £25,000. The company appears to have been wound up in 1878 or 1879.

New South Wales Widows' Fund [1878] is referred to by Gray (1977:24). The Fund appears to have been very short-lived. No other evidence of its operations could be located.

City Mutual Life Assurance Society Limited [1878] is discussed in some detail in Chapter 4. The name of the Society was changed to Capita Financial Group Ltd during 1986. It merged with MLC Life Limited during 1990.

Intercolonial Life Assurance, Annuity and General Association Ltd. [1880] was formed with a nominal capital of £100,000 shares of £1 each. Shareholders made an initial payment of 10/- per share. Policyholders were entitled to 80% of firm profits. The Association issued policies with sums insured of £50 or upwards, and premiums payable either yearly, half-yearly, quarterly or monthly. An information booklet on this firm is held in the A.M.P. Archives, Sydney. It appears to have been wound up shortly after formation (1881?).

South Australian Mutual Life Assurance Society Ltd. [1881] transferred its life business to the Australasian Temperance and General Mutual Life Assurance Society Ltd (est. 1876) during 1890.

Hobart-Town and Launceston Industrial Guarantee, Life Endowment and Annuity Company [1881] ceased writing life business during the nineteenth century.

Colonial Mutual Life and Fire (Insurance Society?) [1882] is referred to by Nobbs (1978:246). No other details of this company could be located.

Industrial Mutual Life Assurance Society Of Australia, Limited [1884] was registered in Brisbane on 1 February, 1884. The society went into liquidation during 1888 [A.I.B.R. (1889:282)].

Federal Mutual Assurance Association of Australasia [1884] transferred its life business to the Australasian Temperance and General Mutual Life Assurance Society Ltd during 1890.

Australasian Trust Management Assurance and Investment Company [1885] was incorporated by an Act of Parliament (37 Vic., No. 19). The nominal capital of the company was £100,000. A copy of the original prospectus of this company is held in the A.M.P. Archives, Sydney. It appears to have been wound up shortly after formation.

Australian Mutual Prudential and Medical Assurance Society Ltd. [1886] was registered on 18 August, 1886. The Society was concerned mainly with industrial life business. It was liquidated during 1887.

Citizens' Life Assurance Company Limited [1886] was incorporated on 31 December, 1886. During 1908 it amalgamated with the Mutual Life Association to become the Mutual and Citizens' Life Assurance Company. This latter firm was run essentially on the same basis as Citizens' Life, and has been the largest domestic life insurance company during the twentieth century. Refer to Chapter 5 for further details on this company.

Australian Metropolitan Life Assurance Company [1895] was registered on 17 July 1895, with a nominal capital of £12,000, paid up to £5,000. The name of the company was changed to Mercantile Mutual Life Insurance Company Ltd. during 1971.

People's Prudential Benefit Society [1896] was registered on 10 August 1896, with a nominal capital of £10,000. At that time it purchased the business of the People's Mutual Medical Benefit Fund for £3,500. The name of the firm was changed to the People's Prudential Assurance Company during 1899.

Standard Life Association Ltd. [1899] was registered on 27 March 1899, with a nominal capital of £200,000, divided into 20,000 shares of £10 each. Initial paid-up capital was 10/- per share. The Association dealt mainly with industrial life business (both participating and non-participating). Its ordinary branch was conducted on a *purely mutual* basis. During 1910 the Association's business was transferred to the Colonial Mutual Life Assurance Society Ltd. (est. 1872).

APPENDIX 2

TYPES OF LIFE INSURANCE POLICIES

Life insurance firms have offered a variety of policies. Traditionally, these have included temporary, whole of life, endowment assurance, and pure endowment policies. In recent times they have also offered insurance bonds. The nature of each type of policy is discussed below.

A. TEMPORARY LIFE INSURANCE

Term Life Policies

Term life policies provide that the insurer will pay a particular amount (the "sum insured") to a specified beneficiary(ies) if the insuree dies within the contract period. If the insuree survives this period, the protection ceases and there is no return of premiums paid. Term policies do not participate in the profits of insurer (i.e. do not attract bonuses). Nor do they acquire surrender values (i.e. they have no savings element).¹ As such, they are similar in nature to general insurance contracts.

Traditionally, insurers had the option at the end of each term to refuse to continue insuring a policyholder. Today, term life policies typically provide for automatic or guaranteed renewal. However, future premiums are not guaranteed (i.e. can be increased at the discretion of the insurer), and are generally higher than in the absence of this option. Further, automatic renewal normally ceases at a prespecified age (e.g. 65).

1. If a policyholder seeks to withdraw from a term policy, insurers will sometimes refund the unexpired portion of the premium paid. However, firms are under no legal compulsion to do this.

Term policies can involve the payment of a lump sum at the commencement of the term, or a series of regular payments during the term. The latter type of arrangement can involve decreasing, increasing, or level premiums. A *decreasing* term policy is where the death benefit reduces over time. Mortgage redemption insurance is an application of this. A *level* premium policy spreads the higher cost of life insurance in the older years, due to the increased risk of death, evenly across the term covered. This creates an effective front-end loading of premiums, especially during inflationary periods. An example of an *increasing* term is where the premium payable is linked to an inflation index.

Term policies typically include a convertibility option, allowing the insuree to convert to a whole of life, endowment assurance, or unbundled policy (described below). Alternatively, term policies can be sold as a complement to whole of life, endowment assurance or unbundled policies, thereby increasing an insuree's cover.

Personal Accident, Sickness and Disability Policies

Certain insurance policies protect insurees against the economic consequences of injury or sickness (e.g. loss of income). These include personal accident insurance, sickness insurance, and disability policies.

Disability cover comes in two main forms: *total and permanent disability insurance* (TPD) and *disability income or income replacement insurance* (DII). TPD policies provide for the payment of a lump sum in the case of "permanent" disability. A DII policy pays an income if the policyholder is totally disabled for a temporary period.

Group Life Insurance

Group life insurance is where death and/or disability cover is provided for a group of people under some master policy. The essence of the group insurance concept is that all members (e.g. employees) pay equal contributions, or contributions which are determined by a criterion such as salary levels. In particular, premiums are not based upon the individual health risks of group members. To avoid within-group adverse selection, membership is often compulsory. Mayers and Smith (1981:421-422) suggest that the demand for grouping arises because of low incentive conflicts between insurers and group organizers (e.g. employers).

Credit Life Insurance

A credit life insurance policy is usually purchased by a debtor, as part of a credit transaction (representing a special form of collateral). Under such a policy, the creditor is paid the sum insured (e.g. the amount of the debt) in the event of the debtor's death. It is usually in the form of decreasing term insurance. Credit life rates reflect mortality experience for a wide range of ages and insurability status.

B. WHOLE OF LIFE AND ENDOWMENT POLICIES

Whole of life policies provide for a specified amount, plus any accrued bonuses, to be paid by the insurer to a named beneficiary(ies) on the death of the policyholder. The premiums for a whole of life policy are usually level and payable for the entire duration of the contract. They are payable in the sense that premiums may be paid, and if they are paid, the insurance firm must accept them. An insuree can decide to cease premium payments (surrendering the

policy), and receive a cash or surrender value. However, it could take a number of years (generally at least 5 years) before the surrender value is equal to the paid up premiums. The length of this break-even period reflects the high level of up-front agent commissions associated with these policies.

Whole of life policies can have a limited-premiums provision. Under such a provision, premiums need be paid from a pre-determined age (e.g. 65 or 85). Whole of life policies can also include a convertibility option (say to an endowment policy), to offer flexibility to insurees.

Endowment assurance policies exist where a specified amount is payable on survival to maturity, or on prior death. A whole of life policy is equivalent to an endowment policy that is written for an unlikely age (usually 90 to 100 years of age). The policy is priced such that accumulated reserves equal the sum insured at that age. If that age is achieved, policyholders can usually surrender the policy and receive the maturity value.

Whole of life and endowment assurance policies "bundle" savings and protection elements. As such, it is not possible to unambiguously determine what proportion of premiums go towards either savings or protection elements. This makes it difficult for policyholders to assess managerial performance (e.g. rate of return achieved).

Although not very common today, a number of life offices have issued *pure endowment* policies. These involve two potential payouts. If death occurs before maturity date, or if the policy is surrendered, any accumulated premiums (plus accrued interest) are paid to the beneficiary. Otherwise, the beneficiary receives the face value of the policy at the maturity date. As such, pure endowments contain no protection element. An endowment assurance policy can be regarded as a combination of pure endowment and term insurance.

C. INSURANCE BONDS

Insurance bonds are another type of life insurance policy. These are relatively long-term in nature (e.g. 10 to 30 years duration). Premium payments can be made in the form of a single lump sum at the commencement of the policy, or less commonly, as a regular series of sums. The premium amount is invested on behalf of the insuree. The individual decides what proportion of the premium goes into the death benefit (life cover) and what represents the savings/investment component. Typically, an annual management fee (e.g. 3%) is deducted. As such, the protection, savings, and protection elements of a premium are unbundled.

The death benefit associated with an insurance bond can be a prespecified amount plus the accumulated savings component, or a prespecified amount which includes the savings component. Sometimes a minimum death benefit is required.

Holders of insurance bonds do not receive "dividends". Instead, "bonuses" (earnings net of management charges) accumulate on their account. These are in turn reinvested. If the insuree survives the contract period, he/she receives any accumulated savings (i.e. the principal amount plus any bonuses). Insurees can surrender their policies during the contract period and receive their accumulated savings, but in doing so they are usually charged an exit fee.

There are two main types of insurance bonds. These have been termed *investment account* and *investment linked* policies. Under an *investment account* policy, premiums less the cost of life cover and management expenses, are paid into an individual investment account to which tax-paid interest is credited. The policyholders' investment is guaranteed, and usually comprised of money market and fixed interest securities. They are also known as capital guaranteed or stable-capital insurance bonds. Sometimes a minimum return is also guaranteed.

An *investment linked* policy is where the value of a policyholders' investment varies with the movement in a specific investment portfolio. They are also known as market-linked or unit-linked insurance bonds. For investment linked life insurance business, the investment portion of premiums are used to buy an amount of units, representing a share in a body of underlying assets. The units are known as property bonds, managed bonds, or equity bonds, according to how the funds are invested. Managed bond funds are typically a combination of shares, property, and fixed interest investments. Unit prices for linked life business are determined periodically (e.g. daily, weekly or monthly) and reflect the value of the underlying assets.

Investment account policies were first written in Australia during 1974 [Solomon and Friedman (1982:265)]. The first direct *investment linked* policy was issued in Australia during 1979.² For the year ended 31 December 1989, they collectively accounted for 35.5% of new annual premiums and 91.5% of new single premiums [Source: Insurance and Superannuation Commission, Annual Report (1989-90)].

A variation of the insurance bond is the *universal life* or *integrated life* policy. It was first introduced in the United States during 1979. By the close of 1985 virtually every U.S. life firm had issued such a product, and its aggregate sales accounted for 38 percent of total individual life premiums [refer to Black and Skipper (1987:85)].³ Universal policies offer flexibility regarding the pattern of insurance benefits. Policyholders can usually alter both the amount and the

-
2. Melville (1969) provides an early exposition of these types of policies, advocating that the unit-linked approach should replace conventional long-term policies in Australia.
 3. Universal life policies are less popular in Australia. This appears to be driven by tax laws that promote long term contracts with pre-specified protection and savings elements.

timing of all premiums after the first payment, as well as the face value. Consequently, universal policies can be described as a flexible-premium, adjustable-death-benefit product. Further, agent compensation is primarily linked to the amount of protection. If there is no protection element (i.e. it's a pure savings policy), agent compensation is low (e.g. 2 to 3 percent of total premiums).

D. SPECIAL CLASSES OF LIFE POLICIES

Superannuation Policies

Superannuation is a special type of life insurance product concerned with the provision of death and retirement benefits for workers. Private superannuation plans became popular in Australia after 1920. As the concept of superannuation spread, the organization through life offices evolved, and grew rapidly from 1939. These schemes often involved a combination of group term insurance, to cover the risk of death prior to retirement, and pure endowments or deferred annuities, to provide a lump sum or pension on retirement. During the 1950's life offices also began to issue *investment account* contracts for group superannuation business.

Industrial Life Policies

Industrial life policies were first offered in Australia during the 1870's. Traditionally, they have differed from ordinary life policies in a variety of ways. First, premiums of industrial policies are collected from the home of the insuree by an agent. Second, they involve frequent premium payments (usually weekly or monthly instead of yearly, half-yearly, or quarterly). Third, they are issued with a relatively small sum insured on individual lives. Finally, it takes longer for

industrial life policies to acquire a surrender value (say, six years). No Australian-owned life office has issued industrial life policies since the 1980's.

E. ANNUITIES

A life annuity policy provides periodic payouts to a beneficiary (the annuitant). These payments may be payable until the death of the beneficiary, or for a specified period. Annuities can be purchased for a lump sum, or for a series of instalment premiums. Further, they can be *immediate* or *deferred* annuities, depending upon whether the insurer starts paying the annuity at the commencement of the policy or at some later date. However, immediate annuity business is not very common in Australia.

APPENDIX 3

A LISTING OF LIFE INSURANCE FIRMS AS AT 1970 AND 1989

Life Insurance Firms as at 31 December, 1970

As at 31 December 1970, there were 48 firms registered under the *Life Insurance Act 1945* (refer to the Insurance Commissioner's Twenty-Fifth Annual Report). These included 42 direct underwriters and 6 professional reinsurers. A list of those firms, according to the nature of their ownership, is presented below.

Mutuals (Total of 9)

The Australasian Temperance and General Mutual Life Assurance
Society Limited

Australian Mutual Provident Society

The City Mutual Life Assurance Society

Colonial Mutual Life Assurance Society

National Mutual Life Association of Australasia Limited

Cuna Mutual Insurance Society

Friend's Provident and Century Life Office

Norwich Union Life Insurance Society

Scottish Amicable Life Assurance Society

Companies (Total of 33)

Adriatic Insurance Company

Amev Life Assurance Company Limited

Associated National Insurance Company Limited

Australian Metropolitan Life Assurance Company Limited

Australian Provincial Assurance Association Limited

Business Men's Assurance Company of Australasia Limited
Commerical Life Assurance Limited
Commerical Union Assurance Company of Australia Limited
Commonwealth General Assurance Corporation Limited
Eagle Star Insurance Company Limited
Equitable Life and General and General Assurance Corporation
The Federation Insurance Limited
Greater Pacific Life Assurance Company Limited
Guardian Assurance Company Limited
Hallmark Life Insurance Company Limited
Invincible Life & General Insurance Co. Ltd.
Legal and General Assurance Society
The Mutual Life and Citizen's Assurance Company Limited
New Zealand Victoria Life Limited
Occidental Life Insurance Company of California
Phoenix Life Assurance Company of Australia Limited
Producers and Citizens Life Life Insurance Company Limited
The Provident Life Assurance Company Limited
The Prudential Assurance Company Limited
Royal-Globe Life Assurance Company Limited
Security Life Assurances Limited
Skandia Australia Insurance Limited
South British United Life Assurance Company Limited
Switzerland Life Assurance Society Limited
Transport and General Life Assurance Company Limited
Underwriting and Insurance Limited
Unity Life Assurance Limited

Yorkshire-General Life Assurance Company Limited

Professional Reinsurers (Total of 6)

Australian Reinsurance Company Limited

Mercantile and General Life Reassurance Company of Australia Limited

Mercantile and General Life Reinsurance Company Limited

Munich Reinsurance Company of Australia Limited

Swiss Reinsurance Company

The Victory Reinsurance Company of Australia Limited

Life Insurance Firms as at 31 December, 1989

As at 31 December 1989, there were 55 firms registered under the *Life Insurance Act* 1945 [refer to the Quarterly Statistical Bulletin (December 1989) issued by the Insurance and Superannuation Commission]. These included 49 direct underwriters and 6 professional reinsurers.

Local Mutuals (Total of 4)

Australian Mutual Provident Society

Capita Financial Group Limited (formerly The City Mutual Life Assurance Society)

Colonial Mutual Life Assurance Society

National Mutual Life Association of Australasia Limited

Foreign Mutuals (Total of 2)

Cuna Mutual Insurance Society

Friend's Provident Life Office

Local Companies (Total of 18)

ACC Life Limited

Armstrong Jones Life Assurance Limited

ANZ Life Assurance Company Limited

Business Men's Assurance Company of Australia Limited

Commonwealth Life Limited

Equity Life Limited

FAI Life Insurance Society Limited

Fidelity Life Insurance Company of Australia Limited

HCF Life Insurance Company Pty Limited

Le Forte Life Limited

Liberty Life Limited

MLC Life Limited

National Australia Financial Management Limited

NRMA Life Limited

Occidental Life Insurance Company of Australia Limited

Oceanic Life Limited

Regal Life Insurance Limited

Westpac Life Limited

Foreign Companies (Total of 25)

Adriatic Life Limited (Italy)

Amev Life Assurance Company Limited (Netherlands)

Ansvar Life Insurance Limited (Netherlands)

Australian American Assurance Company Limited (Hong Kong)

Australian Eagle Insurance Company Limited (U.K.)

Cigna Life Insurance Australia Limited (U.S.A.)
Citicorp Life Insurance Limited (U.S.A.)
Combined Life Insurance Company of Australia Limited (U.S.A.)
Continental Assurance Limited (U.K.)
Federation Life Insurance Limited (Switzerland)
Guardian Assurance Public Limited Company (U.K.)
Hallmark Life Insurance Company Limited (U.S.A.)
Heritage Life Insurance Limited (U.S.A.)
Investors Life Insurance Company of Australia Limited (U.K.)
Legal and General Life of Australia Limited (U.K.)
Lumley Life Limited (U.K.)
Mercantile Mutual Life Insurance Company Limited (Netherlands)
Norwich Union Life Australia Limited (U.K.)
NZI Life Limited (New Zealand)
The Prudential Assurance Company Limited (U.K.)
The Prudential Assurance Company of Australia and New Zealand (U.K.)
Scottish Australia Financial Management Limited (Scotland)
Sun Alliance Life Assurance Limited (U.K.)
Tyndall Life Insurance Company Limited (U.K.)
Zurich Australian Life Insurance Limited (Switzerland)

Professional Reinsurers (Total of 6)

Australian Reinsurance Company Limited (Switzerland)
Cologne Life Reinsurance Company of Australia Limited (West Germany)
The Mercantile and General Life Reassurance Company of Australia
Limited (U.K.)
Munich Reinsurance Company of Australia Limited (West Germany)

Swiss Reinsurance Company (Switzerland)

Victory Reinsurance Company of Australia Limited (U.K.)

APPENDIX 4

ADDITIONAL INFORMATION ON COMPANIES AND MUTUALS

FOR THE YEAR ENDING 1970

The information contained in this appendix should be read in conjunction with Chapter 6.

PORTFOLIO HOLDINGS - NUMBER OF POLICIES IN FORCE (%)
FOR THE YEAR ENDING 1970

| Policy Type | Firm Type | | Two-Tailed Probabilities | |
|-----------------------------|-----------|-----------|--------------------------|-------------|
| | Mutuals | Companies | Mann-Whitney | Student's t |
| <u>Whole of Life</u> | | | | |
| Mean | 49.95 | 41.33 | .230 | .214 |
| Median | 52.51 | 41.32 | | |
| Standard Deviation | 15.74 | 16.99 | | |
| <u>Endowment Assurances</u> | | | | |
| Mean | 46.41 | 45.71 | .958 | .913 |
| Median | 45.09 | 45.07 | | |
| Standard Deviation | 14.73 | 15.74 | | |
| <u>Pure Endowments</u> | | | | |
| Mean | 1.58 | 4.63 | .614 | .305 |
| Median | 1.14 | 2.01 | | |
| Standard Deviation | .84 | 8.07 | | |
| <u>Other</u> | | | | |
| Mean | 2.06 | 8.32 | .715 | .249 |
| Median | 1.49 | 1.83 | | |
| Standard Deviation | 1.51 | 14.72 | | |
| n = | 8 | 31 | | |
| df = | | | | 37 |

Source: Compiled from the Insurance Commissioner's Twenty-Fifth and Twenty-Sixth Annual Reports (1970 and 1971).

**PORTFOLIO HOLDINGS - ANNUAL PREMIUMS IN FORCE (%)
FOR THE YEAR ENDING 1970**

| Policy Type | Firm Type | | Two-Tailed Probabilities | |
|-----------------------------|-----------|-----------|--------------------------|-------------|
| | Mutuals | Companies | Mann-Whitney | Student's t |
| <u>Whole of Life</u> | | | | |
| Mean | 49.37 | 40.84 | .114 | .112 |
| Median | 52.81 | 42.84 | | |
| Standard Deviation | 13.17 | 15.25 | | |
| <u>Endowment Assurances</u> | | | | |
| Mean | 43.33 | 46.67 | .821 | .752 |
| Median | 41.09 | 44.69 | | |
| Standard Deviation | 9.96 | 15.03 | | |
| <u>Pure Endowments</u> | | | | |
| Mean | 2.94 | 7.86 | .357 | .289 |
| Median | 3.34 | 3.58 | | |
| Standard Deviation | 1.33 | 11.92 | | |
| <u>Other</u> | | | | |
| Mean | 4.36 | 7.98 | .768 | .491 |
| Median | 2.66 | 3.55 | | |
| Standard Deviation | 4.04 | 13.13 | | |
| n = | 8 | 31 | | |
| df = | | | | 37 |

Source: Compiled from the Insurance Commissioner's Twenty-Fifth and Twenty-Sixth Annual Reports (1970 and 1971).

**PORTFOLIO HOLDINGS - NEW POLICIES ISSUED (%)
FOR THE YEAR ENDING 1970**

| Policy Type | Firm Type | | Two-Tailed Probabilities | |
|-----------------------------|-----------|-----------|--------------------------|-------------|
| | Mutuals | Companies | Mann-Whitney | Student's t |
| <u>Whole of Life</u> | | | | |
| Mean | 58.91 | 45.50 | .106 | .137 |
| Median | 60.61 | 45.42 | | |
| Standard Deviation | 15.82 | 22.92 | | |
| <u>Endowment Assurances</u> | | | | |
| Mean | 35.55 | 34.93 | .958 | .930 |
| Median | 34.29 | 36.36 | | |
| Standard Deviation | 13.63 | 18.22 | | |
| <u>Pure Endowments</u> | | | | |
| Mean | 2.07 | 7.27 | .434 | .217 |
| Median | 2.32 | 2.80 | | |
| Standard Deviation | 1.23 | 11.36 | | |
| <u>Other</u> | | | | |
| Mean | 3.87 | 12.31 | .192 | .252 |
| Median | 1.72 | 2.78 | | |
| Standard Deviation | 3.87 | 20.84 | | |
| n = | 8 | 31 | | |
| df = | | | | 37 |

Source: Compiled from the Insurance Commissioner's Twenty-Fifth and Twenty-Sixth Annual Reports (1970 and 1971).

**PORTFOLIO HOLDINGS - NEW ANNUAL PREMIUMS (%)
FOR THE YEAR ENDING 1970**

| Policy Type | Firm Type | | Two-Tailed Probabilities | |
|-----------------------------|-----------|-----------|--------------------------|-------------|
| | Mutuals | Companies | Mann-Whitney | Student's t |
| <u>Whole of Life</u> | | | | |
| Mean | 51.91 | 39.06 | .076 | .08 |
| Median | 51.65 | 37.94 | | |
| Standard Deviation | 13.50 | 18.40 | | |
| <u>Endowment Assurances</u> | | | | |
| Mean | 38.82 | 41.05 | .987 | .748 |
| Median | 42.07 | 39.98 | | |
| Standard Deviation | 10.02 | 18.36 | | |
| <u>Pure Endowments</u> | | | | |
| Mean | 4.11 | 9.19 | .673 | .293 |
| Median | 4.39 | 4.87 | | |
| Standard Deviation | 1.99 | 13.06 | | |
| <u>Other</u> | | | | |
| Mean | 5.16 | 10.70 | .826 | .462 |
| Median | 3.35 | 3.95 | | |
| Standard Deviation | 4.58 | 20.40 | | |
| n = | 8 | 31 | | |
| df = | | | | 37 |

Source: Compiled from the Insurance Commissioner's Twenty-Fifth and Twenty-Sixth Annual Reports (1970 and 1971).

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