

# **The Right to Underwrite? An Actuarial Perspective with a Difference**

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## **Abstract**

For a very long time, underwriting has formed part of the actuarial canon. With increasing frequency, challenges are being issued against the right of insurance companies to underwrite their applications for new business, arguing that certain aspects of the practice are undesirably discriminatory.

This paper explores the role of the actuary in the underwriting process, and the challenges that are being set for the profession (as opposed to the life insurance industry) as a result of this role.

The distinction between the interests of the actuarial profession, and the interests of the life insurance companies has become - unfortunately - increasingly blurred. This paper considers how the profession can maintain this distinction, and so retain its identity as a profession worthy of public trust and respect.

## **Keywords**

Merit goods; fairness; social legitimacy; risk classification; independence; professional status.

## **1. Introduction**

In recent years there have been a number of papers by actuaries commenting on broader social debate about what the authors call the 'right to underwrite' or sometimes 'the freedom to underwrite'. Examples include Leigh (1996) in the UK and de Ravin & Rump (1996) in Australia. These authors see the role of actuaries as defending the insurance industry against criticism from other interest groups which Leigh (for example) disparages as "the medics, the moralists, and those who are genetically unfit" (Leigh, 1996, p.19). In this paper we intend to address the same issues as these authors, but from a more independent perspective.

This paper is not meant to imply that life insurance companies should not seek to influence public debate on underwriting practice so as to protect their commercial interests. Their response as an industry is theirs to make, and may include lobbying, public relations and the sponsorship of research which the industry thinks likely to support the industry's case; an example of the latter approach is the research initiated and financed by the American Council of Life Insurance (ACLI) which was published in Cummins et al (1983). (According to the preface, this work was commissioned because ACLI "was concerned about legislative and judicial activity in this area and its potential effects on the life insurance industry".) In this regard, the life insurance industry is no different from that of any other business grouping pursuing its own agenda. However, the issue with which we are concerned is the role of the actuarial profession in debate on underwriting practice, and the need to articulate a separate, professional, actuarial perspective on the matter.

In our view the issue of the "right to underwrite" is not one that can be examined solely from within the confines of our discipline, or from the perspectives of the life insurance industry. It is necessary to take a step back, and to look at the nature of insurance, and the role which it plays in society. It is only after doing this that it is possible to contextualise the "right to underwrite".

This paper examines these broader issues first, since their clarification will establish a framework in which insurance practice can be located. We start by outlining the special features of insurance business which might lead public policymakers to impose restrictions on underwriting practices. We then draw attention to the existence of alternative concepts of distributive justice to the familiar "actuarial fairness", and discuss criteria by which a risk classification scheme might be judged. After noting the limitations of the purely actuarial perspective on these issues, we consider the proper role of the actuarial profession in underwriting, and then the broader issue of the proper role of the actuarial profession in society. The final section summarises and concludes the paper.

## **2. The nature of insurance**

### *Special features of the insurance industry*

Insurance companies, like all businesses, operate in a social context. Within this context, however, insurance, and particularly insurance of life, health and disability risks, has a number of special features which distinguish it from most other consumer services. Some of these features may lead to a perceived need for distinctive regulation of insurance as compared with other consumer services.

First, the seller of insurance insists on selecting the customers to whom it will sell, and on setting different terms for different individual customers; this is not a familiar phenomenon in consumer mass markets.

Second, the cost of providing the service is not known in advance, on an individual level. This leads to a fundamental tension in all insurance programmes between pooling on the one hand and actuarial rating on the other. This tension between pooling and pricing means that insurance has a dual nature. In its actuarial rating features, it is like private savings accounts. In its needs-tested payout features, it is like public assistance.

Third, insurance is a collective, communal enterprise: it is redistributive by its very nature. This distinguishes insurance both from personal savings for adverse contingencies and from most other consumer services. Insurance can be made more or less redistributive, but it is fundamentally different from most other products, which do not involve pooling and subsequent redistribution according to need.

Fourth, insurance against certain contingencies may be an example of what may be termed a "merit good", that is a good which society considers should be available in certain quantities to all, even to those who do not have the resources to purchase it in a market transaction.

Fifth, insurance may be a "social good", that is a good the supply of which generates positive externalities, so that society has an interest in ensuring that the good is supplied as widely as possible. The notion of a positive externality refers to the benefits, arising from the supply of the service, which accrue to persons other than those to whom the service is supplied. For example, the satisfaction and sense of well-being of the present authors may be increased by the knowledge that we live in a society in which insurance is made available to certain disadvantaged groups. (In this example, the positive externality is relatively intangible in nature, but this need not necessarily be the case.)

Sixth, insurance is unusual in that as well as competing in the usual ways for service industries - price, level of service, product differentiation, recruitment of employees and agents - the insurers also compete in risk selection. An insurer which introduces a new underwriting procedure which facilitates the exclusion of higher risks from its insurance pool gains a competitive advantage over other insurers. This "selection competition" does not contribute to the aggregate welfare of consumers as obviously as do other types of competition, e.g. competition to reduce expenses. It might therefore be argued that public policy should be directed towards discouraging this "bad" competition, and promoting the "good" type of competition, e.g. on expense costs and level of service.

#### *Insurance as a merit good*

It was noted above that certain types of insurance are arguably merit goods, that is goods which society considers should be available in certain quantities to all irrespective of ability to pay. The extent to which this is the case depends on the availability of alternatives to insurance in meeting social needs. For example, in a jurisdiction such as the United States, where access to adequate medical care is largely dependent on the purchase of insurance, it is very clear that insurance disabilities may lead to broader social disabilities. In other jurisdictions such as the United Kingdom, where a high standard of medical care is (for the moment) guaranteed by the State, it is less clear that insurance disabilities lead to social disabilities. In such a society it is much less clear that insurance is a merit good, and indeed one mainstream political party in the UK remains ambivalent about whether it wishes to encourage or discourage private medical insurance.

Medical insurance is not the only form of insurance for which the "merit good" aspect of the cover is influenced by state benefits. The existence and level of state-provided death benefit, disability cover, old age pensions and other welfare benefits all have implications for the extent to which the State expects all individuals to be able to find private insurance cover to meet various contingencies.

A further example where private-sector insurance disabilities might create broader social disabilities is in the provision of mortgage cover, or home loan business. If lenders generally require such insurance, then uninsurable members of society are effectively precluded from home ownership and all the benefits which accrue therefrom. Some governments have recognised the need to remedy this social disability. For example, in France, an agreement has been reached between the FFSA (Federation of French Insurers) and the Ministries of Trade and Health to provide "loan security policies" to HIV-infected individuals, so as to reduce and limit those social disabilities.

The relevance of the above examples, and hence the extent to which insurance can be viewed as a merit good, will differ from country to country. However, the trend in recent years in many countries away from State protection and towards private insurance has tended to increase the extent to which insurance is viewed as a merit good. If private insurance continues to play an increasing role in meeting social needs, it seems likely that society's interest in the social legitimacy of risk classification variables will continue to increase.

Summarising this section, we may note that insurance has a number of special features which mean that it has some of the characteristics of a merit good. Increasingly, this has led to the fairness and social legitimacy of insurance practices being called into question. However, in insurance, the concepts of fairness and social legitimacy are not straightforward, and admit a range of interpretations; it is to these concepts that we now turn.

### **3. Fairness and social legitimacy in insurance**

#### *Notions of fairness*

The argument that underwriting is justifiably unequal lies at the heart of the traditional actuarial defence of the practice. This defence relies on the assumption that all forms of cross-subsidisation are inherently wrong: "it represents an unfair charge to one individual or group to subsidise another individual or group." (Paddon, 1990, p.1363).

The argument put forward by many non-actuarial commentators takes the opposite stand. Society might in reality, they argue, prefer equality to equity - or, more accurately, a greater emphasis on equality of outcome rather than equality of assessment. Actuarial fairness may be seen as seeking to place the costs of misfortune on the unfortunate (O'Neill, 1997), a notion of fairness which non-actuarial commentators may regard as rather eccentric.

How do we decide between these views? A choice between alternative views of fairness is essentially a question of social philosophy. It is not an actuarial question, and actuarial science is of little assistance in thinking about it.

Probably the most influential concept of fairness over the last 25 years has been that proposed by the Canadian philosopher John Rawls (1972), that is the Rawlsian notion of fairness. Rawls' seminal book runs to more than 600 pages, and has spawned an extensive literature; here, we can do no more than sketch the central concepts.

There are two aspects to the Rawlsian notion of fairness: firstly the principle of greatest equal freedom, and secondly the principle of difference. (There is also a principle of equality of opportunity, but that does not pertain to the issues which we consider here.) The first principle, the principle of greatest equal freedom, says that each person or organisation should have the widest possible freedom, but only to the extent that that is compatible with the possession of equal freedom by other persons. The second principle, the principle of difference, says that inequalities may be justified, provided that they make even the poorest members of a society better off than they would otherwise have been. Rawls argues that these principles will be acceptable to all if they place themselves behind a veil of ignorance, that is they assume that, when choosing the principles by which society should operate, they do not know what position in society they occupy.

In our view, from a Rawlsian perspective, it is not at all obvious that fairness in insurance must necessarily and in all circumstances mean "equal treatment for equal risks". Nor is it obvious that the life insurers' unfettered "freedom to underwrite" as advocated by Leigh (1996) is consistent with Rawlsian justice. Such freedom for insurance companies may have adverse effects on the freedom of individuals - for example, if it prevents them from obtaining adequate health care. In most societies the sick and disabled include some of the poorest individuals. It is difficult to see how their exclusion from insurance risk pools can be said to make them better off than they would otherwise have been. 'Freedom to underwrite' may fail to satisfy either of the facets of Rawlsian justice.

The Rawlsian perspective is only one view of justice, albeit an influential one; there are a number of alternatives which could be considered. Some of these place a higher emphasis than Rawls on merit or desert, and could therefore be employed in defence of underwriting variables which society perceives are linked to individual choices (eg. smoking status).

More generally, other ethical theories may offer more support for the paradigm of conventional risk classification - although these theories, unlike many apologists for the insurance industry, generally do not claim to be in any way concerned with fairness.

For example, the principle of utilitarianism - "the greatest good for the greatest number" - might be seen as supporting the exclusion of a minority of persons from insurance pools. However, any utilitarian calculus requires weighting the benefit enjoyed by those able to purchase insurance marginally more cheaply against the harm suffered by those excluded from insurance.

In jurisdictions where buying insurance is the means for obtaining adequate health care, or other merit goods, it is clear that exclusion from insurance can cause very great harm to the individual.

It is not obvious that very great and fundamental harm to the few is outweighed by a marginal price benefit for the many.

It might be easier to defend current practice if the insurance industry took steps to ameliorate the worst harms caused by risk classification, for example by the establishment of industry-wide pools which cover otherwise uninsurable risks. This approach has been followed in a number of countries, sometimes on the insistence of government and sometimes on a voluntary basis.

In conclusion to this section, there are a variety of notions of fairness and ethical philosophies. Actuaries need to accept that there are many possible constructions which could be placed on fairness, and that the actuarial profession has no monopoly on wisdom when society comes to decide between the competing interpretations.

#### *Social consent to insurance practices*

Another feature of a merit good is that it is widely perceived as a "good thing". This is certainly true of life insurance, and the industry's sales are very dependent on this perception. But what happens if life insurance comes to be seen as undesirable because it is "discriminatory"? Experience in other markets suggests that consumer perceptions on ethical issues can have a major impact on businesses. For example, certain UK banks suffered considerable loss of business in the 1980s because of consumer boycotts motivated by the banks' perceived continuing involvement in, and implicit support of, the apartheid regime in South Africa. Consumer activism has also had an increasing impact in relation to environmental issues: for example, in 1995 the Shell Oil Company was forced to abandon its plans for sinking its Brent Spar oil rig at sea, as a direct result of a consumer boycott in several European countries. This was despite the fact that the company believed that scientific evidence on the merits of deep sea disposal as opposed to other decommissioning options (such as on-shore dismantling) was finely balanced.

Note that in both cases, the companies concerned initially disparaged the criticism as being the work of minority pressure groups, rather as some underwriters today disparage criticism of their unfettered "right to underwrite". Yet in both cases, the companies were eventually made to look foolish, being forced to reverse positions in which they had invested considerable financial and political capital, by an increasing flood of public comment.

While these examples do not necessarily imply that the insurance industry will be forced to follow a similar course, they do represent a warning of the possible consequences for any business which fails to respond in a timely manner to changes in prevailing social opinions.

Incidentally, if the idea of life insurance being seen as an undesirable product seems far-fetched, a cursory review of the history of the industry in the United States (Zelizer, 1983) will indicate the varying views which society has from time to time taken of the morality of life insurance practice.

#### *Social legitimacy of risk classification variables*

As we have already noted, the fairness of insurance classification procedures is a question which extends beyond the ambit of actuarial science; indeed, actuarial science has very little to say about it. It is therefore not surprising that many non-actuarial authors have considered the question of what determines the legitimacy of a risk classification variable.

For example, Abraham (1985, p.442) argues that classification variables may be suspect for any of the following reasons.

- (i) A particular characteristic may be used improperly in other fields and is therefore objectionable on symbolic grounds. For example, it is argued that women are often discriminated against in an economic context and therefore sex is suspect as a classification variable. Insurers would ideally like to disassociate risk classification from the use of the same variables to stigmatise particular groups, but this can be very difficult to achieve - particularly since insurers themselves play many roles (e.g. as employers) outside of the context of an insurance contract.
- (ii) There may not be enough data to justify the classification.
- (iii) Some variables may be used only to the disadvantage of certain groups, and never to their advantage. A very obvious example of this in insurance is the underwriting of medically impaired lives for life insurance without a corresponding allowance in annuity prices offered.

Wortham (1986, p.417) proposes seven criteria for assessing rating factors in order to decide whether and how their use should be regulated. These are as follows (with translation into statistical terminology where appropriate):

- (i) Statistical power. The probability of accepting a life on terms which would not be used if all relevant facts were known should be as small as possible.
- (ii) Statistical size. The probability of rejecting a life who would be accepted on the terms proposed if all relevant facts were known should be as small as possible.
- (iii) Causality. Classification factors for which a causal explanation can be given of the link between the factor and higher expected losses are to be preferred to factors for which the link is established purely as a statistical correlation, with no apparent causal explanation.
- (iv) Incentives to loss reduction. Classification factors which provide incentives for the policyholder to reduce the risk of losses are socially beneficial. For example, if cigarette smoking is viewed as a matter of free choice rather than an addiction, then classification by smoker or non-smoker status provides such an incentive.
- (v) Controllability. This criterion is a pre-condition for the previous criterion. Clearly a classification variable cannot provide an incentive to loss reduction unless it is to some extent controllable by the insured.

(vi) Compatibility with social values. This criterion relates mainly to the use or abuse of the classification variable in other contexts. As noted earlier, if a variable is misused or has been misused to disadvantage particular groups, the use of that variable in insurance may be tainted by association. This is exactly the situation which prevails in many countries with regard to racial discrimination in insurance.

(vii) Are alternatives to private insurance available? As noted earlier, the existence of such alternatives may result in insurance classifications being of lesser concern for public policy.

Probably only the first two of these criteria, that is the statistical criteria, would normally be considered in any actuarial analysis to determine an appropriate rating structure. This does not mean that the actuarial approach is wrong, but it does mean that it is incomplete.

#### *Limitations of the actuarial perspective*

In order to illustrate our view that the actuarial perspective on underwriting is incomplete, it is instructive to review how actuaries writing in this area have defined underwriting.

One such definition of underwriting or risk classification is that it is "the process of grouping risks with similar risk characteristics so as to appropriately recognise differences in cost" (Paddon, 1990, p.1362).

Implicit in this definition is a concept of how we should *appropriately* recognise differences in cost. What is appropriate depends on the relative merits of equity and equality. The definition put forward implies that - in the market for life insurance, at least - equity is a more desirable outcome than equality. Unlike some other actuaries writing about underwriting, however, Paddon does at least acknowledge this choice: "As actuaries we do not oppose equality in and of itself. However the means by which [equality] is increased can have unanticipated consequences, and in some cases results quite opposite of those intended." (1990, p.1365)

But actuaries are not the only people who have access to determining what is fair and what is not. Lawyers, medical practitioners, underwriters and policymakers all have their own - different - interpretations as to what constitutes fairness in insurance.

Another reason why the actuarial perspective on fairness in insurance is incomplete is that actuaries tend to consider fairness only from the point of view of existing policyholders. But the issue of distributive justice can be viewed (Stone, 1990, p.393) either from inside the circle of policyholders, or outside, from the vantage point of people who are already ill. From a societal perspective, the people who need life insurance most (i.e. those who are already ill) are precisely the people whom, from within the circle of policyholders, it is economically necessary and fair to exclude. This conflict between views of fairness from alternative vantage points is at the crux of disagreements over fairness in insurance.

In the light of the limitations of the actuarial perspective, and the possible alternative perspectives which we have discussed above, the next section considers the proper role of the actuarial profession in underwriting.

#### **4. The role of the actuarial profession in underwriting**

Underwriting is not a scientific discipline: underwriters frequently use intuition and experience in making their decisions, which is probably inevitable, although it is desirable that this should be backed by statistics wherever possible. What is more problematic, though, is the way that some actuaries believe that their contribution to underwriting is scientific, when in fact - in many cases - the scientific basis of actuaries' underwriting recommendations is difficult to discern.

Of course, the demands of practical work necessitate the use of some approximations. However, in South Africa - a country with which one of the authors is familiar - there has been an alarming trend for risk classification schemes to be increasingly dependent on factors that have not been properly investigated. Truyens (1993, p.9), referring to the post- April 27 1994 changes in South Africa, asked whether income- and education-based rate differentiation would be outlawed as irrational discrimination. He feared that, unless the South African insurance industry could produce actuarial statistics to justify such differentiation, this would be the case - the implication being that at the time, it was not in possession of any statistical justification.

This raises a further issue insofar as actuaries are concerned: many of the anti-discrimination laws (for example, in New Zealand, the EU and the United States) make specific provision for their waiver on the grounds of actuarially justifiable statistics. But if actuaries deem particular conclusions to be "actuarially justifiable" when they may in fact be found to be based on suspect foundations as alluded to by Truyens, their credibility with public policymakers will be eroded.

The credibility of the profession in society also depends on our acknowledging legitimate non-actuarial concerns pertaining to underwriting procedures. We are encouraged to note that the policy statements of other actuarial bodies indicate that they recognise some of the issues associated with the social acceptability of underwriting. For example, the Institute of Actuaries of Australia (1994) has stated that where chosen risk classification factors have been found to be no longer significant or to be socially unacceptable, they have been removed. They also acknowledged that actuaries need to review continually the factors that they choose in order to "reflect the effect of emerging statistics and changing social attitudes."

But the actuarial profession needs to be clear that, although actuaries are involved in the process of establishing the statistical justification for particular underwriting processes, the decision as to whether to implement them is not an actuarial one, but is a commercial decision taken by the life offices, modified by other social forces. This distinction between the role of the actuary as a professional and that of the industry is crucial if national actuarial associations wish to be regarded as professions, as opposed to trade unions of life insurance company employees or technicians.

Although our focus has been on the situation where insurers wish to use particular classification factors which society finds unacceptable, it is worth noting that societal preferences could also have an opposite effect. For example, if insurers had chosen not to recognise smoking as an underwriting variable, this position might have been difficult to sustain in the light of increasing public recognition (and disapproval) of the effects of smoking on mortality.

## **5. The role of the actuarial profession in society**

The previous section was concerned with the role of the actuarial profession in a specific area of insurance practice, namely underwriting. In this section, we broaden the discussion to consider, in a more general sense, the proper role of the profession in society, and the requirements that actuaries must meet if society is to regard the actuarial profession as one worthy of public trust and respect.

Two over-arching requirements for the ongoing social acceptance of professions are those of independence and social beneficence.

### *Independence*

It is necessary to distinguish between the role of the actuary as a scientist and professional, and her (or his) role as a life insurance company employee. As a scientist, and as a professional, the actuary is constrained by responsibilities more stringent than those which affect the life insurance companies. They can be assumed to act in a way that preserves their interests and position in society. However, if an association of individual actuaries aligns itself too closely with such vested interests it risks compromising its professional identity and integrity as a trusted profession.

One of the key roles of a profession is to be able to articulate both sides of a debate - to point out the pros and cons of any given proposed course of action. Paddon (1990, p.1365) puts it slightly differently: "...we have a responsibility to encourage those who make public policy to understand the impact of a proposal or decision." We think that in recent years, the actuarial profession has not played this role particularly well, at least not in relation to underwriting. Generally, the contribution of actuaries has been to act as vigorous defenders of the life insurance industry. We are not aware of any papers (at least, not before this one!) in which actuaries have presented an independent perspective on underwriting.

Whilst actuaries may on occasion side with the position of the life insurers on particular issues, the maintenance of professional status depends on actuaries being perceived as capable of distinguishing, when it is appropriate to do so, a professional viewpoint from the commercial viewpoint of the life insurance industry.

In a number of countries, we believe that actuaries' status as professionals is now questionable, because of inability or unwillingness to maintain this distinction. In South Africa, the home of one of the authors, the problem is exacerbated by the fact that in recent years the profession has sometimes made no input of its own into important social and legal processes, instead choosing to subsume its responses in those submitted by the Life Offices' Association (LOA). In effect, the message being sent out is that the views of the South African actuarial profession are identical in all respects to those held by the LOA.

This apparent lack of independence is potentially damaging not only to professional status, but also to the profession's prospects for expansion. If actuaries are seen as being uniquely identified with the life insurance industry, in the longer term this perceived lack of independence can only hinder the growth and expansion of the profession.

### *Social beneficitation*

Independence is a necessary, but not sufficient, condition for the maintenance of professional status. A second requirement for the long-term survival of a profession is that of social beneficitation. By this we mean that the work that we do as professionals should add value to society, and be seen to do so.

Some actuaries would argue that performing traditional actuarial roles in life insurance companies and pension funds is sufficient for this purpose. However, if society decides to re-evaluate the way in which insurance business is transacted, the actuarial profession might come under scrutiny too. If actuaries are seen to be capable only of defending the rights of the life insurance industry and its current policyholders, it is possible that they will come to be seen as being highly qualified life insurance technicians, with no other roles than performing prescribed calculations and lobbying for those institutions, rather than as a respected profession.

An alternative would be to view the social responsibility of the actuary as extending beyond those institutions.

Note that such an approach would not necessarily be entirely altruistic. By demonstrating its ability to look beyond the short-term interests of its principal employers, the profession could increase the possibility of expanding and developing its professional influence into other areas.

## **6. Conclusion**

Insurance underwriting, like all business practices, operates in a social context. Insurance has a number of features which distinguish it from most other products, and which give it some of the features of a merit good (that is, a good which society considers should be available in certain quantities even to those who do not have the resources to purchase it in a private market transaction), and of a social good (that is, a good the supply of which generates positive externalities).

The importance of these features depends on the extent to which social needs are met by private insurance. If the insurance industry wants an increasing social role for private insurance and the associated opportunities for profit, it must accept that society will take a greater interest in the social legitimacy of risk classification procedures. The alternative is for the industry to decline this increased social role, and retreat into a more limited position in which its risk classification procedures will be of less concern to society.

Actuaries should recognise that the actuarial perspective on fairness in insurance classification has its limitations, and that they are not the only arbiters of fairness. The acceptability of underwriting procedures is societally determined, and a profession which fails to recognise and make allowances for this may find itself ostracised and increasingly ignored.

It should be possible for actuaries to take a different position from that of their principal employers in the underwriting debate, and in other debates where corporate and professional views are not necessarily congruent. However, unless they are perceived as being capable of holding a different view - whether they do so in practice or not - the professional status of the actuarial profession could come under threat.

If actuaries are to survive as a profession - one that actively engages in debate and the furthering of knowledge, and that is aware of its responsibilities to society - they need to challenge themselves about what it means to be an actuary, as opposed to an employee of a life insurance company.

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