

**SHAREHOLDER VALUE ANALYSIS**

**Richard Field**

**Michael Lomax**

**Our thanks are due to Martin Bride and Harold Clarke for their help in preparing this paper. However, the views expressed are our own and are given in a personal capacity.**

## **SUMMARY**

- **INSURANCE IS NOT RISKY**
- **REINSURANCE IS A WASTE OF MONEY**
- **DIVIDENDS ARE THERE TO BE CUT**
- **CAPITAL ALLOCATION IS IRRELEVANT**
- **YOUR PERFORMANCE MEASURES ARE MEANINGLESS**
- **YOU CAN MAKE MONEY OUT OF THE CYCLE**

If you find any of these statements surprising, you should read this paper and come to our workshop to find out more.

We have used concepts from financial economics and Shareholder Value Analysis (SVA) to challenge conventional wisdom about general insurance. Our focus is strategic, not technical.

We anticipate a lively discussion.

## **SHAREHOLDER VALUE ANALYSIS**

### **1. ABOUT THIS PAPER**

- 1.1 Shareholder Value Analysis (SVA) is not a new concept. It has been in use in some industries for many years, particularly in the USA. It is now being applied in insurance and has started to appear in the actuarial literature. This paper is not an introduction to SVA, far less a handbook. Such a paper would be rather dull - the theory underlying SVA is easy in principle and certainly within the grasp of any actuary. However, for those who need an introduction, one may be found in the Appendix.
- 1.2 So what is the paper about, and why was it written?
- 1.3 This paper is concerned with the creation of shareholder value; a subject which is, or should be, at the heart of any manager's objectives. We are disappointed that the actuarial profession has not championed the ideas of SVA. Actuaries have successfully entered the world of general insurance; their numbers are growing as they become more widely accepted; and the prospects for further growth are good, including the possibility of a statutory role for actuaries in UK general insurance companies. But in contrast to life insurance, few actuaries are in key management positions. To change that situation, actuaries must participate fully in the value creation process.
- 1.4 Actuaries debating SVA for the first time might be tempted to spend too much time discussing the theory and not enough considering its implications; too much effort on calculating shareholder value and not enough working out how to create it. We have been conscious of these temptations in writing our paper and have tried to steer your attentions towards the uses of SVA rather than the method itself.

## **2. THE ESSENTIALS OF SVA**

**2.1** This is not the right forum for a critique of SVA. We believe that the basic concepts hold good and form a useful basis from which to develop our ideas. Specifically, we point to:

- the existence of well-developed capital markets which allow investors to buy and sell, to borrow and lend, and to diversify their holdings quickly and cheaply;
- shareholders' preference for higher returns (for a given level of risk) or lower risk (for a given return);
- the distinction between diversifiable and non-diversifiable risk;
- the relevance of market values; and
- the focus on returns to shareholders.

**2.2** You should be suspicious of claims that shareholder value is being created in the absence of any apparent competitive advantage. If an industry is in long run competitive equilibrium, its assets are expected to earn a 'normal' rate of return equal to the opportunity cost of capital; no more, no less. Shareholder value is not created by doing something which competitors do just as well.

**2.3** It is easier to destroy shareholder value than to create it!

### **3. INSURANCE IS NOT RISKY**

- 3.1** Let us be clear what we mean. Insurance is not risk free. However, it is no more risky than investing in shares generally. Why? - because the average listed UK insurance company beta is close to 1, the beta for the market as a whole.
- 3.2** How can this be? Surely insurance is inherently risky. Actuaries are risk managers. But the risks they manage are largely diversifiable (with notable exceptions). By the process of diversification, the risks disappear. The problem for insurers is that this does not add value for shareholders, who can diversify risk more cheaply and efficiently on the stock market.
- 3.3** Underwriting diversifiable risk is not risky at all. However, not all insurance risk is diversifiable. Thefts and arson tend to increase in a recession, so claims are affected by general economic conditions. But the main way in which insurance companies create risk is by offering shareholders a geared exposure to equity returns. They have conventional debt gearing in common with companies in other industries. But they are also able to invest premiums in equities, to the extent that total equity exposure may exceed the capital supporting the insurance business. It is sometimes useful to think of general insurance companies as geared investment trusts, financed in part by 'insurance' debt.
- 3.4** The extra risk created by insurance companies in this way offsets the unriskey nature of their core business including, in the case of composite insurers, their life business. However, this does not add value for shareholders either. If they want a geared equity exposure, shareholders can borrow money and invest it themselves.

#### **4. REINSURANCE IS A WASTE OF MONEY**

- 4.1** Reinsurance contracts further diversify diversifiable risk. If it were a costless exercise this would merely be a waste of time. Unfortunately, reinsurance brokers take a share, and reinsurers have overheads. These costs are a waste of shareholders' money.
- 4.2** But what if an insurance company goes bust because of inadequate reinsurance? If shareholders have a well-diversified portfolio they will not mind very much. Other insurance holdings will tend to appreciate in value, and shareholders' losses are limited (not so at Lloyd's!). If you bet on the horses, you do not expect to win every time. It is managers and policyholders, not shareholders, who will suffer.
- 4.3** Any company that feels it needs to buy reinsurance in order to protect solvency should raise more capital. However, reinsurance may have a role to play in helping the capital markets to distinguish between poor managers and those who are merely unlucky!

## **5. DIVIDENDS ARE THERE TO BE CUT**

- 5.1** It is unusual for companies to cut their dividends, even though they may not be covered by profits. Insurance companies might wish to vary their dividend payouts to reflect the state of the economic or underwriting cycles, or to rebuild battered balance sheets, but rarely do so.
- 5.2** The reasons usually put forward to justify the dividend in situations like this are (publicly) that the directors remain confident about the company's future prospects and (privately) that the dividend is required to support the company's share price. These arguments are weak. Dividends are a crude communications device, whilst a yield basis for share price valuation implies very little knowledge of the underlying business and a fundamental mistrust of management's ability (to make the right investments or to return excess capital to shareholders).
- 5.3** Of course, this behaviour creates a vicious circle. The more that companies insist on maintaining or increasing their dividends even though circumstances may not warrant it, the more that a dividend cut, should it become absolutely necessary, will be perceived as a sign of distress.
- 5.4** Companies may sometimes find themselves paying out dividends with one hand and raising additional finance with the other, incurring costs as they go. Given the importance which investors attach to dividend announcements as a source of information about a company's future prospects, there may be little choice.
- 5.5** However, if insurance companies are able to convince investors that risks are properly priced, that they are following rational strategies, and that they can distinguish between actions which create or destroy shareholder value, then they may be able to adopt a more flexible dividend policy. No company which allows its premium rates to be dictated by the 'market' will ever be in this position.

## **6. CAPITAL ALLOCATION IS IRRELEVANT**

- 6.1** Unless risks are perfectly correlated, total capital requirements are not additive. Hence capital allocation is theoretically impossible in a deterministic sense. Fortunately, this does not matter much, because capital allocation is irrelevant anyway, at least as far as shareholder value is concerned. For any given allocation, more capital can be injected with no change in value.
- 6.2** Capital invested in the business is virtually free of investment constraints and, for practical purposes, can be expected to earn a market return. It follows that the investment of further capital neither creates nor destroys shareholder value. Of course, it is 'at risk', in the sense that underwriting losses represent a call on shareholders' funds. But shareholders also have a claim on underwriting profits!
- 6.3** Even investment constraints need not result in the destruction of shareholder value. In theory, a shareholder can 'undo' the effects of an insurer's investment strategy by rebalancing his own portfolio.
- 6.4** Because the investment of further capital neither creates nor destroys shareholder value, the value of a block of business is the same as its value with no capital allocated. It is the risks inherent in the insurance cash flows which matter. The allocation of capital makes shareholder value calculations unnecessarily complex and may actually obscure the value of the underlying cash flows. This is because the appropriate risk-adjusted discount rate is a function of the chosen capital allocation (the 'right' discount rate for a particular allocation can be inferred by equating net present values). On the face of it, the present value of claims, say, will change in response to the change in capital allocation and hence in the discount rate. This is plainly nonsense.
- 6.5** In some situations, it may be worth discounting each cash flow item separately. MIG claims would then be discounted at a low rate, to reflect the cost to shareholders of accepting this form of financing.



## **7. YOUR PERFORMANCE MEASURES ARE MEANINGLESS**

- 7.1** A meaningful performance measure must indicate whether value is being created or destroyed. Value is created if (and only if) the net present value of the expected cash flows is positive, when discounted at the appropriate risk-adjusted rate of return. Any measure that fails to reflect these facts is at best meaningless and in some cases misleading.
- 7.2** Nearly all performance measures in use today fall down on one or more of the following counts:
- they do not allow for risk (the risk-adjusted rate of return required to justify MIG underwriting substantially exceeds that required to justify motor underwriting);
  - they rely on undiscounted reserves including implicit margins;
  - they confuse decisions taken at different times;
  - they do not separate earnings on capital from other investment returns.
- 7.3** The list of meaningless measures therefore includes underwriting profits, earnings per share, share price growth, claims ratios and combined operating ratios. How do yours measure up?

## **8. HOW TO MAKE MONEY OUT OF THE CYCLE**

- 8.1** A high proportion of an insurance company's added value is created at the peak of the underwriting cycle. Historically, UK insurers have made phenomenal returns at times like this, only to throw it all away in the trough.
- 8.2** In an ideal world, perhaps, insurers would be able to enter and exit the market freely to take advantage of upturns and to escape from downturns. In practice, entry and exit are neither costless nor immediate, although the advent of insurance futures may help to make this easier. The fact remains, however, that the best way to out-perform the sector is to maximise market share at the peak and to minimise it at the trough. Of course, if every insurer tried to do this then the cycle would become less pronounced. That may not be a bad thing either.
- 8.3** Actuarial involvement in general insurance companies has been concentrated on reserving and pricing, i.e. on analysis of the 'costs of production'. Actuaries can make a valuable contribution by tightening the control cycle linking risk assessment, pricing and reserving. However, this is not the whole problem. Expenses are fixed to varying degrees, giving rise to complex cost/volume relationships. Moreover, an insurance portfolio has 'momentum', the result of entry and exit barriers. It is difficult to increase market share significantly without either reducing prices or accepting poorer quality insurance risks (which amounts to the same thing). The competitive process is dynamic and interactive. Accordingly, game theory may be a more useful tool for use in the creation of shareholder value than the stochastic modelling of claims distributions.

## **9. CONCLUSIONS**

- 9.1** According to the theory of SVA, a successful company is one which creates value for its shareholders. If actuaries can show how they can contribute to this process then the prospects for a more rewarding role for actuaries in general insurance are good. If, on the other hand, they fail to understand it, then actuaries deserve to be consigned to backroom oblivion for ever.
- 9.2** The opportunity exists. In UK banking, Lloyds Bank embraced the concepts of SVA earlier and more fully than any of its rivals and is now firmly established as the UK's most profitable bank. No insurer has yet done the same.
- 9.3** The industry as a whole must make an adequate return in order to survive. Normalising mechanisms will force average returns to converge on the cost of capital. Within the industry, however, there is room for widely divergent performance. As deregulation and technological development have increased competition and contestability within the UK insurance industry, so the merits of one company's management and strategy compared with another's will be exposed. In the days of the cartel, opportunities for divergent performance - better or worse - were more limited. We believe that the key to outperformance lies in understanding how and when value is created, founded on information systems designed with this end in mind.
- 9.4** Because they are in a 'risk' business, insurers - and actuaries advising them - can easily become confused about the nature of risk. If you have found some of our statements surprising, you should decide whether it is our propositions or your preconceptions which are false, and why.
- 9.5** Actuarial thinking and practice in general insurance should be directed more closely towards the creation of value for shareholders.

## **APPENDIX**

### **SHAREHOLDER VALUE ANALYSIS**

- A.1**     The shareholder value of a company is the present value of expected future cash flows that can be distributed to the owners of the business. Shareholder value analysis (SVA) is the analysis of shareholder value for management and other purposes - for example, performance measurement, planning or investment decisions.
- A.2**     SVA is closely related to appraisal value analysis and profit testing. Instead of trying to distinguish between them it is more appropriate to focus on the common underlying principles:
- the calculation of expected cash flows;
  - the determination of a risk discount rate; and
  - the focus on net value to shareholders.
- A.3**     In large companies there is normally a separation of ownership and management. The most remarkable aspect of this situation is that managers can get on with their job - creating value for shareholders - whilst acting in the interests of all shareholders simultaneously. Irving Fisher showed that, provided they have free access to efficient capital markets, shareholders can choose their own pattern of consumption over time (by buying and selling shares) and their own degree of risk (by mixing 'risky' assets with 'safe' assets, like deposits), independent of managers' decisions.
- A.4**     Value is created if managers take investment opportunities with a positive net present value (NPV). In other words, the expected cash flows, discounted at an appropriate risk-adjusted rate of interest, have a positive net value to shareholders.

- A.5 Other things being equal, risky investments are less desirable than safe ones. To allow for this, a higher rate of return is demanded from risky investments. Alternatively, for an equivalent return, shareholders prefer lower risk. But what is a 'risky' investment? Financial theory uses a definition of risk based on the variance of returns: the greater the variance, the greater the risk. Where there is a portfolio of assets, it is the variability of portfolio returns which is important. This is a function not only of the variance of returns from each asset, but also of the covariances between the returns from one asset and another. Except in extreme cases, the portfolio risk will be less than the sum of the risks from each of the assets. Some of the individual risks are removed by diversification.
- A.6 'Diversifiable risk' is defined as risk which can be eliminated by diversification; 'market risk' is what is left over. With efficient capital markets, diversifiable risk can be eliminated cheaply by investing in a portfolio of shares, so diversification by firms does not add value. The only risk that matters is market risk.
- A.7 Market risk arises from factors which affect the economy in general, i.e. where there is a correlation between the effects on one firm and another. The risk of a well-diversified portfolio depends on the market risk, or beta, of the securities it contains. The beta of an asset is its marginal contribution to the risk of the market portfolio. Stocks with betas greater than 1 have an above-average impact on market risk; stocks with betas less than 1 have a below-average impact.
- A.8 The Capital Asset Pricing Model (CAPM) is a powerful result which allows the return required from a risky investment to be calculated. According to the CAPM, this is equal to (return required on a risk-free investment) + (beta x market risk premium) where the market risk premium is the difference between the return required from an investment in the (risky) market portfolio and the return required on a risk-free asset, and beta is the beta for the specific investment being considered. The required rate of return is sometimes referred to as the cost of capital.

- A.9 The CAPM also says that betas are additive: the beta of a portfolio of assets (including, for example, a mixture of equity and debt) is the average of the asset betas, weighted by market value.
- A.10 Modigliani and Miller showed that, with efficient capital markets, dividend policy is irrelevant. If shareholders need cash, they sell shares to get it. However, there are imperfections (eg taxes on income vs capital gains).
- A.11 Modigliani and Miller also showed that capital structure is irrelevant, and that firms can safely separate investment and financing decisions. A firm's value depends on the value of its real assets, not the securities it issues. Again, however, there are imperfections (eg tax relief on debt interest).
- A.12 There are certainly difficulties with the theory as outlined above. For example, the definition of risk is based on the variance of returns over a given interval. Returns over successive intervals are assumed to be independent, which causes difficulties in multi-period problems, and no account is taken of the skewness of returns. The CAPM points to a strict linear relationship between expected return and market risk, for which the empirical evidence is mixed. Capital markets are assumed to be free and efficient, although there are known imperfections. Various attempts have been made to refine and improve the theory to deal with these difficulties, but it is not necessary to describe them here.