



The Business of Finance in the Insurance Industry

by Sandy Walker, CPCU

The insurance industry is one of the most important in terms of size and significance. Insurance, as we know it today, first emerged in Britain at the end of the sixteenth century. The main concern of society, at that time, was fire protection. This was in response to events like the Great Fire of London in 1666. The two main types of insurance, at that time, were fire insurance and marine insurance offered by such companies as Sun Fire Office and Royal Exchange Assurance (Bayes, 2004). In the United States, the first company to be formed was a mutual company called Friendly Society. It began on January 18, 1732, in what is now Charleston, SC (Bayes, 2004). The second company to be formed was the Philadelphia Contributorship for the Insurance of Houses from Loss by Fire on February 18, 1752.

Changes in the insurance industry continued, and certainly the 1990s was no different. The profits experienced by the industry prior to this time had begun to change. The tighter regulation resulted in lower competition, while profit margins of insurance carriers began to climb. Deregulation and globalization were factors that brought about increased competition. The competition has come, not only from new carriers entering the market, but also from other industries now offering the insurance product. By 1999, risks were being underwritten at roughly half the price of prior years, in order to gain market share. The situation was serious, but was seemingly masked by the industry's practice of releasing reserves. This was a time when we saw the industry selling products below the cost to produce it. This resulted in the collapse of shareholder value (Hancock 2001).

The Value of Insurance

In the world of business, managers are judged on their ability to create profit for the owners and shareholders. In the insurance industry, there are two types of companies, stock and mutual. A stock insurance company is a company owned and controlled by stockholders and conducted for profit. It sets a premium charge for insurance, assuming

Abstract

Using multiple resources available, this article looks at the economic structure of finance in the insurance industry. Shareholders provide risk capital to the insurance company that is then invested in regulated assets. These investments in turn earn a market return. The legal and fiscal environment of insurance companies creates a competitive disadvantage in investing. Insurance must manage these capital costs and ensure that they can provide insurance for a price in excess of what they need to produce.

all liabilities on a corporate basis. The owners of the business are paid the profits. A mutual insurance company is a company that has no capital stock, but is owned by its policyholders. They elect a board of directors or trustees through whom business is conducted. Any earnings belong to the policyholders and may be distributed to them as policy dividends or reduced premiums.

So how is an insurance company valued? Most insurance companies base their value on the accounting principles of assets and liabilities. However, this trend is slowly changing since these measures do not accurately reflect the true state of the company.

According to an economic view, assets of an insurance company should be valued at market value and liabilities according to the best estimates of the time value of money. If these principles are ignored, the value of a company can be distorted. According to the International Accounting Standards Board (IASB, 1999), the issues with accounting in the insurance industry have not gone unnoticed. Recently, the IASB proposed a new way of reporting insurers' worth based on economic valuation principles.

How It Works

Insurers are typically a liability-driven financial intermediary. This means insurance companies leverage themselves as the value part of their business. Money comes into the company in the form of premiums. Premiums are, in essence, the way an insurance company borrows money. The money received from policyholders is received in consideration of a promise to pay on the part of the insurance carrier.

The product an insurance company produces is the insurance contract. However, the insurance carrier must rely upon diversification and the financial markets in order to make money. The pooling of contracts that are not perfectly connected allow collective losses to become more predictable. By investing part of the premiums received in financial assets, insurers can generate future cash flows needed to pay expected claims. Insurance carriers use the insurance policy as a type of financial contract, then use financial markets to bridge the gap between the premiums paid today and the claims of tomorrow.

Another feature of insurers is the risk capital they hold. While pooling reduces some of those risks, the insurance contract is one of chance; therefore, unexpected losses are sure to happen. An example of unexpected losses would be catastrophe losses, as recently experienced in Florida. No insurance carrier can fully be prepared to handle such devastation. Policyholders have to be concerned with the potential for a carrier to not be able to meet its financial obligations. Especially since the reason the policyholder obtained the insurance policy to begin with was to be able to transfer risk.

Equity Solvency

The balance sheet of most insurance carriers basically shows investments in financial assets balanced by the company's liabilities and the risk capital provided to its shareholders. Basically, an insurance company is like a leveraged investment fund where debt is raised through the sale of insurance policies instead of through the issuance of debt on capital markets (Hancock, 2001). To define leveraged investment funds more thoroughly, a leveraged fund is an investment fund that finances the purchase of financial assets partly by fundholders' capital and partly by debt (leverage). On January 16, 1999, an issue of *The Economist* stated: "When world stock markets took a summer plunge, insurance shares dived twice as far. When equities recovered in the autumn, insurers also rose faster than the market. This amplification of movements in the stock market helps to explain two things. First, why investors in insurance are biting their nails these days as Wall Street, once again, is looking overvalued. And second, how

Sandy Walker, CPCU, has been with State Farm Insurance for more than 18 years; seven years of which have been in second-line leadership. She graduated from Missouri Southern State University with a B.S. in marketing and management, and Walden University with an M.B.A. in knowledge and learning management. She also earned the CPCU designation.

shareholders really think of insurance companies: as little more than highly leveraged investment trusts" (*The Economist*, 1999, p. 61). There are some distinctions between insurance companies and other investment funds. First, insurers have a competitive disadvantage in investing, and second, they have a favorable competitive advantage in raising funds.

The Cost of Capital

Capital in financial services and the insurance industry is as important to production as it is for other industries like manufacturing. In contrast to manufacturing, capital in insurance is not invested in tangible assets, but in liquid assets, like stocks or bonds. One of the most unique features of insurance is the product offered. Nowhere else will you see a product that is a promise. Insurer capital comes from investors. This means there is a cost to the capital. The cost of this capital is the expected rate of return insurers have to pay for the capital they use. The cost of capital is an economic concept that is forward looking. Returns are what investors demand, and this return is determined in capital markets (IAIS, 2002). Finally, the cost of capital is risk dependent—the higher the risk, the higher the returns.

Today, the business of insurance has been influenced by theories of corporate finance, capital structure, and the efficient use of capital (Kielholz, 2000). The business of insurance is about risk selection, underwriting, loss control, and claims management. But, capital is required to produce the business. This is an important concept especially from the view of the prospective investor and the insurance manager. Ultimately, investors are concerned with their risk-adjusted expected returns and management with capital efficiency.

In order for managers of insurance to get the most out of the company's capital, they must weigh the costs and benefits of raising and holding that capital. The benefit of a strong capital base is security. Capital helps to protect the company against unexpected claims or financial losses. This protection is heavily regulated by rating agencies. The cost for holding capital comes in the form of taxation and transaction costs.

Measuring the Cost of Capital

In the world of academia, it is recognized that, in order to measure the cost of capital, you have to rely on market data. This data reflects investors' view on the risk and return characteristics of investments. The most widely used and easiest method for estimating the cost of capital is the capital asset pricing model (CAPM) (Kielholz, 2000).

The CAPM is important for two main reasons: First, it provides a theoretical justification for indexing; Second, it provides a way of estimating expected rates of returns in a variety of financial applications (Bodie, p. 343, 2000). If investors choose to invest in a riskier stock, like that of an insurance company, they will require a higher expected return than is available on a risk-free government bond, for example.

An alternative to CAPM is the discounted cash flow analysis (DCF). DCF is based on the idea that the price an investor is willing to pay should equal the present value of all future cash flows (Bodie, p. 112, 2000). For a stock, this means the price an investor is willing to pay (P_0) should equal the sum of the discounted future dividend payments (Kielholz, 2000). This is represented by the formula:

$$P_0 = \text{DIV}_1/(1+r) + \text{DIV}_2/(1+r)^2 + \text{DIV}_3/(1+r)^3 + \dots$$

In this formula, r is the required rate of return or cost of capital. In order to solve for the cost of capital, the formula can become:

$$r = \text{DIV}_1/P_0 + g$$

Here, g is the annual growth rate of dividends. This means in order to estimate the DCF cost of capital, all you need is the current stock price, information on next year's target dividend rate, and the expected growth in dividends (Kielholz, 2000).

According to the *Journal of Insurance Regulation*, Vol. 20 No. 2, 2001, risk-based capital is one of the most controversial developments to come out of the National Association of Insurance Commissioners (NAIC) solvency agenda in the early 1990s. In 1989, the NAIC adopted the Policy Statement on Financial Regulation Standards. This statement provided a common set of standards for regulation of the financial condition of insurance companies. As part of this statement, the NAIC established a peer-review process for financially troubled insurers, and established a risk-based capital (RBC) system to ensure consistent and uniform capitalization standards across state boundaries.

The RBC was a supplement to existing fixed minimum capital standards. The fixed minimum standards typically required \$1 million to \$2 million of capital and surplus for insurers regardless of size and scope (Barth, 2001). Clearly, these standards are fine for a start-up insurer, but for established companies they are too low. Another component of the RBC system was a law that made it easier for state regulators to fix problems that occurred without delay. The Risk-Based Capital for Insurers Model Act imposed automatic requirements on insurers to file action plans if their capital dropped below the minimum standards (Barth, 2001). The RBC does not create new powers for the state insurance regulators, but simply streamlines the regulatory process.

As helpful as the RBC formula is, there are also concerns with using it. One concern is the potential excessive capital requirements that could be imposed on some insurance carriers, but not on others. Some regulators felt there should be explicit recognition of measurable and quantifiable risks. It was decided that the size factor would not meet the simple criteria and was omitted from the final formula. One interesting point is the RBC formula for life insurers set tiered risk factors. The life RBC formula risk factor was 30 percent of the statement value, while the property and casualty RBC formula risk factor was only 15 percent (Barth, 2001). By design, the NAIC RBC formula was simply a pass/fail, either an insurance carrier has capital in excess of the requirements or it doesn't.

Incorporating and Managing the Cost of Capital

Insurance companies can include the cost of capital into its business by using measures of economic profit to price their product and to reward management. Approximately 20 percent of the total costs facing a typical non-life insurer are cost of capital (Kielholz, 2000). The cost of capital in insurance depends on the entire portfolio of risks, not just an individual risk.

During the past decade, the insurance industry has seen a dramatic increase in the number of insolvent insurers (Babbel, 1999). Some of the insolvencies were precipitated by changes in interest rates, as well as losses on assets such as junk bonds, commercial mortgages, CMOs, real estate, and derivatives (Babbel, 1999).

As stated earlier, economic profit measures have placed emphasis on how important the cost of capital is in insurance. In the CAPM world, there are three factors that influence the cost of capital: (1) risk-free rate, (2) beta, and (3) equity risk premium. Other important factors that need to be discussed are solvency risk/diversification, tax costs, transaction costs, and regulation. Each is discussed below in greater detail.

Solvency Risk/Diversification

The CAPM is over-simplified as compared to the reality of its users (Bodie, p. 354, 2000). The CAPM does not consider the risk of insolvency by an insurance carrier. The main reason insurers hold capital is due to risk associated with their business.

Insurers basically have two options when managing their risk of insolvency: (1) they can minimize the risk by holding more capital; or (2) they can maintain a diversified book of risks. A company with a diversified book of risks will have lower capital cost and competitive advantage (Kielholz, 2000). According to A.M. Best's Ratings and Insolvency Trends, Special Report 2003, from 1973 to 2003, 726 companies became insolvent. Of that number, 469 occurred between 1988 and 2003.

Tax Costs

The opportunity cost of capital increases for insurers as corporate profits are taxed. Insurers manage their taxes by holding less capital, reducing their taxes by holding more assets that are taxed at a lower rate, and by postponing capital gains. Also, insurers that are located in high-tax countries will have a higher cost of capital than those located in lower-taxed countries. Tax rates on capital vary from country to country, with Europe generally having the highest rates of capital taxation (Kielholz, 2000). Since underwriting profits are rare, most profits generated come from investments. Due to this trend, investors look at insurers as a combined risk management and investment company (Kielholz, 2000). However, many view insurers as a poor investment fund. This is mainly due to investment income being taxed for the insurer and then for the shareholder.

Transaction Costs

Transaction cost is another factor affecting the insurers' cost of capital. These costs come about due to agency costs. Investors in the insurance arena are not fully informed about all the risks associated with a book of business. Investors trust that management is properly making decisions regarding risk/return trade-offs. One way to reduce these transaction costs is by compensation programs. Another way is by information that is provided to the investors. Today, insurers use rating agencies to help facilitate this flow of information.

Regulation

Regulation has, perhaps, the biggest impact on the insurer's capital. The purpose of regulation is to protect the public from unfair treatment or insolvent insurers (Beam, 2002). Regulation impacts the cost of capital by imposing capital requirements on the company. Most states have laws regarding the types of securities that may be purchased for investment by insurers.

Reserves

States require insurers to maintain a certain minimum level of reserves that is adequate enough to meet their policy obligations. In life insurance, the reserve is the amount needed to meet policy benefits such as death and nonforfeiture benefits. In the property and casualty side, the unearned premium reserve must be adequate to pay the policyholders a premium return due to cancellation or expiration. Another reserve on the property and casualty side is the loss reserve. This is a reserve required to pay any losses that are incurred but not paid.

Investments

Most states have laws that govern the types of securities that may be purchased by an insurer. For life insurers, the primary investments are bonds and common stocks (Beam, p. 130, 2002). Limited permissions are given for certain types of investments by the states regulating the insurer. For example, stocks may be limited to a stated percent of assets or to 100 percent of surplus (Beam, p. 130, 2002). Real estate holdings are also limited to a certain level.

Investments of assets by property and casualty insurers are also regulated, although the laws are often more lenient and vary from state to state. The general consensus is to have investments for all assets held as reserves and other liabilities (Beam, p. 130, 2002). Assets such as cash, bonds, and preferred stocks may be the admitted assets seen. The remainder of the assets, which represent capital and surplus, can be invested in a wide range of securities, including common stock (Beam, p. 131, 2002). The limitations placed on property and casualty insurers are on real estate holdings and investments in foreign companies.

State of the Industry

The property and casualty industry reported a statutory rate of return of 9.4 percent in 2003, up from 1.1 percent in 2002 (Hartwig, 2003). The profitability of the industry began to take a turn and saw a 9.8 percent increase in net written premiums, 85 percent reduction in underwriting losses, and \$8.1 billion positive swing in capital gains, which was a 9.4 return on average surplus (Hartwig, 2003). The year-end 2003 policyholder surplus, the indicator of capacity, was up \$61.6 billion or 21.6 percent to \$347 billion, which is a record high.

Conclusion

The insurance industry continues to be a very complex system. The profitability picture is more complicated than other industries such as manufacturing. While the financial picture of the insurance industry is at its best since 1997, the industry's average return on surplus was only 9.4, despite a combined ratio of 100.1 (Hartwig, 2003). In order to continue to be profitable, improvements in underwriting are still needed.

References

- A.M. Best's Ratings, (2003), A.M. Best's Ratings and Insolvency Trends, retrieved October 9, 2004 from A.M. Best's web site: www.ambest.com.
- Babbel, D., Fabozzi, F., (2001), *Investment Management for Insurers* (2nd Ed.), New Hope, PA: Frank J. Fabozzi Associates.
- Barth, M., (2001), Risk-Based Capital A Retrospective, *Journal of Insurance Regulation*, 2001, Vol. 20, No. 2 (pp. 233-242).
- Bayes, K., (2004), History of Insurance in America, retrieved October 1, 2004, from the web site www.insurance4texas.com/history.htm.
- Bodie, Z., Merton, R., (2000), *Finance*, Upper Saddle River, New Jersey, Prentice-Hall Inc.
- Hancock, J., Huber, P., Koch, P., (2001), Value Creation in the Insurance Industry, *Risk Management and Insurance Review*, 2001, Vol. 4, No. 2, 1-9.
- Hartwig, R. (2003), 2003 Year End Results, Insurance Information Institute, retrieved October 1, 2004 from the web site www.iii.org.
- International Accounting Standards Board, (1999), *Insurance Issues Papers*, retrieved October 7, 2004 from the web site www.iasb.org.uk.
- Jenkins D., Yoneyama T., (2000), *The History of Insurance* (Volume 1), Pickering and Chatto <http://insurance.about.com/gi/dynamic/offsite.htm?site=http%3A%2F%2Fwww.insurance4texas.com%2Fhistory.htm>.
- Kielholz, W., (2000), The Cost of Capital for Insurance Companies, Geneva Papers on Risk & Insurance-Issues & Practices, retrieved October 1, 2004 from the web site http://web7.epnet.com/DeliveryPrintSave.asp?tb=1&_ug=dbs+2+1n+en-us+sid+B9FB9D48-8C8D.
- The Economist*, 1999, Capital Punishment, *The Economist*, January 16, 1999.