

Value Management in Insurance Companies

Michael Köhler, Pascale Güllner, Michael Knoll and Stefan Zumsteg compare and assess existing approaches in value management in insurance companies and provide an idea of future best practices.

What applies to all companies applies to insurance companies, too – value is created when the company can achieve, in the long run, a higher return on capital than it needs to pay out in capital costs to suitably compensate its capital providers.

However, special conditions apply to value management in insurance companies, as these are subject to tension between solvency and the demand for returns. On the one hand, insurers must comply with regulations intended to protect creditors from company insolvency. This demands that insurers maintain certain liability or risk capital. On the other hand, insurers are also confronted with their capital providers' demands for returns – the capital providers require rates of interest on their capital adequate for the level of risk. To this extent, demands by rating agencies should also be taken into account.

For the insurance industry, this means thinking about value creation and developing an understanding of how value is created and against what figures it should be measured.

The article seeks to examine the reasons for and benefits of value-oriented management for the insurance industry and, in the second stage, look at and evaluate the existing approaches to value-oriented management for insurance companies. Finally, we look at the future to assess the opportunities and dangers of value-oriented management in the insurance sector.

Reasons for value-oriented management


With the deregulation of the insurance markets, direct insurers have been faced with more intensive

competition, both in terms of distribution and in obtaining capital. The competition to gain market share leads to over-capacity in the market. As a result, prices for risk coverage no longer stand up in relation to the risks incurred. Increased expenditure on claims leads to chronic underwriting losses in the insurers' financial results; it was possible to cover these in good times by investment revenues and recently by releasing hidden reserves from the past. Now, faced with persistent

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low interest rates, insurers are once again forced to create value using their core business.

In addition, insurers are becoming increasingly aware of the importance of capital and its scarcity. Competition in obtaining capital has increased both within and outside insurance companies, and investors are therefore demanding higher returns, according to the risk exposure, on their capital.

To survive in the harsh competition for customers and capital, the focus must be on business activities that create value. This means that insurers must manage their companies in a value-oriented manner.

Value generation in the insurance industry

A precondition for value-generating company management, however, is the presence of an adequate concept of value. As, at the present moment, such a concept is by no means either clear or uncontroversial, we will here describe the concepts of value being applied at this time. The concepts of value all have in common the fact that three influencing factors are used to determine them: underwriting result, investment result and capital costs. Today the view is becoming more prevalent that insurance companies essentially create value by profitable new business and efficient management of capital costs, with management of investments being only second in priority. This view may be illustrated by a theoretical exercise comparing an insurance company with an investment fund:

An insurance company may be interpreted as an investment fund financed by outside capital; its capital does not originate from the capital markets, but from the sale of insurance policies. Insurers invest the premiums received in the capital market until they are to be paid out in the case of a claim.

When investing their capital, insurers have a competitive disadvantage compared with investment funds, both in respect of company supervisory legislation and tax legislation. Insurers cannot freely invest their capital, but are subject to company supervisory legislation conditions regulating the type of investment and minimum capital. In addition, compared with an investment fund, investors of an insurance company

are doubly taxed – on the one hand at the insurance company’s pre-tax profit level and on the other at the investor’s dividend income level. An insurance company therefore has a more difficult task in creating value in its investment activity.

In obtaining funds, on the other hand, insurers have a competitive advantage in that they are able to take up their funds from the insurance market, which is less transparent and subject to control compared with the capital market. The inefficiencies of the insurance market enable the insurers, in principle, to sell insurance policies at prices that are above their costs of production. By this means they create value. The insurance companies are able to exploit this competitive advantage because they are in a position to pool cover for risks in a more cost-favourable manner than alternative pooling agreements. Insurance policy purchasers are therefore prepared to pay an extra charge.

This extra charge, or franchise value, reflects the cash value of the future value creation expected by the investors. The value drivers of insurance companies, therefore, lie in their capacity for maximising the franchise value. This means that profitable new business, i.e. new business in excess of production costs, represents an important value driver.

Value is further driven by the management of capital costs. Insurance company shareholders, in addition to a risk-adequate return on their investment, also demand a reimbursement of costs arising from the insurance-specific competitive disadvantages. These are the result of so-called friction costs, which in essence consist of compensation for the lack of transparency and control in the insurance market compared with the capital market, of supervisory restrictions and of double taxation at the investor level.

Insurance companies create value if their returns exceed the capital costs of an investment fund (taking outside financing into account) plus the friction costs.

Existing value concepts

Various instruments are available for value-oriented management. These include embedded value, fair value and risk-adjusted capital (RAC), as described in Figure - 1.

Embedded Value

Embedded value is particularly widespread in the life insurance area. This value concept, when used

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to manage business, takes into account not only a single annual period, but the whole period of validity of the individual insurance contracts. It is based on statutory accounting

systems. Embedded value is made up of the sum of:

- Adjusted net asset value;
- Cost of capital; and
- Present value of future profit.

The adjustments in the ‘adjusted net asset value’ in essence represent taking hidden reserves on the asset side into account.

In this model, capital costs are created by the need to have capital available within the framework of the solvency regulations for which the market return expected by the shareholder cannot be achieved. The difference between this market return and risk-free interest determines the annual capital costs. If these annual costs are discounted, the result is the so-called ‘cost of capital’ as a cash value.

‘Present value of future profit’ is the cash value of expected future profits of the insurance company’s existing business. Here, too, the annual statutory profits are estimated on a policy basis and discounted. The discount rate is frequently calculated using the ‘capital asset pricing model,’ which measures the insurance industry’s risk premium against risk-free investment.

‘Present value of future profit’ minus ‘cost of capital’ may also be seen as a correction of the generally carefully calculated technical reserves (mathematical reserves). If this

FIGURE 1 - Existing approaches for value-oriented management

Approach	Targeting and function
Embedded value	Adjustment of statutory evidenced capital by paying out hidden reserves in the assets and liabilities and taking into account the profits or losses to be expected in future from the existing portfolio and the capital costs. The value contribution can be measured as a relative change to the equity approximated in this way.
Fair value	Equity is determined based on the difference between market value of the assets and market or ‘fair value’ of the liabilities. The value contribution is measured based on the relative changes to the equity determined according to the principles of a ‘true and fair view’.
Risk-adjusted capital	The equity requirement is determined based on risk considerations such as the risk of liquidation or the investment risk. The value contribution may be measured by a risk-adjusted return, in which profit is compared with the costs of the linked risk capital.

Source: PricewaterhouseCoopers

difference is deducted from the statutory reserves, the result is a reserve requirement that is sufficient to cover the liabilities arising from the insurance contracts. Taken together with the 'adjusted net asset value', the 'embedded value' can therefore be interpreted as an approximation of the 'true equity'. If success is measured as a relative change to embedded value, this results in company control by changes to the equity. This 'embedded value' based equity control is also known as control according to 'return on capital employed' (ROCE).

Fair Value

'Fair Value' is understood as an evaluation close to the market. The fair value principle also is, in the end, about determining the value of equity. The difference is that in 'fair value' equity is determined differently from embedded value. Instead of being estimated directly, equity according to the fair value principle is defined as the difference between market value of the assets and market or fair value of the liabilities. Here, too, management consists of measures to increase equity, or rather the returns on it, and success is measured as relative changes to the equity. Fair value evaluation may be applied both in the life and non-life insurance sectors.

RAC

'Risk-adjusted capital' (RAC) is a type of equity and is, in principle, defined as the amount that would, with a high degree of probability, be sufficient to meet all liabilities arising from signed insurance contracts. The range of variations is very wide, both with regard to naming and to methodology in detail. The time element in particular must not be disregarded: in non-life insurance business, the risk generally ends not with the expiry of insurance cover, but with the settlement of all claims that have arisen. Risk capital can also be assigned to capital investment activities, often with a 'value at risk' approach. This is of great importance

for life insurance, because the risks of capital investment often exceed the underwriting risks.

An adequately determined risk-adjusted capital is therefore a suitable foundation for value-oriented management. If, for example, the profit (on a net present value basis, including claims in non-life insurance) is divided by the risk capital, the result is the return on risk-adjusted capital (RoRAC). The use of such figures within an insurance group should lead to high-risk business necessarily giving a greater return, and to capital in the first place being made available to transactions with the best risk-return relationship. In addition, the risk capital

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provides the information as to whether the available equity is sufficient to meet the liabilities undertaken, taking the risk into consideration.

Evaluation of various approaches

The embedded value approach has the advantage of being comparatively widespread among life insurance companies and that largely uniform standards apply regarding the method of calculation; there is also a corresponding level of experience. The disadvantage of the embedded value concept lies in the fact that it is primarily designed to deal with existing policies and allows for hardly any

conclusions to be drawn regarding the profitability of individual products.

This applies particularly because, as a rule, the allocation of capital investments and the future capital income calculated on this basis take hardly any account of investment opportunities in the concluding year in question. This gives a false impression, in particular of the profitability of products compared with single premium policies. In addition, the problem of the alignment of the necessary regulatory capital with the discount rate is by no means solved.

The fair value approach does not have these problems as part of the concept because it is strictly based on market values and therefore evaluates liabilities also in market terms. As the profits or losses become due in essence at the time of sale, this principle represents inherent profit testing and for this reason enables value-oriented control at product level.

The disadvantage of this concept is that hardly any experience of using it is currently available and implementation is complex if only because reference throughout is not made to statutory data, but to estimated future cash flow forecasts. Lastly, the application of the fair value model to major products, in particular the classic capital-forming products with profit participation, has not as yet been finally clarified.

In the fair value approach there are also no explicit risk estimates. It may be argued that the risk capital costs are included in the market value of the liabilities. However, the essential condition of the existence of such a market price is by no means always met. Given that in non-life insurance:

- The volatile nature of settlement and the risks connected with it are of central importance; and

➤ Efforts tend more towards the separation of investment and underwriting income.

The route taken here is via risk-adjusted capital.

For the RAC approach, on the other hand, methodological difficulties and also the expense of calculation and accounting must not be underestimated. Even today there is no generally acknowledged procedure for calculating risk capital. Modelling the interdependency of stock exchange rates, natural events and 'man-made' catastrophes is a hard nut to crack, and not only since September 11. Risk capital varies enormously according to the assumptions made. This means that the use of this method can itself become a risk: mistaken decisions can be caused by faulty models.

RAC and similar measurement values are hard for laypersons to understand due to their complexity and limited comparability. Nevertheless, this is a reasonable approach and may in the end develop into an important element of value-oriented management in the insurance industry.

Benefits and areas of application

It has been stated that value-oriented management is a condition for an analysis of internal value creation processes and value drivers. Value orientation helps in the clearer recognition of competitive advantages (see Figure 2 below).

In addition, orientation based on a scale of value offers a foundation for

decisions on strategy and for allocation of capital to those areas of business that provide the best value contribution. It is therefore possible to provide better quantitative support for decisions regarding assignment of capital for financing the internal or external growth of an area of business or withdrawing from one.

The value-oriented management approach may, finally, be linked with management incentive programmes. This allows a consistent system of incentives to be built up which will

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harmonise the interests of capital providers and management with regard to the objective of creating value. For example, success-dependent remuneration could be linked to a target return on a risk-adjusted equity value. Such a remuneration concept oriented towards value creation may be applied not only in top management but also, for example, in sales. It is important

here that the scale of value is transparent and accepted as fair.

A peek into the future

As the basic philosophy of the fair value approach is very close to that of the embedded value concept, development of embedded value along the lines of fair value measurement can certainly be envisaged. As on the other hand measurement of profitability at product level is essential for value-oriented management of business, it would seem that at least in theory the fair value concept is more promising for the future. Profitability at product level is inherent within it. Risk capital related figures also have their place within the fair value approach, for instance in the evaluation of risk capital costs if market prices are lacking. In addition, the risk capital approach provides a test for the sufficiency of equity.

Finally, the shareholders' return expectations determine the capital costs, and the return is dependent on risks. Only by setting out the risk capital figures is it possible to show whether the return as required by the shareholders is in a fair ratio to the risk.

Because value-oriented approaches not only create increased transparency for the investor, but also allow management to manage the insurance transactions more efficiently, it is likely that the application of these approaches will increase.

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FIGURE 2 - Opportunities for the application of value-oriented management

Area of application	Targeting and function
Strategy development	Recognition of value drivers and competitive advantages
Strategic planning and control	Foundation for capital allocation decisions
Company	Foundation for decisions on internal or external growth, exit and make or buy decisions
Management incentive programmes	Coherent incentive system as a foundation for variable management remuneration

Source: PricewaterhouseCoopers