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Value based management in insurance companies

The implementation of value based management involves the change of the traditional perspective on managing and building a process whose aim is to maximize the company's value. The purpose of this article is to present the concept of value based management in the context of the business of insurance companies. The process of value based management consists of strategy development, planning, identifying value drivers, monitoring, including the production of relevant reports, motivation and communication. In every company, there are three basic flows affecting its value. They are: revenue stream, stream operating costs and capital employed stream. Areas of creating value in the insurance companies are: the products, distribution, tariff policy, underwriting, business administration program, claim settlement and investment policy. The implementation of Solvency II will emphasize the importance of value based management for insurers.

Keywords: value based management, insurance company, value chain.

Introduction

It is typical of insurance products that they are usually of the long-term character. This very nature of the insurance product forces the managerial staff to direct the management process in such a way that it will take into account this long-term character through the choice of adequate tools and instruments. The specifics of the way how insurance companies operate also underline the considerable role of the strategic management. Operational decisions are very important too, but what matters most to insurers are the directions of long-term operations.

Additional market conditions also force insurance companies to use precisely defined management policy directed at a few years' period which will allow them to build a sustainable competitive advantage and safeguard the company against adverse action of various factors. That is the reason why insurance companies should pay special attention to the strategic management if only through the choice of adequate concepts, methods and instruments. One of such concepts is the value-based management in an insurance company.

Even though the concept has been in existence for years, it represents a slightly different view of the company's achievement of the defined objectives from those commonly used. First and foremost it proposes departure from typical management objectives depending on generating better and better financial results and subordinating the management process to the accrual basis, which represents the traditional accounting and reporting approach.

The implementation of the value-based management is associated with the change of this traditional approach and construction of management process designated by the objective which is maximizing of the company value.

The aim of the present paper is the presentation of the value-based management in the context of insurance companies operation. The idea of the concept is the same as for other business entities, but there will occur differences in the area of value creation, because they are determined by the range and character of the insurers' operations. Research methods will rely on the analysis of literature dealing with the management of the company and its client as well as the analysis of the estimate and value-based management of the insurance company. For the purposes of the present paper we will make use of and analyze information published on websites of institutions and organizations concerned with the implementation of value-based management concepts.

1. Value-Based Management Concept

The Value-Based Management Concept came into existence as a result of evolution of several other concepts starting with the theory of residual income presented by Alfred Marshall in *Principles of Economics*, published in 1890, up to assumptions that the intellectual capital is the main source of the company value elaborated by L. Edvisson and M.S. Malone in 1997. The current image of the company value-based management was shaped by such factors as: value marketing, mergers, takeovers, disinvestments, risk and its effect on the company value, capital management, value-based motivating of managers, corporate governance, global strategies of value building, impact of IT and Business Intelligence on the value, investor relations, value reporting, client capital management, human capital management, shared values, and company culture.[1]

Company value-based management is a modern, dominant management style pursued in the best capital companies on all seven continents. It includes principles, proposals and solutions that concern making strategic and operational decisions, whose aim is maximizing of the company value for its owners (shareholders) and the remaining interest groups connected with the company: clients, employees, suppliers, moneylenders, local community and society.[2]

An essential factor in proper understanding and applying the value-based management concept is to arrive at a precise definition of the notion "value". It can be defined in a variety of ways. According to the classic definition the company value is the sum of its tangible and intangible assets constituting functionally organized and united into a whole components of the company, reduced by liabilities.[3]

1. *Value Based Management. Koncepcje, narzędzia, przykłady*, red. A. Szablewski, K. Pniewski, B. Bartoszewicz, Poltext, Warszawa 2008, p. 24
2. Ibidem, p. 25
3. Siudak M., *Zarządzanie wartością przedsiębiorstwa*, Oficyna Wydawnicza Politechniki Warszawskiej, Warszawa 2001, p.13.

In the subject literature there appear many other categories of the company values, the most common of which are: economic value, book value, market value or investment value. However, in the case of the value-based management concept it is most commonly assumed that the company value is the value it has for the owners (shareholders), i.e. the equity value.[4] At the same time there appears the notion "the value measure, such as for instance EVA (Economic Value Added), which is defined as "the measure of operating profit of the company having regard to the cost of the entire capital financing its investments (both equity capital and foreign capital)".[5]

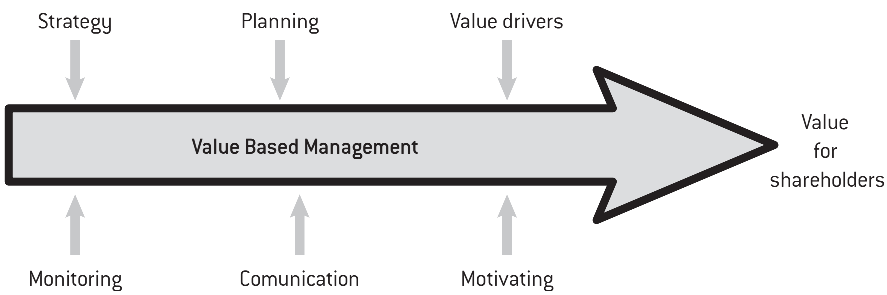
The value measuring method is variously defined in the subject literature and the term proves ambiguous. That is why when implementing the value-based management process, the business entity has to take, as the starting point, a precise definition of what we mean by the term value and the method of measuring it.

It is also worth noting that as a result of the development of the value-based management concept there appear definitions of this concept covering narrower grounds, like for example 'customer equity'. It is defined as "the value which is an estimated financial value of the customer including his/her cooperation potential".[6] The customer equity is measured with their purchasing power and the loyalty level. This approach differs a little from the traditional one concerning the value-based management, but it is certainly worth our attention for the customer equity also influences the company value. This means that improving *customer equity* also adds to the company value creation. As we see these two areas are not so completely independent of each other.

Customer lifetime value in the insurance company is the present value of its future profits from its clients (from the sale of insurance policies) at the time he/she makes a purchase (insurance year). The customer lifetime value is based on profits rather than sales, so in order for the value calculations to be of any use three types of information are needed: the client index, transaction index, marketing investment index.[7]

Because of various approaches to the term value and ways of measuring it, there are also many concepts that regard defining particular elements of the value-based management process. The components of this process most commonly cited are: strategy formation, planning, value drivers identification, monitoring with drawing up appropriate reports, motivating system and communication. They were presented in Figure 1.

Fig. 1. The road to the value for the owners of the company Source:



Source: Nita B., *Metody wyceny i kształtowania wartości przedsiębiorstwa*, PWE, Warszawa 2007, p. 24

4. Nita B., *Metody wyceny i kształtowania wartości przedsiębiorstwa*, PWE, Warszawa 2007, p. 24.
5. Cwynar A., Cwynar W., *Zarządzanie wartością spółki kapitałowej. Koncepcje, systemy, narzędzia*, Fundacja Rozwoju Rachunkowosci w Polsce, Warszawa 2002, p. 85
6. Rogozinski K., *Zarządzanie wartością z klientem*, Oficyna Wolters Kluwer, Warszawa 2012, p. 276
7. Parzych M.J., *Pomiar wartości życiowej klienta w firmie ubezpieczeniowej*, w: *Zarządzanie wartością klienta w przedsiębiorstwach w Polsce*, red. B. Dobiegala-Korona, T. Doligalski, Oficyna Wydawnicza SGH, Warszawa 2011, p. 296.

In every company there are three basic streams influencing its value. These are:[8]

- income stream
- operating costs stream
- capital commitment stream

The income stream is affected by such factors as: price, sales volume, unit cost and profit margin. Each of those factors can be analyzed for the purposes of the value-based management in a still more detailed way, i.e. when it comes to product division, when analyzing production capacity, capacity utilization level, customer groups and sales regions. And thus a business entity can create value through making specific decisions in relation to the aforementioned factors.

Within the operating costs stream one can distinguish fixed costs, variable costs and a unit cost level. For the sake of clarity it should be specified which costs are controllable (under the business entity's control) and those which are uncontrollable. Among the former are production losses, raw material consumption, energy consumption, machine and workforce capacity. As for insurance companies this cost group is relatively small and will primarily involve direct acquisition costs, and part of damage liquidation costs. Uncontrollable costs include prices of materials, inflation, and currency rates. In this cost group, for insurance companies the most important are administrative costs.

The last of those mentioned above is the capital commitment stream. It is generated by such factors as the utilization level of the assets possessed, level of capital expenditure, level of current liabilities, stock level, level of obligations or interest rate level. In the case of insurance companies the stream will be to a great extent dependent on capital investment and its results.

The value-based management concept often refers to Michael Porter's idea of creating the value chain. He identifies core activities: production, quality management, marketing and sales, and auxiliary activities concerning infrastructure, information, human resource management, research and development and materials management. The product value (and by the same token the firm's value) is being created in each and every of these processes. The product value, i.e. the sum of money the client is ready to pay for it, defines indirectly the value of the company.[9]

The concept of chain for the insurance company will be presented in the next chapters.

2. Value creating areas in the insurance company

The main objective of the activities preceding implementation of value-based management process is the identification of value sources. As already said, there are three basic areas generating value relating to income, costs and capital. What should be done, then, is to define clearly what sources of value creation really exist in these three areas for insurance companies.

Value creating areas in the insurance company are presented in Table 1.

8. *Value Based* ..., op. cit., p. 117
9. Siudak M., *Zarządzanie* ..., op. cit., p. 45

Table 1. Value creating areas in the insurance company

The area of value	The most important sources of value creation
Products	New sources of revenue
Distribution	Efficiency sale Costs of channels
Tariff policy	Reducing claims through better identification and risk evaluation Sale price alignment to customer needs and market situation
Underwriting	Quality of portfolio
Business administration process	Costs (especially IT)
Losses adjustment	Value of claims paid and technical provisions
Investments	Revenue from investment activities

Source: *Wycena i zarządzanie wartością zakładu ubezpieczeń*, red. J. Handschke, Wydawnictwo AE Poznań, Poznań 2006

The first area connected with products, which generates income can contribute to increasing the insurance company value through increasing this income, in particular through new income sources. That is why the insurance company operations should centre on looking for, creating and selling new products. However, one should remember that the insurer must take care of financial stability and each new insurance policy entails the risk, both actuarial and operational. For this reason, in the case of insurance companies, this area is exposed to increased risk and even if the costs of insurance sale alone are calculated will point to the product profitability, it should be borne in mind that there is always the risk of what is known as force majeure, i.e. natural disasters like earthquakes, floods or fires causing great damage.

Distribution is one of the most important value creating areas because it has an effect both on the income and costs, as well as on the capital. Insurance agents in the insurance company work in the inverse production cycle. i.e. they receive premiums before making disbursements. Because of this, for proper functioning, distribution channels are indispensable and they are insurers' basic stock affecting their market value. They play a role both of a production factor and a seller also providing insurance contracts. Their main task, however is to obtain the written premium.

Distribution channels, on the other hand, generate operational costs also known as distribution costs. There are various methods of calculating these costs, but two of them come to the fore. The first one depends on a traditional approach, which means grouping costs by type. The other is based on calculating costs in relation to operations. Both methods are presented in Table 2.

Table 2. Distribution costs calculation

Method	Formula
The traditional genre classification based on costs in accordance with the recognition of financial reporting	Distribution costs = Acquisition costs + administrative costs + share of loss adjustment costs
Management, referring to the calculation by activity based costing	Distribution costs = cost of managing distribution + cost of maintaining single-channel distribution (the sum)

Source: own study based on Source: *Wycena i zarządzanie wartością zakładu ubezpieczeń*, red. J. Handschke, Wydawnictwo AE Poznań, Poznan 2006, p. 74

The value creating area through costs is closely related to the cost management area and that's why this is an important problem, contributing significantly to proper functioning of the insurance company. The problem of costs management is also a separate area of the insurer management, but – as can be seen – closely connected with value-based management. That's why value maximization should be based on cost level optimization and an adequately chosen method of calculation.

Distribution also influences capital utilization efficiency, which is expressed in the form of a relation between achieved results and capital spent, or the difference between the result and the capital spent on achieving it. Capital utilization efficiency consists of four partial efficiencies: sale efficiency, allocative efficiency supply of external factors affecting production, and cooperative efficiency.

Due to their specific characteristics, insurance operations cover two value creating areas typical only of insurers. These are a tariff policy and underwriting. They resemble one another and deal with similar issues, i.e. both having to do with insurance risk assessment. Tariff policy concerns primarily pricing insurance coverage and all measures taken whose aim is to better estimate insurance assessment rates, in other words to eliminate the situation where customers pay inadequate risk premiums, either too high or too low. In this area the value is created both by income from premiums, as well as costs connected with paying compensations and other insurance benefits. The insurance company has to reconcile two things, on one hand has to carry out reliable actuarial assessments, but on the other hand adjust the obtained results to their clients' expectations and current market conditions. Functioning of diversified tariffs as well as non-diversified affects profitability of the insurer's business, and by the same token its value.

The role of underwriting is slightly different, for it concentrates on the portfolio quality. And thus value creation takes place here not directly through influencing income or costs but indirectly through creating an adequate portfolio risk. Selection and classification of those risks permits value creation through such operations as:[10]

- cost-cutting of compensation payments,
- premium rate creation through anti selection of risk and establishing an adequate premium,
- gaining competitive edge (new products),
- realization of preventive function,
- pricing for insurances without statistical data (expert method).

Thus in the situation where the insurance company decides on the implementation of value-based management process it should pay special attention to coordination of objectives and operations in this process with our tariff and underwriting policies.

Areas linked to administration and loss adjustment contribute first of all towards generating costs, and as such these areas are connected with value creation. An important role is played here by high-tech information systems, which are used for insurance policy management, result reporting, data collecting, ensuring their quality and data sharing, bookkeeping, and financial operation processing. The choice of these systems and efficiency of their utilization affect cost optimization. It is hard to speak of cost reduction for it is impossible measure when different it systems are used.

Loss adjustment expense plays an important role in insurance company costs that is why the area dealing with these questions has been identified as part of the value-based management and should be strictly controlled when strategic decisions are made.

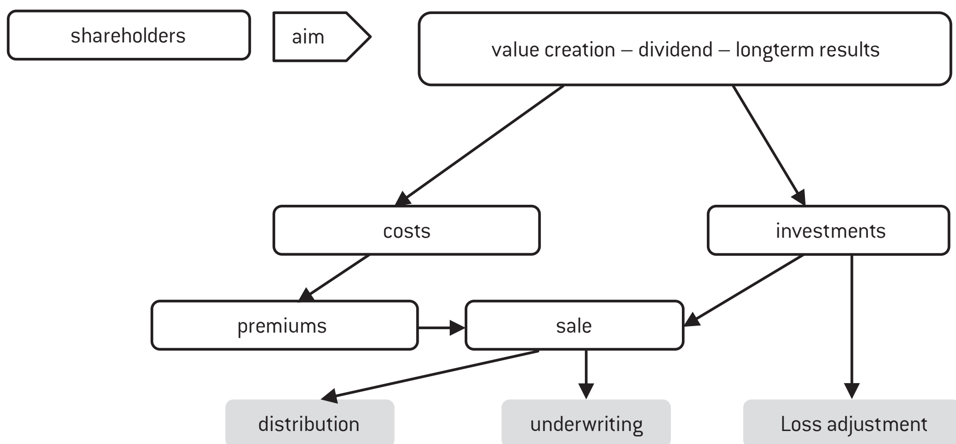
10. *Wycena i zarządzanie wartością zakładu ubezpieczeń*, red. J. Handschke, Wydawnictwo AE Poznań, Poznan 2006, p. 84

By contrast, quite distinct is the area related to investments. It is not even close to the core activities of the insurance company, i.e. connected with product sales, but – as we know – plays an important role. For the purposes of the value-based management, attention should be paid to income and costs of investments and also to their profitability for they determine to a large extent the capital commitment efficiency, as investor expectations are covered to a great extent from investment results.

3. Value-based management process in the insurance company

Relations between particular areas and entities in the insurance company in the context of value creating are presented in Figure 2.

Fig. 2 Value based management process in insurance company



Source: own study

Figure 2 shows the relationship between different areas and shareholders in the insurance company in the context of value based management. Our point of departure being shareholders with their objective of having high dividends ensured. Dividend growth is invariably related to long-term financial performance, which in turn is shaped by costs and investments. As far as costs are concerned, an important role is played by the loss adjustment process. In the case of investments, however, their value, as well as the results they generate are related to the premium, which in turn is dependent on sales, and the sales are shaped by distribution and underwriting and by the situation on financial markets. What these interdependencies boil down to determines the range of the performance measurement system, which should be designed in such a way that it will serve insurance activity assessment in the context of attaining its main goal, which is value maximization for the owners.

One of the most important elements of the strategic management concept is the value chain, already mentioned in this paper. The chain will not look exactly the same for the insurance company as for other business entities. It is presented in Figure 3.

Fig. 3 Value chain in insurance company

BASIC ACTIONS	Actuary				
	Law service				
	Information systems				
	Finance				
	Human resources management				
	Territorial network				
	Product preparing	Sale	Loss adjustment	Insurance risk transfer	Investments
	BASIC ACTIONS				

Source: own study

As presented in Figure 3, the value chain in the insurance company does not resemble the traditional one. There are areas in it typical of insurance activity, such as the actuarial office, loss adjustment process, investing activities, or insurance risk transfer.

In the value-based management process one of the main roles is played by the appraisal method. For insurance companies the methods most commonly applied are: the embedded value method and the appraisal value method.[11] The first of these methods consists of two elements: net assets at their fair market value and the most probable profits in the future at the present value, resulting from a concluded insurance contract. While calculating future profits, one uses the cost of the capital supplied by the shareholders, which is calculated as discounted cost of lost profits due to the capital freeze. The lost profits can be presented as the difference between the return on the solvency margin and the return on the capital market.

While calculating the appraisal value we add to the embedded value the present value of the profits from contracts to be signed in the future, whose conclusion can be rationally forecast on the basis of the present market position of the insurance company.

It is also worth noting that the above models are based in large measure on predicted data and that is why it is so important to conduct the preliminary analysis in a reliable manner selecting our data very carefully.

And if some data do not permit making reliable forecasts, they should be left out altogether. While calculating the embedded value, one has to carry out the sensitivity analysis, whose aim is to obtain a model for projection of elements of the financial result. Three areas are subject to scrutiny and these are: insurance policy data, products, experiments and forecasts. The model for the EV appraisal has one rather serious drawback for it does not take into account the role of options and guarantees built into the contract.

Ernst and Young has made a survey to know how looks implementation of value based management in insurance companies. Potential increase in profitability due to value based management is estimated at up to 4%. New risk capital models in Solvency II highlight the need for value based management. Most insurance companies (73%) have a value based management concept or plan

11. *Value Based*…, op. cit., p.193

to implement one. Implementation of an internal model is often a driver for value based management. Half of surveyed insurers use an internal model with risk-based management, and 25% apply the standard formula to calculate the risk capital requirement. Companies also use capital models based on Solvency I or rating models.[12]

A range of value based management activities can be applied to increase profitability. Survey made by EY shows that these have been adopted to varying degrees. Internal transparency increases via economic and performance measurement, transparent capital allocation and definition of value based management indicators. 27% of insurers consider themselves at this level. Profitability can also be increased by aligning executive and employee incentive structures to corporate management strategy (implemented by 9% of companies) and capital optimization through restructuring (24% of insurers). Nearly 10% of companies use value based management to manage insurance portfolios and investments, and 30% optimize their product margins and risk exposures through value based pricing. Insurers with value based management expect it to provide an average increase of 2.9% in return on economic capital. However, nearly 40% of insurers expect to achieve only a quarter of this potential benefit.

4. Conclusion

The problem of value-based management is undoubtedly important and it sets the course for activities related to the development of management process. It is adjusted to the current market conditions and expectations of various customer groups. It requires, however, as in the case of insurance companies, individual adjustment to the character of a given activity. The basic change when implementing the value-based management in the insurance company is a repositioned product portfolio to point out products most likely to create value, which enables a 25% increase in potential value.[13]

Potential profitability growth due to the value-based management is estimated at up to 4%. New risk capital models in Solvency II highlight the need for VBM. Most insurance companies (73%) resort to a VBM concept or plan if necessary. Implementation of an internal model is always a driver for VBM. Half of the insurers surveyed use an internal model with risk-based management, and 25% apply the standard formula to calculate the risk capital requirement. Insurance companies also use capital models based on Solvency I or on rating models.[14]

There is a range of activities that can be applied in order to increase profitability. A survey carried out by EY shows that these have been adopted to varying degrees. Internal transparency increases due to measuring the company's economic performance, transparent capital allocation, and defining the VBM indicators. 27% of VBM insurers consider themselves to be at this level. Profitability can also be increased by aligning executive and employee incentive structures to corporate the management strategy (implemented by 9% of insurance companies) and capital

12. http://www.ey.com/GL/en/Industries/Financial-Services/Insurance/European-Solvency-II-survey—Value-based-management, (access 06/10/2015)
13. Koller T., *What is value-based management?* [http://www.mckinsey.com (access 06.10.2015)
14. http://www.ey.com/GL/en/Industries/Financial-Services/Insurance/European-Solvency-II-survey---Value-based-management, (access 10.06.2015)

optimization through restructurization (24% of insurers). Nearly 10% of insurance companies use the VBM to manage insurance portfolios and investments, and 30% optimize their product margins and risk exposures through value-based pricing. Insurers with the VBM expect it to ensure an average increase of 2.9% in return on economic capital. However, nearly 40% of insurers expect to achieve only a quarter of this potential benefit.

Value Based Management aims to provide consistency of :[15]

- the corporate mission,
- the corporate strategy,
- the corporate governance,
- the corporate culture,
- corporate communication,
- organization of the corporation,
- decision processes and systems,
- performance management processes and systems,
- reward processes and systems.

Value Based Management is a concept whose main objective is to maximize the company value. However, one important practical aspect is to convince the managerial staff that it is also indirectly related to improvement of financial results, which makes a positive difference to them too.

References

Cwynar A., Cwynar W., *Zarządzanie wartością spółki kapitałowej. Koncepcje, systemy, narzędzia*, Fundacja Rozwoju Rachunkowosci w Polsce, Warszawa 2002.

Nita B., *Metody wyceny i kształtowania wartości przedsiębiorstwa*, PWE, Warszawa 2007.

Rogozinski K., *Zarządzanie wartością z klientem*, Oficyna Wolters Kluwer, Warszawa 2012.

Siudak M., *Zarządzanie wartością przedsiębiorstwa*, Oficyna Wydawnicza Politechniki Warszawskiej, Warszawa 2001

Wycena i zarządzanie wartością zakładu ubezpieczeń, red. J. Handschke, Wydawnictwo AE Poznań, Poznan 2006.

Value Based Management. Koncepcje, narzędzia, przykłady, red. A. Szablewski, K. Pniewski, B. Bartoszewicz, Poltext, Warszawa 2008.

Parzych M.J., *Pomiar wartości życiowej klienta w firmie ubezpieczeniowej*, w: *Zarządzanie wartością klienta w przedsiębiorstwach w Polsce*, red. B. Dobiegala-Korona, T. Doligalski, Oficyna Wydawnicza SGH, Warszawa 2011.

Koller T., *What is value-based management?* [http://www.mckinsey.com (06.10.2015)]

http://www.ey.com, (06.10.2015)

http://www.valuebasedmanagement.net, (06.10.2015)

15. http://www.valuebasedmanagement.net, (access 10.06.2015)

Zarządzanie wartością w zakładach ubezpieczeń

Wdrożenie zarządzania wartością wiąże się z zmianą tradycyjnego spojrzenia na zarządzanie i zbudowaniem procesu którego celem jest maksymalizacja wartości przedsiębiorstwa. Celem niniejszego artykułu jest przedstawienie koncepcji zarządzania wartością w kontekście działalności zakładów ubezpieczeń. Na proces zarządzania wartością składa się: formułowanie strategii, planowanie, identyfikacja nośników wartości, monitorowanie wraz ze sporządzaniem stosownych raportów, systemy motywacyjne oraz komunikacja. W każdej firmie istnieją trzy podstawowe strumienie wpływające na jej wartość. Są to: strumień przychodów, strumień kosztów operacyjnych i strumień zaangażowanego kapitału. Obszarami kreowania wartości w zakładzie ubezpieczeń są produkty, dystrybucja, polityka taryfowa, underwriting, administrowanie programem biznesowym, likwidacja szkód oraz polityka lokacyjna. Wdrożenie projektu Solvency II na pewno podkreśli znaczenie value based management *u ubezpieczycieli.*

Słowa kluczowe: Zarządzanie wartością, ubezpieczenia, łańcuch wartości

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