RESEARCH PAPERS OF WROCŁAW UNIVERSITY OF ECONOMICS No. 125
Financial Sciences 3 2010

Monika Wieczorek-Kosmala
University of Economics in Katowice

VALUE OF INSURANCE. A CORPORATE FINANCE PERSPECTIVE

Summary: The value of insurance for the company can be perceived from different perspectives. The paper identifies insurance value drivers through the analysis of core benefits related to applying insurance as a tool of risk management. Particularly, two aspects are analysed: the insurance risk transfer mechanism and the process of practical application of insurance in a company. Each of the identified insurance value drivers is discussed in terms of its impact on value creation process perceived through the economic value added account. The discussion is concluded with the model of net of connections between each of the identified insurance value drivers and economic value added account components. The model includes a character and a course of actions between its elements.

Keywords: insurance, value, economic value added; JEL codes: G22, G32.

1. Introduction

Insurance is usually perceived from a risk management perspective. It means that it is analysed as a tool offering a protection against financial consequences of risk occurrence. It is common to associate insurance value with the expected indemnification which is then compared to the burden of premium payment. This paper is written with a purpose of proving that this perspective is to narrow from corporate finance perspective. Particularly, it aims at convincing that numerous insurance value drivers can be identified. The problem was developed by means of the theoretical studies over the insurance risk transfer mechanism and the process of implementing insurance in a company[1].

The study also considers the nature of each of identified insurance value drivers in terms of their measurability. Most of the identifiable insurance value drivers are immeasurable in nature which means that it is difficult to perceive them with

[1] The study took under consideration the problems included in the theory of insurance demand, as well as the arguments presented by the analysis of optimal insurance contract. However, the most inspiring was the study presented by J. Berk and P. DeMarzo, which includes an extended analysis of different benefits of insurance linked with corporate finance issues. Compare: J. Berk, P. DeMarzo, *Corporate Finance*, Pearson Education, Boston 2007, p. 928-930.

empirical analysis. However, although immeasurable, they should not be omitted and require larger consideration.

Finally, the paper aims at linking each of the identified insurance value drivers with value embodied in economic added value account. It represents a novel problem that will be solved with the method of conceptual analysis of the nature of identifiable insurance value drivers[2]. In this context, each of the identified insurance value drivers are considered separately. The results of the study are presented in the form of model of net of connections between insurance value drivers and the components of economic value added account.

2. Identifying core insurance value drivers

Insurance value drivers should be associated with benefits of implementing insurance in the company. In order to identify such benefits, the nature of insurance as an economic device should be considered. Insurance is a complicated mechanism which has two fundamental characteristics:

- transferring risk from an individual to a group,
- sharing loss by all members of the group[3].

Through the agreement to share the losses, the economic burden of losses is spread through the group. The company willing to transfer the risk pays insurance premium. The premium represents the share of a company in a fund collected and managed by an insurer. This fund is used to support financially those members of a group who suffered from loss.

Taking above into consideration, from an individual perspective insurance can be defined as an instrument whereby the individual (a company) substitutes a small, certain loss (a premium) for a large uncertain financial loss (the contingency insured against)[4]. This definition emphasises the transfer of risk. From a social perspective, insurance should be defined as an economic device for reducing and eliminating risk through the process of combining a sufficient number of homogenous exposures into

[2] There are seldom attempts to link the benefits of insurance with value creation process. One of such studies was presented by E. Banks. However, the author uses so called enterprise value (EV) as a canvas for further considerations. EV is defined here as a sum of expected cash flows in time discounted with discount rate, comprising a risk-free rate and a risk premium. In the mentioned study, EV is a subject of risk management and insurance is perceived there as one of available solutions. See: E. Banks, *Alternative Risk Transfer. Integrated Risk Management Through Insurance, Reinsurance and Capital Markets*, John Wiley & Sons, Chichester 2004, p. 4; 16-17.

[3] E.J.Vaughan, T.Vaughan, *Fundamentals of Risk and Insurance*, John Wiley & Sons, New York 2003, p. 33.

[4] The theory of insurance demand assumes that the basic idea of insurance demand models is that the contingent amount of money depends upon a well-defined loss. H.Schlesinger, *Theory of Insurance Demand*, [in:] *Handbook of Insurance*, ed. by G. Dionne, Kluwer Academic Publishers, Boston/Dordrecht/London 2000, p. 132.

a group. By this combination, an insurer makes the loss predictable for the group as a whole. In this definition of insurance the pooling of risk is emphasised[5].

From a company's perspective, risk transfer possible thanks to the insurance helps to achieve a certainty that an insurer will support it financially in case of insured event occurrence. Insurer's financial help should ascertain the possibility of achieving the situation which was present before insured event occurrence. In this context, insurance helps to rebuild the destroyed value of a company, particularly its assets. In some cases the insured event causes the impossibility of achieving expected results (eg. profits). In other words, indemnification for loss permits companies to be restored to their former financial position after a loss occurrence. As a consequence, a company can maintain its financial security. It is also obvious that insurance mechanism reduces worries and fears of the insured company due to the promised financial support in case of risk occurrence[6].

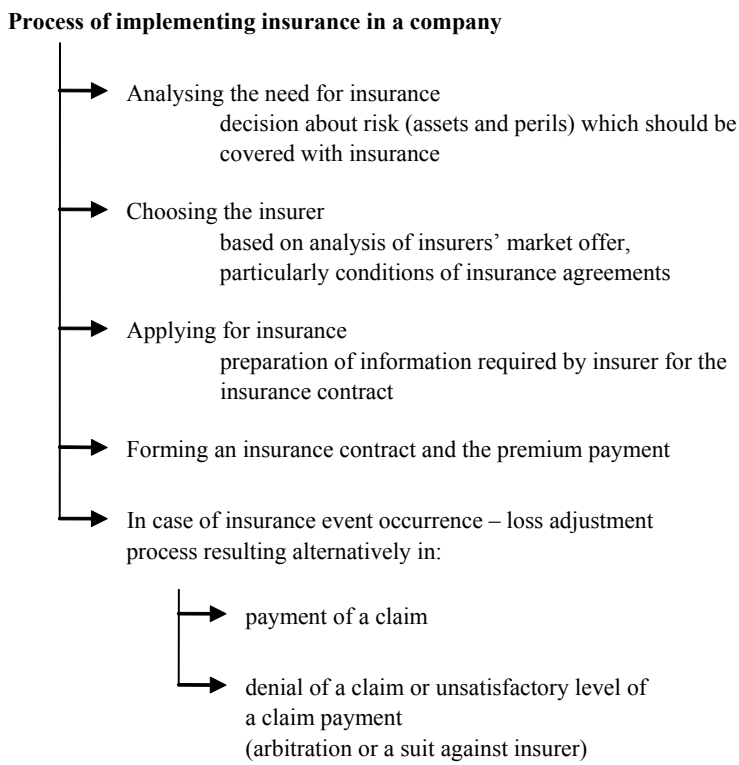

Figure 1. The process of implementing insurance in a company – practical aspects

Source: own study.

[5] Compare: Ibidem, p. 34.

[6] Compare: G.E. Rejda, *Principles of Risk Management and Insurance*, Addison Wesley, Boston 2001, p. 28-29.

Some insurance value drivers can be identified through the consideration of a process of implementing insurance in the company. As presented in Figure 1, the process includes a few following steps: analysing the need for insurance, choosing the insurer, applying for insurance, forming an insurance contract, and – in case of loss occurrence – payment or denial of a claim. However, in the process of implementing insurance the company needs to review the insurance market and contact the insurer. The purposes of economic contacts are different and thus constitute an important source of various benefits for the company.

To conclude, taking into consideration the above mentioned theoretical and practical aspects of implementing insurance as a tool of transferring risk, the three core insurance value drivers are identifiable:

- indemnification for loss,
- reduction of worries and fears, and
- economic contacts with insurers and insurance market.

However, the further deeper analysis of insurance value drivers will be insufficient without the link to the value creation problem. Particularly, it is crucial to indicate the way in which a particular insurance value driver affects the value creation process.

Nowadays, it is widely accepted to evaluate company's effectiveness considering its ability to create the value for the owners[7]. Value for the owners often constitutes the main goal of the company's existence. In this context, economic value added (EVA) represents one of commonly used measures. According to EVA formula, the company is not truly profitable unless its revenues have covered both operating expenses of running the business and all capital costs, including the cost of equity finance[8]. From an accounting perspective, the economic value added is defined as a difference between the company's net operating profits after taxes (NOPAT) and the capital charge. The capital charge equals the company's invested capital (IC) times its weighted average cost of capital (WACC). As a consequence, EVA can be defined as follows:

$$EVA = NOPAT - (IC - WACC)$$

where:

EVA – economic value added,
NOPAT – net operating profit after taxes,
IC – invested capital,
WACC – weighted average cost of capital.

[7] A larger explanation of such purposes (under the assumption that owners are stockholders) is presented in: A. Damodaran, *Corporate Finance. Theory and Practice*, John Wiley & Sons, Hoboken 2001, p. 11-39.

[8] About the idea and account of economic value added see more in: J.L. Grant, *Foundations of Economic Value Added*, John Wiley & Sons, Hoboken 2003, p. 3; S.D. Young, S.F. O'Byrne, *EVA and Value-Based Management. A Practical Guide to Implementation*, McGraw-Hill, New York 2001, p. 35.

The above presented definition of EVA convinces that the company creates value if EVA is positive. Using EVA as a canvas for further considerations, the model of insurance value drivers should be linked with their impact on:

- operating efficiency, related with increase in operating costs or decrease in operating revenues – the risk of decrease in operating profit,
- financing efficiency, related with changes in invested capital volume, capital structure and changes in cost of capital components – the risk of increase in capital charges.

As depicted in Figure 2, insurance value drivers help to achieve operating and financing efficiency of the company and thus the level of EVA.

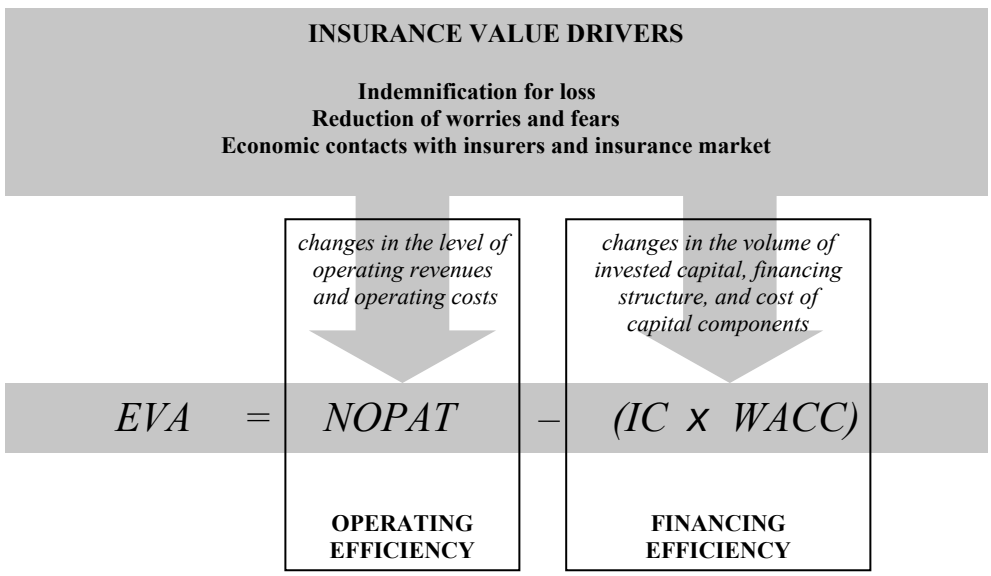

Figure 2. The concept of identification of insurance value drivers versus EVA components

Source: own study.

Further study will explain in detail the way in which each of the identified insurance value drivers influence the operating or financing results of a company. Particularly, it will be reviewed how insurance drivers affect the value creation process. Insurance value drivers may affect the level of operating revenues and operating costs, the volume of invested capital, capital structure and the cost of capital components. Thus, insurance value drivers affect the economic value added account components: invested capital (IC), weighted average cost of capital (WACC), and operating profit (NOPAT).

3. Indemnification for loss as a value driver

Indemnification for loss represents the most obvious effect of using insurance in protection against risk. It represents the stream of funds flowing from the insurer to the insured company in case of insured event occurrence. It has several important implications for value creation process.

It is undisputable, that indemnification for loss helps to restore company's assets or position prior to the loss. It is common knowledge that payment of claim is volatile depending on the type of insurance and results of loss adjustment procedure. Also, it is reduced with deductibles included in the insurance contract. However, it is not diminishing the role of funds contributed to the company in difficulties caused by loss occurrence.

Indemnification for loss affects all components of economic value added account. Particularly, indemnification helps to:

1) stabilise the amount of invested capital involved in value creation process as the indemnification contributes funds for restoration of assets damaged (reduced) by loss occurrence,

2) stabilise the weighted average cost of capital as the funds for assets restoration help to eliminate or reduce additional financing costs that may result from changes in financial structure or changes in cost of capital components,

3) stabilise the net operating profit after taxes as the funds for assets restoration eliminate or reduce costs that may result from limitation or abandonment of operating activity.

The above distinguished aspects need a closer explanation.

As presented in Figure 3, indemnification for loss helps to stabilise the level of invested capital and thus the level of EVA possible to be achieved.

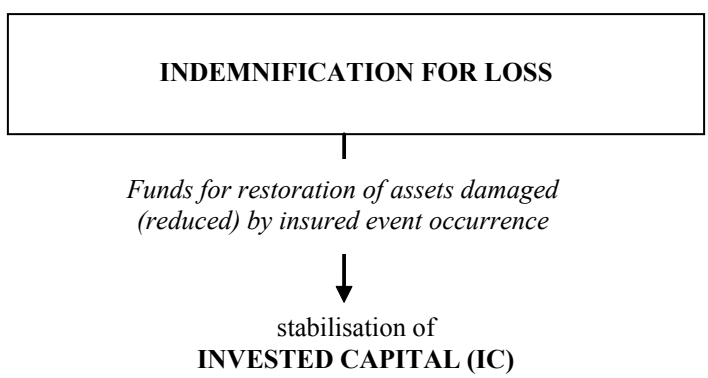

Figure 3. The impact of indemnification for loss on the level of invested capital

Source: own study.

There is a following explanation of relations depicted in Figure 3. Loss damages (and thus also reduces) the operating assets of a company. Operating assets mean here assets involved in creating operating profits and represent the volume of invested capital. Obviously, the reduced assets lead to limitations in operating profit possible to be achieved. Thanks to the funds contributed by indemnification for loss, the company has a chance to restore or rebuild the level of operating assets and invested capital at the same time.

To illustrate this mechanism a following example should be considered. The basic assumption is that in terms of activity undisturbed by the loss occurrence the company will achieve $EVA_{(0)}$ which is a result of operating activity expressed by $NOPAT_{(0)}$ and the capital charge expressed by the invested capital $IC_{(0)}$ times the weighted average cost of capital $WACC_{(0)}$:

$$EVA_{(0)} = NOPAT_{(0)} - [IC_{(0)} \times WACC_{(0)}].$$

Assuming that in case of loss occurrence a portion of property (L_P) will be damaged, but the operating efficiency and cost of capital remain unchanged, the company will achieve $EVA_{(1)}$:

$$EVA_{(1)} = NOPAT_{(0)} - [(IC_{(0)} - L_P) \times WACC_{(0)}].$$

Consequently, $EVA_{(0)} > EVA_{(1)}$

Under the assumption that the company is paid and insurance indemnification (I) which is equal to the loss of property (L_P) and the indemnification is paid immediately, the company will achieve $EVA_{(2)}$:

$$EVA_{(2)} = NOPAT_{(0)} - [(IC_{(0)} - L_P + I) \times WACC_{(0)}].$$

The conclusion is that thanks to the insurance indemnification the company may achieve the expected level of economic value added:

$$EVA_{(1)} > EVA_{(2)}$$

The above presented model assumes that the loss occurrence will not influence the operating activity of the company. In terms of property damage the invested capital is reduced and this is a measurable effect. However, it should be pointed that with lower invested capital the potential to earn operating profit is also limited and finally the level of EVA achieved may be even lower that previously expected. Thanks to the indemnification the company has funds for destroyed assets restoration. Inevitably, it can maintain the scale of operations and potentially the level of EVA achieved is comparable to the expected one.

The mechanism is more difficult to observe with the example of liability insurance. In this case, indemnification helps to restore the invested capital in form of funds which the uninsured company would be obliged to pay to third parties. In

terms of undisturbed activity, the funds can be used to finance the operating activity of the company, as planned prior to the loss occurrence.

As mentioned above, funds contributed with the indemnification for loss have implications with the elimination or reduction of financing costs. Thus, the changes in capital structure and changes in cost of capital components can be prevented. As a consequence, the level of weighted average cost of capital has a potential to remain stable, as presented in Figure 4.

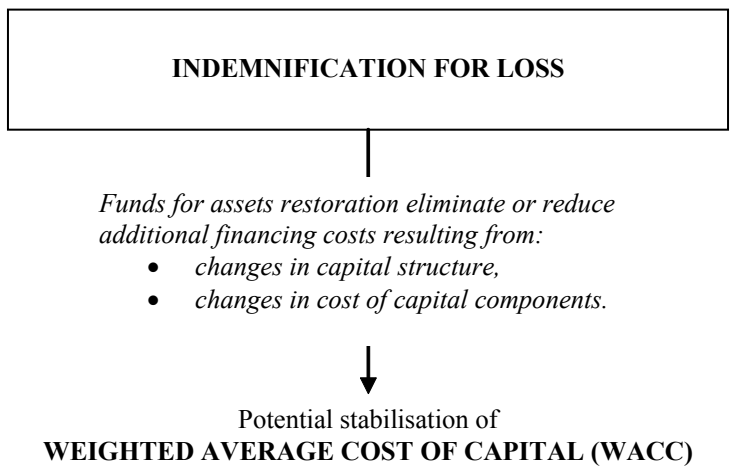

Figure 4. The impact of indemnification for loss on weighted average cost of capital

Source: own study.

There is a following explanation to the relation depicted in Figure 4. In case of risk occurrence, the uninsured company has to find sources of funds for restoring destroyed assets. Such funds may be in the form of capital reserves (internal financing). Surely, this implies alternative costs of using capital reserves for financing loss instead of financing purposes for which reserves were collected[9]. However, it is difficult to identify the range of consequences it brings to the effectiveness of operating activity in particular.

If the company possesses no capital reserves, it has to seek additional external sources of funds in the form of equity or debt finance. Both situations result in additional financing cost. Raising equity funds is considered as an expensive endeavour and is tied with issuance costs (e.g. underwriting fees or transaction

[9] In some cases the company may create special reserves for financing losses, which is called self-insurance. However, from the corporate finance perspective, it is argued that self-insurance has some limitations in loss financing compared to insurance. The analysis in this paper is made under the assumption that the company transfers risk with insurance rather than finances the losses with self-insurance funds.

costs). Additionally, it can cause the change in capital structure by increasing the value of equity capital with higher (than debt finance) cost. Consequently, there is a risk of increase in weighted average cost of capital.

The increase in debt finance brings even a larger scale of consequences. When the company borrows funds it exposes itself to the increase of a chance of experiencing costs of financial distress, including bankruptcy costs. The financial distress costs have an indirect dimension and thus are difficult to be measured. Among others, they include the costs of loss of customers, suppliers and even employees, the loss of quick sale of assets and the costs of lowered creditworthiness. It is beyond doubt, that such a cost springs from difficulties in managing financially distressed company. In addition, financial distress may result in bankruptcy costs which are related to legal and administrative costs of bankruptcy, such as legal and accounting expert opinions, consulting, appraisals and sale of assets[10].

Generally speaking, increase in debt finance rises the risk of insolvency or financial difficulties and thus implies the increase in cost of capital components. In such circumstances all entities financing company, both owners and creditors, rise their expected rate of return which constitutes the calculation of cost of capital components[11]. Consequently, the company will face the increase in weighted average cost of capital. As the indemnification for loss prevents the company from financing loss from external funds (equity or debt), the weighted average cost of capital has a chance to remain stable in case of loss occurrence.

Indemnification for loss brings also the possibility to eliminate or reduce costs related to limitation or abandonment in the scale of operating activity. As presented in Figure 5, this has implications in operating efficiency embodied in net operating profit after tax as well as in financing efficiency embodied in weighted average cost of capital.

There is a following explanation to relations presented in Figure 5. Thanks to indemnification for loss an insured company has a chance to achieve prior level of operation quicker that the uninsured one. It is extremely important while considering that each loss occurrence results in both direct and indirect consequences. The direct consequences are related to the asset damage which is often physical and thus visible. Therefore, direct consequences of loss are restored by means of funds contributed to the company with the payment of a claim (the problem is discussed above). However,

---

[10] To find more about extended analysis and detailed examples of costs of financial distress and bunkruptcy costs, including their impact on value creation process see: J. Berk, P. DeMarzo, *Corporate...,* p. 494-500; S.B. Scott, W.L. Megginson, L.J. Gitman, *Corporate Finance*, Thomson-South Western, International Ed., 2004, p. 442; S.A. Ross, R.W. Westerfield, J. Jaffe, *Corporate Finance*, McGraw-Hill, New York 2005, p. 433-550.

[11] A.A. Groppelli, E. Nikbakht, *Finance*, Barron's, New York 2006, p. 169, 200-203; T. Ogier, J. Rugman, L. Spicer, *The Real Cost of Capital. A Business Field Guide to Better Financial Decisions*, Pearson Education Limited, Harlow 2004, p. 5-10.; H.K. Baker, B.E. Powell, *Understanding Financial Management. A Practical Guide*, Blackwell Publishing, Oxford 2005, p. 342-343.

loss occurrence results also in a range of indirect consequences which often leads to the inefficiency of operating activity. Good exemplification comes from the businesses in which the relatively low loss in assets value leads to large reduction of operations scale and thus to decrease in operating profits. This is specificity of companies in which technological process depends on proper functioning of one or a few crucial elements.

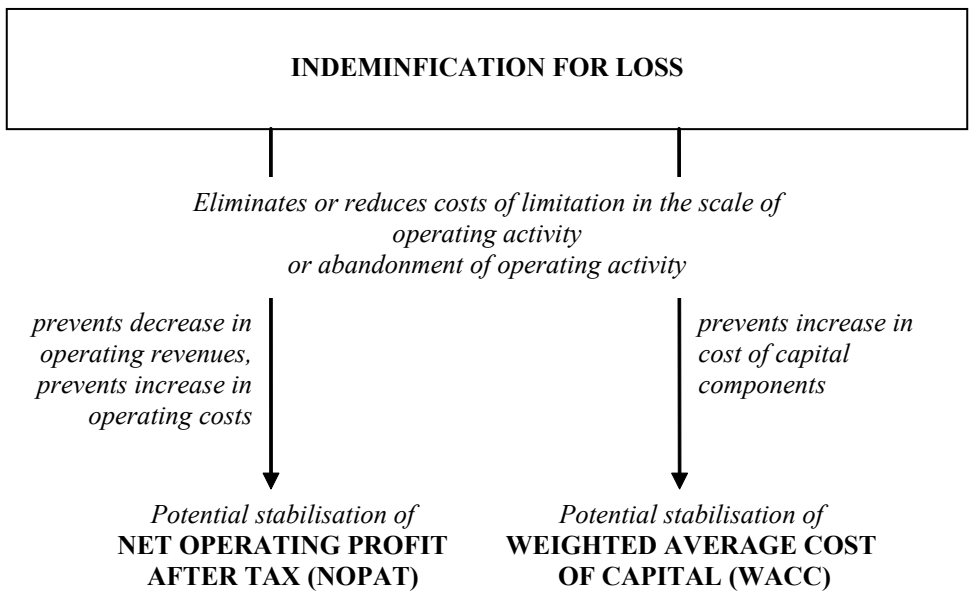

Figure 5. The impact of indemnification for loss on the level of net operating profit after tax and weighted average cost of capital

Source: own study.

Indirect consequences of loss often cause additional operating costs or reduce the volume of operating revenues. Generally, indirect consequences of loss are strongly tied with the absence of company on the market or its limited activity on the market. It often results in the loss of clients and/or suppliers and may imply further consequences. It is important to mention that indirect consequences of loss tend to grow in time (this is why they are often called 'time element loss')[12]. It is impossible to avoid indirect consequences of insured event occurrence. However, the value of indemnification for loss should be linked with the shortening time needed to achieve the previous scale of operations. In such circumstances the indirect consequences of loss have limited ability to grow in force.

[12] This expression 'time element loss' is widely used by: C.A. Williams Jr., M.L. Smith, P.C. Young, *Risk Management and Insurance*, McGraw-Hill, Boston 1998.

Concluding, indemnification for loss prevents growth in operating costs and prevents decline in operating revenues. Consequently, indemnification for loss helps a company to stabilise the operating activity expressed in the volume of net operating profit after tax.

As expressed in Figure 5, elimination (or reduction) of limitation or abandonment of operating activity has also implications on the level of weighted average cost of capital. The explanation is related to the fact that the cost of capital components depends – among other factors – on operating risk[13]. The cost of capital component (equity or debt finance) equals the risk free rate increased with operating risk premium and the financial risk premium[14]. Obviously, if the company meets some restrictions caused by inability to operate on the market after loss occurrence the operating risk increases. Therefore, the ability to achieve quickly the planned level of operations limits the risk faced by owners and borrowers and thus reduces their expected rates of return. Consequently, there is a chance that weighted average cost of capital remains stable.

4. Reduced worries and fears as a value driver

Companies applying insurance in protection against risk are aware that in case of loss occurrence the insurer will contribute funds for assets restoration. This awareness reduces at least a portion of worries and fears related with running the business. The feeling of being safe is even increased by an insurance market organisation which includes the supervision of insurers' operations. According to supervisory requirements the insurer should be always ready to pay claims and should always possess accurate reserves of funds[15].

In terms of the awareness, that in case of unfortunate event occurrence there will be insurer's financial support, the company is placed in a 'peace of mind' state. It may have justified internal and external implications in operating and financing effectiveness of a company. It should be mentioned that the value of reduction of

[13] Operating risk is associated here with the risk of achieving an expected level of operating profit.

[14] The cost of capital models is often built as a risk-free-rate plus risk premium. The risk premium depends on both operating activity of the company (including factors springing from systematic risk) and on financial leverage, it means the risk resulting from the financial structure. For example, this idea is reflected by Hamada quotation. Based on this equation it is possible to derive beta coefficient for unlevered and levered firm. Compare: T.E. Copeland, J.F. Weston, K. Shastri, *Financial Theory and Corporate Policy*, Addison-Wesley, Boston 2005, p. 575.

[15] This is a core of the most important function of insurance in the economy which is defined as offering the insurance protection. The economic and behavioural consequences of this function are widely disputed in the literature. See for example: J. Handschke, *Funkcje i zasady ubezpieczeń gospodarczych*, [in:] *Ubezpieczenia gospodarcze*, T. Sangowski, Poltext, Warszawa 1998, p. 80-83.

worries and fears is multiplied by the professionalism of the insurer (particularly its financial standing and extension of market offer).

Internal implications of reduced worries and fears influence the process of generating net operating profit, as presented in Figure 6. The value is related to more efficient management of invested capital which leads to a possible increase in net operating profit after tax thanks to the possibility to grow operating revenues or reduce operating costs.

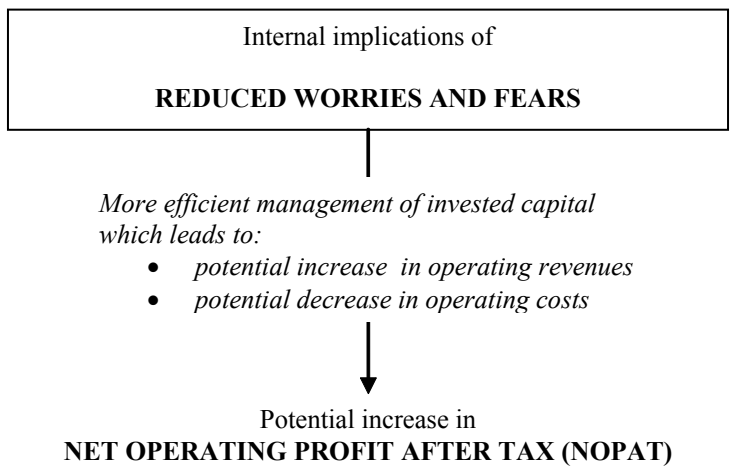

Figure 6. The impact of reduced worries and fears on net operating profit after tax

Source: own source.

There is a following explanation for relations presented in Figure 6. The insured company has a higher level of stabilisation in running the business. In such circumstances, the company can plan activities more effectively. It can focus more accurately on achieving the main goal of activity. Even if the insured event occurs, the company is assured that indemnification for loss will contribute funds needed to restore. It does not have to bother that in case of loss additional debt or equity (external financing) will be needed. Also, it does not have to form reserves of funds (internal financing) for covering loss. Therefore, the invested capital can be arranged in meeting new challenges, financing pioneer projects or investments which will bring higher operating revenues or reduction of operating costs in the future.

External implications of reduced worries and fears are related to the assessment of the company's activity in the business environment. As presented in Figure 7, it may stabilise or even increase the level of operating revenues as well as stabilise or even decrease the weighted average cost of capital.

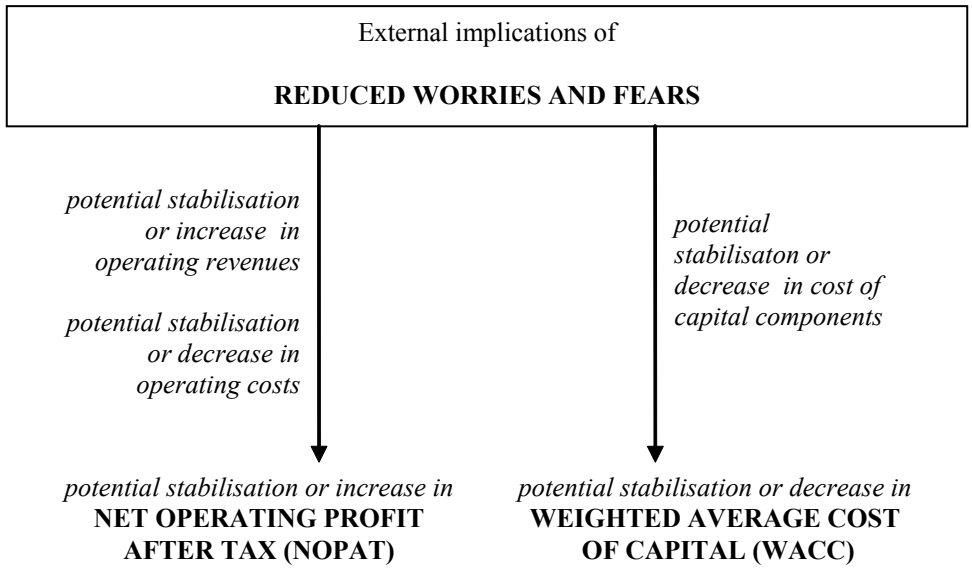

Figure 7. The impact of external implications of reduced worries and fears on the level of net operating profit after tax and weighted average cost of capital

Source: own study.

There is a following explanation of relations presented in Figure 7. The insured company has competitive advantage in the business environment compared to the uninsured one. As a consequence, the insured company may improve economic contacts with different groups of stakeholders. Among the most important areas for the value creation process the following should be distinguished:

- improvement in relations with owners and creditors as capital suppliers. The risk included in company's operations is reduced, thus the expected rates of return decrease. As a consequence the cost of capital components and thus weighted average cost of capital has a potential to decrease. Also, the company may benefit from a better access to additional funds for extension of operating activity,
- improvement in relations with customers and suppliers. It helps to stabilise business connections and thus ensures the level of supply lines and the market for offered goods or services. As a consequence, there is a possibility to reduce volatility of operating costs and revenues,[16]
- improvement in relations with employees. In terms of a higher stability of a company as a whole the employees also feel more secure. It implies their motivation and loyalty and thus may lead to more effective work.

[16] This problem is a subject to break-even-point analysis. See more in: D.R. Emery, J.D. Finnerty, J.D. Stowe, *Corporate Financial Management*, Pearson Education International, Upper Saddle River 2004, p. 260-262.

Taking above into consideration, it is obvious that the reduction of worries and fears may lead to higher operating efficiency in various ways and with various impact. It gives a possibility to increase or at least to stabilise the sales revenues and thus has a positive impact on operating profit. From the weighted average cost of capital point of view, it is important to point at the fact that an insured company is perceived as a better one by capital suppliers.

5. Economic contacts with insurer and insurance market as a value driver

The decision about implementing insurance as a tool of risk management requires a consideration of insurers' market offer. A practical implications of applying insurance in a company convinces that there may also be a reason for extended cooperation with the insurer. Therefore, it is recommendable to find the benefits springing from this cooperation. As depicted in Figure 8, two main areas of such benefits should be considered. The first one is related to better quality of risk management while the second with possibility to reduce operating costs. As a result, there is a potential to increase operating profits.

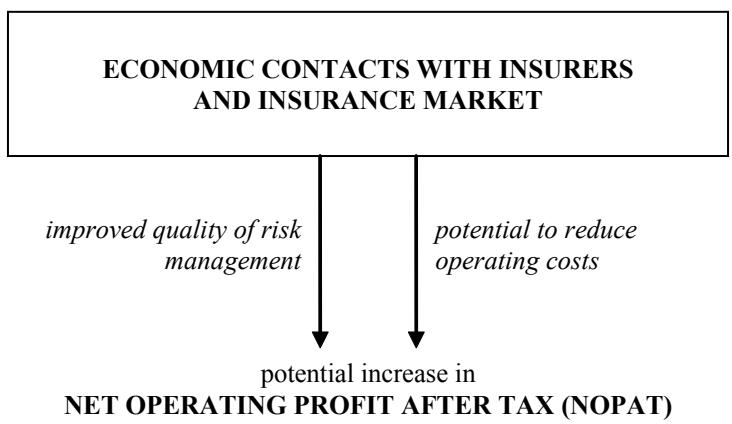

Figure 8. The impact of economic contacts on insurers and insurance market and on net operating profit after tax

Source: own study.

The explanation of relations presented in Figure 8 is as follows. Before forming an insurance contract the insurer examines the company considering the risk of loss occurrence. The auditing procedure includes the revision of technical and organisational aspects of running the business. Therefore, the company is often directly or indirectly advised how to manage risk. The insurer is interested particularly in preventive measures and it gives the company information how it can

improve risk prevention[17]. The similar advice may be acquired by the company while applying for insurance with the help of insurance intermediaries. It is important to mention that better protection against risk may result in lower insurance premiums.

Insurance intermediaries give the company advice about the best insurance programme considering the type of activity. However, the insurance companies also contribute partially to this type of advice. They spread widely the information about their market offer and purposes for using different types of insurance, especially the state-of-the-art products. The information helps the company to project more accurately the insurance protection system.

Contacts with insurers may also be a cause for reducing operating costs. There are examples of insurance which require cooperation with insurer helpful in reducing costs. For example, credit insurance helps to reduce both costs of unpaid or overdue receivables. At the same time it helps to reduce the costs of assessing the creditworthiness of market partners which is conducted by an insurer. A deeper study of other possible connections between an insurer and an insured company in terms of various insurance applications will surely reveal additional benefits of this type. Undoubtedly, there is a potential to reduce operating costs.

6. The model of net of connections between insurance value drivers and EVA account components

The above considerations imply that insurance value drivers influence value creation process in numerous ways. Therefore, the model of net of connections has been constructed. The model arranges the identified insurance value drivers with the components of EVA account. Particularly, the model specifies:

a) the character of action which covers the base of influence from a corporate finance perspective,

b) the course of action which specifies if the influence is real or a potential one and if it stabilises, increases or decreases a particular EVA account component.

The model of net of connections is presented in Figure 9.

The model of net of connections presented in Figure 9 shows that only the indemnification for loss has a potentially direct (which means measurable) impact on EVA account components – namely the invested capital. Though it does not lead to the increase in value it stabilises its level possible to be achieved in terms of the activity undisturbed by loss occurrence. The relations between indemnification for loss and NOPAT and WACC as EVA account components influence potential stabilisation (which is immeasurable in most of cases).

[17] P.A. Winter points that insurance contract may even specify levels of protection (e.g. the number of fire extinguishers, the frequency of inspection of equipment and so on). R.A. Winter, *Optimal Insurance under Moral Hazard*, [in:] *Handbook of* ..., op. cit., p. 155.

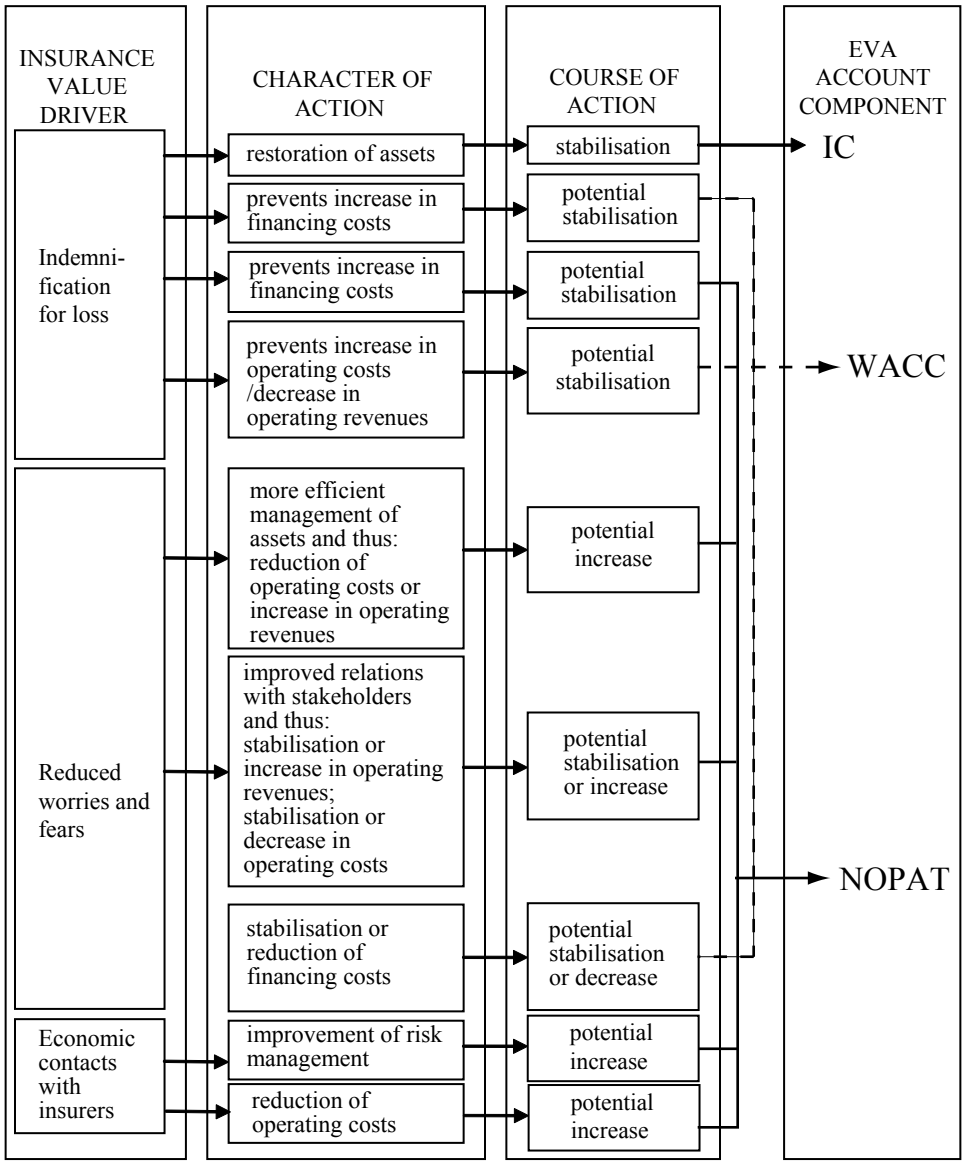

Figure 9. The model of net of connections between insurance value drivers and EVA account components.

Source: own study.

The model of net of connections presented in Figure 9 shows that only the indemnification for loss has a potentially direct (which means measurable) impact on EVA account components – namely the invested capital. Though it does not lead

to the increase in value it stabilises its level possible to be achieved in terms of the activity undisturbed by loss occurrence. The relations between indemnification for loss and NOPAT and WACC as EVA account components influence potential stabilisation (which is immeasurable in most of cases).

Similarly, the other two of the identified insurance value drivers have an indirect (which means immeasurable) impact on EVA account. The reduction of worries and fears, as well as economic contacts with insurers and insurance market give companies the opportunity to stabilise or even improve the EVA through NOPAT and WACC components. However, the model implies that this type of connections exists and indirect value drivers should not be diminished or omitted.

The presented model of net of connections can be used in a company as a frame for decision making within a risk management process. It can be applied for any type of insurance (or insurances) and in any type of business (among other factors). With the presented model, the companies focused on the idea of economic value added account have a possibility to analyse in which areas (operating or financing efficiency) the insurance may support value creation process. Thus, the decisions about implementing insurance will grow in accuracy.

7. Conclusions

The above presented study helps to reveal core insurance value drivers together with their impact on value creation process represented by economic value added account components. It is revealed that in most cases, the insurance value drivers help not to increase, but to stabilise the potential value. It means that without insurance in case of loss occurrence the economic value added would be lower than expected.

Moreover, the identified insurance value drivers often have indirect impact on value creation process. This is probably the reason why it is difficult to observe their influence on company's day-to-day operations. Only within the value of indemnification the impact can be partially measured. However, it would require the simulation of company's value in terms of (1) undisturbed activity and (2) disturbed activity in terms of insurance protection. This type of simulation is recommendable in terms of a defined type of insurance that will be applied in a defined company. The outcome of such a simulation should be then compared with an expected cost of applying insurance. Thus the company will rise the ability to establish the total results of implying insurance as a protective measure.

Also, it is worth perceiving the value of insurance in a multiyear perspective. The application of insurance will often determine the operating and financing efficiency of the company in the long run.

Literature

1. Baker H.K., Powell B.E., *Understanding Financial Management. A Practical Guide*, Blackwell Publishing, Oxford 2005.
2. Banks E., *Alternative Risk Transfer. Integrated Risk Management Through Insurance, Reinsurance and Capital Markets*, John Wiley & Sons, Chichester 2004.
3. Berk J., DeMarzo P., *Corporate Finance*, Pearson Education, Boston 2007.
4. Copeland T.E., Weston J.F., Shastri K., *Financial Theory and Corporate Policy*, Addison-Wesley, Boston 2005.
5. Damodaran A., *Corporate Finance. Theory and Practice*, John Wiley & Sons, Hoboken 2001.
6. Emery D.R., Finnerty J.D., Stowe J.D., *Corporate Financial Management*, Pearson Education International, Upper Saddle River 2004.
7. Grant J.L., *Foundations of Economic Value Added*, John Wiley & Sons, Hoboken 2003.
8. Groppelli A.A., Nikbakht E., *Finance*, Barron's, New York 2006.
9. Ogier T., Rugman J., Spicer L., *The Real Cost of Capital. A Business Field Guide to Better Financial Decisions*, Pearson Education Limited, Harlow 2004.
10. Rejda G.E., *Principles of Risk Management and Insurance*, Addison Wesley, Boston 2001.
11. Ross S.A., Westerfield R.W., Jaffe J., *Corporate Finance*, McGraw-Hill, New York 2005.
12. Scott S.B., Megginson W.L., Gitman L.J., *Corporate Finance*, Thomson-South Western, International Ed., 2004.
13. Schlesinger H., *Theory of Insurance Demand*, [in:] *Handbook of Insurance*, ed. G. Dionne, Kluwer Academic Publishers, Boston/Dordrecht/London 2000.
14. Vaughan E.J., Vaughan T., *Fundamentals of Risk and Insurance*, John Wiley & Sons, New York 2003.
15. Williams Jr. C.A., Smith M.L., Young P.C., *Risk Management and Insurance*, McGraw-Hill, Boston 1998.
16. Winter R.A., *Optimal Insurance under Moral Hazard*, [in:] *Handbook of Insurance*, ed. G. Dionne, Kluwer Academic Publishers, Boston/Dordrecht/London 2000.
17. Young S.D., O'Byrne S.F., *EVA and Value-Based Management. A practical Guide to Implementation*, McGraw-Hill, New York 2001.

WARTOŚĆ UBEZPIECZENIA Z PERSPEKTYWY FINANSÓW PRZEDSIĘBIORSTWA

Streszczenie: Zastosowanie ubezpieczeń przynosi przedsiębiorstwu różnorodne korzyści, które bez wątpienia oddziałują na proces kreacji wartości. Korzyści zastosowania ubezpieczeń można więc utożsamiać z nośnikami wartości. Celem opracowania jest zidentyfikowanie takich właśnie ubezpieczeniowych nośników wartości. Z tego względu autorka artykułu rozpatruje ubezpieczenie z punktu widzenia możliwości jego zastosowania w procesie zarządzania ryzykiem. W szczególności identyfikuje nośniki wartości wynikające z praktycznej implementacji ubezpieczeń w przedsiębiorstwie i nośniki wartości wynikające z mechanizmu transferu ryzyka w ramach ubezpieczeń. Koncentruje się również na wykazaniu powiązań ubezpieczeniowych nośników wartości z komponentami wartości, które są ujęte w rachunku ekonomicznej wartości dodanej.