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CORPORATE RESTRUCTURING AS A RISK TREATMENT METHOD

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Abstract. The article is aimed at the development of risk treatment methods. The author considers different risk treatment methods and proposes corporate restructuring as one of the methods. Corporate restructuring has not been seen yet as the method of risk treatment in risk management literature but the practice of its implementation in response to risk effects is obvious. The author describes risk parameters and different risk treatment methods which can be applied and point out corporate restructuring as one of them. The features of corporate restructuring as a risk treatment method are identified. The author proposes the algorithm of risk treatment on the basis of corporate restructuring and it can be looked as part of risk management of the company.

Keywords: risk management, risk, corporate restructuring, methods, risk treatment methods.

IEL Classification: G32.

Introduction

Nowadays companies operate facing changes in business environment both internal and external. These relate to legislation, demand, obsolete equipment and etc. which cause risks affecting business. In modern, quickly changing economy risks cannot be avoided. Corporate restructuring traditionally is aimed at adapting to business conditions in order to enhance the competitiveness, increase the company's value and well-being of owners. The need of corporate restructuring appears especially at the time of crisis when old ways of doing business do not work anymore (Hammer, Champy 2009).

There is a connection between the number of made corporate restructuring and the economic, regulatory, and technological shocks, which is proved by the waves of corporate restructuring. The shocks are radical changes and they present risks for enterprises which make corporate restructuring to treat them. However corporate restructuring as a risk treatment method hasn't been considered yet in risk management literature. Thus, the author of the article:

1) describes risks parameter when corporate restructuring can be used as a risk treatment method; 2) identifies features of corporate restructuring as a risk treatment method; 3) proposes the algorithm of risk treatment on the basis of corporate restructuring. The paper allows to expand the theory and practice of corporate restructuring to risk management sphere.

1. Literature review

At the beginning we should identify what risk, corporate restructuring, risk treatment methods and kinds of corporate restructuring are. In risk management literature, risk is seen in general as an expected value, probability distribution, deviation and event. Knight (1921) determines risk as conditions when the consequences of decisions and the probabilities of those outcomes are known, whereas uncertainties are conditions where the potential consequences of decisions and related probabilities may not be well known. Graham, Weiners (1995) define risk as the probability of an adverse outcome. Rosa (1998, 2003) denotes risk

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as a situation or event where something of human value (including humans themselves) is at stake and where the outcome is uncertain. Risk refers to uncertainty of outcome, of actions and events (Cabinet Office, 2002). Crowe *et al.* (2002) describe risk as the possibility of deviation in the results from expected goals. Aven (2007) reports risk as the two-dimensional combination of events/consequences and associated uncertainties (will the events occur, what will be the consequences). The international standard ISO 31000:2009 (Risk management – Principles and guidelines) determines risk as an effect of uncertainty on objectives. Serpella *et al.* (2014) define risk as the possibility of a damaging event happening in the task, affecting its goals.

Many kinds of risks emphasize in risk management literature. Shim Jae, Siegel Joel (2008) determine the following types of risks: business risk; liquidity risk; default risk; interest rate risk; purchasing power risk. Christoffersen (2012) underlines five types of risks: market risk; liquidity risk; operational risk; credit risk; business risk. Hopkin (2014) identifies the risks of PESTLE risk classification. It includes political, economic, sociological, technological, legal, environmental or ethical category of risk. There are many types of risks in literature. This is due to the fact that the kind of risk is determined by its factor and there are many factors and its combinations. Sometimes the authors use different terms to identify the same risk. Therefore, there is not unified risk classification. Nithin, Gokulachandran (2015) classify risks into three categories – Human Risks, Environmental Risks and Operational Risks.

It is impossible to eliminate risks because the natural uncertainty of input variables; however, risk management allows us to reduce the risk to the level that we are ready to accept (Ehsan Goodarzi, Shui 2013).

Machac and Steiner (2013) explains Risk management as an essential part of every manufacturing industry because running industries always goes with several types of risks. Appropriate risk management practice focuses on the identification and controlling of risks, it increases the probability of success and decreases the probability of failure as well as uncertainty in attaining of over-all objectives of the industries. There are some ways of risk treatment both in theory and practice of risk management.

Cooper, Grey (2005) emphasize the following risk treatment strategies:

- risk prevention (including risk avoidance) is directed at eliminating sources of risk or reducing substantially the likelihood of their occurrence (for example, more detailed planning, regular inspections and audits);
- impact mitigation is aimed at minimizing the consequence of risks (for example, engineering and structural barriers, separation or relocation of an activity and resources);

- risk sharing the company shares the risk with other involved companies on the basis of contracts;
- insurance is used for physical assets and limited range of commercial risks with the low probability but high impact residual risks;
- risk retention it means that sometimes risks cannot be avoided or transferred and companies may become risk takers and reap the associated reward.

ISO 31000:2009 determines that risk treatment involves selecting of one or more options for modifying risks, and implementing those options. The options can include the following:

- avoiding risk by deciding not to start or continue with the activity that gives rise to the risk;
- taking or increasing the risk in order to pursue an opportunity;
- removing the risk source;
- changing the likelihood;
- changing the consequences;
- sharing the risk with another party or parties (including contracts and risk financing);
- retaining the risk by informed decision.

Borghesi, Gaudenzi (2012) determine the following risk treatment options:

- avoidance it means not to undertake risk;
- loss prevention it aims at reducing the frequency of a particular loss;
- loss reduction the techniques aimed at reducing the severity of loss;
- separation the risk is dispersed among different locations;
- duplication it is based on backups, spares or copies of critical property, information and storing them in reserve;
- diversification it spreads loss exposures over numerous projects, products, market, or regions thereby reducing the impact of a loss of an organization from a loss at a single location.

Hoskisson, Turk (1990) define corporate restructuring as a major change in the composition of a firm's assets combined with a major change in its corporate strategy. Restructuring is the process of reorganizing and divesting business units and exiting industries to refocus upon a company's core business and rebuild its distinctive competencies. Crum, Goldberg (1998) determine restructuring of a company as a set of discrete decisive measures taken in order to increase the competitiveness of the enterprise and thereby to enhance its value or performance. Gibbs (2007) defines corporate restructuring as a change in the operational structure, investment structure, financing structure and governance structure of a company.

The need of corporate restructuring appears especially at the time of crisis (at the time of radical changes).

Rhodes-Kropf *et al.* (2005) determine the first merger wave after the Depression of 1883, which peaked between 1898 and 1902, and ended in 1904. Although these mergers affected all major mining and manufacturing industries, certain industries clearly demonstrated a higher incidence of merger activity. There are five waves of corporate restructuring. The last one began in 1990.

Gaughan (2011) emphasizes the sixth wave of corporate restructuring between 2003 and 2007.

Each country of Europe has its particular experience of corporate restructuring and it is difficult to identify the waves of corporate restructuring for all countries of Europe. A general conclusive theory about the M&A waves is not available yet, although there seems to be industry-specific factors that trigger the waves because different industries experience increased M&A activity at different times (Sudarsanam 2010).

The author of the article emphasizes that in risk management literature corporate restructuring is not considered as a risk treatment method. Nevertheless, it is obvious that the quantity of corporate restructuring is not a static value and corporate restructuring process is dynamic. Sometimes there are peaks of corporate restructuring intensity over the time period (a lot of companies make their corporate restructuring at the same period of time). Research has showed that merger waves tend to be caused by a combination of economic, regulatory, and technological shocks (Mitchell, Mulherin 1993). The shocks cause risks and companies make corporate restructuring to treat them.

There are many kinds of corporate restructuring. Johnson (1996) describes three categories of corporate restructuring: asset restructuring, financial restructuring and organizational restructuring. The following types of corporate restructuring are identified by Bowman, Singh (1993): portfolio, financial and organizational restructuring.

Asset restructuring involves the sale or spin-off, sell – offs or split up of businesses within the corporate portfolio leading to a refocused level of diversification (Markides, Williamson 1996). Corporate refocusing is a kind of asset restructuring in which the firm both reduces its number of businesses and makes changes to its diversification strategy, which is particularly challenging in emerging economies (Carrera *et al.* 2003; Hoskisson *et al.* 2000).

Financial restructuring is different from portfolio restructuring, because it is not mainly connected with changing the strategic scope of the organization, but with changing capital structure and ownership structure of the organization. Managers tend to do financial restructuring of organization restructure if they suppose that a public firm should be transformed into private ownership in order to eliminate agency-related inefficiencies through a tighter coupling of ownership and control (Fox, Marcus 1992) or that a private firm should be transformed into public ownership in order to attract financial capital (Florin *et al.* 2003).

Organizational restructuring is often a by-product of portfolio or financial restructuring, as significant changes in the strategic scope and capital structure of the firm need to be accompanied by corresponding changes in its authority and decision-making hierarchies (Prechel 1994).

Mazur and Shapiro (2000) divide the kinds of corporate restructuring are into two parts: forced corporate restructuring and unforced corporate restructuring. Forced corporate restructuring is done in accordance with legislation: privatization of enterprises, nationalization, corporate restructuring according to the bankruptcy legislation or corporate restructuring following the antimonopoly legislation. Unforced corporate restructuring is affected by the decision of owners. It is divided into corporate reorganization and corporate restructuring of the company. Corporate reorganization affects the company's rights and obligations: merger, acquisition, division, branching off, transformation. Corporate restructuring does not affect the company's rights and obligations.

It is obvious from literature review that corporate restructuring has a great bandwidth of kinds making it flexible and varied to be a risk treatment method. Also, corporate restructuring is made to go out of the shocks and crises that means to treat the effects of risks.

2. Corporate restructuring as a risk treatment method

The author of the article proposes the definition of risk as a measurable event affecting the company and occurring because of changing both internal and external environment of the company.

This definition emphasizes that:

- the risk is measured (by quantitative and qualitative measurement units);
- the risk affects the company changing its performance indicators;
- the internal and external environment of company is the source of risk.

In the article the term "risk treatment method" is used as the definition of activity aimed at mitigating or elimination of risk impact. Corporate restructuring is considered as one of the risk treatment method.

The author of the article gives the following definition of corporate restructuring. *Corporate restructuring* is a set of measures aimed at changing of the enterprise structure (its portfolio, assets, finance, organizational structure and etc.) which is taken in accordance with both internal enterprise preconditions to the changes (internal environment of the enterprise and the targets of owners) and the conditions of external enterprise environment.

The definition emphasizes the orientation of corporate restructuring on internal and external enterprise reasons. The risks (internal and external) affecting the enterprise (making its performance indicators worse, better or increasing its volatility) are the reasons for corporate restructuring. Corporate restructuring is one of the risk treatment methods allowing to adapt the enterprise before the risk effect or to react after the risk effect.

Thus, corporate restructuring as a risk treatment method is a purposeful activity based on the company changes (its portfolio, assets, finance, organizational structure and etc.) and focused on risk treatment. This definition reveals the essence of corporate restructuring when a company uses it as a risk treatment method.

There is not unified and closed classification of risks and that is why the author does not identify the kinds of risks that can be treated by corporate restructuring. Thus, company determines the factors of risks, describes risks and decides what methods of risk treatment can be implied.

The following parameters of risk are chosen to identify the conditions to implement the risk treatment methods (Table 1):

- the possibility to transfer risk (yes or not);
- the possibility to influence a risk source (yes or not);
- the character of risk effects (negative or positive).

Table 1. Risk parameters of risk treatment methods (source: author)

Risk parameters Risk treatment method	The possibility to transfer risk (yes or not)	The possibility to influence on risk source (yes or not)	The character of risk effects (negative or positive)
Risk prevention (including risk avoidance)*	NO	NO	Negative
Insurance (including reserve funding)*	YES	NO	Negative
Risk sharing (risk separation) *	YES	NO	Negative
Risk retention*	nO	NO	Positive
Diversification*	NO	NO	Negative
Removing the risk source*	NO	YES	Negative
Corporate restructuring	YES, NO	YES, NO	Negative or Positive

Note: *corporate restructuring in not mentioned in the risk treatment methods.

The author chooses such risk treatment methods as: risk prevention (including risk avoidance); insurance (including reserve funding); risk sharing (risk separation); retaining the risk; diversification; removing the risk source and corporate restructuring.

If risk can be transferred to another party (e.g. another company), the insurance (including reserve funding), risk sharing (risk separation) are applied. If risk cannot be transferred to another party, it shall apply: risk prevention (including risk avoidance); risk retention; diversification; removing the risk source. Corporate restructuring can be carried out when risk can be both transferred and not transferred.

If a company cannot influence the source of risk, it can use: risk prevention (including risk avoidance); the insurance (including reserve funding); risk sharing (risk separation); risk retention; diversification. If a company can influence the source of risk, removing the risk can be applied. Corporate restructuring can be carried out in two cases: the company can or cannot influence the source of risk and cannot influence the source of risk.

If the risk effect is negative, the following risk treatment methods are applied: risk prevention (including risk avoidance); insurance (including reserve funding); risk sharing (risk separation); diversification; removing the risk source. Risk retention is used when the risk effect is positive, but sometimes there are situations when the company cannot do anything to treat the risk. Corporate restructuring can be carried out when the risk effect is either positive or negative.

Thus, corporate restructuring can be used under the following risk parameters: 1) risk can be or cannot be transferred to another party; 2) company can or cannot influence the source of risk; 3) risk effect is negative or positive.

The author of the article compares the following risk treatment methods to corporate restructuring: risk prevention (including risk avoidance); insurance (including reserve funding); risk sharing (risk separation); retaining the risk; diversification; removing the risk source.

The comparison of the mentioned methods of risk treatment is based on the following indicators:

- proactive or reactive risk treatment. Proactive risk treatment means that risk treatment method is used before the moment of risk effect. Reactive risk treatment means that risk treatment method is used after the moment of risk effect;
- attitude to risk (the method is used to accept risk or to avoid risk);
- there are some changes of company structure and functions (the method results in the changes of corporate structure and the functions or it does not);
- there is synergy effect. The method has or does not have any synergy effect;
- there are additional risks of risk treatment method implementation (low, middle, high value of additional risk).

The result of the comparison of risk treatment methods is presented in Table 2.

The following methods of risk treatment are preventive: risk prevention (including risk avoidance); insurance (including reserve funding); risk sharing (risk separation); diversification; removing the risk source. Risk retention is seen as a reactive risk treatment method. Corporate restructuring is a proactive and reactive risk treatment method. It means that corporate restructuring can be made before or after the moment of risk effects on the corporate activity.

A company can use the different methods of risk treatment to avoid risk: these are risk prevention (including risk avoidance); insurance (including reserve funding); risk sharing (risk separation); diversification; removing the risk source. Risk retention can be applied to accept risk. Corporate restructuring is used both to accept and to avoid risk.

Risk prevention (including risk avoidance), insurance (including reserve funding), risk sharing (risk separation) and risk retention don't lead to the changes of corporate structure and the functions of the company. The following risk treatment methods cause or don't cause the changes of corporate structure and the functions of the company, these are diversification and removing the risk source. If diversification is done in the form of investment in different financial instruments it doesn't change the structure of the enterprise and its functions. If diversification is carried out in the form of opening a new production line (a new product is made), it causes changes in the structure of the enterprise and its functions. Removing the risk source results in structure changes and functions of the enterprise, if the source of risk is within the enterprise. For example, a business unit of the company is a source of risk and the

decision is its liquidation. Corporate restructuring results in the changes of corporate structure and the functions of the company, because the company adapts its structure and functions in response to the changes of internal or external environment (the companies eager to be more flexible).

The following risk treatment methods don't produce any synergy effect. These are risk prevention (including risk avoidance), insurance (including reserve funding), risk sharing (risk separation); risk retention, diversification, removing the risk source. Corporate restructuring induces synergy effect. Synergy effect reveals if mergers and acquisitions are realized and a new or existing company gets economy of scale (thus the performance of the merged firm is higher than in the situation of their separate functioning) – (Halibozek, Kovacich 2005; Van Horn, Wachowicz 2008).

Risk prevention (including risk avoidance) and removing the risk source do not have additional risks of risk treatment method implementation. Insurance (including reserve funding) has minimal additional risk. The risk is unlikely and the company gets an amount of insurance coverage or spends reserve funds if a risk occurs but there is minimal probability that the value of losses can be higher than the amount of insurance coverage or reserved funds. Risk sharing (risk separation) and diversification has middle value of additional risks. The additional risk of risk sharing (risk separation) is connected with the failure of contractual obligations. The additional risk of diversification is that it does not protect from risk, it allows to allocate losses to several positions, but it does not mean to eliminate the influence of risk and does not protect against systemic risks affecting all macroeconomic processes. Diversification leads

Table 2. The comparison of risk treatment methods (source: author)

The indicators	The indicators Proactive or reactive r treatment		Attitude to risk		The changes of corporate		Additional risks of the implementation
The name of method	Proactive risk treatment	Reactive risk treatment	To accept risk	To avoid risk	structure and the functions of the company	Synergy effect	of risk treatment method (low, middle, high value of additional risk)
Risk prevention (including risk avoidance) *	V	0	0	V	0	0	0
Insurance (including reserve funding) *	V	0	0	V	0	0	\/, low value
Risk sharing (risk separation) *	V	0	0	V	0	0	\/, middle value
Risk retention*	0	V	\/	0	0	0	\/, high value
Diversification*	V	0	0	\/	0 or \/	0	\/, middle value
Removing the risk source*	V	0	0	\/	0 or \/	0	0
Corporate restructuring	V	V	\/	\/	V	\/	∖/. high value

Notes: 0 – the indicator is not taken into account or not emphasized in this method of risk treatment. \lor – the indicator is taken into account or emphasized in this method of risk treatment.

^{*}corporate restructuring in not mentioned in the risk treatment methods.

to complication of corporate management enhancing the probability of additional adverse impacts. Risk retention and corporate restructuring has high value of risk treatment method implementation. The additional risk of risk retention is correlated with increase in the influence of retained risk (its negative impact on company activity).

It should be noted that corporate restructuring does not guaranty positive synergy effect. The following factors affecting the results of corporate restructuring are determined: regulatory changes, number of bidders, bidder's approach, mode of payment, type of acquisition, related acquisitions and acquisition experience (Datta *et al.* 1992; King *et al.* 2004). These factors are additional risks of corporate restructuring and it should be taken into account.

Corporate restructuring as the method of risk treatment is characterized by the following features:

- it is made before or after the moment of risk effects (it is a proactive and reactive risk treatment method);
- it is used to accept and/or to avoid risk;
- it results in the changes of corporate structure and the functions of the company;
- it allows to get some synergy effect;
- it has high additional risks of implementation.

The algorithm of corporate restructuring as a risk treatment method is shown in Figure 1.

In the algorithm the time period of risk management is divided into two parts: before risk effect and after risk effect. Step one is to carry out the company's diagnostics and strategy analysis. Company's diagnostics includes the analysis of financial coefficients (e.g. average collection period, financial stability index etc.), the cost structure of company and etc. The company can make dynamic modeling of its business activity. Strategic analysis contains the analysis of the company mission, goals, SWOT and PESTLE analysis. The Diagnostics and strategic analysis is used to identify the risks impacting the company. If risks are not identified or corporate restructuring doesn't treat the risks, the process of risk treatment on the basis of corporate restructuring is finished. If risks are identified and corporate restructuring can treat the risk, then step two is to draw up the program of corporate restructuring to treat the risks. Many methods of risk measurement can be used by the company to choose appropriate kind of corporate restructuring (CAPM, WACC, Monte Carlo method, ISDWIR method and etc.).

Step three is to implement corporate restructuring to treat the risk. All these steps (from 1 to 3) of the algorithm are made before the risk effect. The company must have enough time to realize them. Thus, the company has realized corporate restructuring to treat the risk before risk effects had appeared. Step four is to analyze the results of corporate restructuring. If corporate restructuring affected

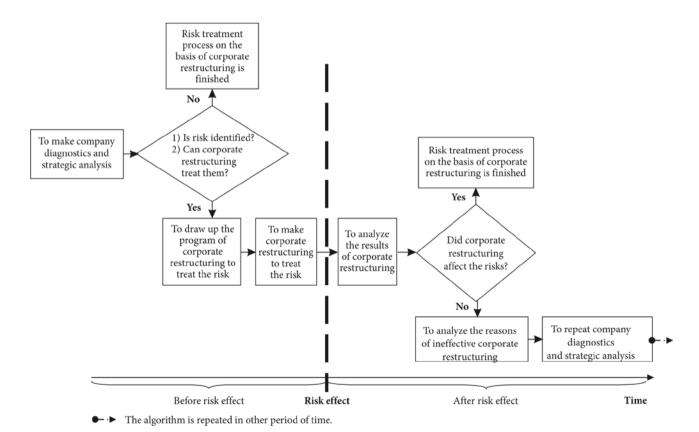


Fig. 1. The algorithm of corporate restructuring as a risk treatment method (source: author)

the risks, the process of risk treatment on the basis of corporate restructuring is finished. If corporate restructuring didn't affect the risk *step five* is to analyze the reasons of such results. *Step six* is to redo the company's diagnostics and strategic analysis. Repeated diagnostics and strategic analysis are conducted because business environment can change and it should be evaluated again. Step six is a start of a new cycle of the algorithm being identical to step one by the context. Thus, the new algorithm cycle (step 1–5) begins in the other time period. The information about the reasons for ineffective corporate restructuring is used when the company draws up a new program of corporate restructuring.

It should be noted that new risks can be revealed in the second cycle of the algorithm. Over the time, the enterprise environment changes causing new risks for the enterprise. The algorithm allows to determine the steps of risk treatment on the basis of corporate restructuring during the period of time. The algorithm is universal for all kinds of companies.

3. Discussion

Ordinarily corporate restructuring is realized to increase the competitiveness of the enterprise and enhance its value or its efficiency. The author of the article aims to consider corporate restructuring as a risk treatment method. There are many kinds of corporate restructuring permitting to use different tools of corporate restructuring to treat risk. It should be taken into account that the implementation of corporate restructuring as a risk treatment method doesn't mean to exclude other risk treatment methods. Company can combine several methods of risk treatment.

In literature there isn't unified classification of risks, because of two reasons: risk is determined by factor and the nature of each is different; one risk can have two or more names in different classifications. That is why the author identifies common risk parameters of risk treatment methods.

The author doesn't define the kinds of risks that can be treated by corporate restructuring because each corporate restructuring and the environment of the company is special. The main point is to identify risks (with the help of SWOT and PESTLE analysis) and determine which risk can be treated by specific corporate restructuring. It is impossible to identify in advance all risks that can be treated by corporate restructuring.

Corporate environment changes causing risks and corporate restructuring is made to treat the risks. Some corporate restructurings in bank sphere were in 2008, for example, in such banks as Fannie Mae and Freddie Mac, Merrill Lynch, Lehman Brothers. The activity of their corporate restructuring started when risks in stocks and bank sphere and their effects became significant and banks needed to adapt. Corporate restructuring as a risk treatment method

should be used if it is impossible to use other methods of risk treatment, or when corporate restructuring is more effective than others.

The algorithm in Figure 1 describes the situation when company predicts risks and its risk treatment activity is preventive. For example, one unit of company has risk of fire, three these accidents were over 3 years and each costs 3 000 dollars. Company can have three ways: to close the unit and merge with a similar specialized company; to ensure the unit against fire; to accept the risk and do nothing. Nevertheless, there are situations when risk started to affect the company and its risk treatment activity gets reactive. For example, a company has a key supplier and it began to be late with the delivery. The company has three ways: to acquire the supplier with the aim to control its deliveries, to find another supplier or to accept risk (not to do anything). The company has to determine the resulting parameters, assumptions of calculation and mathematical model to make a decision under preventive or reactive risk treatment.

Conclusions

In the article corporate restructuring is considered as a risk treatment method. Corporate restructuring has not been yet considered as risk treatment method in nowadays risk management literature, but the practice of its implementation in the cases of risk effects is obvious. There is correlation between the incidence of corporate restructuring and the economic, regulatory, and technological shocks (the shocks are risks for the company).

The author gives the definition of corporate restructuring as a set of measures aimed at changing of enterprise structure (its portfolio, assets, finance, organizational structure and etc.) which is conducted in accordance with both internal enterprise preconditions to the changes (internal environment of the enterprise and the targets of owners) and the conditions of external enterprise environment. Corporate restructuring as a risk treatment method is a purposeful activity based on the changes of company (its portfolio, assets, finance, organizational structure and etc.) and is focused on risk treatment.

Corporate restructuring can be used under the following risk parameters: 1) risk can be or cannot be transferred to another party; 2) company can influence the source of risk or it is not possible; 3) risk effect is negative or positive.

Corporate restructuring as the method of risk treatment is characterized by following features:

- it is carried out before or after the moment of risk effects (it is proactive and reactive risk treatment method);
- it is used to accept and/or to avoid risk;
- it results in the changes of corporate structure and the functions of the company;
- it allows to get synergy effect;
- it has high additional risks of implementation.

The author of the article proposes the algorithm of corporate restructuring as a risk treatment method. The algorithm allows to determine the steps of risk treatment on the basis of corporate restructuring over the period of time. The algorithm is universal for all kinds of companies. The use of corporate restructuring as a risk treatment method does not exclude others. In practice some combinations of risk treatment methods can be applied.

The paper allows to expand the theory and practice of corporate restructuring to risk management sphere.

Disclosure statement

The authors of the paper do not have any professional, personal or financial interest from other parties regarding the content of the paper.

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