Insurance Company's Performance: Risk Evaluation

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Abstract **- Solvency II framework sets a lot of challenges for every insurance company, since it requires a more sensitive, balanced and sophisticated risk analysis to prepare and establish better risk coverage. Therefore it is important to identify the risks that affect an insurance company's performance and development, since it causes unexpected losses incurred from inadequate processes, people and systems, partners or from other events. The concept of the paper is to identify, analyze, assess, measure, manage and control risk effect on an insurance company's activity. In order to achieve the stated objective, the authors of the paper use theoretical and methodological analysis of the scientific literature, analytical, statistical, priority charts and experts methods with the purpose to study the features of the risk management. Through the conducted research the authors of the paper measure a possible effect of the main risk on insurance company's activity in order to prepare the possible risk management plan. In addition, the authors of the paper investigate and develop a method that enables analyzing and measuring each risk factor effect on risk occurrence probability. The authors have developed risk culture implementation approach by using experts risk assessment, as the first stage of risk evaluation establishment according to Solvency II Directive requirements.**

Keywords **– risk management, Solvency II framework, risk factors.**

I. Introduction

Insurance in one of the most significant and growing industries in every country's economics, therefore it requires a more sophisticated and complex evaluation of the risk that can occur in an insurance company.

However, a more sophisticated analysis of risks should ensure stability and solvency of an insurance company's development and activity, thus protecting policyholders' interests.

The main aim of Solvency II framework is to establish new rules for insurance companies' solvency assessment in the European Union. The new Solvency II regime sets a lot of challenges to every insurance company, since it requires establishing new rules for risk evaluation that will change rapidly every insurance company's processes, systems, functions, organizational structure, and capital structure.

However, an effective risk evaluation is crucial for the implementation of Solvency II and the ability to prosper in the tough market environment.

The main problem of Solvency II Directive requirements is that are still under development which ads impetus for understanding the methods of their implementation within insurance and reinsurance companies' processes.

The Hypothesis of the article comprises the idea of the improvement risk evaluation principles according to Solvency II Directive main requirements the activity of an insurance company can be improved.

The concept of the paper is to identify, analyze, assess, measure, manage and control risk effect on an insurance company's activity.

The object of the paper is risk evaluation. Therefore, the subject is the improvement of risk evaluation in an insurance company according to the Solvency II framework requirements.

In order to achieve the stated objective, the authors use theoretical analysis of the scientific literature, analytical methods, expert and analytical hierarchy methods, as well as comparative methods with the purpose to investigate the main components of risk evaluation methods.

The main issue during the research was to interconnect risk evaluation and an insurance company's development. The article consists of five main sections. The overview of Solvency II framework requirements and insurance company main evaluation principles are presented in Section II. The authors of the publication investigate and analyze risk evaluation methods according to Solvency II framework in Section III. In Section IV the authors of the publication introduce the case study of risk evaluation in an insurance company using analytical hierarchy and ranking methods. The final section summarizes the findings and conclusions of the study and assesses the improvement of the risk evaluation.

II. The Basis of Risk Evaluation

Risk is the possibility of the occurrence of an insurance event with an impact on the achievement of objectives.

Risk management is the method of managing, planning, evaluating and controlling of processes an insurance company with the aim to eliminate the possible risk of the insurance company and to improve its development, profit and financial results [1].

Risk measurement is the process of evaluation and determination of the amount of an asset or set of assets that should be kept in an insurance company's reserves. The aim of the new regime is to ensure the solvency and stability of an insurance company.

The Solvency II Directive should establish economic risk - based solvency requirements across all the European Union countries for every insurance company.

According to Solvency II regime requirements insurance companies' solvency and financial stability can be managed and improved through risk evaluation.

Solvency II framework is based on the three pillars where each Pillar fulfills its own function:

- first Pillar is responsible for quantitative requirements of new regime,

- second Pillar requires qualitative and supervision requirements or system of government,
- third Pillar establishes disclosure requirements that imply prudential reporting and public disclosure.

The basis of new regime is the risk function establishment and improvement according to Solvency II Directive's requirements in order to ensure the solvency of insurance companies.

The authors of the publication are concentrated on the first and second Pillars responsible for risk evaluation and management.

In order to satisfy Solvency II Directive requirements, it is necessary to divide the risk function into two parts: risk management and risk measurement. The interpretation of Solvency II Directive is presented in Figure 1.

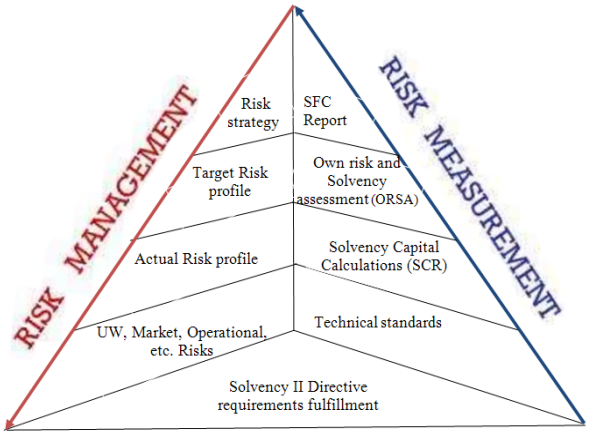

Fig. 1. The interpretation of Solvency II framework [2].

Figure 1 represents the clarification of Solvency II regime that represents the Directive requirements which are based on risk management and risk measurement, i.e. on sophisticated risk evaluation.

Risk evaluation is based on risk management and risk measurement since one point is measure the identified risk, another is to value the introduced risk.

Risk evaluation covers all processes, reporting and strategies procedures that should be comprised in order to identify, monitor, measure, manage and report the risks on the continuous basis.

Risk evaluation is also based on the risk culture established in each insurance company.

Risk culture can be defined as the norms and traditions of behavior of individuals and of groups within an organization that determine the way in which they identify, understand, discuss and act on the risks the organization confronts and takes [3].

The risk culture is dependent on three main components: risk appetite, risk tolerance and risk limits.

The risk appetite of an organization represents its overall philosophy of risk taking and the expectations of its stakeholders such as shareholders, policyholders and bondholders [3].

Risk tolerance transfers risk appetite value from qualitative metrics to quantitative terms therefore presents the amount of capital that insurance company has decided to put at risk [2].

The risk limit is approved by each particular insurance company and introduces the more precise level of risk tolerance that is allowed to put in risk management.

According to Solvency II framework main risks that should be identified are based on the standard formula presented in Table 1.

TABLE I

INSURANCE COMPANIES MAIN RISKS ACCORDING TO SOLVENCY II FRAMEWORK [1]

Solvency Capital requirements	Risk	Sub-risk	Risk of sub-risk
	Operational risk		
	Adjustment for the risk absorbing effect of technical provisions and deferred taxes		
	Basic Solvency Capital Requirement	Market risk	Interest rate, equity, property, spread, currency, liquidity, concentration, risks
		Life risk	Mortality, longevity, lapse, expenses, revision, CAT, disability morbidity risks
		Health risk	STL health, Non-STL health and CAT risk
		Non-life risk	Premium reserve, lapse and CAT risks
		Default	
		Intangible asset	

Table 1 represents the main insurance risk according to Solvency II framework standard formula.

During the case study the authors of the publication will evaluate an insurance companies main risks according to the new regime standard formula.

III. THE RISK EVALUATION MODEL

Risk evaluation is the process of risk importance measurement and management.

Actually, risk evaluation covers all processes, reporting and strategy procedures that should be comprised in order to identify, monitor, measure, manage and report the risks on the continuous basis.

The authors of the publication have created the risk evaluation based on the main features:

- risk identification is the process of insurance company's main risk, sub-risk classification with aim to evaluate its possible harm on insurance company's stability;
- risk ranking is the process of evaluation, prioritizing and listening of the risk of an insurance company with the aim to identify the most important of them that could more negatively influence an insurance company's activity;
- analytical hierarchy process is a theory of measurement experts evaluations through pairwise comparisons according to derive priority scales. It is these scales that measure intangibles in relative terms.

The author of the paper have created the model scheme that introduces the risk evaluation process starting from its establishment in insurance company.

The risk evaluation scheme, created by the authors, is presented in Figure 2.

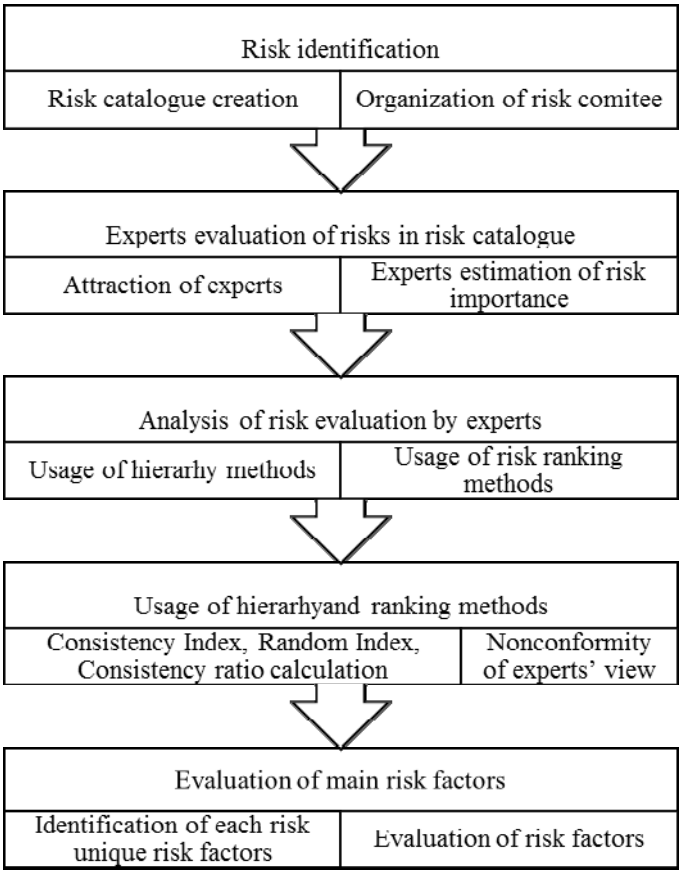

Fig. 2. Risk evaluation in insurance companies using hierarchy and priority methods (created by the authors) [4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20].

The Figure 2 presents the risk evaluation scheme where are introduced main stages of its development.

The introduction of risk system development according to Solvency II Directive requirements in the Baltic countries is presented in Figure 3.

Fig. 3. The interpretation of Solvency II framework (created by the authors) [21, 22, 23, 24, 25, 26, 27, 28].

Since the Baltic insurance market, which is similar to the Latvian insurance market, is rather young and is still developing, the authors are concentrated on risk culture development.

Risk culture development can be the first stage for next 2-3 years risk evaluation discussions in insurance companies, using expert evaluations.

Risk culture is more about risk nature understandability with the main aim to define risk tolerance, risk appetite and risk limits of an insurance company. After the risk culture implementation, the required capital for each risk should be calculated, using new regime's standard formula or internal model.

After the risk measurement, using capital calculation, risk management according to Solvency II Directive requirements can be fully implemented and appropriate risk evaluation process can be started.

The authors developed a short-term solution for the risk culture development in an insurance company based on Solvency II framework quantitative impact studies, particularly according to the 5th study.

The authors of the publication are concentrating on risk evaluation part using risk ranking and analytical hierarchy methods.

During the research the authors of the paper have investigated the difference in adapted to an insurance company's risk evaluation methods using attracted expert assessments.

The base of the hierarchy methods is the Saati hierarchy method that introduces a theory of measurement through pairwise comparisons on expert evaluation to derive priority scales. The fact is that these scales are measuring intangibles in relative terms.

Therefore the Saati hierarchy method measures how much one element dominates another with respect to the given attribute.

Calculation of expert evaluation using Saati hierarchy method should be ensured using consistency ratio (*CI*) (1) or consistency index (*CR*) (2), random index (*RI*) (3) that approves conformity of expert view [29].

$$CI=(\lambda_{max}-n)/(n-1), \quad (1)$$

$$CR = CI / RI, \quad (2)$$

$$RI = 1.98\,(n-2))/n, \quad (3)$$

where

$\lambda_{max} \geq n$ are main eigenvalues of matrix. If matrix returns to a positive value then $\lambda_{max} \geq n$.

n - comparable elements.

Saati and his colleagues at the Oak Ridge National Laboratory and at the Wharton School of the University of Pennsylvanian have investigated the possible values of the random ratio.

During the research 500 random reciprocal n x n matrices were generated for n = 3 to n = 15 using the 1 to 9 scale. The Saati conducted reasearch results is presented in Table 2.

TABLE II

RANDOM RATIO VALUES, INVESTIGATED BY SAATI [29]

RI	MATRIX VALUES *N*									
	1	2	3	4	5	6	7	8	9	10
1980	0	0	0,58	0,90	1,12	1,24	1,32	1,41	1,45	1,49
2001	0	0	0,52	0,89	1,11	1,25	1,35	1,40	1,45	1,49

Saati evaluation is based on the specific scale using pairwise comparison, presented in Table 3. During the case study experts should use these scales.

TABLE III

SAATI EVALUATION IMPORTANCE SCALE [29]

Importance		Description
1	Equal importance	Two risks contribute equally to the objective
3	Moderate importance	Experience and judgment slightly favor one risk over another
5	Strong importance	Experience and judgment strongly favor one risk over another
7	Very strong	A risk is favored very strongly over another; its dominance demonstrated in practice
9	Extreme importance	The evidence favoring one risk over another is of the highest possible order of affirmation
2, 4, 6, 8	Compromise between the above values	Sometimes one needs to interpolate a compromise judgment numerically because there is no good word to describe it

In case the consistency ratio is less than 10%, nonconformity of expert view is likely to take place and results can be defined as unreliable.

Risk ranking method ranges the risks by the value of possible negative influence to an insurance company's development, using the importance scale the elements of the particular process.

Ranking methods are used in order to assess and measure the expert evaluations. The authors of the paper are adapting the ranking methods to risk evaluation in insurance companies in Baltics.

Using risk ranking methods there is necessity to investigate each risk average statistical importance evaluation (4) [30].

$$M_j = \frac{\sum_{i=1} C_{ij}}{m}, \tag{4}$$

where

Mj – risk importance assessment average statistical value;

m - the amount of experts that have evaluated j risks;

C_{ij} - experts I assessment of j risks.

The point is that also important is to calculate a proportion coefficient of each identified in insurance company risk (5) [30].

$$K_{yj} = \frac{\sum_{i-1}^{m} C_{ij}}{k_{aej} \sum_{j=1}^{n} \sum_{i=1}^{m} C_{ij}}, \tag{5}$$

where

k_{yj} - j risk proportion coefficient, the overview the part of all risk points;

n - risk amount;

k_{aej} - experts activity coefficient for j risk.

Similar to analytical hierarchy method in ranking methods level of conformity should be calculated. The level of the expert conformity can be calculated using all expert evaluation variance for each risk (6), average quadratic variation of expert evaluation (7), and relative variation coefficient of evaluation (8) [30].

$$D_j = \frac{\sum_{i=1}^{m} \left(C_{ij} - M_j \right)^2}{m}. \tag{6}$$

$$\sigma_j = \sqrt{D_j}. \tag{7}$$

$$\upsilon_j = \frac{\sigma_j}{M_j}. \tag{8}$$

However, conformity of expert evaluation for all identified risks can be assessed using concordance factor (9) [31].

$$W = \frac{12 \sum_{j=1}^{k} d_j^2}{m^2 (n^3 - n) - m \sum_{i=1}^{m} T_i'}, \tag{9}$$

where

d_j - is the sums of ranks for j risks and variations of average arithmetical ranks sums, evaluated for all risks;

T_i – depended ranking coefficient, based on amount t of expert j evaluation.

Concordance coefficient calculation is significant in expert evaluation assessment, since it describes the evaluation correctness.

The point is that concordance coefficient range may vary from zero to one.

The point is that in case concordance coefficient is equal to 1, the expert evaluations are fully harmonized and can be used in analysis.

In order to prove the results of conducted research using ranking methods, the hypothesis of the research should be verified (10) [32].

$$\chi_p^2 = m \cdot (n-1) \cdot W > \chi_T^2, \tag{10}$$

where

χ_p^2-calculated chi-squared test;

χ_T^2- chi-squared test according to table value.

The authors also use another type of ranking method - pairwise comparison where each pair of risks should be compared using 10 points scale.

Thus the expert evaluate how much points should belong to each risk from pair.

All expert evaluations are summarized in matrix and compared with the aim to find out the most important of risks with evaluation of each risk importance (11) [32].

$$w_i = \frac{1}{\sum_{j=1}^{m} b_{ij}}, \quad (11)$$

where

b_{ij} – multifactorial distribution of expert evaluation.

During the next section the authors of the paper will present the case study using all analytical hierarchy and ranking methods of one non-life insurance company's performance evaluation.

IV. Risk evaluation: Insurance company's case

The authors have performed the case based on one of an insurance company's risk evaluation using risk ranking and analytical hierarchy methods.

The conducted research should help to establish short-term practise of possible risk nature investigation, using expert evaluations.

During the research the authors have attracted expert from this insurance company. Each expert has 2 and more year work experience and introduced concrete process in an insurance company.

- actuarial function – independent function, responsible for risk measurement according to Solvency II framework, mainly involved in 1st Pillar;
- internal audit function – independent function, is involved in Solvency II Directive 2nd Pillar requirement fulfilment;
- risk management function – independent function, is responsible for risk evaluation, is involved in new regime 2nd and 3rd Pillar;
- compliance function – independent function, responsible for management actions controlling, planning and forecasting, is involved in 2nd Pillar;
- sales – are responsible for Gross Written premium volume, often heads of the sales departments are board members, so are involved in Solvency II requirements fulfilment from management side;
- risk underwriting – is responsible for pricing actions for all insurance companies products;
- claims handling – is responsible for appropriate claims handling process in an insurance company, gives first estimates of case reserves.

The authors of the paper firstly have investigated the insurance company's main risk using the described expert evaluations. The expert evaluations using Saati scale is presented in Table 4.

TABLE IV

Expert evaluation using Saati scale

Risk	Risk					Importance, %
	1	2	3	4	5	
1.Operational risk	1.0	1.1	1.1	0.3	0.2	13.37
2.Non-life risk	0.9	1.0	3.0	3.0	3.0	35.21
3.Credit risk	0.9	0.3	1.0	0.8	0.7	11.24
4.Health risk	3.3	0.3	1.3	1.0	2.0	20.71
5.Market risk	5.0	0.3	1.4	0.5	1.0	19.48
Total	11.2	3.1	7.8	5.6	6.9	

In order to make the conclusions based on expert evaluation, the conformity of expert evaluations should be proved (see Table 5).

TABLE V

Expert evaluation conformity

Ratio	λ_{max}	*CI*	*CR*
Value	5.9572	0.2393	16.06%

The point is that conformity consistency ratio is more than 10%, therefore expert evaluations are conformed and can be used for risk evaluation.

According to expert evaluations, the risks with the biggest possible negative impact are non-life risk, health and market risk. The authors have asked the experts to evaluate the insurance company's risk using ranking method (see Table 6).

TABLE VI

Expert evaluation using ranking

Statistical value	Risks				
	1.Operational risk	2.Non-life risk	3.Credit risk	4.Health risk	5.Market risk
Average	3.4	1.1	4.4	2.9	3.1
Median	3	1	4	3	3
Mode	5	1	4	2	4
Ranks	4	1	5	2	3

However, the conformity of expert evaluation is proved using concordance coefficient, calculations are presented in Table 7.

TABLE VII

Experts conformity approval using concordance coefficient

Statistics	Value
Number of the experts	7
The number of freedom degrees	4
Concordance coefficient	57.1%
χ_p^2	16
χ_T^2 (alfa=0.005)	14.86
χ_T^2 (alfa=0.01)	13.28

The authors of the paper can conclude that expert evaluation can be used in risk ranking and that according to conducted research the results are similar to analytical hierarchy method's results.

The fact is that the risk evaluations according to both used approaches are following to the Solvency II framework each risk capital measurement tendency where the biggest capital should be put into non-life risk.

The point is that the authors of the publication recommend to use ranking method as a start point of operational risk nature investigation.

Operational risk is a change in value caused by the fact that actual losses, incurred for inadequate or failed internal process, people and systems, or from external events (including legal risk), differ from the expected losses [1].

The fact is that an operational risk is one of the most complicated risk, since it fully depends on the human factor, IT and external factor failures, therefore interconnection between decision making and estimated risk appetite, risk tolerance and risk limits should be fully integrated into the insurance company's processes.

The authors using risk catalogue have identified operational risk sub-risk and asked the same experts evaluate operational risk sub-risk using ranking method and pairwise comparison. Main operational risk sub-risk are:

1. organizational risk (R_{11});
2. reputational risk (R_{12});
3. business disruption and system failure risk (R_{13});
4. human resources risk (R_{14});
5. client, products and business practices risk (R_{15});
6. compliance risk (R_{16});
7. execution, delivery and process management risk (R_{17});
8. external fraud risk (R_{18});
9. information technology (IT) risk (R_{19});
10. model risk (R_{110}).

The point is that the operational risk expert evaluation's analysis using the standard ranking method is presented in Table 8.

TABLE VIII

OPERATIONAL RISK EVALUATION USING RANKING

Statistical value	Risks (R_1)									
	1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*
Average	3.1	3.4	2.9	4.9	6.1	4.6	7.6	8.4	4.7	9.3
Median	2	4	3	5	7	5	7	8	4	9
Mode	2	4	3	5	8	7	10	8	3	9
Ranks	2	3	1	6	7	4	8	9	5	10

In order to approve the conformity of expert evaluation, the authors of the publication have calculated the concordance coefficient presented in Table 9.

TABLE IX

APPROVAL OF EXPERT EVALUATION CONFORMITY

Statistics	Value
Number of the experts	7
The number of freedom degrees	9
Concordance coefficient	56.2%
χ_p^2	35.38
χ_T^2 (alfa=0.005)	23.59
χ_T^2 (alfa = 0.01)	21.67

According to operational risk research using ranking method the authors can conclude that sub-risks with the biggest negative influence on operational risk are business disruption and system failure risk, organizational and reputational risks.

Using expert evaluations the authors of the publication also have performed pairwise comparison with aim to identify the main operational risk sub-risks. The conducted research is presented in Table 10.

TABLE X

OPERATIONAL RISK SUB-RISK PAIRWISE COMPARISON

Risks (R_1)	Risks (R_1)									
	1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*
1	*1.0*	0.8	0.8	0.8	0.9	0.5	1.5	1.7	0.6	1.6
2	1.2	*1.0*	0.7	2.0	1.4	0.9	1.9	2.2	0.8	1.5
3	1.3	1.5	*1.0*	1.9	1.3	0.9	1.5	1.8	1.1	1.9
4	1.2	0.5	0.5	*1.0*	1.5	0.8	1.5	1.3	0.5	1.1
5	1.1	0.7	0.8	0.7	*1.0*	1.3	1.8	1.8	0.8	1.5
6	1.9	1.1	1.1	1.3	0.8	*1.0*	1.5	1.8	0.7	1.6
7	0.7	0.5	0.7	0.7	0.6	0.7	*1.0*	0.9	0.6	0.6
8	0.6	0.5	0.6	0.9	0.6	0.6	1.1	*1.0*	0.7	0.9
9	1.7	1.5	0.9	1.9	1.3	1.4	1.8	1.5	*1.0*	2.5
10	0.6	0.7	0.5	0.9	0.7	0.6	1.6	1.1	0.4	*1.0*
$\sum_{j=1}^{m} b_{ij}$	11.3	8.7	7.4	12.3	10.0	8.7	15.2	15.1	7.1	14.2
Evaluation	0.09	0.11	0.14	0.08	0.10	0.12	0.07	0.07	0.14	0.07
Ranking	6	4	2	7	5	3	10	9	1	8

Using pairwise comparison the authors of the publication have achieved slightly different results. According to pairwise main risk comparison identified as the risks with the biggest negative influence to the insurance company, are IT risk, business disruption and system failure risks and compliance risk.

Since two different ranking methods have showed slightly different results, the authors of the publication can recommend to use standard ranking method instead of pairwise risk comparison. However, pairwise comparison should be performed using evaluation of experienced experts with deep risk nature comprehension but the fact is that the experts knowledge in Baltics is still on low or medium level therefore evaluation can be unreliable.

V. EXTENDED SUMMARY

Solvency II framework is based on new risk evaluation requirements with the aim to ensure solvency of every insurance company in the countries of the European Union. The point is that Solvency II Directive is based on risk management and risk measurement, meanwhile each function plays crucial role in Solvency II Directive principles establishment and should change the understanding of insurance business principles.

The Baltic insurance market is rather small and developing compared to that of the EU, therefore Solvency II Directive requirements should be established through another approach.

Since according to Solvency II regime requirements insurance companies' solvency and financial stability should be managed and improved through risk evaluation, the authors of the paper introduce the approach for risk evaluation implementation in the Baltic countries, particularly in Latvia.

The authors have divided Solvency II Directive requirements implementation into 4 stages:

1. Establishment of risk culture where the nature of each risk should be investigated with the aim to set appropriate risk appetite, tolerance and limits.
2. Risk measurement where the capital for each risk should be calculated according to Solvency II standard formula or an insurance company's internal model.
3. Risk management process should be fully implemented with the aim to manage and control all processes of an insurance company with the aim to eliminate the possible risk of the insurance company and to improve its development, profit and financial results.
4. Risk evaluation includes implementation of risk culture, risk measurement and risk management covers all Solvency II requirements.

The authors recommend to use a short-term method for risk culture establishment using expert evaluations. The expert evaluation can be analyzed using analytical hierarchy and risk ranking methods.

Experts should be an insurance company's employees with a high level of knowledge in a certain province. However, risk evaluation should also educate key employees in risk nature comprehension.

The authors have performed case study on one insurance basis using internal experts risk evaluations with the aim to study the importance of main insurance company's risk according to Solvency II Directive.

The conducted research has showed that according to expert evaluation using analytical hierarchy and ranking methods the risk with the biggest negative possible influence on the insurance company development and performance are non-life risk, health and market risk. The expert evaluation corresponds fully with Solvency II capital requirements that should be put to the risk.

The authors of the paper have also investigated the nature of operational risk using ranking methods in analysis of expert evaluations.

The suggested approaches of risk evaluation implementation in short-term will enable every insurance company to control trends within its development towards the solvency and will introduce a deeper understanding of risk nature that will allow in future to follow the Solvency II requirements and establish a more sophisticated and sensitive risk evaluation. In the future the authors of the article plan to continue the present research on the insurance company's risk evaluation.

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Darja Stepčenko, Irina Voronova. Apdrošināšanas sabiedrības darbība: riska novērtējums
Maksātspēja II direktīva nosaka vairākus izaicinājumus katrai apdrošināšanas sabiedrībai, jo pieprasa jutīgāku, sabalansētāku un sarežģītāku riska analīzi, lai izstrādātu, ieviestu un sniegtu labāku riska segumu. Tādēļ ir ļoti būtiski identificēt tos riskus, kuri visvairāk apdraud apdrošināšanas sabiedrības darbību un attīstību. Pēc būtības risku varētu izraisīt nepareizi un nekorekti procesi, cilvēku darbība, sistēmas, partneri vai arī citi avoti. Publikācijas mērķis ir identificēt, izpētīt, novērtēt, izmērīt, vadīt un kontrolēt iespējamo risku efektu uz apdrošināšanas sabiedrības darbību. Lai sasniegtu uzstādīto mērķi, publikācijas autores izmanto teorētisko un metodoloģisko zinātniskās literatūras analīzi, analītiskās, statistiskās, ekspertu un prioritātes metodes, lai izpētītu un novērtētu riska vadības īpatnības. Veicot pētījumu, publikācijas autores analizē un izpēta risku ietekmi uz apdrošināšanas sabiedrības darbību, lai izveidotu riska vadības plānu. Bez tam publikācijas autores izpēta un izstrādā metodi, kas ļauj analizēt katra faktora ietekmi uz riska iestāšanās varbūtību. Publikācijas autores izstrādā riska kultūras novērtēšanas shēmu, izmantojot ekspertu novērtējumus, kas varētu būt pirmais posms riska novērtējuma ieviešanai saskaņā ar Maksātspējas direktīvas prasībām.

Дарья Степченко, Ирина Воронова. Деятельность страхового общества: оценка рисков.
Директива «Платежеспособность II» предусматривает ряд вызовов для каждой страховой компании в соответствии с требованиями более чувствительного, сбалансированного и более сложного анализа рисков для разработки, введения и осуществления лучшего покрытия рисков. Поэтому важно определить риски, влияющие на деятельность и развитие страховой компании, поскольку данные риски вызывают убытки, возникающие от некорректных процессов, персонала и систем, партнеров или других источников. Целью публикации является выявление, анализ, оценка, измерение, управление и контроль последствий рисков на деятельность страховой компании. Для достижения поставленной цели, авторы использовали теоретико-методологический анализ научной литературы, аналитические и статистические методы, методы экспертных оценок и оценки приоритетов, с целью изучения особенностей управления рисками. В рамках исследования, авторы провели анализ и изучили влияния основных рисков страховой компании с целью разработки плана управления рисками. Авторы публикации также предложили метод анализа влияния каждого фактора на возможность возникновения риска. Авторы публикации разработали схему оценки культуры рисков, с использованием экспертного оценивания, что можно считать первым этапом оценки риска в соответствии с требованиями Директивы «Платежеспособность II»