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ARTICLE

THE IMPACT OF INSURANCE ON INVESTMENT POTENTIAL

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ABSTRACT

Insurance of enterprises' risks and availability of a developed insurance market in the region allow to compensate losses of investment activity. This stimulates the development of investment potential in the region. But the relevance of insurance is not obvious for some economic entities. This raises questions about the need for insurance to carry out investment activities. However, insurance products can compensate for losses caused by investment risks, and allow companies to accumulate resources. Also, insurance companies own large insurance amounts and can become potential investors to finance investment projects in the region, which increases investment potential. The purpose of this article is to study the impact of insurance coverage on supporting the investment development of enterprises. Business entities engaged in investment activity often face certain risks which decrease the potential of the investment activity development. According to the company manager survey, investment risks occupy the third place among the factors limiting investment activity (30% of the companies surveyed in 2017). The first and the second position in the respondents' opinion belong to such factors as owned financial asset shortage (60%) and uncertainty of the economic situation (34%) in the country, and the fourth position - to high interest rates for business loans (29%). It is worth mentioning that insurance helps to reduce owned financial asset limit thus filling the shortage of financial resources of economic entities compensating for the losses caused by the realized risks. The high cost of business loans can be reduced as well in case of insurance guarantee provided by the borrower. Thus, insurance makes it possible to support investment activity reducing the impact of barriers.

KEY WORDS
financial risk, insurance, investment risk, investment, complex risk, complex insurance.

INTRODUCTION

The first and the second position in the respondents' opinion belong to such factors as owned financial asset shortage (60%) and uncertainty of the economic situation (34%) in the country, and the fourth position - to high interest rates for business loans (29%) [Table 1].

Table 1: Classification of companies according to the evaluation of the factors limiting investment activity [1]

Factors limiting investment activity	2002	2013	2014	2015	2016	2017
Inadequate demand for the product	21	19	19	19	21	23
Owned financial asset shortage	65	67	60	64	59	60
High interest rates for business loans	31	31	25	25	27	29
Complicated borrowing scheme for implementation of investment projects	17	15	14	13	14	16
Investment risks	25	23	27	27	27	30
Poor condition of technical facilities	9	5	6	7	8	7
Low profitability of fixed capital investments	14	11	11	10	13	13
Uncertainty of the economic situation in the country	18	32	31	26	26	34
Faulty legal framework regulating investment processes	17	10	10	11	9	11

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The comparative analysis of investment and insurance potential of regions shows the correlation between the developed insurance market and its investment potential. We have rated the regions with relevant amounts of insurance premiums and amounts of fixed capital investments as per insurance and investment potential. A higher absolute value of insurance premiums and investment corresponds to a higher rating position.

If the values of these ratings are similar, the development of insurance corresponds to its potential opportunities in the region. If the insurance rank is lower than the investment potential, this means that the insurance opportunities are not used sufficiently in the region. As shown in [Table 2], the insurance rank of the Republic of Tatarstan is higher than its investment potential which implies the necessity for more effective use of insurance in order to develop the investment potential of the region.

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Currently in order to increase investment potential it is necessary to consider certain methods of risk management, such as complete risk elimination, loss prevention and possible result control, risk assumption and possible loss insurance. A risk may be rated against two dimensions: the probability of a negative event with specifically unprofitable consequences and the amount of the possible loss caused by the negative deviation from the norm.

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Table 2: Indicators of investment activity risk reduction for economic entities through insurance

	2015	2016	2017
Amount of fixed capital investments			
Rating position of the city of Moscow	1	1	1
Rating position of the city of Saint-Petersburg	3	3	3
Rating position of the Republic of Tatarstan	6	6	6
Amount of insurance contributions			
Rating position of the city of Moscow	1	1	1
Rating position of the city of Saint-Petersburg	2	2	2
Rating position of the Republic of Tatarstan	3	3	3

If the first three methods of risk management affect the possibility of its formation, insurance reduces the amount of possible future loss. If the insurance contributions are regarded as the realized function of insurance, i.e. protection against risks, it is possible to define by means of retrospective analysis in which part insurance reduces the risks of business entities, consequently, the realized risks are the amount the insurer's payments. This knowledge may help to determine the quantitative indices of risk reduction by means of insurance market.

So, the purpose of this article to explore the insurance as a support the investment activities of enterprises.

MATERIALS AND METHODS

We have applied the methodology put forward by Prof. M.R. Safiullin in order to study the influence of "the effect of insurance" on change of fixed capital investments. The conceptual framework of the system functional model of market economy reflects the key markets and market interactions [2].

The general economic and mathematical model of the chart represented in quadrant of [Fig. 1] appears as follows:

$$FCIt = F (EIt), \quad (1)$$

where

FCIt - fixed capital investments;

EIt - "the effect of insurance" as the difference between insurance contributions and insurance premiums.

The hypothesis of this study is the following. From our point of view, if the company insures the risks of investment activity, they have more funds to invest in the business.

RESULTS AND DISCUSSION

Risk management is subject of numerous research studies, the most prominent of which are works on cost estimate of risk management programs [3, 4]. In case of insurance risk realization, the indemnity received by an economic entity will make it possible to compensate for the loss incurred in full of partially. On the one hand, part of owned assets is diverted to insurance payments which will lead to insufficient investment of production and profit loss, but on the other hand, this will cause the expected flow of funds in the future in the form of compensation of the losses in case of the event insured. Thus, insurance coverage of enterprises helps not only to compensate for the losses associated with investment activity, but also to finance planned investment projects and compensate for the losses from pure investment risks. It is a well-known fact that pure investment risks are not covered by insurance as they are considered risks with unpredictable financial results which forces investors to manage risks by themselves and limits the amount of financial assets. The studies on the impact of insurance on financial market as well as on economic growth are of special interest [5]. The fact that the authors of these studies prove the correlation between insurance and economic growth implies that the investment potential of the market depends on the developed insurance market as well.

As a result of redistribution through insurance of financial flow, the value of net assets of the enterprise changes as well as the enterprise value, calculated considering the expected earnings, which influences the amount of investment activity funding. The research on the influence of risk management on enterprise value is subject of numerous studies [6, 7].

The comparative analysis of the volume of the net assets belonging to the enterprise in case of risk insurance and their retention enables us to draw the following conclusions:

first, the value of net assets of the enterprise in case of the risk event and loss compensation by means of indemnities is lower than their value in the absence of any insurance contract and loss but is higher than in case of risk retention. The main condition of the above mentioned equation is the advisability of business risk insurance;

second, the value of net assets of the enterprise in case of absence of a risk event and in the presence of a

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valid insurance contract is higher than their value in case of a loss inflicted without any insurance contract, as the insurance premium paid is always lower than the amount of the expected loss;

third, the value of net assets of the enterprise in the presence of an insurance contract and in case of an un favorable event occurrence is higher than their value in case of risk retention in terms of the difference between the indemnity obtained and the insurance premium paid (the effect of insurance).

There is a great number of renderings and definitions of risk in economic literature. Let us consider these definitions. "Risk is a situation when the result of some action is not obvious or ambiguous or when there are several outcomes. The term "risk" is generally used to describe uncertainty in the situation when the actual result of some action is not known for sure and it is supposed to be determined as a result of random choice among several possible variants whose distribution is not known" [8].

"Risk is the danger of occurrence of unforeseen losses of the expected profit, income or property, funds caused by eventual change of economic activity conditions and unfavorable circumstances" [9].

The authors of "The Encyclopaedia of Financial Risk Management" distinguish various risks, including market, liquidity, credit, accounting, tax, macroeconomic risks, etc. From the point of view of the authors "market risk is a possible discrepancy between characteristic traits of economic state of an object and the values expected by the individuals making decisions under the influence of market factors" [10]. At the same time according to the authors, "the concept of risk is often used in relation to probability of unfavorable outcomes, losses and negative consequences" [11].

In insurance theory risk is often associated with the uncertainty of losses.

"Risk is ...:

- an event that can cause financial losses whose compensation is guaranteed by the insurance contract;
- the probability of suffering from some form of loss or damage;
- the probability of losses from commercial activity" [12].

The word "risk" in terms of business may designate absolutely different things. In particular, risk may imply [13]:

- the potential possibility (danger) of occurrence of the probable event or chain of events causing certain material damage;
- the possibility of insufficient receipt of profit or income;
- the characteristic feature of damage is the frequency or/and size (extent) of damage;
- the insured object that may suffer from damage.

Investment activity is risk-bearing. Investment risk is part of financial risks according to economic literary sources. Financial risks, in their turn, are subdivided into two groups [14]:

1) risks associated with purchasing capacity of money (inflation, deflation, exchange, liquidity risk);
2) investment risks, i.e. risks associated with funding (profit, earning capacity risks, risk of direct financial loss).

There are numerous definitions of investment risk. Summarizing the definitions suggested by various authors, we have obtained the most complete definition of investment risk: investment risk is the risk occurring upon implementation of investment activity which corresponds to measurable probability (threat) of asset and resource losses (loss at least of a part of investment), insufficient receipt of income or additional investment expenses as well as the opportunity to receive significant profit (income) in the course of investment activity by the economic entity under conditions of uncertainty.
[Table 3] represents the possible risks associated with implementation of investment projects.

Table 3: Risks associated with implementation of investment projects

Internal	External
Risk of loss of health and disability of staff	Exchange risk
Risk associated with staff liability	Inflation risk
Risk of breach of contract	Deflation risk
Bankruptcy risk	Risks associated with suppliers, contractors, executors
Profit risk	Risk of payback period change
Risk of loss/damage of property	Risk of project cost increase
Risk of insufficient receipt of expected income from business activities	
Risk of loss of property rights	

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Risk of partial or complete loss of invested funds	
Liquidity risk (credit risk)	

Quite often an investment risk is regarded as a complex risk as it includes numerous subtypes of risks anyhow related to investment activity [Table 4]. There are certain regulations of insurance in which insurance companies establish the scope of liability (insurance risks) basing on their own work experience in the insurance market, taking into account the financial opportunities for compensation of losses caused by risk events stipulated in the insurance contract which leads to practical "individualization" of the latter.

Table 4: Classification of risks as per branches of insurance

Personal insurance	Property insurance
Risk of loss of health and disability [15]	Risk of insufficient receipt of expected income from business activities
	Risk of loss/damage of property (including equipment)
	Title insurance (risk of loss of property rights)
	Employee liability risk
	Risk of breach of contract before third parties

The above mentioned implies that we may speak about comprehensive insurance as possible insurance support for implementation of investment projects. The concept of comprehensive insurance, which may become a method of complex risk management, can be found in Russian legislation but it mainly concerns the objects of personal and property insurance. Comprehensive insurance is currently provided by ensurers for builders' risks [16], [17]. Thus, conducting comprehensive insurance of investment risks it is necessary to include six kinds of insurance services:

Title insurance is the only remedy that can keep the investor from losses caused by the third party fraud when a bona fide purchaser loses the property right for the object.

Insurance of the enterprise property that will render it possible to compensate for losses caused by floods, fires, accidents and other direct damages. Insurance protects means of production, real estate property, means of transport.

Insurance of means of production against breaking, damage or destruction as a result of faulty engineering, installation and operation. This service is available for industrial enterprises. However, insurance of outdated equipment may be too expensive.

Insurance of loss of profit. If the industrial process stopped after two cases of risk event occurrence and the investor lost part of profit, they will receive a part of insurance premium based on indices of previous periods. Compensation can also be received in case of disruption of supplies by the other party to a contract. Insurance of financial business risks that can be ascribed to profit insurance is situated in the matrix of insurance type distribution in terms of loss ratio and premium increase in quadrant III, which has the lowest premium increase and low loss ratios [18].

Officials liability insurance provides compensation of losses caused by errors or deliberate misconduct by the management.

Risk of losses caused by force majeure in the course of installation and construction work at the enterprise that lead to damage or destruction of incomplete construction at any stage.

According to the results of the statistical research "the effect of insurance" of business risks constitutes in average 50% of fixed capital investments [Table 5]. Unfortunately, the time frame studied in our research is limited to the period between 2012 and 2016 due to restricted availability of statistical data concerning insurance of business risks of legal entities. There is no available record of the extent of insurance of legal entities business risks until 2012.

It is worth mentioning that there is no clear statistics concerning insurance risks associated with investment activity in Russia. In most cases the statistical data reflects the insurance of activity of economic entities in general without singling out the insurance of the risks associated with investment project implementation. For instance, insurance of property of legal entities implies both the property involved in implementation of investment projects and the property obtained outside the framework of investment activity. Such a situation has negative impact on the possibility of research on efficiency of insurance related to implementation of investment projects and hinders the use of all insurance possibilities necessary to increase the investment potential and economic growth.

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Table 5: Dynamics of insurance of business risks of legal entities and fixed capital investments

Year	Insurance premiums, mln. rub.	Insurance contribution, mln. rub.	The effect of insurance, mln. rub.	Fixed capital investments, mln. rub.
2012	6,151,147	901,742	5,249,405	9,595,700
2013	7,058,343	643,010	6,415,333	10,065,700
2014	7,058,343	2,244,982	4,813,361	10,379,600
2015	7,819,338	14,389,940	-6,570,602	10,496,300
9 months 2016	6,855,641	7,195,936	-340,295	not available

Table 6: Dynamics of general market "effect of insurance" and fixed capital investments

Period of time	Insurance premiums, mln. rub.	Insurance contributions, mln. rub.	The effect of insurance, mln. rub.	Fixed capital investments, mln. rub.	GDP, billion rub.
2004	374,398.8	198,307.7	176,091.1	2,246.8	17,027.2
2005	349,912.2	142,019.6	207,892.7	2,893.2	21,609.8
2006	406,763.3	162,028.4	244,734.9	3,809.0	26,917.2
2007	479,265.9	201,073.6	278,192.3	5,217.2	33,247.5
2008	551,901.6	248,649.6	303,252.0	6,705.5	41,276.8
2009	513,176.3	285,129.4	228,046.9	6,040.8	38,807.2
2010	557,180.1	294,508.7	262,671.4	6,625.0	46,308.5
2011	664,370.2	303,524.5	360,845.6	8,445.2	59,698.1
2012	809,059.8	369,439.7	439,620.0	9,595.7	66,926.9
2013	904,429.8	420,769.0	483,660.8	10,065.7	71,016.7
2014	987,772.6	472,268.6	515,504.0	10,379.6	77,802.7
2015	1,023,819.3	509,217.5	514,601.8	10,496.3	81,287.2

The quadrant reflects the relation between "the effect of insurance" and fixed capital investments. The regression analysis based on the statistical data of table 6 suggests the following results (see [Fig. 1]). Thereat, during the period between 2004 and 2015 the equation of regression of correlation between "the effect of insurance" and fixed capital investments in the Russian Federation appears as follows: Y=0,0208*X.

As seen in [Fig. 1], the character of relation between "the effect of insurance" and fixed capital investments has been confirmed. The increase of "the effect of insurance" results in growth of fixed capital investments. This is quite logical. Simultaneously, both indices may be influenced by general economic factors such as increase or decrease of economic cycle, as both indices depend heavily on presence of financial resources in economy.

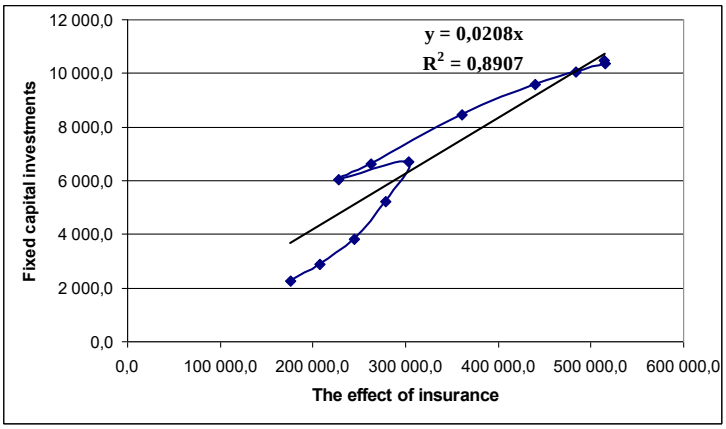

Fig. 1: The correlation between "the effect of insurance" and fixed capital investments in the Russian Federation.

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CONCLUSIONS

Macroeconomic modelling has a long history. We have conducted macroeconomic research on insurance as the tool of investment activity stimulation. The analysis revealed significant influence of insurance on investment activity development. Insurance coverage of enterprises helps not only to compensate for the losses associated with investment activity, but also to finance planned investment projects and compensate for the losses from pure investment risks.

CONFLICT OF INTEREST

There is no conflict of interest.

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None.

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