

THE IMPROVING OF THE EVALUATION METHODOLOGY OF THE REINSURANCE MARKET COMPETITIVE SURROUNDING

Annotation

The existing methodology of evaluation of market competitiveness on the insurance market is analyzed in the article, the ways of its improvement are offered, by means of applying Jini index with the graphical image as a Lorenz curve on the reinsurance market.

Key words: competition, competitive surrounding, reinsurance market, market concentration, monopolization.

Problem statement. The competitiveness on the reinsurance market characterizes the process of interaction and struggle of acting companies on it, potential partners and competitors, that is oriented on the providing of the most beneficial position for the participant on the market, which will give him the possibility of defense from the competitive forces or affect them with the benefit for themselves, will create better conditions for the realization of reinsurance services, meet client's needs and get commission compensation. The interest of the reinsurers in the development of the positioning strategies and behaviour on the market that take the consequences with modern development conditions of reinsurance business, specifies the necessity of appropriate theoretical-methodological approaches development to the evaluation of the competitive surrounding of the reinsurance market of Ukraine.

Analyses of the last investigations and publications. Such scientists-economists made a big contribution to the deepening of the theoretical-methodological basis of the evaluation of the competitiveness surrounding of the reinsurance market: O.O. Gamankova [1]; A.M. Yermoshenko [2]; V.D.

Bigdash [3]. At the same time the methodology of concentration evaluation on the reinsurance market needs further improvement.

The purpose of the article is the investigation of the methodological principles of the competitive surrounding evaluation of the reinsurance market and the development of practical recommendations according to their improvement.

Investigation results. The main indexes, used for the evaluation of concentration and the level of market competitiveness, are coefficient of market concentration (monopolization index) and coefficient of market competitiveness (Herfindal-Hirshman index). A positive aspect of the information software of the insurance market is the introduction of The State Commission for Regulation of Financial Services Markets of Ukraine from 2003 of the appropriate market indexes calculation with the aim of showing the competitive tendencies on it. Herewith, the coefficients of monopolization and competitiveness of the insurance market are calculated by the regulator of different sectors: general insurance and life insurance. However, these coefficients haven't received their application on such a significant segment of insurance sector as a reinsurance market. Then, the introduction of the existing methodology of market competitiveness definition on the home reinsurance market is appropriate and necessary for the reflection of the appropriate market processes and their dynamics on it.

According to the theory of organization of industry markets the concentration of sellers on the market characterizes the relative dimension and quantity of the companies that deal with the certain kind of economic activity [4]. The less amount of companies function on the appropriate market, the higher is concentration level. Simultaneously, when the amount of companies is equal there's such regularity on the market: the more they differ between themselves by size, the higher is the concentration level.

On the other hand, the concentration level affects the behaviour of market participants: the higher is the concentration level, the more they are

dependent between themselves. And this means that market behaviour of every participant is defined by the appropriate reaction of the competitors that are present on the market. The concentration level affects the predisposition of the companies to the rivalry or cooperation: the less they function on the market, the easier they realize the interdependence and the sooner they will cooperate. That's why we can assume that the higher is the concentration level, the less competitive will be the market.

In scientific researches great attention is paid to the investigation of concentration market problems and their evaluation. For example, E. Demydova states that concentration is a degree of saturation, density of a certain kind of economic activity [5, p.23-34]. Adapting this concept to the reinsurance market, we understand under concentration the degree of saturation of the reinsurance activity on the market. Herewith, the concentration level affects the choice of reinsurance services and definition of their value taking into account the positions of the competitors and partners on the market. The high level of concentration is an obvious feature of possible market monopolization, and hence a high level for outsiders who intended to come into the market. That's why the calculation and tracking of the market concentration indexes by the state regulator are significant task from the point of view of original and reasonable intervention into the processes of excessive concentration and market monopolization.

Market concentration can be calculated in different ways. O.O. Gamankova calculates the coefficient of market concentration (CR_m) in the most famous way, in particular, as a sum of shares of the biggest market participants [1, p.195]:

$$CR_m = \sum_{k=1}^m O_k , \quad (1)$$

CR_m is a coefficient of concentration m of the biggest market participants;

O_k is a share of the biggest market participant;

m is the quantity of participants.

A.Yermoshenko, V. Bigdash use another way of calculation of the degree of concentration of insurance market [2, p.151; 3, p.35]. The compulsory condition of calculation of any index is the identifying of the parameters that are taken as “size” of the insurance company. The calculation of market concentration index by this way we can show with the help of formula:

$$KK_p = \frac{x_1 + x_2 + x_3 + x_n}{n}, \quad (2)$$

KK_p is a coefficient of market concentration;

x_n is a sum of insurance/earned rewards of all complex of insurance companies that function on the insurance market.

However, concentration index doesn't reflect the distribution of the shares within the groups of the biggest companies, and also outside the groups – between outsiders, and hence it doesn't characterize the market power potential in full. Namely, the calculation of this index, characterizing market share that belongs to a certain group of the companies, doesn't give all information about the other market participants, their shares and quantities on the market.

Index, mentioned above, the most frequently is used in practice for the investigation of oligopolistic markets concentration. The term “oligopolistic market” is used for markets with a specific structure, where the proposition is introduced by not many sellers of similar products. Exactly a big amount of oligopolists enterprises consider them the result of small number.

The peculiarity of such markets is the interrelation of the strategic market behavior of sellers, insurance companies, in our case. That's why on the oligopolistic markets of the company, that try to maximize their income, the effect of leveling of limiting costs and limiting receipts cannot be used. Because they don't know the receipts, as it depends on the demand function that is reproduced exactly by the main players on the market, not by the customers.

So, uncertainty of demand function on the products and services of a certain seller at the moment of taking his decisions about the price and the amount of offer is a key peculiarity of oligopolistic markets. Another peculiarity of such markets is the result of the previous one, and this is a general interdependence of oligopolists because of taking into consideration the expected reaction of the competitors in their demand functions.

Another index, with the help of which the concentration degree on the market is evaluated, is the index of competitiveness of Herfindal-Hirshman (*HHI*), which is calculated by formula:

$$HHI = \sum_{i=1}^n S_i^2, \quad (3)$$

S_i is a share of i market participant (as a rule – sales, assets, etc.);

n is the amount of participants-sellers on the market.

Index (*HHI*) is calculated as a sum of shares quadrates of all market participants. Namely, in contrast of the concentration coefficient Herfindal-Hirshman index gives the integral data due to the shares of all market participants, and that's why evaluates the degree of monopoly and the degree of market power concentration more adequately. However, it is more difficult to calculate, as there should be data about the market shares of all companies. At the same time, Herfindal-Hirshman index is not the adequate characteristic of the degree and quality of monopoly in all cases. In particular, it doesn't give the possibility to define the oligopoly of dominant complex of small oligopolists with one or two big competitors, it is the oligopoly opposite to the market oligopoly of dominant company with the competitive surrounding.

In our opinion, with the aim of using the concentration indexes for the evaluation of the reinsurance market competitive surrounding, mentioned above, we should previously outline the borders of this market. The whole space of the general market is the maximum territorial border. But in some cases we can talk about the defined local markets within the territory of

general market, for example about the market of the incoming reinsurance and the market of the outgoing reinsurance, external reinsurance market and internal reinsurance market. Besides, markets are separately formed by the methods, forms and kinds of reinsurance. In our case the main criteria of choice of the market borders is its distribution on the markets of incoming and outgoing reinsurance.

Having defined the market borders, let's explain what enough for the dominance on it is. On the one hand, the share of the participant presence is so considerable that only one of its numbers definitely reveals the dominant position. On the other hand, if the size of this share is less, the participant dominance on the market is decided by taking into account other factors. In particular, by means of defining parameters, that are taken as a "size" of the market participant. For the market of the outgoing reinsurance the main index of its participant size we consider the complex of insurance rewards that are given to reinsurance, and for the market of the incoming reinsurance – received reinsurance rewards. At the same time we can calculate the indexes of concentration and competitiveness of the mentioned markets, using other criteria: assets, own capital and guarantee fund, that characterize financial possibilities of the market participants; insurance rewards, the amount of rewards, given to reinsurance, reinsurance rewards, reinsurance payments that reflect the reinsurance activity development in fact. In our opinion, the usage of such diversity of criteria while calculating of these indexes will help to characterize the competitive surrounding of the reinsurance market far and wide.

The information index of the distribution degree of a certain feature between the objects is Jini index, which can be showed graphically via Lorenz curve [6]. The index reproduces the information that Lorenz curve shows, characterizing the difference between the actual distribution of a variable and hypothetical situation, where this variable has a steady distribution. This means that in the hypothetical situation all the participants of the reinsurance

market are in equal position that comes to a zero index. The concentration is full when the variable meaning is for one market participant, and Jini index meaning in this case comes to 100%.

Jini index, that gives the possibility to see the dynamics of the irregularity of index distribution in complex on different stages, is often showed without the description of complex grouping. In accordance, the biggest amount of groups has one complex, the higher Jyni coefficient it will have. Lorenz curve shows the irregularity of a certain feature distribution, and in case of using of this curve for the investigation of market concentration shows the interrelation between the company share on the market and market share by a certain feature that is calculated with the accumulated sums of the smallest to the biggest companies.

Conclusions. Summarizing, we should note that mentioned above indexes of market concentration and Herfindal-Hirshman index, that have practical meaning in home insurance practice, are the only indicators of the condition of the competitive surrounding of the insurance market in home practice. In Ukraine there is no officially defined methodology of the evaluation of the competitiveness degree on the insurance market, and it's not absolutely predicted for the reinsurance market. The usage of market concentration coefficients and Herfindal-Hirshman coefficient on the market in general, without defining certain segments, allow to confirm the inadequacy of results received while their analyses on the reinsurance market.

For more exact and real evaluation of the competitive surrounding of the reinsurance market and defining the strategic market behavior of its participants we offer to use Jini index and graphical picture of the results via Lorenz curve, since only this index characterizes the distribution irregularity of a certain feature and shows the interrelation between the share of companies on the market and market share of a certain feature. Besides, its parameters describe the tendencies for the smallest reinsurers, that dominate on the reinsurance market according to their financial power, and for the biggest

companies, by the complex of which the reinsurance market is introduced, - according to their main indexes of reinsurance activity.

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