BANCASSURANCE UNDER FINANCIAL MARKETS’ GLOBALIZATION IN UKRAINE

Urgency of the research. The topicality of research is motivated by the necessity to study the mechanism of bancassurance in the conditions of financial market development in Ukraine and by increasing the role of banks and insurance companies in the economy.

Target setting. The peculiarities of mechanism of bancassurance in the modern conditions of financial market development are under the study. The aim is to study the influence factors (motivators and deterrents).


Uninvestigated parts of general matters defining. The issues of the effective cooperation of commercial banks and insurance companies, their impact on each other in the competitive financial market regarding the influence of variables were not studied enough.

Task. The task is two-fold: to study the mechanism of bancassurance in the modern conditions of financial market development and to systematize the influence factors in the context of the factor analysis of the services bancassurance provides.

The statement of basic materials. The mechanism of bancassurance is studied in the present research, the factor analysis is conducted and the connection between the studied objects is determined. Regressive and correlative analysis helps the understand the setting of the credit limit and insurance bonuses on the bancassurance development. The calculated taxonomic coefficient synthetically characterizes the changes of features of the investigated objects or actions.

Conclusions. The effective cooperation of banks and insurance companies increases the investment potential of the country and facilitates the economic development. Bancassurance is the integral part of economic growth and its role is to create such cooperation model of banks and insurance companies that gives the competitive advantages for both sides and provides the stable development of banking and insurance sectors of economy.

Keywords: commercial banks; insurance companies; bancassurance; financial market; correlation; factors.

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Rusul L. V. Bancassurance under financial markets’ globalization in Ukraine
Urgency of the research. At the present stage of economic growth much attention is paid to the development of banks and insurance companies as one of the factors of the economic growth and as the integral part of the economy of any country. The level of development of these institutions determines the country's ability to adjust to the diverse economic conditions and to create favorable environment for the stable economic growth.

The bank and insurance sectors play an important role in the national economic development and the topicality of the present research is motivated by the necessity of study of these factors in the current period of the financial instability. The interaction between financial markets and their integration into the financial supermarkets is aimed at the financial services process improvement and the insurance that product offering is competitive.

Target setting. The factors that influence the bancassurance are under the study. Conventionally they can be divided into external and internal. The external factors include processes and phenomena which cannot be influenced by the institution and the internal factors can be controlled by the institution. At the same time factors of influence consist of incentives and disincentives and their impact on the banking and insurance development need to be analyzed. By implementing the econometric methods of investigation we can analyse the change in the bancassurance services considering the development of the banking and insurance sectors.

The bancassurance in Ukraine is not developed enough and that is why it is necessary to facilitate the conditions for its development as it has considerable potential for the growth and recovery from the economic recession.

Actual scientific researches and issues analysis. The peculiarities of the commercial banks and insurance companies cooperation, the development of the common services and their implementation have received a great deal of attention, see in particular: N. V. Tkachenko, I. O. Shkolnik, S. M. Kozmenko [1], O. O. Shakura [2], L. S. Zakharkina, N. E. Avanesova, I. B. Dzedzyk, K. I. Rusanenko, Yu. P. Makarenko, K. Sumathi [3], A. Rebeena [4]. N. V. Tkachenko, Yu. P. Makarenko, N. E. Avanesova study the models of cooperation of banks and insurance companies and the role of bancassurance in the financial market, reasons and the problems of its development are studied by A. Rebeena, I. B. Dzedzyk, K. I. Rusanenko.

Uninvestigated parts of general matters defining. The forms, models and role of the bancassurance in the economy of the country were studied by many scholars, but the issue of the bancassurance development is not analyzed enough considering the factors of influence on the formation and realization of the common services by banks and insurers. It is also necessary to conduct the correlative and regressive analysis to define the role of the credit limit and the insurance bonuses on the development of the bancassurance.

Task. The research deals with the development phase of bancassurance in the framework of financial market development, analysis of the factors that influence the implementation and management of common services arrangements, study of the main stages of the development of banks and insurers.

The statement of basic materials. The cooperation of insurance companies and banks over the last years had significant effect with considerable changes on the domestic market of the financial services. It is thought that the first attempts of the domestic banks and insurers cooperation occurred when Ukraine officially declared itself as an independent state.

The main factors for the development and cooperation of banks and insurers at the financial services market of any country are the legislation, growth and competitiveness of the banks and insurance sectors.

The evaluation of the interaction of banks and insurance companies is possible only by the systematic gathering, recording, and analysis of data connected with the common services of the financial institutions mentioned above. The data includes the information about the number of customers of the banks and insurance companies according to the different types; the number of customers of the banks who bought the financial product of the insurance partners or common service; the number of
the insurance contracts sold through the bank according to the types of the contracts; management expense ratios; costs to settle the insurance liabilities according to the type of bank insurances; bonuses earned from the selling the financial products through banking and insurance cooperation; the bonus distribution according to the sectors of the banks.

To evaluate the development dynamics of the banks and insurance companies cooperation such factors should be taken into consideration: correlation of the number of bank clients who purchased the financial product of the insurance partners comparing to the total quantity; the correlation of the insurance contracts bought through the bank comparing to the total quantity of bank clients; the rate of the total cross-selling of the insurance products; the payment cost index under the integration of the banks and insurance companies; bank profitability due to the insurance products selling; the average bonus index in the banking sector [5, p. 132].

But in Ukraine banks and insurers do not provide the information on their cooperation, distribution channels and the quantity of the sold insurance products. Thus, to evaluate the development of bancassurance in Ukraine according to the indices shown in the statistic reporting of NBU and the insurance companies the econometric and statistic models of the analysis can be used.

So among the methods mentioned above the method of taxonomic coefficients calculations is the most suitable for the multi-featured object analysis, i.e. it allows positioning of the studied objects according to the value of the synthetic index.

Taxonomic process usually involves six main stages:
- matrix notation;
- specification of the elements;
- indexing into a matrix;
- the construction of the standard vector;
- the identification between the matrix spaces;
- the calculation of the coefficients of the taxonomy.

To analyse the development of bancassurance in Ukraine we choose indices concerning banks and insurance companies. In Ukraine the basis of the cooperation of these institutions is formed by credit products provided by the banks along with the insurance contracts.

For instance, if the client takes mortgage credit the assets and life insurance contracts are offered. But if the client refuses to sign the insurance contracts the bank has a right to raise the credit rate or to set up additional fees.

For our analysis the next household indices were taken into consideration: consumer credit volume, mortgage credits, credit insurance, asset insurance, life insurance. The matrix of the indices as a base for the analysis and evaluation is presented in the table below [6] (Tab. 1).

<table>
<thead>
<tr>
<th>Index</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>accounting period deviation (+,-) before 2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consumer Credit Volume</td>
<td>137 346,00</td>
<td>135 094,45</td>
<td>104 879,06</td>
<td>32 466,94</td>
<td>-30 215,39</td>
</tr>
<tr>
<td>Mortgage Credits</td>
<td>56 270,07</td>
<td>72 156,01</td>
<td>60 215,30</td>
<td>3 945,23</td>
<td>-11 940,71</td>
</tr>
<tr>
<td>Credit Insurance</td>
<td>1 026,00</td>
<td>684,7</td>
<td>348,7</td>
<td>-677,30</td>
<td>-336,00</td>
</tr>
<tr>
<td>Asset Insurance</td>
<td>3 769,20</td>
<td>3 205,30</td>
<td>3 486,20</td>
<td>-283,00</td>
<td>280,90</td>
</tr>
<tr>
<td>Life Insurance</td>
<td>2 476,70</td>
<td>2 159,80</td>
<td>2 186,60</td>
<td>-290,10</td>
<td>26,80</td>
</tr>
</tbody>
</table>

The indices in the table 1 show that 2015 is characterized by the credit decrease, the volume of
the customer and mortgage credits have reduced to ₴ 302015,39 millions and ₴ 11940,71 millions, accordingly, and comparing to 2014 the volumes of the credit insurance have also reduced.

Table 1 is the basis for formation the matrix of standard indices that will be taken for the analysis of the evaluation of bancassurance functioning (Tabl. 2; 3).

The further calculations demand the standardization and allow to reduce the unit to the dimensionless quantity, i.e. to balance the indices value.

Table 2

<table>
<thead>
<tr>
<th></th>
<th>X</th>
<th>X_2</th>
<th>X_3</th>
<th>X_4</th>
<th>X_5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>137346,00</td>
<td>56270,07</td>
<td>1 026,00</td>
<td>3 769,20</td>
<td>2 476,70</td>
</tr>
<tr>
<td>2</td>
<td>135094,45</td>
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<td>684,7</td>
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<td>2 159,80</td>
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<td>104879,06</td>
<td>60215,30</td>
<td>348,7</td>
<td>3 486,20</td>
<td>2 186,60</td>
</tr>
<tr>
<td>X_ссе</td>
<td>125773,17</td>
<td>62880,46</td>
<td>686,47</td>
<td>3486,90</td>
<td>2274,37</td>
</tr>
</tbody>
</table>

Next formula is used for the standardization of the indices:

\[ Z = \frac{X_i}{X_{ссе}}, \]

Of which:
- \( Z \) – standard index;
- \( X_i \) – value of \( X \)-index in \( i \)-period, \( X_{ссе} \) – average value.

Table 3

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1,09</td>
<td>0,89</td>
<td>1,49</td>
<td>1,08</td>
</tr>
<tr>
<td>2</td>
<td>1,07</td>
<td>1,15</td>
<td>1,00</td>
<td>0,92</td>
</tr>
<tr>
<td>3</td>
<td>0,83</td>
<td>0,96</td>
<td>0,51</td>
<td>1,00</td>
</tr>
</tbody>
</table>

The average meaning for every index is calculated by standardization the matrix indices:

- \( X_{1_{ссе}} = 125 773,17 \);
- \( X_{2_{ссе}} = 62 880,46 \);
- \( X_{3_{ссе}} = 686,47 \);
- \( X_{4_{ссе}} = 3 486,90 \);
- \( X_{5_{ссе}} = 2 274,37 \).

The next step is to differentiate the indices of matrix and to single out the motivators and deterrents. The basis for such differentiation is the peculiar influence of each index on the growth rate of the subject under the study. The factors with positive (stimulative) effects on enterprise formation and growth are known as motivators, the reasons that can hinder the development of enterprises are called deterrents. The determination of the motivators and deterrents is the foundation for the standard vector construction. The component of this vector has the coordinate \( X_{0i} \) and is formed on the basis of the indices by formula [7, p.114]:

\[ X_{0i} = \max x_{ij} \text{ if element } j \text{ is motivator; } \]

\[ X_{0i} = \min x_{ij} \text{ if element } j \text{ is deterrent; } \]

Next factors have positive effects on the cooperation of banks and insurance companies: volume of customer credits, volume of mortgage credits, credit insurance, asset insurance and life insurance. The increase of the mentioned factors signifies the improvement of the activity of the banks and insurance companies, increase in profits and growth of the customer base.

Thus, the variables of the matrix can be classified as motivators and the standard vector acquires...
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The following coordinates:
\[ P_0 = (1.9; 1.15; 1.49; 1.08; 1.09) \]

The next step of calculation of the optimal capital structure index is to detect the space between the separate observations (periods) and the standard vector. The space between the separate observation point and point \( P_0 \) is calculated according to formula 3:

\[ Cio = \sqrt{\sum_{j=1}^{m} (Zij - Zoj)^2}, \]  

Of which:
\( Z_j \) – standard value of index \( j \);
\( Z_{oj} \) - standard value of index \( j \) in model.

Let specify the space between the separate observations (periods) and the standard vector:
\[ \begin{align*}
C_{r1} &= \sqrt{(1.9 - 1.9)^2 + (1.15 - 0.89)^2 + (1.49 - 1.49)^2 + (1.08 - 1.08)^2 + (1.09 - 1.09)^2} = 0.26 \\
C_{r2} &= \sqrt{(1.9 - 1.07)^2 + (1.15 - 1.15)^2 + (1.49 - 1)^2 + (1.08 - 0.92)^2 + (1.09 - 0.95)^2} = 0.54 \\
C_{r3} &= \sqrt{(1.9 - 0.83)^2 + (1.15 - 0.96)^2 + (1.49 - 0.51)^2 + (1.08 - 1)^2 + (1.09 - 0.96)^2} = 1.04 \\
\end{align*} \]

Next we will calculate the average space between the observations according to formula:
\[ Co = \frac{1}{m} \sum_{j=1}^{m} Cio, \]

\[ \overline{C_o} = \frac{0.26 + 0.54 + 1.04}{3} = 0.61 \]  

(4)

We also should calculate the average deviation \( (S_o) \), maximum possible deviation from summary model \( (C_o) \) and the summary dynamic index of the growth level (di) according to formulae:

\[ S_o = \sqrt{\frac{1}{m} \sum (Cio - \overline{C_o})^2}; \]  

(5)

\[ Co = \overline{C_o} + 2S_o; \]  

(6)

\[ di = \frac{Cio}{Co}; \]  

(7)

\[ S_o = \sqrt{\frac{1}{3} (0.26 - 0.61)^2 + (0.54 - 0.61)^2 + (1.04 - 0.61)^2} = 0.38 \]

\[ C_o = 0.61 + 2 * 0.38 = 1.36 \]

\[ d_{2013} = 0.26/1.36 = 0.19 \]

\[ d_{2014} = 0.54/1.36 = 0.39 \]

\[ d_{2015} = 1.04/1.36 = 0.76 \]

Thus, the taxonomic coefficient is calculated on the basis of the taxonomic data:

\[ K_i = 1 - d_i, \]  

(8)

\[ K_{2013} = 1 - 0.19 = 0.81 \]

\[ K_{2014} = 1 - 0.39 = 0.61 \]

\[ K_{2015} = 1 - 0.76 = 0.24 \]

Calculated taxonomic index synthetically characterizes the shifts of the factors value of the investigated objects or actions. We can interpret this index as high valued if motivators are high value and
the index is low valued if motivators are low valued. The value of the taxonomic index of growth can range between 0 and 1 (0 ≤ K ≤ 1). It can be defined as a separate object (process) with higher value if the value index is closer to 1 at the current period. It helps to evaluate the reached average level of the factors value that characterizes the investigated phenomenon at the current period or subsequent periods.

The calculated indices show that the development of banking and insurance sectors and their cooperation in Ukraine decreases over the last few years with the least index in 2015. It is connected with the reduction of the credits, reduction of the credit insurances, though the bonuses from the assets and life insurances remain unchanged.

The factors affecting the bancassurance in Ukraine are worth studying. Conventionally these factors can be divided into external and internal. The external factors include the processes and phenomena which cannot be influenced by the institution and the internal factors can be controlled by it. The external factors that affect the bancassurance are: economic situation; financial markets; political climate; legislation; financial policy; world economic situation; force majeure.

We consider that the most important factors of influence in the cooperation of banks and insurance companies are political and legal factors as the admissible level of the cooperation between these financial institutions is set by the government while forming the cooperation mechanism. It is worth mentioning that there are no regulatory and legal documents that control the cooperation of banks and insurance companies.

There are no legal obstacles for cooperation of banks and insurance companies in Ukraine, cooperation can be registered in terms of agency relationships controlled by the government that reduces the economic competitiveness. Nowadays it is generally accepted when the bank wants to maximize own profits and presses the client to use the services of the peculiar insurer it has the agreement with and, consequently, gets the bonuses. Such bank actions violate customer rights as to the choice of the insurer and violate the competitiveness on the insurance market.

Besides the political and legal factors of influence on the cooperation of banks and insurance companies, the formation of the financial policy by the government is also of great importance.

The cooperation of banks and insurance companies in the conditions of minimal limitations has all premises for future growth and the level of integration between financial intermediaries is unlimited and is defined by them independently.

There are some economic, organizational, political and legal factors with negative impact on the development of bancassurance.

These economic factors are:
- limited financial opportunities of banks and insurers impact their possibility to create additional work places, to purchase new equipment and software, to provide bank and insurance services;
- high level of competitiveness. Largest and most powerful international companies that provide insurance, banking, investment and other financial services force less profitable financial intermediaries out of a market;
- insufficient level of marketing of a bank and insurer. The analysis of the insurance segment, marketing survey for searching the best potential partners depend on the bank’s marketing level.

The organizational factors of these companies are:
- insufficient flexibility in management and the ability to make the common decisions are the factors that have the direct influence on the effectiveness of the cooperation of banks and insurance companies, besides cooperation of both companies depends on the ability of top-management of both companies to create the right framework for the partnership;
- insufficient professional qualification of staff: the employees of the financial organizations should be professionally qualified as one employee has to consult on different financial services to a client.

Mentioned factors are appropriate for the modern stage of the development of the banking and insurance sectors and somehow limit the mechanism of the cooperation of banks and insurance com-
companies. We consider that the political and legal factors of influence on banks and insurers cooperation are worth attention. The detection of the acceptable point of cooperation between these financial intermediaries at the government level plays the important role in formation of the cooperation mechanism. The absence of the regulatory and legal documents that control the cooperation of banks and insurance companies should be taken into consideration.

With the help of correlative and regressive analyses the influence of factors on the cooperation of banks and insurance companies will be studied.

In Europe banks mainly provide the life insurances while in Ukraine the banks mostly offer asset and credit insurances. It is partly confirmed by the fact of interdependence between the insurance bonuses and the volume of the customer crediting.

The correlation coefficient helps to prove the interdependence between the factors mentioned above. The index of correlation coefficient ranges between «-1» to «+1». Negative value of the coefficient means the inversely proportional correlation between the indices and the sign «+» means directly proportional correlation.

The density of the interdependence between the indices is determined by the approximation of the index to one, so, the lowest index means the weakest interrelation [8, p.251].

The table 4 is taken as base for the analysis.

Table 4

<table>
<thead>
<tr>
<th>Bancassurance Indices in 2013 – 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Index</td>
</tr>
<tr>
<td>-------------------------------------</td>
</tr>
<tr>
<td>Bancassurance Synthetic Index</td>
</tr>
<tr>
<td>Volume of the Customer Credit</td>
</tr>
<tr>
<td>Credit Insurance (millions, €)</td>
</tr>
</tbody>
</table>

Thus, the correlation between the development of the bancassurance and the peculiar indices is defined in terms of the calculated synthetic index of bancassurance and the factors that influence it, in this case, they are the volume of the customer credit and credit insurance.

According to the data in table above the correlation coefficient was calculated for the customer credit volume 0.9580, credit insurance 0.9847 relatively to the synthetic index and the correlation between the given indices 0.8934.

The next step is the regressive analysis.

The regressive equation can be presented as:

$$Y_X = f (X_1, X_2, \ldots X_N)$$

Of which:

- $Y_X$ – dependent variable;
- $x$ – independent variable (factor).

In this case we continue to use the data from the table 4 to define the interrelation between the development of the bancassurance and the volumes of customer credits and credit insurances.

The scheme of the interrelation between bancassurance and the volumes of credit insurances is presented as linear equation:

$$y = 0.0008x - 0.0239,$$

that shows the direct dependence between the development of the bancassurance and credit insurances in-
Surveys. On the basis of the equation we conclude that over the last years the level of cooperation between banks and insurance companies reduces as well as the volumes of the credit insurances.

The scheme of the interrelation between bancassurance and the volumes of customer credits is presented as nonlinear equation:

\[ y = 3E - 22x^{4.1495}, \]

that shows the dependence between the bancassurance and customer credits. On the basis of the equation we conclude that the level of cooperation between banks and insurance companies reduces faster than the volumes of the customer credits.

**Conclusions.** Many scholars consider that modified and gradually implemented policy of the minimum liability limits can facilitate the national economic growth as the level of integration between the financial intermediaries in this situation is unlimited, defined individually and allows to finance the into branches where money will be used more effectively. With the help of regressive and correlative analyses the impact of credit volumes and insurance bonuses on the development of the bancassurance was defined. The correlation coefficient was calculated for the customer credit volume 0.9580, credit insurance 0.9847 relatively to the level of bancassurance development and the correlation between the given indices 0.8934. On the basis of the calculated indices we can state the high interdependence between them and this interdependence has linear character, for example, the enlarging of the customer credits volume increases the insurance bonuses from credit insurances and facilitates the cooperation between banks and insurers.

Nowadays the important issues the banks and insurance companies face are economic instability and how to ensure financial stability. It should be noted that Ukrainian legislation does not support the cooperation between banks and insurers. On the basis of the equation we conclude that over the last years the level of cooperation between banks and insurers reduces as well as the volumes of the credit insurances.

**References**