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A CHOICE OF THE MOST APPROPRIATE STRATEGY OF A BANKING GROUP CONSOLIDATION SCOPE CHANGE

The article presents one of ways of a choice of the most appropriate strategy for a banking group consolidation scope change on a basis of operations with an actual BG member. The aims of the article are: formation of a four-level hierarchy of a choice of the most appropriate strategy for a consolidation scope change; determination of a strategy that can be applied for a BG consolidation scope change in conditions of an arbitrary financial position of a BG and a BG member. To solve the mentioned tasks the author uses the analytic hierarchy process approach. Objects of the research are a banking group and a banking group member. Subjects of the research are a scope of consolidations and strategies of its change. In a process of formation of a hierarchy the author uses two groups of figures: a financial position of a banking group; indicators of a financial position of a banking group member. This research is one of ways to use results of a banking group consolidated financial report analysis in order to achieve strategic purposes of banking group management.

Key words: the analytic hierarchy process approach, a scope of consolidation, a banking group, a banking group member.

Амбарчян М.С.

ВИБІР НАЙОПТИМАЛЬНІШОЇ СТРАТЕГІЇ ЗМІНИ ПЕРИМЕТРУ КОНСОЛІАДЦІЇ БАНКІВСЬКОЇ ГРУПИ

В даній статті розглядається один із способів вибору найоптимальнішої стратегії зміни периметру консолідації банківської групи на основі операцій із існуючим учасником банківської групи. В статті сформульовано та вирішено такі завдання: сформовано чотирирівневу модель вибору найоптимальнішої стратегії зміни периметру консолідації; визначено стратегію, застосування якої є найоптимальнішим за будь-якого фінансового стану банківської групи та учасника банківської групи. Для вирішення поставлених завдань автором застосовано метод аналізу ієрархій. Об'єктами даного дослідження є банківська група та учасник банківської групи. Предметом дослідження є периметр консолідації банківської групи та стратегії його зміни. В процесі побудови ієрархії автором використані дві групи показників: фінансовий стан банківської групи; індикатори фінансового стану учасника банківської групи. Здійснене автором дослідження є одним із способів застосування результатів аналізу консолідованої фінансової звітності банківської групи з метою вирішення завдань стратегічного управління банківською групою.

Ключові слова: метод аналізу ієрархій, периметр консолідації, банківська група, учасник банківської групи.

Амбарчян М.С.

ВЫБОР НАИБОЛЕЕ ОПТИМАЛЬНОЙ СТРАТЕГИИ ИЗМЕНЕНИЯ ПЕРИМЕТРА КОНСОЛИДАЦИИ БАНКОВСКОЙ ГРУППЫ

В данной статье рассматривается один из способов, который позволяет выбрать самую оптимальную стратегию изменения периметра консолидации банковской группы на основе операций с существующим участником банковской группы. В статье сформулированы и решены такие задания: сформирована четырехуровневая модель выбора наиболее оптимальной стратегии изменения периметра консолидации; определена стратегия, использование которой является наиболее оптимальным при любом финансовом состоянии банковской группы и участника банковской группы. Для решения поставленных заданий автором использован метод анализа иерархий. Объектом данного исследования является банковская группа и участник банковской группы. Предметом исследования является периметр консолидации банковской группы и стратегии его изменения. В процессе построения иерархии автором использованы две группы показателей: финансовое состояние банковской группы; индикаторы

финансового состояния участника банковской группы. Проведенное автором исследование является одним из способов использования результатов анализа консолидарованной финансовой отчетности банковской группы с целью решения заданий стратегического управления банковской группой.

Ключевые слова: метод анализа иерархий, периметр консолидации, банковская группа, участник банковской группы.

General formulation of a problem and its connection with important scientific and practical tasks. An aim of banking group (BG) management is to achieve the highest possible efficiency level in conditions of rational usage of BG resources. Since a BG structure and a character of ownership and control relations inside a BG are described in a scope of consolidation, one of the goals of management is to achieve the most rational model of a scope of consolidation. A choice of the most appropriate strategy of a consolidation scope change is one of approaches to solving this goal.

An analysis of last researches that have started a problem solving. The problem of theoretical substantiation and practical application of the analytic hierarchy process approach has been researched by a considerable amount of scientists, among which are T. Saaty, J. A. Alonso, M. T. Lamata, J. David, D. Saaty, A. M. Bahurmoz, P. Cabala, O.S. Kravchenko [1-5] etc. Such scientists as J.A. Alonso, M.T. Lamata, J. David, D. Saaty research methodological problems of the approach and offer new methods of calculation of pairwise comparision points. Other scientists as A.M. Bahurmoz, P. Cabala, O.S. Kravchenko use the approach to evaluate decision alternatives in attempt to choose the best business project. Although the problem of practical implementation of the method is thoroughly researched, there is a need to consider how to use the approach in order to choice an appropriate instrument of management for group of companies, taking into account their financial positions.

Aims of the article. The aims of the article are: to build the hierarchy model of a choice of the most appropriate strategy for a consolidation scope change on a basis of operations with an actual BG member; to determine, which of strategies is the most appropriate to implement in conditions of an arbitrary financial position of a BG and a BG member.

Main research material presentation and full grounding of received scientific researches. Alternative strategies of a consolidation scope change on a basis of operations with an actual BG member are considered in the article. The author uses the analytic hierarchy process approach to determine a strategy, implementation of which is the most expedient in any financial position of a BG and a BG member. The methodic of application of the analytic hierarchy process approach includes a few steps.

The first step is to choose elements, between which there is hierarchic subordination and to determine a number of hierarchy levels. The first level of the hierarchy is a list of alternative decisions, one of which will be chosen in a result of method application. To form this list the author considered actual strategies of a change of a BG consolidation scope [6, 7] and chose strategies used to make operations with actual BG member. Since a choice of a strategy depends on an actual financial position of a BG and a BG member, figures of financial position of a BG and a BG member are chosen to be elements of the second and the third level (Table 1). The last level of any hierarchy in a process of this approach application is the decision making level.

Table 1

Elements of a hierarchy model used to choose the most appropriate strategy

| A BG financial position	An indicator of a BG member financial position	A strategy
A. There isn't a decline of BG	1. An ownership share > an essential level.	I. Merger of assets, liabilities and equity of a particular BG member

| efficiency.
B. There is a short-term decline of BG efficiency.
C. There is a long-term decline of BG efficiency. | 2. An ownership share < an essential level.
3. A control share > an essential level.
4. A control rights share < an essential level.
5. A BG member activity is efficient.
6. A BG member activity is inefficient.
7. A BG activity is more efficient than a BG member activity.
8. A BG activity is less efficient than a BG member activity. | with assets, liabilities and equity of another one.
II. Exclusion of a BG member from a scope of consolidation (removal from a consolidation scope, dissolution).
III. An increase of a control share.
IV. A decrease of a control share.
V. An increase of an ownership share.
VI. A decrease of an ownership share. |

The hierarchy model of a choice of the most appropriate strategy for a consolidation scope change on a basis of operations with an actual BG member consists of such elements:

1) elements I-VI (the first level) – alternative strategies of a consolidation scope change;

2) elements 1-8 (the second level) – indicators of a BG member financial position;

3) elements A-C (the third level) – an actual financial position of a BG;

4) the forth level – making a decision on a strategy of a consolidation scope change (Figure 1).

There are all possible relationships between the elements of the forth and the third levels, the third and the second levels. There are not all possible relationships between the elements of the second and the first levels. Consequently, the hierarchy presented in Figure 1 is an incomplete hierarchy [8].
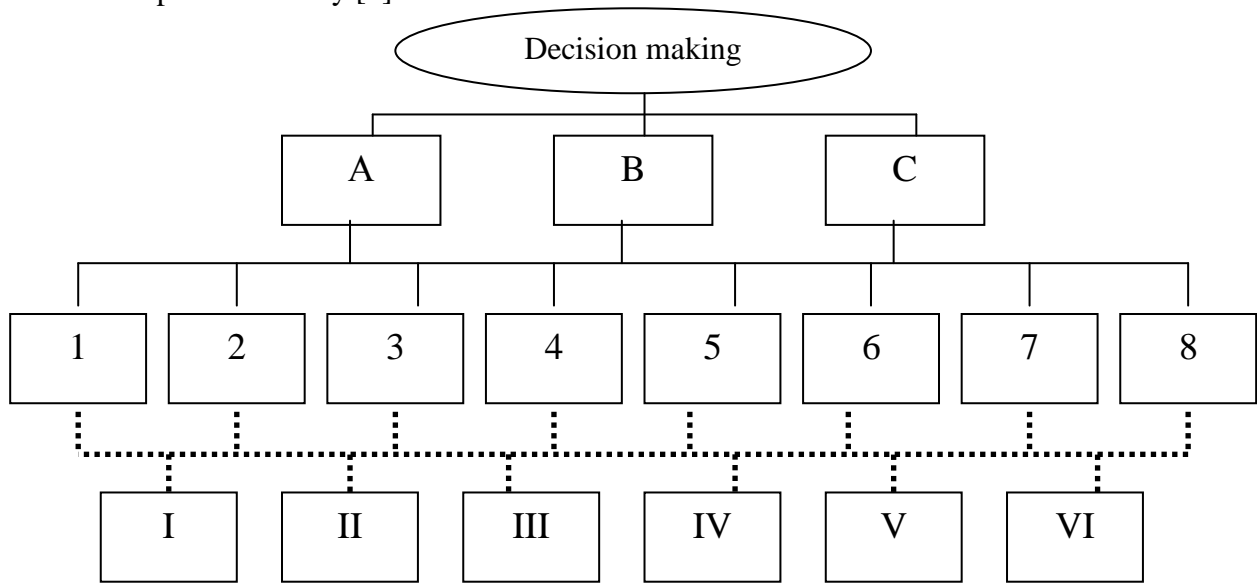
――――――――― – there are all possible relationships between the elements;
•••••••••••••••• – there are not all possible relationships between the elements.

Figure 1. The four-level hierarchy of a choice of the most appropriate strategy for a consolidation scope change

Since there are all possible relationships between elements of the forth and the third levels, the third and the second levels, the elements of these levels form a complete three-level hierarchy. Since there are not all possible relationships between the elements of the second and the first levels, the author determines complete two-level hierarchies for the elements of the second and the first levels (Table 2).

Table 2

A list of complete two-level hierarchies for the elements of the second and the first levels

A second level element	First level elements
1	I, VI
2	I, V
3	I, IV, VI
4	I, II, III, V
5	I, IV, V
6	I, II, III, IV, VI
7	II, III, IV, VI
8	IV, V

In the second step the author calculates a normalized weight of each element of the first level, taking into account influences of those elements of the second and the third levels, which form a complete hierarchy with the researched element of the first level. Firstly, the author forms pairwise comparison matrixes of the elements of the first level that submit to the same element of the second level, taking into account influences of the elements of the third level. Estimation of a pair of strategies is made using the scale of T. Saaty [3]. The author calculates normalized weights of the strategies I-VI for the indicators 1-8 in conditions of the financial positions A-C on a basis of the mentioned matrixes (Table 3, Table 4, Table 5).

Table 3

The normalized weights of the strategies I-VI for the indicators 1-8 in conditions of the financial position A

No. of a strategy	No. of an indicator							
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
I	0,13	0,10	0,36	0,04	0,07	0,14	-	-
II	-	-	-	0,10	-	0,03	0,03	-
III	-	-	-	0,58	-	0,33	0,43	-
IV	-	-	0,04	-	0,19	0,10	0,35	0,10
V	-	0,90	-	0,29	0,74	-	-	0,90
VI	0,88	-	0,60	-	-	0,40	0,18	-

Consequently, in case of existence of a BG in the financial position A, a manager prefers: the strategy VI, if a financial position of a BG member is characterized by the indicator 1; the strategy V, if a financial position of a BG member is characterized by the indicator 2; the strategy VI, if a financial position of a BG member is characterized by the indicator 3; the strategy III, if a financial position of a BG member is characterized by the indicator 4; the strategy V, if a financial position of a BG member is characterized by the indicator 5; the strategy VI, if a financial position of a BG member is characterized by the indicator 6; the strategy III, if a financial position of a BG member is characterized by the indicator 7; the strategy V, if a financial position of a BG member is characterized by the indicator 8.

Table 4

The normalized weights of the strategies I-VI for the indicators 1-8 in conditions of the financial position B

No. of a strategy	No. of an indicator							
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
I	0,13	0,10	0,36	0,04	0,05	0,14	-	-

II	-	-	-	0,10	-	0,03	0,04	-
III	-	-	-	0,58	-	0,28	0,38	-
IV	-	-	0,04	-	0,29	0,21	0,39	0,11
V	-	0,90	-	0,29	0,65	-	-	0,89
VI	0,88	-	0,60	-	-	0,34	0,19	-

Consequently, in case of existence of a BG in the financial position B, a manager prefers: the strategy VI, if a financial position of a BG member is characterized by the indicator 1; the strategy V, if a financial position of a BG member is characterized by the indicator 2; the strategy VI, if a financial position of a BG member is characterized by the indicator 3; the strategy III, if a financial position of a BG member is characterized by the indicator 4; the strategy V, if a financial position of a BG member is characterized by the indicator 5; the strategy VI, if a financial position of a BG member is characterized by the indicator 6; the strategy IV, if a financial position of a BG member is characterized by the indicator 7; the strategy V, if a financial position of a BG member is characterized by the indicator 8.

Table 5

The normalized weights of the strategies I-VI for the indicators 1-8 in conditions of the financial position C

No. of a strategy	No. of an indicator							
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
I	0,13	0,10	0,36	0,04	0,05	0,21	-	-
II	-	-	-	0,10	-	0,42	0,59	-
III	-	-	-	0,58	-	0,02	0,10	-
IV	-	-	0,04	-	0,38	0,10	0,04	0,10
V	-	0,90	-	0,29	0,57	-	-	0,90
VI	0,88	-	0,60	-	-	0,25	0,27	-

Consequently, in case of existence of a BG in the financial position C, a manager prefers: the strategy VI, if a financial position of a BG member is characterized by the indicator 1; the strategy V, if a financial position of a BG member is characterized by the indicator 2; the strategy VI, if a financial position of a BG member is characterized by the indicator 3; the strategy III, if a financial position of a BG member is characterized by the indicator 4; the strategy V, if a financial position of a BG member is characterized by the indicator 5; the strategy II, if a financial position of a BG member is characterized by the indicator 6; the strategy II, if a financial position of a BG member is characterized by the indicator 7; the strategy V, if a financial position of a BG member is characterized by the indicator 8.

In the third step the author calculates a normalized weight of each element of the second level, taking into account influences of elements of the third level. Firstly, the author forms pairwise comparison matrixes of the elements of the second level, taking into account influences of the elements of the third level [4]. The author calculates normalized weights of the indicators 1-8 in conditions of the financial positions A-C on a basis of the mentioned matrixes (Table 6).

Table 6

The normalized weights of the indicators 1-8 in conditions of the financial positions A-C

No. of a financial position	No. of an indicator							
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
A	0,01	0,04	0,08	0,12	0,27	0,17	0,16	0,16

B	0,01	0,03	0,08	0,11	0,28	0,18	0,16	0,15
C	0,01	0,03	0,07	0,11	0,27	0,17	0,14	0,19

Consequently, the indicator 5 is the weightiest in the all three financial positions of a BG. The indicator 6 takes second place in conditions of the financial position A, the indicator 6 takes second place in conditions of the financial position B, the indicator 8 takes second place in conditions of the financial position C.

In the forth step the author calculates an integrated weight of each element of the first level for each element of the third level [3] (Table 7). The integrated weights of the strategies I-VI in conditions of the financial position A are calculated on a basis of Table 3 and Table 6, the integrated weights of the strategies I-VI in conditions of the financial position B are calculated on a basis of Table 4 and Table 6, the integrated weights of the strategies I-VI in conditions of the financial position C are calculated on a basis of Table 5 and Table 6.

Table 7

The integrated weights of the strategies I-VI in conditions of the financial positions A-C

No. of a strategy	No. of a financial position		
	A	**B**	**C**
I	0,080	0,076	0,084
II	0,021	0,023	0,166
III	0,194	0,176	0,081
IV	0,143	0,201	0,147
V	0,407	0,378	0,387
VI	0,155	0,147	0,135

Consequently, the strategy V is the weightiest in the all three financial positions of a BG. The strategy III takes second place in conditions of the financial position A, the strategy IV takes second place in conditions of the financial position B, the strategy II takes second place in conditions of the financial position C.

In the fifth step the author calculates a normalized weight of each element of the third level. Firstly, the author forms pairwise comparison matrix of the elements of the third level. The normalized weights of the financial positions A-C are calculated on a basis of the mentioned matrix (Table 8).

Table 8

The normalized weights of the financial positions A-C

No. of a financial position		
A	**B**	**C**
0,63	0,33	0,04

Consequently, the most appropriate is the financial position A. The financial position B takes second place, the financial position C takes third place.

In the sixth step the author calculates final integrated weights of the elements of the first level, according to which a manager makes a decision [4] (Table 9). The final integrated weights of the strategies of a consolidation scope change are calculated on a basis of Table 7 and Table 8.

Table 9

The final integrated weights of the strategies of a consolidation scope change

No. of a strategy	An index
I	0,079
II	0,028
III	0,183

IV	0,163
V	0,397
VI	0,151

In a result, the strategy V is the weightiest among other strategies. Taking this into consideration, the most appropriate strategy of a BG consolidation scope change, in conditions of an arbitrary financial position of a BG and a BG member, is an increase of an ownership share of a parent bank in equity of a BG member. A decision to increase a control share is the second weightiest, a decision to decrease a control share is the third weightiest, a decision to decrease an ownership share is the forth weightiest, a decision to merge assets, liabilities and equity of a particular BG member with assets, liabilities and equity of another one is the fifth weightiest, a decision to exclude a BG member from a scope of consolidation is the least weighty.

Conclusions. The author proposes to use the analytic hierarchy process approach to choose the most appropriate strategy for a change of a banking group consolidation scope. The author formed the four-level hierarchy of a choice of the most appropriate strategy for a consolidation scope change on a basis of operations with an actual BG member. It was determined that the most appropriate strategy, in conditions of an arbitrary financial position of a BG and a BG member, is to increase an ownership share of a parent bank in equity of a BG member.

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