PLANNING TECHNIQUE FOR COMPLEX ECONOMIC OBJECT’S SYNERGY AT MERGERS AND ACQUISITIONS

Levitskiy, Stanislav
Institute of Economic Cybernetics, Donetsk National University, Donetsk, Ukraine
s.levytskyi@donnu.edu.ua

Frunze, Igor
Institute of Economic Cybernetics, Donetsk National University, Donetsk, Ukraine
kafedraec@gmail.com

Abstract
The paper reviews integration problems for complex economic objects aiming to achieve a synergy effect from complementary actions of their assets, which total value exceeds isolated functioning results. In the present times in Ukraine problems concerning assessment of synergy effect at M&A of companies are the new among examining objects and that is why need further development. It is shown that application of system approach to investigation the efficiency integration of economic objects at mergers and acquisitions with regards of process design peculiarities of managerial decisions allows maximum accurate analyzing the results of interaction of economic units within unified integrated structure. So, one of the main reasons to make a bargain on M&A is intention to obtain positive synergy effect because basing on management theory its appearance promotes competitiveness and efficiency increase of the company. According to carried out analysis of existing approaches to assessment of expected synergy effect mostly models offer to calculate one-off synergy effect. It is worth noting that different kinds of synergies can appear not just after combining, but with time, that requires further investigations. It has been proposed a planning mechanism developed on the base of conceptual description the function results for integrated formation, which is the key technique tool for mergers and acquisitions.

Keywords: Planning Technique, Mergers & Acquisitions, Integration, Complex Economic Object

INTRODUCTION
In the present times in Ukraine problems concerning assessment of synergy effect at M&A of companies are the new among examining objects and that is why need further development. According to carried out analysis of existing approaches to assessment of expected synergy
effect mostly models offer to calculate one-off synergy effect. It is worth noting that different kinds of synergies can appear not just after combining, but with time, that requires further investigations. As synergy planning at mergers and acquisitions (M&A) is happening within M&A process then we shall study main stages of M&A technique for selected corporate strategy of a company.

At the first stage they determine the aims which are planned to be attained within the business. One of the main purposes of M&A are benefits growing of shareholders, having competitive advantages at the market, increasing the company’s value. Herewith, one should note that such aims can be attained through both exterior methods like M&A activities and interior methods: introduction of new techniques, increasing labour and management efficiency (Ivashkovskaya, 2004).

At the second stage M&A mechanism is developed and the analysis is made for possible options for attaining the goals set at the previous stage. As there are high risks in M&A business then firstly they make analysis of alternative options for achieving the set goals. For example, they can consider offerings to change marketing policy, construct new capacities, internal efficiency increase, restructuration etc.

At the third stage they do selection of the object which will be in business, i.e. they search a company for purchasing. Within the set task at this stage you should analyze a situation and define as full as possible for a company to fulfill its purposes and opportunities at M&A (Harding & Roweet, 2007).

METHODOLOGY

As shown at (Levitskiy, Frunze & Mikhaylik, 2014) implementation results for model of integration are:
- indexes of financial, economic and market efficiency of each type of economic objects integration;
- assessment of synergy effect at each type of economic objects integration.

So, methodology of analysis and interpretation the results of efficiency assessment of economic objects integration allow ranging the methods to create an integrated structure towards decreasing their reasonability. At the stage of implementing of managerial decision they perform the final version of economic objects integration and pushing the decision towards its performance.

Also, (Levitskiy, Frunze & Mikhaylik, 2014) shows that description of planning technique for M&A of economic objects integration one can outline two main components:
- a static component, which contains structural analysis of simulated process aiming to distinguish necessary and sufficient elements for studying of problematic situation;
- a dynamic component, which contains a model of M&A of economic objects integration, which allows to trace changeability dynamics for process characteristics in order to substantiate and accept a decision on performing integration in concert with the chosen integrated method.

So, accepting system approach to investigating of M&A for integration efficiency of economic objects considering the specific developing process features for managerial decisions allow as accurate as possible to analyze the interrelation results for economic units within unified integrated structure.

RESULTS
The preparatory stage of the business includes some steps, which are presented on the fig. 1.

Fig. 1. Steps for preparatory stage of the business

<table>
<thead>
<tr>
<th>STAGES</th>
<th>TASKS</th>
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<tbody>
<tr>
<td>Analysis of a branch</td>
<td>Selection of the branch for acquisition</td>
</tr>
<tr>
<td></td>
<td>Progress dynamic and branch structure design</td>
</tr>
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<td></td>
<td>Determination and forecasting of force distribution</td>
</tr>
<tr>
<td></td>
<td>Determination and forecasting of macroeconomic factors’ impact</td>
</tr>
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<td></td>
<td>Studying the opportunities for technological, legislative and competitive changes, demand fluctuations</td>
</tr>
<tr>
<td>Self-assessment</td>
<td>Analysis of company’s own situation</td>
</tr>
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<td></td>
<td>determining skills</td>
</tr>
<tr>
<td></td>
<td>Assessing opportunities for creating synergy effects</td>
</tr>
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<td></td>
<td>Setting up the criteria for selecting the applicants for acquisition</td>
</tr>
<tr>
<td>Analysis of competitors</td>
<td>Risk analysis</td>
</tr>
<tr>
<td></td>
<td>Behavior design for competitors</td>
</tr>
<tr>
<td></td>
<td>Determination and forecasting competitors’ prospects</td>
</tr>
<tr>
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<td>Determination and forecasting the competitors’ negative impact</td>
</tr>
</tbody>
</table>
After finishing the preparatory stage where they provide interior and exterior environment analysis for expected company, a process begins on searching an applicant company that is the most problematic for the stage. By the beginning of the stage they have already had the certain criteria for selecting applicants for acquisition. Usually the primary criteria are the following (Grechukhin, 2005):

- branch;
- goods or services;
- sales volumes;
- incomes;
- geographical position;
- private of public companies.

The next step after criteria selection is done is searching of real acquisition targets that can be done by two methods shown at fig 2.(Evans F. Ch., Bishop D. M., 2004).

**Fig.2. Searching methods of real acquisition targets**

<table>
<thead>
<tr>
<th>METHODS</th>
<th>CHARACTERISTICS</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Using the intermediaries for trading the companies</td>
<td>Trade brokers and investment bank agencies represent the interests and customers, and the companies for being sold. Giving to such agencies the purchaser’s criteria inform them about customer’s being in search putting the signs in reference with his demands</td>
<td>A customer should realise that using of intermediaries can result in offering a number of unsuitable applicants.</td>
</tr>
<tr>
<td>Using the contacts in a branch</td>
<td>Targets can be found due to personal contacts within desired branch</td>
<td>This method is more efficient when desired companies are in the same branch as a customer, because it increases a number of companies and trade groups, with whom a customer has got good ties.</td>
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</tbody>
</table>
At the fourth stage of M&A mechanism they appraise the applicant company (Copland T., Koler T. & Murrin J., 2005).

**Fig 3. Assessment steps for applicant company**

<table>
<thead>
<tr>
<th>STAGES</th>
<th>CHARACTERISTICS</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applicants’ assessment for merges or acquisition</td>
<td>Matching their own expectations from merging and applicants’ parameters - operational characteristics, structure of property, financial indicators.</td>
<td>Allows to determine the most attractive candidates for merging.</td>
</tr>
<tr>
<td>Determining the opportunities for creating synergies</td>
<td>Analysis of production, research and other capacities in applicant company’s ownership</td>
<td>Bargain success depends greatly on assessment the ability to create a price as a result of strengthening market positions, integration of trade, production and other capacities, shortening the staff, transfer of technology etc.</td>
</tr>
<tr>
<td>Determining the opportunities for creating a price due to restructuration of a company</td>
<td>Comparing the target company with top companies in a branch</td>
<td>M&amp;A often means changes as in having been acquired and being acquired companies, They can be used with a profit for making transformations</td>
</tr>
<tr>
<td>Financial assessment of an applicant</td>
<td>Carrying out an cost assessment of target company using internal (discount financial flows in reference with synergy effects) and external indicators (market assessments, similar bargain cases etc)</td>
<td>The first agreement is achieved in the bargain’s cost, its structure and it is started an integration process (talks with antimonopoly authorities, inside preparations to integration process, assessment of a size and sources of synergies)</td>
</tr>
<tr>
<td>Final check of company’s trustworthiness</td>
<td>Basing on the information checked they specify company’s acquisition price</td>
<td>Agreements in the intention memorandum can be changed</td>
</tr>
</tbody>
</table>
At the fifth stage of M&A there is accepting of the solution and making up an integration plan.

At the sixth stage they provide implementation of set tasks on M&A considering the changes. One should note that this stage has got algorithms which influence this or that type of M&A. Companies’ integration has been one of the difficult tasks of management. Due to a number of difficulties and niceties in the process the companies often make some mistakes. In spite of rather big background in M&A activities there is no unique algorithm now that is clear because of great peculiarity of the companies to be incorporated (Ivashkovskaya, 2004).

Successful integration generally rather depends on ability to implement unique chances mergered during M&A process not only ideally planned work and duties distributed exactly (Harding & Roweet, 2007).

Herewith the world experience shows that often as M&A results a company not only fixes its market position but sometimes loses the previous ones. Such incorporation creates indefinite situation when a company could lost its clients and fellow workers that will cause unregulated expenses and a result to reducing a cost.

At the seventh M&A stage they make assessment of a business results and formulate their conclusions on the actual performance of set goals. It is worth noting that when defining the reasonability of a business on M&A we calculate a synergy effect.

A synergy effect from M&A of companies is added value from agreed actions and corporate business that occurs as a result of efficient using of production factors.

Synergy allows receive and improve competitive privileges of the combined system, which could not be received by business units themselves if separated and they are a total sum of all profits when integrated system is created (Levitskiy, S.I., 2012).

At figure 4 there are main forms of synergy effect (Copland T.KolerT. & Murrin J., 2005).
Fig 4. Forms of synergy effect

Forms of exhibiting a synergy effect

- **Promoting expenses reducing**
  - Savings on flexibility: New trade channels, access to set ties, acquiring a massif of loyal customers, increasing a density of customers’ coverage.

- **Promoting an income growth**
  - Growth of market capacity of a company, acceleration of its progress along strategic trajectory.

- **Combined impact**
  - Centralization of marketing
  - Increasing a company’s political impact in a region/country
  - Functional synergy, i.e. target company is more efficient in the functioning areas, where purchasing company shows its weakness.

**Financial savings**
- Reducing capital expenses due to receiving higher credit rating
- Eliminating tax payments
- Liquidation of doubling functions and creating unified centralized

**Operational savings**
- Savings on a scale as a result of expenses reduce for a product’s unit by reducing a share of fixed costs in a per unit cost price of a product.
- Increasing the working efficiency with suppliers: reducing a purchase prices by increasing the purchasing volume, Using additional discounts.

**Promoting an income growth**
- Resource combining, expanding a range of production
- Creating market niche and new products
- Appearing an ability to overcome trade barriers
- Accumulation of critical mass for participating in the projects on a state scale

One should note that the value of total synergy effect from companies’ M&A is influenced by its forms at certain cases of making a deal, and you need to find out and consider all benefits from resource integration which a company can manage with (Frunze, I. A., Levitskiy, S.I. & Illyasova, I. G., 2012).

The most accurate determining all forms of synergy effect considering features of each deal is provided by accurate classification of the reasons arisen at M&A as well as analysis of the most frequently occurred synergy effect forms for separate economic sectors. Assessment
model for synergy efficiency value is one of the selection tools for perspective business. While choosing process among some kinds of companies for M&A activity the priority should be given to the one whose integration will provide the greatest synergy effect (Levitskiy, Frunze & Mikhaylik, 2014).

If company-the goal is the only option for making a deal then decision on acquisition or merger with this company will depend on an opportunity to achieve positive synergy effect. At sufficient respond a decision on prospects and rationality of the deal made is accepted. In reverse case considering all bargain characteristics and on the assessment results of possible exhibits of synergy along with their comparing with possible losses incurred for providing a bargain a company receives negative value of synergy effect as a result, and in this case company-buyer has to deny such a bargain if even the possible certain positive effects can be obtained. In this situation synergy effect is turned out to be negative and, on contrary, will result in reducing the combined cost of both companies (Levitskiy, S.I.; Frunze I.A. & Zaitseva N.M., 2010). At figure 5 there is classification of parameters, which determine a value of synergy effect.

Fig5. Classification of parameters, which determine a value of synergy effect
At figure 6 there is presented an analysis of existing approaches to determining a synergy effect (Frunze, I. A., Levitskiy, S.I. & Ilyasova, I. G., 2012).

Fig 6. Comparing characteristics of approaches to determining a synergy effect

<table>
<thead>
<tr>
<th>Income approach</th>
<th>Market approach</th>
<th>Outlay approach</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Advantages</strong></td>
<td><strong>Drawbacks</strong></td>
<td><strong>Advantages</strong></td>
</tr>
<tr>
<td>High accuracy of calculations, as synergy effect value is connected with changing the risk factors puxka of a company’s activity</td>
<td>Complexity of substantiation the level of discount rate</td>
<td>Approach allows to develop correcting ways for wrong decisions accepted during formation of property complex of an enterprise</td>
</tr>
<tr>
<td>Assessment methods have clear quantitative expression</td>
<td>Labour content and complexity of calculations</td>
<td>Approach has limited application, as it is not a business which is often bought, but a set of assets without non-material assets built-in business in a whole</td>
</tr>
<tr>
<td>Assessment is agreed with a main purpose of company’s activity</td>
<td>Additional investments are not considered for restructuring and outlays occurred during acquisition</td>
<td>Simple calculations</td>
</tr>
<tr>
<td>Approach considers that synergy effects are necessary to provide appeared benefits flow</td>
<td>Complexity of making accurate forecast of incomes and expenses of a company after the bargain is made</td>
<td>Approach allows consider only one of the forms of synergy effect appearance</td>
</tr>
<tr>
<td>Approach allows to evaluate and consider all synergy effects occurred in this bargain</td>
<td>Approach is based upon the principle of expectation</td>
<td></td>
</tr>
<tr>
<td>Growth of share yield of a company visually shows how the wealth of shareholders have increased</td>
<td>Difficulty of selecting an analogue-company</td>
<td></td>
</tr>
<tr>
<td>Market approach</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Allows to consider exchange market behavior after advertising about M&amp;A of companies</td>
<td>Assessment methods are not formalized</td>
<td></td>
</tr>
<tr>
<td>Outlay approach</td>
<td></td>
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</tr>
<tr>
<td>Approach allows to develop correcting ways for wrong decisions accepted during formation of property complex of an enterprise</td>
<td>Approach does not allow to find out and estimate all possible sources of synergy</td>
<td></td>
</tr>
<tr>
<td>Simple calculations</td>
<td>Approach is applicable only to public companies, whose assets actively are marketed at stock exchanges</td>
<td></td>
</tr>
<tr>
<td>Approach is based upon the principle of expectation</td>
<td>Assessments on the base of this approach are only indicators of short-time perspectives and effects from mergers of companies</td>
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</tbody>
</table>
Most precisely a value of synergy effect is possible to determine by calculating an index of «Net Present Value of Synergy» (NPVS). Calculation formula is as follows (Ishchenko & Badokina, 2010):

$$NPVS = \sum_{i=1}^{n} \frac{\Delta FCE_i}{(1+r_c)^i} - P - E,$$

where $\Delta FCE = \Delta S - \Delta C - \Delta T - \Delta NWC - \Delta Capex \pm \Delta L + \Delta Debt - \Delta L$,

where, NPVS – net present value of synergy;
\(\Delta FCE\) – money flows for shareholders;
\(\Delta S\) – revenue growth savings;
\(\Delta C\) – expenses savings;
\(\Delta T\) – income tax savings;
\(\Delta NWC\) – net working capital savings;
\(\Delta Capex\) – investment savings;
\(\pm \Delta L\) – revenue growth (+) / savings on revenue growth (−) owing to companies’ combining;
\(\Delta Debt\) – changing the net debt in reference with financial synergy;
\(\Delta I\) – extra investment for restructuring;
\(r_c\) – profitability of stock capital;
P – award being paid at acquisition by a company-buyer to shareholders of target company;
E – buyer’s expenses at M&A process.

DISCUSSION

Development of the enterprises on the basis of merges and acquisitions is getting more important and demanded comparing to natural increase due to their own resources. Number and volumes of operations increase fast both in industrial and developing countries. In the conditions of financial crisis the mergers of companies being considered as reasonable have failed because of the faults made during this process, and also because of quick changes in exterior market conjuncture. Classifying and analyzing world experience one can note emphasize the main reasons for merges and acquisitions of companies: achieving the synergy effect; saving, caused by volumes; monopolism; management quality progress; taxes; difference in market cost of a company and its replacement cost; difference between residual value and current market cost; diversification of production.

Therefore, the main reason of reorganizing the company in the form of merges and acquisitions is their desire to increase financial stability using complementarity of assets operation. In forecast a total result from merge must exceed the resulted sum of individual acts of each participant of the action. As competitive privileges and price increase of combined company mostly depends on quality of a bargain and existence of clear strategy for integration on the base of mechanism for synergy effect assessment on M&A they have offered an algorithm of selecting the perspective bargains, which is given on figure 7.
Fig7. Algorithm of selecting the perspective bargains on M&A on the base of synergy effect assessment

1. Strategy and aim of a company
2. SWOT-Analysis of a company
3. Making up a list of branches, included in the area of strategic planning of a company
4. Making up a list of possible target companies
5. Assessment of target company’s ability to create synergy privileges
   - Yes → Dismiss from a list of possible targets
   - No → Making up an acquisition team
7. Defining the criteria of target company-aims: market position, competitors, customers, products
   - Corresponds → Choosing a new target
   - Not correspond → Choosing a new target
8. Assessment of allowable risk level and availability of a customer quickly answer the changes of working conditions
   - Permissible → Choosing the process of purchasing
   - Impermissible → Choosing a new target
9. Choosing the process of purchasing
   - Aggressive
   - Conservative
10. Choosing the staff for taking part in negotiations; Deciding on information to be inquired at target company
11. A company is offered for sale
12. Proposition on sale is absent
13. Assessment of a just market price of a target company as independent
14. Assessment of a just market price of a company-buyer as independent
15. Assessment of a target company considering the sources of synergy
16. Synergy impact forecast on changing the money flows of combined company
17. Defining the investment value of a combined company
18. Defining the value of net present value of synergy effect
19. Calculating the outlays value and maximum award which a customer can afford to pay himself for shares of target company
   - To continue negotiations
   - Refuse from bargain
   - Negative → Bargain will result in reducing a cost of combined company
   - Zero → Bargain will not influence the buyer’s cost
   - Positive → Bargain will make additional cost for buyer
20. Making a bargain on M&A of a company
Hereby, one of the main reasons to make a bargain on M&A is intention to obtain positive synergy effect because basing on management theory its appearance promotes competitiveness and efficiency increase of the company.

REFERENCES


