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# **EVALUATION OF COMPANIES INVOLVED IN MERGER OPERATIONS**

– Summary of doctoral thesis –

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## Introduction

Mergers and acquisitions have become a topic particularly known and long debated in the financial world of the XXI-st century. Although a few decades ago the news on a merger were very rare and often difficult to understand or accept, nowadays we hear more frequently about new transactions of this type committed or even successfully completed both nationally and especially internationally. Nowadays, the rhythm of their implementation and the extent of the size of the companies involved are remarkable and often surprising.

From the continuing need to adapt to the market and the desire to identify the most appropriate solutions for doing business risen the merger operations, they gradually becoming increasingly popular. However, any adjustment requires always further efforts, and of course, previously unplanned costs, all of which may influence ultimately the success of these reorganization operations.

In the context of the intensification of mergers and acquisitions activity, the actuality and the intense manifestation of concerns from researchers in the field for evaluating companies involved in merger operations have become a reason to debate this issue during the present thesis.

In the national specialty literature, we noticed a rather low approach of this subject, being identified as a small number of recent works addressing the valuation in the context of mergers. The few works which treat the aspects of the evaluation process focuses on determining the value of a company in general, the methods used in mergers being considered only adjacent.

The core idea of a merger is the concept of increasing the value, leaving from the premise that " $1 + 1 = 3$ ". In other words, it is considered that the added value of a company resulting from the merger is superior to the sum of individual values offered by the participating companies if they had not merged.

Establishing a value that reflects the true situation of the companies participating in such transactions is vital because, on that basis, it is determined the exchange ratio and, by default, the number of shares which has to be issued when merging to the title owners from the company which will cease its activities.

From this perspective, we consider that the issue raised in the thesis – *Evaluation of companies involved in merger operations*, could be of real interest to specialists in the field - evaluators, but also to accountants, financiers, analysts, managers, etc., providing extra information to this relatively recently field emerged at national level.

## **Purpose and objectives of the thesis**

*The main goal pursued in the Doctoral thesis consists in reflecting the particularities occurred in the evaluation of companies involved in mergers operations.*

In order to achieve this fundamental objective, we considered its decomposition into a series of *specific objectives* as follows:

- identifying and brief presentation of most relevant concepts developed over time by experts in the field of mergers on typologies, theories, motivation and success factors that ensure the success of such a process;
- Identifying the reasons which led to the completion of mergers, especially at national level;
- Summarizing the provisions of the international, European and national standards and regulations in the field of mergers;
- Presenting the main features of the evaluation process, including the methods identified in the literature;
- Identifying the main methods used in the evaluation of merger, described by the international and national literature;
- Analysis of the main valuation methods used in the merger from our country;
- Identifying the extent in which the participation in merger operation generates for the companies involved an added value which returns to their shareholders;
- Post-merger performance analysis within local companies involved in such operations;
- Determining the extent in which the evaluation methods used for establishing the contribution value of each of the companies influence the exchange rate, respectively the manner to distribute the benefits in the acquiring company.

A part of these specific objectives were decomposed on sub domains of interest resulting secondary objectives according to the characteristics identified.

The research conducted is mainly applied, most of the concepts identified both in literature and in regulations being then illustrated through practical studies in each chapter.

## **Literature review**

The subject approached enjoys a large complexity, its deepening involving the review of the most representative studies in the field. The identification of a very large number of books, reports and articles published in mergers or the evaluation of companies participating in such operations led us to realize a selection of the most relevant papers to the topic addressed in the thesis.

In this context, we conducted a segmentation of the literature on the objectives pursued during the thesis, namely:

– *the conceptual approach of the notion of fusion, typologies, theories, motivation and the success factors* was based on ideas formulated by the following authors: Chiplin and Wright (1987), Weston, Chung and Hoag (1990), De Pamphilis (2001), Gaughan (1991, 2002, 2005), Machiraju (2003), Brealey, Myers and Allen (2006), Jagersma (2005), Hennart and Park (1993), Datta and Puia (1995), Raghavan and Callan (1997), Martin, Swaminathan and Mitchel (1998), Willman and Bickerton (1999), Shimizu et al. (2004), Hitt et al. (2001), Stigler (1950), Ohmae (1989), Caves (1990), Madhok (1997), Barkema and Vermeulen (1998), Vermeulen and Barkema (2001), Seth (1990), Sudarsanam (1995), Vasconcellos and Kish (1998), Morck and Yeung (1999), Sirower (1997), Bradley, Desai and Kim (1988), Trautwein (1990), Porter (1991), Weston et al. (2001), Seth et al. (2000), Brealey and Myers (2003), Mueller (1969), Jensen and Meckling (1976), Jensen (1986), Ravenscraft and Scherer (1987), Pfeffer and Salancik (1978), Seth, Song and Pettit (2000), but also Matiş (2002, 2003), Georgescu, Istrate and Huian (2009), Tiron-Tudor, Răchişan and Cristea (2005).

– *the synthesis of standards and regulations on merger operations* was based on a review of provisions from national legislation (Law 31/1990, Order 1376/2004, Law 571/2003, Accounting law 82/1991, Order 1802/2014), but also the main laws at European and international level, namely the European Directives and IAS / IFRS.

– *in the analysis of the main methods for evaluating the businesses* we took into account the work of some authors such as: Maxim (2010), Ioniţă (2009), Anghel et al. (2010), Milington (2000), Păvăloaia and Păvăloaia (2006), Toma (2009), Bucătaru (2009), Niţă (2010), Petrescu (2006, 2010, 2012), Smith (2012), including Anghelache et al. (2012).

– *the review of the methods used mainly in the merger transactions* involved the consultation of the works of the following authors: Sherman (2011), Tikhile (2014), Aluko and Amidu (2005), Petit and Ferris (2013), Damodaran (2005), Devos et al. (2009), Mocciano et al. (2012), respectively Lazăr and Avram (2011).

– *the study of post merger performance of the companies involved in such operations* was conducted first based on works which define and treat performance in general: Georgopoulos and Tannenbaum (1957), Bennis (1962), Caplow (1964), Katz and Kahn (1966), Yuchtman and Seashore (1967), Friedlander and Pickle (1968), Price (1968), Mahoney and Weitzel (1969), Schein (1970), Labrousse (1971), Duncan (1973), Negandhi and Reiman (1973), Child (1974), Shashua and Goldschmidt (1974), Klein (1976), Dubois (1979), respectively according to some studies which deepen the subject of post-merger performance, namely: Healy, Palepu and Ruback (1992), Switzer (1996), Parrino and Harris (1999), Linn and Switzer (2001), Heron and

Lie (2002), Gugler, Mueller, Yurtoglu and Zulehner (2003), Moeller and Schlingeman (2004), Rahman and Limmack (2004), Powell and Stark (2005), Lev and Mandelker (1972), Mueller (1980), Herman and Lowenstein (1988), Ghosh (2001), Sharma and Ho (2002), Hogarty (1970), Meeks (1977), Clark and Ofek (1994), Dickerson, Gibson and Tsakalotos (1997), Yeh and Hoshino (2001), respectively Kruse, Park and Suzuki (2002).

Throughout the documentation made on drafting the paper we found that, nationally, prevail the theoretical articles on the topic of mergers, only in recent years the Romanian researchers addressing this area from an empirical perspective, a fact justified by the delay in this restructuring option entered in the Romanian market after the 90s. However, on the international level, particularly in the Anglo-Saxon literature, we found a preference for conducting empirical studies, numerous papers addressing specific aspects on the merger of companies and their evaluation being identified.

### **Research methodology**

In terms of the current research in which falls our approach, we believe that it belongs to the positivism because it aims to highlight, in an in-depth and detailed manner, the theoretical and practical aspects of the evaluation of companies which take part in merger operations. For the accomplishment of the project we combined qualitative and quantitative techniques. The techniques from the first category were primarily used in the conceptual plan, through the content analysis carried on the work of doctrine and regulations in the field, while the techniques in the second category were used for analysis and formulating opinions and conclusions relevant on the evaluation methods for the merged companies, the implications of choosing a method over the other, as well as for the issues related to post merger performance measurement indicators.

In order to realize the entire paper we used a number of research methods specific to both types of research, qualitative and quantitative, namely:

- non-participative observation method– for the study of national, European and international regulations in the fusion domain;

- documentary analysis – in order to cover the studies of the authors from the field, the various reports prepared by the consulting companies, the merger projects and the financial statements prepared and published by the merged companies, which have been studied throughout the chapters one, three, four and five.

- comparative analysis – for presenting the different opinions identified in the literature on the performance of merger operations, in realizing comparisons of performance indicators registered by the 86 companies analyzed compared to the average results at the sector level, the

study undertaken in the fourth chapter of the thesis, and in order to reflect the different opinions on the results due to the application of different evaluation methods for determining the net contribution inside the merger.

## **Synthesis of the thesis**

The thesis entitled “*Evaluation of companies involved in merger operations*” comprises an introduction followed by a number of five chapters in which are presented a series of conceptual and methodological boundaries regarding the evaluation of companies involved in mergers, the theoretical aspects being always completed with real examples and practical studies which confirm or disproves the issues highlighted in the literature or raise new issues and perspective of analysis for the studied topic.

*Chapter 1. Company merger between diversity and consensus* starts from the opinions identified in the literature on the emergence, evolution and contents of merger transactions. In its content we presented the conceptual delimitations on the definition, typology and theories of merger. Next, based on these ideas, we reflected the reasons for resorting to such techniques, namely the factors which contribute to the success of fusion projects. After synthesizing the main reasons invoked at national and international level, we conducted a case study that aimed to analyze the merger of 84 fusion projects from the perspective of motivation or justification of the decision to merge. The results of the study have identified a particularly high frequency of economic motivations, most companies wanting to participate in merger activity in order to achieve efficiency and savings. In the final of the chapter we brought into discussion the merger seen as process, respectively the specific regulation in force at international, European and national level.

*Chapter 2. Evaluation of companies in the context of restructuring* is dedicated to the description of the specific aspects of the evaluation process of companies, addressing the needs and the principles of evaluation, the main types of values with which it operates, the business valuation steps and the national regulations from the field. In the second part of the chapter we focused on the main valuation methods of the companies, identifying three main approaches developed in the literature, namely: the approach based on assets, the one based on income and the approach based on market comparisons, each of these approaches developing different evaluation methods with calculations and specific techniques.

*Chapter 3. Evaluation of companies involved in merger operations* shows, in a first phase, a summary of the most representative studies in the field, especially at the international level. In its content, we presented the main valuation methods used in mergers, depending on the approaches which they may be assigned, namely the active approach, the evaluation methods

based on goodwill, respectively the valuation methods based on comparisons. In order to reflect the results expected from the merger, we turned our attention to synergies, the main effect desired by the companies involved in such operations. In the last two subchapters of this part we have undertaken two studies which aimed to analyze the valuation methods used in the mergers that occurred between companies in Romania and the added value resulting from these restructuring operations.

*Chapter 4. Performance of companies participating in merger operations* is dedicated to the analysis of the concept and the various definitions of performance, the link between performance and return, the overall analysis of the financial performance, respectively of the profitability and return rates. The literature analysis on post-merger performance summarizes the main studies in this area depending on the results, discusses which are the determinants of post-merger performance according to the empirical studies conducted so far, and inclusively analyzes the main studies according to the indicators used to assess the post-merger performance, namely the exchange indicators, respectively the financial and accounting indicators. In the end of the chapter we conducted a study on the impact of the participation in a merger by absorption on the medium term, on the financial performance of the absorbing company. In this regard, there have been selected the Romanian companies in the wholesale and retail sector which merged in 2011, being analyzed for the post-merger period the following indicators: net turnover, net result and the commercial, financial and economic rates of return taking as period of time the horizon 2010-2013, more specifically the ante and post-merger period. Also, we sought to compare the evolution of the indicators mentioned above, registered by the acquiring companies, with the evolution of their medium level at national scale for the commercial sector.

*Chapter 5. Influence of valuation methods on exchange ration and the way of sharing benefits in the absorber company* presents a comparative analysis of the merger between two companies, E.ON GAZ DISTRIBUȚIE S.A. and E.ON MOLDOVA DISTRIBUȚIE S.A. conducted in 2014. After a preliminary presentation of the research methodology, the companies involved and the framework of the merger, we reflected comparative the specific issues of valuation when using the Discounted Cash flow method, respectively the net asset method.

Each chapter concludes with some interim conclusions while the final conclusions, contributions, limitations and future research prospects are contained in the last part of the paper, entitled *Conclusions, personal contributions, limits and research perspectives*.

## Conclusions

By addressing the topic entitled “*Evaluation of companies involved in merger operations*” we sought to clarify some aspects related to the evaluation of companies involved in merger transaction, as well as to underline the importance which should be given to the entire process of evaluation, both in the selection phase of the merger partners, in the negotiation one, and also at the effective start of the transaction.

Depending on the values established for the participants in the merger, the entire financial accounting approach, as well as the final results, but also the quota of allocation of shares within the new company, we have found to be influenced by them.

Analyzing the theories that underpin the realization of mergers, we consider that, nationally, the highest application have the aspects enounced by the efficiency theory (mergers carried out in order to obtain synergies) monopoly theory (emphasis on the desire to increase market share) and chaos theory, according to which that unexpected changes in the economic environment causes an increase in uncertainty and the desire to regain a normal level by resorting to mergers. The remaining theories can enjoy an increased applicability especially internationally where there is an outlined market for business mergers and acquisitions, and where large corporations, managers and consultants in reorganization have decision-making power and a greater influence than at national level.

Considering the attention given to the theories underlying the merger, as well as the reasons drawn from these, the first chapter ends with a case study carried out at national level on 83 cases of merger, being realized a synthesis of the motivations included in fusion projects drawn up on this occasion. Thus, we found out that the results of the studied from the international level are reflected in the case of Romanian mergers, most of them being made from the desire of increasing economic efficiency, of obtaining certain commercial advantages, and to streamline the management activity or to enhance the power of crediting.

As regards how to determine the value of the companies participating in the merger, it was found that the literature and international practice considers the valuation methods belonging to the income approach most appropriate for estimating the value businesses which will merge, while at the national level it can be seen that the most numerous are the asset-based evaluation methods.

The famous formula used to define mergers " $1 + 1 = 3$ ", finds no correlation with the economic reality from the Romanian mergers market. The study conducted on a number of 77 merger, revealed that only in 56% of the cases analyzed, it was identified a positive difference of value to acquiring companies, therefore, the major influence of mergers on creating added value for shareholders it could not be confirmed.

In the case of companies involved in merger operations, the performance is more difficult to be determined given the fact that researchers should estimate which should be the performance of the companies involved in such events if they wouldn't have occurred. The high degree of difficulty in estimating such analysis led to the development of numerous studies in the field, and various approaches.

The results obtained from the case study conducted in order to determine the financial performance on medium term on companies which merged indicates a growth on medium term of the turnover of companies which merged in comparison with the average of the industry, a insignificant evolution of the net profit post-merger, namely a significant diminish of the commercial, financial and economic performance of companies involved in such operations.

In order to underline the importance of valuation methods of companies on the whole merger, we conducted a case study that showed the differences that can arise when choosing a particular method of evaluation over others, opting for selection of a recent merger carried out between two large national companies.

Thus, we found out that the established value for the two companies has influenced all calculations made on the merger, ultimately causing different balances for the company which survives the merger, as well as a distinctly way of distributing the shares which constitutes its social capital. Therefore, the distinct values calculated using the two methods of valuation will be reflected in the different ways of allocating future dividends, and, to a certain extent, in the power of the company.

The fact that it has been used a different valuation method from the net asset value led to the generation of goodwill, which was reflected in the accounts of the acquiring company, thus increasing the level of intangible assets and non-current assets in the balance sheet resulted from the merger. Regardless of the valuation method used, the balance sheet items related to intangible assets would have increased due to the transfer of property rights from the absorbed to the absorber, but the goodwill generated by applying the DCF method has led to a significant increased rate of intangible assets and of financial autonomy rate.

Our research approach can be concluded by underlining the importance of the valuation method which is chosen when determining the net contribution in case of merger both in overall calculations, by influencing the balances of the company resulted from the mergers, as well in the way of distributing its shares, the future benefits, and the power.

## Personal contributions

With reference to the personal contribution during this work, we emphasize further the main contributions for each chapter.

Thus, in the first chapter – *Company merger between diversity and consensus* we realized:

- Conceptual boundaries of the concept of merger according to the opinions identified in the literature;
- Analysis of the existing typologies of mergers in the works of some reference authors, national and international;
- Structuring the specific theories of fusion developed over time on the reasons underlying this operation;
- Analysis of the main reasons drawn from a series of international representative studies for the subject approached;
- Identifying the success factors for fusion projects according to specialists and consulting firms in the field;
- Brief presentation of the specific stages of the merger process;
- Brief rendering of the main regulations on fusions adopted at international, European and national level.

Within the second chapter – *Evaluation of companies in the context of restructuration* we realized:

- Conceptual boundaries regarding the evaluation of companies in general;
- Presentation of the main approaches identified in the works of authors in the field of corporate valuation methods.

For the third chapter – *Evaluation of companies involved in merger operations*, we carried out:

- Analysis of published works in the field of evaluation in the context of merger;
- Detailing the methods typically used in merger transactions;
- Presentation of the effects of the merger on the basis of specialized studies;
- Identifying, based on a case study, the main valuation methods used nationally to determine the net contribution of each of the companies involved in merger;
- Determining the percentage in which mergers realized at national level lead to the creation of added value for shareholders.

Over the fourth chapter – *Performance of companies participating in merger operations*, we realized:

- Presenting the state of knowledge in the field of performance in light of the views identified in the literature;
- Synthesizing the main indicators for measuring the performance of companies involved in mergers;
- Analyzing post-merger performance through the studies developed by the experts in the field based on the stock exchange indicators and also on those financial ones;
- Presenting, through an empirical study, the evolution registered on the medium term of the main financial key performance indicators for companies resulting from the merger;
- Comparative analysis of the financial performance indicators registered by companies which merged, with the average trend in the sector from which they belong.

Within the fifth chapter – *Influence of valuation methods on exchange ration and the way of sharing benefits in the absorber company*, we performed:

- Presenting nationally known mergers from the perspective of all financial calculations made with this occasion;
- Emphasizing the main differences resulting from the use of different valuation methods for the companies involved in mergers in terms of exchange rate, the number of securities issued by the acquiring, the level of capital increase and the premium merger resulted;
- Analyzing the impact of valuation methods on the acquiring company's shareholder structure;
- Determining the influence of input values established through different methods on indicators of position and financial performance.

### **Limits of the research**

Any research activity involves also the confrontation with certain limits, whose listing can explain either the approaches used, either the results obtained or the manner of presentation.

Therefore, in our scientific approach we have faced a number of limitations that have restricted our research, namely:

- The impossibility of reviewing more studies from the literature on mergers in general, merger evaluation, respectively determination of post-merger performance;
- Difficulties in accessing other financial information relating to mergers conducted at national level, except for those published in merger projects;
- Impossibility of analyzing the evaluation reports done by authorized experts in the case of certain mergers due to the confidentiality of this information;
- The large volume of mergers conducted at national level in the last five years has made impossible their exhaustive analysis;

– The impossibility of applying all methods of evaluation presented in the literature in the cases analyzed.

### **Research perspectives**

Due to the increased interest in the topic of mergers, especially for the aspects regarding the evaluation of companies involved in such operations of reorganization, among the main directions of future research that can be considered, we can mention:

- The development of the analysis regarding the evaluation methods and the added value generated by merger operations on other economic sectors;
- The identification in which extent the intended effects mentioned in the merger projects materializes into reality;
- The identification of some correlations between evaluation methods and the success of mergers;
- The extension of the analysis regarding the performance of merger operations on companies traded on the stock exchange;
- Conducting a long-term analysis (over five years) regarding the impact of restructuring through mergers on the performance of the acquiring company;
- Designing a model for measuring the synergies that may arise as a result of a merger;
- Developing collaborations with research institutions which deepen the field of merger on an international level.

### **References**

In order to realize the doctoral thesis we consulted: 110 books, 156 articles, 4 doctoral thesis, 14 legal acts and 8 Internet pages.