Measuring the Performance of Merger Operations

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Abstract

Measuring the performance of external growth operations is important information because it allows to justify whether or not to undertake such operations. A few questions arise in this regard. What is performance and how do we measure it? Are there types of operations that perform better than others? The aim of the research is to determine the factors that influence the performance of mergers and acquisitions, discovered in reference publications in the field, with the help of SPSS 20.0. The low value creation found is more beneficial to the shareholders of the target company than to those of the companies initiating the operations. The observed results differ greatly depending on the fields of activity, the type of operation and other factors.

Key words: mergers and acquisitions, economic performance
J.E.L. classification: L25, G34

1. Introduction

While some studies (Healy, Paleu, and Ruback, 1992) reveal a significant improvement in operational performance, others reflect a significant decrease in this performance as a result of mergers or acquisitions (Ravencraft and Scherer 1989). As for mainland Europe, Gugler, Mueller and Yurtoglu have shown that, on average, profits increase after mergers, but there has been a significant drop in sales. Authors Powell and Stark analyzed the influence of mergers and acquisitions made between 1985 and 1993, and the results obtained indicated that the improvement in operational performance as a result of these operations is modest. On the other hand, Dickerson, Gibson and Tsakalotos reveal, also in the case of Great Britain, a significant decrease in operational performance after mergers or acquisitions.

The first finding that can be drawn from these studies is the great diversity of results obtained. In each of the issues addressed, it is almost always possible to find two different studies that lead to opposite conclusions. There are several reasons for this:

- diversity of samples used both in terms of regions, periods, types of operations and sectors of activity;
- diversity of methods used: economic and accounting approach / financial approach, short-term / medium-term research.

However, if we analyze these results in a more general way, taking into account the major trends, we can identify some common features of the performance of external development operations. However, the results obtained must be interpreted with great caution. The conclusions are all the more valid as they are placed in a context close to that of the empirical studies performed. Regarding the operations carried out by activity sectors, the conclusions need to be further relativized. In this respect, it is important to note that in the vast majority of cases, the research was conducted in an Anglo-Saxon context, marked by a stronger predominance of financial markets in the functioning of the economy than in European or Asian countries. In addition, most of the results obtained relate to large listed companies, characterized by a greater or lesser separation between control and management functions (provided entirely by managers) and ownership and risk-taking functions (provided by shareholders).). Finally, a last limitation refers to the focus of research works on the

manager-shareholder relationship and on the notion of creating value for shareholders. Indeed, the extension of research to other directly interested parties in the undertaking may contribute to the broadening of the value creation point of view and may result in a substantial change in the conclusions. In particular, they may lead to the emphasis on the notion of value transfer to the detriment of value creation.

2. Literature review

Two major schools of thought face each other in measuring and analyzing the performance of external growth operations (Meier and Schier, 2006). The first ideological school represented by the supporters of the industrial economy favors the direct measurement starting from the accounting and financial data of the enterprises. It compares the evolution of operational performance indicators before and after an external growth operation during the analyzed period. In this sense, the results obtained most often show that external growth operations are not performing. The second ideological school, represented by researchers in management and, in some special cases and in the field of enterprise finance or financial management, favors measuring performance through the impact of the operation on the evolution of the stock market of the target company and the acquiring or absorbing company. This approach is based on the assumption of market efficiency. According to this school, the market immediately anticipates the effects of the external development operation when the operation is announced and incorporates the expected effects into the share price in terms of creating value for shareholders. The studies carried out in this field constitute a combined test of the hypothesis of market efficiency and the performance of mergers and acquisitions. They tend to endorse a certain effectiveness of these operations.

2.1. Measuring economic and accounting performance

The most frequently used technique is that of association, which consists in comparing the results of enterprises that have carried out an external growth operation with those of a sample of comparable companies (in terms of field of activity, size, etc.) that have not opted for this. choice. The purpose of these studies is to identify whether, on average, external development operations improve the buyer's results. The analysis of economic and accounting performance is done to compare before and after the external growth operation, starting from the evolution of performance indicators. Among the most used indicators are the economic rate of return, the rate of financial profitability, the evolution of sales or market shares. Almost 50% of external development operations are considered failures (Ravencraft, D.J., Scherer, 1989). On average, there is a decrease in economic performance after performing external growth operations or rather a slight improvement in performance (Trautwein, 1990). As a result of external growth operations, companies tend to lose market share. This trend is all the more valid when it comes to conglomerate external growth. It is less clear when it comes to horizontal operations (Meier, O., Schier, 2006). On the other hand, other studies show that internal development proves to be more profitable in the long run than external development (Dickerson, A.P., Gibson, H.D., Tsakalotos). These results were obtained by analyzing the evolution of performance before and after an external development operation. It should be noted that Healy, Palepu and Ruback obtain different results when comparing the evolution of the performance of companies that have driven external growth with the average evolution measured starting from a reference value consisting of a sample of companies belonging to similar sectors of activity. Their study looks at the top 50 mergers made in the United States during the 1980s and demonstrates improved results.

Criticisms of economic and accounting research

The use of accounting or economic measuring instruments has been criticized by many authors, mainly for two reasons (Meier, O., Schier, G, 2006):

- the first is related to the non-explicit consideration of risk in this type of measurement when external growth operations profoundly change the risk profile of the buyer. This is the case for decreases in profitability offset by decreases in the level of risk. In this case, it is difficult to decide in terms of performance, other than to refer to an explicit theoretical model in terms of the level of risk, as is the case with approaches based on the notion of value creation;

- the second category of arguments that militate against such studies concerns the use of accounting data, the scope of which can be quite changed by changes in accounting policy directly or indirectly related to the external growth operation. Among the possible distortions, we find methods of accounting for goodwill, revaluation of certain assets as a result of mergers, treatment of intra-group transactions, amortization policy of the ensemble after the merger. Other authors (Peasnell, K.V, 1996), however, advocate these approaches, and emphasize the possibility of using indicators, such as cash flow that avoids specific indirect methods related to accounting for goodwill and depreciation policy changes.

2.2. Measuring financial performance

Another way of measuring the performance of mergers and acquisitions is to analyze the impact of these operations on the evolution of the stock price of the shares of the target company and the acquirer. This approach is based on the assumption of market efficiency and assumes that the market immediately anticipates the effects of the external growth operation through mergers or acquisitions, right from the moment the operation is announced, and the expected effects on value creation are reflected in the share price.

The main research conducted in this field is based on the methodology called event study. There are two approaches according to which it is sought to study the impact in the short or medium term. In the short term (ex-ante), the method is based on the calculation of an abnormal return rate, defined as the difference between a rate of return observed at the time of the announcement of the external growth operation and a theoretically estimated rate of return. as equal to the expected rate of return if the operation had not been announced. In the long run, the compound yield is compared with an average compound yield, calculated on a representative sample, consisting of companies from identical sectors, of comparable size and similar book-to-market rates (Fama, EF, French, K, 1992). . Book-to-market is a rate that defines the ratio between the carrying amount of an enterprise and its market value. The lower the value of the rate, the higher the market value of the company compared to its book value. This may be a signal of growth opportunities within the enterprise.

3. Research methodology

The research approach has an empirical character, proposing to validate its working hypotheses through a deductive-inductive process. The study uses methods specific to the quantitative (positivist) approach.

The aim of the research is to determine the factors that influence the performance of mergers and acquisitions, discovered in reference publications in the field. Our research started from the selection of articles from databases such as Science Direct, SpringerLink, Wiley Online Library, ProQuest Central, Oxford Jornals Collection, Cambridge Journal Online, Emerald Publishing Group; Sage and Thompson ISI - Web of Science, with the following characteristics: from the period 01.01.2001 - 01.01.2020, by keywords M&A performance and M&A determinants, with the impact factor h> 10.

Analysis tools and procedures: data collection by observation method, data sorting and grouping, tables, graphs. The study is based on the method of economic-financial analysis that contains a set of methodological steps and procedures to establish and quantify the causal relationships between the studied indicators and the determinants: comparison of financial statements, analysis by rates (Ratios), use of the computer tool for data storage, calculating rates, determining financial balances, determining the evolution in time and space of the indicators.

4. Determinants of the performance of mergers and acquisitions

We analyzed the performance of mergers and acquisitions in the U.S. market between 1973-1998, noting that the merger or acquisition company manages to create equity, but this is modest (it is between 1.4 % and 2.6%) (see table no. 1).

Table no. 1 Average abnormal rates of return on the US market

	1973-1979	1980-1989	1990-1998
Absorbed company + purchasing company	1,5%	2,6%	1,4%*

Source: Andrade, G., Mitchell, M., Stafford, E., 2001
** From a statistical point of view the significant threshold is 1%*

If analyzed separately, the acquirer on the one hand and the target company, on the other hand, there is a significant increase in share value for the target company (around 16%) and a decrease in the case of the acquirer (between -1 % and -0.3%). Thus, the average performance of external growth operations does not appear to be satisfactory, but it must be assessed according to the variables taken into account.

These variables refer to the way of external growth (merger or acquisition), the degree of closeness between the activity of the target company and the acquirer, the method of payment used in the transaction (shares or cash), the type of acquirer or target company (glamorous or value), the relative size of the target, the degree of indebtedness of the acquirer and its availability reserves or the level of expansion.

Type of operation, merger or acquisition

The performance of external growth operations is significantly different depending on the nature of the operation, merger or acquisition.

Table no. 2 Creating value depending on the type of operation

	Acquisition	**Merger**
Acquirer	4%	0%
The target company	30%	20%

Source: Jensen, M., Ruback, R., 1983.

The results obtained by Jensen, Ruback and Agraval show that, in the case of a merger, the performance is lower than in the case of an acquisition.

The degree of closeness in terms of activities between the target company and the buyer

The degree of proximity seems to exert a positive influence on the performance of mergers and acquisitions. The closer the activities are, the more likely the operation is to create value. These operations allow for synergies, but at the same time, the formation of diversified groups is associated with a number of undesirable issues such as rigidity and bureaucratic inefficiency of large companies, the difficulty of managing such a company, divergent interests of managers, etc.

The losses associated with these issues can outweigh the synergies, having a negative impact on the company's performance.

And in this case, the results are heterogeneous. Thus, while certain studies (Healy, PM, Paleu, KG, Ruback, RS) show that mergers and acquisitions made for diversification lead to a decrease in the performance of the new enterprise, others (Linn, SC, Switzer, JA, 2001) show the relationship between mergers and acquisitions for the purpose of diversification and the poor performance of the newly formed enterprise as insignificant. On the other hand, Kruse, Park and Suzuki claim that the performance of enterprises after the diversification operation is higher.

Method of payment

Most studies (Andrade, G., Mitchell, M., Stafford, E, 2001) show that operations financed by liquidity are more efficient than those financed by shares (see table no. 3).

Table no. 3 Abnormal rates of return on the US market between 1997-1998

	How to remunerate shareholders	
	Actions	liquidity
Target + buyer	0,6%	3,6%*

Source: Andrade, G., Mitchell, M., Stafford, E., 2001
** From a statistical point of view the significant threshold is 1%*

One explanation for the results of the studies would be that operations paid for with money can facilitate the replacement of the non-performing management team of the target company. Authors Parino and Harris showed in a study of 197 mergers and acquisitions that the performance of operations depends on the management team that will lead the new company. Thus, if the management team is replaced, the performance of the enterprise will increase, exceeding the average recorded in the sector. Another explanation would be that the operation can be financed by borrowing, which restricts the availability of funds for managers (who are often tempted to make irrational expenses), thus requiring managerial discipline and reducing problems with available treasury.

The nature of the buyer glamorous enterprise or value enterprise

The issue of the type of purchaser has been treated in the literature. Researchers Rau and Vermaelen (Rau, R., Vermaelen, T, 1998) categorized glamor firms as those enterprises that have a book-to-market ratio. These companies have an important development potential which gives them a very important financial value in relation to the value of the accumulated assets (book value). In contrast, value firms are those that have a higher book value / market value ratio. These companies are generally better anchored in the sector. They benefit from a more mature field and have higher profits. In terms of external growth, this distinction is important, as there are quite significant differences in performance, especially in the long term. The authors Rau and Vermaelan calculated the abnormal returns for three years for the operations carried out between 1980 and 1991 and concluded that the glamorous companies have significantly lower results than the value type ones (see table no. 4).

Table no. 4 Average abnormal rates of return

	Acquisition	Merger
Glamor type enterprise	4%	-17%
Value enterprise	8%	16%

Source: Rau, R., Vermaelen, T., 1998

In addition, the difference is even greater if it is a merger operation than a acquisition operation. Thus, glamorous companies register abnormal returns of -17% in the case of mergers and 4% in the case of acquisitions. On the other hand, value companies record abnormal returns of 8% in the case of mergers and 16% in the case of acquisitions. Glamorous companies are companies that have had increases in stock prices, cash flows and revenues in the past, which increases managers' confidence in their shares. In such companies, decision makers are likely to support managers in order to carry out external growth operations. On the other hand, lower performing enterprises will be more cautious in carrying out external growth operations.

Relative target size

The size of the target seems to be an important determinant of the performance of mergers and acquisitions. A study conducted by Mercer Management Consulting (Mercer is the largest human and financial resources consulting firm in the world, and is considered one of the most prestigious consulting firms in the world, operating in more than 40 countries, with more more than 19,000 employees) show a significant deterioration in performance if the target company exceeds 30% of the buyer's turnover. Relative size is an important factor in assessing the complexity of post-acquisition management. The specific issues related to the integration of the target and, therefore, to the effective achievement of synergies are all the more important as the relative size of the target is more important. We must not infer from this that a relatively small target is necessarily a proof of success in an integration policy. Other factors are taken into account, such as the proximity of activities or the convergence of organizational or managerial logics.

Results regarding the size of the absorbed company were nuanced by the research conducted by the authors Fuller, Netter and Stegemoller on more than 3,135 operations that include target companies listed or unlisted on the Stock Exchange. Table no. 5. presents the main results obtained according to the relative size and the way of financing the operation.

Table no. 5 Abnormal profitability of the buyer depending on the relative size of the target

Target size in % of buyer size	Average abnormal returns	Distribution of results according to the financing method of the operation		
		Cash payment	Payment in shares	Mixed payment
Results obtained on the whole sample				
Less than 5 %	1,04% (*)	0,84% (*)	1,31%(*)	1,26% (**)
5%-9,99%	2,02% (*)	1,86% (*)	1,94% (**)	2,37% (*)
10%-19,9%	2,12% (*)	2,71% (*)	1,68%	1,64% (**)
More than 20%	3,23% (*)	4,86% (*)	0,17%	3,81% (*)
Results obtained when the target is listed				
Less than 5%	0,62%	-0,15%	1,93 % (**)	-0,03%
5%-9,99%	0,13%	-1,21%	2,11 %	-2,25%
10%-19,9%	-0,97%	3,28% (*)	-2,81%(***)	-1,59%
More than 20%	-2,56% (*)	0,74%	-4,37% (*)	-1,1%
Results obtained when the target is not listed (autonomous company)				
Less than 5%	1,03% (*)	0,76% (**)	1,26% (**)	1,32% (*)
5%-9.99%	2,08% (*)	1,88% (*)	1,5%	2,79% (*)
10%-19,9%	3,07% (*)	3,07% (*)	4,34% (*)	1,7 % (**)
More than 20%	5,75% (*)	3,96 (*)	11,72% (*)	5,39% (*)

(*) statistically significant threshold is 1% for a range of events ranging from –2j to + 2j
(**) the statistically significant threshold is 5% for a range of events ranging from –2j to + 2j
Source: Fuller, K., Netter, J., Stegemoller, M., 2002

When the target company is listed, the profitability of the transaction for the buyer decreases significantly depending on the relative size of the target. Thus, the larger the target size, the lower the profitability of the operation for the buyer's shareholders. It should be noted that if the target is not listed, the results obtained are reversed, in this case the operation is all the more profitable the more important the relative size of the target.

Possible listing of the target

The results of table no. 6 leads us to ask ourselves about the importance of the "target listing" factor on the profitability of mergers and acquisitions. Table no. 7. show the results obtained on the whole sample, regardless of the relative size of the target. The results obtained confirm the importance of this factor. Transactions on quoted targets are on average "value destroyers" for the buyer's shareholders while transactions involving an unlisted target company create average value.

Table no. 6 Distribution of the buyer's abnormal returns by type of target

	Average abnormal returns	Repartiția rezultatelor în funcție de modul de finanțare a operațiunii		
		Cash payment	Payment in shares	Mixed payment
The whole sample	1,77 % (*)	1,70 %(*)	1,25 % (*)	2,20 % (*)
Targets = listed companies	-1 % (**)	0,34 %	-1,86 % (**)	-1,1 %
Targets = listed companies	2,08 %(**)	1,62 % (*)	2,43 % (*)	2,48 % (*)
Targets = group branches	2,75 % (*)	2,56 % (*)	3,23 %	3,33 % (*)

(*) statistically significant threshold is 1% for a range of events ranging from –2j to + 2j
(**) the statistically significant threshold is 5% for a range of events ranging from –2j to + 2j
Source: Fuller, K., Netter, J., Stegemoller, M., 2002

The results obtained by Fuller, Netter and Stegemoller are even more significant when the "financing mode" factor is reintroduced. The operations performed in shares on target companies not listed on the Stock Exchange being the most value-creating operations. Conversely, transactions involving large, publicly traded and publicly traded targets are among the most "value destroyers". The operations involving relatively large target companies not listed and remunerated in shares proved to be the most profitable in the sample studied. The distribution of value at the end of external growth operations is a central issue. It concerns not only the shareholders of the buyer and the target but also the other parties directly interested in the business, namely managers, creditors, employees and social groups as a whole. If, overall, at the time of the announcement of the operation, a phenomenon of value creation is found, it can be noticed that its distribution is not uniform. Almost all of the value creation is earned by the target shareholders, while the shareholders of the purchasing company record abnormal rates of return close to 0% and even slightly negative (see table no. 7).

Table no. 7 Average abnormal rates of return on the US market

	1973-1979	1980-1989	1989-1999
Target	16 % *	16 % *	15,9 % *
Buyer	-0,3 %	-0,4 %	-1,0 %
Target + Buyer	1,5%	2,6 % *	1,4 % *

** statistically significant threshold is 1%*
Source: Andrade, G., Mitchell, M., Stafford, E., 2001

This result is confirmed by almost all specialized studies. If the research of the existing statistical results is deepened, it is observed that the shareholders of the purchasing enterprise end up obtaining, on average, a part of the value in case of acquisitions. In compensation, in case of mergers or acquisitions by exchange of shares, the value creation achieved during the operation tends to get rid of them almost entirely (table no. 8).

Table no. 8 Average abnormal rates of return on the US market

	Acquisitions	Mergers
Target	30 %	20%
Buyer	4 %	0 %

Source: Jensen, M., Ruback, R., 1983

Considering the personal motivations of leaders

The importance of considering leaders' motivations in the analysis of merger-acquisition performance was emphasized by the authors Morck, Schleifer and Vishny who sought to determine whether these managerial motivations can explain the observed abnormal negative returns. The results obtained on a sample of 327 operations show that managerial motivations are strongly associated with the existence of abnormal negative returns. Also, these authors show that the managers who have the lowest performance are also those whose acquisitions generate the least performing results.

Table no. 9 The influence of the analyzed factors on the created value

Factors	Ways	Relative impact on value (*)
Ways to merge	Merger	↓
	Acquisition	↑
Degree of proximity between the activities of the buyer and those of the target	Strong	↑
	Low	↓
How to finance the operation	Redemption of shares	↑
	liquidity	↓
The nature of the buyer	*Glamor firm (strong development)*	↓
	Value firm (strong profitability)	↑
Target listing	Unlisted targets	↑
	Rated targets	↓
Relative target size	Important to the buyer	↓
	Low compared to that of the buyer	↑

(*) The meaning of the symbols used is as follows:
↑ on average an operation performed in this way creates more value than the average of the observed operations.
↓ on average an operation performed in this way creates less value than the average of the observed operations.
Source: Datta, D.K., Pinches, G.E., Narayanan, K., 2001

Mergers and acquisitions have seen significant development in recent years and have become inevitable maneuvers in the strategies of large groups or smaller companies. The results obtained are, however, in many situations disappointing. The low value creation found is more beneficial to the shareholders of the target company than to those of the companies initiating the operations. The observed results differ greatly depending on the fields of activity, the type of operation and other factors. This variation is summarized in table no. 9.

5. Conclusions

Although the phenomenon of mergers and acquisitions has been studied for over 30 years, the failure rate is still high. What would be the explanation?

In our view, three possible reasons can be put forward to explain this lack of performance improvement over the years of the companies involved in the merger process, namely:

- The managers of the entities resort in many situations to mergers and acquisitions for other reasons than those related to value creation;
- Lack of collaboration between academic researchers and practitioners involved in mergers and acquisitions and, implicitly, insufficient capitalization of research results in practice;
- Mergers and acquisitions research does not address all aspects of these types of operations.

The conclusions from the study are based on an analysis of top research (the analyzed articles have an impact factor H> 10). If the analysis were extended to studies with a lower impact factor, we will probably reach different conclusions.

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