

The Effect of Serial Acquisitions on the Profitability of Acquiring Firms: Empirical study

أثر عمليات الاستحواذ المتسلسلة على ربحية الشركات المستحوذة: دراسة تطبيقية

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Abstract

This paper examines stock price reactions to serial acquisition announcements by application of partially anticipated events model. The sample study covers over 11 years, and they contain 46 French serial acquirers. The entire 46 firms which announced and subsequently carried out serial acquisition launched a total of 97 acquisition operations. The main objective of our work is to estimate the gains or losses issuing from serial acquisitions launched by French acquirers, in the framework of investment programs. This model on which is based our study is applied through four multiple regressions, among which the coefficients of two of them are expressed in rates of returns. However, the results showed that only the hypothesis of announcement effect of acquisition attempts was verified, and clearly indicate that French frequent acquirers were destructive in terms of value, they do not maximize neither the value of the firm nor the stockholder's wealth.

Keywords: Serial acquisitions, announcement effect, acquisition attempt, abnormal return, partially anticipated events.

JEL Classification: G14, G34.

ملخص

هذا المقال يختبر سلوك أسعار الأسهم عند الإعلان عن عمليات الاستحواذ المتسلسلة وهذا بتطبيق نموذج الأحداث المتوقعة جزئيا. عينة الدراسة تمتد على مدى 11 سنة وتضم 46 مؤسسة فرنسية مستحوذة. هذه المؤسسات قامت بأجراء 97 عملية استحواذ خلال مدة الدراسة. ان الهدف الرئيسي لبحثنا هذا يتمثل في تقدير الأرباح أو الخسائر الناتجة عن عمليات الاستحواذ المتسلسلة التي قام بتنفيذها المستحوذون الفرنسيون في إطار برامج الاستثمار. هذا النموذج والذي تركز عليه دراستنا تم تطبيقه على أساس أربعة معادلات انحدار متعدد حيث أن معاملات اثنان منها معبر عنها بمعدلات للمردودية. النتائج تظهر على أن فرضية أثر الإعلان هي الفرضية الوحيدة التي تم تأكيدها وهذا يبين أن المؤسسات المستحوذة الفرنسية من خلال عمليات الاستحواذ المتسلسلة كانت مدمرة للقيمة مما يدل أنها لا تعظم قيمة المؤسسة ولا تعظم ثروة المساهمين.

كلمات مفتاحية: الاستحواذات المتسلسلة، أثر الاعلان، محاولة الاستحواذ، المردودية غير الاعتيادية، الأحداث المتوقعة جزئيا.

تصنيف JEL: G34, G14

Introduction

The purpose of this research paper is to study and analyse the reactions of stock prices of acquiring companies to the announcements on mergers and acquisitions. It is precisely a question of verifying whether the model of event partially anticipated by French acquirers generates consistent results that can be compared with those of the American case.

Recent financial literature specifically attempts to determine the gains associated with these transactions for acquiring and target firms and to identify their impact on shareholders' wealth. It also tries to assess the abnormal returns of acquirers and targets to discover mergers and acquisitions that can create value for acquiring firms.

The competitive acquisition market implies that the potential gain of acquirers in unsuccessful transactions has a negative bid price accepted by the target shareholders. This involvement was tested by (Ruback, 1983) in a study using data on public tenders offers sought by several acquiring firms. The results of this study confirm the competitive hypothesis of the corporate acquisition market.

(Bradley, Desai, & Kim, 1983) examine the profits made by shareholders of companies targeted by unsuccessful takeovers. The results of this study reveal that the permanent positive overvaluation of the target's securities in unsuccessful operations takes place mostly because of, the emergence and anticipation of another takeover operation which must be completed at the end of the operation process to the transfer of control of the target's resources. Takeovers by public tender offer are attempted by acquiring companies to exploit potential synergies and not just to have qualitative information on the true value of the target's resources. (Schipper & Thompson, 1983) also addressed a somewhat complex issue, the corporates acquisition by series. In this study, the authors find positive and significant abnormal returns associated with the announcement of acquisition programs, and negative abnormal returns associated with some regulatory and institutional changes. These results support the assumptions made by the authors that the acquisition activity has a favourable ex-ante impact on the value of firms that announce the intention to engage in acquisitions. They also support the idea that some regulatory and institutional changes reduce the expected profitability of future acquisition activity.

With this in mind, the problem we are trying to deal with and analyse in this paper will be focused essentially on the measurement, analysis and explanation of the profitability of the serial acquisitions launched by French corporates leaders.

Our study contributes to the existing literature, first, by creating a framework for measuring gains and losses for serial acquirers in terms of stockholders' wealth creation. Secondly, we focus on the French market which previously was not explored purposely.

This paper is organized as follows. Section 1 presents a literature review on the subject. Section 2 describes the event study methodology used to evaluate the performance of French serial acquisitions. Section 3 then combines the results of the event study carried out on the 46 French acquirers who launched acquisition programmes during 1997-2007. Section 4 will be reserved for discussion of results achieved. Finally, section 5 present our conclusions.

1. Literature review

The empirical literature on corporate acquisitions profitability is extensive. (Thompson & Malatesta, 1985) analysis differs in several reports from most previous studies. First, much of the literature deals with some specific types of acquisition activity such as takeovers, mergers, etc. In contrast, (Thompson & Malatesta, 1985) state that events under other considerations are attempts at acquisition which are widely explained. There is neither distinction between mergers and takeovers, nor between successful and unsuccessful attempts. This approach facilitates the distribution of the profitability of the acquisition activity in a general way.

A second difference between this study and most previous studies involves measuring acquisition gain. The majority of previous event studies have measured acquisition profitability using the variables introduced by (Fama, Fisher, Jensen, & Roll, 1969). This technique estimates the average of the distribution of data for abnormal returns associated with acquisitions.

One of the issues dealt with in the paper by (Thompson & Malatesta, 1985) is the maximization of shareholder wealth, which implies that acquisition activity must be associated with the increase in share prices of acquiring companies. Other researchers, such as (Bradley, Desai, & Kim, 1982), (Dennis & McConnell, 1984), (Firth, 1980), (Malatesta, 1983) and (Varaiya, 1985), also carried forward estimated dollar measures of acquisition profitability. (Bradley, Desai, & Kim, 1982) studied takeovers operations, the other researchers experimented with operations while (Varaiya, 1985) did not distinguish between mergers and takeovers. And as a result of this panoply of research, the hypothesis of maximizing shareholder wealth is maintained, this should serve to positively bias that measures profitability.

In a fairly recent study focused on the American market, (Ismail, 2008) reported that shareholders of acquiring companies in the case of individual acquisitions, outperform serial acquisitions by 1.66%. The results indicate that single acquirers generate higher returns in equity

deals than in cash and mixed offers, which is due to the high returns earned through the acquisition of non-public targets.

In a recent study on the Polish financial market, (Rutkowski, 2018) used eleven ratios calculated from the consolidated financial statements and revealed that serial acquisitions taking the form of an investment program in emerging markets are influenced by several factors that have been identified for financial markets in developed countries. The conclusion of this research notes that acquirers who launch a multitude of serial acquisition programs acquire their targets faster and increase their assets to achieve a higher growth rate.

(Mosharraf, Duy, & Nahid, 2021) find that acquirers who complete a series of corporates acquisition take very high risks compared to acquisitions made by individual acquirers. They also find that the underperformance of acquiring firms in their investment programs relative to individual acquirers is more pronounced when managers have more control over the wealth of their firm. Also, (Laamanen & Keil, 2008) show that there are three factors that moderate the relationship between the protagonists in serial acquisitions by weakening the negative effects that are the size of the acquiring firm, the scope of the serial acquisitions and the experience of the acquirer. (Pandey, Sutton, & Steigner, 2021) in their comprehensive study of more than 13,000 acquirers from 72 countries worldwide come to the conclusion that cumulative abnormal returns for acquirers are significantly negative ; therefore, CEO hubris-driven behavior undermines the learning experience of bidders ; at the same time, the time between deals at competitive markets tends to decrease, so, bidders learn to make acquisitions more aggressively but less accurately.

However, there is no consensus among researchers even about the definition of a «serial » acquirer (Macias, Rau, & Stouraitis, 2016), (Morillon, 2021) since the patterns of acquisitions are various. The given definition of a corporate acquisition program as a group of acquisitions driven by core business logic ; however, the majority of scholars do not pay much attention to this issue and use serial or repetitive acquisitions as a similar concept to a corporate acquisition programs. In our study, we use similar approach.

One of the differences of our study from the previous papers is that we focus on the French market. Although some cross-country studies as (Pandey, Sutton, & Steigner, 2021) addressed acquisitions made by French acquirers, not so many researchers purposely focused on this market. (Ibrahimi & Meghouar, 2019) focus only on horizontal M&A deals performed by French companies from 2005-2014. They used an accounting-based approach and concluded that acquisitions cause both value creation and value destruction for acquirers. However, this study

does not relate directly to market values, as it focuses on changes in companies' cash flows. (Trowski, 2014) tested the predictions of acquisitions' failures based on (Thompson & Malatesta, 1985) model and determined factors that may affect the mode of acquisition and its success measured by market returns. The specific of our study is that we focus on serial acquirers.

2. Serial corporate acquisitions assessment

2.1 Methodology

The evaluation of serial corporate acquisitions launched by French acquirers during the period 1997-2007 is based on the "Partially Anticipated Events" model of (Thompson & Malatesta, 1985). This model is intended for the calculation of gains or losses generated by serial corporate acquisitions (acquisition programs). As there is a lack on consensus about the concept of serial corporate acquisition, we perceive it as a set of acquisition transactions that are considered as attempted acquisitions over a period of several years. The basic model of the profitability of acquisition programs is the multiple regression that (Thompson & Malatesta, 1985) developed in their paper. According to these authors, the acquisition attempts that make up the acquisition program are events with a probability included between 0 and 1. Therefore, this model that we present below is applied to the calculation of the reaction of stock prices to the events that French acquirers partially anticipate :

$$(\tilde{r}_{jt} - r_t)V_{jt-1} = \alpha_j + \beta_j V_{jt-1} (\tilde{r}_{mt} - r_t) + \gamma_j d_{jt} + \tilde{e}_{jt}$$

$(\tilde{r}_{jt} - r_t)V_{jt-1}$: Security risk premium

$V_{jt-1} (\tilde{r}_{mt} - r_t)$: Market risk premium

α_j, β_j and γ_j : The coefficients of the model

d_{jt} : Binary variable equal to (1) in case of event (acquisition attempt) and (0) otherwise

$\tilde{e}_{jt}$: Standard error

These events that are partially anticipated by acquirers generate two different types of effects, namely, an economic impact and an announcement effect. The application of this model consists of four multiple regressions, each regression allows the calculation of the coefficients that measure the gain or loss generated by the serial corporate acquisitions as well as the economic impact and the announcement effect of acquisition attempts. Two of these regressions use the interest rate r_t and the other two use the zero beta rate of return $\tilde{r}_{zt}$ to calculate the market risk premium and the security risk premium. Also, the coefficient of the model is expressed in monetary unit (€), and in rates of return in the other two regressions. Below are the 4 multiple regressions that we apply to French serial acquirers data :

$$\text{Regression 1: } (\tilde{r}_{jt} - r_t)V_{jt-1} = \alpha_j + \beta_j V_{jt-1} (\tilde{r}_{mt} - r_t) + \gamma_j d_{jt} + \tilde{e}_{jt}$$

$$\text{Regression 2: } (\tilde{r}_{jt} - r_t) = \alpha_j + \beta_j (\tilde{r}_{mt} - r_t) + \gamma_j d_{jt} + \tilde{e}_{jt}$$

$$\text{Regression 3: } (\tilde{r}_{jt} - \tilde{r}_{zt}) V_{jt-1} = \alpha_j + \beta_j V_{jt-1} (\tilde{r}_{mt} - \tilde{r}_{zt}) + \gamma_j d_{jt} + \tilde{e}_{jt}$$

$$\text{Regression 4: } (\tilde{r}_{jt} - \tilde{r}_{zt}) = \alpha_j + \beta_j (\tilde{r}_{mt} - \tilde{r}_{zt}) + \gamma_j d_{jt} + \tilde{e}_{jt}$$

Where r_{jt} is the return of stock j at time t , r_{mt} is the stock exchange return at time t , r_t is the risk-free interest rate and r_{zt} is the zero beta rate of return.

The coefficients generated by the model from the application of the four regressions listed above are α , β , γ and $\alpha + \gamma$. Beta is the coefficient that calculates the sensitivity of securities to changes in the stock market, it is calculated as follows:

$$\tilde{\beta}_j = \widetilde{Cov}(r_{jt}, r_{mt}) / \tilde{\sigma}^2(r_{mt})$$

But what interests us about the assumptions of the model are the other coefficients, α , γ and $\alpha + \gamma$ which successively measure the change in abnormal return, the economic impact and the announcement effect of acquisition attempts. In the analysis of the "Partially Anticipated Events" model, Maltesta-Thompson (1985) provide the conditions for these three coefficients in an efficient market. These are presented below (Table 1):

Table 1: Model conditions for an efficient market.

Coefficient	conditions for an efficient market	Definition
α	$-q_j v_j$	Abnormal return variation
γ	v_j	Economic impact
$\alpha + \gamma$	$(1 - q_j) v_j$	Announcement effect

Source : (Omar Boufama, 2015, page 193).

Where :

q_j : Constant frequency of acquisition attempts per period

v_j : Constant economic impact for each future attempt

Each of the coefficients deals with a hypothesis specific to the "Partially Anticipated Events" model. They relate to changes in the abnormal return, the economic impact and the announcement effect of acquisition attempts. They are also treated as alternatives to null hypotheses for each of the model coefficients. These are summarized in Table 2 below :

Table 2 : The hypotheses of the study, their definitions and the sign of each of them.

Hypotheses	Hypotheses definition	Variable	Sign
$H_1 : \alpha_j = -q_j v_j < 0$	Change in the expected abnormal profitability of an attempted acquisition in a non-announcement period	α_j	Negative
$H_2 : \gamma_j = v_j > 0$	Economic impact of an acquisition attempt	γ_j	Positive
$H_3 : \alpha_j + \gamma_j = (1 - q_j) v_j > 0$	Effect announcement of an acquisition attempt	$\alpha_j + \gamma_j$	Positive

Source :(Omar Boufama, 2015, page 194).

2.2 Data

The two main sources of data are the website of the French Financial Market Authority (www.amf-france.org), from which the acquiring companies were identified, and the digital database *Datastream* that was used for the collection of financial and stock market data of the selected acquiring firms.

In order to constitute the sample of our empirical study we have determined a set of criteria listed below :

1. The financial market chosen in our study is the Paris Stock Exchange ; therefore, all stock of the acquiring companies selected in the study sample must be listed on the Paris stock exchange, even if the target is listed on another stock exchange.

2. The types of acquisition considered in our study are: takeover bid, public exchange offer, mixed public offering and merger-absorption.

3. Each sampled company that has attempted at least once to acquire another company is considered to have initiated a series of acquisitions.

4. The observation period we have chosen is relatively long, starting on 01/01/1997 and ending on 31/12/2011, or 15 years. This choice is linked to the availability of information on the website of the French Financial Market Authority.

According to these criteria, first, 91 companies have been studied. After the initial sample had been cleared, we were able to retain in the final sample that 46 firms, representing a rate of 51%. During the 1997-2007 study period, these 46 French acquirers made 97 acquisition attempts (Boufama, 2015), which represents slightly more than 95% of all attempts during the observation

period. The most popular types of acquisition were takeover bids (29.90 %) and mergers (41.25 %), as shown in Table 3 below:

Table 3: Distribution of acquisition attempts in the final sample by type of operation.

Payment method	Number of attempts	
Takeover bid	29	29.90 %
Public exchange offer	20	20.60 %
Mixed public offering	8	08.25 %
Merger-Absorption	40	41.25 %
Total	97	100.00 %

Source :(Omar Boufama, 2015, page 188).

The information about the acquisition attempts was collected from the website of the « Autorité des Marchés Financiers ». For the compiled list of French acquirers, we obtained stock prices, dividends, the number of securities and market capitalization from Datastream.

3. Empirical results

For each of the 46 sampled companies, the parameters of each regression were estimated using the ordinary least square method applied to the 132 months (from 01/01/1997 to 31/12/2007) of market data.

For the first regression the results are expressed in monetary units (€). The results derived from the 46 multiple regressions are reported in Table 4 which presents an estimation of the mean coefficients, the t-student average and the significant percentage different from zero of the coefficients.

According to the first hypothesis of the model, if acquisition attempts are partially anticipated and the average economic impact of these attempts is positive, then the α_j coefficient must be negative. In only one case of the 46 regressions performed this result was obtained and it is significant at the 5% level. This single case of negative α_j goes to the company "Unibel". In only one case (2.17%) that of "Unibel" we reject the null hypothesis $\alpha_j = 0$ that in favor of the alternative $\alpha_j < 0$ at a level of significance of 10%. On the other hand, in 32 cases we reject the null hypothesis in favor of the alternative $\alpha_j > 0$ at the same level of significance. The number of cases that are not significant is 13 out of the 46 cases studied which represents about 28% of the total sample.

Table 4: Summary of regression 1 results.

$(\tilde{r}_{jt} - r_t)V_{jt-1} = \alpha_j + \beta_j V_{jt-1} (\tilde{r}_{mt} - r_t) + \gamma_j d_{jt} + \tilde{e}_{jt}$						
Coefficient	Estimations number	Average estimate (€ million)	Positive percentage	Average t-statistic	significant percentage at confidence level 0.1	
					Positive	Negative
α	46	169.033*	91.3	2.48**	69.57	2.17
β	46	1.20	100.00	7.55**	97.83	0.00
γ	46	-40.901*	37.0	-0.25**	2.17	10.87
$\alpha + \gamma$	46	128.131*	61.0	0.04	58.7	37.00

(*) In million euro

(**) Significant at 10% level

Source : (Omar Boufama, 2015, page 195)

The t-student average for $\hat{\alpha}_j$ follows a normal distribution with a standard deviation equal to $1/\sqrt{46} = 0.147$. The mean t-student of the sample reported in Table 4 equals to 2.48. In the same table, it is shown that the average of $\hat{\alpha}_j$ for the sample is 169,033 million euro which rejects the hypothesis that predicts a negative sign. The explanation that can be given to this value is that the French stock market is less efficient than thought or at least that it is efficient in the weak form only. We test the hypothesis that the $\hat{\alpha}_j$ mean is zero using F-statistic. The formula of this test for α_j and γ_j coefficients is:

$$\frac{(\sum_{j=1}^J \hat{\alpha}_j)^2}{(\sum_{j=1}^J \sigma^2(\hat{\alpha}_j))}$$

The calculated value of F-statistic is 0.60 as shown in the Table 5. It is insignificant since at the 1% level the tabulated value is greater than the calculated value.

If the average economic impact of the acquisition attempts is positive according to hypothesis H2, then γ_j the coefficient of the binary variable of the acquisition attempts d_{jt} must be also positive. 21 of the estimated 46 $\hat{\gamma}_j$ are positive. In two cases we reject the null hypothesis in favor of the alternative $\gamma_j > 0$ at a level of 10%, and in only one case we reject the null hypothesis in favor of the alternative $\gamma_j < 0$ at the same level.

The average estimate of the economic impact v_j of an acquisition attempt is given by the average of $\hat{v}_j$. The average of $\hat{v}_j$ is -40.901 million euro, and the negative sign contradicts the hypothesis of wealth maximization motivated by acquisition attempts.

Table 5: Statistical test F for regression 1.

$(\tilde{r}_{jt} - r_t)V_{jt-1} = \alpha_j + \beta_j V_{jt-1} (\tilde{r}_{mt} - r_t) + \gamma_j d_{jt} + \tilde{e}_{jt}$		
Null Hypothesis	Statistic-F	Degrees of freedom
$\left(\frac{1}{J}\right) \sum \alpha_j = 0$	0.60	1,5934
$\left(\frac{1}{J}\right) \sum \gamma_j = 0$	Not valid	Not valid
$\left(\frac{1}{J}\right) \sum (\alpha_j + \gamma_j) = 0$	-2.82**	1,5934

(**) Significant at 10% level

Source : (Omar Boufama, 2015, page 197)

Under the condition that v_j is positive, the expected announcement effect $\alpha + \gamma$ must be also positive. The null hypothesis that $\alpha + \gamma = 0$ is tested using a joint t-student test. The formula used is :

$$t = \frac{\alpha + \gamma}{\sqrt{\sigma^2 (\alpha_j) + \sigma^2 (\gamma_j) + 2cov (\alpha_j + \gamma_j)}}$$

The results in Table 5 show this case of the t-student joint test. Only 27 t-students are positive and the remaining 17 are negative. The F-statistic for the average of $\alpha + \gamma$ is -2.82. This is significant at 5% level. This allows us to accept the null hypothesis that $\alpha + \gamma$ is on average equal to 0. The sum of $\hat{\alpha}_j + \hat{\gamma}_j$ corresponds to the announcement effect of an attempted acquisition which, as we said earlier, is a mitigating measure of the economic impact of an attempt.

What we have just discussed is the basic model that calculates the profitability of serial corporate acquisitions. This treatment has shown us that these serial acquisition are failing. However, this model has alternatives in the form of multiple regression. The first alternative is the regression which calculates profitability in rates of return. The conditional return-generating process is expressed in rates of return and not in value of return (return in €). Estimates of the

parameters of this alternative (regression 2) are reported in Table 6 and Table 7 for the F-statistic test :

Table 6: Summary of regression 2 results.

$(\tilde{r}_{jt} - r_t) = \alpha_j + \beta_j (\tilde{r}_{mt} - r_t) + \gamma_j d_{jt} + \tilde{e}_{jt}$						
Coefficient	Estimations number	Average estimate	Positive percentage	Average t-statistic	significant percentage at confidence level 0.1	
					Positive	Negative
α	46	0.0240	97.8	3.02**	79.09	2.17
β	46	0.8332	100.0	6.71***	95.65	0.00
γ	46	-0.0101	45.7	-0.11**	4.35	2.17
$\alpha + \gamma$	46	0.0140	58.7	0.07	56.5	41.30

(***) Significant at 1% level ; (**) Significant at 5% level

Source : (Omar Boufama, 2015, page 199)

The difference between the two types of results, the results expressed in value and those expressed in rates of return, lies in the weighting of the risk premium of a stock and that of the market. In the first type the risk premiums are weighted by the value of the firm, and in the second type these risk premiums are not weighted by the value of the firm V_{jt-1} . The firm's value is expressed by market capitalization.

The results of these régressions as alternatives to the basic model (regression 1), allowed us to measure the robustness of the figures presented in Table 4 as it can facilitate our task of comparing with the results of other studies on the same subject.

Finally, by summarising the results from the four regressions we can say that only one hypothesis out of the three studied has been confirmed, it is the hypothesis H_3 which predicts that the expected announcement effect of the acquisition attempts must be positive. For the other two hypotheses, the parameter signs were reversed. These results are summarized in table 8:

Table 7: Statistical test F for regression 2.

$(\tilde{r}_{jt} - r_t) = \alpha_j + \beta_j (\tilde{r}_{mt} - r_t) + \gamma_j d_{jt} + \tilde{e}_{jt}$		
Null Hypothesis	Statistic-F	Degrees of freedom
$\left(\frac{1}{J}\right) \sum \alpha_j = 0$	2.14	1,5934
$\left(\frac{1}{J}\right) \sum \gamma_j = 0$	0.30	1,5934
$\left(\frac{1}{J}\right) \sum (\alpha_j + \gamma_j) = 0$	8.84*	1,5934

(*) Significant at 10% level

Source : (Omar Boufama, 2015, page 200)

4. Discussion

(Thompson & Malatesta, 1985) were among the first authors to study the phenomenon of serial acquisitions. Large companies use this method which allows them to launch serial acquisitions to grow rapidly and decrease costs. Indeed, buying a certain number of companies with important competitive advantages looks faster, cheaper and more advantageous for the future of the firm than investing in the creation and development of new business units, technologies or penetrating to the new markets.

However, in our study we got results that contradict to those by (Thompson & Malatesta, 1985). One of possible explanations is the large difference in the frequency of acquisition attempts at the American and French markets. In fact, the total number of attempts in our study is only 2.11 attempts per company, while that of the American case is almost 4 times higher and equals to 7.86 attempts per company. For the number of attempts per company and per year it is 0.19 in our study, while in the American case it is 1.5, almost 8 times higher than in the French case.

This difference is also confirmed by Pandey, (Pandey, Sutton, & Steigner, 2021) for a longer period. According to (Trowski, 2014), who had studied factors determining the volume and method of payment of French M&As over almost the same period as we did (1996-2010), large changes in technologies, regulations and economic environment could lead to the huge gap between investors' and managers' expectations. Investors overreact to industry shocks more

strongly than managers ; that's why the effects from serial acquisitions, reflecting these misexpectations, may differ from those that were hypothesized.

In another similar study looking at serial merger valuation and acquirer gain, (Asquith, Bruner, & Mullins, 1983) measure the day-to-day abnormal returns by using a control portfolio that has beta values approximately close to those of the securities studied to determine the gains of the acquirers following the launch of mergers. The actual returns of the control portfolio are then subtracted from those of the securities studied to obtain the estimated abnormal returns. They achieve the cumulative average abnormal return (CAAR) of 2.80% over a 21-day period. The comparable result of (Thompson & Malatesta, 1985) was 2.91% equivalent to the average announcement impact. For our study we came to estimate this value and which corresponds to the announcement effect, it is equal to 1.40%. All these values are presented in the Table 9:

Table 8 : The results of regressions expressed in value and rate of return.

coefficients	Sign of the coefficients	Excess return expressed in cash (million €)		Excess return expressed as a percentage (%)	
		Regression 1	Regression 3	Regression 2	Regression 4
α	Negative	169.03	147.01	2.40	2.18
γ	Positive	-40.90	-69.09	-1.01	-1.07
$\alpha + \gamma$	Positive	128.13	77.92	1.40	1.11

Source :(Omar Boufama, 2015, page 204).

The results obtained show that French acquirers did not benefit from serial acquisitions, this prompted us to deepen our analysis to understand this phenomenon well that of serial corporate acquisition. To do this, we conducted a sectoral analysis to identify the economic sectors and then the most efficient and profitable companies following the launch of this type of acquisition. In all, we identified 8 economic sectors.

For these eight economic sectors we have calculated the economic impact γ and the announcement effect $\alpha + \gamma$ of the acquisition attempts. If we take the two coefficients at the same time, the first finding is the continuation of sign we had for the total sample, namely that the economic impact and the announcement effect are negative, which is contrary to the hypotheses of the model.

Following this analysis we have noticed that there is only one sector for which the two coefficients γ and $\alpha + \gamma$ are verified, it is the health sector of which it is composed of two companies only, Sartorius and Guerbet.

Guerbet and Sartorius together demonstrate significant results, however for the evaluation of serial corporate acquisitions carried out for all sample companies the result is somewhat mixed since for each regression there are only one or two companies that have verified all three assumptions. Table 10 below shows this situation :

Table 9: Summary of some studies on acquisition programs.

	Study of Asquith, Bruner and Mullins (1983)	Study of Malatesta and Thompson (1985)	Actual study Boufama (2015)
Period of study	1963-1979	1958-1962 1968-1973	1997-2007
number of enterprises (stocks) in the sample	144	30	46
Estimated announcement effect (%)	2.80	2.91	1.40

Source : (Omar Boufama, 2015, page 210).

Table 10: Companies that met the study hypotheses.

Coefficients	sign of the coefficient according to the hypothesis	Regression 1	Regression 2	Regression 3	Regression 4
α	Negative	-	-	-	-
γ	Positive	+	+	+	+
$\alpha + \gamma$	Positive	+	0	+	+
The companies that met the hypotheses		<i>L'OREAL</i>	<i>UNIBEL</i>	<i>CASINO</i>	<i>CASINO</i>

Source : (Omar Boufama, 2015, page 207).

Conclusion

This work is an extension of scientific research in terms of the impact of M&A operations on the value of the firm. Through this study we have tried to examine the profitability of French M&A that are part of the serial corporate acquisitions. We applied the (Thompson & Malatesta, 1985) Partially Anticipated Events model to assess the profitability of serial acquisition launched by French acquirers.

Each acquisition transaction that the acquirer may initiate to acquire another business is considered an attempted acquisition and each acquisition attempt may be successful or unsuccessful, as each acquisition transaction is an anticipated event. This application required some variations in the choice of companies (Acquirers) compared to the method used by these authors.

The average economic impact has a different sign than that predicted by the hypothesis, it is equal to -40,901 million euro and most tests indicate that they are statistically significant, which is contrary to the value maximization assumption.

French acquirers can become active acquirers because they have a comparative advantage in making acquisitions. Fixed costs for initiating a serial corporate acquisitions must offset the benefits of attempted acquisitions. (Schipper & Thompson, 1983) found the stock market response to the launch of serial corporate acquisition to be on average positive. This result was confirmed in the study by (Thompson & Malatesta, 1985) but not in our study. The problem in the French case is probably the frequency of acquisition attempts which is low. In the American case this frequency is 1.5 acquisition attempt per year, while in the French case it is 0.19.

This model on which is based our empirical study is applied through four multiple regressions among which the coefficients of two of them are expressed in rates of return. The results extracted from those various regression show that only the hypothesis of announcement effect of acquisition attempts was verified. For the two others hypotheses, three calculated coefficients had different signs of their thrust signs.

Finally, proved evidence through the four regressions results supports partially the hypothesis that serial corporate acquisition can be perceived as profitable investment projects for the French acquirers. This conclusion is justified by the individual results of firms. Otherwise, the sample which consists of 46 French companies considered as frequent acquirers on French acquisition market indicate clearly that firm's acquisition programs were destructive of value. It means they do not maximize the value of the firm nor the stockholder's wealth.

Our study has evident limitations. One is the relatively small sample of French public acquirers that were active in acquisitions in the period examined in this study. Previous studies, mostly, focused on American, British, or Chinese markets, so it would be interesting to trace the generalization of our evidence to other markets in continental Europe or emerging markets, different from China. Also, it would be interesting to expand the period of observation and study recent patterns of serial acquisitions. Secondly, as (Morillon, 2021) states, different types of serial acquirers follow different patterns in acquisition ; this fact may be the explanation of the evidence of our study that shoes that only few companies fulfill successful acquisitions. Therefore, it is interesting to trace these types in our sample.

References

- Asquith, P., Bruner, R., & Mullins, D. (1983). The gains to bidding firms from merger. *Journal of Financial Economics*.
- Boufama, O. (2015, Octobre). Corporates acquisition programs, towards a profitability assessment model : Adaptation to Algeria (Les programmes d'acquisition d'entreprises, vers un modèle d'évaluation de la profitabilité : Essai d'adaptation à l'Algérie). Annaba, ALGERIA: Thèse de Doctorat, University Badji Mokhtar.
- Bradley, Desai, & Kim. (1983). The rationale behind interfirm tender offers : information or synergy. *Journal of Financial Economics*.
- Bradley, M., Desai, A., & Kim, E. (1982). Specialized resources and competition in the market for corporate control.
- Dennis, J., & McConnell, D. (1984). Corporate merger and security returns : Tests of the investment hypothesis, the incentive hypothesis and the coinsurance hypothesis. *Working Paper, Purdue University*.
- Fama, E., Fisher, L., Jensen, M., & Roll, R. (1969). The ajustement of stock prices to new information. *International Economic Review*.
- Firth, M. (1980). Takeovers, shareholders returns and the theory of the firm. *Quarterly Journal of Economics*.
- Ibrahimi, M., & Meghouar, H. (2019). Sources of value creation and destruction in horizontal mergers and acquisitions. *Managerial Finance*.
- Ismail, A. (2008). Which acquirers gain more, single or multiple ? Recent evidence from the USA market. *Global Finance Journal*.

- Laamanen, T., & Keil, T. (2008). Performance of serial acquirers : Toward an acquisition program perspective. *Strategic Management Journal*.
- Macias, A., Rau, P., & Stouraitis, A. (2016). Can serial acquirers be profiled. *Working Paper, Cambridge University*.
- Malatesta, P. (1983). The wealth effect of merger activity and the objective function of merging firms. *Journal of Financial Economics*.
- Morillon, T. (2021). Serial acquirers and decreasing returns : Do bidder's acquisition patterns matter ? *Financial Review*.
- Mosharraf, H. M., Duy, P. M., & Nahid, I. (2021). The performance and motivation of serial acquisitions : Evidence from Australia. *International Review of Financial Analysis*.
- Pandey, V., Sutton, N., & Steigner, T. (2021). Learning in serial mergers : Evidence from a global sample. *Journal of Business Finance and Accounting*.
- Ruback, R. (1983). Assessing competition in the market for corporate acquisition. *Journal of Financial Economics*.
- Rutkowski, A. (2018). Profitability of serial acquirers on the Polish capital market. *Springer Proceedings in Business and Economics*.
- Schipper, & Thompson. (1983). Evidence on the capitalized value of merger activity for acquiring firms. *Journal of Financial Economics*.
- Thompson, P., & Malatesta, R. (1985). Partially anticipated events : A model of stock price reactions with an application to corporate acquisitions. *Journal of Financial Economics*.
- Trowski, C. (2014). Acquisitions and bidder stock valuations : empirical evidence from the French market. *Finance*.
- Varaiya, N. (1985). A test of Roll's hubris hypothesis of corporate takeovers. *Working Paper, Southern Methodist University*.