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THE WEALTH EFFECTS OF MERGERS AND ACQUISITIONS TO TARGET-COMPANIES IN USA FOR THE PERIOD 1920-2000: A CRITICAL EXAMINATION OF RELATED EMPIRICAL STUDIES

By

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Abstract

In the present paper we collect and assess the results from a number of empirical studies which deal with the economic impact of mergers and acquisitions to the share value of target-companies in USA. The studies in question cover a time interval from 1920 until 2000 and represent almost the entire studies that evaluate the phenomenon among various business areas. Despite the fact that positive results arise for target-companies shareholders from mergers and acquisitions, the results show significant divergences among studies with overlapping sample periods and/or with common or similar event windows, fact which prevents the derivation of concrete conclusions. JEL Classifications: G34, G14, N22.

Keywords: Mergers, acquisitions, efficient market theory, cumulative abnormal returns, event window.

1. Introductory comments and the aim of the paper

The evaluation of mergers and acquisitions (M&As) phenomenon constitutes a particularly popular research field from which a large number of individuals or business firms can draw useful decision making information. Businessmen, shareholders, investment companies, mutual funds, huge funds, banks, special credit organizations and national authorities come to many decisions taking into account the findings of these studies.

The importance of the phenomenon is confirmed by the extensive volume of relative research papers in the international literature, while the intensive pursuit of reliable answers led the researchers to adopt a number of alternative approaches. For instance, while the experts of the industrial organization

field propose changes in the balance sheet of the (two) dealing companies as a method of evaluating M&As, the experts of finance, based on the neoclassic theory[1], suggest that the assessment of M&As should be realized through the study of the market value changes of the companies that are caused during the public announcement of the 'transaction'.

The theoretical background of the second approach, which nowadays expresses the prevailing view in the field, derives from the theory of efficient markets (Fama *et al.,* 1969) according to which the share prices react immediately and fully to any relevant information. In particular, any relevant new information that sees the light of publicity creates future expectations, which the market discounts at the time of the public announcement. Within the framework of that theory, the methodological approach that is applied in the international literature in order to evaluate the wealth effects of M&As is the "event study". According to this approach, focus is placed on the market returns of the dealing companies around the public announcement of M&As, which as a fact constitutes the new and unexpected event. More specifically, the ultimate objective of the event studies is the estimation of the additional (abnormal) returns that result before[2], during and after the announcement day of M&As. The daily abnormal return of a share is calculated by deducting from the actual return of that asset the returns of a benchmark, which can be either a general market index or a market model[3]. The sum of daily abnormal returns for a selected time interval (event window) generates the corresponding cumulative abnormal returns.

It is important to point out that the theory of efficient markets, on which is based the application of the event study, does not determine explicitly the precise event window that is required for the 'immediate' and 'full' incorporation of the consequences that derive from any new and relevant information to the market value of the company or the companies that are examined. Thus, the empirical studies that evaluate the wealth effects of M&As apply event windows that vary from few or many days to few months around the announcement date[4]. In addition, the application of the event study methodology requires certain preconditions that in fact limit the comparability of the empirical results. These preconditions are related with the country of origin of the selected companies, the size of the sample examined, the sample period, the duration of the event window, the type of the transaction (merger, acquisition or tender offer) and the methodology that is used for the calculation of the abnormal returns.

The present paper, allowing for the above limitations, records and evaluates the empirical results regarding the wealth effects of M&As to target-companies

in USA, that have been published from numerous event studies. The country in question has been selected since there is a considerable number of recorded M&As, the market value of the transactions is substantial, there is sufficient availability of numerical data and for these reasons there is a sufficient number of researchers who in turn have published a sufficient number of empirical studies. The extensive bulk of published empirical results for US target-companies allows the comparative assessment of them, in order to develop generalised and reliable conclusions which under certain conditions could constitute a valuable investment guide.

The purpose of the present study is primarily to record the findings of the studies that examine M&As from 1920 until 2000 in USA and through the comparative analysis certain findings are generated. More specifically, this paper is structured as follows: in the second part the event studies that examine the wealth effects of M&As to target-companies in USA are recorded. In the third part the results of the event studies are assessed based on the applied event windows, while in the fourth part the diachronic development of the phenomenon is taking into consideration. Finally, in the last fifth section the conclusions of this critical comparative examination are presented.

2. Presentation of the empirical studies which examine the wealth effects of M&As to target-companies in USA for the period 1920-2000 and some preliminary comments

The empirical studies that evaluate the economic impact of M&As to US target-companies are recorded in Table 1. In the first column of the table the name(s) of the author(s) are reported and in parenthesis the year of publication of the study, in the second column is mentioned the sample period, in the third column the cumulative abnormal returns are recorded and in parenthesis the value of the statistical test (t-statistic) where this is available, in the fourth column the size of the sample used is presented and in parenthesis the percentage of target-companies with positive returns (in the studies where is available), in the fifth column the duration of the event windows is presented on which the abnormal returns[5] are calculated and the last column reports any important particular information.

TABLE 1

The wealth effects of M&As to US target-companies
for the period 1920 – 2000

Authors (1)	Sample Period (2)	Cumulative Abnormal Returns (3)	Sample Size (4)	Event Window (days) [months] (5)	Additional Information (6)
Andrade *et al.* (2001)	1973-98	16% 23.8%	4,256	(-1,1) (-20,end)[1]	Approximately 8% of the general sample (4,256) is constituted by tender offers
	1973-79	16% 24.8%	789		
	1980-89	16% 23.9%	1,427		
	1990-98	15.9% 23.3%	2,040		
Asquith *et al.* (1990)	1973-83	16.83% (70.39)	139	(-1,0)	
Asquith (1983)	1962-76	Completed 6.2% (23.07) 15.50%	211 (84%)	(-1,0) (-1,end)[2]	
		Uncompleted 7% (12.83) -7.5%	91 (89%)		
Asquith and Kim (1982)	1960-78	14.9%	22	(-10,10)	Conglomerate mergers only
Davidson and Cheng (1997)	1981-87	11.60% (20.51)	145	(-1,1)	
DeLong (2001)	1988-95	16.61% (35.77)	280 (89%)	(-10,1)	Mergers, where at least one party was bank
Dennis and McConnell (1986)	1962-80	8.11% (3.00) 16.67% (2.86) 8.56% (7.07) 4.06% (4.52) 13.74% (2.54)	75 (71%)	(-19,-2) (-19,0) (-1,0) (0) (-6,6)	Mergers with the exclusive use of common stocks. The numbers in the fourth column refer to the announcement day
Dodd (1980)	1970-77	Completed 13.41% (71.2) 27.97%	71	(-1,0) (-40,40)	
		Uncompleted 12.73% (19.8) 15.65%	80		

Eckbo (1983)	1963-78	Unchallenged 14.08% (6.97) 6.24% (9.97) 8.91% (9.23) 3.13% (10.17) Challenged 25.03% (12.61) 10.2% (15.22) 11.74% (12.80) 3.82% (7.99)	57 (70%) (60%) (65%) (51%) 29 (90%) (72%) (72%) (57%)	(-20,10) (-1,1) (-3,3) (0)	Horizontal mergers
Eger (1983)	1958-80	2.6% (10.36)	36	(0)	Mergers with the exclusive use of stocks
Frank and Harris(1989)	1955-85	14.7%	1,210 (81%)	[0]	
Frank *et al.* (1991)	1975-84	Total 28.04% (22.87) One bidder 24.57% (19.25) Many bidders 39.49% (13.71) Unopposed bids 25.58% (19.22) Opposed bids 35.32% (12.99)	399 306 93 298 101	(-5,5)[3]	
Healy *et al.* (1992)	1979-84	40.6%	50	(-5,end)[4]	The 50 largest acquisitions of the period
Houston *et al.* (2001)	1985-90 1991-96 1985-96	15.58% (5.19) 24.60% (7.77) 20.80% (9.13)	27 37 64	(-4, end)[5]	Mergers between banks with value more than $ 400 millions
Huang and Walkling (1989)	1977-82	22.6%	101	(-1,0)	
Kaplan and Weisbach (1992)	1971-82	26.9% (19.2)	209 (95%)	(-5,5)[6]	Mergers with value more than $ 100 millions
Leeth and Borg (2000)	1919-30	18.22% (6.47)	59 (75%)	[-1,end][7]	
Malatesta (1983)	1969-74	16.8% (17.57)	83	[0]	

Maquieira *et al.* (1998)	1963-96	Conglomerate 41.65% (6.55) No Conglomerate 38.8% (4.94)	47 (83%) 55 (80%)	[-2,2]	Mergers with the exclusive use of common and preferred stock
Martínez-Jerez (2002)	1990-98	13.62%	335 (82%)	(-1,1)	Mergers with pooling of interest[8]
Mulherin (2000)	1962-97	10.14%	202 (76%)	(-1,0)	
Mulherin and Boone (2000)	1990-99	21.2% (16.8)	376	(-1,1)	
Schwert (2000)	1975-96	22% (24.4) 12.4% (24.8) 9.6% (13.7)	2,296	(-63,126) (-63,-1) (0,126)	The sample includes a fraction of tender offers
Schwert (1996)	1975-91	13.40%	647	(-42,-1)	
Servaes (1991)	1972-87	Total 21.89%	577	(-1,end)[9]	
		One bidder 20.83%	500		
		Many bidders 30.53%	204		
	1972-80	24.55%	338		
	1981-87	22.80%	366		

[1] The event window ends the completion day of the merger.

[2] The event window ends either the completion day or the cancellation day.

[3] The event window ends five days after the last bid.

[4] The event window ends the day when the target-company is delisted from the stock market.

[5] The event window ends one day after the completion of the merger.

[6] The event window ends five days after the last bid.

[7] The event window ends the completion month.

[8] This note has to do with the accounting treatment of the merger.

[9] The event window ends either the acceptance day or the delisted day.

The empirical studies that are presented in Table 1 cover a sample period which begins in the decade of 1920s (Leeth and Borg, 2000), where took place the second wave of M&As and finishes at the second half of 1990s, during the fifth wave of M&As (Martinez-Jerez, 2002, Andrade *et al.*, 2001, Houston *et al.*, 2001, Mulherin, 2000, Mulherin and Boone, 2000, Schwert, 2000, Maquieira *et al.*,

1998). Nevertheless, we should point out that the majority of studies focuses on M&As transactions from the first half of 1960s up to the middle of 1980s.

A key parameter which should be taken into account while evaluating the empirical results is the size of the samples used by different studies. For instance, it is reported that in the studies of Andrade *et al.* (2001), Schwert (2000) and Frank and Harris (1987) the number of target-companies under review varies from 1,210 to 4,256. On the contrary, in other studies, like those of Houston *et al.* (2001), Leeth and Borg (2000), Maquiera *et al.* (1998), Healy *et al.* (1992), Eckbo (1983) Asquith and Kim (1982), the number of the examined companies is very limited, since there are included less than 60 target-companies. However, in most studies, the samples used include from 100 to 350 cases.

In addition, based on the data of column 4 in Table 1, the percentages of target-companies with positive abnormal returns at the corresponding event windows, in many cases do exceed 80% (Martinez-Jerez, 2002, DeLong, 2001, Maquieira *et al.*, 1998, Kaplan and Weisbach, 1992, Frank and Harris, 1987, Asquith, 1983), while the lowest recorded percentage is in the order of 51% (Eckbo, 1983).

4. Evaluation of the studies' results based on the duration of the event windows

A crucial parameter that, as it was mentioned above, is related to the efficient market hypothesis and differentiates the empirical results, is the **duration of the event windows** on which the abnormal returns are calculated. In fact, there is a correlation between the abnormal returns and the length of the event windows, although this correlation in not linear. Most researchers choose a time interval of few days around the announcement day of the merger or acquisition (Martinez-Jerez, 2002, Andrade *et al.*, 2001, Mulherin, 2000, Mulherin and Boone, 2000, Davidson and Cheng, 1997, Frank *et al.*, 1991, Huang and Walkling, 1989, Asquith, 1983, Eger, 1983, Dodd, 1980), while in a number of studies, the researchers apply more extended event windows (Maquieira *et al.*, 1998, Frank and Harris, 1987, Malatesta, 1983), which, in certain studies, terminate relatively to an event.[6] (Andrade *et al.*, 2001, Houston *et al.*, 2001, Leeth and Borg, 2000, Healy *et al.*, 1992, Kaplan and Weisbach, 1992, Servaes, 1991).

In addition we should underline that the application of common event windows does not cause equal or similar results for the target-companies. Indeed, in a number of studies, the abnormal returns record important divergences even when the applied event windows are identical. For instance, in the event window

of three days (-1,1), in the study of Andrade *et al.* (2001), the abnormal return for the period 1973-1998 is in the order of 16%, while in the studies of Martinez-Jerez (2002), Mulherin and Boone (2000), Davidson and Cheng (1997) and Eckbo (1983), where the sample periods are shorter and during the period of Andrade *et al.* (2001), the abnormal returns vary from 6.24% to 21.2%. Similarly, considering the studies of Martinez-Jerez (2002) and Mulherin and Boone (2000) which apply the same event window (-1,1) and use similar sample periods during the 1990s, it is observed that the abnormal return in the latter is 56% higher than the corresponding return in the former.

In the same way, important differentiations are presented among the studies when the adopted event window lasts two days, (-1,0), including the announcement day of the merger and the previous one. According to the data of Table 1, the abnormal returns that relate to the studies of Mulherin (2000), Asquith *et al.* (1990), Huang and Walkling (1989), Dennis and McConnell (1986), Asquith (1983) and Dodd (1980), vary between 6.2% and 22.6%. Consequently, the sizeable breadth of abnormal returns that is recorded in just two days is, once more, an evidence of significant differentiations regarding the economic impact of M&As to target-companies.

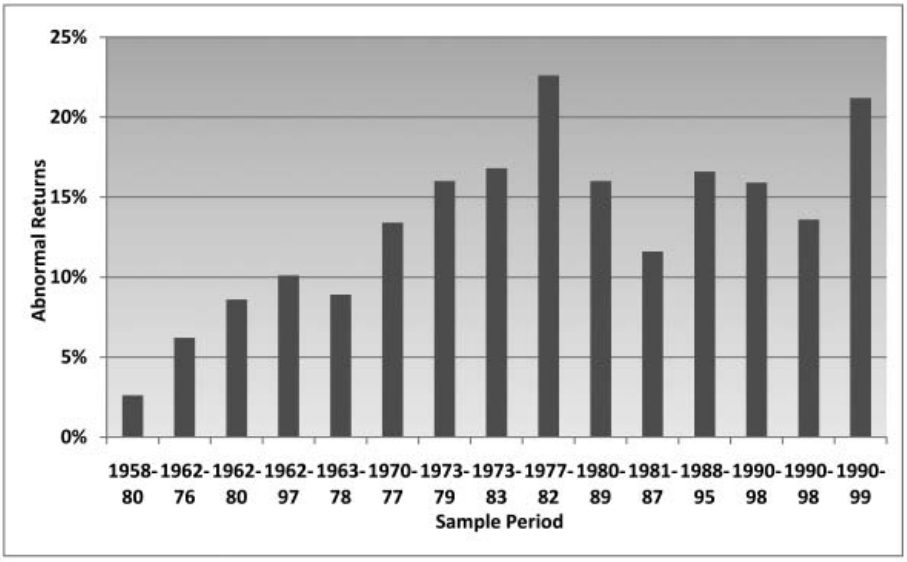
In order to conclude the picture in the case of short-term event windows, it is reported that Eger (1983), using an event window that represents the announcement day of M&As (0), records an abnormal return of 2.64% which is the lowest one for the target-companies[7]. Additionally, for the same event window Dennis and McConnell (1986) and Eckbo (1983) record abnormal returns in the order of 4.06% and 3.13% respectively which are much higher than this of Eger (1983). Though, the results during the announcement day are in any case much lower than the results of slightly longer time periods, a fact which indicates that the incorporation of the effects that derives from a merger or acquisition announcement is not completed just in the announcement day.

It could be claimed based on the unification of the points of the last paragraphs that the abnormal returns differ considerably from study to study, even when the duration of the event window is limited in few days or even in one day. The confirmation of the above statement is given in Graph 1 which shows the abnormal returns that have been estimated in short-term event windows. It is apparent that the formation of generalized and concrete conclusions presents a high degree of difficulty. However, we could pointed out the fact that when the first year of the sample period is before 1970 the abnormal returns in short-term

event windows are found to be less than 10%, while afterwards the returns vary from 12% up to 23%.

GRAPH 1

Diachronic comparative assessment of empirical results.
Abnormal returns in similar event windows of short-term duration



The considerable discrepancies in the abnormal returns that are presented in the examined studies which apply short-term event windows do not exist when the duration of the windows is extended to months. More specifically, at the announcement month [0] of M&As, the studies of Frank and Harris (1989) and Malatesta (1983) with similar sample periods, record converging abnormal returns in the order of 14.7% and 16.8% respectively. Also, the widening of the event window that is attempted in the studies of Leeth and Borg (2000) and Maquieira *et al.* (1998) results to higher abnormal returns than the two previous studies, while the returns increase to 18.22% and 41.65% respectively.

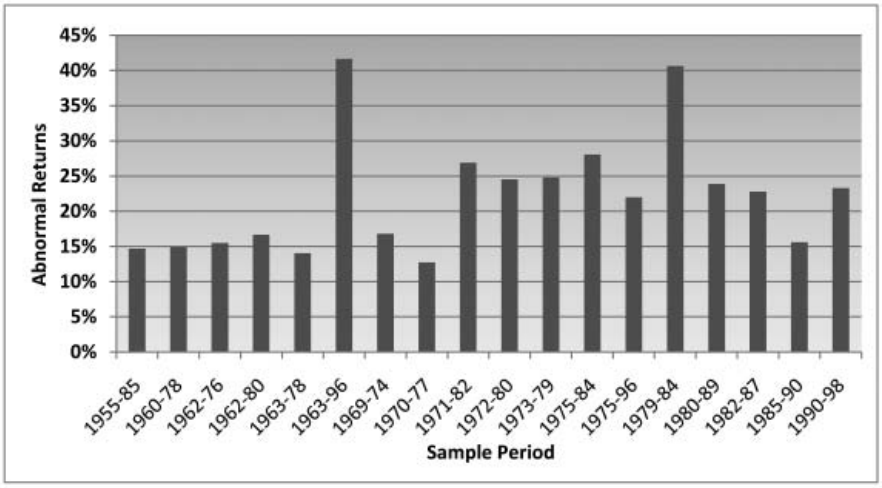
It should be mentioned that in some empirical studies the duration of the event windows is not stable and pre-specified, but depends on the realization of the particular event. In case where the event in question is the final completion of the initial public announcement of the merger or acquisition, the studies of Andrade *et al.* (2001), Healy *et al.* (1992), Servaes (1991)[8] and Asquith (1983) record abnormal returns between 15.50% and 23.8%, although the first three studies present similar results, above 20%. Furthermore, an alternative event

window that is adopted by Kaplan and Weisbach (1992) and Frank *et al.* (1991), begins five days before the first bid and finishes five days after the last merger or acquisition proposal that is offered to target-companies. These two studies, which examine overlapping sample periods, record similar results, since in the former the abnormal return amounts to 26.9%, while in the latter the corresponding return is found marginally above 28%.

The studies that adopt not fixed windows as in the case of monthly event windows present results with relative consistency and consequently more reliable conclusions can be drawn. This is confirmed from the Graph 2, which records abnormal returns from studies that apply long-term event windows show little variation, particularly when the studies in question are grouped before and after 1970 taking into account the beginning of the sample period. According to the Graph 2 and excluding the extreme values, when the beginning of the sample period is before 1970 the abnormal returns vary from 12% to 17%. In contrast, when the sample period starts after 1970 the abnormal returns are between 22% and 28%.

GRAPH 2

Diachronic comparative assessment of empirical results.
Abnormal returns in similar event windows of long-term duration



A more complete justification of the relation between the level of abnormal returns and the duration of the applied event windows is given in Graph 3. This graph presents the abnormal returns for the entire event windows that have been used by the researchers. The careful examination of the graph leads to

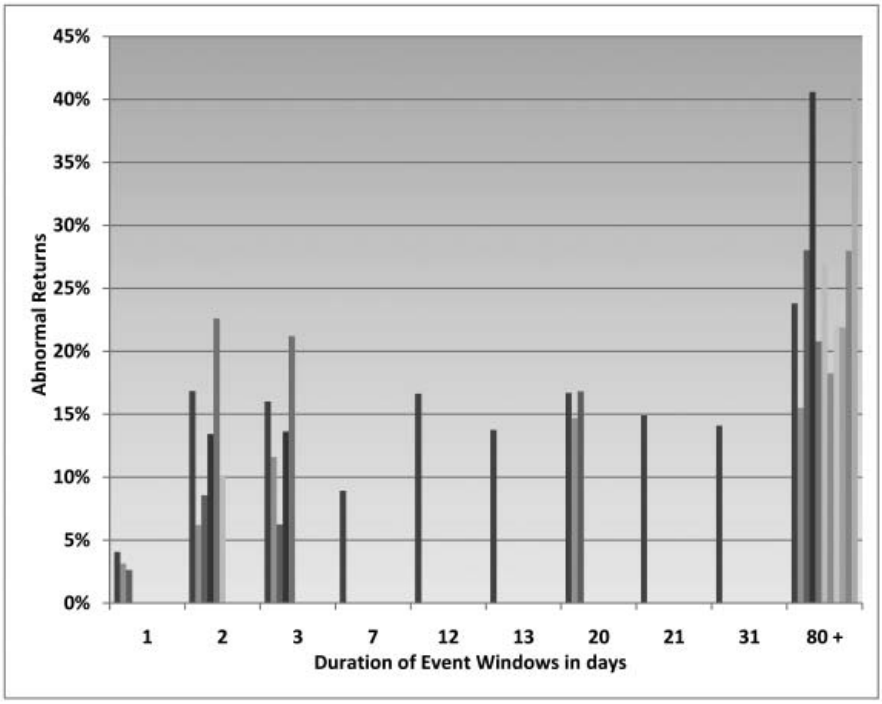
the following findings. The studies that apply event window of one day record abnormal returns with an average of 3.5%. On the contrary, the studies that use event window of two days record much higher returns that vary from 6% to 23%, with an average value of 12.5%. Similar with the previous results is the breadth of abnormal returns that present the studies which apply event windows from 3 to 31 days, fact that indirectly could lead to the conclusion that the theory of efficient markets on the one hand presupposes time period of two days and on the other hand covers or is verified in time interval that does not exceed thirty one days.

Another finding is that the studies that adopt long-term event windows which last more than thirty one days present abnormal returns between 15% and 42% with an average of 25%. This finding is likely to indicate a second wave of investment opportunities in target-companies' shares that appears many days (or few months) before or/and after the announcement date of the merger.

The above findings, although are remarkably impressive, come up from the results of different and numerous studies and not from a single study that aims to discover the significance of event windows. Thus, even thought these findings are not documented strictly scientifically, important questions arise which could be investigated empirically and more rigorously, in the frames of a unified sample.

GRAPH 3[1]

Abnormal returns based on the duration of the event windows



[1] Regarding monthly event windows, it is supposed that each month has 20 trading days.

5. Diachronic trend of abnormal returns of the examined studies

An equally important parameter which could affect the empirical results of the examined studies is the **sample period**, apart from the duration of the event windows. Social, economic and technological developments together with various definite and indefinite variables have an effect on the expectations of business firms and up to a point, shape the results of M&As. In order to investigate the diachronic development of the phenomenon and identify possible differences through the last decades, the empirical results are distributed considering the sample period. Initially, it is realised that, with the exception of the study of Leeth and Borg (2000), the entire samples under review focus on the four last decades of the previous century. In this frame and ignoring the outliers, the following Table 2 presents the wealth effects of corporate M&As at each decade and also shows the diachronic trend of abnormal returns from decade to decade.

TABLE 2

Diachronic trend of the wealth effects of M&As

	Sample Period			
	1960–following decades	1970 - 79	1980 - 89	1990 - 99
Short-term event windows	2.6% - 10.1%	13.4% - 16.8%	11.6%	13.6% - 21.2%
Long-term event windows	14.9% - 41.7%	16.8% - 28%	15.6% - 40.6%	16.6% - 24.6%
General Breadth of Returns	2.6% - 41.7%	13.4% - 28%	11.6% - 40.6%	13.6% - 24.6%

With regard to the most recent decade, the 1990s, the studies of Martinez-Jerez (2002), Mulherin and Boone (2000) and Andrade *et al.* (2001), which apply a common event window (-1,1), record abnormal returns in the order of 13.62%, 15.9% and 21.2% respectively, determining a wide breadth of short-term returns from 13.6% to 21.2%.

Taking into account the case of long-term event windows, the study of Houston *et al.* (2001) records an abnormal return in the order of 24.6% which is 50% higher than the corresponding return of DeLong (2001), despite the fact that both studies evaluate M&As where at least the one party was bank. However, this sizeable difference occurs due to the different duration of the event windows that the two studies use, since in the former the applied event window finishes the completion day, while in the latter the event window lasts 12 days (-10,1).

Overall, it is reported that the general breadth of abnormal returns during the decade of 1990s to US target-companies varies between 13.6% and 24.6%. However, this breadth is differentiated depending on the duration of the event windows. In particular, for short-term event windows the breadth of abnormal returns is 13.6%-21.2%, while in the case of long-term event windows the corresponding breadth is 16.6%-24.6%. By and large, the abnormal returns in long-term event windows in the 1990s are relatively higher than those in short-term.

For the decade of 1980s the majority of studies (four out of five) uses long-term event windows. Within the frame of such windows, the studies of Andrade *et al.* (2001) and Servaes (1991) record parallel results since both studies present abnormal returns in the order of 23%, for similar event windows that end at the completion day of the merger. At the same time, the study of Healy *et al.*

(1992) that covers the first half of the decade, records abnormal return in the order of 40.6% which is almost 80% higher than those of the two previous studies and, indeed, one of the highest returns during the period 1920-2000 for US target-companies. Moreover, the studies of Houston *et al.* (2001) and Davidson and Cheng (1997) which is the only study that applies short-term event window, record the lowest returns for the decade in the order of 15.58% and 11.6%, respectively. According to the data of Table 2, during the decade of 1980s the general breadth of abnormal returns for target-companies varies between 11.6% and 40.6%. However, the lower return derives from the study of Davidson and Cheng (1997), a fact that once more confirms better results during long term event windows than short-term, while the breadth of abnormal returns for the former is 15.6% - 40.6%.

With reference to the decade of 1970s, the studies of Andrade *et al.* (2001), Servaes (1991), Malatesta (1983) and Dodd (1980), as well as the studies of Kaplan and Weisbach (1992), Frank *et al.* (1991), Asquith *et al.* (1990) and Huang and Walkling (1989), that cover in addition few years from the 1980s, present positive abnormal returns that vary from 14% to 28%. However, the distribution of the returns is the finding of particular interest, since the returns assemble in the two boundaries of the breadth. More specifically, the studies of Andrade *et al.* (2001), Malatesta (1983), Dodd (1980) and Asquith *et al.* (1990), which, excepting the second study, apply common event window of two days (-1,0), record abnormal returns near the low boundary, up to 17%. On the contrary, the remaining studies of Kaplan and Weisbach (1992), Frank *et al.* (1991), Servaes (1991) and Huang and Walkling (1989), using dissimilar event windows, present abnormal returns between 23% and 28%. According to the classification of the data in Table 2, the general breadth of abnormal returns for the period of 1980s varies between 13.4% and 28%, while in short-term event windows the returns are from 13.4% to 16.8% and in long-term windows from 16.8% to 28%.

Finally, taking into account the empirical studies that select sample periods which begin during the decade of 1960s and exceed in the following decades lasting more than 14 years, the general breadth of abnormal returns for that period is between 2.6% and 41.7%. During that period, the studies of Dennis and McConnell (1986) and Asquith (1983), which use common event window (-1,0) and similar sample periods which start in 1962 and finish after 14 and 18 years respectively, present converging abnormal returns close to 8%. At the same time, the study of Asquith and Kim (1982), which has similar sample period but longer event window (-10,10) compared to the previous studies and evaluates exclusively conglomerate mergers, records abnormal return in the order

of 14.9%. The study of Eger (1983), using a longer sample period, estimates the lower abnormal return that has been estimated for US target-companies in the order of 2.6%. The studies of Mulherin (2000) and Maquieira *et al.* (1998) apply the longer sample periods lasting more than 30 years, which start at the begging of 1960s and finish in the second half of 1990s. The estimated abnormal returns in these studies deviate substantially, since in the former the abnormal return is in the order of 10.14% while in the latter 41.65%. However, that divergence even if is considerable could be justified to certain extent from the different event windows that these two studies apply. Particularly, in the study of Mulherin (2000) the duration of the event window is two days (-1,0), while in the study of Maquieira *et al.* (1998) the event window lasts five months [-2,2].

The main findings, with regard to the diachronic development of the wealth effect that derive from M&As, can be summarised as following. The studies that use sample periods during the decades of 1970s and 1990s record a remarkably matched general breadth of abnormal returns, which varies from, approximately, 13% to 26%. The same uniformity in the results is also observed between the decade of 1980s and the period that begins during the 1960s. Specifically, in the former the recorded abnormal returns are from 11.6% up to 40.6% and in the latter the returns vary from 2.6% to 41.7%. This apparent circularity of the phenomenon should certainly be the subject of a closer study. Still more impressive is the circularity in the abnormal returns that results in long-term event windows. In particular, for the decades of 1960s and 1980s the abnormal returns for long-tern event windows vary between 14.9% - 41.7% and 15.6% - 40.6% respectively, while for the decades of 1970s and 1990s the corresponding returns vary between 16.8% - 28% and 16.6% - 24.6% respectively. In contrast, the diachronic development of abnormal returns that are estimated in short-term event windows does not present a proportionally circular trend.

6. Conclusions and proposals for future research

The data that have been presented and analyzed in the above sections of the paper, show that the target-companies in USA, in the entire cases, obtain positive additional returns during the announcement of corporate M&As, which take place with the agreement of the board of directors. Nevertheless, it should be mentioned that the abnormal returns, even if are positive and statistically significant, record a sizeable breadth between 2.6% and 41.7%.

The level of abnormal returns in M&As is correlated to the length of the event windows and according to the event studies, higher returns are recorded in extended event windows. However, it should be pointed out that there is not

a general consensus among the researchers regarding the determination of the adequate event window for the estimation of the wealth effects of corporate M&As. Still bigger complexity stems from the conclusion that the recorded results deviate considerably even among the studies that apply common or similar event windows, which last one or few days around the announcement date of M&As. In contrast, more consistent are the findings concerning long-term event windows. Particularly, in event windows that last few months the estimated returns present a relative similarity, while the recorded returns are in any case higher than the corresponding returns for short-term event windows.

Investigating the diachronic trend of the phenomenon, it is realized that the results present circularity both in the general breadth of abnormal returns and in the long-term event windows. The diachronic development of the results that are calculated in short-term windows does not present a proportional circular consistency.

Another significant outcome of this examination has to do with the level of abnormal returns between completed and uncompleted M&As. During the initial announcement date of M&As the market employs the current available information without making an allowance for the final outcome of the prospect merger, since the results are similar for the target-companies that finally merge with those that the merger at the end is cancelled. An additional important result that emerges from the examined studies is that the competition among bidders, in order to acquire a target, results to enough higher abnormal returns for the latter, comparatively with the existence of only one bidder.

A final important point that is worth mentioning is the exceptionally high percentages of target-companies that present positive abnormal returns. As it becomes apparent from the majority of the empirical studies, the percentages in question are found to be above 80% for M&As.

The findings of the present study could be used as a starting point for further research in the field of M&As. In particular, the results found for US target-companies could be comparable to the corresponding results for similar companies but from different countries or geographic areas, such as the UK, Continental Europe or emerging markets. Likewise, the results from all the previously examined studies could be used as a point of reference for the wealth effects of M&As taking place at present. The comparative assessment between recent and past results of M&As could lead to the identification of any significant trends or confirm the circularity of the phenomenon that observed during the last decades.

Notes

1. According to the neoclassic theory, the stock market is the most effective mechanism of distributing the available resources. As a result mergers and acquisitions are a process of efficient distribution of economic, business and human resources.

2. The objective of using event windows that begin days before the announcement date is to examine the cases of inside information and/or leakage of information.

3. For a more detailed information for the application of event studies look at Brown, S. and Warner, J. (1985; 1980).

4. According to Mitchell and Netter (1989) and Dann *et al.* (1977) the consequences of certain events can be incorporated in share prices in few minutes.

5. Regarding the duration of the event windows it is noted that the numbers in parenthesis (,) denote days, while the numbers in brackets [,] denote months. Zero is the announcement day (0) or the announcement month [0].

6. Such an event could be the completion of the merger, the cancellation of the merger, the last bid, the delisting, the acceptance of the offer or the acquisition of control.

7. It should be noted the significantly small sample size in the study of Eger (1983), which includes 36 observations.

8. In the study of Servaes (1991) the event window ends either the acceptance day or the delisting day.

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