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Exploring the Improvement of Corporate Performance after Mergers – the Case of Greece

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Abstract

This paper examines empirically the impact of mergers and acquisitions (M&As) on the operating performance of M&A-involved firms in Greece. Using financial and non-financial characteristics, the post-merger performance of fifty Greek companies, listed at the Athens Stock Exchange (ASE) that executed at least one merger or acquisition in the period from 1998 to 2002, is investigated. Selected accounting variables (financial characteristics) are introduced to measure operating performance and compare pre- and post-M&A firm performance for three years before and after M&A, while the year of M&A event is omitted from comparisons. Furthermore, the business strategy and the operating performance of the firms are evaluated on a set of explanatory variables (non-financial characteristics) from a confidential questionnaire response data, which include the type of merger, the method of evaluation and the method of payment.

Key words: mergers, acquisitions, operating performance, business strategies
JEL Classification: G34, M41

I. Introduction

Presently, one of the main elements of contemporary corporate restructuring is the boom in mergers and acquisitions (M&As). The strategy literature commonly argues that M&As are one of the mechanisms by which firms gain access to new resources and, via resource redeployment, increase revenues and reduce cost. This major proposition for the M&As increased activity is mainly imposed by intense competition, evolving technology, low interest rates, changing regulations in the financial markets, and many other factors.

Notwithstanding, the process of internationalisation and the expansion of the European Union has fostered the whole activity in recent years: foreign direct investment by multinational companies has grown rapidly, international trade increase faster than the rate of growth of national economies, and supra-national institutions, such as the EU and the WTO, promoted ever more inter-linked economies over national governments, which evolve an international perspective of M&As and an increasingly competitive business environment (Zarotiadis & Pazarskis, 2003).

The potential economic benefits of M&As are changes that increase value that would not have been made in the absence of a change in control. These changes in control are potentially most valuable when they lead in the re-deployment of assets or restructurings, providing new operating plans and business strategies. Or, simply all of these could only provide a possible improvement in free cash flow.

In order to examine the phenomenon of M&As in Greece, this study proceeds to an empirical analysis of the post-merger performance of fifty Greek companies, listed at the Athens Stock Exchange (ASE) that executed at least one merger or acquisition in the period from 1998 to 2002, using financial and non-financial characteristics, and attempts to investigate the M&As effects on their operating performance. The structure of this paper is as follows: section II refers at the current legal framework in Greece, and, particularly, for a company listed at the Athens Stock Exchange (ASE); section III provides an analytical basis of the research design (research question, sample and data, questionnaire and structure, classification and selection of ratios, hypothesis); section IV presents the research results with their analysis; last, section V concludes.

II. Legal Framework on M&As

According to several regulations published in the Greek Government Gazette, the general legal framework on M&As activities is described by the articles 68-80 of the Law 2190/1920, which concern public companies, limited by shares (S.A.), and were amended by the Presidential Decree 498/1987. M&As activities that concern L.T.D. companies are directly regulated by the Law 3190/1955, and especially, according to the articles 54-55 of this Law. This basic framework is postponed, into some specific areas on M&As, by the Law Decree 1297/1972, and the articles 1-5 of the Law 2166/1993 that are concerning fiscal incentives for the formation of larger companies by mergers. Furthermore, the article 16 of the Law 2515/1997 specifies and enhances the legal process for bank mergers, in accordance to the article 2 of the Law 2076/1992. Also, the Law 2515/1997 surrogates the articles 1-15 of the Law 2292/1953, and there are special provisions and incentives for the concentration of the Greek banking system. In accordance to the Law Decree 1297/1972, and the Law 2166/1993, the Law 2992/2002 provides new incentives for investments and it expands the categories of investments, including the form of international M&As.

In parallel, there is the Regulatory Decision 19 of the Board of Directors of the A.S.E. (approved on January 15, 1999) for the companies that are listed at the A.S.E., in accordance to the Law for "Obligations of listed companies in cases of mergers, takeovers, change of principal-main activity, or spin-off of a sector" (Gov. Gaz. 40 B/27-1-1999), which prescribes in general the following transactions:

- In case that a company already listed on the ASE proceeds to a share capital increase, in order to merge by absorbing another company not listed on the ASE, the listed company, before any action, must publish a "prospectus". The prospectus must include the consolidated financial statements of the merged companies, for at least the last fiscal year preceding the merger (audited by a Certified Auditor), the valuation methods of the merged companies, their financial results, and the way based on which the exchange of shares was determined. It is clear that the acquired company must have been tax audited by the Tax Authorities for the unaudited fiscal years, and the conclusions of these auditing reports must be included in the prospectus.
- In case that a company already listed on the ASE proceeds to a share capital increase, in order to merge another company also listed on the ASE, the listed company must proceed with the

requirements mentioned above, but also the prospectus must be complied with the approval of the ASE Board of Directors for its context and the trading of the new shares.

- In case that a company already listed on the ASE proceeds to a share capital increase, in order to take over another company not listed on the ASE, the listed company must include in the prospectus a full description of the target company with a special focus on its main activities, and financial structure, and analysed the prospects, as well as the consequences of the takeover action on the listed company. The prospectus must also include the takeover price and the criteria determining that price.
- In case that a company already listed on the ASE proceeds to a takeover of a company not listed on the ASE at a purchase price that exceeds 20% of its own funds, the listed company must not only publish the prospectus (according to the company's obligations for the disclosure of information mentioned on the above paragraph), but also supply the ASE Board of Directors with the final take-over result, in the form of a memo, after the completion of the takeover action.

III. Research Design

From several past research papers on accounting and finance, there is a common agreement that stock price performance studies are unable to determine whether M&As create real economic gains or losses and to provide evidence on the sources of any merger-related economic result, as it difficult to distinguish between stock-market inefficiencies and improvements in economic performance resulting from the merger. The examined increases or decreases in equity values are typically attributed to some unmeasured source of real economic factors (such as synergy) or a general and not well established idea (as management past decisions). It is obvious that this kind of research, along with their explanations, could partially not be correct, as many other factors influence stock prices and their conclusions do not provide clear consciousness of their result argumentation.

In this context, the use of post-merger accounting data (and especially, financial ratios) is a better and safer path to test directly for changes in operating performance that result from mergers than stock price studies. But as there are many discussions on equity value changes, thus far, there is no particular representative methodology on M&As that could reveal a successful operating performance from financial ratios, in addition with the evaluation of certain strategic decisions from another source (for example, a questionnaire). From this point of view, a study in this perspective for Greek business could be especially interesting.

Sample and data

The data of this study is coming from two different sources for a sample of fifty acquiring firms. First, from financial statements of those companies that was received from the databank of the company ICAP (that were used later for calculation of firms' financial ratios).

Table 1: Percentage of sample's M&A event by year.

Year	Percentage
2002	40,32%
2001	25,81%
2000	16,13%
1999	9,68%
1998	8,06%
Total	100,00%

Second, from a confidential questionnaire, that provided primary data, and was promoted for depicturing the type of merger, the method of payment, and evaluation. The sample companies of this research were Greek companies, listed in the Main Market of the ASE, and had been involved in

domestic (Greek) acquisitions, as well as in international ones, as acquirers during the period 1998-2002 (see Table 1-2).

Table 2: Percentage of the sample firms according to the A.S.E. category classification.

Category	Percentage
Primary Sector	2,00%
Manufacturing	42,00%
Utilities	0,00%
Commerce	14,00%
Hotel - Restaurant Services	0,00%
Transport - Communication Services	6,00%
Financial Services	6,00%
I.T. - Real Estate - Rental - Commerce Services	14,00%
Health - Public Care Services	2,00%
General Services	0,00%
Constructions	12,00%
Transitory Category	2,00%
Total	100,00 %

Questionnaire

The three examined themes of the questionnaire with their choices were referred to: (A) the type of M&As activities, (B) the method of payment and (C) the method of valuation of a target company. The exact meaning of these three terms as it was perceived in the questionnaire of this study is analyzed below (Agorastos & Pazarskis, 2003).

A. There are three types of mergers in Greece, as it is specified in the above laws: merger by absorption (where the acquiring firm retains its name and its identity, and it acquires all of the assets and liabilities of the acquired company; after the merger the acquired firm ceases to exist as a separate business entity), merger by consolidation (where an entirely new firm is created; both the acquiring firm and the acquired firm terminate their previous legal existence and become part of the new firm), and merger by acquisition (where one firm purchase another firm's voting stock for cash, shares of stock, or other securities, and there is no share capital increase in the acquiring firm; there are two types, acquisition of stock and acquisition of assets).
B. The methods of payment are summarized in four major types of payment: cash payment, stock-for-stock exchange (including ordinary shares, preference shares, etc.), cash & stock exchange (a combination of the first two methods), and "other" (including loan stock, convertible loan stock, etc.).
C. Last, the valuation of a target company from the acquiring company has been promoted in six basic options: price earnings (P/E) capitalization method, discounted cash flow method (DCF), method of net realizable value (including extra profits from goodwill, estimated in a five-year period), method of medium term of annual profits of last five-year period, method that uses the Committee of Capital Market, and a combination, with no particular proportion, of those methods.

Classification and ratio selection

Financial ratios are widely used for modelling purposes both by practitioners and researchers, as their analysis is one of most valuable tools for the decision-making of many interests parties (owners, management, personnel, competitors, academics, etc.). Financial ratio analysis facilitates inter-company as well as intra-company comparisons beyond various argumentations, but a central question that remains is the finding of a perfect set of financial ratios that could cover and examine the whole activities of a firm. Several accounting and finance text-books present a subjective classification of financial ratios based on the practical experience or views of the authors, with a selected set of financial ratios (Bayldon et al., 1984).

In this study, financial ratios are organised in a general tabulation, divided into three main groups (Courtis, 1978): profitability (operating) ratios, which gauge a company's operating success over a given period of time; liquidity ratios, which measure the short-term ability of a company to pay its debts and to meet unexpected cash needs; and solvency ratios, which indicate a company's ability to meet long-term commitments on a continuing basis. This approach has been based on the technical relationships between the different financial ratios, as a "pyramid" approach. Within this framework, seven basic financial ratios are selected and classified in three basic groups, as it is shown in the Table 3.

Table 3: Classification of financial ratios.

Class	Code	Variable
Profitability	V1	Earnings before taxes/net worth
	V2	Returns on assets
	V3	Gross profit margin
Liquidity	V4	Quick ratio
	V5	Current ratio
Solvency	V6	Net worth/total assets
	V7	Total debt/net worth

In fact, there are many other perceived aspects for business evaluation performance, different from the above. Return on investment (ROI) type of measures are the most popular and frequently used when accounting variables are utilized to determine performance. But in considering Kaplan's (1983) arguments against excessive use of ROI types of measurements, the above referred ratio selection of this study is confirmed as better again.

> "Any single measurement will have myopic properties that will enable managers to increase their score on this measure without necessarily contributing to the long-run profits of the firm" (Kaplan 1983, p. 699).

Thus, an adoption of additional and combined measures is seemed to be necessary in order to provide direct attention to the long-term profitability and performance of a firm, in accordance with the short-term one.

Hypothesis

The evaluation of the relative change of each examined financial ratio of the sample (ratios from V1 to V7) is clearly an empirical problem. Therefore, the following hypothesis for the empirical test is examined for each financial ratio separately:

*H_0: There is **no** relative change of the financial ratio from the M&A event.*

H_1: There is relative change of the financial ratio from the M&A event.

The selected financial ratios for each company of the sample over a three-year period before (year T-3, T-2, T-1) or after (year T+1, T+2, T+3) the merger/acquisition event are calculated, and the mean from the sum of each company ratio for years T-3, T-2, and T-1 is compared with the mean from years T+1, T+2, and T+3, respectively. The study applies a static determination of ratios, while the year of M&A event is omitted from comparisons because it usually includes recognition of a number of atypical events which distort comparisons. The results are presented in the next section.

IV. Results

Hypothesis testing: ratio analysis

The evaluation of the relative change of each financial ratio of the sample (ratios from V1 to V7) is examined and the results are presented at the next table.

Table 4: T-Statistic (two-tail) of financial ratios.

Variables	*Pre- or post-acquisition performance*	*Mean*	*T-Statistic (TWO-TAIL)*	*P-Value*
V1	pre-acquisition post-acquisition	17,9 8,7	3,53 ***	0,001
V2	pre-acquisition post-acquisition	23,8 9,02	4,12 ***	0,000
V3	pre-acquisition post-acquisition	28,1 24,7	1,49	0,137
V4	pre-acquisition post-acquisition	1,692 1,55	0,90	0,367
V5	pre-acquisition post-acquisition	1,218 1,077	1,20	0,232
V6	pre-acquisition post-acquisition	0,884 0,824	2,55 **	0,012
V7	pre-acquisition post-acquisition	1,38 0,896	2,00 **	0,048

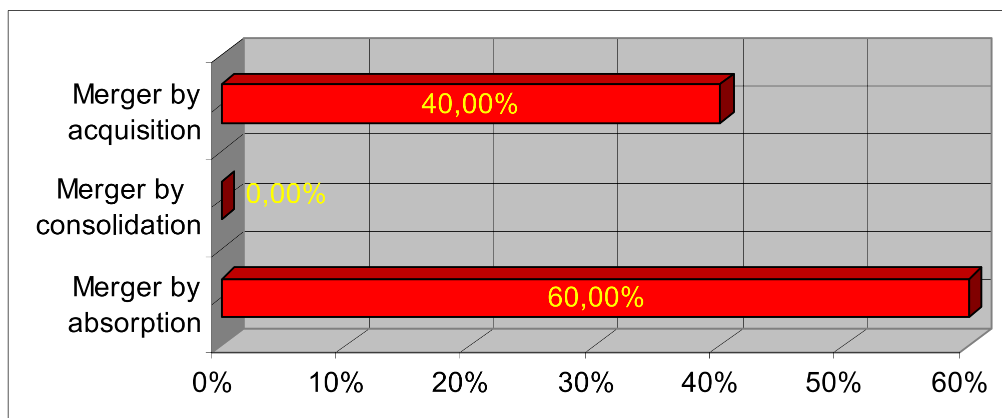
Note: *** Statistically significant at the 0.01 level,
** statistically significant at the 0.05 level,
* statistically significant at the 0.1 level.

There is clear evidence that this analysis applied at company's ratios after M&A event to its past performance identifies special peculiarities. Our ratio analysis at the sample companies reveals that ratios: earnings before taxes/net worth, and returns on assets (ratios V1, and V2 at table 1, respectively) are decreased in value after M&As, which is equivalent to a decrease at the profitability of the sample companies from a merger/acquisition event. Also, the other ratio that evaluates profitability, gross profit margin (ratio V3) is decreased slightly, from 28,1 to 24,7. Liquidity ratios, quick ratio and current ratio (ratios V4, and V5, respectively), have not presented an important decrease in their values. Last, from solvency ratios, net worth/total assets, and total debt/net worth (ratios V6, and V7, respectively), are decreased slightly in values.

Sample characteristics: questionnaire results

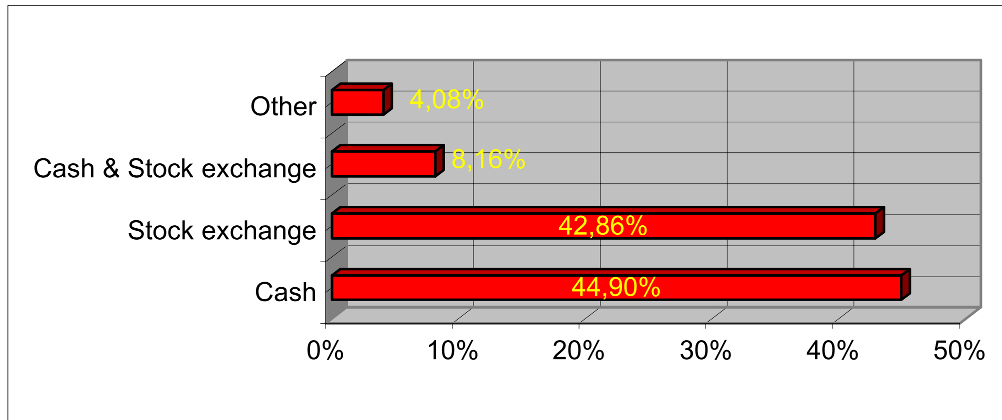
Based on the questionnaire results, 60,00% of the sample firms have performed, at least, a single merger activity by absorption of one firm by another the last five years, while 40,00% of the sample firms have performed a merger activity by acquisition (Table 5). It is interesting that 0% of the sample firms have performed a merger activity by consolidation (creation of an entirely new firm by the acquiring and the acquired firm).

Table 5: Type of M&A.



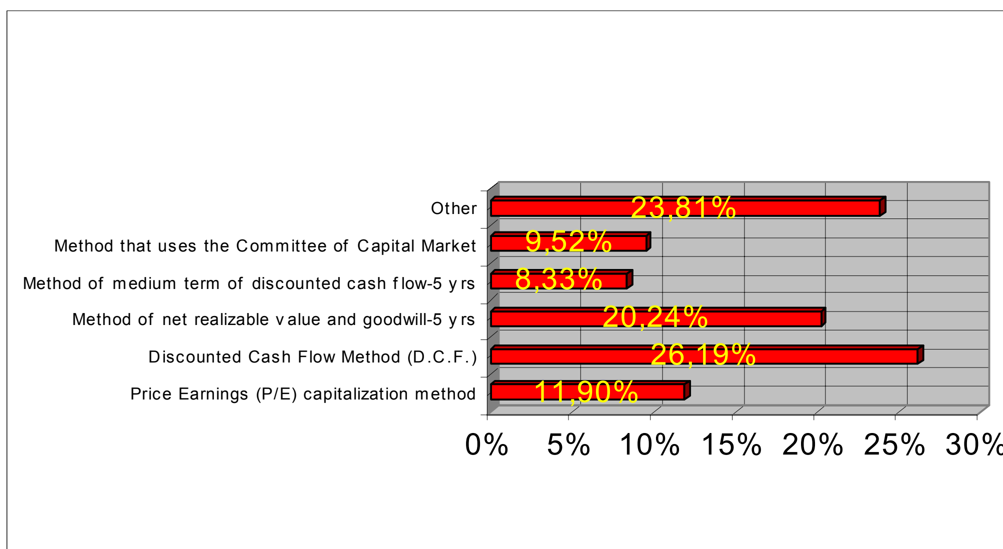
Examining the method of payment that Greek firms have used in their M&A activity, it arose that 42,86% has done their deal with a stock exchange, while 44,90% have preferred cash payment for their transaction. Also, there is a combination of the two methods, cash and stock exchange (8,16%), and “other” 4,08% (Table 6).

Table 6: Method of payment.



Last, the basic methods that the sample firms have chosen as the most appropriate for a company valuation was the Discounted Cash Flow Method-D.C.F. (26,19%), and the Price Earnings (P/E) capitalization method-Gordon Formula (11,90%), while 20,24% has preferred the method of net realizable value (net asset value) plus the medium term of discounted profits of estimated goodwill for a five-year period. Also, 9,52% has preferred the method that uses the Committee of Capital Market and 8,33 % has preferred the method of medium term of discounted cash flow for a five-year period. Furthermore, 23,81% of the sample firms have answered “other”, which, refers to a combination, with no particular proportion, of the methods above (Table 7).

Table 7: Method of valuation.



Interpretation and further evidence

The analysis of certain strategic non-financial characteristics (such as the type of merger, the method of evaluation and payment), concerning the activities of M&As of Greek enterprises, which are listed in

the Main Market of the ASE, are presented in the above sub-section, and the effects on the operating performance of the sample firms are also discussed above. From the evaluation of the received survey results is not provided clear evidence that these examined non-financial characteristics could influence financial performance of a firm, and especially its profitability, liquidity, or solvency. In order to be able to derive any more accurate inferences, it would be recommended this survey to be applied to all listed firms in the A.S.E., as well as, to a large sample of non-listed firms.

V. Summary and Conclusions

One of the main elements of contemporary corporate restructuring is mergers and acquisitions. This study examines the M&A effect on a sample of Greek firms, and illustrates briefly the legal framework that is valid for a company listed at the Athens Stock Exchange (ASE). Using financial, accounting and confidential questionnaire response data, the post-acquisition performance of fifty Greek companies listed on the ASE that executed at least one merger or acquisition in the period from 1998 to 2002 is evaluated on a basis of certain non-financial characteristics (type of merger, method of evaluation and payment), and financial characteristics (a set of seven selected financial ratios). The main interesting finding of the survey is that there is strong evidence that the profitability of a firm that performed an M&A is decreased due to the merger/acquisition event.

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