

# MERGERS AS A COMPETITIVENESS STRATEGY IN DIFFERENT BUSINESS SECTORS DURING ECONOMIC CRISIS PERIOD: EVIDENCE FROM GREECE

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## Abstract

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This paper investigates the accounting performance of companies listed on the Athens Stock Exchange after mergers by the industrial sector during the period of the financial crisis in Greece. More specifically, all mergers of listed companies during the period 2012–2016 are examined, with the analysis of a final sample of twenty-six companies listed on the Athens Stock Exchange. The evaluation of the accounting statements and the performance of Greek listed companies is done by extracting and comparing various figures from them (financial ratios) before and after the implementation of mergers. This research is based on the methodology of Healy, Palepu, and Ruback (1992) and Ramaswamy and Waagelein (2003) in order to explore if there is a positive or negative result from the merger transaction. The research results did not show any statistically significant change in any of the research financial ratios after the mergers. However, the effect of the absorbing company's industry was examined in relation to the analyzed financial ratios and no better performance was observed for those in any industry. Finally, mergers as a competitiveness strategy in the business arena managed to provide the involved companies with a stable accounting performance during the crisis period in Greece.

**Keywords:** Mergers, Accounting Measures, Accounting Performance, Financial Ratios, Competitiveness Strategy, Greece

**Authors' individual contribution:** Conceptualization — M.P.; Methodology — M.P. and S.K.; Formal Analysis — M.P., M.G., C.K., and S.K.; Investigation — M.G., C.K., and S.K.; Writing — Original Draft — M.P. and M.G.; Writing — Review & Editing — M.G., C.K., and S.K.; Supervision — M.P.

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## 1. INTRODUCTION

The action of the merger (as well as the acquisition) constitutes not only a method of external corporate development but also a strategic choice of

the company that allows to further strengthen the competition, development and expansion of the company (Lewellen, 1971; Kusewitt, 1985; Ramaswamy & Waagelein, 2003; Alexandrakis, Mantzaris, & Pazarskis, 2012; Yilmaz & Tanyeri, 2016).

Mergers, particularly in recent decades, have also brought about structural changes in some industries and attracted international attention (Golubov, Petmezas, & Travlos, 2013; Berriategortua, Olsagasti, & Florencio, 2018; Grigorieva, 2020; Petridis, Tampakoudis, Drogalas, & Kiosses, 2022). Especially in a period of crisis — experienced by Greece and prolonged almost continuously from 2010 onwards — it is often vital for companies to proceed with mergers so that they can capture a larger market share and manage to survive (Rao-Nicholson, Salaber, & Cao, 2016; Pantelidis, Pazarskis, Drogalas, & Zizou, 2018).

At the same time, the merger or acquisition of financially weak companies becomes necessary, as in this way it is possible for dynamic companies to acquire a basic tool for development and dealing with the daily problems of companies, through the reduction of costs, but also the general expansion of operations, now addressing an increasingly large buying public and in fact using the know-how of two or more companies to better address the needs of consumers and thus the greater attraction of the buying public (Mueller, 1980; Kumar, 1984; Harford, 2005; Pantelidis et al., 2018; Lois, Pazarskis, Drogalas, & Karagiorgos, 2021). Finally, corporate mergers in developed or emerging economies, especially in times of crisis, are quite common and it is generally accepted that larger mergers have particular wealth redistribution effects, which need further study (Zhang, Wang, Li, Chen, & Wang, 2018; Pazarskis, Vogiatzoglou, Koutoupis, & Drogalas, 2021).

This study wants to focus on the analysis of the particular accounting characteristics that lead to the success of the merger process in an industry from the point of view of companies listed on the Athens Stock Exchange. In particular, the field of research of this paper is the analysis of accounting data, including the use of several financial ratios, which focus on the evaluation's result of the completion of the merger of listed companies in various industries, but also on the measurement of the performance of the merged companies as a competitive strategy in the new era through specific methods of measuring efficiency, profitability and effectiveness (e.g., capital adequacy and solvency, liquidity).

The structure of this paper is as follows. Section 2 reviews the relevant literature. Section 3 analyses the methodology that has been used to conduct empirical research on mergers during Greek economic crisis period. Section 4 encloses the commentary on the results. Section 5 closes the paper with the conclusions reached.

## 2. LITERATURE REVIEW

The terms 'merger' and 'acquisition' are often used interchangeably, even though they have different connotations. In an acquisition, the buyer buys the majority of another company's stock or parts of it (Harrison, Hart, & Oler, 2014; Bauer, Schriber, Degischer, & King, 2018; Riva & Provasi, 2019). On the other hand, in a merger, a new company is created in which the merging parties share according to the agreed ownership (Amihud & Lev, 1981; Hoshino, 1982; Healy, Palepu, & Ruback, 1992; Alexandrakis et al., 2012; Harada, 2018; Lois et al., 2021).

Achieving and maintaining a strong corporate form through a merger is the primary goal of each of its participants, which directly affects its viability (Thanos & Papadakis, 2012; Pantelidis et al., 2018; Pazarskis et al., 2021). The impact of mergers on firm performance due to these transactions is a topic of great interest, which intensifies the value of conducting this research from many aspects (Tampakoudis, Nerantzidis, Soubeniotis, & Sout, 2018; Riva & Provasi, 2019; Shaban, Al-hawatma, & Abdallah, 2019; Tampakoudis & Anagnostopoulou, 2020; Ravaonorohanta, 2020; Kapil & Kumar, 2021; López Domínguez, 2021). That is why its purpose is to be carried out in this direction by creating results that reflect either a positive impact of mergers on the company's performance or a negative or mixed impact on various performance dimensions (Mueller, 1980; Kumar, 1984; Ramaswamy & Waagelein, 2003; Golubov et al., 2013; Berriategortua et al., 2018; Grigorieva, 2020). The impact of the merger on the performance of the resulting company may be related to the sector of the companies involved, as the change in the profitability ratio is an important instrument that should be measured to demonstrate whether it is higher in the companies that merged through growth strategies (Basmah & Rahatullah, 2013; Bauer et al., 2018).

The examination of the economic strategy contributes to the achievement of the economic survival of each company and, therefore, must be close to the economic and competitiveness policy that ensures its perpetual and uninterrupted operation. Mergers are also part of this business environment, as they can result in large corporate formations aimed at increasing market share (Anton, 2016; Abdul Rahman, 2017; Zutter & Smart, 2018).

The purpose of any merger is to maximize the value of the shareholders of each company while supporting its investment and business activities with the aim of achieving maximum profit (Healy et al., 1992; Pantelidis et al., 2018; Lois et al., 2021). That is why the development of the financial strategy and the proper utilization of the merger aim to maintain an effective financial services management system, which is useful for the progress of the newly created company. There are four main financial areas that should be studied and paid close attention to in any merger (Duggal, 2015; Gupta & Banerjee, 2017; Pazarskis et al., 2021):

- the strategy of increasing the liquidity of the new companies' assets;
- the strategy of optimizing the capital structure of the new company after the completion of the merger, the objective of which is to obtain an acceptable degree of leverage, minimize the capital cost and increase the value of the company;
- the cost reduction strategy;
- the strategy of increasing profits through efficiency control.

Over time, there have been several studies that have used accounting data to evaluate the final outcome of a merger, focusing mainly on return on equity and net profits (Healy et al., 1992; Sharma & Ho, 2002; Ramaswamy & Waagelein, 2003; Dargenidou, Gregory, & Hua, 2016; Rao-Nicholson et al., 2016; Pazarskis, Pantelidis, Alexandrakis, & Serifis, 2014; Pazarskis, Koutoupis, Pazarzi, & Kyriakogkonas, 2018; Lois et al., 2021). In particular, for the recording and study of the data that led

to the negotiation and completion of a merger, the following were used in the relevant literature: the financial statements, the various important accounting figures (equity, foreign capital, etc.), numerical indicators, with the aim of analyzing the reasons that led to the conclusion of a successful merger.

The financial ratios are realistic and measurable criteria that can measure the financial course of each company (Amihud & Lev, 1981; Hoshino, 1982; Alhenawi & Krishnaswami, 2015; Alhenawi & Stilwell, 2017). Financial ratios are usually indicators of changes (results). The study of financial ratios gives information that indicates whether the financial course of the company enables the achievement of the objectives set during the negotiation of a merger or acquisition, as ratios can be defined as a measure of the quantity and change of financial statements (Harford, Klasa, & Walcott, 2009; Jandik & Lallemand, 2014; Pazarskis et al., 2014; Harrison et al., 2014). In addition, by using the accounting system of measuring a merger it is possible to measure the performance of the following elements that affect the viability of the new company after a merger (Yanan, Hamza, & Basit, 2016; Zhang et al., 2018):

- measuring the performance of the activities within the new company following the merger;
- evaluation of the competitive position of the new company (gross profit margin, etc.) to ensure the long-term competitiveness of the organization in its sector.

### 3. RESEARCH DESIGN

#### 3.1. Sample

The research sample consists of twenty-six companies listed on the Athens Stock Exchange, which merged with other listed or unlisted companies during the period 2012–2016. The sample does not include companies that made more than one agreement in the previous and the following year, as well as companies that went bankrupt along the way, as well as companies whose main object is financial/financial operations, e.g., banks. The financial data of the companies in the research sample were collected from the website of the Athens Stock Exchange, the published financial statements and annual reports of the companies on the internet.

#### 3.2. Quantitative variables

The processing of the sample of mergers carried out in the period 2012–2016 will be based on the examination of twenty financial ratios, which are widely used to analyze the performance of companies after mergers (Amihud & Lev, 1981; Hoshino, 1982; Healy et al., 1992; Sharma & Ho, 2002; Ramaswamy & Waegelein, 2003; Alhenawi & Krishnaswami, 2015; Dargenidou et al., 2016; Rao-Nicholson et al., 2016; Alhenawi & Stilwell, 2017; Lois et al., 2021). The selected financial ratios for the analysis and evaluation of the sample are presented and analyzed below:

**Table 1.** Quantitative variables: Financial ratios

Variable	Financial ratio	Ratio analysis
V01	Current ratio	Current assets / Current liabilities
V02	Liquidity ratio	(Current assets - Stocks) / Current liabilities
V03	Collection period	(Debtors / Sales) × 360
V04	Inventories turnover	Cost of goods sold / Inventories
V05	Credit period	(Creditors / (Cost of goods sold + Closing inventory - Opening inventory)) × 360
V06	Debt ratio	Total liabilities / Total assets
V07	Debt-equity ratio	Total liabilities / Shareholders' funds
V08	Shareholder equity ratio	Shareholders' funds / Total assets
V09	Sales to current liabilities ratio	Sales / Current liabilities
V10	Return on assets (ROA) (before taxes)	Earnings before taxes / Total assets
V11	Return on equity (ROE) (before taxes)	Earnings before taxes / Shareholders' funds
V12	Return on assets (ROA) (after taxes)	Earnings after taxes / Total assets
V13	Return on equity (ROE) (after taxes)	Earnings after taxes / Shareholders' funds
V14	Asset turnover ratio	Sales / Total assets
V15	Gross margin	Gross profit / Sales
V16	EBIT margin	Earnings before interest & taxes / Sales
V17	EBITDA margin	Earnings before interest, taxes & depreciation / Sales
V18	Net assets turnover	Sales / (Shareholders' funds + Non-current liabilities)
V19	Interest cover	Earnings before interest & taxes / Interest expenses
V20	Gearing	Long-term debt / Shareholders' funds

#### 3.3. Research methodology

The main objective of the work is to study the performance of the company before and after the merger transactions which is commonly applied practice in past studies (Pazarskis et al., 2014, 2018; Harada, 2018; Liu, Li, Yang, & Li, 2019). There are various accounting and financial methods to calculate this change due to mergers: one can examine the change in the share price of the companies involved (event studies), interview executives of the companies involved in mergers about their outcome, or evaluate their financial

statements that have been checked by certified auditors and the latter is considered more reliable by various researchers (Healy et al., 1992; Sharma & Ho, 2002; Ramaswamy & Waegelein, 2003; Alexandrakis et al., 2012). That is why twenty key financial ratios are calculated one year before the merger and one year after it with the aim of answering the question of whether this action proved to be beneficial for the company (Mueller, 1980; Kumar, 1984; Harford, 2005; Golubov et al., 2013; Berrioategortua et al., 2018; Grigorieva, 2020).

The study of the financial ratios concerns all the companies in the sample one year before ( $t - 1$ )

and one year after ( $t + 1$ ) the merger for the years 2012–2016, the average of the sum of each financial ratio is also calculated for the year  $t - 1$  and  $t + 1$  and the corresponding comparison is made. Furthermore, the reference year of each merger is the year of its realization and is defined as  $t = 0$ , for which reference year the financial ratios are not calculated, as important events of a mainly financial nature affect the financial result in the year of the merger, such as the financial cost of implementing the merger, the cost of integration of information systems, etc. (Pazarskis et al., 2014, 2021; Pantelidis et al., 2018).

To check the above, tests are carried out with comparisons of averages of two independent sample mean t-tests on the financial ratios of the companies in the sample before the merger and after the merger (Pantelidis et al., 2008; Lois et al., 2021). Furthermore, to find any difference that exists among different business sectors after merger events we employ the Kruskal-Wallis test that is

applied as follows: we calculate the difference of the means of every ratio before and after the merger event as:

$$\Delta VX_i = \bar{X}_{2_i} - \bar{X}_{1_i} \quad (1)$$

where,  $\Delta VX$  = quantitative difference of means of financial ratio in the pre- and post-merger period;  $i$  = financial ratios of this study  $V01, V02, \dots, V20$ ;  $\bar{X}_1$  = mean of financial ratio in the pre-merger period;  $\bar{X}_2$  = mean of financial ratio in the post-merger period.

#### 4. RESULTS

The following two tables show the descriptive statistics in the pre-merger period and the post-merger period, tabulating an analytical presentation of the data survey as a whole for the period 2012–2016 of the sample companies.

**Table 2.** Descriptive statistics of examined variables in the pre-merger period

Variable	Minimum	Q1	Median	Q3	Maximum	IQR	St. dev	Skewness	Kurtosis
Pre-V01	0.481	0.906	1.215	1.593	9.496	0.687	1.867	2.964	10.444
Pre-V02	0.124	0.541	0.909	1.306	9.397	0.764	1.812	3.543	14.487
Pre-V03	0.309	64.264	112.9	146.65	351.44	82.393	92.104	1.287	1.262
Pre-V04	0.000	2.778	4.679	11.289	37.876	8.511	8.543	2.014	4.644
Pre-V05	19.306	108.20	141.5	269.50	669.00	161.301	137.386	1.716	4.033
Pre-V06	0.060	0.477	0.712	0.813	8.822	0.336	1.594	4.900	24.617
Pre-V07	-15.19	0.663	2.245	3.142	682.77	2.480	141.289	4.105	17.388
Pre-V08	-0.070	0.241	0.309	0.605	1.000	0.363	0.275	0.514	-0.304
Pre-V09	0.441	1.119	1.787	2.763	5.525	1.644	1.260	1.018	0.949
Pre-V10	-0.190	-0.042	0.006	0.031	0.216	0.073	0.078	0.271	2.117
Pre-V11	-82.08	-0.110	0.022	0.074	1.125	0.184	16.463	-4.423	20.326
Pre-V12	-0.169	-0.040	0.002	0.025	0.135	0.065	0.065	-0.312	0.679
Pre-V13	-87.25	-0.147	0.024	0.059	1.252	0.206	17.508	-4.418	20.273
Pre-V14	0.069	0.478	0.547	0.868	3.842	0.390	0.681	3.795	17.247
Pre-V15	-0.022	0.109	0.181	0.377	0.769	0.268	0.197	1.041	0.667
Pre-V16	-0.161	-0.009	0.040	0.095	0.584	0.104	0.142	1.818	6.023
Pre-V17	-0.154	0.050	0.100	0.137	0.584	0.087	0.150	1.072	2.608
Pre-V18	0.070	0.733	1.031	1.865	4.779	1.132	1.027	1.698	3.790
Pre-V19	-3.008	-0.250	0.834	2.158	21.820	2.407	5.404	2.629	7.299
Pre-V20	-6.244	0.329	0.553	1.136	222.17	0.807	44.240	4.478	20.839

Note: IQR is interquartile range.

**Table 3.** Descriptive statistics of examined variables in the post-merger period

Variable	Minimum	Q1	Median	Q3	Maximum	IQR	St. dev	Skewness	Kurtosis
Post-V01	0.334	0.734	1.112	1.748	14.469	1.015	2.770	3.867	16.424
Post-V02	0.226	0.440	0.848	1.170	14.469	0.730	2.675	4.711	23.208
Post-V03	2.831	61.725	85.522	108.78	402.53	47.065	77.916	2.430	7.943
Post-V04	0.000	2.345	4.234	5.921	203.435	3.576	38.505	4.919	24.669
Post-V05	-1206.84	82.53	124.26	277.61	406.15	195.08	291.76	-3.670	16.776
Post-V06	0.237	0.481	0.682	0.808	1.219	0.327	0.274	0.413	-0.447
Post-V07	-64.955	0.608	1.595	3.221	8.899	2.613	13.214	-4.643	22.771
Post-V08	-0.219	0.192	0.318	0.519	0.763	0.327	0.249	-0.295	-0.201
Post-V09	0.455	0.879	1.997	2.813	15.357	1.934	2.973	3.360	13.099
Post-V10	-0.308	-0.014	0.016	0.036	0.138	0.050	0.080	-2.121	8.606
Post-V11	-0.371	0.010	0.054	0.095	16.913	0.085	3.248	5.074	25.820
Post-V12	-0.286	-0.019	0.015	0.029	0.104	0.048	0.069	-2.696	10.718
Post-V13	-0.325	-0.012	0.049	0.080	15.713	0.092	3.018	5.074	25.823
Post-V14	0.058	0.482	0.642	0.864	4.422	0.381	0.776	4.131	19.453
Post-V15	-0.174	0.100	0.230	0.315	0.781	0.215	0.194	0.591	1.568
Post-V16	-0.342	0.028	0.064	0.110	0.993	0.082	0.211	2.779	12.942
Post-V17	-0.313	0.073	0.102	0.163	0.994	0.090	0.222	1.999	7.475
Post-V18	-4.225	0.728	0.987	1.831	10.380	1.103	2.392	1.739	7.498
Post-V19	-33.513	0.402	1.403	3.056	19.876	2.655	8.301	-2.497	12.541
Post-V20	-8.612	0.090	0.431	0.738	3.627	0.648	2.282	-2.691	8.885

Note: IQR is interquartile range.

The following is the detailed presentation of a whole for the period 2012–2016 based on the t-test of the tables with the results of the statistical survey as of the sample companies.

**Table 4.** Comparison results for examined variables in pre- and post-merger period

Variable	Mean pre-merger (1 year avg.)	Mean post-merger (1 year avg.)	t-value	p-value	Confidence interval 95%
V01	1.817	1.970	0.23	0.820	(-1.194; 1.500)
V02	1.424	1.4255	0.00	0.998	(-1.302; 1.305)
V03	125.2	100.52	-1.02	0.311	(-73.2; 23.8)
V04	7.983	13.137	0.65	0.519	(-11.03; 21.34)
V05	195.52	118.27	-1.20	0.239	(-208.2; 53.7)
V06	0.950	0.6843	-0.82	0.419	(-0.930; 0.399)
V07	39.64	-0.7973	-1.42	0.167	(-98.9; 18.0)
V08	0.390	0.3334	-0.76	0.454	(-0.2054; 0.0932)
V09	2.062	2.5878	0.81	0.422	(-0.788; 1.839)
V10	-0.005	0.0062	0.49	0.624	(-0.0338; 0.0558)
V11	-4.235	0.6971	1.47	0.154	(-1.97; 11.83)
V12	-0.013	0.00018	0.69	0.495	(-0.0252; 0.0514)
V13	-4.514	0.64517	1.45	0.158	(-2.14; 12.46)
V14	0.730	0.7817	0.25	0.804	(-0.363; 0.467)
V15	0.249	0.2197	-0.52	0.605	(-0.1399; 0.0823)
V16	0.061	0.09709	0.71	0.482	(-0.0665; 0.1386)
V17	0.114	0.1568	0.80	0.431	(-0.0656; 0.1509)
V18	1.339	1.5403	0.39	0.701	(-0.858; 1.260)
V19	2.324	1.3565	-0.49	0.630	(-4.99; 3.05)
V20	11.737	0.10658	-1.31	0.201	(-29.88; 6.62)

Note: \*\*\*, \*\*, \* indicate that the change of the mean is significantly different from zero at a significance level of 0.01, 0.05, and 0.10, respectively, as calculated by comparing the average of two independent subassemblies (two independent samples mean t-tests) at ratios of the sample. More specifically, for the three above cases the classification levels relative to the value of the p-value are the following:  $p < 0.01$  indicates strong evidence against null hypothesis (denoted by \*\*\*),  $0.01 \leq p < 0.05$  indicates moderate evidence against null hypothesis (denoted by \*\*),  $0.05 \leq p < 0.10$  indicates minimum evidence against null hypothesis (denoted by \*),  $0.10 \leq p$  indicates no real evidence against null hypothesis.

From the statistical analysis made for the 2012–2016 merger implementation period, it was revealed that no statistically significant change occurred for any of the twenty financial ratios. Similar results with no change in the post-merger period were found in other past studies (Healy et al., 1992; Sharma & Ho, 2002; Pantelidis et al., 2018). However, this study provides different results to other past studies that found better performance in the post-merger period (Kumar, 1984; Mueller, 1985; Dargenidou et al., 2016; Alhenawi & Stilwell, 2017) or even a deterioration of the post-merger performance (Harford et al., 2009; Jandik & Lallemand, 2014; Harrison et al., 2014).

Furthermore, the sample was investigated with the Kruskal-Wallis test statistical method, in order to find any peculiarities in various business sectors after mergers (Gupta, Raman, & Tripathy, 2021). Specifically, the sample was studied in terms of the following business choice (qualitative variable). The business sector activity of the absorbing company in the merger in the primary sector, the industry, the trade services, and the construction sector. Based on the branch of activity of the acquiring company in the merger, based on the following categories: the primary sector, the industry, the trade services, and the construction sector. The table below presents the statistical results.

**Table 5.** Results for merged companies per business sector (the Kruskal-Wallis test)

Variables	Median				p-value
	1 = Primary sector	2 = Industrial firms	3 = Services-commerce	4 = Construction sector	
AV01	0.17743	0.08318	-0.06194	0.08883	0.813
AV02	-0.001061	0.020436	-0.286222	0.09527	0.662
AV03	6.302	-17.335	-6.408	-13.665	0.877
AV04	0.6216	-0.5587	-0.5381	-0.2605	0.313
AV05	-39.537	6.193	-19.298	19.558	0.849
AV06	0.16775	-0.01234	0.02363	0.02641	0.768
AV07	-5.57804	-0.07057	-0.16312	0.06455	0.577
AV08	-0.15767	-0.02522	0.02063	-0.02641	0.905
AV09	0.13208	0.01416	0.44666	-0.37822	0.583
AV10	0.014878	0.005803	0.019652	0.027269	0.983
AV11	0.43955	0.01155	-0.02724	0.04933	0.801
AV12	0.0243719	0.0009167	0.0144084	0.0296095	0.980
AV13	0.43188	0.03105	-0.03613	0.04595	0.751
AV14	0.0512308	0.003063	0.0103893	-0.0004535	0.909
AV15	-0.170074	0.011683	0.009992	0.003921	0.152
AV16	0.029058	0.003971	-0.027692	0.156651	0.145
AV17	0.037185	-0.001675	-0.012222	0.125663	0.436
AV18	0.0552	0.03331	-0.11949	0.36883	0.339
AV19	0.26025	0.3621	0.04696	3.32259	0.249
AV20	-0.1024478	-0.0007933	-0.1039276	-0.1763446	0.929

Note: \*\*\*, \*\*, \* indicate that the change of the mean is significantly different from zero at a significance level of 0.01, 0.05, and 0.10, respectively.

The above table of statistical results by business sector does not show a statistically significant change in any of the twenty financial ratios studied before and after the mergers in Greece, indicating that the business sector does not play a key role in achieving better performance. Of course, it should be emphasized that thanks to mergers as a competitive strategy in the business arena during the crisis period in Greece, the companies involved in mergers managed to achieve no statistically significant losses based on their accounting performance.

Different conclusions were reached by Al-Hroot (2016) who, examining cases of mergers by the business sector in Jordan, concluded that there was a different effect due to mergers in each sector he examined. Furthermore, Rao-Nicholson et al. (2016) argued that the accounting performance of firms involved in mergers and acquisitions is affected by the industrial sector in the examined ASEAN (Association of Southeast Asian Nations) countries during the financial crisis period.

Concluding, based on the various studies done over time the effect of mergers can be either positive, negative or neutral in the profitability, growth and performance of a company involved in mergers. Although the question is always the well-being of the business, which depends on its development and its strengthening in the competitive environment in the sector where it operates, this does not always emerge clearly. However, based on the data of this paper, if there was no immediate effect after the mergers and while we examined business data during the period of a specific economic crisis, the way in which the companies continued to operate without statistically significant negative effects after the mergers in through economic crisis they indicate to us the beneficial effects of mergers.

## 5. CONCLUSION

Over time, there have been various studies dealing with mergers, examining them from various angles, and using accounting data to evaluate the final outcome of a merger, focusing mainly on return on

equity and net profits (Healy et al., 1992; Ramaswamy & Waegelien, 2003; Rao-Nicholson et al., 2016; Lois et al., 2021). This research studied the financial position of the companies based on twenty-six financial ratios extracted from their financial statements. Twenty-six merged companies, which constitutes all merger events of listed companies, were examined as research sample for the period from 2012 to 2016, and data were studied for one year before the merger and one year after.

The results of the statistical tests (t-test) applied to the performance of twenty financial ratios concluded that there is no statistically significant change in the indicators studied. In the second phase, the research dealt with the statistical results of the Kruskal-Wallis test per industry. The conclusions the study reaches are that there was no statistically significant change in any of the financial ratios and, therefore, there was no better performance for the companies in any sector, but also the merged companies gained financial stability during the economic crisis period in all the examined sectors.

The present research is only a part of the overall situation of corporate mergers in Greece during the crisis period through the analysis of their financial statements, as there are several limitations regarding the time period and the sample. First, the sample was examined for a certain period of time within the crisis and not beyond it. Furthermore, the sample of companies, although they were all listed companies for the period under review, was relatively small and non-listed companies could also be examined (if there were easily accessible data).

As future research, it is proposed to analyze the financial ratios of non-listed Greek companies during the economic crisis, in order to present comparatively the extent to which Greek listed and non-listed companies were affected by the crisis. Furthermore, a comparison could be made with European companies of other countries in order to measure to what extent the examined companies were affected in the various European countries on a case-by-case basis.

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