# INTERNATIONAL MERGERS AS A BUSINESS EXPANSION STRATEGY BY GREEK COMPANIES: A CASE STUDY OF CORPORATE PERFORMANCE ANALYSIS FOR BOARD OF DIRECTORS

Sofia Kourtesi [*], Aikaterini Chasiotou [**],
Christos Konstantinidis [***], Stylianos Kafestidis [****]

* Department of Economics, International Hellenic University, Serres, Greece
** *Corresponding author,* Department of Business Administration, International Hellenic University, Serres, Greece
Contact details: Department of Business Administration, International Hellenic University, End of Magnesias Street, GR-621 00 Serres, Greece
*** Department of Business Administration, International Hellenic University, Serres, Greece
**** Independent researcher, Greece

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## Abstract

This research analyzes a specific international merger involving a Greek publicly traded company in the recent post-COVID-19 and post-sovereign debt crisis era in the Greek market. The primary research aim is to assess the corporate performance of a Greek company listed on the Athens Stock Exchange (ASE) after it underwent an international merger in 2019. The research involves an in-depth analysis of the company's performance post-merger and calculates various financial ratios using accounting data from four years before and after the international merger. The research results revealed that the merger deal has led the examined Greek listed sample company to a better performance in profitability, but not in liquidity and leverage, thus signalizing some mixed results for the international merger transaction.

**Keywords:** Merger, International Business Strategies, Financial Ratios, Case Study, Greece

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## 1. INTRODUCTION

Nowadays, the realization of mergers as a means of expansion is a crucial alternative to modern corporate restructuring (Rao-Nicholson & Salaber, 2013; Ferreira et al., 2016; Zhou et al., 2024). Nevertheless, the internationalization process and the European Union's (EU) expansion have stimulated every sector of the economy in recent years: foreign direct investment from multinational corporations has increased significantly, global commerce has grown at a faster rate than national economies, and supranational organizations like the EU and World Trade Organization (WTO) have promoted ever-closer financial relationships over national governments, leading to the evolution of an international merger perspective and a more fiercely competitive business environment (Markides & Oyon, 1998; Doukas & Travlos, 1988; Lois et al., 2021).

The basic principle of effective merger operations is that adjustments that improve business performance from improperly exploited resources or assets and might result in financial gains are changes that would not have been undertaken in the absence of a change in control in a private or public company or organization (Chandrika et al., 2022; Giovanis et al., 2024). While many others are excited and optimistic about a potential merger deal, a lot of researchers and business practitioners view such an idea with skepticism (Pazarskis et al., 2022, 2023). Furthermore, because of the current interest in this topic, merger choices made during times of crisis are a unique field of research to explore (Rao-Nicholson et al., 2016; Pantelidis et al., 2018). In every economy around the world, the macroeconomic situation has a direct impact on the reasons for mergers, but it also has a major influence on their success (Ibrahim & Raji, 2018; Liu et al., 2024). There have been a few studies throughout the years that have examined the implementation of mergers during economic downturns, but overall, there are not many. Therefore, it would be very beneficial to do research that looks at mergers that occur in any region after a crisis period.

Recent years have seen continuous activity in mergers in Greece as a result of the global corporate reorganization. It goes without saying that their development might aid Greek businesses in being ready for and resilient to a national or international economic crisis. Following this, a fresh look at the recent business environment through the present study investigates the activity of an international merger from a Greek listed company in 2019, it could provide and depict special merger characteristics of Greek absorbed companies. This is done to analyze with a case study the corporate performance of a Greek company that is involved in an international merger, from an international business and corporate analysis perspective. The purpose of this research is to give management, shareholders, scholars, and others a baseline framework of analysis for Greek international mergers. The main research questions that are examined by looking at the case study of a Greek company that carried out an international merger deal (in a period with no other examples of similar transactions from Greek listed companies) are as below:

*RQ1: Did the post-merger performance become higher for the absorbing company in an international merger compared to the pre-merger period?*

*RQ2: Have they produced better performance results?*

The rest of the study is organized as follows. The literature review as well as the distinctions between domestic and foreign mergers are discussed in Section 2. The study's research design (sample and data, chosen accounting ratios, methodology) is presented in Section 3. The research outcomes are examined in Section 4 where further interpretations and supporting data to the research findings are suggested. The article is finally concluded in Section 5 with the study limitations and future avenues of research.

## 2. LITERATURE REVIEW

There have been many different opinions over time regarding the impact of mergers and whether they are beneficial for a company that decides to merge. For example, some researchers (Dargenidou et al., 2016; Alhenawi & Stilwell, 2017; Gupta et al., 2021) believe that value is created or business performance is positively affected by mergers. Others, on the other hand, argue that there is a negative impact or a decline in profitability, business performance, or increased leverage for the merged companies (Jandik & Lallemand, 2014; Harrison et al., 2014), while still others support a pattern that is well-known from earlier research: there is no appreciable difference in the performance of the merger-involved companies as a result of mergers (Al-Hroot, 2016; Pantelidis et al., 2018).

As a result, the strategy literature frequently makes the case that mergers may be one of the ways businesses acquire additional resources, which allows them to redistribute those resources to cut expenses and boost revenue (Healy & Palepu, 1993). Researchers in international business extended the definition of resource possibilities to incorporate a geographical element (Markides & Ittner, 1994; Agorastos et al., 2006). As a result, foreign mergers are regarded as a distinct class of merger activity and have different characteristics than domestic ones (Cakici et al., 1991, 1996; Seth et al., 2000; Danbolt, 2004; Agorastos et al., 2011; Chandrika et al., 2022; Liu et al., 2024).

Weston et al. (1990) provide a thorough analysis of this viewpoint, stating that while certain reasons for international mergers and acquisitions are exclusive to the international market, others are identical to those for purely domestic deals. These "international" reasons often consist of the following elements:

- Growth: 1) to meet long-term strategic objectives; 2) to expand further from the home market; 3) to expand domestically while retaining market share; 4) to have economies of scale necessary for competitiveness in the global marketplace.
- Technology: 1) to benefit from technical understanding; 2) to acquire technology in areas lacking it.
- A further application for possibilities and strengths of distinct products: making business worldwide is related to selling differentiated products in different countries (Caves, 1986).
- The government's objective is to: 1) get around protective tariffs, quotas, and other restrictions; and 2) reduce its dependence on exports.
- Exchange rates: 1) influence on the comparative value and relevant expenses of domestic against overseas mergers; 2) influence on the value of profits to go back in the country of the parent company.
- Stability in both politics and the economy: to make investments in a dependable, secure context. Heterogeneous labor costs and labor productivity.
- Keeping track of customers (particularly for banks). Diversification: 1) to lower systematic risk; 2) by product line; 3) across borders.
- A domestic economy with limited resources: to secure reliable sources of supply.

## 3. RESEARCH DESIGN

### 3.1. Sample and data

In recent years there has been continuous merger activity in Greece as a result of global corporate restructuring. However, even if there are multiple merger agreements by listed Greek companies in the Athens Stock Exchange (ASE), there is a scarcity of merger agreements in the last decade of international mergers by listed companies. So, everyone could be skeptical about their success and maybe that is why not all listed Greek companies are involved in international merger transactions. Is it something that does not favor their development in being ready and resistant to a national or international financial crisis or is it not true? In 2019, there was one international merger activity by all Greek listed companies in the ASE that was being monitored to be further analyzed as a case study. The name of the company, which has carried out an international merger, is not mentioned in this document, but it is easy to find it on the website of the ASE.

Additionally, the company under examination has not engaged in banking operations, which poses unique challenges for the accounting assessment of international mergers. However, the company's merger activity includes a sizeable investment to guarantee the management of the merged entity. The study continues by analyzing just the publicly traded firm as it is simple to locate and assess the accounting performance of the company from these documents following the merger. The announcements made by the listed Greek companies on the ASE's websites are used to track any merger activity. The accounting ratios used in this study are derived from the financial statements of the merging business.

### 3.2. Selected quantitative variables

A company's post-merger accounting performance is assessed using financial ratios, which are chosen quantitative variables derived from the company's financial statements and other accounting data. In this investigation, a total of thirteen ratios are utilized, as indicated in Table 1.

**Table 1.** Classification of financial ratios

| *Variable* | *Financial ratio* | *Ratio analysis* |
|---|---|---|
| *V1* | Return on equity (ROE) | Net income / Shareholders' funds |
| *V2* | Return on assets (ROA) | Net income / Total assets |
| *V3* | ROCE using net income | Net income / (Shareholders' funds + Non-current liabilities) |
| *V4* | Profit margin | Net income / Sales |
| *V5* | EBIT margin | Earnings before interest and taxes / Sales |
| *V6* | Cash flow/Operating revenue | Cash flow / Operating revenue |
| *V7* | Current ratio | Current assets/Current liabilities |
| *V8* | Liquidity ratio | (Current assets - Inventory) / Current liabilities |
| *V9* | Gearing | Long-term debt / Shareholders' funds |
| *V10* | Interest coverage | Earnings before interest and taxes/Interest expenses |
| *V11* | Net asset turnover | Sales / (Shareholders' funds + Non-current liabilities) |
| *V12* | Profit per employee (th., EUR) | Net income (th., EUR) / Total number of employees |
| *V13* | Operating revenue per employee (th., EUR) | Operating revenue / Total number of employees |

There exist several alternative methods for evaluating performance apart from the ones mentioned above (Jensen, 1986; Chatterjee & Meeks, 1996; Pazarskis et al., 2022). If accounting variables are used to assess performance, return on investment (ROI) measures are thought to be the most common and often utilized. However, this multiple ratio selection approach as quantitative variables is validated as preferable when taking into account Kaplan's (1983) arguments against the excessive use of ROI kinds of measures, as follows: "… 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). Therefore, it is thought that for a comprehensive picture of the performance and profitability of a company, new and combined measurements have to be adopted (Pazarskis et al., 2023).

### 3.3. Methodology

The purchasing company in the sample considers its merger action as an investment evaluated with its net present value (NPV); an investment is approved if the NPV is less than zero. From this perspective, the research moves on with its analysis, considering the effect of a merger action as it would any other positive NPV investment made by the company in relation to its ratios over a certain time frame (Healy et al., 1992; Pazarskis et al., 2022). Furthermore, financial ratios are an important tool for merger evaluation (Mueller, 1980; Healy et al., 1992; Chatterjee & Meeks, 1996; Sharma & Ho, 2002; Agorastos et al., 2011; Verma & Kumar, 2024). The chosen financial ratios for the examined sample company over four years before or following the merger deal are computed for the study's purposes, and every mean from post-merger years is compared to a relevant mean from the years before the merger, correspondingly.

The following important research topic is examined by looking at the aforementioned ratios by studying the relative change with ratio analysis of the Greek company that carried out an international merger deal: is the post-merger performance higher for the acquiring company in an international merger compared to the pre-merger period? A set of quantitative variables in the sample is calculated over four years before (years from $t - 4$ to $t - 1$) and after (years from $t + 1$ to $t + 4$) the merger event (Pazarskis et al., 2022). Then, the mean of each accounting ratio for the years before the merger is assessed to find any increase or decrease in the mean after the merger transaction. To test this hypothesis, the mean and median of the two independent samples are compared and discussed,

by computing their difference in percentages and by employing T-test for two independent samples or by applying the Mann-Whitney test, whenever the data do not present a normal distribution (Healy et al., 1992; Sharma & Ho, 2002; Agorastos et al., 2011; Pazarskis et al., 2023).

## 4. RESULTS

Descriptive statistics for the examined sample of financial ratios are presented in Table 2 for the pre-merger period and in Table 3 for the post-merger period, with analysis of eight elements for examined ratios: minimum, first quartile (Q1), third quartile (Q3), maximum, interquartile range (IQR), standard deviation (Std. dev.), skewness, kurtosis of the data for the sample company. From Tables 2 and 3 we conclude that the variables *V10* and *V13* display a sizeable heterogeneity and variance both for the pre-merger and for the post-merger period. On the contrary, the variables with the lowest heterogeneity and variance are *V7*, *V8*, and *V11* both for the pre-merger and the post-merger period, meaning that all their values have a smaller distance from their arithmetic mean.

**Table 2.** Descriptive statistics of financial ratios for the pre-merger period

| *Variable* | *Minimum* | *Q1* | *Q3* | *Maximum* | *IQR* | *Std. dev.* | *skewness* | *kurtosis* |
|---|---|---|---|---|---|---|---|---|
| Pre-V1 | 10.48 | 10.92 | 14.28 | 14.49 | 3.36 | 1.80 | -0.05 | -5.52 |
| Pre-V2 | 6.82 | 6.93 | 9.22 | 9.35 | 2.29 | 1.19 | 0.00 | -5.86 |
| Pre-V3 | 10.00 | 11.10 | 12.62 | 12.89 | 1.52 | 1.12 | -0.91 | -0.47 |
| Pre-V4 | 6.93 | 7.73 | 10.06 | 10.94 | 2.33 | 1.55 | 0.06 | -2.59 |
| Pre-V5 | 9.84 | 9.93 | 11.69 | 13.26 | 1.76 | 1.37 | 1.26 | 0.78 |
| Pre-V6 | 6.95 | 7.57 | 9.95 | 10.99 | 2.38 | 1.57 | 0.30 | -2.57 |
| Pre-V7 | 2.56 | 2.68 | 2.88 | 2.90 | 0.19 | 0.14 | -0.85 | -1.01 |
| Pre-V8 | 1.61 | 1.78 | 1.97 | 2.03 | 0.20 | 0.16 | -0.98 | 0.47 |
| Pre-V9 | 18.37 | 20.39 | 23.50 | 24.07 | 3.11 | 2.22 | -0.79 | -1.02 |
| Pre-V10 | 5.28 | 11.17 | 26.38 | 29.51 | 15.21 | 9.64 | -0.29 | -3.12 |
| Pre-V11 | 1.31 | 1.38 | 1.54 | 1.57 | 0.16 | 0.10 | -0.37 | -2.59 |
| Pre-V12 | 14.30 | 14.57 | 16.44 | 20.68 | 1.87 | 2.62 | 1.94 | 3.81 |
| Pre-V13 | 137.36 | 171.82 | 207.68 | 211.76 | 35.86 | 29.34 | -1.30 | 1.11 |

**Table 3.** Descriptive statistics of financial ratios for the post-merger period

| *Variable* | *Minimum* | *Q1* | *Q3* | *Maximum* | *IQR* | *Std. dev.* | *skewness* | *kurtosis* |
|---|---|---|---|---|---|---|---|---|
| Post-V1 | 13.43 | 13.66 | 14.40 | 14.99 | 0.75 | 0.59 | 0.83 | -0.12 |
| Post-V2 | 8.70 | 8.85 | 9.03 | 9.08 | 0.19 | 0.14 | -0.87 | -0.14 |
| Post-V3 | 11.52 | 11.76 | 12.93 | 12.98 | 1.17 | 0.64 | -0.15 | -5.09 |
| Post-V4 | 10.93 | 11.50 | 11.80 | 11.87 | 0.30 | 0.37 | -1.82 | 3.42 |
| Post-V5 | 14.08 | 14.22 | 14.68 | 15.45 | 0.46 | 0.53 | 1.69 | 3.03 |
| Post-V6 | 12.56 | 12.63 | 12.77 | 12.87 | 0.14 | 0.12 | 0.29 | -0.40 |
| Post-V7 | 2.25 | 2.32 | 2.56 | 2.73 | 0.24 | 0.18 | 0.74 | -0.57 |
| Post-V8 | 1.43 | 1.43 | 1.52 | 1.56 | 0.09 | 0.05 | 0.49 | -3.26 |
| Post-V9 | 22.42 | 23.47 | 29.82 | 32.93 | 6.35 | 4.17 | 0.53 | -2.34 |
| Post-V10 | 13.46 | 22.14 | 27.34 | 30.35 | 5.20 | 6.28 | -1.41 | 2.53 |
| Post-V11 | 1.16 | 1.18 | 1.23 | 1.25 | 0.05 | 0.04 | 0.02 | -2.84 |
| Post-V12 | 16.32 | 17.34 | 21.23 | 22.33 | 3.89 | 2.40 | 0.03 | -3.63 |
| Post-V13 | 137.50 | 147.84 | 183.91 | 204.18 | 36.07 | 25.50 | 0.49 | -1.55 |

To begin with the profitability ratios, the results (tabulated in Table 4) revealed that over a four-year period before and following the merger transaction, six of the first ratios that are related with profitability present an improvement. More specifically, variables *V1–V6* (ROE, ROA, ROCE, profit margin, EBIT margin, cash flow to operating revenue ratio) have increased their mean from 12.15% (median 10.50%) to 43.84% (median 46.05%), signalizing an improvement in the relation of net income or earnings before interest and taxes or cash flow to shareholders' funds, total assets, capital employed (shareholders' funds plus non-current liabilities), sales or operating revenue. This outcome is in line with several other research findings that the post-merger period observed an increase in profitability (Cosh et al., 1980; Chatterjee & Meeks, 1996; Parrino et al., 1998; Dargenidou et al., 2016; Alhenawi & Stilwell, 2017). However, it fails to line up with the findings of previous research, though. Neely and Rochester (1987) discovered a drop in the profitability ratios for the US market in 1976 during the post-merger era, particularly the ROA. A decrease in the ROA ratio for the Australian market was also observed by Sharma and Ho (2002). Meeks (1977) discovered similar outcomes, with a drop in the profitability ratios. Also, a decline in profitability was claimed by Salter and Weinhold (1979), Mueller (1980), Kusewitt (1985), Dickerson et al. (1997), and Jandik and Lallemand (2014). Additionally, since there has been a rather considerable gain in profitability, these results for the Greek market do provide support to the theory of market power (Lubatkin, 1983, 1987). That supports the absorbing company's increased market strength following a merger should boost the new company's profit margins and, thus, its profitability.

Regarding the liquidity and structure of the examined company, three examined financial ratios (*V7–V9*) had a decrease in all cases due to the merger event. First, liquidity ratios, current ratio (*V7*) and liquidity ratio (*V8*) present a deterioration. The mean from the variable *V7* decreases by 10.95% (median 13.22%), while the mean from the variable *V8* by 20.18% (median 22.35%). This shows that there is no improvement after the merger in the relation of current assets (or current assets minus inventory) to current liabilities. Furthermore, the gearing ratio (*V9*) shows a deterioration in the relation of long-term debt to shareholders' funds. In this ratio,

the smallest value is the better, as it is related to the employment of leverage in the company structure. The mean value deteriorates by about 24.36% (and the median value for 18.55%). Al-Hroot (2016) found similar results, concluding that during the initial time following the merger, corporate lending increased and the merging businesses' profitability in the Jordanian industry improved marginally.

Regarding operational activity ratios, one out of the two examined ratios presents an improvement (*V10–V11*). The interest coverage ratio (calculated by earnings before interest and taxes - EBIT divided by interest expenses) increased and the net asset turnover ratio decreased. More analytically, the variable *V10* (interest coverage ratio) presents an improvement of its mean by 29.92% (median 33.54%). Furthermore, regarding the case of the net asset turnover ratio, calculating from sales divided by capital employed (shareholders' funds plus non-current liabilities), decreased. Specifically, the mean of the variable *V11* presents a deterioration of about 17.12% (median 17.79%). The results of this study differ from those of Ahmed and Ahmed's (2014) investigation in Pakistan. They concluded that throughout the post-merger period, the acquiring businesses' total financial performance increased merely relatively little. In their sample, the combined firms' capital structure and liquidity somewhat increased, but their profitability declined as a result of the merger.

Last, regarding ratios that are related with the number of employees and productivity, the profit per employee ratio (*V12*, calculated from net income in thousands of euros divided by the total number of employees) signalizes an improvement of the mean by 19.35% (median 29.83%), while operating revenue per employee ratio (*V13*, operating revenue in thousands of euros to total number of employees) shows a decrease about 9.29% (median 15.70%). Cortés et al. (2017) by studying several merger deals in Latin America concluded that industry productivity in the home country of the absorbing company has positive results in international mergers.

The strategy literature frequently contends that one way for businesses to get additional resources and redistribute those resources to save expenses and boost revenue is through mergers. The notion of resource potential for international mergers has been expanded by international business experts to incorporate a spatial component (Agorastos et al., 2011). Moreover, foreign merger deals are viewed by the absorbing company as more uncertain investments inside a different country of the absorbing company, but they also present chances for increased profitability when economies of scale are developed in the investment's host nation (Hymer, 1976). Overall, it is evident from the data obtained that the firm under investigation had improved profitability as a consequence of the merger agreement, but not in terms of liquidity or leverage, indicating that the merger transaction had mixed outcomes.

**Table 4.** Median and mean of ratios before and after completion of a merger deal

| *Variable* | *Pre-merger median (4 years avg.)* | *Post-merger median (4 years avg.)* | *Difference Δ% median* | *Pre-merger mean (4 years avg.)* | *Post-merger mean (4 years avg.)* | *Difference Δ% mean* |
|---|---|---|---|---|---|---|
| *V1* | 12.642 | 13.970 | 10.50% | 12.563 | 14.089 | 12.15% |
| *V2* | 8.071 | 8.956 | 10.96% | 8.078 | 8.925 | 10.49% |
| *V3* | 11.993 | 12.380 | 3.23% | 11.720 | 12.315 | 5.08% |
| *V4* | 8.882 | 11.731 | 32.07% | 8.908 | 11.565 | 29.83% |
| *V5* | 10.570 | 14.343 | 35.69% | 11.059 | 14.553 | 31.60% |
| *V6* | 8.694 | 12.698 | 46.05% | 8.833 | 12.705 | 43.84% |
| *V7* | 2.795 | 2.426 | -13.22% | 2.761 | 2.459 | -10.95% |
| *V8* | 1.893 | 1.470 | -22.35% | 1.856 | 1.481 | -20.18% |
| *V9* | 22.187 | 26.303 | 18.55% | 21.703 | 26.990 | 24.36% |
| *V10* | 19.235 | 25.685 | 33.54% | 18.315 | 23.794 | 29.92% |
| *V11* | 1.465 | 1.204 | -17.79% | 1.453 | 1.204 | -17.12% |
| *V12* | 14.842 | 19.270 | 29.83% | 16.166 | 19.295 | 19.35% |
| *V13* | 194.810 | 164.224 | -15.70% | 184.686 | 167.534 | -9.29% |

To further investigate if the merger agreement significantly modified the company's financial ratios, a T-test is implemented to compare the means of all the variables for the pre-merger and post-merger period. The normality test is necessary to be conducted since in case of no normality a non-parametric test should be used.

**Table 5.** Tests of normality

| *Variable* | *Kolmogorov-Smirnov* [a] | | | *Shapiro-Wilk* | | |
|---|---|---|---|---|---|---|
| | *Statistic* | *df* | *Sig.* | *Statistic* | *df* | *Sig.* |
| *V1* | 0.275 | 8 | 0.075 | 0.828 | 8 | 0.057 |
| *V2* | 0.330 | 8 | 0.011 | 0.740 | 8 | 0.006 |
| *V3* | 0.189 | 8 | 0.200* | 0.872 | 8 | 0.156 |
| *V4* | 0.271 | 8 | 0.086 | 0.841 | 8 | 0.077 |
| *V5* | 0.221 | 8 | 0.200* | 0.879 | 8 | 0.182 |
| *V6* | 0.273 | 8 | 0.082 | 0.834 | 8 | 0.065 |
| *V7* | 0.184 | 8 | 0.200* | 0.942 | 8 | 0.633 |
| *V8* | 0.230 | 8 | 0.200* | 0.876 | 8 | 0.174 |
| *V9* | 0.274 | 8 | 0.077 | 0.923 | 8 | 0.454 |
| *V10* | 0.293 | 8 | 0.042 | 0.868 | 8 | 0.145 |
| *V11* | 0.192 | 8 | 0.200* | 0.903 | 8 | 0.308 |
| *V12* | 0.199 | 8 | 0.200* | 0.886 | 8 | 0.216 |
| *V13* | 0.194 | 8 | 0.200* | 0.880 | 8 | 0.188 |

*Note: a. Lilliefors significance correction. *. This is a lower bound of the true significance.*

From Table 5 it is observed the Shapiro-Wilk test results since the size of the examined sample is small (N < 50). It is noted that Sig. is bigger than 0.005 for all the financial ratios except for *V2* (ROA). Therefore, except for ROA, all the other variables follow a normal distribution. Thus, it is implemented a non-parametric Mann-Whitney test for ROA and a parametric T-test for the rest of the financial ratios.

**Table 6.** Independent samples test

| | | *Levene's test for equality of variances* | | *T-test for equality of means* | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | *F* | *Sig.* | *t* | *df* | *Sig. (2-tailed)* | *Mean difference* | *Std. error difference* | *95% confidence interval of the difference* | |
| | | | | | | | | | *Lower* | *Upper* |
| *V1* | Equal variances assumed | 35.350 | 0.001 | -1.395 | 6 | 0.213 | -1.5260 | 1.0940 | -4.2029 | 1.15098 |
| | **Equal variances not assumed** | | | -1.395 | 3.630 | **0.242** | -1.5260 | 1.0940 | -4.6894 | 1.63746 |
| *V3* | **Equal variances assumed** | 1.265 | 0.304 | -0.797 | 6 | **0.456** | -0.5955 | 0.7468 | -2.4230 | 1.23200 |
| | Equal variances not assumed | | | -0.797 | 4.784 | 0.463 | -0.5955 | 0.7468 | -2.5417 | 1.35073 |
| *V4* | Equal variances assumed | 10.896 | 0.016 | -2.889 | 6 | 0.028 | -2.6570 | 0.9196 | -4.9072 | -0.4067 |
| | **Equal variances not assumed** | | | -2.889 | 3.341 | **0.055** | -2.6570 | 0.9196 | -5.4217 | 0.10777 |
| *V5* | **Equal variances assumed** | 2.419 | 0.171 | -4.118 | 6 | **0.006** | -3.4945 | 0.8485 | -5.5708 | -1.4182 |
| | Equal variances not assumed | | | -4.118 | 3.875 | 0.016 | -3.4945 | 0.8485 | -5.8805 | -1.1084 |
| *V6* | Equal variances assumed | 17.179 | 0.006 | -4.252 | 6 | 0.005 | -3.8725 | 0.9107 | -6.1009 | -1.6440 |
| | **Equal variances not assumed** | | | -4.252 | 3.032 | **0.023** | -3.8725 | 0.9107 | -6.7533 | -0.9916 |
| *V7* | **Equal variances assumed** | 0.385 | 0.558 | 2.303 | 6 | **0.061** | 0.3022 | 0.1312 | -0.0188 | 0.6233 |
| | Equal variances not assumed | | | 2.303 | 5.565 | 0.064 | 0.3022 | 0.1312 | -0.0250 | 0.6295 |
| *V8* | **Equal variances assumed** | 2.907 | 0.139 | 3.827 | 6 | **0.009** | 0.3745 | 0.0978 | 0.1350 | 0.6139 |
| | Equal variances not assumed | | | 3.827 | 3.641 | 0.022 | 0.3745 | 0.0978 | 0.0919 | 0.6570 |
| *V9* | **Equal variances assumed** | 3.153 | 0.126 | -1.939 | 6 | **0.101** | -5.2862 | 2.7259 | -11.956 | 1.3839 |
| | Equal variances not assumed | | | -1.939 | 4.573 | 0.116 | -5.2862 | 2.7259 | -12.494 | 1.9222 |
| *V10* | **Equal variances assumed** | 2.063 | 0.201 | -0.825 | 6 | **0.441** | -5.4795 | 6.6402 | -21.727 | 10.7686 |
| | Equal variances not assumed | | | -0.825 | 5.159 | 0.446 | -5.4795 | 6.6402 | -22.391 | 11.4329 |
| *V11* | Equal variances assumed | 7.904 | 0.031 | 3.924 | 6 | 0.008 | 0.2487 | 0.0634 | 0.0936 | 0.40387 |
| | **Equal variances not assumed** | | | 3.924 | 3.688 | **0.020** | 0.2487 | 0.0634 | 0.0667 | 0.43079 |
| *V12* | **Equal variances assumed** | 0.002 | 0.965 | -1.524 | 6 | **0.178** | -3.1285 | 2.0533 | -8.1529 | 1.89579 |
| | Equal variances not assumed | | | -1.524 | 5.956 | 0.179 | -3.1285 | 2.0533 | -8.1617 | 1.90472 |
| *V13* | **Equal variances assumed** | 0.012 | 0.918 | 0.764 | 6 | **0.474** | 17.15200 | 22.44201 | -37.76162 | 72.06562 |
| | Equal variances not assumed | | | 0.764 | 5.886 | 0.474 | 17.15200 | 22.44201 | -38.02024 | 72.32424 |

Table 6 presents the results for the variables *V1* and *V3–V13*. From Levene's test for equality of variances, we conclude that equal variances should be assumed for *V3*, *V5*, *V7*, *V8*, *V9*, *V10*, *V12*, and *V13* (Sig. > 0.05). In the rest of the variables, unequal variances are taken into consideration. For all the financial ratios *V1* and *V3–V13* it is examined the null hypothesis of no difference between their arithmetic means for the pre-merger and the post-merger period against the alternative hypothesis of unequal means. If the Sig. (2-tailed) > 0.05 then the null hypothesis is accepted and there is not a significant differentiation between the two period's averages. It is inferred that for the variables *V5*, *V6*, *V8*, and *V11* there exists a statistically significant dissimilarity between their pre-merger the post-merger period averages. The same conclusion is valid for the variables *V4* and *V7* but at a significance level at 10%.

**Table 7.** Non-parametric independent samples test

| *Mann-Whitney test* | *V2* |
|---|---|
| Mann-Whitney U | 8.000 |
| Wilcoxon W | 18.000 |
| Z | 0.000 |
| Asymp. sig. (2-tailed) | 1.000 |
| Exact sig. [2*(1-tailed sig.)] | 1.000[a] |

*Note: a denotes that the null hypothesis is accepted at any significance level.*

Finally, Table 7 exhibits the non-parametric Mann-Whitney test for the variable *V2*. It is noticed that Asymp. Sig. (2-tailed) > 0.05, thus the null hypothesis is accepted and there is no significant difference between the two period's arithmetic medians.

Considering the statistical analysis of this study and the profitability ratios, the results (tabulated in Tables 6 and 7) revealed that three of the six first profitability-related ratios showed

improvement over the four years before and following the merger deal. More precisely, the relationship between net income, or profits before interest and taxes, to sales has been improved as indicated by the statistically significant increases in variables *V4–V6* (profit margin, EBIT margin, and cash flow to operational revenue ratio). Similar results claimed several past researches that showed a rise in profitability after the merger deal (Chatterjee & Meeks, 1996; Dargenidou et al., 2016; Alhenawi & Stilwell, 2017). It does not, however, agree with the results of certain other prior studies. In the post-merger era, Neely and Rochester (1987) support a deterioration of the ROA ratio in the US market's profitability. Meeks (1977) found that the profitability ratios decreased, yielding identical results. Moreover, Salter and Weinhold (1979), Kusewitt (1985), Dickerson et al. (1997), Sharma and Ho (2002), and Jandik and Lallemand (2014) also reported a decrease in profitability.

The merger event also resulted in a statistically significant decline in all three of the analyzed quantitative variables (financial ratios *V7–V8*) related to the structure and liquidity of the firm under examination. More specifically, there is a decline in the liquidity ratios, current ratio (*V7*) and liquidity ratio (*V8*). This demonstrates that the relationship between current assets (or current assets less inventory) and current liabilities did not improve following the merger. Last, regarding operational activity ratios, one out of two examined ratios (*V11*) presents a statistically significant change. Specifically, the net asset turnover ratio (*V11*), calculated from sales divided by capital employed (shareholders' funds plus non-current liabilities), decreased.

The strategy literature often argues that mergers are one approach for companies to obtain more resources and reallocate those resources to reduce costs and increase revenue, while resource potential for international mergers supports new resources in new geographical areas (Caves, 1986; Agorastos et al., 2006; Chandrika et al., 2022). Furthermore, when economies of scale are achieved in the investment's host country, international merger agreements provide opportunities for enhanced profitability, but they are also perceived by the absorbing business as riskier investments in an unfamiliar environment (Hymer, 1976; Liu et al., 2024). Overall, the evidence collected makes it clear that the merger agreement increased the under-investigation's profitability, but not in terms of liquidity or leverage, suggesting that the merger transaction had mixed results.

## 5. CONCLUSION

The creation of new corporate entities through mergers is a key component of modern corporate restructuring. This means that, aside from the well-analyzed environments of the US or UK capital markets, it has been in the past relatively few studies on mergers conducted in the vast majority of other nations worldwide. There are not many post-merger financial performance studies with ratio analyses on companies engaged in merger activity for Greece, particularly when looking at it from an international perspective. The goal of the current study is to provide new perspectives on the latter problem.

This study attempts to assess such a type of international merger transaction by examining the pre- and post-merger results of a Greek company listed on the ASE that performed one merger activity in 2019 as an absorbing company. It does this by using several quantitative variables as performance measures from 2015 to 2022, and thus, the study performed an analysis for four years before in contrast to after of corporate performance of the merger event. The aim of this research is to explore the effects of mergers on post-merger corporate performance using thirteen key financial ratios that had previously been generated from the accounting data of the company.

In summary, the research indicates that the Greek listed sample firm under investigation has seen improved profitability as a result of the merger agreement, but there have been mixed effects in terms of liquidity and debt. Furthermore, the notion of market power is supported by this outcome for the Greek market, since there has been a notable improvement in profitability (Lubatkin, 1983, 1987). This strategy holds that the acquirer's increased market strength following the merger should boost the newly formed company's profit margins and, consequently, its profitability.

Limitations of this study are the small research sample — as it examined a company in the form of a case study — and the time frame period of analysis that stops at the end of 2022. Further extensions of this research might look at how the specific sort of merger transaction affects a larger sample of Greek companies involved in international mergers that are listed as well as non-listed in the ASE companies and throughout other time periods.

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