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MERGERS & ACQUISITIONS. A FINANCIAL ANALYSIS OF A BIG CASE STUDY IN EMERGING MARKETS DURING THE PANDEMIC

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ABSTRACT

This paper deals with the issue of Acquisitions and Mergers. More emphasis is placed on the approach of the term Acquisition, and in particular on a large and important acquisition of two companies listed on the Greek economy. As is known, the Greek stock market belongs to the emerging markets. The agreement and completion of the acquisition took place during the pandemic. This study is an in-depth research and financial analysis of the companies Singular Logic and Epsilon Net for the years 2011 to 2020. The two companies, Singular Logic and Epsilon Net, have agreed to acquire the former from the latter in 2020. An acquisition carried out with the partial separation of the acquired business until the beginning of 2021, and the result of this process was the newly established company Epsilon Singular Logic SA This newly established company is half-owned by Epsilon Net and Space Hellas. As far as the study of this particular work is concerned, a complete financial analysis is carried out before the acquisition

of these two companies. Our analysis focuses on a longitudinal comparison with productivity, efficiency, cash flow, investment ratios, liquidity, the Altman bankruptcy model and finally the takeover evaluation models, between Epsilon Net and Singular Logic. This comparative study tries to highlight the financial course of the two companies with any financial problems that existed from the year 2011 to the year of the acquisition agreement 2020, i.e. before the completion of the split and acquisition of the economic entity Singular Logic.
Keywords: Mergers & Acquisitions, Financial Analysis.
JEL Classification: G21, G33, G34.

INTRODUCTION

M&A, deals, buyouts, LBOs, MBOs, private equity, venture capital, corporate development, and a myriad of other terms are used to describe large transactions that fundamentally change the nature or course, and control, of a company. While there are many differences among these different types of deals, a common thread runs through all of them. They are all Strategic Transactions that involve a change or shift in control of a company and usually a corresponding shift in strategic direction.[1]

Merger is said to occur when two or more firms combine into one firm. Mergers can be either through absorption or through consolidation. Acquisition is defined as an act of acquiring effective control over assets or management of a company by another company without any combination of business or companies. For a firm entering into M&A, the various principles of valuation have to be taken into consideration. For that the acquiring firms has to decide which type of valuation is needed in order to have financial and economic gain out of M&A process.[2]

The main motivation of any business to make an acquisition or merger is to increase the size of the economic entity. All this process leads to the development of the company, such a strategy is faster but it entails several risks that focus on the cost of realization, the successful merger of activities, the successful integration of activities and finally, the successful long-term synergies.[3]

Mergers and Acquisitions activity has been a widely spread researched area over the past decade by both academic scientists and industry experts, especially after the implementation of the Euro as a common currency in most countries of the European Union, which greatly reduced the exchange rate risk and initially strengthened the economies of the countries that participated in this common currency. It is important to be mentioned that the acquired company will be recorded at its fair value. The difference between the fair value and the purchase price will be recorded in the balance sheet of the company that acquired the company as goodwill. The goodwill created in the acquisition of economic entities based on International Accounting Standards is recognized on the date of acquisition by determining the fair value of the acquired company and is not amortized, but may be examined later for a possible reduction in the value of the goodwill . In addition, the acquired company's goodwill enables the acquiring company to amortize within 20 years.[4]

[1] Frankel M., E., S., (2005). "Mergers and Acquisitions Basics. The Key Steps of Acquisitions, Divestitures, and Investments" Published by John Wiley & Sons, Inc., Hoboken, New Jersey
[2] Parimala S., Kalaiselvi S., (2015). "Impact of Mergers and Acquisitions: A Theoretical Framework". Indian Journal of Research Volume 4, Issue 11. pp 87-89
[3] Gaughan, P. A., (2011) Mergers, Acquisitions and corporate Restructurings, 5th edition, Wiley Publications.
[4] Grant Thornton (2022). "Navigating the changes to International Financial Reporting Standards". Grant Thornton International Ltd Publications 2022 edition.

Every Merger and Acquisition that takes place has a common goal, the value of the companies that will be created after the acquisition or merger have a cumulative value greater than the previous two. It is often observed that companies use as a strategic method the acquisition and merger with other companies to create a new company that is financially as well as strategically stronger than the two or more that preceded it. First, we should mention that acquisition and merger are two different concepts.[5]

Singular Logic and Epsilon Net were two financial entities based in Greece. Singular Logic was founded in 1997 in Athens while Epsilon Net was founded in 1999 in Thessaloniki. The purpose chosen to carry out this research is the interest arising in the merger and acquisition of the IT industry, and more specifically in two IT companies dealing with programs aimed at accounting firms. The acquisition of the company Singular Logic was started in year 2020 and completed in 2021, a year that for companies dealing with accounting content programs is considered profitable. And this is because all businesses in the Greek Territory were required by law from November 2021 to invoice electronically. According to the EpsilonNet announcements the company Epsilon SingularLogic S.A. was founded in January 2021. EpsilonNet also acquired from Space Hellas all of its shares in the company Epsilon SingularLogic S.A., which corresponded to a percentage of 39.97% of the company's share capital, against the amount of 11 .8 million Euros. After the transfer, the percentage of the EpsilonNet Group in the company Epsilon SingularLogic S.A. amounts to 99.97% of its share capital. At the same time, EpsilonNet sold all its shares to Space Hellas, to the company SingularLogic S.A. which corresponded to a percentage of 39.93% of its share capital, against the amount of 6.3 million Euros.[6] This, for the economic entities involved in the specific sector, meant profits. An additional purpose for carrying out this study was the calculation, analysis and presentation of the indicators to the investment and scientific public for further study of similar cases, as well as the contribution that the indicators had in highlighting the financial behavior of these two companies in the last decade. Furthermore, the specific research highlights the important position of Epsilon Net after the acquisition of Singular Logic, both because it significantly increases its share of sales in the Greek information system market, addressed mainly to accounting firms and services, and because of its efforts to achieve further its development through new acquisitions in the Greek and international market. Finally, we wanted to show whether and to what extent the financial analysis and the bankruptcy model showed the financial distress of the acquiring company in time, leading to its acquisition out of nowhere. The results helped us draw conclusions and study in depth the purpose of acquisition and merger in the Greek context. After all, the policies that are now practiced in the hinterland are focused on mergers and acquisitions of economies of scale to deal with the energy crisis, with possible tax breaks for companies that proceed with such moves.

LITERATURE REVIEW

Bower (2001) considers that acquisitions and mergers are done to limit competitors, geographical expansion of the firm, expansion in product lines and international presence of the firm, development in the field of know-how versus internal development and consolidation competitive position in a market that is constantly developing and creating new needs.

[5] Papadakis Vassilis M., (2007) "Business strategy Greek and International experience," 5th edition, E. Benou Publications, Volume I Theory, Athens

[6] https://www.businessdaily.gr/epiheiriseis/96552_symfonia-epsilon-net-me-space-hellas-gia-ti-singular-logic

Jones K (2009) defines the M&A transaction as: "Mergers and acquisitions refers to the corporate strategy, finance, and management that deals with the buying, selling, and combining of companies; mergers and acquisitions can finance or help a growing company in a given industry expand rapidly without the necessity of creating another business entity Wikipedia (2009). The ultimate goal of a merger is to create value. Value can only be created when the value of Company A + Company B is greater than the value of Company A and Company B separately."

Fornalczyk (2012) writes: "Mergers and acquisitions (M&A) offer an alternative to strategic alliances in order to strengthen market position. Mergers result in higher concentration of assets in the hands of a single company, the outcome of acquisitions is the creation and expansion of capital groups. Competition law treats a capital group as one economic entity because subsidiaries are coordinated by the dominant company within the group."

Jallow M., S., Masazing M., and Basit A., (2017) examined the impact of mergers and acquisitions on ROA and by referring to the paired sample test, and the results shows that the total mergers and acquired firms used in as sample size encounter significant reduction on ROA before and after mergers. They saw that there was a reduction, which still have an effect on ROA. Therefore we can conclude that mergers and acquisitions will significantly effects the performance of firm hence ROA. Second they examined the impact of merger and acquisition on ROE and as for the paired sample analysis; the results signified that the merged firms in the sample size encounter a reduction in ROE before and after mergers. Furthermore, the sample on the other hand ROE found a sophisticated level of significant than ROA, which means ROE have more effect on financial performance. Finally they said that if the value of ROE is significant then it's having an effect on mergers and acquisition activities.

Meeampol S., Lerskullawat P., Wongsorntham A., Srinammuang P., Rodpetch V., Noonoi R., (2014) analyzed the possibilities of prediction of business bankruptcy by applying the Z- score model and Emerging Market Z-score model. This paper found out that both models can completely predict the sign of a possible bankruptcy that may occur and effective when two years of information were used than one year. The Z-Score model achieved 89.66% (2010) and 80.77 (2011), while EM-Score model, 75.86% (2010) and 46.15% (2011) prediction accuracy when it is applied to forecast bankruptcies on the underlying sample. It indicated the importance of liquidity ratio, retained earnings, capital efficiency, and operating efficiency. This financial ratio was most significant in bankruptcy prediction for the Stock Exchange of Thailand (SET). Capital efficiency means how a manager manages the assets. The higher ratio indicates better capital efficiency. In other words, the manager manages the assets efficiently. The liquidity ratio states a company's capacity to repay short-term creditors out of its total cash. The higher the current ratio, the more capable the company is by paying its obligations.

METHODOLOGY

Financial ratios are a correlation between two quantities that make up the numerator and the denominator, or otherwise the financial ratios are the simple relationship that exists in one account of the balance sheet or the statements of the results of use to another and are expressed in simple mathematical form. The utility of numerical indicators is to determine the actual position or efficiency of various departments or even entire departments of the economic unit. Essentially, the indicators show us the analysis of the actual situation of the entire economic entity or more generally of the sector in which the specific economic unit is included. In

addition, financial ratios can determine the relationship between key business metrics, making business action easier as the results that have been explained are explained. An advantage of ratios is that they can provide information to the business that basic accounts cannot provide directly. Also, they can determine the degree of performance of various activities of the economic entity in order to more properly exploit its means of action. Also, an advantage is that the quotient of the ratio if we express it in an absolute value or in the form of a percentage will give us a new piece of information, which will be different and independent from the informational content of the two accounting quantities that were designed as a result of the creation of the numerator. It is important to mention that ratios give the researcher who studies them a quick, direct and reliable way to discover critical information about the company he is researching. [7]

In order to comparatively evaluate the two companies under consideration before the acquisition of one by the other, we studied the following categories of the most important financial ratios:

A) Liquidity Ratios:

Financial ratios referring to liquidity can be used to determine the short-term position of an economic entity or the ability it may have to meet its short-term obligations. The ability that the company can have to cope with its current needs also depends on the adequacy of its liquidity, which in order to be realized requires the conversion of its stocks into sales or sales into receivables and receivables that become liquidity.[8]

Liquidity ratios are divided into three important categories as it is well known.

i) General Liquidity = Current Assets / Current Liabilities (1)

ii) Specific Liquidity = (Current Assets – Inventories) / Current Liabilities (2)

iii) Cash Liquidity = Cash / Current Liabilities (3)

B) Profitability Ratios:

Profitability ratios are used by analysts to assess the profitability of the economic entity based on its business objectives, i.e. profit maximization. The results provided by the efficiency indicators are a typical example of the long-term earnings of an economic entity, because it is inextricably linked to its long-term viability. The information provided by the specific indicators is taken into account by the people surrounding the company, such as shareholders and investors.[9]

Profitability ratios are divided into four important categories as it is well known.

i) Return on Equity: ROE = EBIT / Equity (4)

Where EBIT means Earnings Before Interest and Taxes.

ii) Return on Assets: ROA = EBIT / Assets (5)

iii) DuPont Analysis:

$$ROE = \frac{EBIT}{Sales} X \frac{Sales}{Total\ Assets} X \frac{Total\ Assets}{Equity} \quad (6)$$

iv) Gross Profit Margin: GPM = Gross Profit / Sales (7)

v) Profit Margin = Net Profit Before Tax / Sales (8)

[7] Apostolou, A., (2015). "Analysis of Accounting-Financial Statements". [elec. bibl.] Athens. pp.17-87. Association of Greek Academic Libraries. Available at: http://hdl.handle.net/11419/3760

[8] Niarchou N. (2004) Financial Analysis of Accounting Statements. Stamouli Publications S.A. Athens, Greece.

[9] Apostolou, A., (2015). "Analysis of Accounting-Financial Statements". [elec. bibl.] Athens. pp.17-87. Association of Greek Academic Libraries. Available at: http://hdl.handle.net/11419/3760

vi) EBITDA Margin[10]

EBITA= (Operating Profits + Depreciation + Amortization) / Sales (9)

The EBITDA margin is considered to be a good indicator of a company's financial condition because it evaluates a company's performance without needing to take into account financial decisions, accounting decisions or various tax environments.[11]

The EBITDA margin refers to the operating profits of the business together with taxes and depreciation that the economic entity may have in the particular year under consideration. Essentially, this ratio shows us the true efficiency of the company's earnings along with depreciation. In addition, we could clarify that, the specific indicator shows the profit of the business, calculating as expenses and taxes, interest, depreciation, amortization, etc.

C) Altman Model of Bankruptcy of Emerging Market:

The Z-score combination which is essentially Altman's bankruptcy model is based on the sequential calculation and combination of several indicators into one. In the case of the two economic entities that we are considering, we should use two versions of the Altman Z-score model. One version concerns the application of the Altman's Z-score model for listed on the Athens Stock Exchange companies and will be applied to the company Epsilon Net and the other version will be applied to the company Singular Logic that was not listed on the Athens Stock Exchange.

i) Listed on the Stock Exchange Market[12]

$$Zscore = 3{,}25 + (6{,}56 * X_1) + (3{,}26 * X_2) + (6{,}72 * X_3) + (1{,}05 * X_4) \quad (10)$$

Where:

X_1 = Working Capital / Total Assets (11)

Working Capital = (Current Assets - Current Liabilities) (12)

X_2 = Retained Earnings / Total Assets (13)

X_3 = Earnings Before Interest and Taxes / Total Assets (14)

X_4 = Book Value of Equity / Total Liabilities (15)

The Interpretation of Emerging Market Z-Score Model is:

Z- score > 2.60 Safe Zone,

1.1 < EM Z- score < 2.60 Grey Zone and

Z- score < 1.1 Distress Zone.

ii) Not Listed on the Stock Exchange Market[13]

$$Z = (0{,}717 * X_1) + (0{,}847 * X_2) + (3.107 * X_3) + (0{,}420 * X_4) + (0{,}998 * X_5) \quad (16)$$

The fourth ratios in Not Listed on the Stock Exchange Market version are the same with the Listed on the Stock Exchange Market. The only difference is that in Not Listed on the Stock Exchange Market version of Altman's Z-score is the X_5 ratio that described below:

X_5 = Sales / Total assets (17)

The Interpretation of non Emerging Market Z-Score Model is:

[10] CHEN J., (2022). "EBITDA Margin: What It Is, Formula, How to Use It" https://www.investopedia.com/terms/e/ebitda-margin.asp (accessed 14/10/2023).

[11] Tarver E., (2022). "What Does the EBITDA Margin Imply About a Company's Financial Condition?". https://www.investopedia.com/ask/answers/032715/why-ebitda-margin-considered-be-good-indicator-companys-financial-health.asp (accessed 14/10/2023).

[12] Meeampol S., Lerskullawat P., Wongsorntham A., Srinammuang P., Rodpetch V., Noonoi R., (2014). "Applying Emerging Market Z-Score Model to Predict Bankruptcy: A Case Study of Listed Companies in the Stock Exchange of Thailand". Management Knowledge and Learning International Conference International School for Social and Business Studies Portoroz Slovenia

[13] Altman, Edward I. and Edith Hotchkiss. (2006). Corporate financial distress and bankruptcy. 3rd Edition John Wiley & Sons, Inc., Hoboken, NJ.

$Z > 2.99$ Safe Zone or financially healthy, $1.81 < Z < 2.99$ Grey Zone and $Z < 1.81$ Distress Zone.

D) Cash flow Statements ratios

Cash flow ratios are extracted from the published financial statements and mainly from the cash flow statement combined with the balance sheet and the income statement. It should be mentioned that it is important to study cash flow ratios because they provide us with information about cash receipts, payments and net cash flows resulting from the daily operation, investments and financial activities of the economic entity. This gives investors the advantage to more rationally evaluate the ability of the economic entity to generate a positive flow of funds in the future, to be able to meet the repayment of obligations and pay dividends, if the business has the need for external capital to operate properly and finally, the reasons that may arise for the change in cash and cash equivalents between the beginning and the end of the management period.[14]

i) Cash Return on Assets: CROA = CFO / (Average Total Assets) (18)

where CFO means Cash Flow Operation.

We calculate the indicator referring to the performance of the Assets or CROA (cash return on assets), with the operating cash flows in the numerator and the average value of all the Assets in the year under review with the previous one in the denominator. This ratio gives us information, which is how far the cash flows from the economic entity were used in relation to its assets.

The CROA ratio is used to benchmark a business's performance with other businesses in the same industry. CROA rates actual cash flows to assets without being affected by income. The ratio is useful to company analysts or potential and current investors. A high CROA ratio typically indicates that a company earns more net income from $1 of assets than the average company, which is a sign of efficiency. A low cash ROA ratio typically indicates that a company makes less net income per $1 of assets, which is a sign of inefficiency.[15]

ii) Cash Return on Equity: CROE = CFO / Average Equity (19)

To calculate the financial indicator of return on equity or CROE (cash return on equity), we need in the numerator the operating cash flows of the economic entity under consideration and as the denominator the average value of the year under consideration together with the previous one of the share capital. The results of this indicator show us that the cash flows used by the company during the specific management period efficiently correspond to the equity capital invested by the shareholders. Cash Flow Return on Equity is a term that refers how much cash flow seems to one dollar of invested capital.[16]

iii) Cash Financial Operation Solvency: CFOS= CFO / Interests paid (20)

The company's financial cash solvency ratio is calculated from operating cash flows in the numerator and interest paid in the denominator. The results that this indicator gives us are whether the company is solvent in its obligations in the loans it has taken out from third parties and pays the interest corresponding to its obligations.[17]

[14] Niarchou N. (2004) Financial Analysis of Accounting Statements. Stamouli Publications S.A. Athens, Greece.
[15] Banton C., (2021). "Cash Return on Assets Ratio: What it Means, How it Works". https://www.investopedia.com/terms/c/cash-return-on-assets-ratio.asp (accessed 14 10 2023).
[16] Niarchou N. (2004) Financial Analysis of Accounting Statements. Stamouli Publications S.A. Athens, Greece.
[17] Niarchou N. (2004) Financial Analysis of Accounting Statements. Stamouli Publications S.A. Athens, Greece.

RESULTS AND DISCUSSION

In this chapter we present our results and by financial ratios category.

A) Liquidity Ratios

In the table 1 and figure 1 below we present the comparison of the general, specific and cash liquidity ratios' courses values for the two involved companies ten years before the acquisition and the same ratios only for the bidder company in the year that the acquisition completed and one year after the acquisition. As can clearly observe mainly from the figure 1 for the target due to its lack of inventories the values of general and specific liquidity ratios had parallel courses with sharp downward trends with significant recovery but only two years in 2015 and 2019. There was also a downward trend in the course of cash liquidity ratio, but not as sharp as the other two liquidity ratios. The values of cash liquidity ratio move very close to zero. For the bidder company we also observe that the values of general and specific liquidity ratios due to its lack of inventories had parallel courses. The values of all liquidity ratios had courses with a significant volatility ten years before the acquisition took place. Due to the pandemic years they had a sharp downward trend, and in the year that the acquisition completed and one year after the acquisition did not seem to recover.

Table 1

General, Specific and Cash Liquidity Ratios

YEARS	General Liquidity Singular Logic	General Liquidity Epsilon Net	Specific Liquidity Singular Logic	Specific Liquidity Epsilon Net	Cash Liquidity Singular Logic	Cash Liquidity Epsilon Net
2011	1.742	1.787	1.716	1.665	0.346	0.131
2012	0.788	1.736	0.777	1.636	0.094	0.319
2013	0.546	2.512	0.534	2.451	0.078	0.617
2014	0.492	2.877	0.484	2.873	0.053	0.518
2014	0.419	2.699	0.414	2.695	0.032	0.508
2015	1.191	2.537	1.181	2.526	0.058	0.525
2016	0.352	2.310	0.346	2.303	0.027	0.530
2017	0.248	2.796	0.242	2.775	0.014	0.778
2018	0.237	3.220	0.230	3.207	0.013	1.452
2019	0.739	2.557	0.511	2.554	0.110	1.142
2020	0.327	2.624	0.318	2.620	0.051	1.661
2021		1.643		1.638		0.846
2022		1.681		1.671		0.746

Source: Authors' Calculations from published financial statements.

B) Profitability Ratios

In the table 2 and figure 2 below we compare the course of the profitability ratios ROE, ROA for the two companies ten years before the acquisition and the same ratios for the bidder company in the year that the acquisition completed and one year after the acquisition. These ratios are two of the three components of DuPont model and the third one is the EM. As can clearly observe mainly from the figure 2 that the ROE ratio of the target company had significant negative values with sharp volatility and the ROA ratio had also negative values but with no such a sharp volatility. As for the bidder company we found that the course of the ROE and ROA ratios followed an upward trend even during the pandemic.

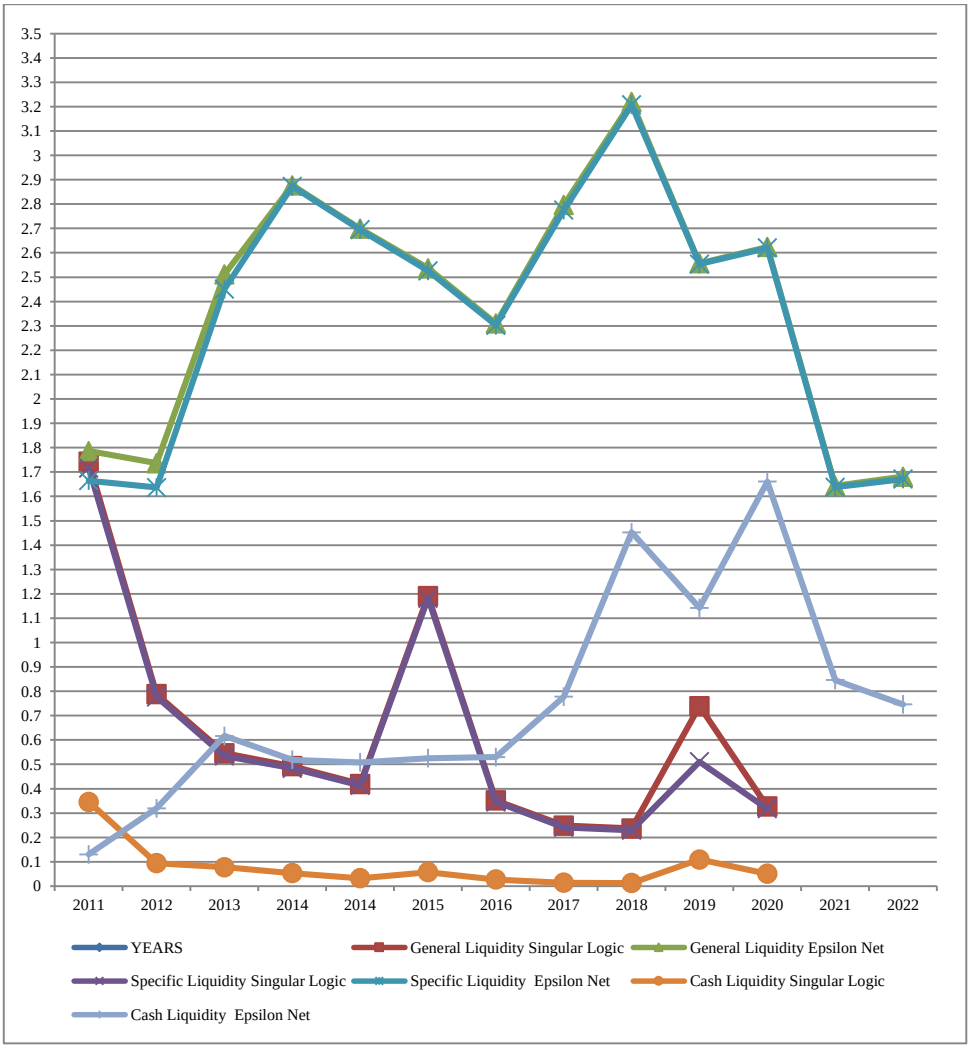

Figure 1: The course of General, Specific and Cash Liquidity Ratios. Source: Table 1

This upward trend continued in the year 2021 that the acquisition was completed and one year after the acquisition took place. From the table 2 we can notice the trend of the EM ratio that saw the high values of financial leverage of the target company, especially the significant high value in year 2018. The EM ratio of the bidder company saw that it's financial leverage had a smooth course with low index values both before the acquisition and during the pandemic, as well as in the year 2021 that the acquisition was completed and one year after the acquisition took place.

Table 2

ROE, ROA, EM DuPont Analysis 2011-2020

Years	ROE % Singular Logic	ROE % Epsilon Net	ROA % Singular Logic	ROA % Epsilon Net	EM Singular Logic	EM Epsilon Net
2011	-1.30	1.80	-0.50	1.40	2.60	1.29
2012	-52.50	1.70	-14.60	1.10	3.60	1.55
2013	0.01	2.90	0.30	2.20	4.33	1.32
2014	-3.80	4.90	-0.90	3.70	4.22	1.32
2015	9.20	3.60	2.30	2.60	4.00	1.38

2016	3.90	1.40	0.90	0.90	4.33	1.56
2017	-73.80	9.30	-8.50	5.50	8.68	1.69
2018	-10.20	10.80	-0.30	5.60	34.00	1.93
2019	9.50	13.00	1.40	6.50	6.79	2.00
2020	-2.30	16.40	0.40	7.30	5.75	2.25
2021		29.90		15.30		1.95
2022		37.10		20.30		1.83

Source: Authors' Calculations from published financial statements.

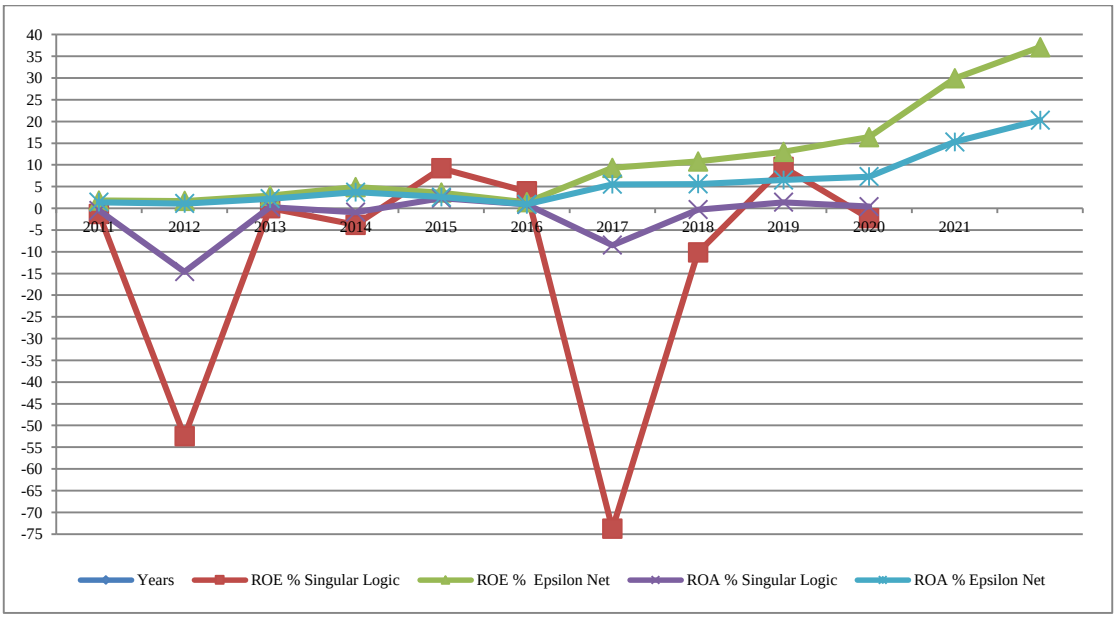

Figure 2: The course of ROE %, ROA %. Source: Table 2

In the table 3 and figure 3 below we compare the course of the other three profitability ratios Profit Margin, Gross Margin EBITDA Margin for the two companies ten years before the acquisition and the same ratios for the bidder company in the year 2021 that the acquisition was completed and one year after the acquisition took place. As can clearly observe mainly from the figure 3 the profit margin and EBITDA margin of the target company had significant negative values with sharp volatility. In the contrary the gross margin had positive values with no such sharp volatility and more over after year 2017 started an upper trend. As for the bidder company we found that the course of the profit margin and gross margin followed an upward trend even during the pandemic. This upward trend continued in the year 2021 that the acquisition was completed and one year after the acquisition took place. The EBITDA margin had mainly downward trend ten years before the acquisition but during the pandemic started an upper trend than continued with more tension in the year 2021 that the acquisition was completed and one year after the acquisition took place this trend followed downward course.

Table 3
Profit Margin, Gross Margin EBITDA Margin 2011-2020

Years	Profit margin % Singular Logic	Profit Margin % Epsilon Net	Gross Margin % Singular Logic	Gross Margin % Epsilon Net	EBITDA Margin % Singular Logic	EBITDA Margin % Epsilon Net
2011	-7.78	1.40	21.38	36.11	-0.42	42.77
2012	-94.33	1.56	21.66	33.48	-86.43	37.74
2013	-15.12	2.64	23.63	44.55	-10.71	21.92
2014	-10.96	2.76	23.04	51.50	0.24	18.83
2015	5.79	3.09	30.44	48.42	12.61	14.98
2016	6.29	0.70	32.09	44.94	2.97	10.69
2017	-39.38	5.71	14.76	54.00	-30.05	14.36
2018	-12.38	5.94	22.90	51.01	-12.64	13.42
2019	-49.68	7.55	23.28	55.06	-44.19	16.35
2020	-98.50	14.22	29.68	57.81	-91.27	21.51
2021		24.00		61.00		52.60
2022		29.00		65.00		33.40

Source: Authors' Calculations from published financial statements.

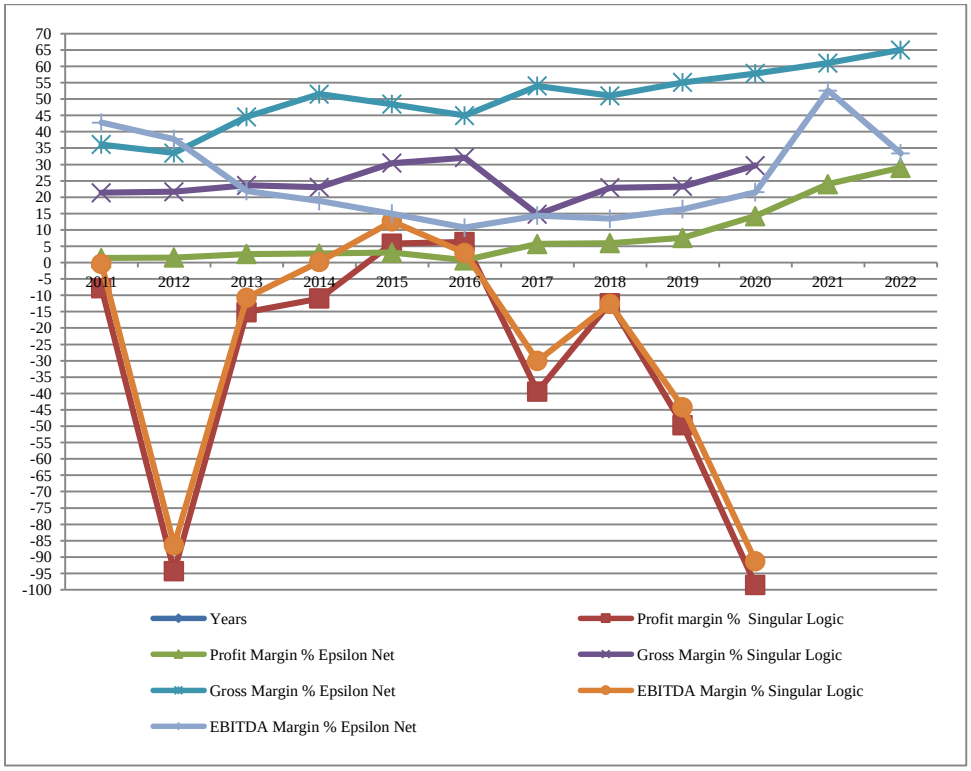

Figure 3: The course of Profit Margin, Gross Margin EBITDA Margin. Source: Table 3

According to the results of table 4 and figure 4 below the target company's values of Z-Score model had a volatility from the red to gray zone which indicated its bad financial condition foreshadowing the ominous future of the company. It is important to mention that in 2020, the year in which the company is acquired by its competitors Epsilon Net and Space Hellas by half, the bankruptcy model receives the highest value and amounts to 2.29, which however puts it in the gray zone. As per the bidder company the values of Z-Score model had an upward trend for the ten years before the acquisition but in year 2021 that the acquisition had completed a downward trend were occured and one year after the acquisition had completed this trend

followed upper course without reaching the highest value of year 2020. Nevertheless the values of Z-Score model rank the target company to the safe zone.

Table 4

Results of Altman's Z-Score Model

Years	Singular Logic	Epsilon Net
2011	0.478	4.734
2012	1.615	5.244
2013	0.643	5.743
2014	0.050	5.928
2015	0.641	5.793
2016	0.041	5.505
2017	0.630	6.486
2018	0.275	7.095
2019	0.687	8.470
2020	2.294	8.947
		6.833
		7.421

Source: Authors' Calculations from published financial statements.

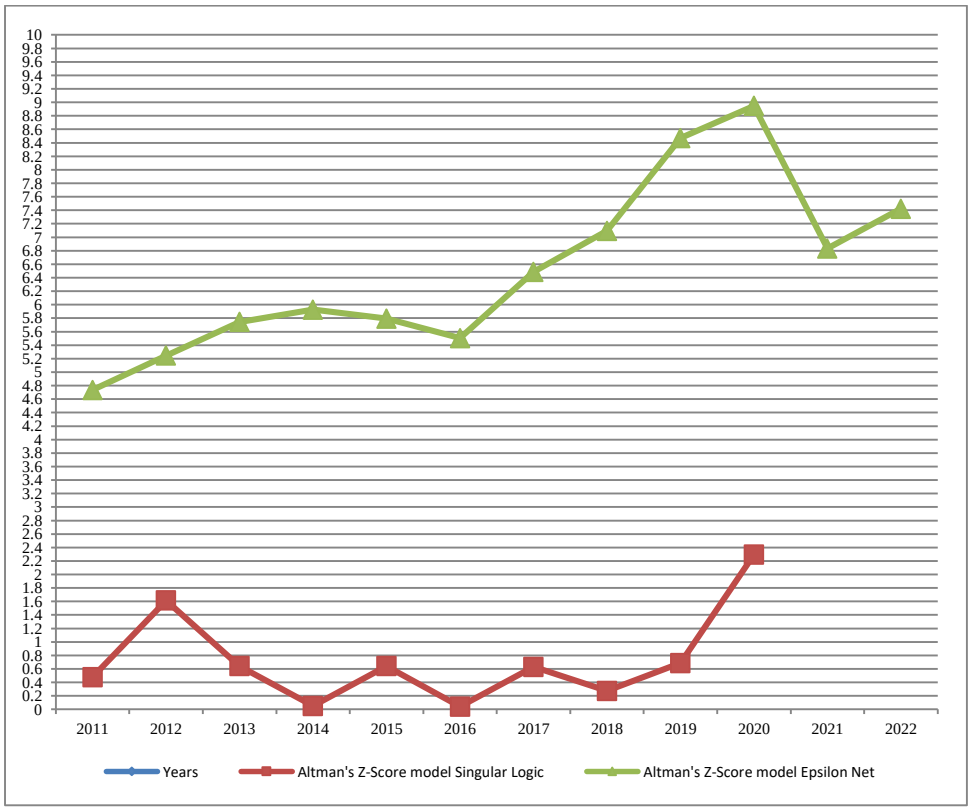

Figure 4: The course of Altman's Z-Score Model. Source: Table 4

D) Cash Flow Statements Ratio

In this session we present our findings of three cash flow important ratios. The values of CROE and CROA ratios were expressed in percentages. The values of CFOS ratio were expressed in whole numbers. In the table 5 we present all the three ratios but in the figure 5 we saw only the course of CROE and CROA ratios. According to the table 5 and figure 5 below the target company's CROE and CROA ratios had low volatility and their values move slightly above zero, but in the year 2020 the CROE ratio had a significant negative value and looks like an

outlier. The values of CFOS ratio are presented both in table 5 and in the figure 6 and we can observe that they had a low volatility moving in the positive area except year 2015.

As per the bidder company the values of the course of CROE and CROA ratios during the decade before the acquisition had low volatility moving in positive areas. One year after the acquisition had completed the values of CROE ratios had steady trend, but in the second year it appeared a downward trend. On the contrary the values of CROA ratios in year 2021 that the acquisition had completed a downward trend showed and one year after the acquisition had completed an upper trend presented. The values of CFOS ratio are also presented both in table 5 and in the figure 6 and we can observe that they had a significant downward trend from year 2011 to 2016. In the next two years had a significant volatility and from year 2018 started an upward trend.

Table 5

Cash Flow Ratios CROE, CROA and CFOS

Years	CROE % Singular Logic	CROE % Epsilon Net	CROA % Singular Logic	CROA % Epsilon Net	CFOS Singular Logic	CFOS Epsilon Net
2011	4.90	30.50	2.10	19.40	1.04	21.88
2012	18.20	27.50	5.30	19.50	2.07	17.06
2013	-2.00	21.30	-0.50	29.30	-0.24	15.01
2014	15.20	15.80	3.60	11.90	1.46	12.53
2015	22.20	14.80	5.30	10.80	2.85	13.53
2016	17.20	1.30	4.80	0.90	1.33	1.22
2017	11.50	10.90	2.00	7.00	0.57	10.59
2018	4.70	10.40	0.40	5.90	0.17	3.66
2019	48.00	15.80	4.30	8.20	2.60	5.20
2020	-240.00	33.30	7.80	16.10	2.80	10.45
2021		34.90		1.40		12.77
2022		24.80		10.80		16.56

Source: Authors' Calculations from published financial statements.

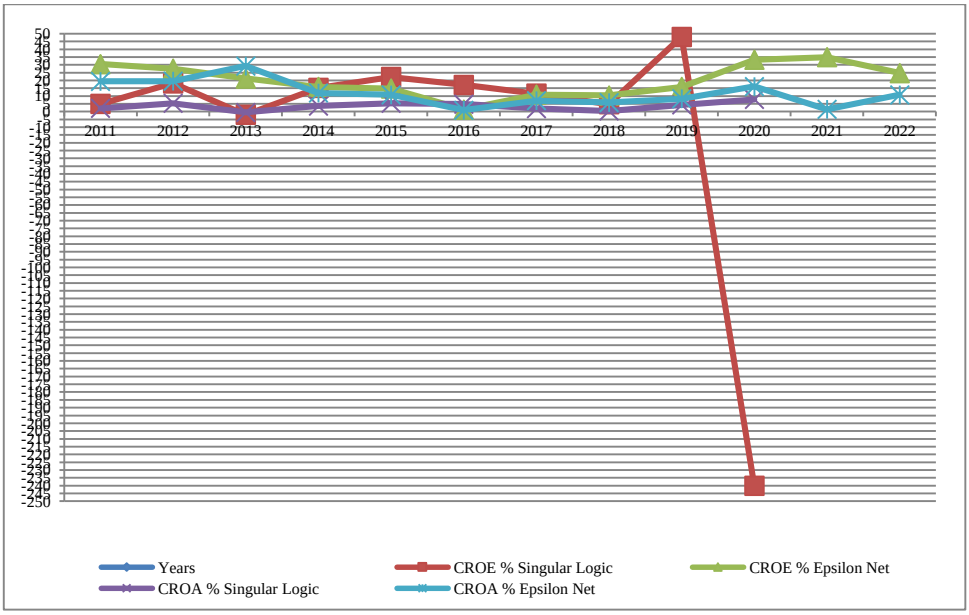

Figure 5: The course of Cash Flow Ratios CROE %, CROA %. Source: Table 5

Figure 6: The course of Cash Flow Ratio CFOS. Source: Table 5

CONCLUSION

The findings of the financial analysis of the examined acquisition show us that the target company had a general deterioration in the values of its ratios during the decade 2011-2020 and we can say that it was a "bad" company in financial terms at the end of the year 2020 in which the acquisition was started. The acquiring company's liquidity appeared not to be positively affected in year 2021 that the acquisition completed and one year after the acquisition. The profitability of the bidder company seemed to be positively affected given that the upward trend of the ROE, ROA Profit margin and Gross margin ratios continued in year 2021 that the acquisition completed and one year after the acquisition at a stronger pace. As per EBITDA margin in year 2021 that the acquisition completed presented upper trend, but one year after the acquisition had a downward course. The values of Z-Score model showed that in year 2021 which the acquisition completed, this probably had a negative impact on the up until then upward trend in the prices of the acquiring company's Z-Score model, after it showed a decline, but it seems that one year after the acquisition the upward trend is returning. However, the values of the bankruptcy Z-Score model of the acquiring company are always in the safe zone. From the analysis of cash flow ratios we suppose that the acquisition did not had strong positive affect to he bidder bank.

As a final conclusion we can assume that it is too difficult for a bidder company to absorb a target "bad" company in financial terms after one year of acquisition. For further study we propose to find out that if there is economics of scale and reduction of competition from such acquisition maybe the positive results could show in the long term period.

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