FINANCIAL BEHAVIOR DECISION FOR MERGERS AND ACQUISITIONS IN EUROPEAN FINANCIAL INSTITUTIONS AFTER THE COVID-19 PANDEMIC

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Abstract

This work trying to solve the problem of uncertainty of the effect of financial behavioral (Asaoka, 2019) on mergers and acquisitions (M&A) examines the deal size values in completed mega M&A of the European financial institutions in 2023 with 99 cases. The aim of this paper is to specify the correlation between deal size values in the completion of mega M&A in 2023 and the most important financial factors used in such processes that leads to a financial behavior decision. The methodology used highlights with cross-sectional analysis, correlation matrix, and descriptive statistics for better results (Zientek & Thompson, 2009). The findings according to the Pearson correlation coefficient show that all the selected independent variables can be used in the econometric model because there is a significant statistical positive and negative correlation between the values of the deal size and the selected financial factors. The contribution of the present study lies in the presentation of such information in a short time period. Concluding the paper direct the bidders how to make rational decisions after the COVID-19 pandemic.

Keywords: Mergers & Acquisitions, Investment Banking, Institutional Inventors Financial Behavior

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1. INTRODUCTION

Mergers and acquisitions (M&A) are becoming a more often business strategy with crucial financial behavior decisions in Europe due to globalization and international conglomerations in the business world. Over the past decade, financial institutions have been hit at least twice by a global financial crisis and by the financial distress from the COVID-19 pandemic. These two events fostered a favorable climate for acquisitions by major financial institutions whose financial strength was not affected. Deal size values creation in M&A had, of course, always been the guiding principle for deal makers. But in the present time after the global financial crisis and the COVID-19 pandemic that have hit the world economies, it is evident that there is a greater need to precisely define this deal size value creation so that there are no adverse financial effects on acquirers, which could spread in the wider economy as well. If financial institutions act as bidders and overpay for a target financial institution, then they wish to set the cash/equity/debt mix according to the agreed price. Possibly when the targets insist on determining the manner and time of payment then the agreed buyout value becomes lower than the original.

This study examines mega M&A in European financial institutions only in 2023 which is a short time period from the crises of the COVID-19 pandemic and essentially fills the gaps of the present literature. Because the findings of this study show that there is a negative relation between the deal size values and the percentage of cash value, the study concludes that the bidders do not prefer to use cash to buy the entire target, except if the target's value is low. This happens because holding cash as an investment has a lower cost than using long-term debt to make an acquisition (Alexandridis et al., 2013). In addition, the bidders are not required to transfer part of their ownership to the shareholders of the target by issuing new shares to pay for this transaction.

On the other hand, targets also usually prefer to be paid in cash, as this carries less risk than the buyer's shares. In addition, there is a possibility that the bidders' share price will fall immediately after the announcement of the acquisition agreement since the target is a company that is in financial distress or is under bankruptcy, and it appears that this acquisition will also have a negative effect on the buyer. It is mentioned that the bidders avoid acquiring large targets mainly because of the high premiums they have to pay. This is because the high value associated with acquiring large companies can make bidders' managers and boards more reluctant to offer large premiums. Another reason why bidders avoid acquiring large targets might be the difficulty of assimilating large targets into a combined organization. The emergence of the COVID-19 pandemic worsened the financial situation of many companies, creating conditions for their acquisition. The COVID-19 pandemic has also introduced uncertainty about the global economy, upsetting several industries, such as the financial institutions industry, shaping new deal size values in M&A between them. In this context, bidders and targets need to determine which financial factors are most important in determining the value of a merger and acquisition so that there are no failed attempts. After the end of the pandemic, it becomes clear which companies can better maintain operations, with financial soundness, and which will operate with financial distress, and for this, they probably will be a takeover target. The relevance of this study concerns the deal size values paid by the bidders to the targets in M&A after their completion among European financial institutions in 2023. The issue that will be addressed in this research is which financial factors are positively and negatively correlated and influence these deal size values.

The aim of this paper is to find out if there is a correlation between deal size values and the most important financial factors that are used in such processes that lead to a financial behavior (Asaoka, 2019) of rational decision in the completion of mega M&A in 2023.

The questions that this work tries to answer are:

RQ1: Is there a statistically significant correlation between the deal size values and all of the selected financial factors?

RQ2: Are there no other factors that explain the deal size values?

RQ3: Is there a statistically significant correlation between the deal size values and some of the selected financial factors?

RQ4: Are there some other factors that explain the deal size values?

The research methodology and the findings of the responses will be applied to explain the financial behavior of the bidders of European financial institutions of mega M&A in 2023. The results of this work show the financial criteria that guide investors' financial behavioral moves when it comes to M&A of large financial institutions.

This paper is structured as follows. This study examines the literature review in Section 2, describes the research of methodology in Section 3, reports the results in Section 4 with the discussion of them in Section 5, and then in Section 6 talks about the conclusions.

2. LITERATURE REVIEW

The global financial crisis which affected the world economy by the end of 2009 created a big wave of M&A between European financial institutions. One of the main purposes of those M&A was to create economic strong financial institutions so as to be able to prevent themselves from insolvency and bankruptcy in another future financial crisis. In 2020, the COVID-19 pandemic appeared and brought about financial consequences in the world economy and also to the financial institutions. This fact drove the financial institutions to a new wave of M&A mainly trying to avoid financial distress. The present study examines the correlation of some critical financial factors that are connected with the deal size values of M&A, only in 2023, between the financial institutions.

The deal size is directly correlated with market power which could develop inefficiencies causing poor performance. This means that if an acquisition took place in an efficient market it might have low risk. If the same acquisition took place in an emerging market it would probably have moderate risk and again if the same acquisition took place in an inefficient market it would have high risk. Therefore, deal size could affect in both positive and negative direction concerning a firm's decision to grow according to the suggestions by Shepherd (1986). The behavioral perspective regarding M&A was first proposed by Roll (1986), who hypothesizes that overconfidence (or hubris) explains the observed negative stock performance of acquirers.

The findings of the research carried out by Travlos (1987) concluded that the combination of cash and stock to pay for the value of a takeover has something to do with how a stock market reacts to the deal.

Conversely, if the managements of both the acquiring and the acquired company do not hold a majority stake, then the majority shareholders may have doubts about the representation and management of the merger or acquisition agreement and assume that the managements of the involved companies prefer strategic agreements that may have less benefit than desired for both sides according to the work by Healy et al. (1997).

An experienced acquirer will expect that the target company will manage earnings, prior to an expected merger or acquisition, in such a way as to upwardly influence the deal price in its favor as Erickson and Wang (1999) claimed. There are higher chances of reaching a merger or acquisition agreement and greater returns for both the acquiring and the acquired company when their managements own the largest percentage of shares because in this way any objections to the upcoming deal by the minority shareholders are avoided.

Also in the study done by King et al. (2004), they proved that if the acquiring company pays with shares instead of cash then it is clear that the buyer believes with certainty that his stock is overvalued. In addition, they found that the choice of stock as payment for a buyout causes a rather negative reaction in the stock market. Transaction financing in M&A is a key element in scholarly studies (Bruner, 2004).

Large financial institutions bidders resulted in a significant gain when compared to small financial institutions bidders, and improved performance following the M&A due to both revenue enhancements and cost reductions (Cornett et al., 2006). In the studies that examined M&A the value of the deal is often included as an explanatory variable along with the size of the company (Boubakri et al., 2008).

Targets financial institutions selection encompasses the identification and financial pre-screening of prospective targets by the bidder's financial institutions. A bidder financial institution's decision to initiate an acquirer and define the deal price is typically part of a broader consideration of strategic choices such as alliances or organic development. Researches on targets selections focus on the acquirer perspective even though M&A were often also initiated by target financial institutions as Boone and Mulherin (2007) said. They further continued saying that the targets financial institutions for acquisitions were selected according to their resources and capabilities.

The more profits buyers expect to gain from a merger and acquisition, the more willing they will be to pay a higher price and premium for the acquisition (Antoniou et al., 2008).

However, scholarly interest in the deal values of a merger or acquisition has recently re-emerged in financial research (DePamphilis, 2018).

The study by Aktas et al. (2010) examined some determinants of target-initiation for a specialized sample of single-bidder negotiated deal. The accounting actions of the target companies do not necessarily constitute fraud but constitute a strategy of accounting policies that cannot be easily detected.

Management does not deliberately jeopardize shareholder value through M&A activity, as corporate managers believe their actions lead to positive outcomes but the economic motivations of M&A and the actual and empirical realized performance effects have given rise to what is known as the so-called "merger performance puzzle" (Baker & Kiymaz, 2011).

The decision-making process of a merger and acquisition deal is a process that takes a lot of time before the final agreement and its implementation, and it consists of several stages (Ahammad & Glaister, 2013).

The results of the study conducted by Alexandridis et al. (2013) revealed that there were several reasons why buyers would pay a lower price, but also premiums to buy large-value target companies. One of these reasons was conflicting predictions about the correlation between the size of merger and acquisition deals and bid premiums, given the possibility of larger losses potentially arising from a high-value acquisition. The results of their study indicate that the acquisitions of large firms were carried out at a significant discount compared to the acquisitions of small firms. In addition, they said that the relationship between the size of the target firm and the returns earned by the acquiring firms was highlighted, and it was found that the losses for the acquiring firms increase as the size of the target firms increases, despite paying lower premiums to acquire them. This fact overturned the previously prevailing view that buyers were more likely to overpay for takeovers of large companies, without the premium being seen as a measure of payment.

The amount of premium offered by the buyer depends to a great extent on the financial and more general evaluation of the target company (Kim & Canina, 2013).

In the study conducted by Burkart et al. (2014), there is a discussion of how financial constraints and external financing capacity may affect the size and sources of buyers' offers to target firms.

Similar studies define which firms and financial institutions are attractive targets for future takeovers. Those firms and financial institutions are the ones with strong diversification portfolios (Bena & Li, 2014; Ransbotham & Mitra, 2010), other related resources and capabilities (Heeley et al., 2006; Ruckman, 2005), slack (Davis & Stout, 1992), and environmental capabilities (Berchicci et al., 2012).

The stages of M&A are as follows: 1) the planning of the acquisition of a target company, 2) the negotiation between the managements of the acquiring company and the target company, 3) evaluation of the target company, 4) due diligence of the deal before the announcement and 5) the signing of the purchase contract (Caiazza & Volpe, 2015). In the early phase of the negotiation between the two parties, the discussion focuses on the possibilities of making a merger or acquisition agreement, as well as the offer premium set by the buyer (Parola et al., 2015).

The study by Andriosopoulos and Yang (2015) focused on investigating the effect of institutional investors acting as acquirers on M&A that took place in the United Kingdom (UK). The results of this research show that when cross-border M&A take place there is a high positive correlation of institutional investor involvement especially when it comes to acquisitions of full control and very large deals in value. Their research also concluded the significant influence that institutional investors can have in a takeover deal decision-making process. M&A are defined as the combination of two or more companies.

M&A deals are one of the most important and most complicated decisions a company has to take that concerns both the stockholders and the employees and also coincide with the development of the international financial market as Chui and Ip (2017) said in their study. The findings in the work by Berk and DeMarzo (2017) showed that the achievement of differentiation is an important motivation for undertaking M&A. This motivation for diversification takes two different forms, that of developing a portfolio with risk reduction or that of increasing debt capacity and liquidity. Scholarly studies are again interested in the sources and constraints in the financing of M&A deals, according to the studies conducted by Gorbenko and Malenko (2018).

Malmendier (2018) updates the findings of cognitive science in relation to M&A and investment financial behavior decisions. The amount of deal value and the manner of payment of the corresponding price in M&A contracts is an important source of information for the shareholders of both the acquiring and the acquired company, while at the same time, it is pointed out that buyers using profits as a source of financing to achieve a deal use less debt and equity as claimed by Bates et al. (2018).

Moreover, acquisitions whether domestic or cross-border are considered to have occurred primarily when a target company is fully or more than 51% acquired by another company (WallStreetMojo, 2023).

The motivations for each merger or acquisition may be different according to the findings by Evans (2020), who showed that there are companies that merge with their competitors or acquire them to create an oligopoly and possibly a monopoly, thus increasing profits with simultaneous limiting competitors' market share and profit, or achieving greater efficiency by eliminating inefficient management and unskilled employees. Also, a large company resulting from a merger or acquisition can achieve economies of scale by increasing its production volume and profitability, which is generally not possible for a small company. Another motivation formulated by Evans (2020), can be the acquisition of expertise in a general area of the production process. In addition, he said that economies of scope can increase profits from joint operations such as production and distribution, or the pairing of production and distribution of complementary goods and services.

The experiential analysis of M&A of the study by Shah and Kannadas (2020) is in a globalized view, found that there is a decision-making level/strategic level to take financial decisions that decide the fate of an organization.

In a recent study by Abdelmoneim and Fekry (2021), they found that the liquidity of the acquiring companies is affected by the purchase cost or the cash committed and used to acquire the target company. They estimated the market value of a target company based on its share price and they found difficulties involving. They said that this is because if the target company's share price is traded in a stock market with large fluctuations, the calculation of its value becomes unstable in the short term. Their results show a significant positive relationship between shareholder wealth and growth prospects. A study by Klitzka et al. (2022) analyzes M&A payment methods in large transactions of public United States (US) acquirers between 2009 and 2016, they show that contrary to prevailing findings in the literature, acquirers cannot exploit their overvaluation through stock-financed M&A at targets' disadvantage. Their results document that both acquirers and targets are rational in choosing M&A payment methods. A study by López Domínguez (2021) concluded that the effects of potential changes due to different marketplaces and periods of time, avoiding deviations might be considered a behavioral contribution to complement rationality in the complex and uncertain universe of M&A deals. The majority of the deviations are on the financial side whose presence in M&A deals based on the research results deserves special attention.

Firms with substantial M&A experience might foreground the opportunities related to potential deals rather than the financial downsides, giving rise to more risk-taking and thus more proactive and less opportunistic acquisition behavior (Bauer et al., 2022).

The study by Gill et al (2024) in their findings demonstrates that sophisticated deal structuring, effective risk management, and innovative financing arrangements significantly contribute to successful M&A outcomes, including higher deal completion rates, increased shareholder value, and improved post-merger financial performance. The results have important implications for corporate finance practitioners, investment bankers, and policymakers in Pakistan and similar emerging markets.

According to the findings of the study by Ullah and Rashid (2024), the necessity should be given more priority than synergy in the process of M&A and it is necessary to reach a certain threshold level to create mega bank compare to conventional peer. Moreover, the extension of the banks' operation in terms of the cross-border M&A followed by foreign direct investment has both direct and indirect external effects on the banks' performance.

Cash-rich financial institutions are in the best position to do larger, more profitable deals while balancing the negative consequences and influences being encountered. Lower financial institutions' valuations will create opportunities for private equity investments. The target financial institutions often present red flags such as financial distress, and financial insolvency, with the consequence the bidders wish to impose some financial restrictions on the target companies before the deal. This is done more for the assurance of the acquirers. The relative frequency of target-initiated deals also increases during financial crises and economic recessions. Some firms are trying to avoid the cost of bankruptcy by becoming targets and probably investment opportunities. So, the most financially distressed target financial institutions receive modestly lower deal values as it is fair. In accordance with the usual practices of effective and emerging markets probably the targets financial institutions without financial distress ask from the bidders to pay higher the completed deal values in M&A than the target financial institutions with insolvency. It is also a possibility that firms with a weak financial soundness or competitive position are more vulnerable and it is easier to comply with low prices from a bidder in a deal of M&A. However, in some takeovers, the bidders are not paying all the value of the transaction probably because they do not have the necessary cash available to complete the acquisition or it could have also earmarked the cash for other investments, such as technology renew, investments in financial engineering and hiring more eructated employees. The bidder financial institutions that have unlimited cash resources pay cash when their cash investments have low returns and of course lower than the return on equity (ROE) of the target. Then it is certain that the bidders would prefer to pay cash when they acquire another financial institution. A second case is when cash is cheaper than debt because interest rates on cash are lower than debt interest and for that, it is more attractive for the bidder to pay cash for a takeover. Cash is also less risky than debt because there's no chance the bidders might fail to raise sufficient funds from investors, or that the bidders might default. A third case is when cash is cheaper than the cost of equity so bidders are willing to pay cash rather than issue new shares in a capital increase. Cash is also less risky than new stocks because the bidders' share price could change dramatically once the acquisition is announced, mainly if the target has financial distress. The purpose of this paper is to examine whether there is a positive or negative correlation between deal size values and the most important selected financial factors that are related with the completion of these M&A only in 2023, meaning two years after the end of the COVID-19 pandemic.

The hypotheses that this work will examine are the following:

H_0: There is no statistically significant correlation between the deal size values and all of the selected financial factors. There are no other factors that explain the deal size values.

H1: There is a statistically significant correlation between the deal size values and some of the selected financial factors. There are some other factors that explain the deal size values.

3. RESEARCH METHODOLOGY

3.1. Sample selection and data collection

The present study extracted the data for all European financial institutions' completed M&As and the related financial factors from the DataStream base in 2023. The sample consists of 99 M&As that completed through European market stock exchanges. This examination constitutes the originality of the analysis. This study first sets out the research objectives The second stage determines the set of important financial factors that potentially correlated with the examined completed M&As' deal size values. The methodology of this study consists of three parts. The first part describes the descriptive statistics. The second part refers to the correlation matrix for the independent variables with the relative analysis according to the Pearson correlation coefficient. Finally, in the third part, the cross-sectional analysis is presented and its findings are analyzed.

3.2. Model definition

This study analyses the sample of 99 European financial institutions' completed M&As based on a regression model using Stata software. To investigate if the used financial factors have a significant impact on the deal size values of M&As the following regression model is used for the first time:

$$Y_i = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + b_7X_7 + b_8X_8 + \varepsilon_i \quad (1)$$

where: Y_i is the deal size values, a is the constant term, b_1 to b_8 are defined as the coefficients for the independent variables. The independent variables are explained as follows (Meles, 2011):

- X_1: percentage (%) of cash that paid in M&A;
- X_2: ratio of offer price to earnings per share (P/E);
- X_3: ratio of enterprise value to net assets (EV/NA);
- X_4: ratio of enterprise value to earnings before interest, taxes, depreciation and amortization (EV/EBITDA);
- X_5: ratio of enterprise value to sales (EV/S);
- X_6: book value per share over the last 12 months;
- X_7: return on equity (ROE);
- X_8: acquirers' size, or capitalization (the values were calculated by log);
- ε_i: the error term.

4. RESULTS

4.1. Descriptive statistics

The present study uses descriptive statistics according to Zientek and Thompson (2009) did in their work. The descriptive statistics in a short time period, is useful because it presents analytical guidelines and determines the factors of a specific data set by giving short and comprehensible instructions about the sample and measures of the data. The study at first presents the findings starting with a descriptive statistics analysis in Table 1 below. It is important to notice the low values of the standard deviation of the three independent variables: X_1, X_7, and X_8 because they are statistically significantly correlated with the deal values.

The independent variable X_1 shows that 78.44% of the bidder European financial institutions pay in cash the deal size value of acquisitions, and this fact is supported by the relatively small price 4.77 of standard deviation. The price of 0.16 of the independent variable X_7 shows that the acquirers have an average ROE of 16% with a small range of deviations from the mean, as the low price 0.55 of the standard deviation shows. Finally, the independent variable X_8 of the acquirers is log 16% meaning that the bidders that participate in acquisitions among the European financial institutions have a mean of 6.81 billion euros with a small range of dispersion from the mean as shown by the relatively low value 3.57 of the standard deviation.

Table 1. Descriptive statistics

Variable/ratio	*Code*	*Number of deals*	*Mean*	*Std. dev.*	*Min*	*Max*
Dependent variable						
Deal size values	Y_i	99	18.19	2.41	12.1	23.4
Independent variables						
Percentage of cash	X_1	99	78.44	4.77	0.0	100.0
Ratio of offer price to earnings per share	X_2	99	-32.73	51.64	-99.0	54.1
Ratio of enterprise value to net assets	X_3	99	13.90	12.66	0.0	13.1
Ratio of enterprise value to EBITDA	X_4	99	5.89	34.09	-69.5	19.2
Ratio of enterprise value to sales	X_5	99	9.65	9.31	-7.9	9.1
Book value per share over the last 12 months	X_6	99	12.65	51.80	0.0	60.5
Return on equity	X_7	99	0.16	0.55	-3.8	1.4
Acquirers' size, or capitalization	X_8	99	6.81	3.57	-1.8	12.6

Source: Author's calculations.

4.2. Correlation matrix

In statistics, one of the most common ways that this study quantifies a relationship between two independent variables is by using the Pearson correlation coefficient. The Pearson correlation coefficient is the mathematical statistic for a population that provides us with a measurement of the strength of a linear relationship between the two variables (Holmes et al., 2018). The study examines whether the financial factors that extracted from DataStream, and it included in the regression model as independent variables, have a forbidder correlation with each other according to the definition of Pearson correlation coefficient and thus they should reject them because they will be unreliable. The values of the Pearson correlation coefficient between two variables were defined by Profillidis and Botzoris (2019) as follows: 1) $rXY = 1$, two variables have a perfectly positive correlation, $0.8 < rXY < 1$, 2) two variables have a strong positive correlation, $0.3 < rXY < 0.6$, 3) two variables have a moderate positive correlation, $0 < rXY < 0.3$, 4) two variables have a weak positive correlation, $rXY \approx 0$, 5) two variables do not have any kind of linear correlation, $0 < rXY < -0.3$, 6) two variables have a weak negative correlation, $-0.3 < rXY < -0.8$, 7) two variables have a moderate negative correlation, $-0.8 < rXY < -1$, 8) two variables have a strong negative correlation, $rXY = -1$, and 9) two variables have a perfectly negative correlation.

The above-mentioned values of the Pearson correlation coefficient between two variables will be considered in order to explain the results of Table 2. Moreover, Table 2 below presents the correlation matrix for the independent variables of the model that determines the correlation coefficients between them. According to the above theoretical framework of Pearson correlation, it can be noticed in Table 2 which independent variables have a strong correlation with other independent variables and if they are statistically significant. So, the finding of Table 2 shows that there is no forbidden correlation between them because their values are below (0.80) and they can be used all for the estimation of this model. The statistically significant correlations of the most important selected financial factors seem perfectly reasonable based on what each one stands for. Those financial factors that related with significant statistically correlation are: 1) X_4 has a statistically significant weak positive correlation with X_2 (0.26), and with X_3 (0.21); 2) X_5 has a statistically significant weak positive correlation of 0.20 with X_4; 3) X_7 has a statistically significant moderate positive correlation of 0.32 with X_1; 4) X_8 has a statistically significant moderate positive correlation of 0.36 with X_1, statistically significant moderate negative correlation of -0.61 with X_2, statistically significant moderate negative correlation of -0.31 with X_3 and statistically significant weak positive correlation 0.25 with X_7.

Table 2. Correlation matrix for independent variables

Variable code	X_1	X_2	X_3	X_4	X_5	X_6	X_7	X_8
X_1	1							
X_2	0.02	1						
X_3	0.06	0.13	1					
X_4	0.04	0.26***	0.21**	1				
X_5	0.06	0.12	-0.01	0.20**	1			
X_6	0.11	0.08	-0.03	0.12	-0.02	1		
X_7	0.32***	-0.14	-0.01	0.07	-0.02	0.01	1	
X_8	0.36**	-0.61***	-0.31**	-0.14	0.03	0.12	0.25*	1

*Note: ***, **, and * show statistically significant results at the 99%, the 95%, and the 90% level of confidence, respectively.*

Confidence intervals measure the degree of certainty or uncertainty comparing two samples and it can be presented as 99%, 95%, and 90% (Hayes, 2024).

4.3. Cross-sectional analysis

Cross-sectional analysis is a methodology that serves the offering company to assess the magnitude of the value of a takeover deal with the financials used to reach that deal with the target company. Cross-sectional analysis is often used to evaluate the performance of investment opportunities using specific financial factors to identify and compare their significant relationships with a target financial institution's transaction size values. In this way the bidder can evaluate the target financial institution and formulate the best prices of the deal size values. Cross-sectional analysis allows researchers to form hypotheses and then test which of their hypotheses are proven using research methods (Chen, 2024).

From this cross-sectional analysis, the study tries to find out what the financial factors are that might be significantly related to the deal size values of M&As among financial institutions after the COVID-19 pandemic only in 2023. So, the study analyzes over the last 12 months of 2023 if there is a statistically significant correlation between deal size values and the eight most common and important financial ratios for valuation of a financial institution as defined with the regression model.

Table 3. Cross-sectional analysis for the deal size

Variable code	*Statistically significant results*
X_1	-0.016** (-2.18)
X_2	-0.001 (-1.04)
X_3	0.079 (1.60)
X_4	0.006 (0.85)
X_5	0.000 (0.49)
X_6	-0.003 (-0.94)
X_7	1.051*** (2.74)
X_8	0.460*** (5.84)
ε_i	16.392*** (23.92)
N	99
F	9.45***
R-squared	0.5972
Adj R-squared	0.5340

*Note: Dependent variable: Deal size. This table reports the results from the regression Model 1. Coefficients are reported and t-values are included in parentheses. ***, **, and * show statistically significant results at the 99%, the 95%, and the 90% level of confidence, respectively.*

The results in Table 3 show that:

1. X_1 paid by the acquirer financial institutions to the target financial institutions to complete the acquisition have a statistically significant at the 95% level of confidence and a negative impact on Y_i. This means that when the X_1 paid by the acquirer financial institutions to the target financial institutions to complete the acquisition decreases, the Y_i increases.

2. Both X_7 and X_8 have a statistically significant at the 99% level of confidence and positive impact on the Y_i. This means that as the Y_i increases, X_7 increases and also the X_8 of the acquirer financial institutions increases.

It can also be noticed that the F-value of the regression model is F = 9.45 and is statistically significant at the 99% level of confidence. This result reveals the overall significance of the selected regression model as well as the propriate selection of the independent variables. In addition, the regression model has an R-squared (R^2) equal to 59.72% indicating that the selected model interprets the largest portion of the variance of the deal size. From the findings, it is obvious that hypothesis *H1* is accepted. The study has to mention that Figures A.1–A.3 of statistically significant independent variables that were extracted from Stata econometric software are presented in the Appendix.

5. DISCUSSION

The financial behavioral decision for M&A depends in principle mainly on the recommendation made by the managers, and usually requires the approval of a company's board of directors, while the shareholders might have a passive vote, even if the acquisition directly concerns them because it is to be done by exchanging stocks-for stocks (Asaoka, 2019).

If a financial institution acts as a bidder and has to deal with higher values of a deal size for a target financial institution, the size of that deal is determined to be higher or lower depending on the mix of cash/equity/debt. The financial institution bidder prefers to use cash to buy the entire target if the cost of cash is cheaper than the cost of debt and the cost of issuing equity. In addition, the use of cash does not require the bidder to have a reduced leverage in the target's equity as opposed to issuing shares. On the other hand, target companies mainly prefer cash as their means of payment because it carries lower risk than equity, and the bidder's share price may fall immediately after the deal is announced, reducing the price shareholders receive of the target company after the acquisition, with this event more likely to occur if the target is a financially distressed institution. The management of the target financial institutions with the assistance of the financial staff carry out accounting reforms and adjustments before the sale of their business with the aim of showing better profitability and liquidity of their company to the prospective buyers. However, in some takeovers, the bidders are not paying all the value of the transaction in cash because they may not have enough cash or cash equivalents that are immediately liquidated to complete the purchase or they are likely to use the cash for other investment activities, such as another takeover, technology renew and hiring more employees. The findings of this study are difficult to compare directly with other previous studies' findings because there are not any other studies concerning financial institutions' M&A in 2023 and dealing comparing deal size values with these financial factors and methodology. Of course, there are similar studies, but they deal mainly before the COVID-19 pandemic and/or with not the same methodology. The results of this study mean that the independent factor of acquirers' size or capitalization is the most important factor in M&A between financial institutions because it has a significant statistical correlation with four of the seven other used independent financial factors in the model. Acquirers' size or capitalization also have a very important role to the financial institutions' M&A as it is statistically significant at the 99% level of confidence and positive impact on the deal size. This means that when the deal size increases by 1 billion the acquirers' size or capitalization increases by 46.0%. ROE is another very important financial factor as it is statistically significant at the 99% level of confidence and positive impact on the deal size. This means that when deal size increases by 1 billion ROE increases by 105.1%. The percentage of cash is also an important financial factor to the financial institutions' M&A as it is statistically significant at the 95% level of confidence and negative impact on the deal size. This means that when deal size increases by 1 billion then the percentage of cash decreases by 1.16%. This study has to mention that if rational decisions are taken for the deal size values by the bidder financial institutions this will probably help them avoid financial distress insolvency that comes from future takeovers and will prevent them from any M&A failure. The contribution of the present study lies firstly in the presentation of those most important financial factors and if they are statistically significantly positively or negatively correlated with the deal size values in M&A between European financial institutions in 2023. The second contribution lies in the fact that from the econometric and statistical analysis, the study provides information that will assist future bidders in making the right choices. The third contribution is the avoidance of future financial distress for acquirers. The fourth contribution is the examination for the first time of deal size values after the COVID-19 pandemic in a short time period.

6. CONCLUSION

The purpose of this research is to examine whether there is a statistically significant positive or negative correlation between deal size values investments and the most important selected financial factors that are related with the completion of M&A two years after the COVID-19 pandemic but only in 2023. The findings will guide the bidders in a road without financial distress and bankruptcy for the bidders. This study aims to find out if there is any statistical coefficient correlation among the important financial factors and the deal size values of European financial institutions' M&A. Also this study makes an effort to give a little help to the participants in completing successful M&A, so as to avoid financial distress, insolvency and financial risks by making the wrong decisions in the near future. Despite the importance of deal size values decisions, it should be noted that this topic area of deal size values has not been investigated to a great extend after the COVID-19 pandemic. This research analyzes 99 cases of M&A among European financial institutions by studying the financial factors that are statistically significantly related to the size of the value of the deals. The findings showed that there is a significant positive statistical relationship, at the 99% significance level, among the deal size values with the capitalization of the bidder financial institutions and also with the ROE ratio. Finally, a significant negative statistical relationship is demonstrated, at the 95% significance level, between the deal size value and the percentage of cash paid for the acquisition. In conclusion only for the year 2023, the findings reveal that higher transaction deal values in European acquisitions of financial institutions are positively associated with acquirers that have higher profitability and size. That is, the greater the value to be paid to the target financial institutions, the greater the profitability and capitalization of the acquiring financial institutions involved in an acquisition. Also, these higher transaction deal values are negatively related to the amount of cash paid by the acquirers and, therefore, in addition to cash the target financial institutions also acquired using stocks or other forms of payment rather than cash.

The financial behavior of the acquirers is that the higher the value the acquirers have to pay to the targets financial institutions, the lower the percentage in cash the acquirers' financial institutions pay to complete an acquisition. So, maybe this study could assume that the more attractive targets they are the higher the deal prices are paid by the bidders as a main financial behavior of them. Behavioral finance issues impose a high risk on the outcome of an M&A transaction greatly influencing the decision-making process of corporate managers regarding the value of cash. For this reason, it is necessary to make a significant effort to manage and mitigate these potential risks with increased efficiency, in order to avoid the many pitfalls that behavioral finance can cause when pursuing an M&A strategy.

Concluding, higher deals size values are correlated with higher profitability and larger capitalization. Also, higher deals size values are negatively related to the percentage of cash which means that the payment also includes stocks. The findings of this study may lead to financially rational mergers and completed acquisitions among European financial institutions avoiding financial distress in the near future. Furthermore, the findings of this paper show how the financial behavior of acquiring European financial institutions is shaped in order to engage in a large acquisition, whether domestic or cross-border. The findings of this paper also highlight which financial factors are taken into account by the financial behaviors of acquirers to avoid failures.

The limitation of this study is that its results refer only for one year 2023 and two years after the COVID-19 pandemic. The proposal for further future research is to find out if those results hold true for the following years. Next, we need to try to answer questions that they will also contribute to the issue of mega M&A of European financial institutions. Such questions are: 1) how do time pressure and the timing of decisions affect deal values paid in cash, stocks, and debt and 2) how do the bidders shareholders and the targets shareholders affect the financial terms, the conditions, and the payment mix cash/stocks/debt of the deal size values in M&A.

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APPENDIX. CROSS-SECTIONAL ANALYSIS AND STATISTICALLY SIGNIFICANT INDEPENDENT VARIABLES

Figure A.1. Percentage of cash

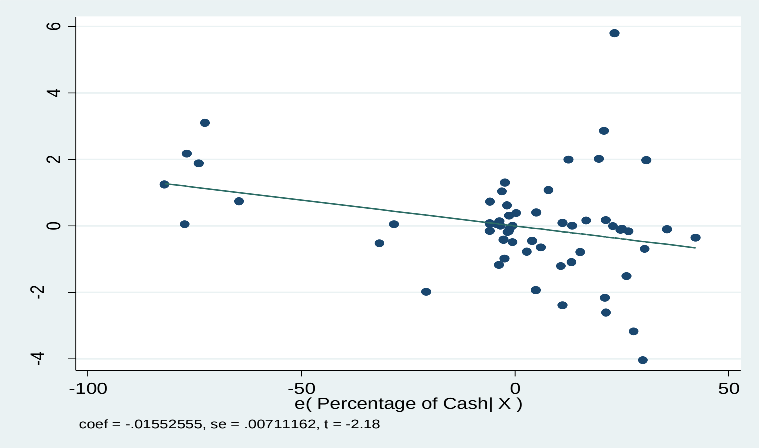

Figure A.2. Return on equity

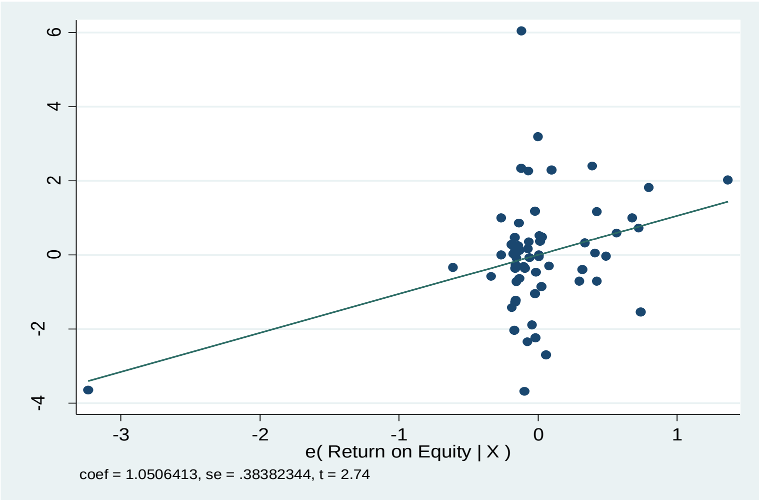

Figure A.3. Acquirers' size or capitalization