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Abstract

This paper investigates the impact of mergers and acquisitions (M&A) on the financial stability of acquiring banks within the European banking sector and its main driving factors, essential to analyse the broader implications for systemic European bank stability. The analysis is conducted at the level of individual acquiring banks, whereas the findings are interpreted through the lens of their potential consequences for the overall stability of the banking system. The analysis reveals that, on average, the effects of M&A transactions on acquiring banks stability are not uniform, but varies considerably, depending on specific bank-level characteristics pre-deals. Key endogenous factors, such as the acquiring's profitability, pre-merger financial stability and institutional size, emerge as important determinants of post-merger outcomes. Furthermore, these variables have differing influences on financial stability depending on the broader political and institutional environment in which the acquiring bank operates and the acquiring pre-deal financial stability level.

Distinguishing between acquiring banks with higher versus lower initial financial stability, further highlights this heterogeneity, indicating that the effects of M&A activity are conditioned by both internal bank profiles and external institutional contexts.

The empirical evidence, based on a statistically robust sample, aligns with recent academic findings and opens new doors for exploring how institutional and firm-specific dynamics interact in shaping the post-merger stability of European banks.

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1. Introduction

Merger and acquisition (M&A) activity in the European banking sector has intensified in the last couple of years, driven by persistent challenges such as macroeconomic instability, weak profitability and increasing competitive and regulatory pressures.

Recent shifts in the European banking landscape also reflect growing complexity in liquidity management and regulatory oversight across the continent. While banks continue to maintain strong liquidity buffers, a notable shift from central bank reserves to sovereign bond holdings has increased their exposure to market valuation risks. At the same time, European regulatory authorities, including the ECB, are implementing reforms aimed at enhancing the consistency and effectiveness of macroprudential tools, such as capital buffers for systemically important institutions. These regulatory adjustments, alongside the ongoing implementation of Basel III reforms and changes in the composition of banks' high-quality liquid assets, point to a broader effort to strengthen the resilience of the European financial system. As a powerful strategic tool, M&A in the banking sector have the potential to improve banks' financial risk profiles significantly. This research investigates whether such consolidation efforts effectively bring to measurable improvements in bank performance in terms of financial stability in the post-merger period and what are the main drivers of those changes.

By doing that the analysis seeks to address two central questions: what explains the improvement or deterioration in bank stability following M&A deals and how do these effects vary under different contextual conditions, such as institutional quality of the country where the acquiring operates, and pre-merger stability of the acquiring bank.

To evaluate these outcomes, the study will use the Z-score as a proxy for measuring the acquiring financial stability after the deal announcement. Banks are tracked for up to three years following the transaction, and changes in their financial performance are analysed in relation to key deal characteristics and selected independent variables. For the independent variables a dummy is constructed to categorise institutions by their pre-merger stability using percentile-based thresholds of the Z-score of the acquiring banks involved in the deals one year prior to the acquisition, and with the same logic other dummy variables are constructed to distinguish deals based on institutional quality, crisis timing and cross-border versus domestic acquisitions.

Assessing individual bank stability is important because it directly influences the resilience of financial institutions to shocks and their capacity to absorb losses. Systemic stability is a broader

concept associated with contagion risks and macroprudential concerns, and it is strictly linked to the health of each financial institution. This is the reason why enhancing or preserving the financial stability of individual banks is the first step toward a broader financial system resilience.

The empirical analysis is based on an initial t-test to see if the effect of the deal is similar or differ between banks within the selected sample; then a multiple regression analysis approach is used to estimate the effect of our independent variables on the post-merger Z-score. The results will aim to investigate if M&A serves as an effective strategic tool for enhancing the financial resilience of the acquiring banks. Finally, two split-sample analysis were conducted; the former aims to divide the sample of banks involved in a merger or acquisition based on their pre-deal stability, whereas the latter divides the sample based on the institutional stability of the country where the acquiring bank operates. The analysis aims to assess whether greater resilience prior to the transaction or a better institutional stability condition leads to improved medium-term stability, or whether, conversely, such banks experience a decline in stability compared to those entering a merger or acquisition from a position of financial distress.

2. Literature review

The banking sector experienced an increase in the number mergers and acquisitions in the European region. The ongoing wave of consolidation, particularly among Italians' leading banks, raises the question of whether this strategic choice can lead not only to improved bank performance, but to greater stability among the involved financial institutions.

One of the most frequently asked questions concerning mergers and acquisitions (M&A) in the banking sector is whether such transactions lead to higher returns for shareholders, and the majority of studies entitled in investigating it adopted event study methodologies, consisting in analysing the firms' abnormal returns within defined temporal windows surrounding the announcement date of the deal.

However, most of the literature is US centric and does not offer a clear and unique conclusion.

The prevailing evidence suggests that while target banks typically enjoy positive abnormal returns, acquiring banks often experience negative ones (Beitel and Schireck, 2001).

Houston and Ryngaert (1994) challenge the assumption that M&A creates shareholder value, observing minimal abnormal returns around merger announcements. Their findings suggest that, particularly in the absence of clear synergies, such deals may not yield strategic long-term benefits, whereas for European banks Cybo-Ottone and Murgia (2000) found positive gains for bank merger announcements between domestic banks and between banks and insurance companies.

Considerably less attention has been paid in evaluating the implications of M&A for bank stability, an issue of growing importance in light of recent financial crises. Since the 2008 global financial crisis, macroeconomic shocks have continued to expose vulnerabilities within the banking sector, affecting not only large international banks, but also smaller institutions. The recent collapses of regional banks in US, such as Silicon Valley Bank, highlight the potential consequences of inadequate risk management, particularly in the face of aggressive interest rate hikes by central banks, aiming to contain post-pandemic inflationary pressures.

As Ozili and Iorembe (2023) emphasise, financial stability is the foundation for economic resilience and an antidote against systemic crises, and in this context, M&A should arguably be driven not solely by motives for profit-seeking or market consolidation, but also by the need to strengthen the structural stability of the banking system.

Despite the vast literature on market reactions to M&A announcements, a notable gap concerning the actual post-merger stability outcomes remains, especially when accounting for the macroeconomic context, deal structure and specific country's institutional characteristics of the involved institutions. Therefore, this study tries to tackle this gap by shifting the analytical lens from short-term abnormal returns to medium-term changes in banking stability to understand whether M&A activity enhances or undermines bank resilience in the European banking context, and what are the main factors driving this change.

2.1 Value creation and synergies

Understanding why firms engage in M&A is crucial for interpreting performance outcomes. M&A motives can be broadly categorised into strategic, economic, personal and market-driven (Berkovitch & Narayanan, 1993), depending on whether the goal is to increase competitive advantage, improve efficiency, satisfy managerial objectives or expand into new markets.

The traditional argument that M&As increase shareholder value assumes that the anticipated value of the entity created by the merger of two groups will exceed, in terms of potential wealth creation, the sum of the respective values of the two separate groups (Ayadi, 2013). Synergies are, therefore, defined as the value generated from the incremental cash flows due to the combination of the two entities, that brings the valuation of the combined firm above the sum of the two standalone values. Two main types of synergies can be achieved: operating synergies and financial synergies. The former takes the form of either revenue enhancement or cost reduction, whereas the latter refers to the possible reduction of the firm's cost of capital (Chatterjee, 1986).

Synergies do not always materialise, as managers might overestimate them, or might overestimate their ability to integrate the two entities involved in the transaction.

Specifically for the banking sector, the rationale behind going through a merger or an acquisition has focused on the achievement of improvements in cost reduction and in the acquiring market positioning usually driven by effective cross-selling strategy of financial products. Merging banks can improve their operating costs by rationalising the branch network of the merging banks, reducing back-office operations and common services and achieving higher economies of scale in information technology and brand recognition (Campa and Hernando, 2006).

Ayako et al. (2015), specifically, demonstrated that while merged banks often underperform relative to industry averages in the short term, performance tends to recover and go beyond those averages within three years. Similarly, Joash and Njangiru (2015) showed that M&A activity led to increased shareholder value and enhanced financial metrics for acquired banks in Kenya, while Bhide (1993) found that a deal would create an efficiency improvement through synergies creation by analysing a sample of 77 acquisitions between 1985 and 1986.

2.2 M&As and financial stability

Mergers and acquisitions in the banking sector and financial stability have been extensively analysed across various regions, particularly following the 2008 global financial crisis and the COVID-19 pandemic. M&A, in those particular contexts, might be viewed not just as a growth strategy but as a potential stabiliser, or destabiliser, of the financial systems.

Part of the banking literature agrees that increases in market power through bank consolidation will improve banking system stability (Beck et al., 2013; de-Ramon et al., 2018). However, only a few studies provide a direct link between banking consolidation through M&As and a increase or decrease in the bank stability. Aziz and Lilti (2017) tested the joint effect of banking deregulation and consolidation on stability in the US banking market before and during the global financial crisis of 2008. However, these findings cannot be said to be a direct link between M&As in the banking sector and a decrease or enhancement of the involved firm's stability after the deal completion, as it is, according with the literature, the impact of a joint interaction of deregulation and consolidation.

Regarding the effect on financial stability after a merger, there is not a unique vision on whether M&A practices should strengthen or reduce it.

Brealey et al. (2019) instead, studied the effect of bank mergers on US bank risks post-merger.

Altunbas and Marques-Ibanez (2004) highlight that pre-deal fundamentals significantly shape post-merger outcomes. Ansari (2021) finds that profitability ratios often remain unchanged after M&A,

suggesting limited gains, unless synergies are successfully executed. In contrast, La and Truong (2024) provide evidence that mergers can strengthen acquiring capital buffers and reduce their risk profile, albeit sometimes at the expense of the target institution's stability.

Berger et al. (1998) explored the effects of U.S. bank mergers on small business lending, noting that while M&A can initially reduce credit availability, these constraints are often offset by strategic adjustments or competitive responses.

Other studies have focused on the role of institutional frameworks and macroeconomic context. For instance, Reddy (2005) discussed how banking sector reforms and the adoption of Basel II standards in India pushed banks towards better risk management practices. Similarly, Gourlay et al. (2006) highlighted the performance improvements following mergers in the post-liberalization period, attributing these to harmonisation gains and more efficient resource allocation.

Studies on the impact of mergers and acquisitions on bank performance have often presented inconclusive or not uniform findings. Consequently, Bernad et al. (2013), recommend regional and national studies to gain a better view of the impact of mergers and acquisitions on bank performance.

2.3 Specific factors that influence banking stability

Stability, as the European Central Bank specifies, is the ability of financial institutions and markets to perform core functions under stress. The 2008 financial crisis and the COVID-19 pandemic have both tested this resilience, leading to increased reliance on M&A as a restructuring mechanism across Europe.

Financial crises often accelerate M&A activity as a mechanism for bank restructuring and systemic stabilisation (DeYoung, Evanoff and Molyneux, 2009). The 2008 global crisis triggered a wave of consolidations aimed at strengthening capital bases, mitigating contagion risk and restoring market confidence.

As shown by Laeven and Levine (2009), the creditworthiness of banks often declines sharply during a financial crisis, increasing the insolvency risk. Considering the most recent literature related to the COVID-19 pandemic, Ahmed (2025) observed that Punjab National Bank's mergers managed to improve financial results after the crisis.

Interest rate volatility during such periods is another factor that indirectly affects core banking operations, and the same applies for state interventions through bailouts, guarantees or policy changes, which can alter the strategic environment for M&A, making them either more necessary or more difficult to execute. This is why, eventually, banks must adapt quickly and strategically to preserve their stability, and they might do that by merging with other financial institutions.

2.4 Cross border deals

As stated in a recent Oliver Wyman report (2025), cross-border deals are a common feature within European banking sector M&As that show the efforts of the banks to build more pan-European institutions. However, compared to the domestic deals, these transactions are extremely complex and often involved additional players in the picture.

Unlike the results from most of the US-based event studies literature, Altunbas et al. (2004) found that there are improvements in performance after the merger has taken place particularly in the case of cross-border M&As.

Caiazza et al. (2016) found that although larger and more profitable banks are more likely to engage in international deals, these transactions are often less cost-effective due to integration complexity and regulatory barriers. Cybo-Ottone and Murgia (2000) also observed that while domestic deals led to positive abnormal returns, cross-border deals showed weaker performance at the announcement date. Nevertheless, cross-border M&A can offer diversification benefits and access to new markets, which may enhance stability and resilience of the merged entity (Hsu, Park and Lew, 2019).

2.5 Size

Size is another critical variable influencing M&A outcomes. Högholm (2016) demonstrated that larger banks often face diminishing returns from M&A, showing a negative relationship between the bidder's abnormal return on the announcement day and the size of the deal.

Results from Altunbas (2004) analysis showed that the overall picture is that large and generally more efficient banks tend to merge with relatively smaller and better-capitalised institutions with more diversified sources of income.

Berger et al. (1999) observed that larger banks often realise smaller gains from mergers, due to already optimised operations or diseconomies of scale. Hagendorff et al. (2008) support the previous findings by showing that a bigger bureaucratic complexity in large institutions can reduce post-merger performance.

In the context of financial stability post-merger, Adusei (2015) investigated the relationship between bank size, funding, credit risks and the stability of rural banks in Ghana, showing that bank size and funding risks positively influence the stability of rural banks.

2.6 Institutional quality

Institutional and legal frameworks also play an important role in shaping M&A outcomes. One of the possible variables that might influence the change in the acquiring's financial stability post-acquisition is the institutional quality of the country where the acquiring is located.

Beck, De Jonghe and Schepens (2013) reveals that the relationship between bank characteristics and stability is not uniform but is strongly influenced by institutional quality and regulatory environments of the country where the merging banks operate.

La Porta (1999) emphasises the importance of legal infrastructure to support a successful consolidation, and recent work by Yen and Huy (2023) additionally reinforces the view that institutional quality enhances both stand-alone bank stability and the positive effects of M&A when it exceeds a certain governance threshold.

Studies by Houston et al. (2001) and Hagedorff et al. (2008) find that banks in countries with stronger governance and legal systems tend to experience more successful M&A outcomes, in part due to better enforcement, risk controls and post-deal integration.

Governments that have a clear legal framework and transparent regulatory environments facilitate smoother M&A transactions and help to prevent and mitigate potential financial risks that can arise during and after the deal. Law and Azman-Saini (2012) confirm the previous findings by stating that positive government policies enhance the efficiency of financial intermediation and support market stability.

3. Methodology

This cross-sectional study investigates the financial consequences of mergers and acquisitions (M&A) in the European banking sector, with a particular focus on outcomes of the acquiring's post-transaction financial stability. The research wants to answer three core questions:

- Is there a measurable impact on the change in the acquiring's financial stability in the short and medium term?
- What explains the improvement or deterioration in bank stability (as measured by the change in Z-score) following M&A deals in Europe?
- How those changes vary across different samples?

The analysis is based on a dataset of 182 mergers and acquisitions transactions involving European banks over the period 2000 to 2022. In addition to deal-level information, the dataset incorporates selected annualised financial variables and ratios prior and after the deals' announcements for each acquiring bank that took part to the deal. The financial data were collected at specific intervals relative to each transaction date to have a more granular evaluation of changes in financial performance surrounding each M&A event on an annual base.

Rather than estimate the causal effect of M&A, given that all the banks from the sample have experienced a merger, this study investigates variation in the post-merger financial stability of the acquiring institution involved. To this extent, several contextual and structural factors are included as explanatory variables, based on prior research and theoretical frameworks in corporate finance and banking strategy.

3.1 Measures of bank stability: the Z-score

A key measure traditionally used to evaluate bank stability is the CAMELS rating, a supervisory assessment of a bank's overall condition (Lopez, 1999). Capital adequacy, Asset quality, Management, Earnings, Liquidity, and Sensitivity to market is what the acronym stands for (Gunsel, 2005; Nimalathasan, 2008; Sarker, 2005). Each component is scored on a scale from 1 to 5, where a rating of 1 or 2 indicates a “strong” or “satisfactory” condition with no significant supervisory concern, while ratings from 3 to 5 signal increasing degrees of risk and potential need of regulatory intervention.

Alternatively, financial stability is frequently measured using quantitative accounting indicators that are particularly suitable for empirical banking studies. Common metrics include the bank Z-score (Lepetit et al., 2008; Beck and Schepens, 2013), Z-risk, Non-performing Loan ratios (Noman et al., 2017), and capital-based models like CAPM.

One of the widely adopted methods for assessing financial stability, particularly in empirical banking research, is the Z-score, formulated by Edward I. Altman in 1968.

Unlike CAMELS, which relies on qualitative supervisory judgment and is often confidential, the Z-score offers a quantitative, market and accounting-based indicator that effectively captures a bank's risk of insolvency. Specifically, the Z-score measures the “number of standard deviations by which a bank's return on assets would need to fall for its equity to be exhausted, thereby reflecting both profitability and capitalisation, as well as the volatility of returns” (Boyd and Graham, 1986). In other words, the Z-score is a measure of a bank's financial stability that tells how much a bank's profits

would need to decline before the bank become insolvent (Lepetit, 2015). With a Z-score lower than 1,8 a company is considered in financial distress and with high chances of going bankrupt. If the bank score falls between 1,8 and 3, instead, the chances of going bankrupt become moderate. On the other hand, a Z-score score of 3 indicates that the company is financially stable and unlikely to go bankrupt. The formula for the Z-score calculation is the following one:

$$Z - SCORE_{it} = \frac{ROA_{it} + EA_{it}}{\sigma ROA_{it}}$$

Where:

ROA_{it} = Total Assets/Net Income

EA_{it} = Equity/Total Assets

σROA_{it} = Standard deviation of ROA

Specifically, if the ROA component increases, the numerator of the Z-score goes up, as the bank's perceived stability. A higher volatility in ROA contributes to an increase in its standard deviation, which instead, brings the denominator of the Z-score down, signalling greater financial risk due to the variability of earnings overtime. The equity-to-assets ratio represents the institution's capital buffer and reflects the proportion of a bank's assets financed by equity. A higher ratio strengthens the numerator and raises the Z-score, indicating improved solvency and a good loss-absorbing capacity. In contrast, a declining equity-to-asset ratio, results in a lower Z-score, pointing to increased fragility perception of the institution.

In this study, we adopt the Z-score approach as the principal measure of bank stability, due to its transparency, availability in public data and robustness in capturing default risk in large and cross-national banking datasets. This aligns with the empirical research of Beck, De Jonghe, and Schepens (2013) on European banks and lead to a precise analysis across the institutions included in our M&A focused sample.

3.2 Paired t-test

Before investigating the drivers of variation in Z-score, we first examine whether there is a statistically significant shift in Z-score levels following the event with a paired sample t-test,

a statistical methodology widely applied to compare the means of two groups of observations. It is often applied to understand whether two groups differ by comparing their sample's mean. In this case the test has been performed to compare the Z-scores both in the one year prior to one year following the acquisition and in the one year prior to the three years after, across all available firm-event observations.

The null hypothesis is: $H_0: \mu_D=0$, where μ_D represents the mean of the differences in Z-scores between the pre-M&A period (T-1) and the post-M&A periods (T+1 and T+3), whereas the alternative hypothesis is: $H_1: \mu_D \neq 0$.

By using matched observations for each deal, the test controls for unobserved heterogeneity across banks that might bias the analysis. The null hypothesis of the paired t-test states that the mean difference between the two time periods is zero, implying no significant change in financial stability or a significant heterogeneity in the analysis' results. Rejection of the null would suggest that the M&A event has a measurable impact on the acquiring's stability post deal, therefore providing a foundation for further investigation into the contextual and firm-level factors that may explain variation in the outcomes.

3.3 Regression model

This research wants to investigate the key factors that drive changes in bank stability in the context of merger and acquisition (M&A) transactions. Specifically, a multiple regression analysis seeks to identify which acquiring and deal-specific characteristics are associated with either an increase or a decrease in financial stability following an M&A event. To capture this effect, the change in Z-score has been employed as the dependent variable to represent a proxy for the variation in the acquiring's financial stability post-transaction in the short and medium term.

The change in Z-score is calculated as the difference between the Z-score one year prior to the deal (t-1) and the Z-score over the three years following the announcement (t+3).

To enhance the robustness of our analysis and explore effects across different time frames, a second regression has been performed using the short-term change in Z-score between t-1 and t+1. This dual-window approach will be used for a comparison between post-merger stability outcomes in the short and medium term.

This analysis partially follows both La and Truong (2024) and Ayagre et al. (2024) methodology. While adopting the general structure of their models, the approach has been adapted to more closely resemble an event study, but by extending the timeframe to capture longer timeframe effects.

Specifically, the broader analysis of Alexandrinis et al. (2017) has been used, adopting the change in Z-score as dependent variable, instead of the cumulative abnormal returns, and adding the Return on Equity and the two dummy variables “PreDealStability” and “PostCovid”, to include other possible elements of influence in the acquirings’ financial stability. Instead of using the Z-score as an independent variable and a static measure of financial stability as in the Ayagre study, this model applies the change in the Z-score to better track the evolution of stability over time and independent variables related to specific acquiring banks’ characteristics for the purpose of our analysis.

The model is estimated using robust standard errors to correct for heteroskedasticity. The main regression specification is as follows:

$$\Delta Zscore = \beta_0 + \beta_1(ROE) + \beta_2(ANetIncome) + \beta_3(Govstability) + \beta_4(Crossborder) + \beta_5(PostCrisis) + \beta_6(AInsize) + \beta_7(Leverage) + \beta_8(Relativesize) + \beta_9(PreDealStability) + \beta_{10}(Postcovid) + \beta_{11}(Publictarget) + \beta_{12}(Cash) + \beta_{13}(MTBV) + \epsilon$$

The regression includes a set of explanatory variables that capture pre-merger profitability (ROE), financial performance (Acquiring Net Income), macro-institutional context (government stability), and deal characteristics such as cross-border structure, crisis timing, acquiring size, leverage, and relative deal size.

The null hypothesis tested is $H_0: \beta_1 = \beta_2 = \dots = \beta_{13} = 0$, implying that the explanatory variables collectively have no effect on the change in financial stability. The alternative hypothesis, H_1 : at least one $\beta \neq 0$, suggests that post-merger stability is significantly influenced by one or more of the included factors. A rejection of the null hypothesis would indicate that specific pre-deal financial metrics and contextual variables do, in fact, play a significant role in shaping the evolution of bank stability in the aftermath of M&A activity.

3.4 Split sample analysis

The methodological choice to apply a split-sample regression approach has been used in the work of Beck, De Jonghe, and Schepens (2013), who demonstrate that the relationship between bank competition and financial stability is not uniform but varies significantly across a different institutional and regulatory environment.

Therefore, to further examine the role of institutional and pre-merger stability in shaping post-merger outcomes, a split-sample analysis has been conducted. For this part of the analysis, the time window considered has been restricted to one year prior to three years after the acquisition. This longer post-

merger horizon has been chosen deliberately to ensure that any deal-specific effects on financial stability have sufficient time to materialise. The full sample was divided according to key contextual variables, the acquiring's country government stability and the acquiring pre-bank financial stability. Separate regressions were then run for each subsample for a comparison of coefficient magnitudes and significance levels across distinct environments. This approach tests whether the drivers of changes in bank profitability and financial stability vary under different institutional or economic conditions, as M&A performances are very context dependent.

The following hypotheses are tested:

H₀ (Null Hypothesis): $\beta_i(0) = \beta_i(1)$ for all i , where $\beta_i(k)$ denotes the coefficient of variable i in the subsample k . Accepting H_0 means that the estimated effects of the independent variables on the change in bank stability (Z-score) are statistically identical across all subsamples.

H₁ (Alternative Hypothesis): $\beta_i(j) \neq \beta_i(k) \exists i, j, k$

Accepting H_1 , instead, brings to the conclusion that the effect of at least one explanatory variable differs across the subsamples.

Rejection of the null hypothesis would indicate that the determinants of post-merger financial stability are not uniform across different institutional or economic contexts. This would support the notion that macroeconomic conditions, governance environments, or structural deal attributes may condition the success of M&A strategies in the banking sector.

Name	Variable	Definition
chgZscore	Change in Z-score	Change in bank financial stability measured through the change in the Bank Z-score index. $Z\text{-score} = (\text{ROA} + \text{EA}) / \text{standard deviation of ROA}$ Measured through the Bank Z-Score index (Lepetit et al., 2008; Beck et al., 2013)
PostCrisis	Post Crisis	Where ROA is the return on assets, calculated as net income after tax divided by total assets; EA is the equity assets ratio, defined as equity capital divided by total assets. Dummy variable equal to 1 if the deal announcement occurred after the Great Financial Crisis; 0 otherwise.
Postcovid	Post Covid	Dummy variable equal to 1 if the deal occurred after the COVID-19 pandemic; 0 otherwise.
Govstability	Government Stability	Dummy variable equal to 1 if the acquirer is from a "stable country" (based on the PRS Group's Government Stability Index, using the 70th percentile of the sample as a threshold); 0 otherwise.
Crossborder	Cross boarder Deal	Dummy variable equal to 1 for cross-border deals; 0 for domestic deals.
Publictarget	Public Target	Dummy variable equal to 1 if the target company is public; 0 if it is private.
Cash	Cash	Dummy variable equal to 1 if the acquisition was paid in cash; 0 otherwise (stock or cash-stock mix).
Relativesize	Relative Size	Deal value divided by the acquirer's market capitalization four weeks prior to the announcement date.
Leverage	Leverage	Acquirer's leverage at year t-1, calculated as:
MTBV	Market to Book Value	Market-to-book value of the acquirer at t-1, calculated as Market cap/Book value of Equity
ROE	ROE	Return on equity of the acquirer at t-1.
ANetIncome	Acquirer Net Income	Acquirer's net income at fiscal year t-1.
Alnsize	Acquirer Size	Natural logarithm of the total assets of the acquirer at fiscal year t-1
Pre Deal Stability	Pre Deal Stability	Dummy variable equal to 1 if the acquirer is considered financially stable before the deal, based on the z-score at t-1 using the 75th percentile as the threshold; 0 otherwise.

Table 1 – Variables Description

All the variables included in the regression are winsorized at the 1st and 99th percentiles to mitigate the influence of outliers and ensure robustness in the analysis. The details of the variables used in the paper are presented in Table 1.

The dependent variable chosen for the purpose of our analysis is the change in Z-score ratio, which represents the change in financial stability of the acquiring bank. A higher Z-score reflects greater financial stability of the bank, as the bank is considered safer and less likely to experience financial distress, and its change is used to see how the acquisition has affected the acquiring bank's stability (Lepetit, 2008; Beck, 2013). A series of independent variables has been used for the purpose of the analysis. The first one is Govstability, a dummy variable where banks are classified into two groups, based on the political and institutional stability of their home countries, using the PRS Group's Government Stability Index from the World Bank database. This index, which incorporates indicators such as internal conflict, external conflict, and ethnic tensions, is a proxy for a country's macro-institutional strength and it is therefore used to investigate whether institutional quality has an impact

on the acquiring's financial stability after an M&A transaction (Kaufmann D, 2011). To categorise our sample of acquiring banks as "more stable" and "less stable" compared to the sample, a threshold based on the 70th percentile of the sample distribution is applied: banks from countries above the selected percentile are considered to operate in a stable country compared to our specific sample, while those below are classified as operating in a less stable context. Similarly to the Govstability dummy, the variable Pre Deal Stability was constructed to capture the acquiring's financial situation of the acquiring banks before the transaction, based on whether its Z-score, one year prior to the deal, lies above or below the 75th percentile of the sample.

To account for the influence of the payment method on the deal outcomes, a dummy variable named Cash has been included in the regression model. This allows the analysis to control for potential differences in market reaction or deal characteristics based on the payment method used, whether the transaction was conducted using cash, stock, or a combination of both. Specifically, the dummy takes the value of 1 if the deal was paid fully or predominantly in cash, and 0 otherwise.

The timing of the M&A event is captured through two dummy variables that identify whether a deal occurred after major financial disruptions. The first distinguishes pre- and post-crisis mergers using the 2008 global financial crisis as a breakpoint (PostCrisis), while the second identifies whether the transaction took place before or after the COVID-19 pandemic (Postcovid). Adding these temporal indicators is crucial to see how crisis-period dynamics, such as regulatory changes, economic uncertainty and capital constraints, might affect post-merger stability of acquiring banks.

A differentiation in the geographic nature of the deal is captured by a dummy variable (Crossborder), showing if the merger involved firms from different countries (cross-border) or the same country (domestic) within the European region. This distinction has been made because cross-border M&A tends to bring to more complex integration process, a higher exposure to diverse regulatory environments and cultural differences that might lead to cultural clash, all factors that can influence the realisation of synergies and financial outcomes of the deals (Caiazza et al., 2016)

These above-described key variables representing institutional stability, crisis timing and deal type, are examined independently with post and pre-merger performance of Z-score to determine whether the change in the financial stability outcomes differ systematically across various M&A contexts. Additional control variables, including acquiring pre-merger profitability (ANetIncome and ROE), leverage, market-to-book ratio (MTBV), deal size (Relativesize), and firm size (AInsize), are incorporated to see if the acquiring's pre-merger financial conditions can affect their post-merger financial stability. Specifically, the acquiring's logarithmic size (AInsize) and the acquiring's relative size (Relsize) allow to capture the impact of the absolute and relative size effect. According to past literature, deals that involve big acquirors and big targets are value destroying (Netter et al., 2011),

but the effect on the acquiring financial stability post-merger hasn't been covered. Regarding MTBV, market valuation is another key factor, as banks with higher market-to-book ratios, often interpreted as having stronger fundamentals or market confidence, tend to perform better post-merger.

Variable	Expected sign	Rationale
Post Crisis	+/-	Mixed impact on stability after the 2008 Great Financial Crisis
Post Covid	+	COVID-19 led to stronger and more strategic M&A
Government Stability	+	Strong institutions support post-deal risk management and integration
Cross-border Deal	+/-	Cross-border M&As are complex and might reduce potential synergies
Public Target	+/-	Public targets may be harder to restructure, affecting negatively the Z-score
Cash	+	Cash deals signal financial strength and lower post-deal integration risks
Relative Size	-	Larger relative size of target may stress acquirer post-deal operations
Leverage	-	High leverage increases default risk and reduces post-deal stability
Market to Book Value	+	Reflects growth potential and market confidence
ROE	+	Higher ROE can lead to a more efficient capital use post-deal
Acquirer Net Income	+	High income provides buffer against shocks post-deal
Acquirer Size	+/-	Larger banks may face lower returns post-deal
Pre Deal Stability	+/-	Strong fundamentals may enhance stability post-deal

“+” = positive effect on change in Z-score; “-” = negative effect; “+/-” = uncertain

Table 2 – Expected variables effect

Table 2 summarises the expected directional impact of each explanatory variable on the change in Z-score, based on the findings from the past literature, and it is used as a reference for our multiple regression analysis results. Table 3 summarises the descriptive statistics of the used independent variables.

Variables	Mean	Standard Deviation	Skewness	Minimum	Maximum	Count
PostCrisis	0,43	0,50	0,29	0,00	1,00	182
PostCovid	0,10	0,30	2,71	0,00	1,00	182
Govstability	0,31	0,46	0,83	0,00	1,00	181
Crossborder	0,44	0,50	0,25	0,00	1,00	182
Publictarget	0,44	0,50	0,25	0,00	1,00	182
Cash	0,27	0,44	1,05	0,00	1,00	182
Relative size	0,25	0,53	4,48	0,00	3,83	174
Leverage	0,31	0,18	0,38	0,03	0,79	176
MTBV	1,61	1,47	3,21	-0,04	10,69	173
ROE	0,13	0,11	1,81	-0,14	0,77	179
Alsize	11,35	1,92	-0,39	5,99	14,78	179

Table 3 – Independent variables descriptive statistics

4. Data collection

The dataset used for the analysis was collected from the Refinitiv Eikon database and consists of 182 completed M&A deals in the banking sector, spanning the period from 2000 to 2021. The sample was constructed by identifying all relevant transactions that met the following criteria:

1. The acquiring firm is a publicly listed company.
2. Both the acquiror and the target operate within the "Bank" Mid-Industry classification.
3. The deal involves banks located in the Europe region.
4. The transaction is categorised as a Merger, a full Acquisition, or an Acquisition of Majority Interest (i.e., purchase of a stake greater than 50%).
5. The method of payment involves cash, equity, or a combination of both.

Year	N. of Deal	Total Deal Value	Average Deal Value	Average Acquirer Market Value	N. of Cross-border Deals	N. of Public Deals
2000	1	1858	1857,56	4464,82	0	1
2001	5	6465	1292,92	2329,46	1	3
2002	5	17365	3472,97	9591,11	1	2
2003	8	7442	930,20	2736,49	4	3
2004	9	18535	2059,44	27592,42	5	2
2005	15	34180	2278,69	15944,65	12	4
2006	24	58282	2428,42	27273,38	20	7
2007	13	7712	593,27	45216,36	9	3
2008	16	42369	2648,06	28701,34	7	10
2009	8	2914	364,30	16107,42	3	3
2010	10	7467	746,73	16574,05	3	6
2011	10	3832	383,21	20819,09	3	2
2012	10	7582	758,16	16605,98	1	8
2013	10	4004	400,36	16857,52	2	6
2014	7	2899	414,08	29278,74	2	3
2015	3	2939	979,73	6739,16	2	2
2016	5	2387	477,46	12021,49	1	2
2017	1	926	926,39	3111,94	0	0
2018	2	1089	544,34	1642,73	0	1
2019	2	312	155,87	1308,32	0	1
2020	12	6588	598,95	6653,27	1	9
2021	6	1911	637,08	62278,15	3	2
Total	182	239058	1343,02	20521,19	80	80

Table 4 – Summary statistics, presenting the sample composition in terms of yearly distribution, total deal value, average deal value, acquiring market value, number of cross-border deals and public deals.

All deals included were classified as completed within the specified time frame. Additional financial and market data necessary for the calculation of the independent variables are subsequently collected. As we can notice from the sample, more than half of the selected deals are domestic, since in Europe consolidation is mainly a national phenomenon (Focarelli, 2002). An explanation for the lack of cross-border deals in Europe is given by Boot (1999), who states that there is a big political dimension within those types of consolidation processes to protect national interests. Another explanation can

be given by Berger et al. (1999), who showed that cross-border deals introduce a new layer of complexity to M&As.

Beyond event study metrics, further analysis was conducted using the same dataset to calculate additional financial ratios, such as the Z-score, analysed both before and after the M&A transactions to assess any shifts in financial resilience following the deal. Additionally, a dummy variable was constructed based on the PRS Group's Government Stability Index, sourced from the official World Bank website, to control political and institutional stability in the acquiror's home country during the deal period.

5. Results

5.1 Paired t-test

	Z-score(t-1)	Z-Score(T+1)		Z-score(t-1)	Z-Score(T+3)
Mean	1,30	1,27	Mean	1,29	1,27
Variance	0,58	0,98	Variance	0,57	0,91
Observations	144	144	Observations	129	129
Pearson Correlation	0,09		Pearson Correlation	0,03	
Hypothesized Mean Difference	0		Hypothesized Mean Difference	0	
df	143		df	128	
t Stat	0,32		t Stat	0,19	
P(T<=t) one-tail	0,37		P(T<=t) one-tail	0,42	
t Critical one-tail	1,66		t Critical one-tail	1,29	
P(T<=t) two-tail	0,75		P(T<=t) two-tail	0,85	
t Critical two-tail	1,98		t Critical two-tail	1,66	

t-Test: Paired Two Sample for Means

Table 5 – Results of paired t-test

Before investigating the determinants of variation in post-merger financial stability, we begin by assessing whether bank stability, as measured by the Z-score, changes significantly following the acquisition event. A paired sample t-test was conducted to compare Z-scores in the year preceding the merger with those in both the one-year and three-year periods following the transaction, across all firm-event observations.

In the first test, the mean Z-score slightly decreased from 1.30 to 1.27 in the year after. However, this change is not statistically significant, as indicated by a t-statistic of 0.32 and a two-tailed p-value of 0.75. The second test showed similar results, as the mean Z-score declined marginally from 1.29 to 1.27, with a t-statistic of 0.19 and a p-value of 0.85.

The inability to reject the null hypothesis does not necessarily imply that M&A transactions have no statistically significant effect on bank stability, but it suggests that the observed changes in the Z-score are likely influenced by considerable heterogeneity within our sample of deals. In other words,

while some transactions may lead to significant changes in stability, the overall average effect is diluted by the diverse nature of the deals included in the sample. Country-specific institutional frameworks, the stability and quality of governance, the macroeconomic timing of the deal, the strategic reasons behind the acquisition and the specific characteristics of the merging banks may all play a role in shaping the impact on financial stability. Therefore, these findings justify a more detailed analysis to investigate how these factors condition M&A outcomes and contribute to the observed variation in post-merger risk profiles.

5.2 Regression analysis

	(1)	(2)
	chgZscore (-1+1)	chgZscore (-1+3)
ROE	-1.847 (-1.70)	-1.781 (-1.70)
ANetIncome	0.000109** (3.10)	0.0000913* (2.30)
Govstability	-0.398* (-2.03)	-0.348 (-1.61)
Crossborder	0.0725 (0.37)	-0.0559 (-0.31)
PostCrisis	0.0112 (0.06)	0.200 (1.00)
Alnsize	-0.237*** (-3.87)	-0.199*** (-3.39)
Leverage	-0.632 (-1.06)	-1.587** (-2.74)
Relativesize	0.144 (1.46)	0.258† (2.44)
predealstability	-1.079*** (-6.35)	-1.269*** (-7.09)
Postcovid	-0.332 (-0.86)	-0.432 (-1.14)
Publictarget	0.0171 (0.11)	-0.176 (-1.03)
Cash	-0.379 (-1.84)	-0.280 (-1.36)
MTBV	0.227* (2.34)	0.245* (2.05)
_cons	3.228*** (4.69)	3.159*** (4.43)
N	139	124
R-squared	0.4124	0.4676

Robust standard errors in parentheses

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table 6 – Result of regression analysis

Table 6 reports the results of the OLS regressions examining the determinants of changes in bank stability following M&A transactions, measured by the change in Z-score from one year prior to one- and three-years' post-merger. Across both models, several key patterns emerge.

As can be observed from the regression results, only five of the independent variables employed are statistically significant at the 10% confidence level or higher. Beginning with the Acquiring Net Income, a statistically significant correlation is evident both in the year immediately following the acquisition at the 5% significance level and three years' post-merger, albeit only at the 10% level. This suggests that the acquiring's pre-merger profitability is a meaningful driver of post-merger stability, though its influence appears to diminish over time.

First, the Acquiror Net Income variable is positively associated with post-merger changes in Z-score, significant at the 5% and 1% levels in Models (1) and (2) respectively. This aligns with the findings of Altunbas and Marques-Ibanez (2004), who reported that stronger pre-merger financial fundamentals tend to predict better post-merger performance. Similarly, the Market-to-Book Value (MTBV) ratio is positively significant at the 10% level in both models, suggesting that acquiring banks perceived by the market as more valuable tend to experience increased financial stability after the acquisition, possibly due to better governance or stronger reputational effects.

Interestingly, pre-deal Z-score is highly significant at 1% level and negatively signed, indicating a tendency for acquiring's banks with high initial stability to experience relatively greater declines following M&A deals, which could be due to overconfidence in integration (Brahma, 2023) or a willingness to safer banks to take more risk and neglect the likelihood to have a negative effect in their financial stability in the years following the acquisition.

Regarding firm size, Acquiring Size (ln) is negatively associated with changes in stability with 1% significance in both the one-year and three-year post-merger model. This supports the hypothesis from Hagendorff et al. (2008) and Berger et al. (1999) that larger institutions may face bureaucratic inefficiencies or face greater integration challenges post-merger, resulting in increased instability after the deal. Similarly, Leverage is significantly negative at 5% in the longer time horizon (Model 2), reinforcing the idea that more leveraged institutions are more exposed to post-deal risks and less resilient in absorbing integration shocks.

In contrast, contextual variables such as Cross-border, Post-Crisis, and Post-COVID dummies show no significant effect on bank stability in either the short or medium term. While the government stability dummy is marginally significant in the short term, its negative coefficient suggests an unexpected pattern and needs further investigation. The relative deal size, however, becomes positive and significant at the 5% level in the longer window, implying that relatively larger deals may deliver long-term stability gains, possibly due to economies of scale or stronger strategic alignment.

Turning to the Government Stability indicator, a negative correlation is observed with subsequent improvements in bank stability, though significance is found solely in the short-term (one year after the transaction). This could imply that acquiring firms operating in European countries characterised

by higher institutional stability may feel less pressure to pursue immediate enhancements in financial stability, perhaps prioritising strategic expansion or profit maximisation strategies that could, at least in the short run, conflict with the goal of enhancing banking stability.

Overall, the results confirm the importance of pre-merger financial health, deal structure and institutional fundamentals in shaping post-merger stability outcomes, a finding that is consistent with earlier studies emphasising the role of pre-deal valuation (Altunbas & Marques-Ibanez, 2004) and contextual heterogeneity (Beck, De Jonghe & Schepens, 2013), and support the hypothesis that M&A effects are conditioned by firm-specific financial indicators more than broad structural variables alone.

5.3 Split-sample regression analysis

5.3.1 Bank-stability quality split: stable vs less stable acquiring banks

To assess whether the relationship between M&A characteristics and post-merger bank stability is influenced by contextual conditions, the sample was divided along two distinct dimensions by taking into consideration only the period going from one year prior to the acquisition to 3 years after: pre-merger bank stability and country-level institutional quality. The following sections present and interpret the findings for each subgroup.

	(1)	(2)
	Stable Banks	Less stable Banks
ROE	-2.559	-1.269
	-1.720	-1.198
ANet Income	0.000108*	0.000122***
	(0.0000558)	(0.0000436)
Gov stability dummy	-0.491	-0.326
	(0.359)	(0.213)
Cross-border dummy	0.0377	0.0541
	(0.263)	(0.335)
Post Crisis Dummy	0.246	-0.257
	(0.314)	(0.273)
Acq ln size	-0.264***	-0.217**
	(0.0894)	(0.102)
Leverage	-0.248	-1051
	(0.953)	(0.709)
Relative size	0.118	0.120
	(0.178)	(0.124)
Post covid	-0.367	-0.413
	(0.501)	(0.327)
Public target dummy	0.0272	0.0845
	(0.281)	(0.240)
Cash Dummy	-0.300	-0.462
	(0.305)	(0.324)
MTBV	0.392*	0.127
	(0.206)	(0.114)
Constant	2.094*	3.272***
	-1.156	-1.001
Observations	68	71

Table 7 – Results of split sample regression analysis for “stable” vs “less stable” acquiring banks.

When splitting the sample according to banks' pre-merger Z-score, several interesting patterns emerge. In both stable and less stable bank groups, acquiror net income is positively associated with post-merger changes in Z-score, although the effect is stronger and statistically more significant among less stable banks, as the latter is significant at the 1% confidence level against the first sample significant at 10% level. This suggests that profitability prior to the merger enhances stability outcomes more than when banks are starting from a weaker baseline, aligning with the view that stronger acquirors possess greater absorption capacity and managerial competence, supporting Altunbas and Marques-Ibanez (2004).

The acquiring's size, on the other hand, has a consistently negative and significant effect in both groups at the 1% confidence level in the first group and at the 5% in the second one, confirming the view that larger institutions that decide to merge usually face greater integration risks. These results are consistent with the findings of Berger et al. (1999) and Hagendorff et al. (2008), who argued that bureaucratic complexity and post-merger coordination challenges often erode the potential benefits of scale in large banking institutions.

Other variables, such as leverage and cross-border merger status, do not show statistical significance, although their coefficients are directionally consistent with theoretical expectations. For instance, leverage remains negatively signed, suggesting that more leveraged banks may be more vulnerable to instability post-transaction.

Interestingly, market-to-book value is positively associated with stability in the stable group, suggesting that market perception of firm quality is relevant in explaining post-deal resilience, particularly when baseline risk is low.

5.3.2 Country-level institutional quality split: stable vs less stable countries

A separate regression was conducted based on the PRS government stability index, splitting the sample between banks operating in more stable versus less stable institutional environments.

	(1)	(2)
	Stable country	Less stable country
ROE	2.305	-2.236**
	-2.229	(0.968)
ANet Income	-0.000259**	0.000153***
	(0.0000980)	(0.0000307)
Cross-border dummy	-0.233	0.143
	(0.359)	(0.221)
Post Crisis Dummy	-0.0893	0.157
	(0.485)	(0.222)
Acq ln size	-0.0765	-0.296***
	(0.129)	(0.0772)
Leverage	-2.692**	0.0652
	-1014	(0.714)
Relative size	0.0664	0.246*
	(0.181)	(0.139)
dummy z-score	-0.965***	-1.011***
	(0.302)	(0.210)
Post covid	-0.0447	-0.708*
	(0.775)	(0.359)
Public target dummy	-0.126	0.119
	(0.444)	(0.189)
Cash Dummy	0.0997	-0.376
	(0.465)	(0.226)
MTBV	0.165	0.207*
	(0.158)	(0.117)
Constant	1.883	3.531***
	-1.618	(0.872)
Observations	41	98

Table 8 – Results of split sample regression analysis for “stable” vs “less stable” countries where the acquiring banks operate.

The results of this second split-sample analysis, which distinguishes between acquiring banks operating in more stable versus less stable countries, reveal several differences within the two samples

that affect post-merger bank stability three years after the deal. In less stable countries, acquiring profitability, measured through the net income, emerges as a positive and statistically significant determinant of stability at the 1% level. This finding suggests that in institutional environments with greater fragility, financially stable banks are better equipped to manage the complexities of M&A integration, thereby achieving more favourable post-merger outcomes. Conversely, in more stable countries, the coefficient for the Net Income is unexpectedly negative and significant at the 5% level, indicating that pre-merger profitability may not necessarily translate into improved stability and could even reflect overconfidence or more aggressive strategic behaviour that undermines medium-term risk mitigation. This contrast is further reinforced by the ROE coefficient, which is significantly negative only in less stable contexts, implying that higher profitability in these environments might be associated with less sustainable earnings profiles or heightened risk exposure.

Pre-merger bank stability, proxied by the Z-score dummy, is negatively and highly significant in both subsamples, consistent with the earlier results that banks with initially high stability may experience regression toward more typical risk levels after a merger, or may be subject to integration overconfidence. Differences also emerge with respect to bank size. Acquiring Size (log) is negatively associated with changes in stability and statistically significant only in less stable countries, pointing to the vulnerability of larger banks in weaker institutional environments. Meanwhile, the Relative Deal Size variable is significant only in less stable contexts, where its positive coefficient suggests that larger deals may help offset institutional weaknesses, possibly due to scale efficiencies or enhanced market control. In contrast, this effect is not observed in more stable jurisdictions.

Leverage shows a negative and statistically significant effect on post-merger stability exclusively in stable countries, where higher debt levels may restrict a bank's ability to absorb integration shocks, while in less stable countries the coefficient is insignificant, potentially reflecting greater variation in regulatory regimes or debt structures. The post-COVID dummy is significant and negative only in less stable countries, suggesting that banks in these environments have been more adversely affected by pandemic-related disruptions after an M&A transaction. Other contextual and structural variables, including Cross-border, Post-Crisis, Public Target, and Cash Deal dummies, are not statistically significant in either group. Finally, the Market-to-Book Value ratio is positively associated with stability only in less stable countries, albeit at a 10% significance level, suggesting that firms perceived as more valuable by the market may benefit from reputational advantages or stronger governance mechanisms that are particularly consequential in weaker institutional settings.

Overall, similarly to the findings of La (2024), these results show the conditioning role of institutional quality in shaping the impact of M&A activity on bank stability. They suggest that in more stable countries, internal financial discipline and structural characteristics such as leverage and

organisational scale are more influential, whereas in less stable contexts, firm-specific fundamentals such as profitability and market valuation become critical in navigating post-merger risks and achieving sustainable integration.

Taken together, the results of the split-sample regressions underscore that the effects of M&A on bank stability are highly context-dependent. Firm-level fundamentals such as net income, size, and market valuation emerge as strong predictors of post-merger outcomes, but their impact is modulated by the institutional and temporal environment in which the merger occurs.

These findings provide empirical support for the conclusions drawn by Beck, De Jonghe and Schepens (2013), who argue that banking sector outcomes cannot be generalised across markets, but must be treated differently according to each specific country's regulatory and institutional frameworks.

6. Conclusions

This study has examined the relationship between M&A transactions and post-merger bank stability, with particular attention to how, acquiring-specific financial characteristics and institutional context shape stability, change and shape deal's outcomes.

Beginning with a paired-sample t-test, the results revealed that, on average, M&A deals do not generate statistically significant changes in bank stability in either the short or medium term. This average neutrality, however, masks substantial heterogeneity across institutions, giving the context for a more granular analysis of the underlying determinants of the variation in the acquiring stability in the short and medium term.

The multivariate regression results confirmed that several acquiring-specific financial variables, most notably pre-merger net income, size and market valuation, play a pivotal role in determining post-deal stability. In line with existing literature, stronger profitability and higher market-to-book ratios (MTVB) were associated with improved stability, whereas larger acquiring size consistently exhibited a negative effect, likely due to the greater integration efforts and organisational complexity faced by larger financial institutions during the integration. Interestingly, pre-merger stability, proxied by the Z-score of the acquiring banks one year before the deal announcement, showed a persistent and significant negative relationship with post-merger outcomes, suggesting an integration overconfidence mechanism among initially well-capitalised banks.

The split-sample analyses added further nuance to the previous regression findings. When dividing the sample based on acquiring bank stability, it became clear that the acquiring net income exerted a stronger and more statistically significant stabilising influence among the "less stable" banks sample, suggesting that profitability acts as a buffer for riskier institutions during post-merger integration.

Moreover, acquiring size retained a negative and significant effect in both stable and less stable groups, underlining the universal challenge that complexity poses for larger banks. Interestingly, MTBV was only significantly positive among more stable banks, suggesting that when baseline risks are low, market confidence contributes meaningfully to preserving financial soundness.

In the second split, where acquiring banks were grouped by country-level government stability, contrasting patterns emerged. In less stable institutional environments, the acquiring net income was highly significant and positively associated with changes in the Z-score, highlighting that strong financial fundamentals are critical for navigating M&A risks where external governance is weaker. Conversely, in more stable countries, the same variable showed a negative and significant effect, implying that acquiring banks in strong governance environments may be more prone to risk-taking or strategic overreach when financially well-positioned, consistent with the hubris hypothesis. Similarly, ROE was significantly negative only in less stable contexts, indicating that high returns in these settings might reflect fragile earnings profiles that undermine long-term stability.

Further, Acquiring Size was again negatively significant in less stable countries, suggesting that the burden of complexity is magnified where institutional support structures are weaker. Leverage proved significant only in stable countries, likely reflecting more rigorous regulatory environments that penalise highly leveraged firms' post-merger. The Relative Deal Size was positively significant only in less stable countries, perhaps indicating that larger-scale transactions can offset weak institutional conditions through economies of scale or enhanced market presence. Additionally, the post-COVID dummy was significant and negative in less stable countries, suggesting that pandemic-related disruptions have had a disproportionate effect on integration outcomes in these environments.

Taken together, these findings underscore the importance of moving beyond aggregate evaluations of M&A outcomes and accounting for the nuanced interplay between firm-level financial indicators and institutional environments. This suggests that successful post-merger integration depends not only on the acquiring's financial robustness, but also on how this robustness interacts with contextual constraints and single banks' peculiarities. For policymakers and bank managers these results highlight the need for tailored integration strategies that are sensitive to both the organisational complexity and the macro-institutional setting.

Therefore, considering the findings presented in this research, several policy and strategic recommendations can be drawn to guide future merger and acquisition activity within the European banking sector.

First, it is essential to ensure that the acquiring bank demonstrates to have a good level of pre-merger profitability, particularly as measured by net income and return on equity. Institutions with stronger

financial fundamentals prior to acquisition are more likely to experience improved post-merger stability, thereby contributing to the broader resilience of the European banking system.

Second, attention should be given to the pre-acquisition leverage ratio of the acquiring institution. High levels of indebtedness are associated with a decline in stability over the medium term, suggesting that regulators and bank executives should exercise caution when approving or engaging in M&A transactions involving highly leveraged acquiring banks.

Third, the size of the acquiring bank must be critically assessed in strategic decision-making. Given the observed negative relationship between bank size and post-merger stability, institutions should carefully evaluate whether a merger or acquisition represents the most effective method of delivering long-term value, especially for larger and more complex banking organisations.

Finally, it is important to recognise that the effects of key financial variables, such as acquiring net income, leverage and market valuation, are not uniform across contexts. These factors exert different influences depending on the pre-merger stability of the acquiring bank and the institutional environment in which it operates. As such, both firm-level characteristics and country-level governance conditions must be considered in any assessment of the potential risks and benefits of bank mergers.

The stability of individual banks plays a fundamental role in strengthening the overall resilience of the European financial system. While systemic stability refers to events such as contagion and macroprudential risks, it ultimately depends on the solidity of individual institutions. Therefore, safeguarding the financial health of each bank is not only critical but also serves as a necessary foundation for promoting stability at the system-wide level.

Therefore, these recommendations will aim to support more informed, context-sensitive M&A strategies and regulatory oversight, and they could represent a useful tool to enhance the financial stability of the European banking sector.

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