



**Do Mergers and Acquisitions Create Value?
Determinants of Value Creation
and
Post-Merger Accounting Performance.**

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Abstract

This thesis investigates whether mergers and acquisitions (M&A) create value for acquiring firms in the US financial industry. Moreover, it explores which specific deal characteristics are statistically associated with the creation of value and post-merger performance. The results broadly point to evidence of market anticipation, as acquiring firms experience positive abnormal returns during the time prior to the announcement. In contrast, the market reaction at the time of the announcement is mostly negative, suggesting that investors have a more sceptical attitude towards acquisitions. Looking at the factors that impact value creation, acquisitions of private targets are associated with positive and statistically significant abnormal returns across several event windows. By contrast, evidence regarding acquirer size is less clear, and the results do not support a definitive conclusion on whether more value is created by larger or smaller acquirers. Some findings also suggest that interbank mergers tend to have a poor impact on value. The analysis done on post-merger accounting performance produced mixed results. While some profitability ratios declined in the two years after the M&A event, measures of cost efficiency show modest improvements. Overall, the aim of this thesis is to provide an examination of value creation across the broader financial sector, rather than focusing solely on banks. It also brings about new evidence concerning deal characteristics associated with both shareholder value creation and post-merger accounting performance.

Title: Do Mergers and Acquisitions create value? Determinants of Value Creation and Post-Merger Accounting Performance

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Resumo

Esta dissertação investiga se as fusões e aquisições (M&A) criam valor para as empresas adquirentes no setor financeiro dos Estados Unidos. Adicionalmente, analisa quais as características específicas das operações que estão estatisticamente associadas à criação de valor e ao desempenho pós-fusão. Os resultados apontam, de forma geral, para evidência de antecipação por parte do mercado, uma vez que as empresas adquirentes apresentam retornos anormais positivos no período anterior ao anúncio. Em contraste, a reação do mercado no momento do anúncio é, na maioria dos casos, negativa, sugerindo uma atitude mais cética por parte dos investidores relativamente às aquisições. Relativamente aos fatores que influenciam a criação de valor, as aquisições de empresas privadas estão associadas a retornos anormais positivos e estatisticamente significativos em várias janelas de evento. Por outro lado, a evidência relativa à dimensão das empresas adquirentes é menos clara, não permitindo conclusões definitivas sobre se empresas maiores ou menores geram mais valor. Alguns resultados sugerem ainda que as fusões interbancárias tendem, frequentemente, a ter um impacto negativo na criação de valor. A análise do desempenho contabilístico pós-fusão apresenta resultados mistos. Embora alguns rácios de rentabilidade diminuam nos dois anos após a operação de M&A, as medidas de eficiência de custos evidenciam melhorias moderadas. Em suma, esta dissertação procura analisar a criação de valor no setor financeiro de forma abrangente, não se restringindo ao setor bancário, contribuindo também com nova evidência sobre as características das operações associadas à criação de valor para os acionistas e ao desempenho contabilístico pós-fusão.

Título: As Fusões e Aquisições Criam Valor? Determinantes da Criação de Valor e Desempenho Contabilístico Pós-Fusão

Palavras-chave: M&A, determinantes da criação de valor, desempenho pós-fusão

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Table of Contents

1. Introduction	5
2. An overview about the M&A landscape	7
2.1 Deregulation laws and Structural consolidation.....	8
2.2 Crisis driven consolidation	9
2.3 Macroeconomic cycles and M&A waves	9
3. Literature Review	11
3.1 Theoretical motivations for Mergers and Acquisitions.....	11
3.2 Determinants of value creation in mergers and acquisitions	13
3.3 Determinants of post-acquisition accounting performance.....	15
4. Data analysis and Methodology.....	17
4.1 Data and sample construction	17
4.2 Event study overview.....	18
4.3 An overview about regressions	19
5. Empirical findings.....	20
5.1 Do M&A deals create value for bidding companies?	20
5.2 Effects on performance of financial M&A	27
6. Conclusion	31
Appendix:.....	34
References:	35

1. Introduction

Despite decades of consolidation in the U.S. financial sector, it is still unclear whether mergers and acquisitions (M&A) create value for acquiring shareholders. Over time, financial institutions have become increasingly more reliant on M&A as a way to expand market share, improve efficiency levels, and maintain their position in the competitive environment. This has been reinforced by several institutional forces including financial deregulation, changes in regulatory frameworks, macroeconomic cycles, and financial crises, all of which have encouraged consolidation within the industry.

Yet, available literature highlights an important contradiction. Mergers and acquisitions are one of the most common corporate strategies and happen frequently across the financial sector. However, empirical studies often find that acquiring shareholders earn little or no value from these transactions. In many cases, abnormal returns around acquisition announcements are either zero or negative for bidders, while most of the gains are distributed to target shareholders. If acquisitions frequently fail to generate value for acquirers, it becomes a challenge to explain why firms continue to pursue them so aggressively. Finding an explanation for this apparent contradiction has therefore become an important goal of the M&A literature.

Several explanations have been proposed. Some studies suggest that the value created by acquisitions depends strongly on the specific characteristics of the deal in question, such as the size of the acquiring firm, the listing status of the target, or the regulatory environment where the transaction happens. For example, acquisitions of private firms have often been associated with positive abnormal returns for bidders, but when carried out by large firms, they are linked even negative shareholder outcomes. These findings indicate that the success of acquisitions varies, depending heavily on specific transaction characteristics.

The financial sector represents a particularly interesting context in which to study this issue. Financial institutions operate in a highly regulated and capital-constrained environment where regulatory reforms, macroeconomic conditions, financial crisis can strongly affect merger activity. For example, the Riegle–Neal Interstate Banking and Branching Efficiency Act of 1994 removed geographic restrictions on banking activities, allowing banks to expand across US state lines. A few years later, the Gramm–Leach–Bliley Act of 1999 permitted the creation of financial conglomerates. These advancements improved consolidation opportunities within the industry. More recently, the Global Financial Crisis of 2008 led to many distress-driven mergers aimed at stabilization, and the subsequent the Dodd–Frank Act of 2010 introduced

stricter regulatory oversight and higher compliance costs. These institutional characteristics, together with a large and heterogeneous sample of firms, make the financial sector fundamentally different from other industries and therefore particularly interesting to study.

Although mergers in banking have already been widely studied, most of existing research focuses specifically on bank-to-bank transactions. Less attention was given to the broader financial sector, which includes a wider range of institutions operating under different competitive dynamics. In addition, relatively few studies examine how factors such as macroeconomic cycles, target listing status, and acquirer size affect the post-merger accounting performance of banks.

This study investigates the above literature gaps by examining three main questions: First, does M&A create value for acquiring shareholders in the U.S. financial sector? Second, which variables help explain differences in value creation across deals? Third, do mergers lead to better post-acquisition accounting performance of acquiring banks?

To find answers to these questions, this analysis uses a sample of 532 completed mergers and acquisitions involving publicly listed U.S. acquirers between the years 1998 and 2021, with the transaction data obtained from Refinitiv Workspace. The empirical approach employs an event study, which measures abnormal stock market returns around acquisition announcements, along with cross-sectional regression analysis to identify which deal characteristics influence value creation. Some additional regressions were calculated in order to understand which variables impact post-merger accounting performance.

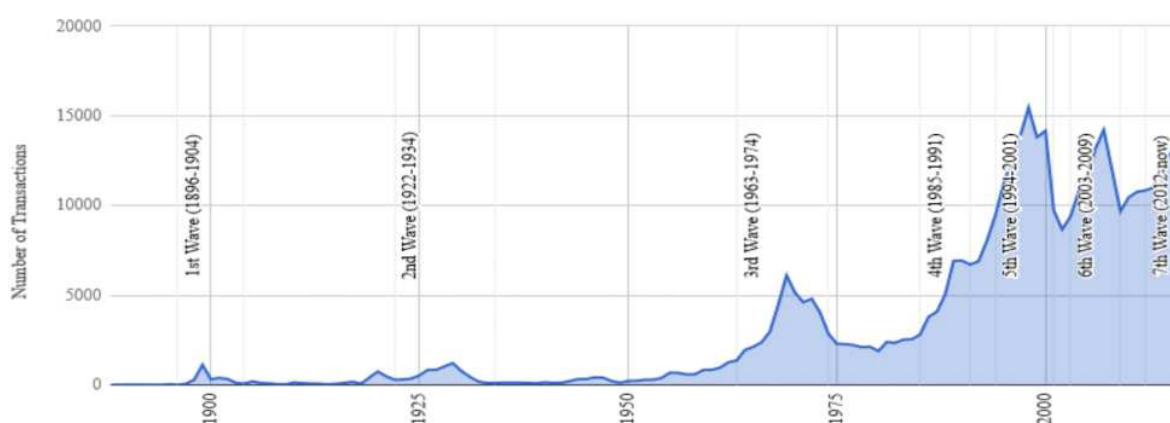
The empirical results show that on average, acquiring firms have positive and statistically significant abnormal returns in the time period before the official announcement, perhaps reflecting market enthusiasm or information leaks. On the other hand, abnormal returns during the announcement window are generally found to be negative. Acquisitions of private targets, however, are often associated with positive and statistically significant abnormal returns during both the announcement and post-announcement periods. Contrarily, acquisitions of public targets tend to generate less favourable market reactions over the same window. Moreover, available evidence is not strong enough to determine whether large or small acquirers consistently create more value. Lastly, it was found that some accounting performance indicators improve slightly after mergers, while others deteriorate.

The remainder of this investigation will develop in the following structure: Chapter 2 looks at the evolution of mergers and acquisitions in the financial sector. Chapter 3 does a more thorough review of relevant literature on value creation and post-acquisition performance. Chapter 4 analyses available data, sample dynamics, and empirical methodology. Chapter 5 presents the empirical results, followed by the Chapter 6 conclusion.

2. An overview about the M&A landscape

Mergers and Acquisitions are mechanisms that are used to gain control over other corporations. Many studies over the past 30 years have focused on how this is done, and how they have evolved over time. These activities were first popular in the USA in the eighteen century and then spread to Europe in the nineteen century to finally arrive to developing countries. The number of mergers and acquisitions significantly developed over the last three decades representing an important choice in the corporate world associated with benefits such as growth and development in the competitive and fast-evolving global landscape. 2025 was recognized as the second highest year for deal activity, reaching a volume of \$4.9 trillion which is 40% more than 2024. Over the time, mergers and acquisitions are known to happen in waves like showed in Figure 1 that arise from macroeconomic shocks, regulatory change, and technological development (Cho and Chung, 2022).

Figure 1: Merger waves from 1985 to 2020 in the USA



Source: Institute for Mergers, Acquisitions and Alliances (IMAA), M&A Statistics – United States.

The broader financial industry experienced a dramatic transformation over time where major characteristics are the driving forces: deregulation, distress mergers and economic cycles.

2.1 Deregulation laws and Structural consolidation

The mid 1990 saw a wave of domestic and international mergers due to an important regulatory change: the Riegle-Neal Interstate Banking and Branching Efficiency Act of 1994. Before this legislation, banks were restricted to operate within a single US state. This act removed geographic restrictions allowing banks to expand across state borders and acquire banks on a nationwide level. This regulatory reform made consolidation opportunities far more attractive within the US banking sector. Subsequently, a combination of technological change, deregulation, globalization and strong market performance contributed to one of the biggest merger waves with a volume of deals reaching \$945.5 billion already surpassing the results obtained in 1997. These deals were motivated by the company's urgent goal of growth, as well as international expansion and steady earnings to support the rapidly increasing stock price. The pace of mergers further increased when the new law called Gramm-Leach-Bliley Act was approved in 1999 which allowed commercial banks, investment banks and insurance companies to combine into one single financial institution through mergers. This law contributed to the development of multifunctional financial conglomerates offering a wide range of products and service. Deregulation is considered an important determinant of value creation in the financial sector, mainly because it enables banks to operate more efficiently and benefit from both economies of scale and scope. A major step in this process was the removal of geographic restrictions with the Riegle-Neal Interstate Banking and Branching Efficiency Act of 1994. Before this legislation, many weaker banks were able to stay in the market due to geographic restrictions. Once these barriers were removed, more efficient banks were able to expand into new regions and make acquisitions of underperforming institutions. In many cases, these mergers created value by allowing costs to be spread across a larger organization, which improved their overall efficiency (Berger et al., 1999; Jayaratne & Strahan, 1998). The Gramm-Leach-Bliley Act later solidified this trend. Mergers that took place after its approval did not only benefit from economies of scale, but also economies of scope. By bringing different financial services together under the same organization, banks could reduce their costs while also increasing revenues by offering a broader range of products and services (Adams, 2012). In addition, expanding across different geographic areas allowed institutions to diversify and increase the scale of their operations, which could help decrease risk (Berger et al., 1999). Because of these potential improvements to efficiency and performance, the quantity of mergers in the financial sector increased markedly, with hundreds of deals taking place each year following the aforementioned deregulatory reforms. This description suggest that M&A value creation and firm performances are impacted by the regulatory environment.

2.2 Crisis driven consolidation

Financial crises are often the cause of distress mergers. The strongest example is represented by the 2008 financial crisis where weak banks merged with healthy banks in order to avoid failure. When the financial crisis hit in 2008, this signed a turning point for M&A because of a steep decline in the deal volume which decreased 41% from 639 deals in 2007 to 374 deals in 2008. Deals in banking being 150, classified as lowest value since 2000. However, from 2009 the number of deals happening in the financial industry landscape started increasing as they were justified by survival reason and government pressure since most of the targets were in great difficulties. Regulators incentivize these acquisitions to improve financial stability as some major targets had the status of Too-Big-To-Fail and their collapse would further destabilize the entire financial system. Moreover, these deals are aimed to reduce losses to the Deposit Insurance Fund, which is used to compensate customers with deposits when a bank fails. Healthy banks were encouraged to get involved in such deals as regulators offered them incentives such as: purchase the assets of the weaker bank at a discounted price (below the fair value) and loss-sharing agreement under which the regulator agree to cover a part of the losses on the distressed asset of the target. From 2009 onwards, such arrangements made distressed acquisitions more attractive to healthy banks. Evidence shows that bidding banks observed positive abnormal returns immediately after the deal was announced and these mergers also improved their operating performance in terms of profitability and cost efficiency, compared to mergers that didn't receive any government support (Mamun et al., 2021). The value creation is also linked to structural changes that followed the financial crisis. In particular, corporate governance reforms and stronger executive monitoring increased manager accountability to shareholder which reduced agency problems in acquisitions decisions. In addition, managerial overconfidence declined after the financial crisis as CEO became more selective when evaluating a target, choosing deals that could lead to synergy realization (Alexandridis et al., 2017).

2.3 Macroeconomic cycles and M&A waves

Merger activity is pro-cyclical which means that the number of mergers increases during expansion and decrease during recessions (Komlenovic et al., 2011).

The year 2001 represents a recessionary period triggered by the burst of the dot-com bubble and later intensified by the Twin Tower attack. These events caused a slowdown in M&A activities as financial institutions became risk-averse and wanted to preserve liquidity. This

downturn also marked the end of the fifth merger-wave, consistent with the theory that merger activities are pro-cyclical.

However, the period between 2002 and 2006 was characterized by low interest rate, wide available debt to finance projects and private equity money to support deals. Financial institutions were highly motivated to merge and take advantage of this upturn period to acquire new technologies and expand into new markets. During these years the number of deals taking place in the financial sector fluctuated while the value of the deals showed a steady increase, reaching a high at \$151billion in 2007.

As already discussed in the chapter above, The Great Financial Crisis (2007 to 2009) constituted a long recessionary period where healthy banks were involved in mergers to save banks that were on the verge of failure. However, from 2010 onwards deals among financial institutions increased, motivated by growth desire after years of recovery. After the financial crisis a new law was approved: The Dodd Frank Act. This introduced new financial regulations to make banks safer after the financial crisis. However, these rules led to higher compliance costs especially for large banks (value of asset above 10billion) which had to face additional rules. Because of that, M&A incentives and outcomes will vary based on the size of the acquiror. Evidence shows that this period was again characterized by positive economic conditions: constant GDP growth, low interest rates, declining unemployment and growing consumer confidence, all encouraged deals whose volume reached a peak in 2015. In particular, there were a total of 1267 deals in the financial industry and of those, 285 deals took place in the banking sector.

This expansionary period ended in 2020 when the COVID-19 outbreak marked another tough period for the financial industry. The first half of 2020 saw a decline in M&A activity because of uncertainty and regulatory pressure (Li et al., 2026). The trend continued until the second half of the year when companies altered their response to pandemic-driven changes, and planned acquisition to increase growth. In particular, the mergers that occurred were more strategic and selective to achieve long-term value and stability. Specifically in the financial industry, deal volume declined by 7%, from 1317 (2019) to 1219 (2020) while total deal value fell by 42% from 166.6billion (2019) to 97.1billion (2020). In 2020 banks announced only 111 deals, being the lowest value in the decade but the value doubled in 2021 where 208 deals took place. Given this analysis, is interesting to study how upturn and downturn period impact post-acquisition accounting performance.

Overall, the US financial industry provides an interesting setting to study M&A, as it is characterized by specific features and events that distinguish it from other industries. As discussed above, US experienced macroeconomic cycles, deregulations, new regulatory reforms that introduced stringent capital constraints as well. These all had an impact on M&A incentives and value creation in the financial industry. In addition, a distinctive characteristic of this industry is the Too-Big-To-Fail status, where large institutions receive implicit government support that reduce the likelihood of bankruptcy and lowers funding cost. As a result, firms may have the incentive to reach a certain size even through M&A. Moreover, the US financial sector is the perfect landscape to be studied as it offers a large sample of both large and small acquiring institutions as well as public and private listed targets, characteristics that also have an impact on value creation. All these features allow for the examination of how macroeconomic conditions, regulatory reforms, acquiror size, target type impact mergers outcomes.

3. Literature Review

This chapter illustrates the most relevant literature. Section 3.1 presents the reason that push firms to undertake M&A deals. Section 3.2 summarizes the variables that drive value creation in mergers and acquisitions. Finally, Section 3.2 give a review of the variables that influence post-merger performance.

3.1 Theoretical motivations for Mergers and Acquisitions

Until now, many studies focused on discovering why Mergers and Acquisitions (M&A) happen in the financial industry, with particular attention to the banking industry. One of the most important reasons that justify mergers is the creation of synergies that happen when the value of the new entity after the deal is greater than the value of each company involved in the transaction. We have different type of synergies that can be distinguished into operating synergies and financial synergies.

One of the most cited reasons to merge is to achieve **economies of scale**: firms engage in deals to reach an optimal size that allow them to spread costs over a broader output base. Another reason to merge is given by economies of scope which arise when costs decrease using shared resources to produce multiple products and eliminating redundant operations. Lastly, operating synergy may also arise from vertical integration which occurs by combining different stages of the supply chain under one entity instead of buying and selling through suppliers.

Through mergers, companies can also achieve financial synergies which arise from higher borrowing capacity and tax benefits.

Merged companies due to their increased size or steadier cash flow may have access to **higher borrowing** than they otherwise would have as independent single firms. This would lead to a **tax benefit** since interest on debt is tax deductible. Finally, sometimes it is not easy for firms to raise cash in capital markets due to information asymmetry. For that reason, companies with great investment ideas but lack of money to invest, can decide to merge with a financially strong firm with excess cash which constitute an easier way to raise money than choosing capital markets.

Moreover, there are also other reasons that justify mergers which are gathered in the Corporate control theory and Agency cost theory.

Corporate control theory (Jensen, 1988; Shleifer and Vishny, 1988) states that takeover is one of the most effective ways to replace ineffective managers of potential target companies.

These firms may under-perform either because its managers act in service of their own interests at the expense of shareholder or because they lack the know-how and skills necessary to maximize company value. If the management of acquiring firms are more suited than that of acquired firms, improvement is possible. This theory hypothesizes that poorly performing firms are more likely to be acquired and are likely to experience better performance afterwards. Acquiring firms are also expected to benefit from the takeover activity if they are able to improve operating synergy, after the takeover.

Moreover, the agency cost theory suggests that managers act in their own interest rather than in their shareholder's interest and for that reason they choose expensive and non-value enhancing mergers with the aim to manage a company of a bigger size with the results of increased wages and powers. Moreover, managers may want to merge because of extra perks they can gain, or because it makes their skillset irreplaceable. These types of mergers are unlikely to increase efficiency or productivity, and by extension financial performance.

Moreover, another reason is the possibility to obtain a Too-big-to-fail-status (TBTF) which reduces funding cost because of the implied government support.

Finally, M&A also happens because of macroeconomic reasons and industry shocks that force companies to change. These shocks are related to the general industry and may include new regulations, higher input costs, more competitions, new technologies coming out. These

changes push firms to merge and sometimes this is the cheapest and fastest solution to adapt to the changes. As an example, mergers increase market power with the possibility of having access to a larger customer base and having greater market presence which allow institutions to set prices (Berger et al., 1999) However, if merging can help firms to adapt to the changes, it is not a certainty that the performance of firms improves after a takeover, compared to before the shock.

3.2 Determinants of value creation in mergers and acquisitions

Against the background presented in the chapter before, this study will investigate: the type of mergers that appear to be value creating and the measurement of improvements in performance of the resulting institution. The first line of research focus on the stock market reactions around the announcement of the deal. Many studies conducted this analysis performing an event-study methodology to analyze excess returns over different windows. They then regressed these results on some key characteristics of the transaction to see which deal-characteristics create value.

The general view about M&A deals that lasted for decades is that acquiring firms register small or negative abnormal returns around the announcement while target shareholders realize substantial gain from the deal (DeYoung et al., 2009). Researchers continued to investigate value creation for acquirors since mergers and acquisitions are a popular activity in the global landscape, questioning the involvement of bidders in a value-destroying activity. It is certain that value creation is linked to certain characteristics which we will talk about in this paragraph.

Regulatory environment and size of the acquiror

The regulatory environment and size of the acquiror are two important determinants of value creation. After the financial crisis, the Dodd Frank Act (DFA) introduced new financial regulations such as increased capital and liquidity requirements as well as reporting requirements. These rules applied both to large and small banks leading to higher fixed compliance costs especially for large banks (value of asset above 10billion) which had to face additional rules. The literature suggests that given their size, small banks faced relatively higher costs than larger banks and this incentivized them to undertake more domestic M&A in order to achieve economies of scale and spread costs over a larger asset base. (Ince, 2024; Bindal et al., 2020; Hogan, 2019). For that reason, small deals (combined asset of merging companies below 10 billion dollars) generate higher cumulative abnormal returns for bidding companies compared both to the pre-DFA period and mergers involving larger banks. Moreover, the

analysis of post-merger performance reveal that small deals achieved higher profitability (ROE, ROA), as well as lower labor costs, showing that the idea of value being created when a deal is announced is supported by real improvements (Leledakis & Pyrgiotakis, 2019).

Literature also focuses on acquirors of large size. Researchers found that deals performed by large acquirors systematically destroy value whereas small acquirors usually generates positive returns. One explanation is that large firms pay higher premium for targets and are more likely to achieve negative synergies. This behaviour is consistent with the managerial hubris theory indicating that managers overpay due to overconfidence which lead to value destruction for shareholders. Moreover, it is also consistent with the agency theory: management of large firms may be too overconfident which lead them to pursue empire-building acquisitions to increase firm size and power even though these transactions are detrimental to shareholders value. Another explanation is related to the payment method: large acquirors usually pay using equity which may signal overvaluation of bidder asset leading to lower announcement returns. By contrast, small firms usually rely on cash as payment method (Pan et al., 2005; Moeller et al., 2004). However, other studies highlighted regulatory incentive associated with a certain size. In particular, banks may have the incentive to pursue M&As, even paying a premium, to reach a size that confer to the resulting institution the Too-Big-To Fail (TBTF) status. Markets reacts positively to these mergers as investors expect government support that would avoid their failure and lower funding costs (Brewer & Jagtiani, 2011).

Target listing status

Existing literature shows contrasting evidence on which target type creates value. Some studies show that bidder register positive significant cumulative abnormal returns when acquiring private target and negative cumulative abnormal returns when a public target is acquired. This is because private targets are less liquid than public and for that reason they can be acquired at lower price generating greater value from synergies (Fuller et al., 2002). The same results persist when a financial advisor is involved in the deal since it can help to extract superior information regarding private firms to identify and exploit synergies better (Leledakis et al., 2021). By contrast, with the approval of the Gramm–Leach–Bliley Act in the US in 1999, investment banks could merge with commercial banks and assurance companies becoming big multifunctional financial companies. In this case, bidders that acquire publicly traded firms generate positive significant CARs. Here, value creation is driven by synergies as the merger is expected to strengthen economies of scope and enhance revenues (Fraser & Kolari, 2007).

Level of deal anticipation:

Tunyi (2020) claims that many studies report that M&A deals destroy value for acquiring shareholders when the deal is announced because they miss to consider that investors are able to anticipate which firms will engage in acquisitions. As a result, bidders show positive significant excess returns prior to the deal announcement and negative or low excess returns afterwards. This demonstrate that highly anticipated deals generate negative or small abnormal returns around the announcement date. By contrast unanticipated acquisitions register high and significant cumulative average abnormal return in the seven days around the announcement (Tunyi, 2020)

Cross boarder vs domestic deals

Cross boarder and domestic deals are also a recurrent topic discussed in the literature.

Researchers found that domestic focusing mergers where the target operate in similar geographic markets and business activities as the acquiror, generate positive abnormal returns for the bidder while diversifying mergers tend to destroy value. This is due to projected cost savings from the elimination of overlapping functions which are stronger when the deal is domestic (DeLong, 2001; Houston et al., 2001). Other studies found that cross boarder acquisitions create positive and significant value for target shareholders, while returns for acquiring firms are smaller and depend on macroeconomic conditions and deal characteristics. In particular, cross boarder deals generate higher positive cumulative abnormal returns for bidders when US acquirers purchase targets located in Latin America or when the acquiring firm is an investment company (Kiymaz 2004). Value creation can also arise when firms from countries with higher accounting disclosure standards and stronger corporate governance levels acquire targets in countries with weaker institutional standards with the aim to improve them. Bidders also register positive significant excess returns when they acquire targets located in countries with weaker economic conditions and depreciated currency, making them relatively cheaper to acquire which generate greater synergies (Erel et al., 2012).

3.3 Determinants of post-acquisition accounting performance

Beyond value creation around the announcement, literature also examines post-acquisition performance of acquirors, focusing on discovering which factors drive the results.

Overall, the literature present contrasting evidence about whether M&A lead to an improvement in post-merger accounting performances. On the one hand, researchers shows that mergers and acquisitions lead to positive and significant improvements in performances

mainly driven from cost reductions and revenue enhancements. (Cornett et al., 2006). However, other studies show that post-merger improvements are small or insignificant. This is because in the year of the merger the company incurs in considerable restructuring costs and integration expenses that immediately reduce profitability and offset the increase in performances registered in the years following the merger. The overall effect become neutral or slightly positive (Behr and Heid, 2011; Hagendorff and Keasey, 2009). Mergers can also lower profits and revenues as the merged bank may issue cheaper loans or charge lower fees in order to attract customers and face competitions (Beccalli and Frantz, 2009).

Macroeconomic conditions and regulatory environment

Macroeconomic conditions and the regulatory environment also impact post-merger accounting performance.

Evidence shows that periods of high policy uncertainty, when both the government economic policies and the future direction of the economy are difficult to predict, impact both shareholders value creation and post-merger accounting performances. Bidder shareholders earn higher excess returns and post-acquisition performances are higher for deal initiated during such periods. These results suggest that during uncertainty periods, banks become more selective and prioritize mergers that create synergies which lead to superior post-merger accounting performances and benefits for the shareholders over opportunistic or speculative transactions (Kiosses et al., 2025).

Studies find that banks with capital constraints make better acquisition decisions, having less freedom to use capital. This lead banks to have better performance in terms of ROE and ROA up to three years after the merger compared to unconstrained banks. Moreover, the results for constrained banks are associated with a lower premium payment and cash payment for the target confirming the thesis that capital-constrained banks make better acquisition decisions (Brune et al., 2015).

Cross boarder vs Domestic mergers

Activity focusing mergers such as inter-bank and domestic mergers generate greater performance improvements than diversifying mergers. These superior performances are associated with synergies that arise both from cost cutting and revenue enhancement. Cost savings are achieved through the elimination of redundant operations and branches. Revenue enhancement stem form cross-selling opportunities, reaching new costumers, increased deposit and lending activity (Cornett et al., 2006; DeLong, 2001).

Acquiror size

The size of the acquiror also has an impact on post-merger accounting performance. Literature argues that M&As where the acquiror is large (asset >1billion) generate higher post-merger improvement performance than smaller acquiror both due to revenue enhancement and cost savings achieved through economies of scale as cost can be spread over a larger asset base (Cornett et al., 2006; DeLong, 2001).

4. Data analysis and Methodology

This chapter provide a detailed analysis of the sample selection and the methodological approach used in this research. Section 4.1 explains the data retrieving process. Then, section 4.2 presents an overview about event study, being the main statistical method used. Finally, chapter 4.3 describes regressions, being the last method used.

4.1 Data and sample construction

To establish whether M&A deals create value for US acquirors, I used an event study methodology using different event windows around the announcement date, analyzing a period that goes from 1998 to 2021. Moreover, this study follows the methodology of Campa and Hernando (2006). I downloaded the sample of M&A deals from the Deal Screener on Refinitiv Workspace. Here I selected only completed deals that saw US publicly listed acquirors involved in transactions with target located in the Americas and classified as private or public. Both target and acquirors are financial institutions. From here, I dropped those transactions where the acquiror already owned more than 50% of the target before the announcement (65 deals) and the ownership was set to 0% when the information was unavailable in Refinitiv Workspace (Betton et al., 2008). I then considered deals where the acquiror ended up with more than 50% shares of the target, meaning that the acquiror has the control of the target when the deal ends. I also dropped 169 transactions where either the target or the acquiror were real estate companies. In the end I imposed a deal value greater than 100million USD (Gigante, Galli, & Scarlini, 2025) and I ended up with 532 deals. In this sample, 251 deals involved acquisitions where the bidder is a bank, which I will consider in the second section of this study to examine the impact of M&A deals on banks' financial performances. Given the sample of deals, I used DataStream Codes previously downloaded from Refinitiv Workspace, to retrieve daily stock prices and market capitalization for each firm. After collecting these data, I dropped from the sample companies with missing or incomplete observations, and I made sure that the companies were enough liquid to be included in the analysis. Drechsler et al. (2013), define stale data as a

series of price that do not change for several days failing to reflect true market conditions due to illiquidity or non-trading activity leading to biased results. As a result, including thinly trading stocks can invalidate statistical inference especially in event studies. For that reason, according to the paper I dropped companies whose returns shows at least 4 days of zero returns in a row (Cowan and Sergeant, 1996).

4.2 Event study overview

Given my sample, I performed the event study methodology which is widely used to measure the impact of an event on the equity of a company. This methodology assumes that: 1) markets are efficient so stock price will immediately react to the new information, 2) the event is unanticipated and there are no confounding events occurring during the event window that can affect the stock price. To satisfy these assumptions, I excluded deals where the same acquiror announced M&As in the event window that goes from 30 days after the announcement date and 90 days before the announcement date, to ensure that each event window captures the market reaction to a single deal announced (Golubov et al., 2015). The first step to perform an event study is the definition of the event window which is the horizon of the study during which the market reaction to the event is studied. The event window extends beyond the event date (the announcement of the M&A deal) to analyze the period before and after the event. This allows to capture the effect of the announcement when the market close on the event date, as well as potential information leakage to investors prior to the event. In addition, also the estimation window needs to be defined. In this study we use 3 different event windows: pre-announcement period (windows $[t-30, t-1]$ and $[t-90, t-1]$), announcement period (windows $[t-30, t+1]$ and $[t-1, t+1]$), post- announcement period (windows $[t-1, t+30]$ and $[t-30, t+30]$). The pre-announcement windows $(t-30, t-1)$ and $(t-90, t-1)$ are used to capture run-up effects due to possible information leakage and insider trading. Similarly, the window $(t-1, t+30)$ which is symmetric to the $(t-30, t-1)$ window, is used to study insider trading when the information is public (Lei and Wang, 2014). The window $(t-30, t+30)$ is used to capture the pre-announcement run up and post-announcement reactions that are not instantaneous (Crocì, 2007). Finally, the window $(t-1, t+1)$ is used to capture immediate reaction to the announcement and is small enough to avoid contamination from other events. This is a common window used in event studies (Andrade et al., 2001).

To model market reactions to the event, we calculate abnormal returns. As we can see in Equation 1, abnormal returns are calculated as the difference between normal returns of the

security minus expected returns, both calculated during the event window. Normal returns are a measure of what the returns would have been without the event.

Equation 1: Abnormal return calculation for a firm i in a period t

$$AR_{i,t} = R_{i,t} - E(R_{i,t}) \quad (1)$$

Where:

- $AR_{i,t}$ are the period-t abnormal returns for a company i
- $R_{i,t}$ are the period-t actual returns for a company i
- $E(R_{i,t})$ are the period-t expected returns for a company i

To calculate expected returns, this research used the CAPM model, and its parameters are estimated during the estimation window that corresponds to 6 months prior the event window (120 trading days). This is a common estimation window used in literature (Mackinlay, 1997). The estimation window and the event windows do not have to overlap, this way the parameters of the normal returns are not influenced by the event.

Equation 2: Capital Asset Pricing Model (CAPM)

$$R_{it} = rf + \beta_i * (R_{mt} - R_f) \quad (2)$$

Where:

- rf is the risk-free rate and this research used the 3 months T-Bill (Agrawal et al., 1992).
- R_m is the market return and in particular the S&P500 is used as proxy downloaded from CRSP.
- Beta is the slope estimated through the OLS regression.

To draw inference about abnormal returns we have to sum them. The aggregation is through time for a single security. For a period that goes from t_1 to t_2 the formula for the Cumulative abnormal returns (CAR) is the following:

$$CAR_i(t_1, t_2) = \sum_{t=t_1}^{t_2} AR_{it} \quad (3)$$

4.3 An overview about regressions

After conducting the event study methodology and computing cumulative abnormal returns, the second methodology used in this thesis are the cross-sectional regressions. I regressed cumulative average abnormal returns, and subsequently also accounting-based performance on different variables to identify which characteristics drive value creation and companies accounting performances. To do that, an OLS regression is built, which gives important insights on the value and significance of the coefficients. The OLS regression is the following:

$$y_i = \beta_0 + \beta_1 x_{1i} + \dots + \beta_N x_{Ni} + \varepsilon \quad (4)$$

In the equation above: y_i is the dependent variable representing characteristics of the company i , x_{ni} represent the independent variables and finally ε_i is the error term.

After conducting the cross-sectional regression, we obtain coefficient estimates for each factor and their sign and significance will be interpreted. Statistical significance is conducted through testing the null hypothesis $H_0: \beta_i = 0$. If a coefficient is statistically different from 0, then the independent variable has an impact on the dependent variable.

5. Empirical findings

In section 5.1, this research will illustrate the results that arise from the event study methodology and identify which variables drive value creation. Moreover, section 5.2 will investigate post-merger performance for banks.

5.1 Do M&A deals create value for bidding companies?

Table 1

Variable Descriptive Statistics

VARIABLES		FREQUENCY	PERCENT
TARGET	Private	169	31.77%
	Public	363	68.23%
SIZE	Large	105	19.74%
	Medium	278	52.26%
	Small	149	28.01%
BANKS	Banks	316	59.40%
	Non-Banks	216	40.60%

Note: This table represents the descriptive statistics of the main variables used throughout this research.

TARGET is a variable representing the listing status of the target company which can be private or public. SIZE is a variable representing the size of the acquiror based on its market capitalization at the date when the deal was announced. BANK is a variable indicating whether the transaction happened between two banks or not.

In Table 1, the descriptive statistics of the main variables used throughout the research are reported. TARGET captures the listing status of the target company which can be private or public. As shown in the table, the majority of targets are publicly listed firm (363 firms) which is more than double the amount of private target in the sample (169). SIZE represents the size of the acquiror measured based on its market capitalization at the announcement date. The table

shows that there are 149 small acquirors and 105 large acquirors, while the remaining sample is composed of medium-sized acquirors. Finally, BANK is a variable representing whether the transactions happen between banks.

Table 2

Differences in cumulative abnormal returns by window lenght

	<i>Mean</i>	<i>Median</i>	<i>% negative</i>
<i>Pre-announcement</i>			
<i>(t-30,t-1)</i>	<i>1.13%**</i>	<i>1.01%**</i>	<i>42.86%</i>
<i>(t-90,t-1)</i>	<i>4.48%**</i>	<i>4.13%**</i>	<i>36.28%</i>
<i>Announcement</i>			
<i>(t-1,t+1)</i>	<i>-0.65%**</i>	<i>-0.67%**</i>	<i>57.89%</i>
<i>(t-30,t+1)</i>	<i>0.43%</i>	<i>0.32%</i>	<i>48.12%</i>
<i>Post Announcement</i>			
<i>(t-1,t+30)</i>	<i>-0.34%</i>	<i>-0.66%</i>	<i>52.07%</i>
<i>(t-30,t+30)</i>	<i>0.75%</i>	<i>-0.01%</i>	<i>50.00%</i>
<i>Tests on differences in cumulative average (median) abnormal returns by window lenght (1)</i>			
<i>(t-90,t-1) - (t-30,t-1)</i>	<i>0</i>	<i>0</i>	
<i>(t-30,t+1) - (t-1,t+1)</i>	<i>0.0057</i>	<i>0.0017</i>	
<i>(t-1,t+30) - (t-1,t+1)</i>	<i>0.4826</i>	<i>0.2367</i>	
<i>(t-30,t+30) - (t-30,t+1)</i>	<i>0.4875</i>	<i>0.218</i>	

Note: this table presents the mean, median and the percentage of negative excess returns over different windows.

*/** signal statistical significance at 10% and 5% levels respectively. Confidence intervals are adjusted for skewness following the method illustrated in Lyon et al. (1999)
(1) The reported values are the p-values from a paired t-test of the null hypothesis that the difference between two event windows is statistically significant.

Table 2 shows the results of the event study, including average and median cumulative abnormal returns, as well as the percentage of negative excess returns. Moreover, the lower part of the table presents the p-values of the null hypothesis that the difference between two event windows is statistically significant. We will use this test to measure the run-up effect which represents the percentage of abnormal returns registered before the deal announcement due to information leakage or investors speculation. Table 2 shows that acquiror companies experience positive and significant excess returns over multiple event windows. For the pre-announcement window (t-30, t-1), average excess returns are equal to 1.13% and they increase to 4.48% when the window is extended to (t-90, t-1); both results are significant at 5%. These results suggest that a substantial portion of abnormal returns is realized prior to the announcement, with 3.35% excess returns are registered during the (t-90, t-30) preannouncement window, possibly due market anticipation of the deal, information leakage or insider trading. Regarding the announcement window, in the (t-1, t+1) period, abnormal returns are negative with a mean of -0.65% and a median of -0.67%. This result is in line with

the theory of Tunyi (2020), who demonstrated that anticipated deals register negative abnormal returns around the announcement date. The distribution of excess returns is quite asymmetric with median values lower than mean in most of the cases. As highlighted in the literature, both acquiror size and target listing status impact value creation. For that reason, the sample of cumulative abnormal returns is split into two groups in order to analyze average excess returns (Table 3) and median excess returns (Table 4). Focusing first on average excess returns, both private and public targets show positive and significant cumulative average abnormal returns in the pre-announcement windows, with contrasting results regarding the type of target that generate the greatest value. However, in the announcement and post-announcement windows, public targets registered negative excess returns, suggesting that market reacts less favorably to the announcement of public target acquisitions. In contrast, acquisitions of private targets show positive and significant excess returns over the same periods. Regarding median excess returns, a similar pattern emerges. In the pre-announcement window ($t-90, t-1$), acquisitions of public targets generate positive significant excess returns, greater than the result associated to private targets. By contrast, in the announcement and post announcement windows, acquisitions of private targets show positive and significant CARs, compared to the negative results generated from the acquisition of public financial institutions. Overall, even though in the preannouncement windows market reacts more favorably to announcement of deals where the target is public possibly due to speculation, the reaction corrects in the announcement and post-announcement windows where acquisitions of private targets generate positive and significant cumulative abnormal returns. These positive results for private target, may arise both from expectation of greater synergies due to the discounted price paid to purchase them or from the presence of a financial advisor that may help the acquiror to extract more information about the target and exploit synergies more effectively (Ince, 2024; Bindal et al., 2020; Hogan, 2019; Leledakis & Pyrgiotakis, 2019).

Moreover, I further split the sample based on the size of acquirors, measured based on their market capitalization at the announcement date. In the preannouncement window ($t-90, t-1$), average excess returns are higher for small acquiror, suggesting positive market anticipation. Probably there are expectations that they can benefit more from acquisitions through the possibility of achieving economies of scale and spread costs over a larger asset base (Ince, 2024; Bindal et al., 2020; Hogan, 2019). In the announcement window ($t-1, t+1$), acquisition made by large acquirors destroy value as excess returns are negative and significant (CAARs of -0.99%) An explanation can be that managers of large firms may overestimate their ability to create value so they end up overpaying for the target or pursue mergers that expand the size of the

firm rather than maximise wealth, in line with the managerial hubris and agency cost theory (Pan et al., 2005; Moeller et al., 2004). However, this result cannot be compared to that of small acquirors as cumulative average abnormal returns are not significant in that window. In the last window ($t-30, t+30$), small acquirors generate positive significant cumulative abnormal returns while large acquiror CARs are insignificant. The analysis of median cumulative returns shows similar patterns. In the pre-announcement window ($t-90, t-1$), results are positive and significant for both groups, although cumulative abnormal returns for small acquirors are double the ones of large acquirors. In the announcement window, median CARs are negative for both groups but lower for small acquirors. From these results, we can't definitely draw conclusion about which acquiror type generates more value.

Table 3

Cumulative average abnormal returns by type of merger

		(t-30,t-1)	(t-90,t-1)	(t-1,t+1)	(t-30,t+1)	(t-1,t+30)	(t-30,t+30)
A. Classification by type of target (private, public)							
Targets	Private	1.41%*	3.82%**	1.64%**	2.94%**	3.50%**	4.94%**
	Public	1.00%**	4.79%**	-2.00%**	-0.74%	-2.12%**	-1.21%*
B. Acquirors size by date announced (3)							
Acquirors	Small Size	1.05%	4.68%**	-0.69%	0.03%	1.67%	2.43%**
	Large Size	1.01%	3.73%**	-0.99%**	0.32%	-1.03%	0.09%

Note: classification of cumulative average abnormal returns (CAARs) by type of target (private vs public) and by acquiror size. Acquirors size is defined based on the market capitalization of the acquirors and classified into small and large measured at the announcement date. Each column reports cumulative average abnormal returns computed over different windows as the difference between abnormal returns and expected returns. */** show significance at 10%/5% level. Confidence intervals for excess returns are adjusted for skewness following the method described in Lyon et al (1999).

(3) small (large) size refer to those deals in the lower (upper) quartile of the distribution defined in terms of the market capitalization of the acquiror on the date the deal was announced.

Table 4

Median abnormal returns by type of merger

		(t-30,t-1)	(t-90,t-1)	(t-1,t+1)	(t-30,t+1)	(t-1,t+30)	(t-30,t+30)
A. Classification by type of target (private, public)							
Targets	Private	1.00%	3.98%**	1.04%**	1.84%**	3.01%**	3.15%**
	Public	1.20%**	4.23%**	-0.89%*	-0.42%**	-1.14%*	-0.77%*
B. Acquirors size by date announced (3)							
Acquirors	Small Size	0.83%	3.98%**	-1.01%**	0.28%	1.07%	0.28%
	Large Size	1.58%	1.86%**	-0.90%*	0.17%	0.25%	-0.55%

Note: classification of cumulative median abnormal returns (CAARs) by type of target (private vs public) and by acquiror size. Acquiror size is defined based on the market capitalization of the acquiror and classified into small and large size measured at the announcement date. Each column reports cumulative average abnormal returns computed over different windows as the difference between abnormal returns and expected returns. */** show significance at 10%/5% level. Confidence intervals for excess returns are adjusted for skewness following the method described in Lyon et al (1999).

(3) small (large) size refers to those deals in the lower (upper) quartile of the distribution defined in terms of the market capitalization of the acquiror on the date the deal was announced.

Finally, to understand which characteristics of the mergers drive value creation, excess returns (dependent variable) are regressed on a set of variables (independent variables). We have: TARGET which is a dummy taking value 1 if the target is private otherwise 0, BANK is a dummy that takes value 1 if both firms involved in the deals are banks, LARGESIZE and SMALLSIZE which are two dummies that define the size of the acquiror. These variables take value 1 for those transactions that are in the upper (lower) quartile of the distribution defined in term of market capitalization of the acquiror. Finally, RSIZE measured as deal value/ acquiror market capitalization, shows how large is the transaction compared to the acquirer's size. In table 5, I reported the coefficients of the regression. The regression also includes time-fixed effect to control for macroeconomic conditions and other specific time factors that may affect all firms simultaneously, influencing value creation. Looking at the results, mergers in which both the target and acquiror are banks appear to destroy value. Specifically, results present negative and significant cumulative abnormal returns of -0.060 and -0.071 in the $(t-1, t+30)$ and $(t-30, t+30)$ windows, respectively. These findings contrast with the existing literature which generally shows that inter-bank mergers generate significant positive abnormal returns due to substantial cost savings from the elimination of overlapping operations (DeLong, 2001; Houston et al., 2001). However, these negative results may be due overpayment for the target firms which destroy synergies, coherent with managerial hubris and agency cost theory. Looking at the TARGET variable, deals involving private targets generate positive significant cumulative abnormal returns during the announcement period and in the post-announcement windows. These results are coherent with the findings of Leledakis et al. (2021) and Fuller et al. (2002), who claim that acquisition of private targets generate greater value for the acquiror as they can be purchased at a discounted price and the potential involvement of a financial advisor can help better identify and exploit synergies. Finally, when the acquiror is large, investors react positively to the deal announcement as cumulative abnormal returns are equal to 0.029. This result may reflect expectations that the deal contribute to the creation of an institution with the status of Too-Big-To-Fail, leading to benefits such as implicit government support and lower funding costs (Brewer & Jagtiani, 2011). However, this effect is not robust over other windows and is slightly significant in the announcement window. Therefore, it is not possible to draw any strong conclusion about the role of acquiror size in value creation. Moreover, if we join this result with the one of Table 3 which suggest that large acquirors experience negative abnormal returns in the announcement window, it appears that this effect is driven by other deal characteristics such as target type or intra-bank acquisitions rather than acquiror size itself.

Similarly, although Table 3 shows that small acquirors experience positive and significant results over different windows, the regression results provide no evidence of a significant relationship between being a small acquiror and value creation.

Table 5

Regression analysis of excess returns

VARIABLES	(1) (t-90, t-1)	(2) (t-30, t-1)	(3) (t-1, t+1)	(4) (t-30, t+1)	(5) (t-1, t+30)	(6) (t-30, t+30)
RSIZE	-0.035 (-1.291)	0.014 (0.630)	-0.010 (-0.766)	-0.005 (-0.190)	-0.005 (-0.297)	-0.001 (-0.023)
BANK	-0.039 (-1.255)	-0.015 (-0.634)	-0.003 (-0.300)	-0.016 (-0.625)	-0.060*** (-2.859)	-0.071** (-2.581)
TARGET	-0.028 (-1.289)	0.005 (0.355)	0.048*** (5.153)	0.054*** (3.255)	0.056*** (3.499)	0.063*** (3.020)
LARGESIZE	-0.004 (-0.081)	-0.033 (-0.807)	0.029* (1.725)	-0.007 (-0.147)	-0.027 (-0.638)	-0.068 (-1.071)
SMALLSIZE	-0.000 (-0.007)	0.006 (0.310)	-0.012 (-1.231)	-0.003 (-0.122)	0.015 (0.644)	0.022 (0.786)
R-squared	0.295	0.156	0.309	0.194	0.261	0.313
Time Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes

Robust t-statistics in parentheses

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

Note: the table reports the coefficients of the regression where the dependant variable is the estimated excess return calculated as the difference between abnormal returns and expected returns over different windows. The dependent variable is constituted by different deal variables. RSIZE defined as deal value:market capitalization of the acquiror, BANK which is a dummy that takes the value 1 if both the target and acquiror involved in the deal are banks and 0 otherwise. TARGET which is a dummy that takes value 1 if the target is private otherwise 0. SMALLSIZE (LARGESIZE) is a dummy that takes the value of 1 if the market capitalization of the acquiror at the date announced is in the first (fourth) quartile of the distribution.

5.2 Effects on performance of financial M&A

In this section I analyzed the accounting performance for acquiror firms after the transaction took place as well as before, focusing on the banking industry only. The sample includes 251 M&A transactions where the acquiror is part of the banking industry. The accounting variables were retrieved from Refinitiv and the formula are reported in the appendix. I looked at profitability variables (Return on Equity [ROE] and Net Financial Margin [NFM]), solvency (capitalization ratio [CAP]), efficiency (cost to income ratio [EFF]), lending intensity (net loan to total assets [LOAN] and risk profile (loan loss provision to total loans [PROV] and loan loss

provisions to net interest revenue [RISK])¹. Table 6 reports the descriptive statistics for each financial ratio one year prior the completion of the merger (ex-ante performance) and two years after the completion of the transaction (ex-post performance). From the table, we can notice that the ROE slightly decline from 10.12% one year prior to the completion of the deal to 8.84% two years after, indicating that the performance of the merging institutions worsen two years after the deal took place. Moreover, the net financial margin decreases by 0.08%, leading to 3.29% two years after the merger, suggesting that banks may earn less from their core operations. However, the resulting institution became more cost-efficient after the merger, as the cost efficiency ratio declines by 1.96%. These results show that following the merger, the resulting institution achieved greater cost reduction due to economies of scale. At the same time, profits and revenues decreased as the merged bank may issue cheaper loans or impose lower fees in order to attract more customers and face competitions. (Beccalli and Frantz, 2009).

Regarding lending activity, both LOANS and PROV increase two years after the completion of the deal, which may indicate that merged institutions issue more loans but also expect a higher value of non-performing loans. Regarding the risk indicator, this measure increased 2.75% to 8.92%, suggesting both higher provisions due to expectation of a higher value of bad loans or lower interest revenues.

¹ In the appendix I gave the formula to calculate each of these variables

Table 6

Descriptive statistics of the financial ratios

	Mean	p25	Median	p75
Ex ante characteristics of acquiror banks				
Return on Equity (ROE)	10.12%	7.93%	9.55%	11.89%
Net Financial margin (NFM)	3.37%	3.04%	3.34%	3.67%
Capitalization Ratio (CAP)	10.90%	9.43%	10.66%	12.35%
Cost Efficiency Ratio (EFF)	75.64%	61.79%	72.21%	85.49%
Net Loans to Total Assets (LOANS)	71.81%	64.56%	70.52%	11.89%
Loan Loss Provisions to Total Loans (PROV)	0.27%	0.11%	0.17%	0.33%
Loan Loss Provisions to Net Interest Revenue (RISK)	6.17%	2.25%	4.04%	7.45%
Ex post characteristics of acquiror banks				
Return on Equity (ROE)	8.84%	7.01%	8.92%	10.94%
Net Financial margin (NFM)	3.29%	3.02%	3.27%	3.58%
Capitalization Ratio (CAP)	11.80%	9.93%	11.88%	13.41%
Cost Efficiency Ratio (EFF)	73.68%	59.20%	69.82%	84.02%
Net Loans to Total Assets (LOANS)	72.66%	66.30%	72.67%	76.65%
Loan Loss Provisions to Total Loans (PROV)	0.38%	0.08%	0.19%	0.38%
Loan Loss Provisions to Net Interest Revenue (RISK)	8.92%	1.75%	4.49%	9.26%

Note: descriptive statistics of the performance measures for the acquiring banks for a sample of 252 completed deals from 1998 to 2021. Each measure is calculated for the acquiring bank 1 year prior the effective completion of the transaction (ex-ante performance) and two years after the completion of the deal (ex-post performance).

To further analyze the ex-post performance of merging banks, each ratio (dependent variables) is regressed on some variables (independent variables). The goal is to understand whether the performance measured by the ratio are driven by specific characteristics and how long does it take for the changes to occur. I included time dummies [DFUS1, DFUS2] indicating the number of years after the effective date of the deal. I also include interactions of a dummy variable taking value 1 for the period after the merger [POSTFUS] with a set of variables measuring different characteristics of the deal: PRIVATE which is a variable indicating whether the target is private, PUBLIC indicating whether the target is public, a dummy for cyclical upturn [UPTURN] and the relative size of the merging partners [RSIZE]². Firm fixed effects are included in the regression to take time-invariant and unobserved firm-specific characteristics into account as they may influence post-merger performances.

The results of the regressions are reported in Table 7. There is a small but statistically significant increase in ROE of 0.013 and NFM of 0.001 one year after the merger. These results are in line with both Behr and Heid (2011) and Hagendorff & Keasey (2009) which argue that M&A deals

² RSIZE is calculated as: deal size/ acquiror's market capitalization.

lead to slight improvements in performance following the transaction. Column 7 shows that capitalization ratio increase by 0.08 one year after the merger in expansionary period.

Table 7

Post-merger acquirers performance

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
VARIABLES	ROE	NFM	CAP	EFF	ROE	NFM	CAP	EFF
DFUS1	0.013**	0.001*	0.001	-0.010	0.020	0.001	-0.002	-0.050
	(2.323)	(1.696)	(0.587)	(-0.616)	(1.644)	(0.568)	(-0.537)	(-1.535)
DFUS2	0.006	0.001	0.002	-0.001	0.006	0.001	0.002	-0.001
	(0.973)	(1.469)	(1.128)	(-0.081)	(0.969)	(1.469)	(1.134)	(-0.081)
RSIZExPOSTFUS					-0.003	0.000	-0.002	0.041
					(-0.184)	(0.086)	(-0.424)	(0.958)
UPTURNxPOSTFUS					-0.004	0.002	0.008**	0.002
					(-0.431)	(1.480)	(2.528)	(0.079)
TARGETxPOSTFUS					-0.004	-0.001	-0.002	0.040
					(-0.392)	(-0.934)	(-0.729)	(1.403)
R-squared	0.016	0.010	0.004	0.001	0.017	0.018	0.024	0.010
Firm Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

t-statistics in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Note: the table reports regressions of annual performance measures for the period from 1998 to 2021 for acquiror banks on a series of variables. The dependent variable is the performance ratio indicated at the top of each column. The independent variables are: DFUS_i are dummy variables referring to *i* years after the merger took place. RSIZE defined as deal value:acquiror market capitalization. POSTFUS is a dummy that takes the value of 1 in the year after the merger took place. TARGET which is a dummy taking value 1 for public target. UPTURN is a dummy taking the value of 1 to account for upturn periods (2001, 2007-2009,2020 are indicated as recessionary period).

In parenthesis we find the t-statistics.

6. Conclusion

This thesis investigated whether mergers and acquisitions create value for acquiring firms in the U.S. financial sector and explored which deal characteristics help explain both value creation and post-merger performance. Although M&As are still an important strategic tool for financial institutions, previous research has consistently found that acquiring shareholders often only earn small or even negative abnormal returns around the time of acquisition announcements. The findings presented here add further evidence to this discussion using a sample of publicly listed U.S. financial institutions between the years 1998 and 2021.

The analysis also highlights how strongly outcomes differ depending on the characteristics of the transaction. Acquisitions of private targets generate positive and statistically significant abnormal returns in both the announcement and post-announcement windows, result confirmed by the regression analysis. By contrast, acquisitions of publicly listed targets are associated with negative excess returns over the same periods. One possible explanation is that private firms can often be acquired at discount because their shares are less liquid, and their market value is harder to observe. In addition, the involvement of financial advisors may help structure these deals in ways that improve the chances of realizing potential synergies.

The impact that acquiror size has on value creation is not definitively clear. At first inspection, the univariate results suggest that smaller firms are more likely to see stronger abnormal returns before the official announcement, reflecting expectations of large gains from economies of scale or strategic expansion. By contrast, acquisitions carried out by larger institutions tend to bring about negative average CARs around the announcement date while result for small acquirors are not significant over the same window. However, once deal-specific factors are taken into account, the effect of size on returns earned mostly disappears across the sample used. There is only evidence of a small positive effect for larger acquirors within the (-1, +1) time window. The implications of this are that the negative outcomes initially observed for larger acquirors are mainly caused by the characteristics of deals they engage in, rather than their size alone. Similarly, being a smaller acquiror does not seem to independently drive value creation. Together, the results do not provide conclusive support for a link between acquiror size and value creation.

Interbank mergers, however, appear to destroy value in the post-announcement windows. This finding differs from some earlier studies that argue mergers between banks can create value through cost savings and the consolidation of overlapping operations. A possible explanation

is that the expected efficiency gains are offset by high acquisition premiums, integration challenges.

In addition to short-term market reactions, this thesis also examined the post-merger accounting performance of acquiring banks. The results suggest a mixed picture. Cost efficiency improves following the transaction, which indicates that cost reductions may be achieved through economies of scale and operational integration. However, measures of profitability such as return on equity and net financial margin, show a slight increase one year after the transaction but decrease two years after the merger. These results suggest that while institutions may succeed in reducing operating costs, the financial benefits are cancelled out two years after the merger due to lower revenues driven by competitive pressure, or pricing strategy changes.

The findings discussed in this thesis have several practical implications for various stakeholders. Managers and Financial Advisors can take into account these results when designing acquisitions strategies. Investors should prioritize deal characteristics rather than assuming that acquisitions automatically increase shareholder wealth. Finally, regulators may also find these results relevant when studying how M&As impact macroeconomic conditions and influence financial stability.

Despite its contributions, the study also has several limitations. Some variables, such as RSIZE, may be endogenous, as they could be related to potential synergies and therefore influence abnormal returns. The analysis also focuses only on acquiring firms, which limits the ability to capture the full effects of the transaction. In addition, post-merger accounting performance is examined only for banks, even though the broader sample includes other types of financial institutions. Finally, expected returns are estimated using the CAPM model. Previous research, including Fama and French (1996), suggests that CAPM does not always provide the most accurate estimates of expected returns.

Future research could extend this work in several ways. One possibility would be to address potential endogeneity concerns by using instrumental variables for deal value that are not directly related to abnormal returns. The analysis could also be expanded to include target firms and to examine post-merger performance across the broader financial industry. Another promising direction would be to consider qualitative factors such as cultural compatibility between merging institutions, which may help explain differences in value creation and integration outcomes. Finally, alternative methods for estimating expected returns could be

tested, such as the constant mean return model or the market model, the latter of which is an indicator of overall market movements and may, therefore, provide a better estimation of abnormal returns.

Overall, the evidence presented in this thesis suggests that M&A does not consistently create value for acquiring shareholders in the U.S. financial sector. Instead, the outcome of a transaction depends mainly on the characteristics of the deal, the type of target involved, and the strategic reasons behind the acquisition.

Appendix:

The ratio used in Table 6 and Table 7 are computed in the following way:

Return on equity (ROE) = (Net income /Total equity) *100

Net financial margin (NFM) = (Net Interest revenue /Total earning assets) *100

Capitalisation ratio (CAP) = (Total Equity /Total assets) *100

Cost to income ratio (EFF) = (Operating expenses / (Net interest revenue + Other income) *100

Lending activity (LOANS) = (Net loans /Total assets) *100

Loan loss provisions to total loans (PROV) = (Loan loss provisions /Total loans) * 100

Loan loss provisions to net interest revenue (RISK) = (Loan loss provisions /Net interest revenue) *100

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