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Comparative Study of M&A Processes in Germany and Italy: Governance, Contract Design, and Information Asymmetry

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Abstract

Do mergers and acquisitions create value? Many empirical studies have failed to resolve this question, producing what the literature terms the M&A paradox. Acquisitions remain one of the most pursued corporate strategies despite ambiguous evidence on their financial outcomes. This thesis investigates the paradox directly through a comparative analysis of domestic transactions in Italy and Germany, two relationship-based economies that share a governance tradition yet differ structurally in their institutional architecture, which makes the comparison particularly informative.

The analysis is conducted on two levels: a comparative analysis and an empirical investigation. In particular, the comparative analysis examines the three Italian corporate governance models, characterized by greater flexibility, and the German two-tier model, which is characterized by employee co-determination. The empirical investigation, conducted to assess post-merger performance across different time horizons, is based on over 1,500 domestic transactions completed between 2010 and 2020, using both descriptive statistics and a regression model that controls for firm-level characteristics.

The findings reveal that value creation in domestic acquisitions is real but conditional. Market-based performance, measured through Enterprise Value, grows positively and significantly across all horizons and specifications, while accounting-based profitability indicators decline. This data, also when interpreted in light of the regression results, can be understood as evidence of mean reversion rather than acquisition-induced deterioration. Firm size emerges as a consistent positive predictor of post-acquisition profitability. Horizontal deals generate a measurable ROA advantage over diversified transactions exclusively at a five-year horizon, consistent with the view that operational synergies require time to materialize. The country dummy is never significant once firm-level characteristics are controlled for. The results suggest that the two governance systems differ not in the average outcomes they produce but in the distribution and resilience of those outcomes under macroeconomic stress.

These results reframe the M&A paradox: the question should not be whether acquisitions create value, but through which mechanisms, over which horizon, and under which structural conditions value creation can be expected to emerge.

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1 Introduction

Merger and Acquisition (M&A) represent one of the most significant strategic instruments for corporate growth, restructuring and competitive positioning in modern economies.

Since the early 20th century, M&A have occurred in successive waves, each characterized by distinct economic drivers and strategic motivations.

Early waves were driven by market concentration, with the creation of monopolies or oligopolies, industrial production and mass production. More recent periods saw the consolidation of specific sectors such as telecommunications and the entry of new players: private equity funds. In the most recent decade, high economic volatility and an increasingly complex environment reshaped the strategic logic of acquisitions. Motivations shifted from purely financial objectives toward operational efficiency, innovation, strategic partnerships, and growth.

Despite the global trends, M&A transactions take on specific characteristics depending on the country in which they occur. In particular, governance structures, the role of supervisory bodies and mechanisms such as employee co-determination may influence how the transactions are made as well as how post-merger integration challenges are addressed.

A comparison between two major European economies, Italy and Germany, is particularly relevant. The former has a system based on three distinct models: the traditional, monistic, and dualistic systems. Germany, on the other hand, relies on a strict two-tier system. These differences shape shareholder protection, the role of supervisory bodies and stakeholder participation.

Although M&A performance has been extensively analyzed in the literature over the years, comparative empirical research on Italy and Germany remains limited. A comparative analysis of these two systems is therefore particularly warranted. Germany is characterized by a co-determination model that emphasizes the centrality of the supervisory board, while Italy offers greater flexibility through its three governance models. Such an analysis can not only contribute to the existing literature, but also serve as a starting point for further research on the subject.

1.1 Research Objectives

The objective of this thesis is to provide a structured comparative analysis of M&A transactions in Italy and Germany, integrating a theoretical institutional perspective with an empirical assessment of post-merger performance.

In particular, the study aims to:

- Analyze and compare the regulatory frameworks for Merger and Acquisition in Italy and Germany, taking into account both binding legislation (hard law) and the complementary role of soft law instruments (the German Corporate Governance Code and the Italian “Codice di Corporate Governance”), with particular focus on shareholder protection mechanisms.
- Examine and compare the different Corporate Governance models of Italy and Germany, highlighting the structural differences of the Italian governance system (traditional, monistic, and dualistic) and the German two-tier system, as well as the role of supervisory bodies and employee co-determination.
- Evaluate post-merger corporate performance in Italy and Germany, using accounting-based and market-based financial indicators, in order to assess whether M&A transactions are associated with improvements in firm performance over short-, medium-, and long-term horizons.
- Assess the diffusion of post-merger success across individual M&A transactions and the frequency of performance improvements, rather than focusing exclusively on average outcomes.
- Investigate whether post-merger performance and success rates differ according to transaction characteristics, in particular transaction size, distinguishing between large and small deals and target and buyer size.
- Test the robustness of post-merger performance outcomes in the presence of major exogenous shocks, such as the COVID-19 pandemic, by comparing results including and excluding affected transactions.
- Discuss whether cross-country differences in post-merger performance can be interpreted in light of institutional and governance differences, without implying a direct causal relationship.
- Investigate whether the acquirer’s pre-deal financial characteristics — specifically initial profitability, firm size, operational efficiency, and deal valuation multiples — predict post-acquisition changes in profitability. Moreover, assess whether horizontal deals generate systematically different profitability outcomes compared to diversified transactions across different time horizons.

1.2 Methodology

The methodology adopted for the first and more theoretical part of this thesis is based on a review of the existing literature, to obtain a complete understanding of M&A processes in Italy and Germany.

First, an analysis of the regulatory frameworks that govern merger and acquisition operations in the two countries is conducted, considering both binding legislation (hard law) and soft law, including the respective Corporate Governance Codes.

Subsequently, the corporate governance models present in the two countries are comparatively examined. A comparative analysis assesses the three Italian models (traditional, monistic, and dualistic) and the German two-tier system, characterized especially by the co-determination system.

The second part of the thesis adopts an empirical, data-driven methodology focused exclusively on firms involved in domestic Merger and Acquisition transactions.

Post-merger performance is evaluated through accounting-based and market-based indicators, based on percentage changes relative to the transaction year. Statistical significance is then tested over short-, medium-, and long-term horizons (1, 3, and 5 years).

Building on the objectives outlined in Section 1.1, the empirical analysis is structured around the following research questions:

- Do M&A transactions improve corporate performance?
 - On average, are performance improvements observed?
 - Over which time horizon (1, 3, or 5 years) do benefits emerge?
 - Are results consistent when transactions affected by the COVID-19 pandemic are excluded?
- What is the percentage of successful M&A transactions?
- Does this success rate change when transactions affected by COVID-19 are excluded?
- Are the success rates in the two countries of the same order of magnitude, or does one country exhibit systematically higher rates?
- Does the size of an M&A transaction (above or below the median), measured both by transaction value and by the relative magnitude of the deal with respect to the revenues of the target and the acquiring firm, determine significant differences in post-merger success rates, and does this effect vary in the presence of macroeconomic shocks such as COVID-19? Are there notable differences between the Italian and German contexts?

- Do pre-deal firm characteristics — specifically initial ROA, firm size, EBITDA margin, and the EV/EBITDA valuation multiple — predict post-acquisition changes in profitability?
- Do horizontal deals, in which acquirer and target operate in the same sector, generate systematically different profitability outcomes compared to diversified transactions, and does this effect vary across time horizons?

To address these questions, empirical analysis is conducted in several stages. In the first part, descriptive and inferential statistics are calculated for each variable and time specification, including mean growth rates, standard deviations, t-statistics, and p-values. Then, transaction-level success indicators are constructed to assess positive outcomes across individual deals. Moreover, to provide a complete picture, robustness checks are performed, such as the exclusion of COVID-19-affected transactions, GDP-adjusted performance measures, and outlier analysis based on Tukey’s interquartile range criterion.

In the second part, a series of regressions is estimated to investigate the determinants of post-acquisition profitability changes. The baseline model includes ROA, EBITDA margin, and $\ln(\text{Revenue})$ at the transaction date, as well as a country dummy. Subsequent models incorporate additional determinants, such as the EV/EBITDA valuation multiple and sector dummies based on the GICS classification of the target firm. Finally, a Same Sector dummy variable — equal to one when the acquirer and the target operate in the same industry — is introduced to test whether sectoral congruence generates measurable profitability advantages. All specifications are estimated across three time horizons ($k = 1, 3, 5$ years) to capture both short- and long-term dynamics. To ensure the stability and reliability of the results, all regression specifications are systematically re-estimated after excluding outliers based on Tukey’s interquartile range criterion.

Limitations Due to Data Availability and Methodological Choices

While key financial indicators such as Revenue, EBITDA, ROA, ROE, and Enterprise Value were available for an important portion of the transactions, other data, such as leverage ratios or cash flow measures, were not obtainable for most firms. This limitation is primarily due to the prevalence of private companies in the sample, for which detailed financial disclosures are not publicly accessible.

1.3 Expected Contribution

The thesis will provide both a theoretical and a practical contribution.

The first part offers a detailed analysis of the differences and similarities between the corporate governance models. The aim of this section is to contribute to the

existing literature using both hard and soft law to create a good understanding of how corporate governance of M&A transactions shapes differently in different state contexts. In addition, the discussion of contract design mechanisms in Section 2.6—including MAC clauses, earn-out provisions, and representations and warranties—constitutes a theoretical contribution that is deliberately kept separate from the empirical analysis. The prevalence of private firms in the sample, for which contractual terms are not publicly disclosed, precluded the construction of deal-level contractual variables.

The second part delivers a primarily practical contribution, linking theoretical concepts to operational realities of M&A transactions through the analysis of post-merger performance across selected operations in Italy and Germany. The empirical analysis investigates the economic and financial dynamics across different time periods (one-, three-, and five-year periods following the transaction date), the diffusion of success across individual transactions and examines whether the deal size and external shocks such as COVID-19 pandemic can have a role in this context.

Finally, the third part, and most originally, investigates through regression analysis whether the acquirer’s pre-deal financial characteristics and deal-level variables predict post-acquisition profitability changes. The regression findings reveal a pervasive and robust mean reversion effect in post-acquisition profitability, document a consistent positive role for firm size, and — most originally — show that horizontal deals generate a measurable profitability advantage over diversified transactions, but only at a five-year horizon, consistent with the view that operational synergies require time to materialize.

The aim of the thesis is not to establish a direct causal link between corporate governance models and M&A outcomes, but rather to analyze the empirical evidence in light of the institutional and governance environments of Italy and Germany.

The objective of the present work is to provide a comprehensive understanding of M&A processes in these two countries and as a starting point for further comparative studies on other countries or on more complex cross-border M&A operations.

2 Literature Review and Background

Mergers and acquisitions (M&A) represent a fundamental aspect of corporate finance. According to Michael McGrath, an expert in M&A execution and integration, “M&A is a collective description of a series of related corporate activities with the purpose of leading one or more, or sometimes parts of companies to the change of control stage” (McGrath, 2011).

More broadly, M&A refers to transactions through which firms combine resources to enhance their competitive position or achieve specific financial and/or strategic goals.

2.1 M&A Definitions and Types

The distinction between mergers and acquisitions plays a key role in the analysis of corporate restructuring strategies and firm performance. Although the terms are often used interchangeably, they refer to different types of corporate transactions.

2.1.1 Mergers

A merger is a process through which two or more companies combine their resources to achieve common strategic or financial objectives. In a merger, the organizations agree to integrate their operations, and all their assets, employees, technologies, and liabilities contribute to the creation of a new entity. Ownership of the newly formed company is typically shared among the original shareholders of the merging firms.

Mergers can take several forms depending on the relationship between the companies involved. The most common classifications include horizontal, vertical, and conglomerate mergers.

Horizontal Mergers

Horizontal mergers involve companies that operate in the same industry and produce similar products or services. The main rationale behind this type of transaction is to

generate operating synergies through economies of scale, reduce average production costs as output increases, and improve efficiency while expanding into new markets and increasing market share.

A notable example is the merger between *Fiat Chrysler Automobiles (FCA)* and *PSA Group*, which resulted in the creation of Stellantis N.V. in 2021. The diversification of the brand portfolio and the expansion of geographic presence were key drivers of the merger, which contributed to greater financial stability and increased bargaining power with suppliers and strategic partners.

Vertical Mergers

Vertical mergers occur between companies that operate at different stages of the supply chain. In many cases, the acquired firm is a supplier of raw materials or intermediate products. The main objectives are to optimize production processes, strengthen control over the value chain, and reduce both operational costs and lead times.

A recent example in Italy is the acquisition of Carrefour Italia by NewPrinces S.p.A, a transaction valued at approximately one billion euros. The strategic objective of the company was to strengthen its position in the Italian market and improve coordination between production and retail distribution.

Conglomerate Mergers

Conglomerate mergers involve companies with little or no operational overlap. In this case, the primary objective is diversification that allows firms to expand their business portfolio and reduce exposure to sector-specific risks. However, this type of transaction may also increase managerial complexity due to the integration of businesses operating in unrelated industries.

The acquisition of Pirelli by ChemChina in 2015 represents an example of this type of merger. Through this transaction, the Chinese group entered a different industrial sector, while Pirelli obtained more financial resources and new international opportunities.

2.1.2 Acquisitions

In contrast to mergers, an acquisition occurs when one firm, known as the acquirer, obtains control of another firm, referred to as the target. This is typically achieved through the purchase of a majority or all of the target company's shares or assets, resulting in a full or partial transfer of ownership in exchange for financial consideration.

Acquisitions can take different forms. Corporate acquisitions involve the complete integration of the target company into the acquirer's organizational structure in order to generate operational and financial synergies. Asset acquisitions, by contrast,

involve the purchase of specific business units, technologies, or strategic resources rather than the entire company.

Furthermore, acquisitions may be classified as friendly or hostile. In a friendly acquisition, the acquiring firm presents a proposal that is accepted by the target company's management and board of directors. Hostile acquisitions, on the other hand, occur when the acquiring firm attempts to gain control despite opposition from the target company's management, often following unsuccessful negotiations.

2.2 Synergies

The motivation behind M&A transactions may vary, but the ultimate goal is always the creation of value from the deal. Indeed, the greater the expected value creation, the higher the premium, defined as the difference between the offer price and the stand-alone value of the target firm. This premium signals the anticipated benefits generated by the transaction. One of the most critical aspects to consider in M&A operations is therefore the creation of synergies, which refers to the additional value generated by the transaction. When the right companies merge, the value created is higher than the sum of stand-alone entities.

Synergies can generally be classified into three main categories: cost synergies, revenue synergies, and financial synergies (Berk and DeMarzo, 2017).

2.2.1 Cost Synergies

Cost synergies arise from removing duplicate activities, such as overlapping resources, joint R&D or administrative costs, and from economies of scale. Economies of scale reduce the unit cost of production as output increases, while economies of scope allow companies to lower costs by jointly producing goods or services that would be more expensive separately. Vertical integration also contributes to cost synergies, as combining firms across different stages of the value chain can reduce coordination costs and minimize hold-up problems between suppliers and distributors. Finally, the elimination of redundancies through organizational restructuring reduces duplication in assets, human resources, and operational processes (Gaughan, 2018; Damodaran, 2014).

2.2.2 Revenue Synergies

Revenue synergies occur when the combined entity generates higher value than the firms could individually. This can result from market expansion, which grants access to new customer segments and geographic markets, or from cross-selling opportunities, which offer complementary products or services to existing customers. Revenue synergies can also arise from the integration of resources and competencies to create new products or services. Additionally, increased market power may

strengthen the firm's competitive position, enabling more favorable pricing strategies, while effective use of intellectual capital can further boost sales and market share (Sirower, 1997; Angwin, 2007).

2.2.3 Financial Synergies

Finally, financial synergies arise from more efficient capital management. M&A transactions can enable tax optimization by using accumulated tax losses to reduce the overall tax burden and increase available cash flow. Risk diversification reduces cash flow volatility and lowers the cost of capital, improving financial stability. Larger combined firms often gain enhanced borrowing capacity and better access to credit markets, while capital structure optimization increases financial flexibility.

In summary, synergies represent one of the primary drivers of value creation in M&A, although their realization often depends on effective post-merger integration and careful managerial execution.

2.3 Integration Challenges

While synergies represent the primary rationale for M&A transactions, as discussed in Section 2.2, their realization is far from automatic. Integration is the process through which the combined entity translates expected synergies into actual performance improvements, and its success depends on several interconnected dimensions. Cultural integration is one of the most important aspects, requiring alignment of the corporate cultures of the merging companies. It is essential to consider both differences and similarities between the organizations in order to build a shared culture that promotes a common vision, goals, and values. Organizational integration involves the creation of a new structure, with clearly defined roles and responsibilities, as well as the elimination of duplicate functions, to support and implement the strategy of the combined entity. Technological integration, although often underestimated, is fundamental, as the consolidation of IT systems and data from both entities is critical to improving productivity and ensuring long-term success. Finally, customer and sales integration plays a central role in post-merger performance, since analyzing client expectations and aligning them with the products and services offered is essential for building customer loyalty (Davis, 2012).

2.4 Asymmetric Information

One of the most important topics of the modern economy is for sure asymmetric information. This is also one of the pillars of M&A, which involves complex interactions between subjects with different information about the quality of assets, financial solidity, and overall growth prospects. This informational gap can lead to distortions such as incorrect valuations, adverse selection, and, in extreme cases, deal failure.

2.4.1 Theoretical Foundations

The theoretical foundations of asymmetric information have been developed by several economists.

Akerlof: The Market for Lemons

In the renowned essay “The Market for Lemons: Quality Uncertainty and the Market Mechanism” (1970), Akerlof analyses how buyers’ inability to distinguish between high-quality and low-quality goods leads to a reduction in the average market value, potentially resulting in the collapse of the entire market. Akerlof illustrates this problem through the automobile market. He distinguishes between new and used cars, noting that both categories may include high-quality vehicles and defective ones (commonly referred, in the United States, as “lemons”). After purchasing a car, owners quickly learn its quality, that is, whether it is a good car or a lemon. Akerlof defines q as the probability that a randomly chosen car is a good one, with $1 - q$ representing the probability that it is a lemon. Consequently, q corresponds to the proportion of high-quality cars in the market, while $1 - q$ corresponds to the proportion of lemons. Unlike the primary market, in the second-hand market sellers possess perfect information about the quality of their vehicles, while buyers do not. As a consequence, good and bad cars must be sold at the same price, since buyers cannot differentiate between them. Owners of high-quality cars become “locked in,” because the market is not able to reward them with a price that reflects the true value of their vehicle (Akerlof, 1970).

Spence: Signaling

In *Job Market Signaling* (1973), Michael Spence analyzed signaling. He explained how better-informed individuals can credibly convey their private information to less-informed individuals, thereby avoiding problems of adverse selection. In M&A, firms can similarly send credible signals about their quality to reduce the uncertainty faced by potential buyers. Companies can signal their quality through certifications from independent auditors, verified strategic plans, or disclosure of specific financial and operational information, providing reassurance to potential buyers and facilitating more accurate valuations (Spence, 1973).

Stiglitz: Screening

Joseph Stiglitz, in *The Theory of Screening, Education, and the Distribution of Income*, introduced the concept of screening. The uninformed party can provide incentives to induce the informed party to reveal relevant information about their risk profile. Within M&A transactions, buyers employ screening mechanisms such as due diligence, contractual clauses, and pricing techniques like earn-outs and deferred payments to uncover hidden risks and align incentives between buyers and sellers (Stiglitz, 1975).

2.4.2 Practical Mechanisms in M&A

Several mechanisms are employed to mitigate asymmetric information in M&A:

Representations and Warranties (R&W)

R&W are declarations provided by sellers to the buyer to reduce information asymmetry regarding the condition of the seller's business. They function as assurances about specific facts concerning the state of the company, such as the solidity of its assets, its fiscal stability, or the ownership of strategic assets (brands, patents, and intellectual property). In case irregularities emerge after the closing of the deal, the buyer can ask for remedies such as damages, indemnification, or post-closing purchase price adjustments. In some cases, these indemnity mechanisms can be replaced by an R&W insurance policy, which covers losses arising from a breach. R&W insurance can be "buy-side" or "sell-side", depending on which party is insured (Even-Tov, Ryans, & Solomon, 2024).

Earn-Out Clauses

The earn-out clause separates the purchase price into two components: an up-front payment at the closing date and a deferred payment contingent on the target achieving predefined performance metrics during a specified "earn-out period." This mechanism reduces the buyer's risk of overpaying and aligns the incentives of future owners and sellers. Deferred payments depend on measurable performance measures such as EBITDA, revenues, or net income. However, earn-outs can create challenges, such as ambiguities in performance metrics, operational control issues, or unrealistic targets (Roncagliolo, 2020).

Material Adverse Change (MAC) Clauses

Material Adverse Change (MAC) clauses allow the buyer to withdraw from the transaction upon the occurrence of specific unanticipated events that significantly affect the merging entities. Given their contractual complexity and relevance in deal structuring, MAC clauses are analyzed in detail in Section 2.6.1, where their typical structure, purposes, and limitations are discussed.

2.5 Corporate Governance

2.5.1 Corporate Governance Overview

Corporate Governance is the body of principles, rules and regulations designed to reduce conflicts of interest that come from the separation of ownership and control of a corporation. It is designed to regulate the relationship between the different bodies of the corporation, to design responsibilities and supervisory power. Indeed, it is more than the pure allocation of powers, but an instrument to ensure transparency, efficiency and, of course, protection of interests of shareholders and stakeholders. (Berk and DeMarzo, 2017)

There are two main corporate governance systems when we talk about developed economies: the relationship-based corporate systems (typical of the European countries as Italy and Germany) and the market-oriented corporate systems (typical of USA and UK). Taking about the European countries, there is the distinction between the Latin system, where Italy belongs, and the German one. (Gandini et al., 2009)

In this section we will analyze the different systems of these two countries underlying regulatory differences and similarities. Following the corporate law reform of 2003, the Italian system allows the joint-stock corporations to choose between three different models: the traditional, the monistic and the dualistic systems. Instead, German corporations have the obligations to follow the dualistic system, governed by Aktiengesetz (AktG).

2.5.2 Corporate Governance Codes

The German Corporate Governance Code (DCGK)

All this is regulated by the German Corporate Governance Code (“The Code”); this document contains principles, recommendations and suggestions for the boards to ensure optimal management of the company. In the code the responsibilities of the Management Board and of the Supervisory Boards are highlighted to ensure value creation for all the stakeholders and sustainable value creation.

The Code is articulated into principles that reflect legal requirements. Regarding the role of the management board, the code states:

“The Management Board is responsible for managing the enterprise in its own best interests. Its members are jointly accountable for managing the enterprise. The Chair or Spokesperson of the Management Board coordinates the work of the Management Board members.”

“The Management Board develops the enterprise strategy, coordinates it with the Supervisory Board and ensures its implementation.” (principles 1 and 2)

These principles are highly important as they concern the role of the board in the company and its relationship with shareholders. The code addresses gender representation on both boards; in particular, the Management Board must set targets for women's representation. The supervisory board, instead, has principles dealing with the appointment and dismissal of the member of the management board and its involvement in the most important decisions of the company. The code, in Principle 7, articulated also the election of the Supervisory Board Chair that must be chosen from among the board members and represent the board interests outside.

The DCGK operates within the two-tier governance structure that characterizes all German stock corporations, whose institutional architecture — including the composition and responsibilities of both boards — is described in detail in Section 2.5.4. Employee participation in corporate boards, mandated by German co-determination laws and reflected in the composition of the Supervisory Board, is equally discussed in Section 2.5.4. The Deutscher Corporate Governance Kodex, first adopted on 26 February 2002, represents the first comprehensive codification of corporate governance best practices in Germany and, while not a law, provides principles, recommendations and guidance for sustainable value creation and responsible management.

Lastly, the code underlines the importance, for the health of the company, of the cooperation between the two Boards through an open dialogue and the observance of confidentiality. In the German code a lot of concepts are discussed, such as the conflict of interests, the remuneration of the Management Board and Supervisory Board and the transparency and external reporting (German Corporate Governance Code [DCGK], 2022).

The Italian Corporate Governance Code

The “Codice di Corporate Governance” is the code of the Italian System. This is divided into principles and recommendations as the German one. The principles are independent from the system that is adopted by the corporation (one tier and two tiers).

The code deals with the role of the Management body, that is the one that oversees the company's strategic direction and is responsible for sustainable long-term success. The management body must include both executive and non-executive directors and these ones must be sufficient to ensure the objective judgment. This body is responsible for strategic decisions and monitoring their implementation. In particular:

- The board of directors with company adopting the traditional or one-tier model.
- The supervisory board and Management board in case of two-tier models.

As for the German corporate code, also the Italian one deals with gender diversity and deals with the remunerations that must be in line with the company's long-term strategy and sustainable success (based on fix components and performance-based incentives). (Codice di Corporate Governance, 2020)

2.5.3 Italian Corporate Governance Systems

The legislative decree 6/2003 has introduced an extension for joint-stock companies in Italy; companies can freely choose among three models:

- **Traditional system:** based on shareholders' meetings, board of directors and board of statutory auditors. In this system the responsibilities of the board of directors are divided into three categories: control, strategy and service.
- **Monistic system:** similar to the traditional model and inspired by Anglo-Saxon system, this model concentrates both management and control within a single board of directors.
- **Dualistic system:** derived from the German model, this system is characterized by a clear separation between management and control into two distinct bodies with a management board, for executing the strategy and a supervisory board.

Different options to ensure different corporations with different characteristics (size, ownership structure and governance structure) can adopt the most consistent model.

Traditional System

The first model is, de facto, the most prevalent in practice. It is composed of a clear tripartition:

- **Shareholders' meeting (Assemblea dei Soci):** its function is designed by law and includes the nomination and the removal of directors and auditors, approvals of financial statements and extraordinary decisions on society's life. It doesn't deal with day-to-day management of the corporations, but it is certainly part of the most significant decisions.
- **Board of directors (Consiglio di Amministrazione, CdA):** it is the administrative and representative body of the society. They define the corporate strategy, manage corporate assets and represent the company externally.
- **Board of statutory auditors (Collegio Sindacale):** it deals with the compliance with law, the adequacy of the company structure (organizational, administrative and accounting).

This model, with all possible limitations due to excessive fragmentation of powers, guarantees an important control of the Shareholders' s meeting over the Board of Directors and a heavy separation between administrative and supervisory activities.

Monistic System

Introduced in 2003 by the legislative decree (6/2003) and characterized by a clear Anglo-Saxon inspiration, this model focuses on the concentration in a single body of the management and control function: the Board of directors (Consiglio di Amministrazione). Different from the traditional model, in the monistic system the board establishes a management control committee that is composed of independent directors. This entity has a role like the board of statutory auditors of the traditional model: control of the conformity of managerial choices and adequacy of company structure.

The second body is the shareholder's meeting with similar functions to the traditional model, with the appointment and removal of the member of external auditors and directors, and the approval of financial statements.

Attribution to the same organism, both the managerial and the supervisory functions, brings some positive aspects but also negative ones. This allows a more immediate knowledge of management policies, faster corrective actions, but this of course brings potential risks of an ineffective independence of supervision activity. (Gandini et al., 2009)

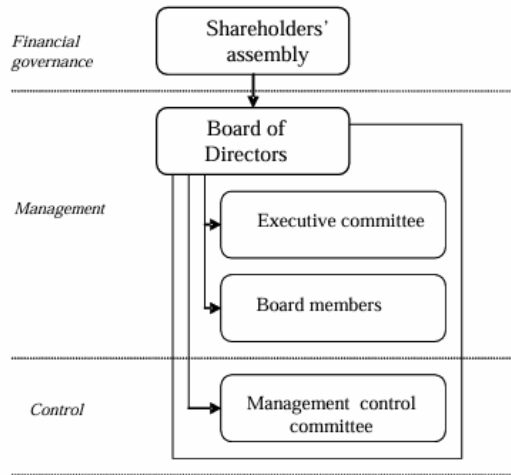


Figure 2.1: Monistic System in Italy (Gandini, 2009)

Dualistic System

Introduced with the entry of the legislative decree 6/2003, the dualistic system, with clear influence of the German model, is quite different from the previous.

Precisely the management board members can be appointed and removed by the supervisory board, moreover also their remuneration is decided by the supervisory board. This board has the authority of “high management” with the power of internal control, supervision and approval of financial statements.

The members of the supervisory board must fulfill the requirements of independence and professionalism. Lastly the board can appoint some committee members, like remuneration committee, nomination and control and risk committee (Li, 2021).

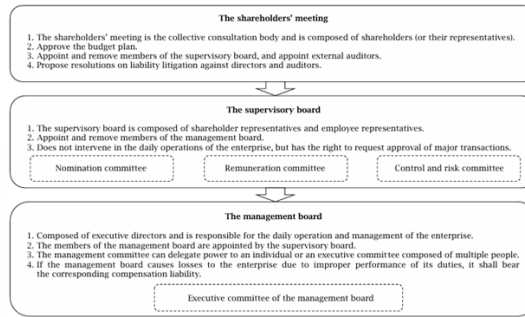


Figure 2.2: Dualistic System in Italy. Italian two-tier model (Li, 2021)

2.5.4 German Corporate Governance System

The roots of the German Corporate Governance can be found in the 19th century. The system, that is a two-tier model, is characterized by shareholders' meetings and by two institutions: management board and supervisory board.

From 1965 all the German Stock Corporation must have two different Boards: the management board (administrative body) and the supervisory board (supervision body). The supervisory body, that has more power and higher status than the management board, is composed entirely by non-executive directors and by shareholders and employees' representatives. The shareholders representatives are chosen during shareholders meetings, and, in the same way, the employee representatives are elected by employees' meetings or employee unions.

Regarding the management board, it is composed of executive members and the numbers of them are decided by the supervisory board, as well as the approval of major transactions. The presence of at least an audit committee and a nomination committee is a requirement for German listed enterprises. (Li, 2021)

Speaking of the typical shareholders of a German corporation, one certainly refers to the banks that have always, especially after the Second World War, become

the main financiers of reconstruction in the post-war period. For this reason, their representatives are usually members of the supervisory board.

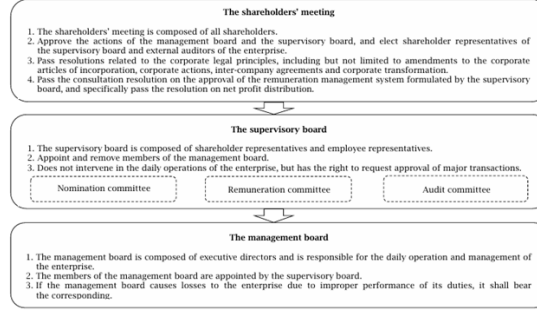


Figure 2.3: Dualistic System in Germany. German two-tier model (Li, 2021)

Co-determination principle

The co-determination principle is the right of employees to have certain seats on the supervisory board of a German corporation, and it refers to the right to be involved in corporation's decisions. The aim is the creation of enthusiasm and active participation in the management of the company.

In Germany specifically, this is divided into two levels: at company level and at corporate level. The first one is then articulated into two different rights: the “Mitbestimmung” (co-determination), which gives employees the right to actively participate in important company decisions and to influence strategic issues, and “Mitwirkung” (co-operation), which allows employees to be consulted, provide suggestions, and participate in operational decisions without having formal voting power.

At corporate level, employees can have a seat on the supervisory board and be involved in management and corporate policy. In this way, employees can contribute to and define the company's strategy and balance the power of shareholders and management.

This is not the same for the Italian system. The Italian two-tier model is not characterized by the employees' representatives in the supervisory board. This system, instead, pays much more attention to the roles of auditors that often are the ones that must select the members of the supervisory board. This, unlike the German system, where there is active participation of employees in the management, in Italy, is replaced by professional supervision exercised by independent auditors. (Li, 2021)

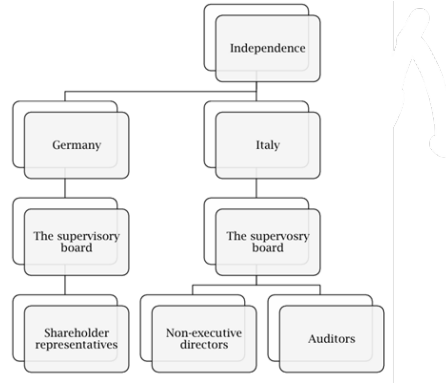


Figure 2.4: The co-determination in Italy and in Germany. (Li,2021)

The concepts analyzed above are theoretical, but in practice things are, as always, slightly different. Thomas Haipeter in his article “Current Trends of German Codetermination by Works Councils: On Path Dependencies, Erosion and Innovation” analyses the important role of the German co-determination through the works councils in recent years. He highlights the existence of several different path directions.

The first one is erosion: recent trends show that the share of employees covered by works councils has decreased from 52% in 2000 to 41% in 2023. But this controversial decline is not the same in all sectors; in the export industry and in large companies the institutions of the dual system continue to retain importance. In the article three different sectors are examined: investment goods, construction and retail. The first sector is the one in which employees remain well protected by collective bargaining agreements and works councils, whereas this is no longer the case in the second and third sectors.

The second trend is participation and innovation, linked to the new legal foundations introduced with the 2001 reform of the Works Constitution Act. In recent years, the role of employees within the work councils has become increasingly important. Employees are no longer merely voters; they can also take part actively in working groups. This promotes social and organizational innovation, and employees become a key resource for the success of the company. (Haipeter, 2025)

2.5.5 Comparative Remarks

The Italian and German corporate governance systems have important differences but share the common objective of ensuring transparency, efficiency and accountable management. All these goals are pursued through different institutional architectures.

Germany has a two-tier structure, with the separation of management and supervisory functions. The latter, which is made up of shareholders and employee

representatives, has an important role: the appointment and removal of members of the Management Board and the exercise of oversight. In general, the German system has an important level of institutional control that is specifically regulated into the Code, reinforced also by codetermination which brings employee participation to the highest corporate level.

In contrast, Italy has more flexibility with the possibility, since the 2003 reform, of three different models: the traditional system, the monistic system and the dualistic system. The first remains the most widely used, with the central role of directors and statutory auditors. The Italian system, in the end, relies more on legal and professional oversight rather than stakeholder participation.

Both countries rely on corporate governance codes (the German Corporate Code and Italian Corporate Governance Code), which are divided into principles and recommendations and promote transparency, effective remuneration policies, diversity into the board and, of course, value creation. Certainly, the different governance philosophy of these two countries is reflected also in their different codes. The Italian code emphasizes the different governance structures and internal control, whereas the German one is focused on stakeholder orientation.

To sum up, the German system is focused on institutional separation and stakeholder participation, while the Italian system emphasizes flexibility.

2.6 Agreement Structure

The merger and acquisitions contracts are complex and represent a significant investment for the buyer and a change of control for the target company. They often involve types of assets such as intellectual properties, real estate, and licenses. Effective communication and coordination between parties are essential throughout the process, which typically includes planning, search, negotiation, processing, closing, and post-closing integration.

2.6.1 Merger Phases

Confidentiality and Collateral Agreements

Most M&A transactions begin in a friendly negotiation environment. When negotiations start, the buyer may require access to the target's non-public information under a confidentiality agreement (NDA). NDAs ensure that information is used only for evaluating the potential transaction. Collateral agreements may also be included, such as employment agreements, non-competition agreements, and financing agreements.

Initial Agreement and Letter of Intent (LOI)

When the buyer is ready to make a formal offer, a term sheet is prepared. This outlines the main terms of the deal, reducing uncertainty. A Letter of Intent (LOI) may follow, which may be binding or non-binding and can specify the acquisition price, exclusivity provisions, and closing conditions. (Gaughan, 2018; Mathew, 2021)

Due Diligence

Due diligence is a critical phase to identify risks, ensure compatibility, and make informed decisions. It is typically conducted by independent third parties. The process can be divided into five complementary types:

1. Financial Due Diligence

Firstly, financial due diligence is made through a comprehensive review of the company's books, assets, liabilities and past financial statements. Several years are analyzed to avoid distortions that can come out from a single period. To make a complete analysis other aspects are analyzed like cash flows, present loans and company's debtors and creditors. All of these are related to financial aspects, but the analysis includes also operational and commercial aspects of the target. This includes the analysis of the market in which the company operates, the customer base, the products and the services that are offered. All of these to ensure a complete picture of operational performance and future value. (Mathew, 2021)

2. Cultural Due Diligence

This second type of due diligence aims to identify the practices, strengths, and weaknesses of the target in order to assess whether a merger with the acquiring entity is feasible and potentially profitable. This is a particularly important form of due diligence because organizational culture affects the company's daily operations, and cultural or managerial incompatibilities may compromise the successful implementation of the agreement. (Mathew, 2021)

3. Strategic Due Diligence

The strategic due diligence is linked to the investigation of understanding the long-term profitability and strategic feasibility of the transaction. Its aim is to determine where the synergies that appear theoretically possible can be realized in practice. This process involves identifying the key areas in which the combined entity may create value, as well as the areas that may represent potential challenges in the integration phase. In addition, strategic due diligence evaluates whether the expected benefits and the valuation of the target are realistic. Overpaying the target is one of the main reasons why mergers fail. (Mathew, 2021)

4. Intellectual Property Due Diligence

The intellectual property due diligence aims to determine the value of the companies' intangible assets, such as patents, copyrights and trademarks. It also involves the investigation of any IP-related problems and how they can be resolved, assessing how the acquiring company may capitalize on the benefits of these assets, and identifying the risks that may arise from owning them. Lastly, this due diligence evaluates whether the IP rights are legally owned and whether they are properly and sufficiently protected. (Mathew, 2021)

5. Legal Due Diligence

Lastly, legal due diligence aims to identify aspects of the business that could give rise to future litigation. This process is made through the examination of contracts with vendors, service providers, employees and any other parties with whom the company has contractual relationships. It also examines ongoing litigations, and the company's obligations to shareholders, creditors and debtors to assess potential legal risks. (Mathew, 2021)

Merger Agreement

After all the due diligence is done, the merger agreement can be made. The agreement is normally made by the buyer's law firm and is subject to negotiation. This agreement contains all the warranties, the details of the closing and what can cause the termination of the agreement. In some cases, penalties are established in case of termination of the agreement by the buyer.

A special clause that can be contained in the agreement is Material Adverse Change (MAC) that allows the buyer to back out upon manifestation of certain events. (Gaughan, 2018)

Material Adverse Change (MAC) Clause

The MAC is a typical contractual mechanism originally developed by the Anglo-Saxon legal world to address the performance of contractual obligations under difficult or unforeseen circumstances. A prominent example of its relevance is the global disruption caused by the COVID-19 crisis.

In essence, the clause allows the withdrawal, typically by the buyer in the merger context, from an investment in case of occurrence of specific events that are unanticipated and that significantly impact the merging entities.

1. Purposes of MAC clause

The MAC clause fulfils three main purposes:

- **Risk allocation during the signing-to-closing period:** Since the period between signing and closing can be significant, due to regulatory approval and shareholders votes, the MAC clause reallocates the risks between the parties.
- **Addressing information and incentive asymmetries:** The clause is a protection for the buyer from undisclosed or emerging negative developments. Moreover, it is also an incentive for the target to maintain its business and investment levels during the signing and closing period.
- **Ensuring that the buyer receives what it has negotiated:** If something unforeseen happens that changes totally the target's financial conditions or operations, the clause can protect the buyer from buying something totally different from the negotiated.

2. Typical structure

Over time, the structure of MAC clauses has become increasingly detailed and sophisticated. Modern formulations typically include:

- A comprehensive definition of what constitutes a material adverse effect.
- An extensive list of carve-outs, specifying events that do not trigger a MAC (such as general economic downturns, industry-wide conditions, changes in law, or geopolitical events).

- Carve-backs, which reallocate the risk to the seller when an otherwise excluded event disproportionately affects the target compared with other firms in the same industry.

At the same time, there are also structural critiques to the MAC clauses as potential misalignment with parties' intent or the vagueness of the term "material," which can generate uncertainty and litigation. (Garrett, 2014)

2.7 Academic Review on Corporate Governance and M&A

The following sections review the academic literature relevant to the analysis conducted in this thesis. Section 2.7.1 examines evidence on value creation and market performance in M&A. Section 2.7.2 analyses the role of information asymmetry and contract design in shaping deal outcomes. Section 2.7.3 discusses the relationship between corporate governance systems and acquisition performance, with particular attention to the institutional contexts of Italy and Germany. Section 2.7.4 focuses specifically on stakeholder governance and codetermination, which is a defining feature of the German system analyzed in this thesis. Finally, Section 2.7.5 provides a historical perspective on M&A research and identifies open questions that this thesis aims to address.

2.7.1 Mergers and Acquisitions: Value Creation and Market Performance

The question of whether mergers and acquisitions actually create value remains one of the most debated topics in the empirical finance literature. The evidence is mixed and the answer depends on the perspective adopted and on the specific characteristics of the deal.

A complementary explanation for M&A underperformance is provided by Roll (1986), whose hubris hypothesis suggests that acquirers systematically overestimate synergies and overpay for targets, driven by managerial overconfidence. This mechanism contributes to explaining why M&A outcomes remain uncertain despite their strategic appeal — the central tension that this thesis investigates.

A broader perspective on the M&A process is provided by Rachel Calipha et al. (2010), who outline the key phases from strategic planning to post-merger integration. The authors emphasize the importance of understanding the motives behind acquisitions — whether growth, globalization, synergies, or business model transformation — as these are crucial for interpreting performance outcomes. In their view, long-term value creation depends not only on completing the deal but also on the integration of organizational knowledge, the use of managerial experience and the implementation of appropriate incentives systems.

Gan (2024) adds an innovation dimension to this picture. In particular, he finds that M&As tend to increase both patent production and profit growth, particularly when target firms hold highly cited patents. Cross-industry acquisitions generate stronger innovation synergies. This suggests that diversity of competencies may stimulate the acquirer’s innovative capacity—a result that complicates the common assumption that horizontal transactions are intrinsically more value-generating.

From a longer-term accounting perspective, Martynova et al. (2006) provide important nuance. While combined profitability often declines following an acquisition, these effects tend to disappear when performance is benchmarked against industry peers. This suggests that apparent underperformance may partly reflect macroeconomic trends rather than deal-specific failures. Hostile takeovers and bids for public targets are associated with worse long-term outcomes, while acquirers with excess pre-deal cash flows tend to engage in less profitable transactions — consistent with Jensen’s free cash flow hypothesis.

A foundational methodological contribution is provided by Healy, Palepu and Ruback (1992), who examine post-merger operating performance through the comparison of accounting-based indicators before and after the transaction. Their approach — measuring changes in ROA and other profitability metrics relative to the transaction year — has become a standard benchmark in the empirical M&A literature and directly informs the methodology adopted in this thesis.

Barber and Lyon (1996) further highlight a critical methodological challenge. Comparisons of pre- and post-acquisition ROA without controlling for the initial profitability level introduce systematic bias. Such comparisons may attribute to the acquisition an effect that instead belongs to the firm’s autonomous dynamics. This concern directly motivates the regression framework adopted in this thesis. The model controls for initial ROA in order to isolate the mean reversion component from any acquisition-induced effect.

Beyond the methodological challenges of measuring performance, the strategic motivation behind the deal shapes outcomes in substantively different ways. Garfinkel and Hankins (2011) show that vertical integration, through the acquisition of suppliers or distributors, reduces operational risk, lowers costs, and decreases cash flow volatility. This finding suggests that M&A can function as a strategic hedging mechanism rather than a pure growth tool.

Horizontal deals produce a different set of competitive dynamics. Li (2024) analyses competitor reactions to horizontal mergers in the United States and reveals heterogeneous patterns. Starting from less competitive firms that reduce investments, to neck-and-neck competitors that increase investments to maintain their position, and market leaders that show little change. These responses are shaped by the innovativeness and financial constraints of the firms involved and demonstrate that the strategic effects of M&As extend well beyond the merging parties themselves.

The German market offers additional context directly relevant to this thesis. Mager and Meyer-Fackler (2017), which analyze German M&A activity from 1981 to 2010, find that abnormal negative returns for acquiring investors were relatively limited compared to US evidence. This reflects differences in deal financing and supports the method-of-payment hypothesis. Eisenbarth and Meckl (2014) further show that anti-cyclical acquisitions, executed during market downturns, tend

to achieve superior long-term performance. These are typically carried out by financially stronger firms targeting smaller, potentially undervalued companies.

Finally, Meckl and Röhrle (2016) synthesize evidence from multiple studies and find that fewer than half of all M&A deals generate a positive market reaction. Cross-border transactions appear more value-creating than domestic deals on average, highlighting the relevance of geographic and market context.

Bradley, Desai and Kim (1988) draw a conceptually important distinction between value transfer — the redistribution of existing value between acquirer and target shareholders — and value creation through synergies. Market repricing at the time of the deal is rapid, while operational value creation requires integration and transfer of capabilities that unfold progressively over time. The institutional features of the German market that underpin these findings — in particular the two-tier board structure and co-determination — are discussed in detail in Sections 2.7.3 and 2.7.4.

The broader message is clear: M&A success is neither automatic nor guaranteed, and depends on deal characteristics, integration quality, timing, and market conditions—all of which motivate the empirical investigation carried out in this thesis.

Table 2.1: Mergers and Acquisitions: Value Creation and Market Performance

Authors	Main Findings	Conclusions
Roll (1986)	Hubris hypothesis: managers systematically overestimate synergies and overpay for targets because of overconfidence.	M&A outcomes are uncertain; acquiring firms tend to overbid regardless of objective deal quality.
Calipha et al. (2010)	M&A value creation depends on the strategic motive (growth, synergies, globalization) and on post-merger integration quality, including knowledge transfer and incentive systems.	Long-term value creation requires successful integration of organizational knowledge and managerial capabilities, not merely deal completion.
Gan (2024)	M&As increase patent production and profit growth, especially when targets hold highly cited patents. Cross-industry acquisitions generate stronger innovation synergies.	Diversified deals may outperform horizontal ones on innovation metrics, complicating the assumption that horizontal transactions are intrinsically more value-creating.
Martynova et al. (2006)	Combined profitability often declines post-acquisition, but this effect disappears when benchmarked against industry peers. Hostile takeovers and bids for public targets yield worse long-term outcomes.	Apparent post-merger underperformance may reflect macroeconomic trends rather than deal-specific failure. Free cash flow excess pre-deal is associated with less profitable acquisitions.
Healy, Palepu & Ruback (1992)	Post-merger operating performance measured via pre/post comparison of accounting-based indicators (ROA) relative to the transaction year is the standard empirical benchmark.	Changes in ROA and profitability metrics relative to Y_0 are the appropriate measure of acquisition-induced performance. This methodology directly informs the empirical design of this thesis.
Barber & Lyon (1996)	Pre/post ROA comparisons without controlling for initial profitability introduce systematic bias, attributing mean-reversion effects to the acquisition itself.	Regression frameworks must control for initial profitability to isolate acquisition effects from autonomous firm dynamics.
Garfinkel & Hankins (2011)	Vertical integration reduces operational risk, lowers costs, and decreases cash flow volatility.	M&A can function as a strategic hedging mechanism, not only as a growth tool. Deal type (vertical vs. horizontal) shapes the nature of value creation.
Li (2024)	Competitor reactions to horizontal mergers in the US are heterogeneous: less competitive firms reduce investments, neck-and-neck rivals increase them, market leaders show little change.	Strategic effects of M&A extend well beyond the merging parties. Horizontal deal outcomes depend on the competitive position and financial constraints of rival firms.
Mager & Meyer-Fackler (2017)	Abnormal negative returns for German acquirers (1981–2010) were limited compared to US evidence, reflecting differences in deal financing consistent with the method-of-payment hypothesis.	The German institutional context produces more contained acquirer losses. Financing structure is a key determinant of market-based M&A performance.
Eisenbarth & Meckl (2014)	Anti-cyclical acquisitions achieve superior long-term performance, typically carried out by stronger firms targeting smaller, undervalued companies.	Deal timing relative to the market cycle is a significant predictor of long-term outcomes; counter-cyclical strategies by financially robust acquirers generate outperformance.
Meckl & Röhrle (2016)	Fewer than half of all M&A deals generate a positive market reaction. Cross-border transactions are more value-creating than domestic deals on average.	Geographic and market context (domestic vs. cross-border) significantly affect value creation prospects.
Bradley, Desai & Kim (1988)	Distinction between value transfer (redistribution between acquirer and target shareholders) and value creation through synergies. Market repricing at deal announcement is rapid; operational value creation unfolds over time.	Short-term market returns and long-term accounting performance measure distinct phenomena. Operational synergies require multi-year integration horizons to materialize fully.

2.7.2 Information Asymmetry and Deal Contracting

One of the most persistent challenges in M&A transactions is the information gap between acquirer and target. The acquiring firm rarely has full visibility into the target’s true value, operational risks, or strategic fit. This uncertainty, if not managed correctly, can compromise the outcome of the deal. The literature has identified several contractual mechanisms designed to address this problem, from performance-based compensation to insurance products.

A natural starting point is the role of contract design in reducing informational gaps. Mu et al. (2023), which analyze Chinese M&A transactions, show that well-structured performance-related compensation mechanisms, commonly referred to as pay-for-performance, can significantly reduce information asymmetry between acquirer and target. This increases the likelihood of achieving post-deal performance commitments. Equity incentives such as shares or stock options, combined with annual bonuses, enhance the fulfillment of objectives. Particularly effective are two-way incentive structures, which link rewards to target performance while imposing penalties for non-compliance, especially in firms with high governance quality. The key insight here is that the combination of incentive type and timing matters as much as the incentive itself.

Earnout provisions represent another widely studied mechanism for managing uncertainty and aligning interests. Roncagliolo (2020) highlights that performance-based deferred payments can create value for acquirers, in particular when targets are difficult to evaluate or when market conditions are uncertain. While earnouts are associated with higher acquisition premiums and can reduce post-acquisition conflicts, their improper use may signal disagreement between parties or increase litigation risk. Barbopoulos and Danbolt (2021), who analyze a sample of over 31,000 US and UK deals, confirm that earnouts enhance acquirer returns compared to all-cash deals, particularly when the acquirer is experienced, the target is small, or the transaction is cross-border. Their effectiveness is greatest in high-risk contexts, reinforcing their role as a tool to mitigate valuation uncertainty.

The effectiveness of earnouts, however, is not uniform across all acquirers. Alexakis and Barbopoulos (2020) show that superior gains from earnout clauses are mainly observed in low-volatility acquirers, while high-volatility acquirers tend to experience zero or negative returns. This does not imply that earnouts lack incentive potential for high-volatility firms. Rather, it underlines the importance of considering acquirer characteristics when evaluating the suitability of these clauses. Lukas and Heimann (2014), who focus specifically on German acquirers, add further nuance. Markets tend to favor the use of earnouts when uncertainty is high and the acquirer can credibly reduce informational asymmetries. However, earnout periods that are too long can become counterproductive. Their findings extend the literature and demonstrate how national context, technological characteristics, and

deal structure jointly shape the effectiveness of earnout provisions.

Alongside contractual mechanisms, due diligence remains a cornerstone of risk management in M&A. Mathew (2021) emphasizes the importance of thoroughly examining financial statements, historical profitability, legal obligations, and the accuracy of disclosed information before closing a deal. In his view, deficiencies in due diligence are among the most significant contributors to post-merger failures. This makes it a critical preventive measure rather than a mere procedural formality.

Two additional contractual safeguards deserve attention. Material Adverse Change (MAC) clauses, examined by Partacz (2022), allow parties to renegotiate, modify, or terminate contracts in response to significant adverse events. Their relevance has increased considerably in recent years, as crises such as the COVID-19 pandemic, geopolitical conflicts, supply chain disruptions, and inflation have highlighted the need for contractual flexibility. While MAC clauses do not replace comprehensive due diligence, they form part of a broader framework for managing unforeseen risks. Representations and Warranties (R&W) insurance, analyzed by Even-Tov et al. (2024), represents a more recent development. It shifts the risk of contractual breaches from the seller to an insurer, thereby reducing negotiation costs and enhancing transaction certainty. Demand for this instrument rises with uncertainty, potential litigation, and limitations on traditional indemnities, though the authors caution that moral hazard may arise if buyers perform less thorough due diligence as a result.

Finally, Patschreck et al. (2015) take a comparative perspective. In their study, they show that contract design practices differ substantially across markets. In the United States, basket clauses and liability caps are more widespread and more restrictive than in Europe, while European markets tend to be more favorable to buyers in terms of claim periods. Despite the widespread use of these clauses, research has yet to provide concrete evidence on how much sellers actually pay when they are triggered, or on their broader effects on financial markets. This is still an open question that can be investigated in future research.

In sum, this literature makes clear that contract design, incentive mechanisms, due diligence, and risk management tools are all essential for managing information asymmetry in M&A. Well-structured agreements, combined with careful analysis and monitoring, can align the interests of acquirers and targets, reduce post-acquisition conflict, and improve the likelihood of transaction success.

Table 2.2: Information Asymmetry and Deal Contracting

Authors	Main Findings	Conclusions
Mu et al. (2023)	Well-structured pay-for-performance compensation mechanisms significantly reduce information asymmetry in M&A (analysis of Chinese transactions). Two-way incentive structures linking rewards to target performance and imposing penalties are especially effective in high-governance firms.	Incentive design (type and timing) is as important as the incentive itself. Performance-based compensation increases the probability of meeting post-deal commitments.
Roncagliolo (2020)	Earnout provisions (performance-based deferred payments) create value for acquirers when targets are difficult to evaluate or market conditions are uncertain, but improper use may signal disagreement or increase litigation risk.	Earnouts are a value-creating tool in high-uncertainty deals, but their incorrect use can destroy value. The design and context of earnout structures are critical determinants of effectiveness.
Barbopoulos & Danbolt (2021)	Earnouts enhance acquirer returns vs. all-cash deals across more than 31,000 US and UK deals, particularly when acquirers are experienced, targets are small, or transactions are cross-border. Effectiveness is greatest in high-risk contexts.	Earnouts are most beneficial when valuation uncertainty is highest. Acquirer experience and deal size moderate their impact on returns.
Alexakis & Barbopoulos (2020)	Superior gains from earnout clauses are concentrated in low-volatility acquirers; high-volatility acquirers tend to experience zero or negative returns from earnouts.	Acquirer characteristics are a key indicator of earnout effectiveness. The clause's success must be assessed based on the acquirer's volatility profitability.
Lukas & Heimann (2014)	For German acquirers, markets favor earnouts when uncertainty is high and the acquirer can credibly reduce information asymmetries. Excessively long earnout periods become counterproductive.	National context, technological characteristics, and deal structure shape earnout effectiveness. There is an optimal earnout duration and earnout periods that are too long can become counterproductive.
Mathew (2021)	Deficiencies in due diligence (as insufficient examination of financial statements, historical profitability, and legal obligations) are among the most significant contributors to post-merger failures.	Due diligence is a critical preventive measure, while rigorous pre-deal analysis is necessary but not sufficient for successful integration.
Partacz (2022)	Material Adverse Change (MAC) clauses allow parties to renegotiate or terminate contracts in response to significant adverse events. Their relevance has increased with recent crises (COVID-19, geopolitical conflicts, supply chain disruptions).	MAC clauses are a component of risk management framework. They provide contractual flexibility under unforeseen adverse conditions but do not substitute for thorough due diligence.
Even-Tov et al. (2024)	Representations and Warranties (R&W) insurance shifts contractual breach risk from seller to insurer, reducing negotiation costs and enhancing transaction certainty. Demand rises with uncertainty and litigation potential, but moral hazard may reduce buyer diligence.	R&W insurance is increasingly relevant in high-uncertainty deal environments. Its adoption may weaken (unwittingly) pre-closing due diligence quality if not carefully managed.
Patschureck et al. (2015)	Contract design practices differ substantially across markets: US basket clauses and liability caps are more widespread and restrictive than in Europe; European markets favor buyers in claim periods. The actual financial impact of these clauses on sellers remains empirically unresolved.	Cross-market differences in contractual norms reflect distinct legal traditions and risk allocations.

2.7.3 Corporate Governance Systems

Corporate governance represents one of the most extensively studied determinants of M&A outcomes. The way in which firms are governed — at the board level, through managerial incentives, and within broader institutional frameworks — shapes both the decision to acquire and the ability to create value post-deal.

A useful starting point is the relationship between information asymmetry and governance mechanisms. Cai et al. (2015) show that firms with higher levels of information asymmetry tend to rely less on direct monitoring and more on indirect mechanisms, such as a stronger link between CEO compensation and firm performance. This is consistent with the monitoring cost hypothesis, which holds that when direct oversight is costly, performance-based incentives serve as a substitute alignment tool. In the M&A context, this matters because the market for corporate control itself functions as an external governance mechanism. Specifically, inefficient management can be disciplined and corporate resources reallocated to more productive uses.

At the board level, Ahmad et al. (2024), through the analysis of board reforms across 61 countries between 1985 and 2021, show that strengthening board independence and oversight increases acquirer returns, improves overall synergies, and affects the redistribution of wealth between acquirers and targets. The institutional context in which these reforms take place matters significantly. Hussain et al. (2024) complement this by examining acquisitions where the acquirer has stronger governance than the target, confirming the portability theory. Specifically, good governance practices can be transferred from acquirer to target, improving board independence, audit committee structure, equity compensation schemes, and minority shareholder protections. The practical implication is that managers can maximize value if they assess governance gaps before a deal. Investors can also use these gaps as signals of potential added value.

Managerial incentives are equally central. Apsari (2017) finds that equity-related compensation and board members' shareholding are positively associated with acquirer performance. Instead, an excessive proportion of independent directors may paradoxically reduce decision-making flexibility and limit M&A effectiveness. Fidrmuc and Xia (2019), using a sample of US public firms, find that, firstly, greater CEO share ownership strengthens the link between firm performance and the decision to initiate a sale. Secondly, CEO incentives correlate with higher acquisition premiums in target-initiated deals and help to mitigate adverse selection.

Feito-Ruiz and Renneboog (2017) extend this to European acquisitions and show that equity-based CEO compensation generally improves market reactions at announcement. However, excessive compensation relative to firm or managerial characteristics can trigger negative investor responses. Moreover, Li and Peng (2021) add an important caveat: the extension of CEO pay horizons alone does not

guarantee value creation. What matters is aligning compensation with performance through time-vesting or performance-vesting schemes to avoid the short-termism that can distort M&A decision-making.

Governance also intersects with risk management and organizational complexity. Wu et al. (2024) show that acquisitions reduce debt default risk, particularly in younger firms, companies with weaker governance, and regions with less developed financial markets.

Cremers et al. (2017) examine staggered boards and find no evidence of entrenchment. In particular, staggered boards can enhance firm value when long-term projects or stakeholder relationships are significant; this is obviously in contrast to the conventional view that they are purely anti-shareholder devices. Pan et al. (2025) demonstrate that higher organizational complexity reduces abnormal returns and synergy realization, particularly in firms with weaker governance. Singh (2024) emphasizes that acquiring firms with strong governance can generate higher value when targeting weaker-governance firms. Beyond board-level mechanisms, and consistent with the contractual perspective discussed in Section 2.7.2, Boufarah and Lamm (2016) underline the centrality of due diligence as a risk mitigation tool, while Thompson and Kim (2020) show that deal timing serves as a proxy for diligence quality, affecting post-M&A performance and risk exposure.

The national and institutional context adds a further layer of complexity that is particularly relevant for this thesis, given its focus on Italy and Germany. Rani et al. (2013) find that firms with strong governance experience higher abnormal returns and better financial performance after acquisitions.

Goergen et al. (2008) examine Germany's stakeholder-oriented governance system that is characterized by large shareholders, universal banks, and a two-tier board with employee participation. They demonstrate how institutional structures shape oversight and value creation in ways that differ substantially from Anglo-American models.

Drobetz and Momtaz (2020) find that cross-border acquisitions tend to improve shareholder rights and ownership dispersion. They move firms closer to Anglo-American governance norms, though this convergence is not necessarily the primary motivation for the deal.

Yoshikawa and Rasheed (2009) caution that governance convergence is complex and uneven, often reflecting formal similarities rather than substantive alignment. Li (2021) compares two-tier governance systems in Germany, Italy, and China, and shows that legal, political, and economic contexts shape the authority of supervisory boards, worker participation, and internal committees in meaningfully different ways.

Gandini et al. (2009) further highlight that governance effectiveness depends on the alignment of ownership structures with independent oversight. In particular they discuss different board models in Italy and their fit with dispersed, concentrated,

or mixed ownership. Enriques and Volpin (2007) review corporate governance reforms in Continental Europe and document progress in shareholder rights and transparency, while noting persistent challenges arising from the continued influence of controlling shareholders.

Collectively, this literature confirms that corporate governance influences M&A outcomes at multiple levels simultaneously. Board independence, managerial incentives, due diligence quality, and national institutional context all interact to determine value creation, risk mitigation, and post-acquisition performance. Strong governance allows acquirers to maximize synergies and align managerial and shareholder interests, while weak or misaligned structures increase the likelihood of underperformance.

Table 2.3: Corporate Governance Systems

Authors	Main Findings	Conclusions
Cai et al. (2015)	Firms with higher information asymmetry rely less on direct monitoring and more on indirect mechanisms (stronger CEO pay-performance link). The market for corporate control itself functions as an external governance mechanism.	Governance structure and incentive design are substitutes for direct oversight when monitoring costs are high. In the M&A context, the market for corporate control itself functions as an external governance mechanism.
Ahmad et al. (2024)	Board reforms strengthening independence and oversight across 61 countries (1985–2021) increase acquirer returns, improve synergies, and affect wealth redistribution between acquirers and targets. Institutional context significantly influences these effects.	Board quality improvements generate measurable M&A value gains. The effectiveness of governance reforms is context-dependent and varies across institutional environments.
Hussain et al. (2024)	Acquisitions where acquirers have stronger governance than targets confirm the 'portability theory': good governance practices transfer to targets, improving board independence, audit committees, equity compensation, and minority protections.	Governance quality gaps between acquirer and target are a source of potential value creation. Identify and exploit governance gaps should be part of the pre-deal strategic assessment.
Apsari (2017)	Equity-related compensation and board members' shareholding are positively associated with acquirer M&A performance. An excessive proportion of independent directors may paradoxically reduce decision-making flexibility.	Optimal governance in M&A involves balanced board composition. Over-independence is as problematic as under-independence; equity alignment of board members improves outcomes.
Fidrmuc & Xia (2019)	CEO share ownership strengthens the link between firm performance and the decision to sell. CEO incentives correlate with higher acquisition premiums in target-initiated deals and help mitigate adverse selection (US public firms).	Managerial incentive structures shape deal initiation patterns and premium-setting behavior. Aligned CEO interests reduce adverse selection risks.
Feito-Ruiz & Renneboog (2017)	Equity-based CEO compensation generally improves market reactions at announcement in European acquisitions. Excessive compensation relative to firm characteristics triggers negative investor responses.	The level and design of executive compensation whether market participants view M&A decisions as value-maximizing or as rent extraction.
Li & Peng (2021)	Extending CEO pay horizons alone does not guarantee value creation. Time-vesting or performance-vesting schemes are necessary to prevent short-termism in M&A decision-making.	Compensation horizon must be put together with performance-contingent vesting to align CEO incentives with long-term value creation. Deferred pay without performance conditions is not sufficient.
Wu et al. (2024)	Acquisitions reduce debt default risk, particularly in younger firms, weaker-governance companies, and regions with less developed financial markets.	M&A can serve as a corporate governance improvement mechanism for financially fragile firms. The default-risk reduction benefit is strongest where governance and market institutions are weakest.
Cremers et al. (2017)	Staggered boards do not necessarily consolidate management; they can enhance firm value when long-term projects or stakeholder relationships are material, contrary to the conventional anti-shareholder narrative.	Board structural features must be evaluated in context. Staggered boards are value-enhancing in long-horizon or stakeholder-intensive industries, not universally harmful.
Pan et al. (2025)	Higher organizational complexity reduces abnormal returns and synergy realization, particularly in firms with weaker governance.	Governance quality moderates the complexity-performance trade-off in M&A. Strong governance partially offsets the negative impact of organizational complexity on deal outcomes

Authors	Main Findings	Conclusions
Singh (2024)	Acquiring firms with strong governance generate higher value when targeting weaker-governance firms, consistent with the portability and governance transfer hypothesis.	Governance differential between acquirer and target is a key value driver. Strong acquirer governance is most valuable when the target's governance baseline is low.
Goergen, Manjon & Renneboog (2008)	Germany's stakeholder-oriented governance (large shareholders, universal banks, two-tier boards with employee participation) shapes oversight and value creation in ways that differ substantially from Anglo-American models.	Institutional governance architecture determines the mechanisms through which M&A value is created or destroyed. German co-determination fundamentally alters board dynamics and strategic decision-making relative to shareholder-centric systems.
Drobetz & Momtaz (2020)	Cross-border acquisitions tend to improve shareholder rights and ownership dispersion, moving firms toward Anglo-American governance norms, though this convergence is not necessarily the primary deal motivation.	M&A activity can function as a channel of governance convergence across institutional boundaries. However, formal governance convergence may not imply substantive alignment.
Yoshikawa & Rasheed (2009)	Governance convergence is complex and uneven, often reflecting formal similarities rather than substantive institutional alignment.	Surface-level governance harmonization across countries masks persistent differences in actual governance practices and their economic effects.
Li (2021)	Comparison of two-tier governance systems in Germany, Italy, and China shows that legal, political, and economic contexts shape supervisory board authority, worker participation, and internal committee effectiveness in meaningfully different ways.	Even formally similar governance structures (two-tier boards) produce different outcomes across national contexts. Institutional complementarities determine the actual content of governance rules.
Gandini, Astori & Cassano (2009)	Governance effectiveness in Italy depends on the alignment of ownership structures with independent oversight. The three Italian board models (traditional, monistic, dualistic) differ in their fit with dispersed, concentrated, or mixed ownership.	Italian governance flexibility enables firms to select structures suited to their ownership configuration, but effectiveness is contingent on achieving alignment between model choice and shareholder composition.
Enriques & Volpin (2007)	Corporate governance reforms in Continental Europe have progressed on shareholder rights and transparency, but persistent challenges arise from the continued influence of controlling shareholders.	Structural shareholder concentration in Continental Europe limits the effectiveness of formal governance reforms. The practical impact of reform depends on the underlying ownership distribution.

2.7.4 Stakeholder Governance and Codetermination

Beyond internal corporate governance and managerial incentives, the literature highlights the role of stakeholder governance. In particular, mechanisms such as works councils and codetermination shape M&A outcomes and firm performance. While traditional governance focuses on shareholders and managerial alignment, stakeholder governance emphasizes the participation of employees and other social actors, which can influence strategic decisions and organizational adaptation.

Haipeter (2025) provides recent evidence on the evolving role of works councils and codetermination in Germany. The study shows a dual trend: overall participation and influence are declining in smaller firms and newer enterprises,

yet large companies maintain strong, innovative councils that assume strategic responsibilities and expand transnational coordination. These findings illustrate that stakeholder governance is dynamic, combining elements of erosion, incremental change, and innovation. Social actors actively shape organizational decision-making within institutional constraints, contributing to long-term adaptation and strategic oversight.

Wagner (2009) examines the effects of “one-third” codetermination, where employees appoint one-third of the supervisory board, on firm performance in German manufacturing industries. The study finds no statistically significant impact on productivity or profitability. However, methodological limitations, such as the absence of causal identification, true panel data, and potential self-selection of adopting firms, caution against strong conclusions. Substantively, the results challenge both the claim that codetermination reduces firm value and the participatory theory that predicts efficiency gains through worker involvement. At least for medium-sized manufacturing firms, one-third codetermination may not produce measurable economic effects, although it may still be justified for social or institutional reasons.

Overall, these studies suggest that while stakeholder governance mechanisms such as works councils and codetermination can play a strategic and oversight role in larger organizations, their direct economic impact may be limited or context-dependent. The literature emphasizes that stakeholder involvement is not static but evolves with firm size, institutional settings, and organizational strategy. This highlights the need to consider social actors as active participants in corporate governance alongside managerial and shareholder-driven mechanisms.

Table 2.4: Stakeholder Governance and Codetermination

Authors	Main Findings	Conclusions
Haipeter (2025)	Works councils and codetermination in Germany show a dual trend: declining participation and influence in smaller and newer firms, but strong, innovative councils in large companies that expand transnational coordination and assume strategic responsibilities.	Stakeholder governance is dynamic and internally heterogeneous. Its strategic and economic effects are greatest in large firms; erosion in smaller enterprises suggests codetermination’s macroeconomic impact may be size-dependent.
Wagner (2009)	One-third codetermination (employees appointing one-third of the supervisory board) in German manufacturing shows no statistically significant impact on productivity or profitability. Methodological limitations constrain strong inference.	Neither the value-destruction hypothesis nor the efficiency-gains hypothesis of codetermination receives empirical support in medium-sized manufacturing firms.

2.7.5 Historical Trends and Future Directions in M&A Research

Finally, some studies offer a broader view of M&A research and its remaining gaps. Cho and Chung (2022) review the historical “merger waves” in the United States, showing recurring cycles of acquisition activity. They find that target shareholders usually obtain higher short term returns, while the long term performance of acquiring shareholders is less clear. The authors discuss neoclassical explanations, managerial behavior, and regulatory changes, and highlight the methodological difficulties in measuring long term outcomes, especially for private or pre IPO acquisitions.

Ferreira et al. (2016) add to this picture with a bibliometric analysis, showing that M&A research is still relatively limited and fragmented. They underline persistent uncertainties about post-merger performance, the role of CEOs and top management, and the processes of resource transfer, learning, cultural integration, and cross border deals. The study calls for future research that combines resource based, behavioral, and institutional perspectives, especially in international and emerging market settings.

Notably, comparative empirical studies on domestic M&A performance specifically in Italy and Germany remain scarce, with most existing work focusing either on single-country analyses or on cross-border transactions. This gap directly motivates the empirical investigation conducted in this thesis.

Taken together, these studies provide a historical and synthetic overview that helps to contextualize previous evidence and identify open questions for future research. They also clearly connect to the objectives of this thesis, which seeks to address some of the current gaps in our understanding of M&A performance and governance.

Table 2.5: Historical Trends and Future Directions in M&A Research

Authors	Main Findings	Conclusions
Cho & Chung (2022)	Historical review of US merger waves shows recurring acquisition cycles. Target shareholders obtain higher short-term returns; long-term acquirer performance is ambiguous. Neoclassical, behavioral, and regulatory explanations are discussed. Methodological difficulties in measuring long-term outcomes are highlighted.	M&A activity is cyclical and wave-driven, not random. Long-term acquirer returns are systematically difficult to measure, particularly for private firm samples such as the one analyzed in this thesis.
Ferreira, Reis & Pinto (2016)	Bibliometric analysis of three decades of M&A research reveals a fragmented, still-limited literature with persistent uncertainties about post-merger performance, CEO and top management roles, resource transfer, learning, cultural integration, and cross-border deals.	Future M&A research should integrate resource-based, behavioral, and institutional perspectives, especially in international and emerging market settings. Current gaps directly motivate the comparative Italy-Germany approach of this thesis.

3 Data & Methodology

3.1 Overview

In the second part of this thesis, the analysis focuses primarily on the collection, processing and analysis of the collected data. Specifically, the study examines domestic merger and acquisition transactions, both in the Italian and German contexts. The adoption of the same selection criteria and the same time frame for both countries allowed for a high level of data homogeneity and consistency, making them more comparable.

It should be explicitly noted that the comparative analysis developed in Chapter 2, between the three Italian corporate governance systems and the German one, serves as theoretical contextualisation and institutional background rather than empirical explanation. Indeed, due to the composition of the dataset, in which 98.5% and 99% of Italian and German targets respectively are private firms, the actual governance model adopted by any individual firm is unknown and cannot be retrieved from publicly available sources. The governance comparison therefore cannot be empirically linked to any specific transaction or acquirer in the sample, and should be interpreted as a theoretical contribution rather than as a variable entering the empirical analysis.

The analysis was supported using the S&P Capital IQ database, accessible through the Karlsruhe Institute of Technology (KIT). This tool enabled the extraction of individual transactions and key financial indicators, which are fundamental for this empirical analysis.

3.2 Data collection & Screening criteria

As previously mentioned, the analysis was conducted by considering exclusively domestic merger and acquisition (M&A) transactions. Specifically, only operations in which both parties involved were national companies, Italian for Italy and German for Germany, were included.

This methodological choice was made with the aim of reducing heterogeneity within the sample. The focus on domestic transactions allows for a more effective

isolation of the M&A impact on company performance, and contributes to a more coherent and meaningful analysis.

Data Extraction Process

Data extraction was carried out using the Screener function of the S&P Capital IQ database, specifically the Transactions section, which provides detailed information on M&A operations within a defined time frame and according to specific filtering criteria.

This functionality allows not only the identification of relevant transactions but also the application of targeted filters to select a sample that is pertinent to the research objectives.

Screening Criteria

The filters applied were as follows:

- Transaction Type: M&A
- Transaction Status: Completed
- Announced Date: 01/01/2010 – 01/01/2020
- Company Geography – Target/Issuer: Italy (same for Germany)
- Company Geography – Buyer/Investor: Italy (same for Germany)
- Percent Equity Acquired: $\geq 50\%$
- Completion Date: All History

By applying these criteria, transactions that involve both public and private companies were selected, with an acquired equity percentage equal to or greater than 50%.

The choice to include only “Completed” transactions allows the analysis to focus solely on deals that were finalized, excluding transactions that were only announced and/or subsequently cancelled. In addition, the equity acquisition threshold ($\geq 50\%$) ensures that only transactions that involve a transfer of control of the target company are included, excluding those that do not significantly impact management, structure, or strategic decision-making.

Additionally, all transactions considered are domestic in nature: the correspondence between the company geography of the target and that of the buyer ensures a homogeneous sample, facilitating comparison and reducing potential distortions arising from differences between national contexts.

Time frame

The time chosen for the analysis spans ten years, from January 1, 2010, to January 1, 2020. This period was selected in order to include a sufficiently large number of transactions and to ensure adequate coverage for the empirical analysis. All the transactions included in the analysis were completed within this time frame and were identified through the S&P Capital IQ database.

So, at the end, the final list of merger and acquisition (M&A) transactions in Italy and Germany is restricted to deals completed between 2010 and 2020. For each transaction, firm-level financial information was collected for up to five years following the completion date. As a result, depending on the time of the transaction, financial indicators may be up to the year 2025.

Financial Data Extraction

For each transaction, financial data was collected based on the transaction completion date. The extraction of this financial information was made through the Excel function of S&P Capital IQ Pro with the use of a unique identifier for each transaction. This procedure ensures consistency and precision in the extraction of data.

Financial variables were extracted at four distinct points in time: completion date (Y0), at the end of the first year following the transaction (Y1), three years after completion (Y3) and five years after completion (Y5). The selection of these specific intervals allows not only for capturing the immediate effects of the transaction but also the understanding of medium- to long-term impacts, considering synergies and other benefits arising from the acquisition that often take time to fully materialize.

Lastly, financial data at Y0 were extracted at transaction completion date rather than at the end of the corresponding fiscal year. This choice was made to ensure that the observed financial indicators were not yet influenced by the transaction itself, to ensure a more realistic and correct evolution of firm performance over the medium and long term.

3.3 Data screening

By applying the filters described above, over 6,000 transactions were identified for Germany and more than 2,000 for Italy. This discrepancy immediately highlights a significant difference in the number of operations between the two countries, reflecting not only differences in market size but also varying levels of activity in the merger and acquisition landscape in each country.

This evidence is consistent with the statistics reported by the Institute for Mergers, Acquisitions & Alliances (IMAA) that, based on the analysis of M&A activity since 1991, already document higher level of participation by Germany

compared to Italy, both in terms of number of transactions but also in terms of value.

For each country, information was extracted such as the total number of transactions, the percentage of public and private transactions (for both buyers and targets), the average deal size, and the total transaction value. This data provided a more detailed overview of the M&A landscape and allowed for an initial comparative analysis between the two countries.

Public vs Private firms

Specifically, the analysis of the public and private nature of the parties involved allows for an assessment of the level of openness and participation of listed companies compared to non-listed ones. Similarly, a preliminary analysis can be conducted by evaluating the average deal size and total transaction value to understand the typical size of transactions and the overall market during the period under consideration.

Italy

Table 3.1: Distribution of Targets and Buyers in Italian M&A Transactions

Category	Number	Percentage
Targets		
Private	2,714	98.50%
Public	37	1.30%
Other	3	0.20%
Buyers		
Private	2,429	88.20%
Public	317	11.50%
Other	8	0.30%
Total transactions	2,754	100%

In addition to public and private companies, the table also includes a category labeled *Other*, which refers specifically to arts institutions, foundations, and trade associations, both as targets and as acquirers. Naturally, the number of transactions with these entities is smaller and less significant compared to the other two categories. For this reason, they have been grouped under a single category.

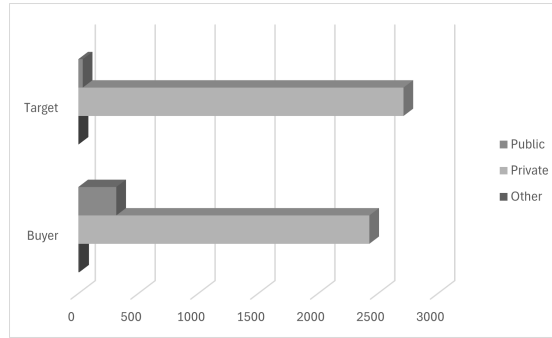


Figure 3.1: Private, Public, and Other Firms in Italian M&A (Targets and Buyers)

Looking at the data, the majority of the targets in the Italian landscape are private companies (98.5%), with only 1.3% being public. A similar pattern can be observed on the buyer side: approximately 88% of acquisitions were made by private entities, while just under 12% were carried out by public buyers. These data provide an understanding of the Italian market, particularly highlighting that the country's business landscape is characterized by a high presence of small and medium-sized private enterprises.

	Number of Transactions	Percentage	Average Deal Size (\$M)	Total Transaction Value (\$M)
Public vs. Private Targets	304	11.04%	122.92	24092.45
Public vs. Private Buyers	24	0.87%	92.08	920.77
Public vs. Public Buyers	12	0.44%	129.86	389.59
Private vs. Private Buyers	2,404	87.29%	103.19	73,370.77

Table 3.2: Distribution of M&A Transactions by Type in Italy

When examining the nature of the transactions, it is observed that the majority occurred between private entities, accounting for 87% of deals (Private–Private deals). Mixed transactions between private and public entities amounted to over 300 cases, representing approximately 11% (Mixed Public–Private deals), while fully public transactions represent less than 1% of the total. These figures further confirm that the Italian market is predominantly composed of the private sector. When analyzing the average deal size, as expected for this type of transaction, higher values emerge for deals involving public companies, both as targets and as acquirers, with an average value of USD 129.86 million per transaction. Without distinguishing between the different types of firms involved and considering the Italian M&A market over the time horizon analyzed, the overall average deal size amounts to USD 107.2 million, while the total transaction value reaches USD 99,048.89 million.

Germany

Category	Number	Percentage
Targets		
Private	6,426	99.00%
Public	45	0.70%
Other	12	0.30%
Buyers		
Private	5,842	90.10%
Public	613	9.50%
Other	28	0.40%
Total transactions	6,483	100%

Table 3.3: Public and Private Firms in German M&A Transactions

For Germany as well, in addition to the standard classification of public and private companies, a third, smaller category, *Others*, was introduced. This category includes, on both the target and the acquirer sides, educational institutions, trade associations, public funds, foundations and charitable organizations, as well as government institutions.

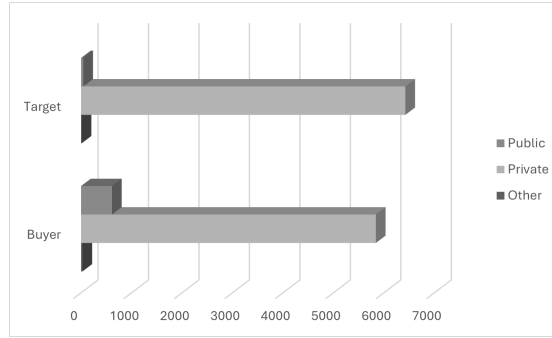


Figure 3.2: Private, Public, and Other Firms in German M&A (Targets and Buyers)

Turning to the German context, Private–Private transactions constitute just under 90% of deals, followed by Mixed Public–Private transactions, which represent 9.24% of the total. Even in Germany, transactions involving only public companies are extremely limited. This highlights the similarity between the two countries in this aspect, namely the clear predominance of the private sector in merger and acquisition activities.

Category	Number of transactions	Percentage	Average Deal Size (\$M)	Total Transaction Value (\$M)
% public vs. private targets	599	9.24%	253.66	56089.26
% public vs. private buyers	28	0.43%	281.97	5075.39
% public vs. public buyers	17	0.26%	2004.74	12028.45
% private vs. private buyers	5811	89.63%	142.95	81480.69

Table 3.4: Transaction overview for German M&A deals

For Germany, when considering the average deal size, significantly higher values are observed for transactions involving public companies on both sides, with an average of USD 2,004.74 million per deal. These are followed by transactions where public companies act as targets and private companies as acquirers, with an average value of USD 281.97 million. One of the most notable differences when analyzing the data is the economic size of transactions: in Germany, the average deal size is \$191.16 million, nearly double that of Italy (107.2 \$M). The total transaction value is also significantly higher than in Italy (\$99 billion), exceeding \$156 billion. This reflects both the greater availability of capital and higher activity of merger and acquisitions in Germany compared to Italy.

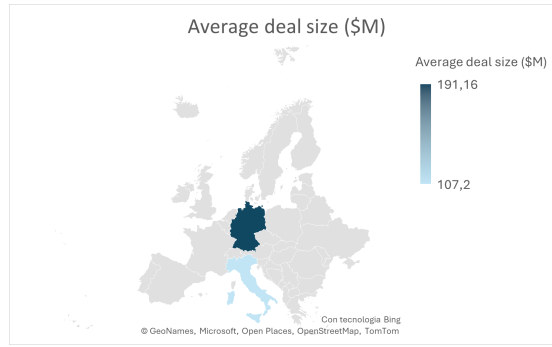


Figure 3.3: Average deal size (\$M) of Italy and Germany

Sector Analysis

This section analyses the sectors that are involved in Italy and Germany considering both Targets and Buyers, as well as the average deal size. The purpose is to understand the sectors that are mainly involved in the two countries.

Italy

Italy is characterized by the predominance of private firms both as targets and buyers. Obviously, data also aligns with the country's industrial fabric, characterized by the predominance of small and medium-sized enterprises. The financial and industrial sectors are particularly active, while sectors such as Real Estate and Energy involve fewer transactions but higher average deal sizes. Sectors like Information Technology and Consumer Staples tend to involve smaller but more frequent deals.

- **Industrial:** 708 targets vs 631 buyers, strong presence on both sides.
- **Financial:** 257 targets vs 605 buyers, greater presence as buyers.
- **Information Technology:** 246 targets vs 232 buyers, balanced activity with small deal sizes.
- **Real Estate:** 47 targets vs 35 buyers, few deals but with high average deal size as targets.

Sectors	Targets (#)	Buyers (#)	Avg Deal Size Targets (\$M)	Avg Deal Size Buyers (\$M)
Communication Services	181	152	234.46	165.78
Consumer Discretionary	402	301	90.46	88.06
Consumer Staples	224	175	44.95	36.95
Energy	35	27	122.81	110.47
Financial	257	605	181.99	192.54
Health Care	154	146	65.87	48.29
Industrial	708	631	126.50	101.27
Information Technology	246	232	19.27	11.93
Materials	156	123	64.27	60.05
Real Estate	47	35	821.83	26.57
Utilities	222	209	100.03	78.20

Table 3.5: Targets, Buyers and Average Deal Sizes in Italian M&A by Sector

The industrial sector shows the highest transaction volume on both sides, followed by the financial sector, which displays a stronger presence as buyer than as target. Real Estate and Energy, despite their limited transaction frequency, involve significantly higher average deal values, consistent with selective and capital-intensive investment strategies.

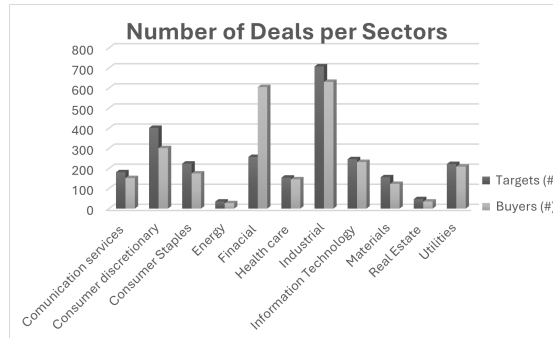


Figure 3.4: Number of Deals per Sectors (Italy)

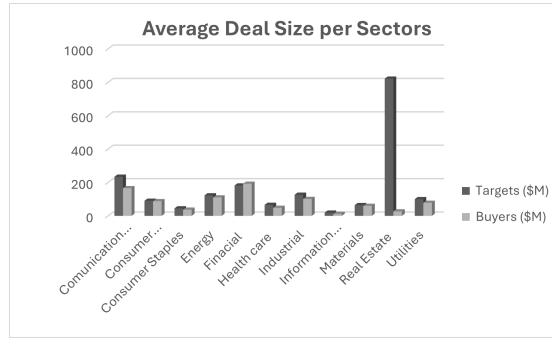


Figure 3.5: Average Deal Size per Sectors (Italy)

Considering targets, the Real Estate sector shows a very high average deal size (\$821.83 million), despite the limited number of transactions. Conversely, sectors such as Information Technology (\$19.27 million) and Consumer Staples (\$44.95 million) display smaller average deals, suggesting more frequent but lower-value transactions. Looking at the buyers, the average transaction size appears more balanced. The Financial sector (\$192.54 million) and Communication Services (\$165.78 million) show the largest deals. In contrast, the Real Estate sector, with an average transaction of \$26.57 million, records significantly smaller deals relative to its target value, suggesting that investments in this sector are concentrated in a few high-value operations.

Germany

The German M&A market shows a similar structure to Italy in terms of sectoral dominance, but higher transaction volumes and larger average deal sizes. The industrial sector leads both in terms of targets and buyers, with more than 1,500 for each of them, confirming, also for this country, the central role in driving merger and acquisition activity. Followed by the Financial sectors, that also in this case highlights a clear strategy of acquisitions rather than being acquired. Other sectors exhibit interesting patterns. Real Estate and Energy, despite a relatively low number of transactions, show very high average deal sizes, reflecting strategic and capital-intensive investments.

Sectors	Targets (#)	Buyers (#)	Avg Deal size Targets (\$M)	Avg Deal Size Buyers (\$M)
Communication Services	653	623	471.4	221.2
Consumer Discretionary	975	764	149.13	323.69
Consumer Staples	299	263	93.67	70.45
Energy	26	24	1003.22	19.62
Financial	317	1163	198.93	172.16
Health Care	421	384	184.11	146.55
Industrial	1760	1665	141.25	106.84
Information Technology	1010	766	53.25	119.92
Materials	411	294	253.74	325.27
Real Estate	162	158	494.57	541
Utilities	152	155	225.02	251.74

Table 3.6: Number of Deals and Average Deal Size by Sector in Germany

- **Industrial:** 1,760 targets vs 1,665 buyers, showing strong presence on both sides; it is the true engine of the German M&A market.
- **Financial:** 317 targets vs 1,163 buyers, showing a strong inclination toward acquisitions, much more than being acquired.
- **Information Technology:** 1,010 targets vs 766 buyers, a dynamic and balanced sector with numerous small- and medium-sized deals.
- **Real Estate:** 162 targets vs 158 buyers, low transaction volume but very high average deal size on both the target and buyer sides.
- **Energy:** 26 targets vs 24 buyers, a very limited sector in terms of operations, but with extremely high average value on the target side.

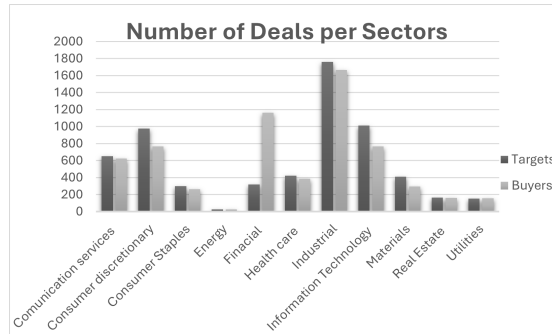


Figure 3.6: Number of Deals per Sectors (Germany)

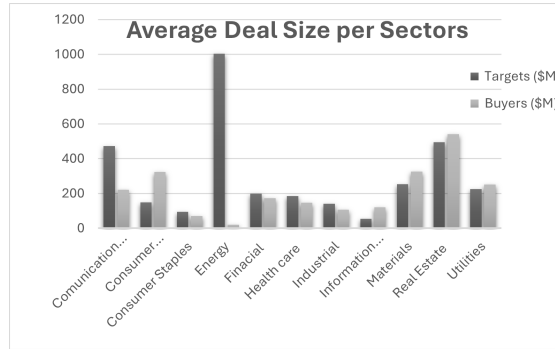


Figure 3.7: Average Deal Size per Sectors (Germany)

Looking at average deal size of the targets, the most significant sector is Energy, with an average of \$1,003.22 million, despite the relatively low number of transactions. High values are also recorded for the Real Estate (\$494.57 million) and Communication Services (\$471.40 million) sectors. If we look at the size of the buyers, the results show less dispersion, with a predominance of the Real Estate sector, followed by the Materials sector.

Comparative analysis

The comparative analysis between Italy and Germany highlights both structural similarities and economic differences in M&A activity. In both countries, there is a clear predominance of the industrial sector, confirming its central role in driving mergers and acquisitions. Financial firms, in both contexts, act primarily as buyers, indicating a strategic focus on growth through acquisitions rather than being acquired. However, the main difference lies in average deal size and capital intensity. In Germany, average deal sizes are significantly higher across almost all sectors, particularly in Energy, Real Estate, and Communication Services, reflecting greater availability of capital and more intensive investment strategies. In Italy, while Real Estate exhibits very high values, other sectors show smaller average deal sizes, consistent with a fragmented, SME-dominated industrial landscape. Overall, the comparison suggests that while sectoral dominance is similar between the two countries, Germany is characterized by larger, more capital-intensive transactions, whereas Italian M&A remains dominated by smaller, more frequent deals, punctuated by occasional strategic, high-value investments.

3.4 Financial Data Collection

3.4.1 Extraction Method

Using the S&P Capital IQ Excel plug-in, the main financial indicators for each transaction were extracted for the year of the transaction (Y0), as well as for the

first, third, and fifth years. The analysis focuses exclusively on firms involved in Merger and Acquisition transactions; therefore, all comparisons are performed within the same firms over time, using the transaction year as the reference point.

3.4.2 Financial Variables

The selected indicators allow for the evaluation of both the size and profitability of the company over time:

- **Revenue:** measures the volume of business generated by the company.
- **EBITDA and EBITDA Margin:** indicate operating profit and efficiency in core activities.

$$\text{EBITDA Margin} = \frac{\text{EBITDA}}{\text{Revenue}} \quad (3.1)$$

- **ROA (Return on Assets) and ROE (Return on Equity):** allow analysis of profitability trends in relation to total resources and to shareholders' equity, respectively.

$$\text{ROA} = \frac{\text{Net Income}}{\text{Total Assets}} \quad (3.2)$$

$$\text{ROE} = \frac{\text{Net Income}}{\text{Shareholders' Equity}} \quad (3.3)$$

- **Net Income:** shows net profit after all expenses and taxes.
- **Enterprise Value:** provides a measure of the overall market value of the company.

Analyzing the trends of these indicators over one-, three-, and five-year horizons makes it possible to assess whether the M&A transaction led to improvements in profitability, efficiency, and overall company value, thereby measuring the success of the operation over time. The results should be interpreted as evidence of post-merger performance dynamics rather than causal effects.

3.4.3 Data Limitations

This data extraction process, which initially included more than 9,000 transactions, revealed that data were not available for all observations. This can be easily explained by the much higher number of private transactions compared to public ones. Furthermore, an additional selection was made: some transactions lacked sufficient data to allow trend analysis, while for others, the available data was inconsistent.

Specifically, the regression sample is reduced to approximately 863 observations out of the initial 1,573 transactions extracted for the two countries combined. This

reduction is primarily attributable to the unavailability of key financial variables — in particular ROA, EBITDA margin, and revenue — for private firms, as discussed in section 3.3, the prevalence of private firms limits the availability of data.

The reduction in the usable sample may have implications for representativeness, because firms with complete financial information could differ from excluded firms along observable or unobservable dimensions. As a result, the final sample may not perfectly reflect the overall population of acquiring firms. Although the direction and magnitude of any potential distortion cannot be assessed with the available data, this issue constitutes a limitation of the study.

3.4.4 COVID-19 Impact

Considering the ten-year time frame under analysis, it is inevitable that post-deal performance may be influenced by external events, such as a major shock like the COVID-19 pandemic. When analyzing post-M&A financial performance (FY0, FY1, FY3, FY5), external shocks like COVID-19 can affect results independently of deal quality.

To assess the impact of COVID-19 on the sample transactions, an analytical procedure was implemented in Excel based on two main functions, designed to identify which transactions were affected by the pandemic and which specific years were impacted.

Specifically, a dummy variable named `COVID_impact` was created to distinguish transactions potentially affected by this significant exogenous factor. It is defined as follows:

- `COVID_impact` (dummy):

$$\text{COVID_impact} = \begin{cases} 1 & \text{if at least one financial year (FY0, FY1, FY3, or FY5) falls in 2020 or later} \\ 0 & \text{otherwise} \end{cases}$$

In addition, a second formula, named `COVID_years`, was created to precisely identify the financial years of each transaction that may have been influenced by the pandemic.

`COVID_years` (year-specific impact): indicates exactly which FYs could have been impacted by the event, e.g., “FY3, FY5”. This approach allows us to identify which parts of post-merger performance might be influenced by COVID-19, without excluding the transaction entirely.

3.4.5 Consistency Analysis

Following the analysis carried out using the `COVID_impact` dummy variable, It was decided to maintain the database in order to assess the impact of the pandemic on post-merger performance, creating separate files for each country.

Specifically, for both Germany and Italy, two distinct files were created:

- The first file includes all transactions, considering both, affected and unaffected by COVID-19, in order to provide a comprehensive overview of the sample.
- The second file includes only transactions unaffected by COVID-19, filtering company performance from this external shock.

This methodological choice was motivated by the need to evaluate the effect of the pandemic on corporate performance and to determine whether the observed trends remain stable and consistent independently of exogenous factors, such as the pandemic.

3.5 Empirical Design and Performance Measurement

The empirical design described in this chapter is grounded in the theoretical framework developed in Chapter 2. The choice of ROA as the primary performance indicator follows the accounting-based approach adopted in the seminal study by Healy, Palepu, and Ruback (1992), discussed in Section 2.7.1. The inclusion of EV/EBITDA as a valuation proxy reflects the role of market expectations and information asymmetry in shaping deal outcomes, as discussed in Sections 2.4 and 2.7.2. Finally, the Same Sector dummy operationalizes the distinction between horizontal and diversified transactions introduced in Section 2.1.1, and allows an empirical test of whether sectoral congruence generates measurable profitability advantages

3.5.1 Post-Merger Performance Measurement

Within the existing literature, a key reference is the seminal study by Healy, Palepu, and Ruback (1992), which examines post-merger performance by comparing operating results after the transaction with those observed prior to the acquisition. Building on this approach, the present analysis evaluates the impact of M&A transactions by measuring post-transaction changes in a set of financial variables.

Specifically, percentage changes were calculated for Revenue, EBITDA, EBITDA margin, Return on Assets (ROA), Return on Equity (ROE), Net Income, and Enterprise Value, using the year of the transaction as the reference point. These changes were then examined one, three, and five years after the transaction to capture short-, medium-, and long-term effects.

For each variable, growth rates were calculated according to the following formula:

$$\text{Growth}_t = \frac{\text{Value}_t - \text{Value}_0}{\text{Value}_0}$$

where t denotes the post-transaction year (1, 3, or 5), and 0 corresponds to the year in which the transaction occurred.

For each financial variable and time horizon, the following descriptive and inferential statistics were computed:

- **Mean growth rate**, capturing the average post-merger effect of M&A transactions on the variable of interest.
- **Standard deviation**, measuring the dispersion of growth rates around the mean.
- **t-statistic**, computed as:

$$t = \frac{\bar{x}}{s/\sqrt{n}},$$

where $\bar{x}$ is the mean growth rate, s is the standard deviation, and n is the number of valid observations.

- **p-value**, indicating the probability that the observed average effect could have occurred by chance.

The analysis of average effects is complemented by a transaction-level assessment based on the frequency of positive performance outcomes across individual deals. Analyses are conducted separately for Italy and Germany, and both the full dataset and the COVID-19-filtered dataset are considered.

3.5.2 GDP-Adjusted Performance Analysis

To account for the economic context, cumulative GDP growth over each time horizon was computed as:

$$\text{Cumulative GDP} = (1 + g_1) \times (1 + g_2) - 1,$$

where g_1 and g_2 denote the annual GDP growth rates over the relevant period. Financial variable growth rates were then adjusted by subtracting cumulative GDP growth over the same period.

3.5.3 Outlier Treatment and Robustness Checks

Outliers were identified using Tukey's interquartile range (IQR) criterion:

$$\text{IQR} = Q_3 - Q_1,$$

$$\text{Lower Bound} = Q_1 - 1.5 \times \text{IQR}, \quad \text{Upper Bound} = Q_3 + 1.5 \times \text{IQR}.$$

Observations satisfying $x_i < \text{Lower Bound}$ or $x_i > \text{Upper Bound}$ were classified as outliers. A parallel analysis excluding outliers was performed to assess the robustness of the findings.

3.5.4 Transaction-Level Success Indicator

For each transaction i , a binary variable was created for each indicator and time horizon:

$$\text{Success Indicator} = \begin{cases} \text{Yes,} & \text{if percentage change} > \text{sample average} \\ \text{No,} & \text{otherwise} \end{cases}$$

The composite success score for each transaction was then calculated as:

$$\text{Success Score}_i = \frac{\text{Number of "Yes" indicators}_i}{\text{Number of available indicators}_i},$$

with a score ranging from 0 to 1. Transactions with a success score ≥ 0.6 are classified as successful. Success rates are computed at the aggregate level for comparison across datasets, including COVID-19-filtered and full samples.

The threshold of 0.6 was a conservative choice that allowed transactions to be classified as successful only when they showed an actual improvement in the majority of the selected indicators, and were therefore not driven by a single metric. The 0.5 threshold was also considered, but not chosen because a simple majority criterion would have defined as successful even those transactions showing only a minimal net improvement, despite significant deterioration across several dimensions. Conversely, a threshold of 0.7 would have imposed an excessively strict standard, particularly when the number of indicators available for a single transaction was small, leaving virtually no tolerance for partial underperformance in any single dimension. The 0.6 threshold therefore represents the most balanced specification: it is meaningfully more demanding than a simple majority while remaining robust to the instability introduced by small indicator counts. To assess the sensitivity of the classification to this choice, robustness checks at thresholds of 0.5 and 0.7 were conducted. These confirmed that the relative ordering of success rates across countries, transaction sizes, and acquirer and target categories remains directionally consistent across all specifications, although absolute success rates vary in magnitude. The results using the alternative thresholds are reported in Appendix Tables A9–A11.

3.5.5 Country-Level Comparative Framework

Finally, the empirical strategy is structured to enable systematic comparison between Italy and Germany. All performance measures, statistical tests, GDP adjustments, and robustness procedures are applied symmetrically to both samples.

This consistent methodological framework ensures that cross-country differences reflect structural characteristics rather than differences in measurement or estimation procedures.

3.6 Regression

3.6.1 Regression Specification

The objective of this empirical analysis is to investigate the extent to which the acquirer's initial characteristics are associated with subsequent changes in profitability over time. In particular, the aim is to assess whether the acquirer's baseline financial conditions can predict the evolution of its post-acquisition performance.

To address this question, the following regression model is estimated:

$$\Delta ROA_{i,t+k} = \beta_0 + \beta_1 ROA_{i,t} + \beta_2 \text{EBITDA margin}_{i,t} + \beta_3 \ln(\text{Revenue}_{i,t}) + \beta_4 \text{Dummy}_i + \epsilon_{i,t} \quad (3.4)$$

where the dependent variable $\Delta ROA_{i,t+k}$ measures the change in return on assets between the transaction year t and $t + k$, with $k \in \{1, 3, 5\}$.

The use of multiple horizons allows us to capture both short- and long-term dynamics in firm performance. Shorter horizons ($k = 1$) capture immediate changes, which may reflect temporary shocks, while longer horizons ($k = 3$ and $k = 5$) allow us to assess whether the observed relationships persist over time or dissipate.

The independent variables included in the analysis are (all independent variables are measured at the acquirer level at the transaction completion date):

- the initial level of profitability ($ROA_{i,t}$), to account for mean reversion effects,
- operational profitability ($\text{EBITDA margin}_{i,t}$),
- firm size, proxied by $\ln(\text{Revenue}_{i,t})$,
- a dummy variable capturing differences between the two countries.

By comparing coefficients across different values of k , it is possible to evaluate the stability and persistence of the estimated effects and achieve a more comprehensive understanding of the underlying economic mechanisms.

All regressions are estimated using OLS, and the sample is restricted to observations with non-missing values for all variables included in each specification.

3.6.2 Extended Regression Specification

As a robustness check, the baseline specification is extended to include a measure of market valuation at the time of the transaction. In particular, the EV/EBITDA

multiple is introduced as an additional explanatory variable, to capture the price paid relative to the firm's operating performance.

The extended regression model is specified as follows:

$$\Delta ROA_{i,t+k} = \beta_0 + \beta_1 ROA_{i,t} + \beta_2 EBITDA_margin_{i,t} + \beta_3 \ln(Revenue_{i,t}) + \beta_4 Dummy_i + \beta_5 \frac{EV}{EBITDA}_{i,t} + \epsilon_{i,t} \quad (3.5)$$

where:

- $\frac{EV}{EBITDA}_{i,t}$ denotes the enterprise value to EBITDA multiple at the time of the transaction.

This variable serves as a proxy for the valuation at which the firm is acquired and reflects the market's expectations regarding future performance.

The inclusion of EV/EBITDA is motivated by three main considerations. First, it captures market expectations embedded in the transaction price. Firms acquired at higher multiples are typically associated with stronger growth prospects and are therefore expected to perform well. Deviations from these expectations may affect subsequent profitability.

Second, EV/EBITDA provides a proxy for valuation risk. Higher acquisition multiples may indicate that the acquirer has paid a premium. This increases the likelihood of overpayment and may lead to weaker post-transaction performance. This mechanism is closely related to the winner's curse hypothesis in the M&A literature.

Third, the variable complements the accounting-based measures included in the baseline model. While ROA and EBITDA margin capture internal operating performance, EV/EBITDA incorporates a market-based perspective and allows for a more comprehensive assessment of the determinants of post-acquisition outcomes.

As a consequence of the inclusion of EV/EBITDA, the number of observations is further reduced relative to the baseline specification, reflecting data availability constraints for this variable.

3.6.3 Extended Model with Sector Dummies

$$\Delta ROA_{i,t+k} = \beta_0 + \beta_1 ROA_{i,t} + \beta_2 EBITDA_Margin_{i,t} + \beta_3 \ln(Rev_{i,t}) + \beta_4 D_i + \beta_5 \frac{EV}{EBITDA}_{i,t} + \sum_{s=2}^{11} \gamma_s Sec_{i,s} + \epsilon_i \quad (3.6)$$

The previous analysis, including the EV/EBITDA multiple, was further extended by introducing a sector dummy variable aimed at identifying the industry to which the target company belongs. This choice is motivated by the fact that the sector structurally affects operating costs, margins, and profitability levels, thereby influencing ROA independently of the acquisition itself.

The inclusion of sector dummies represents a natural next step to verify whether the mean reversion phenomenon observed in the previous analyses is actually

attributable to firm-specific or deal-specific characteristics. Alternatively, it may be driven by structural factors related to the firm's industry. By controlling for sectoral heterogeneity, it is possible to isolate the firm-level component of ROA variation and test the robustness of the main results.

The sector classification was obtained from the S&P Capital IQ database and refers to the primary industry of each target company.

The omitted category is Communication Services, which is used as the benchmark in the regression. Consequently, the coefficients associated with the sector dummies should be interpreted relative to this category, holding all other variables in the model constant.

3.6.4 Extended Model with Same Sector Dummy

$$\Delta ROA_{i,t+k} = \beta_0 + \beta_1 ROA_{i,t} + \beta_2 EBITDA_Margin_{i,t} + \beta_3 \ln(Rev_{i,t}) + \beta_4 D_i + \beta_5 \frac{EV}{EBITDA_{i,t}} + \beta_6 SameSector_i + \varepsilon_i \quad (3.7)$$

This final analysis aims to introduce a relational dimension of the deal, capturing whether the acquirer and the target operate within the same competitive environment.

Specifically, a dummy variable named **Same_Sector** was introduced to distinguish whether the acquirer and the target belong to the same industry, following the classification provided by the S&P Capital IQ database. It is defined as follows:

- **Same_Sector** (dummy):

$$Same_Sector = \begin{cases} 1 & \text{if the acquirer and the target belong to the same industry} \\ & \text{according to the S\&P Capital IQ classification} \\ 0 & \text{otherwise} \end{cases}$$

3.6.5 Robustness Checks

To ensure the stability and reliability of the results, all regression specifications—models (3.4), (3.5), (3.6), and (3.7)—were systematically re-estimated after excluding outliers. The procedure follows the approach already described in subsection *Outlier Treatment and Robustness Checks*.

The decision to apply robustness checks uniformly across all model specifications reflects a precise methodological choice. By replicating the analysis consistently across all specifications, it is possible to assess whether the main findings hold regardless of the level of complexity of the model and the set of controls included.

This approach strengthens the internal validity of the analysis and ensures that the results are not an artifact of a particular specification or driven by a small number of extreme observations. Furthermore, this allows for a more transparent and coherent comparison of the coefficients across specifications.

If the estimated relationships prove stable with and without outliers, and across models of increasing complexity, this consistency constitutes stronger evidence in support of the economic mechanisms underlying the analysis.

4 Empirical Results

Two levels of analysis are presented in this chapter. The descriptive statistics in Sections 4.1 through 4.4 document aggregate performance patterns and cross-country differences in success rates. The regression analysis in Section 4.5 isolates the net determinants of profitability changes after controlling for firm-level characteristics. These two levels are complementary but operate differently: descriptive comparisons capture distributional and compositional differences between the two samples, while regressions identify average partial effects. Cross-country differences that appear in the descriptive analysis may therefore not survive regression controls, and this divergence is itself informative, as discussed in Chapter 5.

4.1 First Analysis – Average Post-Merger Performance

The empirical analysis evaluates both Italy and Germany using the complete database and the dataset excluding transactions affected by COVID-19. Results are presented by grouping financial indicators into growth, profitability, and market-based measures, in order to provide a structured and coherent comparison across countries.

Empirical Results

Variable	Year	Italy					Germany				
		Mean	SD	t-stat	df	p-value	Mean	SD	t-stat	df	p-value
Revenue	Y1	0.664	13.650	1.153	561	0.2492	-0.045	8.305	0.167	966	0.8676
	Y3	0.660	4.907	3.186	561	0.0015	-0.150	13.057	0.358	966	0.7203
	Y5	0.949	5.600	4.014	560	0.0001	0.061	19.012	0.100	965	0.9201
EBITDA	Y1	0.179	3.436	1.111	456	0.2672	-0.143	4.663	0.900	857	0.3681
	Y3	0.217	2.099	2.213	456	0.0274	-0.454	10.561	1.259	858	0.2084
	Y5	0.426	2.576	3.532	456	0.0005	-0.178	10.515	0.496	857	0.6201
ROA	Y1	-0.615	7.667	1.894	556	0.0587	2.247	74.072	0.938	955	0.3485
	Y3	-0.325	5.634	1.358	554	0.1751	-0.424	7.769	1.688	956	0.0918
	Y5	-0.350	7.594	1.083	552	0.2794	-0.537	13.818	1.201	953	0.2300
ROE	Y1	-0.004	5.282	0.016	556	0.9872	-0.679	16.815	1.247	953	0.2125
	Y3	10.706	193.843	1.301	554	0.1937	0.028	9.349	0.092	953	0.9266
	Y5	-0.301	18.117	0.391	552	0.6960	1.696	45.565	1.148	950	0.2514
Net income	Y1	-0.043	6.758	0.151	561	0.8803	-0.106	23.649	0.139	968	0.8894
	Y3	-0.202	12.859	0.373	561	0.7091	0.387	16.873	0.715	968	0.4750
	Y5	-0.642	12.679	1.201	561	0.2303	-0.443	33.445	0.413	968	0.6801
EBITDA Margin	Y1	0.004	1.275	0.064	453	0.9493	-0.161	3.162	1.479	842	0.1395
	Y3	-0.210	3.789	1.183	453	0.2375	0.446	26.066	0.496	841	0.6198
	Y5	-0.305	3.476	1.858	448	0.0639	-0.130	4.707	0.801	840	0.4231
Enterprise Value	Y1	0.243	1.313	3.456	347	0.0006	0.723	6.249	2.809	589	0.0051
	Y3	0.513	1.682	5.403	313	0.0000	3.146	53.326	1.394	557	0.1640
	Y5	0.834	2.112	6.552	274	0.0000	1.371	4.330	7.268	526	1.33e-12

Table 4.1: Mean changes, dispersion and statistical significance of post-merger performance, complete database

Variable	Year	Italy					Germany				
		Mean	SD	t-stat	df	p-value	Mean	SD	t-stat	df	p-value
Revenue	Y1	0.201	0.639	4.370	192	0.000	0.554	4.437	2.604	434	0.010
	Y3	0.149	0.781	2.642	191	0.009	1.045	5.651	3.856	434	0.000
	Y5	0.403	2.042	2.743	192	0.007	1.837	10.618	3.608	434	0.000
EBITDA	Y1	0.460	5.074	1.111	149	0.268	0.090	3.047	0.603	415	0.547
	Y3	-0.135	2.239	0.740	149	0.460	-0.264	6.863	0.785	415	0.433
	Y5	0.256	1.434	2.189	149	0.030	0.197	7.785	0.516	415	0.606
ROA	Y1	-0.334	2.556	1.818	192	0.071	-0.351	3.315	2.195	428	0.029
	Y3	-0.739	5.615	1.823	191	0.070	-0.306	3.173	1.997	428	0.046
	Y5	-1.301	6.005	3.002	191	0.003	-0.354	4.165	1.760	427	0.079
ROE	Y1	0.182	5.263	0.480	192	0.632	-1.544	24.525	1.302	427	0.193
	Y3	32.014	328.752	1.349	191	0.179	-0.064	13.114	0.102	427	0.919
	Y5	-2.162	25.455	1.177	191	0.241	2.199	65.734	0.690	425	0.490
Net income	Y1	-0.078	7.720	0.140	194	0.888	-1.317	25.397	1.083	435	0.279
	Y3	-2.035	17.794	1.597	194	0.112	0.807	20.225	0.834	435	0.405
	Y5	-2.025	14.071	2.010	194	0.046	0.436	15.286	0.596	435	0.551
EBITDA Margin	Y1	0.098	1.560	0.765	148	0.445	-0.022	3.031	0.148	408	0.883
	Y3	-0.453	6.218	0.886	147	0.377	-0.356	5.831	1.237	409	0.217
	Y5	-0.515	5.365	1.161	145	0.248	-0.006	5.578	0.023	410	0.982
Enterprise Value	Y1	0.125	0.974	1.395	118	0.166	0.957	8.856	1.811	280	0.071
	Y3	0.459	1.722	2.759	106	0.007	5.636	76.326	1.218	271	0.224
	Y5	0.781	2.782	2.764	96	0.007	1.722	5.035	5.430	251	0.000

Table 4.2: Mean changes, dispersion and statistical significance of post-merger performance, database without COVID-19 transactions

Growth Indicators: Revenue and EBITDA

In the complete Italian sample, the first post-transaction year (Y1) doesn't display a statistically significant change of Revenue and EBITDA. However, some positive and statistical effects emerge at the three- and five-year horizons (Y3 and Y5). When transactions affected by COVID-19 are excluded, Revenue growth is positive and significant already at Y1 and remain significant across all time horizons. EBITDA, instead, shows statistical significance only at Y5, indicating a less uniform pattern.

In Germany, the complete sample does not show a stable and positive pattern of revenue in short and medium term. A positive value appears at Y5, but without statistical support. Once COVID-19 transactions are excluded, revenue growth becomes positive and statistically significant across all time horizons, indicating a substantial modification of the baseline results.

Overall, the growth dynamics appear stronger in Italy in complete sample, while Germany statistically significant growth effects emerge only after the exclusion of pandemic-affected transactions.

Profitability Indicators: ROA and ROE

In Italy, the profitability indicators, both ROA and ROE, do not display significant improvements across any time horizon, both in the full sample and in the dataset excluding COVID-19 transactions. The exclusion of pandemic-related deals does not materially alter this pattern.

In Germany, the same weak pattern is shown in the complete sample. After excluding COVID-19 transactions, ROA exhibits negative and statistically significant values in several periods, which indicates a deterioration rather than an improvement in profitability. ROE does not present consistent statistical support.

Across both countries, accounting-based profitability indicators do not show systematic post-merger improvements.

Market-Based Performance: Enterprise Value

Enterprise Value emerges as the most consistent indicator in both countries. In Italy, positive and statistically significant increases are observed across all time horizons, both in full sample and after excluding COVID-19 transactions. In Germany, the pattern is broadly consistent, with significant results at Y1 and Y5, while the Y3 estimate, although positive and large in magnitude, does not reach conventional significance levels in the full sample. The exclusion of pandemic-affected transactions does not alter this result.

Thus, in both national contexts, market-based performance appears more robust than accounting-based measures.

It should be noted that Enterprise Value data are available for a substantially smaller subset of observations relative to accounting-based indicators, reflecting

the limited availability of market-based data for private firms. The firms for which Enterprise Value is observable are likely to be larger and more financially transparent than those in the broader sample, which may introduce a compositional bias in the estimates. The Enterprise Value results should therefore be interpreted with this caveat in mind.

Synthesis of Results

The empirical evidence reveals some common patterns across Italy and Germany. First, Enterprise Value shows positive and statistically significant growth across all specifications. Second, profitability indicators remain weak and statistically insignificant in both countries. Third, growth indicators exhibit stronger and more stable results in Italy, while in Germany statistically significant revenue growth becomes evident only after excluding COVID-19 transactions.

These findings describe the statistical patterns observed in the data; however, their interpretation requires caution. In particular, the negative pattern observed in ROA should not be interpreted as evidence of acquisition-induced deterioration. As will be discussed in Chapter 5, the regression analysis suggests that this decline is primarily driven by mean reversion—a structural dynamic linked to the initial profitability level of acquiring firms—rather than by the acquisition itself. The interpretation of these dynamics and their broader economic implications will be addressed in the following chapter.

4.2 GDP-Adjusted Performance Analysis

This section presents the results obtained after adjusting post-merger performance for cumulative GDP growth over the relevant time horizons. The aim is to compare the adjusted estimates with the baseline results to assess whether the observed performance patterns remain stable once macroeconomic dynamics are controlled for.

The analysis is conducted for both Italy and Germany, considering the full database and the dataset excluding transactions affected by COVID-19.

Empirical Results

Variable	Year	Italy					Germany				
		Mean	SD	t-stat	df	p-value	Mean	SD	t-stat	df	p-value
Revenue	Y1	0.674	13.649	1.171	561	0.242	-0.057	8.306	0.212	966	0.832
	Y3	0.659	4.912	3.176	560	0.002	-0.186	13.058	0.444	966	0.657
	Y5	0.931	5.644	3.874	551	0.000	-0.013	19.082	0.021	957	0.983
EBITDA	Y1	0.189	3.436	1.175	456	0.240	-0.156	4.663	0.978	857	0.329
	Y3	0.218	2.101	2.217	455	0.027	-0.491	10.562	1.362	858	0.174
	Y5	0.412	2.592	3.365	447	0.001	-0.235	10.550	0.650	851	0.516
ROA	Y1	-0.605	7.667	1.863	556	0.063	2.235	74.072	0.933	955	0.351
	Y3	-0.323	5.639	1.349	553	0.178	-0.460	7.768	1.831	956	0.067
	Y5	-0.361	7.651	1.101	543	0.271	-0.595	13.869	1.320	946	0.187
ROE	Y1	0.006	5.281	0.029	556	0.977	-0.691	16.816	1.269	953	0.205
	Y3	10.730	194.020	1.302	553	0.194	-0.008	9.349	0.027	953	0.979
	Y5	-0.294	18.256	0.376	543	0.707	1.654	45.733	1.111	943	0.267
Net income	Y1	-0.033	6.757	0.116	561	0.908	-0.118	23.649	0.155	968	0.877
	Y3	-0.198	12.869	0.365	560	0.716	0.351	16.873	0.648	968	0.517
	Y5	-0.659	12.780	1.213	552	0.226	-0.516	33.575	0.476	960	0.634
EBITDA Margin	Y1	0.014	1.275	0.238	453	0.812	-0.173	3.162	1.591	842	0.112
	Y3	-0.211	3.793	1.183	452	0.237	0.409	26.067	0.455	841	0.649
	Y5	-0.321	3.504	1.921	439	0.055	-0.186	4.722	1.138	834	0.255
Enterprise Value	Y1	0.255	1.310	3.624	347	0.000	0.711	6.249	2.763	589	0.006
	Y3	0.511	1.681	5.383	313	0.000	3.110	53.326	1.378	557	0.169
	Y5	0.809	2.113	6.350	274	0.000	1.314	4.327	6.973	526	0.000

Table 4.3: Mean changes, dispersion and statistical significance of post-merger performance, full database GDP-Adjusted

Variable	Year	Italy					Germany				
		Mean	SD	t-stat	df	p-value	Mean	SD	t-stat	df	p-value
Revenue	Y1	0.208	0.639	4.533	192	0.000	0.537	4.437	2.526	434	0.012
	Y3	0.156	0.777	2.790	191	0.006	0.995	5.652	3.670	434	0.000
	Y5	0.392	2.041	2.670	192	0.008	1.747	10.618	3.432	434	0.001
EBITDA	Y1	0.467	5.073	1.127	149	0.262	0.074	3.048	0.494	415	0.622
	Y3	-0.130	2.238	0.710	149	0.479	-0.314	6.863	0.934	415	0.351
	Y5	0.243	1.433	2.079	149	0.039	0.107	7.785	0.281	415	0.779
ROA	Y1	-0.327	2.555	1.777	192	0.077	-0.368	3.317	2.297	428	0.022
	Y3	-0.732	5.613	1.806	191	0.072	-0.356	3.172	2.324	428	0.021
	Y5	-1.312	6.006	3.028	191	0.003	-0.444	4.164	2.206	427	0.028
ROE	Y1	0.189	5.262	0.500	192	0.618	-1.560	24.526	1.316	427	0.189
	Y3	32.021	328.755	1.350	191	0.179	-0.115	13.114	0.181	427	0.857
	Y5	-2.173	25.452	1.183	191	0.238	2.109	65.734	0.662	425	0.508
Net income	Y1	-0.070	7.719	0.127	194	0.899	-1.334	25.398	1.097	435	0.273
	Y3	-2.028	17.791	1.591	194	0.113	0.757	20.226	0.782	435	0.435
	Y5	-2.037	14.072	2.021	194	0.045	0.347	15.286	0.473	435	0.636
EBITDA Margin	Y1	0.104	1.559	0.817	148	0.415	-0.038	3.031	0.257	408	0.797
	Y3	-0.447	6.217	0.875	147	0.383	-0.407	5.831	1.412	409	0.159
	Y5	-0.529	5.359	1.192	145	0.235	-0.096	5.577	0.350	410	0.727
Enterprise Value	Y1	0.131	0.974	1.470	118	0.144	0.940	8.857	1.779	280	0.076
	Y3	0.467	1.721	2.807	106	0.006	5.585	76.327	1.207	271	0.229
	Y5	0.770	2.778	2.730	96	0.008	1.632	5.035	5.145	251	0.000

Table 4.4: Mean changes, dispersion and statistical significance of post-merger performance database GDP-Adjusted without COVID-19 transactions

Accounting-Based Indicators

In Germany, the adjustment for cumulative GDP growth leads to a reduction in the mean for several accounting-based indicators, including Revenue, EBITDA, Net Income, ROE, and EBITDA Margin. The reduction is not flat over time but is more visible at the medium- and long-term horizons (Y3 and Y5). In some cases, previously positive mean values become smaller after the adjustment, and statistical significance weakens relative to the baseline estimates.

When the analysis is restricted to transactions not affected by COVID-19, GDP adjustment still produces a downward revision of mean values, although the overall direction of the trends remains unchanged.

In Italy, the GDP adjustment generates smaller changes in mean values. Revenue, Net Income, and EBITDA display only marginal variations relative to the unadjusted results. Statistical significance remains broadly consistent with the baseline findings, both in the full sample and in the dataset excluding COVID-19 transactions.

In conclusion, the GDP correction appears more pronounced in Germany than in Italy for accounting-based measures.

Market-Based Indicator: Enterprise Value

Market-based indicators continue to display, for both countries, positive mean changes after GDP adjustment.

In Germany, the estimates remain positive and statistically significant across the considered time horizons. In particular, the magnitude of effect is slightly reduced compared to the unadjusted results, but statistical significance is preserved in most specifications.

Similarly in Italy, Enterprise Value remains positive and statistically significant after controlling for GDP growth, and the same pattern persists when transactions affected by COVID-19 are excluded.

4.3 Robustness Checks and Outlier Analysis

In this section, the robustness analysis is conducted after excluding outliers according to the interquartile range (IQR) criterion. The aim is to verify whether the baseline results are driven by extreme observations. The analysis is performed both for Italy and Germany, considering the full database and the dataset excluding transactions affected by COVID-19.

Empirical Results

Variable	Year	Italy					Germany				
		Mean	SD	t-stat	df	p-value	Mean	SD	t-stat	df	p-value
Revenue	Y1	0.104	0.219	10.480	491	2.51E-23	0.100	0.196	14.862	851	1.37E-44
	Y3	0.206	0.456	10.167	505	3.23E-22	0.236	0.415	16.793	874	4.60E-55
	Y5	0.373	0.670	12.660	516	3.51E-32	0.352	0.580	17.985	874	8.99E-62
EBITDA	Y1	0.048	0.296	3.125	375	0.0019	0.062	0.307	5.306	694	1.51E-07
	Y3	0.181	0.622	5.839	400	1.09E-08	0.183	0.633	7.769	721	2.73E-14
	Y5	0.323	0.855	7.609	406	1.95E-13	0.249	0.886	7.658	742	5.88E-14
ROA	Y1	-0.131	0.374	7.568	462	2.08E-13	-0.112	0.393	8.186	818	1.03E-15
	Y3	-0.283	0.573	10.724	470	3.76E-24	-0.247	0.523	13.547	821	6.99E-38
	Y5	-0.314	0.539	12.462	457	6.86E-31	-0.292	0.532	15.846	829	1.35E-49
ROE	Y1	-0.187	0.497	7.975	446	1.30E-14	-0.194	0.550	10.052	808	1.77E-22
	Y3	-0.274	0.776	7.374	436	8.43E-13	-0.262	0.716	10.357	801	1.12E-23
	Y5	-0.333	0.796	8.752	438	4.57E-17	-0.336	0.706	13.504	802	1.35E-37
Net income	Y1	-0.029	0.614	1.009	442	0.313	-0.024	0.648	1.044	795	0.297
	Y3	0.002	1.050	3.675	443	0.974	-0.110	0.967	3.202	795	0.0014
	Y5	0.052	1.013	0.886	453	0.376	0.011	1.113	0.289	806	0.773
EBITDA Margin	Y1	-0.055	0.221	4.821	377	2.07E-06	-0.025	0.216	2.987	686	0.0029
	Y3	-0.065	0.328	3.833	376	0.00015	-0.062	0.384	4.402	732	1.23E-05
	Y5	-0.109	0.374	5.706	381	2.32E-08	-0.086	0.418	5.608	743	2.88E-08
Enterprise Value	Y1	0.104	0.400	4.725	330	3.40E-06	0.191	0.442	10.121	544	3.54E-22
	Y3	0.282	0.609	7.896	290	5.98E-14	0.456	0.800	13.014	521	1.01E-33
	Y5	0.382	0.864	6.997	249	2.41E-11	0.588	1.082	11.893	478	9.40E-29

Table 4.5: Mean changes, dispersion and statistical significance of post-merger performance complete database

Variable	Year	Italy					Germany				
		Mean	SD	t-stat	df	p-value	Mean	SD	t-stat	df	p-value
Revenue	Y1	0.073	0.198	4.687	161	5.87E-06	0.102	0.178	11.066	374	8.16E-25
	Y3	-0.007	0.435	0.201	176	0.841	0.171	0.353	9.443	380	3.76E-19
	Y5	0.080	0.586	1.819	177	0.071	0.275	0.534	10.151	387	1.28E-21
EBITDA	Y1	0.049	0.309	1.744	118	0.084	0.088	0.326	4.964	336	1.10E-06
	Y3	0.117	0.614	2.191	132	0.030	0.165	0.636	4.831	345	2.04E-06
	Y5	0.168	0.846	2.292	133	0.023	0.211	0.879	4.542	357	7.62E-06
ROA	Y1	-0.099	0.403	3.059	155	0.0026	-0.119	0.433	5.243	363	2.69E-07
	Y3	-0.349	0.640	6.782	154	2.39E-10	-0.182	0.638	5.497	371	7.21E-08
	Y5	-0.384	0.593	8.013	152	2.74E-13	-0.248	0.587	8.145	369	5.93E-15
ROE	Y1	-0.196	0.492	4.877	148	2.75E-06	-0.182	0.594	5.725	350	2.23E-08
	Y3	-0.506	0.893	6.825	144	2.26E-10	-0.267	0.918	5.481	355	8.02E-08
	Y5	-0.489	0.870	6.966	153	9.08E-11	-0.304	0.829	6.862	348	3.13E-11
Net income	Y1	0.026	0.732	0.447	155	0.656	-0.054	0.773	1.312	358	0.190
	Y3	-0.318	1.050	3.675	146	0.00033	-0.154	1.135	2.559	354	0.0109
	Y5	-0.319	1.050	4.075	148	7.47E-05	-0.058	1.214	0.897	357	0.370
EBITDA Margin	Y1	-0.044	0.269	1.786	120	0.0766	-0.024	0.215	2.048	329	0.041
	Y3	-0.048	0.444	1.192	120	0.235	-0.031	0.424	1.409	360	0.160
	Y5	-0.117	0.405	3.120	116	0.0023	-0.108	0.427	4.811	362	2.21E-06
Enterprise Value	Y1	0.025	0.376	0.710	116	0.479	0.235	0.461	8.262	262	7.19E-15
	Y3	0.205	0.593	3.484	101	0.00073	0.593	0.871	10.821	252	1.16E-22
	Y5	0.208	0.747	2.605	87	0.0108	0.959	1.417	10.359	233	6.30E-21

Table 4.6: Mean changes, dispersion and statistical significance of post-merger performance database without COVID-19 transactions

Growth Indicators: Revenue and EBITDA

In Italy, also after the exclusion of outliers, Revenue continues to display positive mean changes, particularly at the longer post-transaction horizons. In general, statistical significance is preserved over time, although mean values are lower compared to the baseline analysis. EBITDA exhibits a similar but weaker pattern, with positive values that remain statistically significant in selected horizons.

When the analysis is extended to the dataset not affected by COVID-19, Revenue shows a reduction of significance, particularly in the medium and long term. EBITDA, however, maintains positive and statistically significant results across several horizons, with lower dispersion compared to the full sample.

In Germany, the exclusion of outliers in the full sample provides positive and statistically significant mean values for Revenue and EBITDA, particularly in the medium- and long-term horizons. Compared to the baseline analysis, dispersion decreases, as reflected in lower standard deviations.

Also, in the German dataset excluding COVID-19 transactions, Revenue and EBITDA continue to display positive average values over time. However, statistical significance is less pronounced compared to the full dataset with outliers excluded.

Overall, in both countries, growth indicators remain positive after outlier exclusion, although mean values and statistical significance are generally lower compared to the baseline results.

Profitability Indicators: ROA, ROE, and EBITDA Margin

The profitability indicators in Italy continue to show weak or declining patterns after excluding outliers. No systematic improvement emerges across the post-transaction horizons considered. This pattern persists in the dataset excluding COVID-19-affected transactions.

In Germany, profitability indicators exhibit negative or declining mean values across several horizons after outlier exclusion. There is no clear trend of statistical significance across specifications, and the same pattern is largely preserved in the COVID-free dataset.

Across both countries, accounting-based profitability measures remain structurally weaker than growth and market-based indicators, even after removing extreme observations.

Net Income

In the Italian sample, Net Income displays lower statistical significance after excluding outliers, with higher p-values compared to the baseline results. The mean values are reduced and less consistent across horizons. Similar patterns are observed in the COVID-free dataset.

For Germany, the mean values of Net Income remain positive in some horizons; statistical significance weakens after excluding extreme observations, particularly in the dataset filtered for COVID-19 transactions.

Overall, Net Income appears more sensitive to outlier exclusion compared to Revenue and EBITDA in both countries.

Market-Based Indicator: Enterprise Value

In both countries, Enterprise Value remains positive after the exclusion of outliers.

In Italy, positive values are preserved across medium- and long-term horizons, although the magnitude of the increase is lower relative to the baseline analysis. Statistical significance is preserved in the third- and fifth-year horizons, including in the dataset excluding COVID-19 transactions.

In Germany, Enterprise Value continues to display positive and statistically significant mean values, with a slight reduction of statistical significance in the COVID-free sample.

Overall, market-based performance appears less sensitive to the exclusion of extreme observations compared to accounting-based indicators.

Comparative Summary

The robustness analysis leads to lower values and a reduction of dispersion in both Italy and Germany. Standard deviations decline across most variables, reflecting a more homogeneous distribution of observations.

In both countries, growth indicators and Enterprise Value show positive average trends after excluding outliers, whereas profitability indicators remain weak and do not show systematic improvements.

In general, the exclusion of COVID-19-impacted transactions does not alter the general trend and considerations made, although statistical significance becomes less pronounced in several specifications.

4.4 Transaction-Level Success Analysis

Having established the robustness of average performance patterns in Sections 4.1 through 4.3, this section shifts the focus from aggregate outcomes to transaction-level success rates, examining whether performance improvements are systematically related to transaction value, buyer size, and target size. Transactions are divided into “small” and “large” categories according to the median value calculated on the full dataset for each country.

Transaction Value

Italy			Germany		
	Full database	Without COVID-19		Full database	Without COVID-19
Success Rate	26%	35%	Success Rate	44%	24%

Table 4.7: Success Rate

When considering the full database, a clear pattern emerges between Italy and Germany. Italy records a success rate of 26%, while Germany reaches 44%. Germany has a higher proportion of transactions achieving above-average improvements in at least 60% of the selected economic and financial indicators.

The comparison changes when transactions affected by COVID-19 are excluded. In the COVID-free dataset, Italy's success rate increases to 35%, while Germany's declines to 24%. As a result, the relative position of the two countries reverses under this specification. The magnitude of the variation is also different: Italy shows a nine-percentage-point difference between the two datasets, while Germany exhibits a twenty-percentage-point decline.

Transactions are classified as large or small using country-specific medians calculated on the full datasets, with the same thresholds applied to both the complete and the COVID-free samples.

Italy			Germany		
Transaction Value	Full database	Without COVID-19	Transaction Value	Full database	Without COVID-19
BIG	18%	32%	BIG	20%	6%
SMALL	25%	27%	SMALL	37%	37%

Table 4.8: Success rate considering Transaction Value

In the full database, different patterns emerge across the two countries. In Italy, small transactions display a higher success rate than large ones (25% versus 18%). In Germany, the difference is larger: small transactions reach 37%, compared to 20% for larger transactions.

When COVID-19 transactions are excluded, the dynamics diverge. In Italy, large transactions increase to 32%, surpassing small transactions, which reach 27%. In Germany, small transactions remain stable at 37%, while large transactions decline to 6%. Thus, the relative ranking between large and small transactions changes in Italy but remains unchanged in Germany.

Buyer Size

Italy			Germany		
Buyer size	Full database	Without COVID-19	Buyer size	Full database	Without COVID-19
BIG	19%	52%	BIG	26%	28%
SMALL	32%	15%	SMALL	38%	26%

Table 4.9: Success rate considering Buyer size

In the full database, small buyers outperform large buyers in both countries. In Italy, small buyers record 32% compared to 19% for large buyers. In Germany, small buyers reach 38%, while large buyers record 26%.

In the COVID-free subsample, the evolution differs. In Italy, large buyers increase markedly to 52%, while small buyers decline to 15%, reversing the initial ranking. In Germany, large buyers increase slightly to 28%, while small buyers decline to 26%, resulting in a narrower difference without a strong reversal effect.

Target Size

Italy			Germany		
Target size	Full database	Without COVID-19	Target size	Full database	Without COVID-19
BIG	35%	42%	BIG	30%	22%
SMALL	34%	37%	SMALL	22%	38%

Table 4.10: Success rate considering Target size

In the full database, Italy shows very similar success rates for large and small targets (35% and 34%, respectively). Germany, by contrast, records higher values for large targets (30%) compared to small targets (22%).

In the COVID-free sample, both countries exhibit changes in relative positioning. In Italy, large targets increase to 42% and small targets to 37%, maintaining a limited difference between the two categories. In Germany, large targets decline to 22%, while small targets increase to 38%, leading to a reversal in ranking.

Taken together, the transaction-level analysis reveals that success rates are sensitive to both deal characteristics and macroeconomic context. The exclusion of COVID-19-affected transactions produces heterogeneous effects across the two countries: in Italy, the most pronounced reversal emerges for buyer size, with large acquirers increasing from 19% to 52% while small acquirers decline from 32% to 15%. In Germany, the sharpest shift is observed for transaction value, with large deals declining dramatically from 20% to 6%, while target size also reverses, with small targets increasing from 22% to 38%. These asymmetric patterns are consistent with the interpretive hypothesis developed in Chapter 5, which suggests that the two governance systems may differ not in average outcomes but in their sensitivity

to external shocks. To verify the consistency of the results and ensure that they are not an artifact of the chosen threshold, robustness checks were conducted using alternative thresholds of 0.5 and 0.7 (Appendix Tables A9–A11). Across all threshold specifications, the substantive conclusions remain virtually unchanged. In particular, the greater sensitivity of Italian success rates to the exclusion of COVID-19-affected transactions and the German pattern of a sharp decline in the success rates of large transactions under the COVID-free specification remain robust across all threshold values. As expected, a threshold of 0.5 produces uniformly higher success rates, while a threshold of 0.7 produces lower ones. However, the relative ordering of categories within each country, as well as the directional asymmetries between Italy and Germany, are preserved across all specifications. This confirms that the 0.6 threshold is not driving the results.

4.5 Regressions

4.5.1 Baseline Regression Results

Table 4.11: Summary of Regression Coefficients

Variable	k = 1	k = 3	k = 5
Intercept	-2.442***	-5.233***	-3.467***
ROA (t0)	-0.409***	-0.498***	-0.631***
EBITDA Margin (t0)	0.006*	0.010*	0.001
ln(Revenue) (t0)	0.249***	0.431***	0.346***
Dummy (DE=1)	0.137	0.039	-0.027
R^2	0.280	0.170	0.325
Adjusted R^2	0.278	0.167	0.323

Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

The table 4.11 reports the results for the three time horizons ($k = 1, 3, 5$). The most notable finding concerns the coefficient on initial profitability, which is negative and highly statistically significant across all specifications (ranging from -0.409 for $k = 1$ to -0.631 for $k = 5$).

Firm size, proxied by log revenue, is positive and statistically significant across all horizons, suggesting that larger firms tend to exhibit stronger improvements (or smaller declines) in profitability over time.

The coefficient on EBITDA margin is positive but only weakly statistically significant, while the dummy variable does not appear to have a statistically significant effect in any specification.

4.5.2 Regression Results with EV/EBITDA

Table 4.12: Summary of Regression Coefficients (with EV/EBITDA)

Variable	$k = 1$	$k = 3$	$k = 5$
Intercept	-2.499***	-2.222**	-1.960**
ROA _{t_0}	-0.375***	-0.532***	-0.667***
EBITDA Margin _{t_0}	-0.005	0.004	-0.014**
ln(Revenue _{t_0})	0.254***	0.218***	0.254***
Dummy (DE=1)	0.097	0.535*	0.354
EV/EBITDA _{t_0}	0.002**	-0.001	-0.000
R^2	0.268	0.220	0.325
Adjusted R^2	0.263	0.216	0.321

Notes: Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

As a robustness check, the baseline specification is extended to include the EV/EBITDA valuation multiple, which captures market expectations embedded in the transaction price.

The table 4.12 presents the results of the extended specification including the EV/EBITDA multiple.

The mean reversion pattern documented in the baseline specification proves robust to the inclusion of the valuation multiple.

Firm size continues to display a positive and statistically significant coefficient across all specifications. The coefficient on EBITDA margin shows some variation across time horizons and becomes statistically significant in the longer horizon specification.

The country dummy variable remains non-significant, in line with previous results.

The EV/EBITDA multiple is positive and statistically significant at the one-year horizon (0.002, $p < 0.05$), while it is not statistically significant at longer horizons. Although statistically significant, the magnitude of the coefficient is economically negligible, suggesting that the initial valuation multiple has limited practical relevance in predicting post-acquisition profitability changes.

The inclusion of EV/EBITDA leads to a reduction in the number of observations, reflecting data availability constraints. However, the overall explanatory power of the model remains broadly comparable to that of the baseline specification.

4.5.3 Extended EV/EBITDA Model: Clean Sample

Table 4.13: Summary of Regression Coefficients (with EV/EBITDA)

Variable	$k = 1$	$k = 3$	$k = 5$
Intercept	-4.167***	-3.423***	-3.650***
ROA _{t_0}	-0.353***	-0.512***	-0.630***
EBITDA Margin _{t_0}	-0.005	0.007	-0.010
ln(Revenue _{t_0})	0.327***	0.263***	0.305***
Dummy (DE=1)	-0.108	0.371	0.172
EV/EBITDA _{t_0}	0.055***	0.038	0.067***
R^2	0.270	0.204	0.304
Adjusted R^2	0.266	0.199	0.299

Notes: Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

To verify whether the results of the extended model are sensitive to extreme observations, the specification is re-estimated after excluding outliers. The table 4.13 presents the results of the extended specification including the EV/EBITDA multiple, after the exclusion of outliers.

The mean reversion pattern remains stable after outlier exclusion, with coefficients of comparable magnitude across all time horizons, confirming that the result is not driven by extreme observations.

Firm size continues to have a positive and statistically significant effect across all specifications.

The country dummy variable remains non-significant, in line with previous results, as does the EBITDA margin, which remains insignificant at both short and medium horizons.

Finally, the EV/EBITDA multiple shows a positive coefficient across all time horizons and is statistically significant at the one-year and five-year horizons. This suggests that, after removing extreme transactions, the relationship between initial valuation multiples and subsequent profitability becomes more evident.

The exclusion of outliers reduces the number of observations from 861 to 786, but the main patterns remain largely unchanged.

4.5.4 EV/EBITDA Model and Sector

Table 4.14: EV/EBITDA with Sector Dummies — Full Results

Variable	$k = 1$	$k = 3$	$k = 5$
Intercept	-2.860***	-2.561*	-2.368*
ROA _{t_0}	-0.368***	-0.515***	-0.666***
EBITDA Margin _{t_0}	-0.006	-0.001	-0.012 [^]
ln(Revenue _{t_0})	0.262***	0.222**	0.274***
Dummy (DE=1)	-0.018	0.467	0.079
EV/EBITDA _{t_0}	0.002*	-0.001	0.000
<i>Sector Dummies (ref: Communication Services)</i>			
Consumer Discretionary	-0.779 [^]	-1.453*	-1.279*
Consumer Staples	0.020	0.754	0.656
Energy	-0.358	-1.132	-1.144
Financials	-0.640	0.345	-1.623 [^]
Health Care	0.639	0.536	1.366 [^]
Industrials	0.554	0.853	0.648
Information Technology	0.577	0.291	0.889
Materials	0.748	0.533	0.397
Other	0.718	0.414	-1.267
Real Estate	0.885	2.215*	1.248
Utilities	0.312	0.273	-0.343
R^2	0.288	0.244	0.351
Adjusted R^2	0.274	0.229	0.339

Notes: Significance levels: [^] $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Sector dummies are based on the GICS classification of the target firm. Reference category: Communication Services.

Building on the extended specification, sector dummies are introduced to control for structural differences in profitability across industries.

The table 4.14 reports the regression results with the introduction of sector dummies for the three considered horizons. The ROA coefficient remains negative and statistically significant across all horizons, with values of -0.368, -0.515, and -0.666 for $k = 1$, $k = 3$, and $k = 5$ respectively, and magnitudes broadly comparable to those observed in previous specifications, suggesting that the mean reversion pattern is not an artifact of sectoral composition but persists after controlling for industry-level heterogeneity.

The variable approximating firm size also maintains positive and statistically significant coefficients, consistent with what was observed in the previous specifications.

The EV/EBITDA multiple is positive and marginally significant in the short term (0.002, $p < 0.1$), but does not reach statistical significance in the medium and long term. This suggests that the deal valuation has an effect on the change in profitability in the first year following the deal, which then dissipates over time.

Regarding the variable introduced in this new analysis, the sector dummy is not statistically significant, and therefore does not constitute a relevant driver for the change in profitability. Exceptions are the Consumer Discretionary sector, which shows a negative and statistically significant coefficient in the medium- and long-term horizons (-1.453 at $k = 3$ and -1.279 at $k = 5$), a trend consistent with the competitive pressure and margin compression typical of this sector, which may erode post-acquisition profitability gains over time. However, the statistical significance of these results does not survive outlier exclusion, suggesting that the findings should be interpreted with caution. By contrast, the Real Estate sector shows a positive and statistically significant coefficient at $k = 3$, possibly suggesting that asset revaluation generates temporary gains following the acquisition. However, this result also does not survive outlier exclusion.

The Financials sector shows a marginally significant negative effect in the long term (-1.623, $p < 0.1$), an effect that does not survive outlier exclusion. The initial EBITDA margin and the country dummy remain non-significant across all specifications, in line with the results of previous regressions.

The explanatory power of the model is slightly higher than in previous specifications, with R^2 values of 0.288, 0.244, and 0.351 for $k = 1$, $k = 3$, and $k = 5$, respectively. However, the marginal increase in R^2 compared to the model without sector dummies confirms that the sector adds only limited additional explanatory power.

4.5.5 Same boardModel

Table 4.15: Same Sector and EV/EBITDA — Summary Table

Variable	$k = 1$	$k = 3$	$k = 5$
Intercept	-2.729***	-2.498*	-2.482*
ROA _{t_0}	-0.375***	-0.533***	-0.668***
EBITDA Margin _{t_0}	-0.004	0.004	-0.013*
ln(Revenue _{t_0})	0.257***	0.221**	0.260***
Dummy (DE=1)	0.088	0.524 [^]	0.335
EV/EBITDA _{t_0}	0.002*	-0.001	-0.000
Same Sector	0.318	0.382	0.721*
R^2	0.270	0.222	0.330
Adjusted R^2	0.265	0.216	0.325

Notes: Significance levels: [^] $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Same Sector = 1 if the acquirer and target operate in the same sector.

The final extension introduces the Same Sector dummy to test whether horizontal deals generate systematically different profitability outcomes relative to diversified transactions.

The results, reported in the table above, show that the Same Sector dummy is positive across all considered time horizons (0.318 at $k = 1$, 0.382 at $k = 3$, and 0.721 at $k = 5$), reaching statistical significance only in the long term. This suggests that horizontal deals generate an increase in ROA of approximately 0.721 percentage points compared to diversified deals in the long term, holding all other variables constant.

The coefficient on initial ROA remains negative and significant across all time horizons, once again confirming the phenomenon of mean reversion. Firm size remains positive and statistically significant across all horizons, while the country dummy remains largely insignificant, with only a marginal effect emerging at the three-year horizon, consistent with the pattern observed in previous specifications. Instead, the EBITDA margin shows a marginally significant negative effect in the long term (-0.013, $p < 0.05$ at $k = 5$).

The explanatory power of the model is substantially comparable to the previous specifications ($R^2 = 0.270$, 0.222, and 0.330). Overall, these results suggest that post-acquisition profitability changes are primarily determined by the acquirer's initial profitability level and its size, while the initial deal valuation is relevant only in the short term. The most original finding is that sectoral congruence between acquirer and target produces a positive and significant effect on ROA changes in

the long term, suggesting that operational synergies from horizontal deals require time to materialize.

4.5.6 Robustness Check: Outlier Exclusion

To assess the stability of the results, all regression specifications were re-estimated after excluding outliers from the full distribution of the main variables, following the procedure described in Section 3.6. The results, reported in the Appendix, confirm the main findings across all specifications and time horizons.

5 Discussion

The central question of this thesis is whether domestic merger and acquisition operations in Italy and Germany are capable of creating value, and if so, through which mechanisms and under what conditions.

The answer, which emerges from the interpretation of the data, is not immediate but rather articulated and conditional. It depends on several factors, such as the chosen indicator, the time horizon, the nature of the deal, and—in a less evident and more subtle way—the institutional context in which the acquisition takes place. The central argument of this discussion is that post-acquisition performance in Italy and Germany is primarily determined by firm-level and deal-level factors, while the two governance systems differ not in the average level of outcomes they produce but in their distribution and resilience.

Starting from the methodology used in the two analyzes, it is necessary to clarify the relationship between them. The descriptive analysis and the regression-based analysis are not alternatives but are layered. The former documents what happens to post-acquisition performance in aggregate terms. It shows which indicators increase, when this occurs, with what statistical significance, and with what differences between the two countries. The latter breaks down why it happens; it isolates the net determinants of changes in profitability after simultaneously controlling for the initial characteristics of firms and deals. When read separately, the two analyses may produce results that can even appear to be in tension with one another. However, when read together, they complement each other and provide a more complete interpretation.

More specifically, there are three indicators that, more than others, clearly highlight this complementarity. The first is ROA, which declines in the descriptive analysis, but which the regressions show to be an expected decline, not a signal of acquisition failure. The second is Enterprise Value, which increases robustly in the descriptive analysis and is confirmed by the positive values of the EV/EBITDA coefficient in the regressions, together building an argument for market value creation that is stronger than what each analysis could support individually. Third, the country dummy is not significant in any regression specification, despite dramatic reversals in success rate rankings between the full and COVID-free samples. It

is not a contradiction, but a decomposition that shifts the interpretation from average effects to distributional differences, showing that institutional factors may operate primarily through the dispersion, timing, and resilience of outcomes rather than their mean, and ultimately leading to the thesis’s most original contribution: governance as a variance reducer rather than a mean shifter — a hypothesis that the descriptive evidence does not confirm but cannot conclusively rule out.

5.1 The ROA Paradox and Mean Reversion

The most concerning result in the analyses conducted is the weakness of accounting profitability indicators. ROA, ROE, and EBITDA margin do not show significant improvements in any of the specifications considered—neither in the full sample nor in the COVID-free sample, neither in Italy nor in Germany. When analysing the results excluding outliers, the picture becomes even clearer. ROA and ROE coefficients turn negative and statistically significant in both countries and across all time horizons. A first reading of the results seems to suggest that acquisitions are not able to sustain operating profitability, and may even deteriorate it.

In reality, the regression analysis suggests a more nuanced interpretation than a simple post-acquisition decline in profitability. The coefficient on initial ROA is negative, increasing in absolute value from -0.409 at $k = 1$ to -0.631 at $k = 5$, and highly significant in every specification estimated—baseline, extended EV/EBITDA, clean sample, sector dummies, same-sector model and outlier-robust specifications reported in Appendix.

These results show that acquisitions do not destroy value per se. Rather, acquiring firms with above-average profitability tend to converge towards the mean over time, independently of the acquisition itself — a phenomenon known as mean reversion. It should be noted that this limitation does not apply only to the ROA, but also to the positive estimates of firm size and sectoral congruence. These are, as with ROA, estimated on a sample selected on the basis of high pre-deal profitability — a condition that, by construction, characterizes acquiring firms. To the extent that larger firms and horizontal acquirers are overrepresented among high-profitability acquirers, the positive coefficients on $\ln(\text{Revenue})$ and Same Sector may partly reflect compositional characteristics of the sample rather than purely causal effects of firm size or sectoral overlap.

Barber and Lyon (1996), in their study, specifically analyze the distinction between decline caused by the acquisition and decline that the acquisition merely captures. Their study highlights how much of the literature on post-acquisition performance is subject to methodological bias. Comparing pre- and post-ROA without controlling for the initial level systematically produces distorted conclusions and, in particular, attributes to the acquisition an effect that instead belongs to the firm’s autonomous dynamics. The contribution of the regressions is precisely

this: separating the component of ROA variation attributable to the starting position—the mean reversion—from the component potentially attributable to the acquisition, measured by the coefficients on the other variables (Barber & Lyon, 1996).

In the overall interpretation of this key variable, it should be emphasised that the dependent variable in the regressions measures the change in ROA relative to the year of the transaction, not the absolute level of profitability in a given year. This implies that the negative coefficient on ROA_0 incorporates two distinct components that cannot be fully separated with the available data. The first is an economic component: genuine competitive convergence, whereby above-average profitability attracts competition and erodes rents over time. The second is a mechanical component: firms with high ROA at the time of the transaction have, by construction, more room to decline than to increase in the measured variation, independently of any underlying economic process.

Some aspects of these results deserve specific attention. The first is the increase in the absolute value of the coefficient as the time horizon expands, from -0.409 at $k = 1$ to -0.631 at $k = 5$. This pattern suggests that the reversion process is slow but persistent, consistent with Fama and French (2000), who document a mean reversion dynamic in profitability of approximately 40% per year and characterised by non-linearity, with a stronger effect when profitability is further from the mean (Fama & French, 2000).

In substantive terms, this pattern implies that acquiring firms enter the deal with relatively high profitability — a condition that reflects financial strength and the capacity to undertake acquisitions — but one that is inherently transitory: competitive pressure and the resource demands of post-acquisition integration drive a convergence towards the mean that continues for at least five years after deal completion. Evaluating acquisition performance over short horizons therefore means capturing this downward trajectory at its steepest point. This can lead to the transaction being attributed an effect that instead belongs to the firm’s autonomous dynamics. The cross-specification robustness of the coefficient—in terms of sign, magnitude, and statistical significance across all estimated specifications, including those controlling for industry, deal characteristics, and sectoral homogeneity—further strengthens this evidence.

5.2 The Temporal Hierarchy of Performance Determinants

Beyond *mean reversion*, the integrated reading of the two analyses reveals a precise temporal structure of the determinants of post-acquisition performance, in which different factors dominate at different horizons in a theoretically coherent way.

In the short term ($Y1/k = 1$), performance is driven by pre-existing financial and structural factors. The EV/EBITDA coefficient is positive and significant (0.002, $p < 0.05$ in the full sample; 0.055, $p < 0.01$ in the clean sample), indicating that deals priced at higher multiples are associated with more positive changes in ROA in the first year following the acquisition. The descriptive analysis confirms this direction: Enterprise Value increases significantly already at $Y1$ in both countries, and this indicates that the market quickly incorporates expectations of quality embedded in the acquisition price. Firm size is already positive and significant, and success rates by size show that larger firms tend to perform better across several indicators already in the immediate period.

In the medium term ($Y3/k = 3$), the quality signal of the deal fades—the EV/EBITDA coefficient loses significance—while growth synergies begin to emerge in the descriptive analysis. Revenue and EBITDA growth become significant in Italy already in the full sample, while in Germany this pattern emerges strongly only in the COVID-free sample. Profitability benefits are still absorbed by the reversion towards the mean, but Enterprise Value continues to grow in both countries, confirming that the market incorporates expectations of value creation that go beyond the initial repricing of the deal.

In the long term ($Y5/k = 5$), sectoral congruence emerges as the most relevant additional factor of the entire analysis (+0.721 points of ROA variation, $p < 0.05$). The fact that this effect is not significant at $k = 1$ and $k = 3$ but becomes significant at $k = 5$ is not a weak result: it is exactly the prediction of the literature on horizontal synergies. Capron (1999) documents that operational integration processes in horizontal acquisitions typically require three to five years to fully unfold, while Zollo and Singh (2004) show that deliberate learning in acquisitions—the codification and transfer of organizational capabilities—is an intrinsically slow process that translates into performance improvements only over multi-year horizons. The coefficient +0.721 at $k = 5$ is therefore not only a statistical result, but an empirical confirmation of these mechanisms on a European sample.

At first glance, this finding appears inconsistent with Gan (2024), who documents stronger innovation synergies in cross-industry acquisitions. The divergence, however, may be attributable to substantial differences in both measurement and sample composition. Gan focuses on innovation-related outcomes, such as patent production and long-term profit growth, within a US setting, whereas the present study examines changes in ROA in a European sample composed predominantly of private firms. The apparent discrepancy may therefore reflect the distinction between value creation driven by innovation and value creation driven by operational efficiency.

Finally, the EBITDA margin exhibits an unstable pattern across specifications. While positive and marginally significant in the baseline model at shorter horizons,

the coefficient becomes negative and significant at the five-year horizon in the extended specification. This pattern suggests that firms with higher pre-deal operating margins may subsequently experience greater profitability compression, in line with mean reversion dynamics.

The temporal hierarchy thus outlined—financial factors relevant in the short term, operational synergies relevant in the long term—finds precise correspondence in the distinction between value transfer and value creation proposed by Bradley, Desai and Kim (1988). Market repricing at the time of the deal is rapid and is reflected in the short-term EV/EBITDA coefficient, while operational value creation requires integration and transfer of capabilities that unfold progressively over time. The data of the present work provide empirical evidence of this distinction on a sample of continental European markets.

5.3 Market Expectations and Accounting Realizations

Enterprise Value is the only indicator without tensions between the descriptive and the regression analysis, and this convergence constitutes one of the most robust results of the work on post-acquisition value creation.

In the descriptive analysis, Enterprise Value grows in a positive and significant way in both countries. This robustness is unique compared to all other indicators. Revenue growth is stronger in Italy and significant in Germany only in the COVID-free sample; ROA and ROE show systematic weakness, while Net Income is sensitive to the exclusion of outliers. By contrast, Enterprise Value maintains its positive and significant signal independently of the specification adopted, making it the most reliable indicator of post-acquisition performance.

The regression analysis completes this picture from a different and complementary perspective: the EV/EBITDA multiple at the time of the transaction has a positive and significant effect on post-acquisition ROA variations in the short term, amplified in the clean sample and persistent in the long term once outliers are removed. The positive sign of this coefficient is theoretically relevant and consistent with the interpretation that higher multiples reflect genuine quality signals embedded in the acquisition price. However, the loss of significance at $k=3$ and $k=5$ is equally informative: it is consistent with the winner's curse hypothesis, whereby acquirers paying higher multiples do not sustain a profitability advantage over longer horizons, suggesting that market expectations embedded in the transaction price are rapidly incorporated but do not translate into persistent operating outperformance. These two mechanisms are not contradictory but operate at different time horizons. In particular, in the short term, the quality signal dominates, as acquirers paying higher multiples do so partly on the basis of superior private information about target quality. Over longer horizons, however, this informational advantage is

progressively priced in, and the burden of the premium paid offsets the initial signal, leaving no persistent profitability effect.

The systematic robustness of Enterprise Value, despite the weakness of accounting indicators, finds a precise theoretical explanation in Healy, Palepu and Ruback (1992). Market measures incorporate forward-looking expectations about expected synergies, while accounting measures reflect realised performance, influenced by accounting choices and legacy cost structures. The market anticipates value creation before it appears in the accounts. The data of the present study confirm that this anticipation is systematic, robust, and independent of the macroeconomic cycle, as shown by the stability of the Enterprise Value signal even after adjusting for GDP growth in the two countries.

5.4 The Impact of COVID-19

The COVID-19 pandemic was a global shock that disrupted economies worldwide, representing at the same time a confounding factor to be controlled for and a revealing element of the resilience properties of the two institutional systems under stress conditions.

In the descriptive analysis, the comparison between the full sample and the COVID-free sample produces heterogeneous and asymmetric adjustments across countries and transaction dimensions, rather than uniform effects. In Italy, success rates shift from 19% to 52% for large acquirers, while small acquirers move from 32% to 15%, with a complete reversal of the ranking. In Germany, by contrast, the adjustments are more contained for buyer characteristics (large acquirers shift from 26% to 28%, small acquirers from 38% to 26%). More pronounced reversals emerge for transaction value, with large deals declining from 20% to 6%, and for target size, with large targets moving from 30% to 22% and small ones rising from 22% to 38%. These patterns indicate that the impact of COVID-19 does not operate uniformly across institutional contexts, but interacts with specific structural characteristics of each system.

The regressions, however, provide a more precise reading: the country dummy is not significant in any specification. This indicates that, once firm-level characteristics are controlled for, cross-country differences in average profitability outcomes disappear. This does not imply that the differences observed in the descriptive analysis are illusory: they operate through the distribution of outcomes rather than through their mean. Two systems can in fact produce identical average outcomes but very different distributions, with one compressing outcome variability and the other amplifying it—and this is precisely what the data show.

The German system, characterized by co-determination, appears to generate relatively more stable outcome patterns in some key dimensions, particularly those related to buyer characteristics. However, this stability is not uniform across all

transaction attributes. By contrast, the Italian system, characterized by greater flexibility, produces a wider distribution of outcomes, with better results under favorable conditions but greater dispersion when external conditions change sharply.

This interpretation is also supported by the literature on co-determination. Wagner (2009) documents that partial co-determination does not produce significant effects on average productivity in German firms, consistent with the non-significance of the country dummy in the regressions. Haipeter (2025) shows that works councils in large German firms play an increasing role in organisational integration decisions, contributing to greater stability in organisational responses during stress phases, rather than uniformly higher performance levels—consistent with the more limited variability observed in some segments of the German sample during the pandemic period. The flexibility of the Italian system, documented by Gandini et al. (2009) as particularly suited to concentrated ownership structures and small-to-medium enterprises, appears well aligned with the characteristics of the Italian M&A market under normal conditions. However, it also generates greater sensitivity to changing macroeconomic conditions, as the data reveal when conditions deteriorate.

5.5 Cross-Country Differences: Evidence, Boundaries, and Interpretation

The regression evidence on cross-country differences is unambiguous and consistent across all estimated specifications. The country dummy is never statistically significant, regardless of the time horizon considered, the set of controls included, or the treatment of outliers. Once firm-level characteristics — initial profitability, size, and operational efficiency — are held constant, Italian and German acquirers converge to statistically indistinguishable average profitability outcomes. This result is not a weak null: it is robust to the inclusion of EV/EBITDA, sector dummies, the Same Sector variable, and outlier exclusion. Its consistency across specifications of increasing complexity constitutes strong evidence that the two governance systems do not differ in the average level of post-acquisition profitability they produce.

This finding is theoretically coherent. The institutional differences between Italy and Germany — the German two-tier board with co-determination versus the Italian tripartite flexibility — operate primarily through the quality and stability of oversight mechanisms, not through the average financial outcomes they generate. As Wagner (2009) documents, partial co-determination does not produce statistically significant effects on average profitability in German firms. Goergen et al. (2008) similarly show that the German stakeholder-oriented system shapes the process of oversight and value creation without necessarily producing superior average financial outcomes relative to other European models. The non-significance of the

country dummy is therefore in line with the institutional literature, rather than contradicting it.

The descriptive analysis, however, reveals a pattern that the regression framework is not designed to capture. As documented in Section 5.4, the exclusion of COVID-affected transactions produces markedly asymmetric adjustments across the two countries. The most striking contrast emerges in the buyer-size dimension: in Italy, the swing reaches 33 percentage points for large acquirers and 17 for small ones. In Germany, the same comparison produces shifts of only 2 and 12 percentage points respectively. The magnitude of this asymmetry is notable and warrants careful interpretation. To provide empirical grounding for this observation, a descriptive comparison of outcome standard deviations was conducted across countries, time horizons, and firm-size categories (see tables in the Appendix). The results do not reveal a systematic pattern consistent with the variance-compression hypothesis. Specifically, in the full sample, Germany frequently displays higher dispersion than Italy for key indicators, in contrast to the theoretical prediction. In the outlier-cleaned sample, differences narrow substantially: standard deviations become largely comparable across the two countries, with no consistent directional advantage for either system. A partial exception emerges in the cleaned sample, where German dispersion is marginally lower; however, this pattern is neither robust nor sufficiently uniform to constitute a stylized fact. The variance-compression argument therefore cannot be grounded in these descriptive statistics and remains a theoretically motivated conjecture.

This observation should be interpreted in light of three main considerations.

First, the asymmetry is observable but not attributable. The observed difference in the sensitivity of success rates to the exclusion of COVID-affected transactions could reflect compositional differences between the two samples — in firm size distribution, sectoral composition, or deal characteristics — rather than any institutional effect. The two countries differ along multiple structural dimensions that are not fully controlled for in a descriptive comparison of success rates, and the present data do not allow these competing explanations to be disentangled.

Second, the asymmetry is not uniform across all transaction dimensions. As documented in Section 4.4, not all size and target categories display the same directional pattern when moving between the full and COVID-free samples. A governance-based narrative predicting uniform variance compression in Germany is not only inconsistent with parts of the success-rate evidence, but is also not supported by the direct comparison of outcome standard deviations. In particular, German dispersion is frequently higher than Italian dispersion in the full sample, while in the outlier-cleaned sample the two countries appear broadly comparable. The observed asymmetry is specific to certain transaction dimensions and should not be extrapolated into a general claim about the two systems.

Third, and most fundamentally, the data do not include direct measures of

governance quality at the firm level. The predominantly private composition of the sample — 98.5% of Italian targets and 99% of German targets — precludes the construction of firm-level governance indices. These indices would be necessary to test whether the observed asymmetry is attributable to board structure, codetermination, or ownership concentration, rather than to other compositional characteristics of the two samples. Without such measures, any causal attribution of the descriptive pattern to specific institutional mechanisms remains formally untestable within the scope of this study.

The conclusion of this section is therefore deliberately bounded. The regression evidence robustly establishes that the two governance systems converge on average post-acquisition profitability outcomes. The descriptive evidence identifies an asymmetry in the sensitivity of certain outcome dimensions to an exogenous shock of the magnitude of COVID-19, with Italian success rates that show substantially greater volatility than German ones in the buyer-size dimension. Whether this asymmetry reflects institutional architecture cannot be determined from the present data. Framing this observation as a confirmed hypothesis about governance and outcome dispersion would overstate what the evidence supports. Framing it instead as a direction for future research — one that requires firm-level governance data, a larger share of listed companies, and ideally cross-border transactions between the two countries — is the epistemically honest and scientifically productive position this thesis adopts. The descriptive comparison of standard deviations conducted represents a first step in that direction.

5.6 Why Do Governance Differences Not Appear Empirically? A Structural Interpretation

Chapter 2 of this thesis precisely highlights the considerable differences between the Italian and German governance systems. Germany's two-tier board structure, codetermination, and works councils are generally regarded as more stable oversight mechanisms. The Italian system, by contrast, offers greater flexibility through three coexisting models. If these differences are theoretically significant, the question raised by the empirical evidence — and explicitly left open in Section 5.5 — is why they do not appear in the regression results.

The answer operates at several distinct levels.

The first is the sample composition, which renders governance unobservable. With 98.5% of Italian target firms and 99% of German target firms being private companies, information relating to board composition, codetermination arrangements, works council activity, and ownership concentration is not available in standardized and systematically retrievable form. The governance variable is not recoverable from the data, and the country dummy captures the average difference

between the two institutional systems but cannot make specific reference to governance mechanisms. The non-significance of the country dummy is therefore not evidence that governance is irrelevant, but that the research design as structured cannot detect governance effects operating at the firm level.

The second is that the country dummy is an imprecise proxy. It simultaneously captures many differences beyond governance architecture: sectoral composition, firm size distribution, and many others. Its non-significance cannot therefore be interpreted solely in light of governance differences, but as a joint test of many dimensions simultaneously. As Yoshikawa and Rasheed (2009) document, formal similarities between national governance systems often mask substantive differences that only emerge at the firm level and in specific institutional sub-contexts.

The third concerns the dimension on which governance effects are expected to operate. Regression models as structured measure average effects; however, the codetermination literature does not predict that German firms will outperform Italian firms on average. Wagner (2009) finds no significant effect of one-third codetermination on average productivity or profitability in German manufacturing. Haipeter (2025) documents that works councils contribute to strategic stability and organizational adaptation, not to superior average financial performance. The theoretical prediction is therefore not that German firms will achieve higher ROA changes on average, but that they will exhibit lower outcome dispersion. This is a distributional prediction, not a prediction about means, and OLS regression is not, by construction, designed to test it.

The fourth is related to sample composition: Hussain et al. (2024) show that governance effects in M&A are strongest when the acquirer's governance quality significantly exceeds that of the target. In a domestic sample, where both acquirer and target operate within the same national institutional environment, the governance gap between the two is by construction smaller than in cross-border transactions. The theoretical mechanism identified by Hussain et al. is therefore least likely to be activated in precisely the type of sample analyzed in this thesis.

The fifth concerns a temporal dimension. The benefits of codetermination operate over horizons that well exceed the five years covered by the analysis. The institutional features of the German governance system that generate resilience through slow-moving organizational mechanisms are not expected to produce measurable financial effects within this time horizon, particularly in a sample dominated by private firms where such mechanisms, as Haipeter (2025) documents, are less pervasive and less formalized than in large listed corporations.

In conclusion, the result obtained does not contradict the theoretical framework of Chapter 2, but reveals the limits of what the present research design can detect. Detecting governance effects empirically requires firm-level governance indices, a sample with a significant share of listed companies, a longer post-acquisition window, and ideally cross-border transactions that maximize governance dispersion between

acquirer and target. These are precisely the directions identified as priorities for future research.

5.7 Implications, Limitations, and Future Research Directions of the Study

At the methodological level, the study demonstrates the importance of integrating descriptive and regression analyses: when considered jointly, they produce a richer and more complete interpretative framework than each analysis taken in isolation. A clear example is provided by ROA mean reversion, which—apparently interpretable as a signal of deterioration in the descriptive analysis—reveals itself instead, in the regressions, as a structural and expected mechanism. The thesis therefore recommends that future studies combine these two levels of analysis, rather than treating them as alternatives.

Three implications emerge with particular clarity. The first concerns the evaluation horizon: the benefits of horizontal acquisitions are real, but require time to materialise; consequently, performance measurement systems based on short-term horizons tend to systematically underestimate the value of strategically coherent transactions. The second concerns the size of the acquirer: larger firms show integration advantages across all time horizons in the regression analysis, consistently emerging as a positive and significant predictor of post-acquisition profitability changes. The third implication is more cautious in nature: the descriptive evidence suggests that the governance system may act as an amplifier or dampener of exogenous shocks, primarily by influencing the dispersion of outcomes rather than their average level. This is indicated by the asymmetry in success rate reversals between Italy and Germany during the pandemic period. However, this remains an interpretative hypothesis rather than a tested conclusion, for reasons that are structural to the dataset and are discussed below.

As discussed in Section 3.3, the predominance of private firms within the sample significantly restricts data availability and therefore constitutes the main structural limitation of the study. Private firm data do not allow the construction of firm-level governance quality indices, which would be necessary to directly test whether differences in outcome dispersion are attributable to institutional architecture — co-determination, board structure, ownership concentration — or to other compositional characteristics of the two samples, such as firm size distribution or sectoral composition. A related limitation concerns the absence of contractual variables from the regression specifications. As discussed in Section 2.6, mechanisms such as earn-out clauses, MAC provisions, representations, and warranties are theoretically relevant determinants of post-acquisition performance. In particular, earn-outs align incentives between the parties involved and may improve post-deal profitability, while MAC clauses reduce the acquirer’s risk exposure. The omission

of these variables from the regression model therefore introduces the possibility of omitted variable bias. If the adoption of earn-outs is positively correlated with deal quality and firm size, as suggested by Barbopoulos and Danbolt (2021), the direction and magnitude of this bias cannot be assessed with the available data. This represents an important limitation of the regression model.

The Same Sector dummy is constructed using the GICS classifications provided by S&P Capital IQ. This is a relatively coarse measure of sectoral overlap: two firms classified in the same macro-sector may operate in substantially different sub-industries with limited operational complementarity. If anything, this classification error introduces attenuation bias, meaning the estimated coefficient of $+0.721$ at $k = 5$ likely represents a lower bound of the true profitability advantage of genuinely horizontal deals. A more granular classification, using GICS sub-industries or four-digit SIC codes, would in principle provide a more precise test of this hypothesis. However, the implementation of such finer taxonomies is not straightforward, as firms often operate across multiple segments. Available databases typically report only a primary industry code, introducing additional classification ambiguity.

Beyond sectoral classification issues, the analysis is also constrained by data availability in private firms, particularly with respect to financial indicators. This is precisely why the governance-as-variance-reducer argument developed in Section 5.5 is framed as an interpretative hypothesis grounded in descriptive evidence and theoretical coherence, rather than as an empirically tested causal claim. The limited availability of certain financial indicators for private firms further restricts the scope of possible analyzes, particularly for market-based measures such as EV/EBITDA, which required a significant reduction in observations.

A second limitation concerns the exclusively domestic nature of the transactions considered. While focusing on intra-country deals ensures greater sample homogeneity, it also excludes cross-border acquisitions by construction. An extension of the analysis to cross-border transactions between Italy and Germany — and more generally between different institutional systems — would represent the most natural and promising development of this work. Cross-border deals would allow a direct test of whether the distributional differences documented in the descriptive analysis are amplified or attenuated when acquirer and target originate from different governance contexts, providing cleaner identification of the institutional component that the present domestic-only design cannot isolate.

Additionally, a sample with greater representation of publicly listed firms would enable the construction of firm-level governance indices and allow the hypothesis developed in Section 5.5 to be tested with appropriate empirical rigor.

In conclusion, the results suggest that domestic acquisitions in Italy and Germany create value that emerges in the market before it appears in the accounts, in growth before profitability, in horizontal rather than diversified acquisitions, and in firms with a larger revenue base — as consistently shown by the regression analysis.

While differences between the two systems — to the extent that the available evidence allows inference — appear to concern the variability, timing, and resilience of these outcomes rather than their average magnitude, a distinction that future research with richer governance data would be better positioned to confirm or qualify.

6 Conclusions

The M&A paradox — the gap between the strategic appeal of acquisitions and the uncertainty of their financial outcomes — does not find a definitive resolution in this thesis. The results nonetheless suggest that the paradox is more nuanced than the traditional literature implies: value creation exists, but it emerges over time, in forms and under conditions that conventional metrics struggle to capture.

This thesis has addressed this question along two complementary lines — a comparative analysis of governance frameworks and an empirical evaluation of more than 1,500 domestic transactions — whose findings are summarized below.

6.1 Answers to the Research Questions

Do M&A transactions improve corporate performance on average, and over which horizon?

The answer depends on the indicator chosen. The market-based indicator, represented by Enterprise Value, increases positively and significantly at every time horizon and in both countries (also when considering the dataset adjusted for GDP growth and excluding transactions affected by COVID-19). It is worth noting that this turns out to be the most robust indicator in the entire empirical analysis. In contrast, accounting-based profitability indicators do not show systematic improvements.

This apparent contradiction is resolved by the regression analysis: in fact, the negative movement in ROA reflects mean reversion — a structural convergence dynamic that is independent of the acquisition itself — rather than acquisition-induced deterioration. Once this mechanism is controlled for, firm size emerges as a consistent positive predictor of profitability changes across all horizons. The Same Sector dummy produces a positive and significant effect at the five-year horizon, confirming that operational synergies from horizontal deals require time to materialize.

Are results consistent when COVID-19-affected transactions are excluded?

Broadly yes, but with relevant nuances. The exclusion of pandemic-affected transactions strengthens revenue growth patterns — particularly in Germany, where statistically significant growth emerges only in the COVID-free sample — and sharpens the mean reversion signal in the regression analysis. Enterprise Value remains positive and significant regardless of whether COVID-affected transactions are included. The overall direction of the findings is therefore stable, but the magnitude and significance of specific indicators are sensitive to the pandemic period. That confirms that COVID-19 represents a material confounding factor that must be controlled for in any evaluation of post-merger performance over the time horizon considered.

What is the percentage of successful M&A transactions, and does it differ across countries?

In the full sample, Germany records a higher aggregate success rate than Italy (44% versus 26%). This ranking reverses in the COVID-free sample, where Italy reaches 35% and Germany declines to 24%. The magnitude of the reversal differs substantially across transaction dimensions. In Italy, the sharpest swing involves buyer size, with large acquirers moving from 19% to 52%. In Germany, the most pronounced shift involves transaction value, with large deals declining from 20% to 6%. These asymmetric patterns suggest that success rates are sensitive to both deal characteristics and macroeconomic context, and that aggregate comparisons between countries are highly dependent on the sample specification adopted.

Does transaction size determine significant differences in post-merger success rates?

Yes, but the direction of the effect is not uniform. In the full sample, small transactions outperform large ones in both countries.

In the COVID-free sample, this relationship reverses in Italy for buyer size, where large acquirers substantially outperform small ones. In Germany, small transactions by target size reverse their relative position.

The evidence does not support a simple and stable size premium in either direction. Rather, it suggests that the relationship between size and success is mediated by macroeconomic conditions and differs across the two institutional contexts.

Do pre-deal financial characteristics predict post-acquisition profitability changes?

Yes, robustly. Initial ROA is negative and highly significant across all specifications and time horizons, with the coefficient increasing in absolute value from -0.409 at $k = 1$ to -0.631 at $k = 5$, a slow but persistent mean reversion process. Firm size, proxied by log revenue, is positive and statistically significant across all horizons. It indicates that larger acquirers tend to exhibit stronger post-acquisition profitability dynamics. The EBITDA margin shows limited and unstable predictive power. The EV/EBITDA multiple is positive and significant in the short term but loses explanatory power at longer horizons, consistent with the interpretation that market expectations embedded in the transaction price are rapidly incorporated but do not translate into persistent operating outperformance.

Do horizontal deals generate systematically different profitability outcomes compared to diversified transactions?

Yes, but only at a five-year horizon. The Same Sector dummy is positive across all specifications but reaches statistical significance only at $k = 5$, where it generates an increase of approximately 0.721 percentage points in ROA change relative to diversified deals. The outlier-robust specification confirms the directional robustness of this result, though with reduced magnitude. This timing is consistent with the theoretical prediction that operational integration in horizontal acquisitions unfolds over multi-year horizons. Its empirical confirmation on a sample of European private firms constitutes the most original contribution of this work.

Can cross-country differences be interpreted in light of institutional and governance differences?

With caution. The regression evidence is unambiguous: the country dummy is never statistically significant across any specification. Once firm-level characteristics are controlled for, Italian and German acquirers converge to statistically indistinguishable average profitability outcomes. The descriptive evidence identifies an asymmetry in outcome sensitivity to the COVID-19 shock, with Italian success rates proving substantially more volatile than German ones in specific transaction dimensions. Whether this asymmetry reflects institutional architecture — the German co-determination system versus Italian governance flexibility — or compositional characteristics of the two samples cannot be established with the available data. A descriptive comparison of outcome standard deviations, conducted to provide empirical grounding for this distinction, does not yield a consistent pattern. German dispersion is frequently higher than Italian dispersion in the full sample, and broadly comparable in the outlier-cleaned sample. The distinction between average outcomes and outcome dispersion therefore remains an open empirical question rather than an established finding.

6.2 Contribution to the Literature

This thesis contributes to the existing literature along three dimensions.

Before turning to the empirical contributions, it is important to underline the analysis of governance frameworks developed in Chapter 2. Through a structured comparison of the three Italian models and the German two-tier system with co-determination, it constitutes a preliminary but important contribution to contextualizing the empirical findings.

The first is empirical. Comparative studies on domestic M&A performance in Italy and Germany are scarce. By analyzing more than 1,500 domestic transactions — of which the large majority involve private firms — this work extends the empirical base to a segment of the market that is structurally underrepresented in the literature. This is despite the fact that it accounts for the overwhelming majority of M&A activity in both countries.

The second contribution is methodological. The integrated use of descriptive analysis and regression-based analysis across multiple time horizons demonstrates that the two approaches are not alternatives but complements. In particular, the regression framework resolves an apparent contradiction in the descriptive evidence — the decline in ROA — by identifying mean reversion as its primary driver. This decomposition is a precondition for any honest evaluation of M&A performance and should be adopted as standard practice in future accounting-based studies of post-acquisition outcomes.

The third contribution is substantive. The finding that horizontal deals generate a measurable profitability advantage relative to diversified transactions, but exclusively at a five-year horizon, provides empirical confirmation on a European private-firm sample of a mechanism that the theoretical literature has long predicted but that has rarely been documented outside Anglo-American contexts. Combined with the evidence on firm size as a persistent predictor of post-acquisition profitability, and on Enterprise Value as the most reliable indicator of value creation, these findings offer a more precise characterization of where, when, and under what conditions M&A value creation can be expected to emerge in continental European markets.

6.3 Limitations and Future Research Directions

The limitations of this study are structural rather than incidental. The prevalence of private firms precludes the construction of governance quality indices at the firm level, which would be necessary to test whether the distributional differences identified in the descriptive analysis are attributable to board structure, co-determination, or ownership concentration, rather than to compositional characteristics of the two samples.

In addition, the empirical analysis does not test the role of specific contractual mechanisms—such as earn-out clauses, MAC provisions, or representations and warranties—due to the unavailability of these data for private firms. The prevalence of private firms in the sample limits access to deal-level contractual terms, thereby preventing the construction of corresponding contractual variables. As a result, future research combining deal-level contractual data with post-acquisition performance measures would allow for a direct empirical test of the contract design arguments developed in Section 2.6.

The Same Sector dummy is constructed using GICS macro-sector classifications, which represent a relatively coarse measure of sectoral overlap. A more granular classification would in principle provide a more precise test of the horizontal synergy hypothesis, though implementation challenges — including the multi-segment nature of many firms and the availability of only primary industry codes — limit the practical feasibility of this refinement within the scope of the present study. Finally, the exclusively domestic focus of the sample, while ensuring greater comparability within each country, precludes a direct identification of the institutional component of performance differences.

Cross-border transactions between Italy and Germany represent the most natural and promising extension of this research. They would allow a cleaner identification of whether and to what extent governance contexts influence acquisition outcomes, by introducing variation in institutional exposure that the domestic-only design cannot generate. A sample with greater representation of publicly listed firms would additionally enable the construction of firm-level governance indices and allow a more rigorous evaluation of the hypothesis of governance as a variance reducer. This hypothesis is not supported by the available descriptive evidence on outcome standard deviations, although it cannot be definitively excluded given the predominantly private composition of the sample.

6.4 Closing

The M&A paradox is not resolved — but this thesis offers a more precise account of where, when, and under what conditions value creation in domestic acquisitions can be expected to emerge: in the market before the accounts, in growth before profitability, in horizontal deals at a five-year horizon, and in firms with a broader revenue base. Whether the institutional architectures of Italy and Germany shape the distribution of these outcomes, rather than their average level, remains the central open question this work leaves to future research.

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Appendix

Table A1: Baseline (No outlier)

Variabile	$k = 1$	$k = 3$	$k = 5$
Intercept	-2.970***	-2.596**	-2.195*
ROA (t0)	-0.368***	-0.523***	-0.648***
EBITDA Margin (t0)	-0.004	0.008	-0.009
ln(Revenue) (t0)	0.284***	0.233***	0.252***
Dummy (DE=1)	0.101	0.515	0.425
R^2	0.259	0.202	0.297
Adj. R^2	0.255	0.198	0.293
Significatività: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$			

Table A2: EV/EBITDA + Sector Dummies (No Outliers) — Full Results Table

	$k = 1$	$k = 3$	$k = 5$
Intercept	-4.522***	-3.398*	-3.902**
ROA (t0)	-0.351***	-0.493***	-0.632***
EBITDA Margin (t0)	-0.006	0.001	-0.008
ln(Revenue) (t0)	0.335***	0.257**	0.325***
Dummy (DE=1)	-0.221	0.392	-0.072
EV/EBITDA (t0)	0.055**	0.026	0.059*
Sector Dummies (reference: first category)			
Consumer Discretionary	-0.537	-1.739 [^]	-1.369
Consumer Staples	0.082	0.795	0.493
Energy	-0.767	-1.647*	-1.392*
Financials	-0.487	0.417	-1.338
Health Care	0.578	0.323	1.197 [^]
Industrials	0.631	0.816 [^]	0.751
Information Technology	0.564	0.163	0.800
Materials	0.937 [^]	0.530	0.498
Other	0.788	0.236	-1.732
Real Estate	0.459	2.681	1.076
Utilities	0.223	0.114	-0.619
R^2	0.287	0.232	0.330
Adj. R^2	0.272	0.216	0.316

Significance: [^] $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$
Sector dummies based on GICS classification of target firm.

Table A3: Same Sector + EV/EBITDA (No outliers) — Summary Table

	$k = 1$	$k = 3$	$k = 5$
Intercept	-4.373***	-3.588**	-3.955**
ROA (t0)	-0.354***	-0.513***	-0.632***
EBITDA Margin (t0)	-0.005	0.007	-0.010
ln(Revenue) (t0)	0.328***	0.264***	0.306***
Dummy (DE=1)	-0.112	0.368	0.166
EV/EBITDA (t0)	0.053**	0.036	0.063**
Same Sector	0.377 [^]	0.302	0.558**
R^2	0.273	0.205	0.307
Adj. R^2	0.268	0.199	0.301

Significance: [^] $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$
Same Sector = 1 if acquirer and target operate in the same sector

Table A4: Standard Deviations by Country, Year, and Sample

Variable	Year	Italy Full	Germany Full	Italy No-COVID	Germany No-COVID
Revenue	Y1	13.650	8.305	0.639	4.437
	Y3	4.907	13.057	0.781	5.651
	Y5	5.600	19.012	2.042	10.618
EBITDA	Y1	3.436	4.663	5.074	3.047
	Y3	2.099	10.561	2.239	6.863
	Y5	2.576	10.515	1.434	7.785
ROA	Y1	7.667	74.072	2.556	3.315
	Y3	5.634	7.769	5.615	3.173
	Y5	7.594	13.818	6.005	4.165
ROE	Y1	5.282	16.815	5.263	24.525
	Y3	193.843	9.349	328.752	13.114
	Y5	18.117	45.565	25.455	65.734
Net income	Y1	6.758	23.649	7.720	25.397
	Y3	12.859	16.873	17.794	20.225
	Y5	12.679	33.445	14.071	15.286
EBITDA Margin	Y1	1.275	3.162	1.560	3.031
	Y3	3.789	26.066	6.218	5.831
	Y5	3.476	4.707	5.365	5.578
Enterprise Value	Y1	1.313	6.249	0.974	8.856
	Y3	1.682	53.326	1.722	76.326
	Y5	2.112	4.330	2.782	5.035

Variable	Year	Italy Full Sample	Germany Full Sample	Italy No-COVID	Germany No-COVID
Revenue	Y1	0.219	0.196	0.198	0.178
	Y3	0.456	0.415	0.435	0.353
	Y5	0.670	0.580	0.586	0.534
EBITDA	Y1	0.296	0.307	0.309	0.326
	Y3	0.622	0.633	0.614	0.636
	Y5	0.855	0.886	0.846	0.879
ROA	Y1	0.374	0.393	0.403	0.433
	Y3	0.573	0.523	0.640	0.638
	Y5	0.539	0.532	0.593	0.587
ROE	Y1	0.497	0.550	0.492	0.594
	Y3	0.776	0.716	0.893	0.918
	Y5	0.796	0.706	0.870	0.829
Net income	Y1	0.614	0.648	0.732	0.773
	Y3	1.050	0.967	1.050	1.135
	Y5	1.013	1.113	1.050	1.214
EBITDA Margin	Y1	0.221	0.216	0.269	0.215
	Y3	0.328	0.384	0.444	0.424
	Y5	0.374	0.418	0.405	0.427
Enterprise Value	Y1	0.400	0.442	0.376	0.461
	Y3	0.609	0.800	0.593	0.871
	Y5	0.864	1.082	0.747	1.417

Table A5: Standard deviations by country and year. The dataset is cleaned from outliers.

Variable	Size	Full Sample (Big)	Full Sample (Small)	No-COVID (Big)	No-COVID (Small)
Revenue	Y1	0.629	1.216	0.390	0.918
	Y3	1.381	0.776	0.589	0.838
	Y5	1.970	2.280	0.621	3.444
EBITDA	Y1	1.181	5.047	1.235	8.319
	Y2	1.634	2.856	1.104	3.221
	Y3	2.310	3.091	1.576	1.396
ROA	Y1	3.708	11.914	2.642	2.139
	Y3	7.371	3.970	2.687	5.202
	Y5	3.212	10.753	1.629	2.617
ROE	Y1	5.084	5.648	4.482	7.655
	Y3	12.300	240.101	5.428	411.354
	Y5	4.246	28.820	3.584	44.063
Net Income	Y1	5.447	8.350	2.687	13.281
	Y3	8.481	17.384	3.853	27.938
	Y5	6.802	16.694	3.783	22.809
EBITDA Margin	Y1	0.968	1.677	1.314	1.666
	Y3	3.513	4.688	5.464	7.380
	Y5	1.040	4.349	1.249	6.299
Enterprise value	Y1	0.850	1.820	0.509	1.441
	Y3	1.104	1.796	0.902	2.498
	Y5	2.118	2.400	1.437	4.106

Table A6: Standard deviations by firm size for Italy. The sample is divided between full sample and sample excluding the COVID-19 period.

Variable	Size	Full Sample (Big)	Full Sample (Small)	No-COVID (Big)	No-COVID (Small)
Revenue	Y1	8.302	5.967	0.955	1.210
	Y3	21.281	14.951	5.569	1.575
	Y5	28.803	18.635	15.898	1.616
EBITDA	Y1	2.723	2.450	3.293	3.022
	Y3	3.532	3.662	3.919	4.393
	Y5	8.924	6.729	9.845	9.015
ROA	Y1	1.113	1.890	1.041	2.256
	Y3	1.670	2.954	1.875	2.646
	Y5	2.164	7.249	1.858	7.809
ROE	Y1	5.462	8.000	7.237	9.508
	Y3	12.416	9.941	16.493	10.715
	Y5	18.524	16.377	16.820	9.907
Net Income	Y1	7.540	26.524	9.909	35.188
	Y3	32.750	19.837	43.369	6.691
	Y5	7.165	26.031	8.589	13.075
EBITDA Margin	Y1	2.212	3.629	2.792	4.899
	Y3	63.140	4.671	1.269	5.628
	Y5	6.101	5.710	7.870	7.649
Enterprise value	Y1	14.051	0.973	17.946	0.730
	Y3	121.102	1.602	153.742	1.604
	Y5	978.535	1030.687	514.097	505.900

Table A7: Standard deviations by firm size for Germany. The sample is divided between full sample and sample excluding the COVID-19 period.

	Italy			Germany	
	Full database	Without COVID-19		Full database	Without COVID-19
Success Rate 50%	44%	57%	Success Rate 50%	61%	41%
Success Rate 70%	12%	14%	Success Rate 70%	22%	10%

Table A8: Success Rate - Transaction Value

	Italy			Germany	
	Full database	Without COVID-19		Full database	Without COVID-19
BIG 50%	38%	68%	BIG 50%	37%	47%
BIG 70%	10%	45%	BIG 70%	17%	19%
SMALL 50%	57%	49%	SMALL 50%	67%	45%
SMALL 70%	19%	3%	SMALL 70%	20%	7%

Table A9: Success rate considering Buyer size (50-70%)

Italy			Germany		
Buyer size	Full database	Without COVID-19	Buyer size	Full database	Without COVID-19
BIG 50%	49%	67%	BIG 50%	50%	38%
BIG 70%	25%	27%	BIG 70%	15%	11%
SMALL 50%	49%	53%	SMALL 50%	46%	74%
SMALL 70%	16%	9%	SMALL 70%	8%	11%

Table A10: Success rate considering Target size (50-70%)

Italy			Germany		
Transaction Value	Full database	Without COVID-19	Transaction Value	Full database	Without COVID-19
BIG 50%	28%	46%	BIG 50%	45%	25%
BIG 70%	12%	19%	BIG 70%	10%	4%
SMALL 50%	50%	58%	SMALL 50%	52%	53%
SMALL 70%	13%	6%	SMALL 70%	21%	20%

Table A11: Success rate considering Transaction Value (50-70%)