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# **Navigating the European Mergers and Acquisitions: The Influence of Target CEO Preferences**

**An empirical study**

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## **ABSTRACT**

This thesis analyses the effect of target CEO preferences on mergers and acquisitions (M&A) in Europe. To capture the complexity of the M&A industry, the analysis consists of three parts, each focusing on a different area. The first part studies the effect of target CEO preferences on M&A completion by using a probit model. The second part explores the influence on takeover premium, while the third part investigates the impact on acquirer completion returns, both by using a linear regression. The study uses the retirement age of a target CEO as a proxy to quantify preferences and adds control variables to account for firm and CEO characteristics. The results indicate that the retirement age of target CEOs does not significantly affect either M&A completion, takeover premium or acquirer completion returns. This further suggests that target CEO preferences have no impact on the M&A dynamics in Europe. This highlights the existence of potential differences between the M&A industries in Europe and the US.

**Keywords:** M&A, CEO preferences, Europe, Retirement Age

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## CHAPTER 1 Introduction

Starting as far back as the 19th century, mergers and acquisitions have been a part of the corporate and financial landscape. There have been six major peaks in this activity, with the first wave beginning in 1897 and ending in 1904, while the sixth and final wave started in 2003 and concluded in late 2007 (Alexandridis, 2011). Since then, the activity has remained constant, sparking renewed interest in the academic and research world to tackle the mergers and acquisitions (M&A) landscape. The main goal was to understand what drives these strategic decisions most firms undertake, what influences them and their outcome. While financial gain remains a core driver of M&A decision-making, companies today are also pursuing other objectives such as gaining access to modern technologies to enhance innovation capabilities, consolidate industry dominance, or expand customer bases (Deloitte, 2020). The potential benefits of M&A deals are undeniable; however, they can also introduce complex challenges within a company, the most relevant one being job loss. The most affected party is the CEO of the target company as an M&A usually results in his or her dismissal (McClay, 2024). This creates a potential conflict in which the CEO may prioritise his or her personal benefit even if it is not in the best interest of the company.

In recent years, researchers in the corporate world have been tackling the idea that the chief operating officer (CEO) can indeed influence mergers and acquisition transactions. As the CEO is the ultimate manager in a company, he also holds the most power. Becher et al (2012) argued that the compensation schemes a firm has could have a significant impact on a CEO's behaviour when it comes to selecting which firms to acquire. Elnahas and Kim (2017) show that the political ideology of a target company CEO has an impact on the frequency with which they engage in M&A activities. The research done by Pan and Yung Wang (2019) also highlights that CEOs who are uncertain-averse are less likely to engage in M&As, preferring to acquire companies within the same industry as their own. All studies conclude that CEOs indeed have a significant and influential effect on acquiring decisions, having a powerful say in which firms are targeted. However, these studies, as well as most academia that tackle the M&A subject, focus on the power an acquirer CEO has.

The extent of a target CEO's influence on shaping M&A outcomes remains largely unexplored, representing a significant overlook in understanding its impact on merger and acquisition dynamics, particularly regarding how the CEO's preferences and characteristics influence the decision-making processes. This comes as a surprise when comparing the importance of a target CEO to an acquirer CEO. In the end, target CEOs are the ones who have the biggest and most influential role in the M&A industry, from initiating negotiations to handling pricing discussions. This observation lays the foundation for the thesis's hypothesis suggesting that target CEO preferences may indeed influence M&As.

Regardless that M&As occur globally, the United States has historically held a significant share compared to the rest of the world. This dominance has led researchers to pinpoint their focus on that particular market, neglecting the European industry altogether. However, there are certain differences between the two markets, implying that the findings from previous studies conducted with US firms may not necessarily apply to European firms as well. In contrast to US companies, European firms tend to have a higher diversity on the board by including employees communities' representatives, and creditors. Together with the increased transparency between a CEO's actions and the board, the CEO's power decreases, and thus, also the influence of their preferences. European firms are also known to have higher stakeholder implication (Eur Dev, 2023). This observation might lead one to expect that CEO preferences play a less significant role in M&As within European firms compared to US firms. Therefore, the effect will not have the same magnitude as found in the previous studies; however, it is still reasonable to assume that there will still be a positive and significant effect.

This paper will contribute to the existing literature by exploring two often overlooked perspectives. Firstly, it will extend the understanding of M&A transactions by focusing the analysis on European firms. Secondly, it will highlight the influence of preferences from a target firm perspective. This leads to the formulation of the research question of this thesis:

***How do the preferences of target company CEOs influence mergers and acquisitions in Europe?***

This paper will use three different models with three distinct dependent variables to quantify and understand the influence of CEO preferences on M&As. As preferences are unobservable, the CEO's retirement age will be used as a proxy to quantify them. To analyse M&A dynamics, the variables M&A completion, takeover premium, and acquirer completion returns will be used, with the latter utilized to study acquirer gains. The first model studies the effect of retirement age on M&A completion through a probit model, while the influence of retirement age on takeover premium and acquirer completion returns will be studied using a linear regression. To strengthen the analysis, twelve control variables will be added to account for firm and CEO characteristics. The sample period starts in 2003 and ends in 2019. Based on the results of the analysis, no significant effect of retirement age on M&A completion, takeover premium, and acquirer completion returns was found. This led to the conclusion that target CEO preferences do not influence M&As in Europe, which was in contradiction with the initial expectation.

The following chapters will offer an in-depth analysis as well as insights regarding the role of the target CEO's preferences in M&As. The thesis is organised as follows: Chapter 2 presents the theoretical framework, Chapters 3 and 4 present the data and methodology used respectively, Chapter 5 reveals the findings alongside potential limitations and discussion points, and Chapter 6, the conclusion.

## CHAPTER 2 Theoretical Framework

### 2.1 Outcome

An M&A is a tactical move companies worldwide opt for to combine or acquire the ownership of other firms. The transaction involves two parties: the acquirer, which usually initiates the transaction, and the target, which is the sought company (Hayes, 2024). In an M&A, the target firm's assets, operational units, and ownership are transferred to the acquirer. These transactions can take three main forms: conglomerate, horizontal integration, and vertical integration (Hossain, 2021). Companies primarily engage in M&A activity to achieve a higher value, aiming to create a larger and more efficient organization (Brigham and Ehrhardt, 2002). In his study, Hossain (2021) mentions that the motivations to engage extend even further as M&A can also be used as a tool to increase market share, brand recognition, and diversification, all possible due to the synergies created. According to Schmid et al (2011), this is why during economic crises, firms often resort to M&As.

For decades, M&As have been a persistent enigma in the world of business with researchers still struggling to understand what influences them and their long-term effects (Meglio & Risberg, 2010). Nowadays, academia has focused on what influences the completion of an M&A as in the last years, the M&A world experienced a decrease in the volume of deals. For instance, in the first half of 2024, the volume of deals decreased by 30% compared to previous years (Levy, 2024). Aguilera and Dencker (2008) showed in their study that firms are less likely to complete an M&A deal if the two firms initially perform in different industries as frictions might arise. Kumar and Sengupta (2020) support this point by highlighting that the probability of M&A completion is affected by high geographic distances due to the variations in economic, political, and cultural between the firm's respective territories. Uysal et al (2008) state that among the few deals completed in which the target and acquirer firms are not in the same location, the acquirer firm tends to exhibit lower returns. They find that acquirers have significantly higher returns, more than twice as big when they conduct a local M&A compared to non-local M&A. Out of the many other factors that influence acquirer's returns, Ahn et al, 2010 show that even the outside network of managers could negatively influence acquirer returns when the directors are overseeing multiple boards, as this lack of dedicated time and concentration for proper research leads to the engagement of value-destroying M&A.

Another crucial factor in the M&A world is the takeover premium, the difference between the market price of the target firm's stock and the actual price paid by the acquirer (CFI team, 2023). Simonyan (2014) found that takeover premiums could be influenced by the market's misvaluation but also by previous premiums paid in similar past takeovers. Pan et al (2019) find that takeover premium is also affected by managerial overconfidence. Overconfident acquirer managers tend to overestimate the success of the M&A and underestimate the associated risk, leading them to pay a higher premium for

the targets. They highlight that this relationship is more significant for private enterprises than for state-owned companies.

## **2.2 Predictor**

At the top of each company sits the CEO, the ultimate decision-maker. This role has evolved significantly over the years as in the past, CEOs primarily focused on overseeing day-to-day operations (Gandi K, 2023). According to Lafey (2009), nowadays they are responsible for influencing the organisation's course as well as setting its long-term strategic direction. While CEOs may have personal goals to rise to, the external stakeholders are the ones who hold their decision-making accountable. Beyond its formal responsibilities, a CEO's influence extends also to his or her personal preferences, priorities, beliefs, and risk tolerance.

Having such a crucial role, CEOs have attracted the attention of the academic world over the years. Early studies focused on identifying personality traits and characteristics that shape an effective and adequate CEO. Modesto et al (2013) narrowed it down to six competencies a CEO should master in order to be effective: self-awareness, having a moral compass, being an effective listener, possessing good judgement, being a persuasive communicator, and leading with tenacity. They divide these personality traits into three main themes: wisdom, persuasion, and resilience. The researchers' focus shifted as years passed, investigating now how different decision styles CEOs use affect the company. Kruse et al (2023) highlight the importance of acknowledging how different decision styles influence firm performance. As decision styles are adaptable over time, CEOs can tailor their styles to be specific to a firm, leading in the end to an increase in their firm's success. Another requiring theme tackled by researchers is the influence of a CEO's educational background on the likelihood of being selected for the role as well as its impact on firm performance. Gottesman and Morey (2015) used a sample of US firms to show that the CEO's level of education has no significant effect on a firm's performance. They argue that the time between a CEO's degree completion and the start of their job as a CEO is long enough for the positive effects of a degree to diminish. However, getting a degree or taking part in a more selective education has its benefits. Bhagat et al (2010) highlight that education does have a significant effect on the selection and hiring of CEOs. Thus, while obtaining a degree does not help the CEO to increase the firm's performance, it helps the individual in landing the job. Contemporary research shifted focus again, focusing on analysing how a CEO's personal traits and preferences affect the financial world.

## **2.3 Relationship between Predictor and Outcome**

In 2023, Bekos and Chari developed the Upper Echelons Theory. This theory states that there is a strong connection between a company's top management team's characteristics and its strategic decision-making. They argue that top managers are unable to make fully rational decisions and are often forced

to rely on previous experience and on their interpretations to conduct strategic decisions. This theory was built on previous studies such as the one conducted by Shefrin (2015). In his study, he argues how a manager's preferences affect their ability to make fully rational decisions, leading to the underestimation of value creation opportunities and poor firm performance. Thus, another critical yet often overlooked factor that affects the landscape of M&A is the influence of CEO preferences. As the ultimate managers in the firms, both the acquisition firm's CEO as well as the target firm's CEO can influence M&As.

The initial area researchers explored focused on how the preferences and characteristics of an acquisition firm's CEO affect M&A activity. Wang and Yin (2018) analysed how a CEO's educational background can influence target firms' selection. Their analysis showed that CEOs are more likely to choose a target firm headquartered in the country where they obtained their degree. They argue that CEOs gain a sense of familiarity and acquaintance with local firms during their studies, giving them an information and competitive advantage. Becker et al. (2012) highlight that the compensation and incentive schemes a CEO is entitled to affect their willingness to participate and oversee an acquisition. Using a sample consisting of 3,000 large firms in the US, they conclude that the higher the ownership stake a CEO has within the company, the less likely he or she is willing to oversee an acquisition. However, they highlight that in the few cases in which an acquisition is overseen, the CEO closes value-adding deals and as a result, experiences an increased post-merger performance. Another study conducted by Elnahas and Kim (2017) demonstrates that even the political ideology a CEO has affects M&A decisions. Based on a sample of 1007 US firms, they conclude that Republican CEOs are less likely to engage in M&As. As a result of their ideology and beliefs, Republican CEOs have a higher concern for better firm performance compared to non-republican CEOs, leading to a lower engagement. In the few instances in which they do engage in an M&A, they are more likely to target public firms within the same industry. They are also less likely to enter deals where the degree of information asymmetry is high. Pan and Yung Wang (2019) show that CEOs who are uncertain-averse are less likely to engage in M&As, preferring as well to acquire companies within the same industry as their own. The authors state that uncertainty aversion varies per culture and is also influenced by one's life environment. Based on these results from past studies, the preferences of an acquiring CEO have three main effects on the M&A landscape: the frequency of making an acquisition, the selection of a target company, and post-acquisition performance.

The second perspective, regarding the dominance a target CEO has in shaping M&A outcomes, is far less studied. This might come as striking when considering the relative power a target CEO holds compared to the acquiring CEO. Graham, Harvey, and Puri (2013) argue that in the takeover market, the CEO of the target firm holds the most significant role. They highlight that target firm CEOs are the ones seeking out the buyer, initiating merger talks, and in the case a bid has been made, they lead the



negotiations regarding the price. They are ultimately responsible for determining whether a deal is completed or not.

As M&As are transformative events, they produce significant changes within the involved companies, with the negative impact falling on the target company. Prior literature argues that the target CEO is the most affected party. Wulf and Singh (2011) highlight that it is very uncommon for the acquirer firm to retain the target CEO, leading to a notable change in leadership. This follows the findings of Campbell et al. (2021) who show that keeping the target CEO on board even just as a director can negatively affect the firm's post-merger performance. Consequently, acquirers act with caution when it comes to director and CEO retention from the target company. This translates to significant costs a target CEO's career might encounter when participating in an M&A. Regardless of the compensation schemes a firm offers to its CEO, it remains uncertain whether these eliminate the incentive problem the CEO faces when deciding between career advancement and the company's success. Therefore, agency theory suggests that a potential conflict between a company's CEO and its shareholders might arise as they have two different objectives. The theory highlights how the CEO (the agent) might not act in the interests of the shareholders (the principal) leading to the appearance of disputes.

Jenter and Lewellen (2015) measured the impact of these conflicting objectives by using a sample of 7,992 US firms. To quantify target CEO career costs, they used the retirement age as a proxy and studied how the willingness to accept a takeover bid changes with age. The paper finds a positive and significant effect of retirement age on the probability of receiving a successful takeover bid as well as an increase in M&A activity once the CEO approaches retirement age. This supports their main claim, which states that CEOs who perceive M&As as costly and detrimental to their careers would be more likely to accept a takeover bid only in the later stages as there are no attributable costs to their career. Thus, target CEO preferences can lead to the abandonment of profitable deals if they appear in the early stages of their career. However, the paper also highlights that the magnitude of this effect is heavily dependent on the firm's corporate governance such that a firm with stricter corporate governance will have more M&A activity conducted by young CEOs.

## **2.4 Expectations and Hypotheses**

Based on the existing literature, it is clear that CEO preferences indeed affect M&As. Even though they occur globally, researchers focused on analysing the M&A landscape with the use of US firms as they hold a significant share of the overall activity compared to the rest of the world. This makes the European M&As a mystery and a compelling world to study. Due to the different laws and regulations European firms are forced to comply with, the previously founded factors that influence M&A decisions in the US might not exhibit the same effect in Europe.

While US firms prioritize shareholder value, European firms usually emphasize stakeholder value and management (Eur Dev, 2023). They tend to have a higher diversity on the board by adding various employees' communities' representatives, and creditors. The CEO is also more closely monitored due to increased transparency regulations between his actions and the board, decreasing its overall power and influence. This came as a consequence of the new directive adopted by the European Commission which states that companies need to disclose information about policies, risks, results, anti-corruption, bribery issues, social and employee aspects as well as the diversity on boards of directors (De Nederlandse Grondwet, 2014). This might show that M&A are less likely to be influenced by the CEO's preferences in European firms than in US firms, mitigating their effect. However, as the role of the CEO in the company structure remains paramount, one would still expect to find a significant and positive effect of target CEO preferences on M&A but at a lower magnitude. In conclusion, this thesis will analyse the following main hypothesis:

*H1: In Europe, the target CEO's preferences have a positive effect on M&A activity*

Due to the high complexity and numerous variables influencing the M&A dynamics, this main hypothesis is further divided into three small and specific hypotheses. Each hypothesis will be analysed individually with a statistical model. Based on the three analysis and their conclusions, a final implication regarding the effect of target CEO preferences on M&A activity will be made. The first specific hypothesis analyses the effect of target CEO preferences on M&A completion, while the second one focuses on takeover premiums and the last one on acquirer gains.

Given this, the three small hypotheses are formulated as follows:

*H1.1: In Europe, the target CEO's preferences have a positive effect on M&A completion*

*H1.2: In Europe, the target CEO's preferences have a positive effect on takeover premiums*

*H1.3: In Europe, the target CEO's preferences have a positive effect on acquirer gains.*

## CHAPTER 3 Data

### 3.1 Data Sample Description

The purpose of this paper is to examine the impact of the target CEO's preferences on M&A dynamics. To conduct this analysis, information about M&A decisions and the target firms involved is needed for a starting point. Orbis M&A offers a comprehensive and complete information set for both completed as well as unsuccessful mergers and acquisitions. The data sample used in this research consists of all completed and withdrawn mergers, demergers, and acquisitions starting from 2003 up until 2019. According to Alexandridis et al. (2012), the year 2003 marks the beginning of the sixth and final wave of M&A activity, making it a relevant starting point. The data collection stopped in 2019 to avoid the impact of the COVID-19 pandemic on the market starting in 2020. As the paper focuses on the European market, the sample of firms was restricted to publicly listed firms that have their primary addresses in the following regions: Western Europe, Scandinavia, Eastern Europe, Baltic, Nordic, and Balkan states. Similar to Jenter and Lewellen (2015), financial firms and utility companies were excluded from the analysis due to their distinct accounting standards. Moreover, only firms with a total asset value of at least 10 million euros were included in the data sample. There was no restriction regarding the deal value of the M&A as the target CEO participates in every M&A due to their negotiating responsibilities (Hayward and Hambrick, 1997). Appendix A includes a summary of the selection criteria for the sample. In the end, this filtering process resulted in a sample of 2,996 target firms. From Orbis M&A, information regarding the *target's pre-deal market capitalization, pre-deal target operating revenue, pre-deal target enterprise value, pre-deal target EBITDA, total assets, initial offer price, target stock price prior to the announcement of the M&A, acquirer stock price at and after completion, completion, and withdrawn year* was also retrieved.

Having now identified the target firms that met the criteria, information regarding their CEO is needed. However, for every individual company, data is only required for the CEO who sat on the board during the year of the M&A transaction. This information was extracted from BoardEx, available on Wharton Research Data Services. For each CEO, the following data was retrieved: *retirement age, time to retirement, tenure, board size, time on board, time in the company, number of qualifications, date of birth*, and whether the *CEO* was also a *chairman*. After eliminating the observations with missing information, the final sample used in the analysis consisted of 1369 observations.

### 3.2 Variables

#### 3.2.1 Dependent Variables

To ensure a comprehensive and reliable analysis of M&A dynamics, three dependent variables will be used. The first dependent variable is *M&A completion*. This was not directly retrieved from the datasets, but it was calculated based on the deal status code obtained from Orbis M&A. Based on the search

criteria, the deal status takes only two values: completed and withdrawn. Thus, the dependent variable is presented as a dummy, which takes the value 1 if the M&A was completed and 0 if the deal was withdrawn. The second dependent variable is *Takeover premium*. It is equal to the percentage change between the initial offer price and the target company's stock price prior to the announcement of the M&A. Because the initial offer price is used, this makes it possible to calculate the takeover premium for all M&A deals. This dependent variable is continuous, measured in euros. The third and last dependent variable is *Acquirer completion return*, also a continuous variable. It is used as a proxy to quantify the acquirer gains after the completion of the M&A. This variable also had to be calculated as it was not directly retrieved from the databases. It is equal to the percentage change between the acquirer's stock price after and at the completion of the M&A. For this part, the sample will be restricted to contain only completed M&A deals.

### **3.2.2 Independent Variable**

The independent variable is CEO preferences. As preferences are unobservable, a suitable measure to quantify them is needed. This paper will follow the approach used by Jenter and Lewellen (2015) and use the age of the CEO to measure preferences, more specifically, the CEO's retirement age. CEOs might exhibit personal preferences related to the timing of their retirement, as each will perceive the benefits and disadvantages of staying employed differently. These preferences are thus most likely to influence how they view the M&A costs. A target CEO's career often ends with the decision to participate in an M&A, pushing him into an "early retirement". Being at or above retirement age should make these career costs disappear. Additionally, using the retirement age as a proxy ensures there is no reverse causality in the analysis as the age of the CEO is not a direct result of an M&A. According to Eurofound, the agreed norm to retire from paid work in Europe is 65 years old. As a result, the age of 65 serves as a credible and useful benchmark for this study. The independent variable thus becomes *retirement age*, a dummy variable that takes the value 1 if the CEO who oversaw the M&A deal was at least 65 years old and 0 otherwise. This variable is not directly retrieved from the datasets. The first step in calculating this variable was to determine the age of the CEO at the time of the M&A. Depending on the case, the variable was calculated as the difference between the completed or withdrawn year and the birth year of the CEO. The latter was retrieved from the date of birth variable retrieved from BoardEx.

### **3.2.3 Control Variables**

To decrease the probability of omitted variable bias and minimise the likelihood of endogeneity when identifying the effect between the dependent on the independent variable, several control variables have been added. The first one is *board size*. It represents the total number of directors that sat on the board of the target company at the time of the M&A decision. Due to a lack of data availability, board size will be used as a proxy for corporate governance such that a higher board size translates to stricter corporate governance. Larger boards have a higher number of directors who can provide guidance and

oversight. This leads to an increased probability that there will be more representatives with different expertise and specialization. Additionally, larger boards might follow more formal, organized, and stricter procedures to successfully coordinate the higher number of participants. Given this, it is reasonable to assume that a higher board size translates to a stricter corporate governance structure. *Pre-deal target assets, pre-deal target market capitalization, pre-deal target operating revenue, pre-deal target enterprise value, pre-deal target EBITDA, and deal value*, all measured in millions of euros, are also used as control variables to account for firm characteristics. To control for CEO individual characteristics, *tenure, time in company, time on board, and number of qualifications* are also added to the model. *Tenure* was calculated based on the time in role variable retrieved from the databases. *Time to retirement* indicates the number of years until the CEO reaches the retirement age of 65. *Time in the company* and *time on board* show the number of years the CEO has been part of the company and on its board respectively. *Number of qualifications* represents the average number of undergraduate and higher-level qualifications the CEO has earned. The last control variable used in this paper is *Chairman*, a dummy variable which takes the value 1 if the CEO is also a chairman on the board and 0 otherwise. A summary of all the variables used in this research can be found in Table 1.

Table 1. Description of variables

<b>Variable name</b>	<b>Variable description and measurement</b>
<b><u>Independent Variable</u></b>	
Retirement age	CEO's age at the time of M&A decision; dummy variable with value 1 if the CEO is at least 65 years old, 0 otherwise
<b><u>Dependent Variables</u></b>	
M&A completion	Outcome of the M&A deal; dummy variable with value 1 if the M&A deal was completed and 0 if it was withdrawn
Takeover premium	Equal to the percentage change between the initial offer price and the target company's stock price prior to the announcement of the M&A deal; continuous variable measured in euros
Acquirer completion return	Equal to the percentage change between acquirer stock price after and at the completion of the M&A deal; continuous variable measured in euros

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### **Control Variables**

Deal Value	Value of the M&A deal, measured in millions of euros
Pre-deal Target total assets	Target company's total assets before the M&A deal; measured in millions of euros
Pre-deal Target market capitalization	Target company's market capitalization before the M&A deal; measured in millions of euros
Pre-deal Target operating revenue	Target company's operating revenue before the M&A deal; measured in millions of euros
Pre-deal Target enterprise value	Target company's enterprise value before the M&A deal; measured in millions of euros
Pre-deal target EBITDA	Target company's earnings before interest, taxes, depreciation and amortization (EBITDA), before the M&A deal; measured in millions of euros
Tenure	CEO's time in role measured at the time of the M&A; measured in years
Time in company	Total time the CEO has been with the company at the time of the M&A; measured in years
Time on board	CEO's time as a member of the board at the time of the M&A; measured in years
Number of qualifications	Average number of undergraduate and higher-level qualifications earned by the CEO

Board size	Number of directors on the company's board at the time of the M&A
Chairman	Dummy variable with value 1 if the CEO is also a chairman, 0 otherwise

*Notes: M&A completion, Takeover premium, Acquirer completion returns, Deal value, Pre-deal Target total assets, Pre-deal Target market capitalization, Pre-deal Target operating revenue, Pre-deal Target Enterprise value, Pre-deal Target EBITDA were retrieved from Orbis M&A. Retirement age, Tenure, Time in company, Time on board, Number of qualifications, Board size and Chairman were retrieved from BoardEx, available on Wharton Research Data Services.*

### 3.3 Descriptive Statistics

Having defined the variables, the next essential step is to analyse the descriptive statistics of the data, which are presented in Table 2. This provides a starting point for understanding the data's characteristics before conducting any type of analysis. The mean of the *M&A completion* variable is 0.867, meaning that out of the 1369 M&A deals included in this sample, 86.7% of them were completed with only 13.3% being withdrawn. The mean of the *Takeover premium* is EUR 1,358.655, suggesting that on average, the initial offer price exceeds the target's stock price prior to the announcement. However, the minimum value of this variable is negative EUR 0.999. This indicates that the acquirer believed that some target stock prices did not reflect the firm's true value and were in fact overvalued by the market. This led to an offer price lower than the prevailing market price. The average *Acquirer completion returns* is also negative, highlighting that in this sample, the investors did not perceive the M&A deals as value-creating and the post-performance of the combined firm has not risen to the expectations of the investors. The mean age of the CEOs is 54.766, with a minimum of 31 years old and a maximum of 89 years old. The mean age is relatively similar to the one found by Jenter and Lewellen (2015) in their study, 54.12. Despite the maximum age being relatively high compared to typical standards, only 13.2% of the CEOs in this sample are at least 65 years old as shown by the mean of the *retirement age* dummy variable. This can also be seen in the statistics of the *time to retirement* variable, which has a minimum of -22.6 years, a maximum of 35.3, and an average of approximately 12 years. The number of qualifications a CEO has ranges from 0 to a maximum of 9, with a mean of approximately 2. In this data sample, 41.9% of the CEOs are also a chairman on the board. The board size varies quite substantially, from a minimum of 2 directors to a maximum of 28, with an average of approximately 9 directors. In their paper, Jenter and Lewellen (2015) found a mean board size of approximately 8, slightly lower compared to this sample. This data reveals a surprising result as some CEOs participated in M&A deals within just a few months of joining the company and board. This is shown by the minimum of the *time in company*, *time on board*, and *tenure* variables, equal to 0.1 years. On average, however, CEOs had their positions for approximately 6.7 years, been with the company for about 12 years, and served on the board for 9 years. The maximum values for these variables are also surprising. *Time in company* has a maximum value of approximately 57 years, *time on board*, 52, and *tenure*, 50.9. This suggests that several CEOs from this sample have started in a lower position in the company and climbed to the top, having a long and

successful career. When looking at the firm-specific variables, which are expressed in millions, there is a noticeable range of values. The minimum deal value is EUR 0.0116, while the maximum deal value reaches EUR 66,702.910 with a mean of EUR1, 914.726 million. Target companies also varied greatly in their assets. The pre-deal total assets of the target firm are on average EUR 1,531.927, ranging from EUR 0.060 to EUR 161,068.400. The pre-deal target market capitalization is on average EUR 1,920.570 and ranges from EUR 0.91 to EUR 85,809.880. The target's pre-deal operating revenue, enterprise value, and EBITDA are on average EUR 683.576, EUR 1,966.861, and EUR99.398 respectively. The negative minimum value of the target pre-deal EBITDA, EUR1,953.651 suggests that several firms in this data set do not generate enough income from their operations to cover their operating expenses. This affects the market perception of the company's profitability, resulting in small enterprise values, highlighted by the minimum value of the target enterprise value, EUR 0.891.

Table 2. Descriptive statistics

	<b>Mean</b>	<b>Standard Deviation</b>	<b>Minimum</b>	<b>Maximum</b>
<b>M&amp;A completion</b>	0.867	0.339	0.000	1.000
<b>Takeover Premium</b>	71.969	1,358.655	-0.999	47,847.270
<b>Acquirer completion returns</b>	-0.002	0.077	-0.970	2.406
<b>Retirement age</b>	0.132	0.338	0.000	1.000
<b>Deal value</b>	1,914.726	5,394.612	0.0116	66,702.910
<b>Target total assets</b>	1,531.927	6,555.481	0.060	161,068.400
<b>Target market capitalization</b>	1,920.570	6,171.38	0.911	85,809.880
<b>Target operating revenue</b>	683.576	3.177.225	0	84,959.420



<b>Target Enterprise value</b>	1,966.861	6.068.611	0.891	87,511.510
<b>Target EBITDA</b>	99.398	420.291	-1,953.651	7,163.800
<b>Time to retirement</b>	11.99233	8.728387	-22.600	35.300
<b>Tenure</b>	6.701	7.020	0.100	50.900
<b>Time on board</b>	9.584	8.801	0.100	52.100
<b>Time in Company</b>	11.598	10.089	0.100	56.900
<b>Number of Qualifications</b>	1.835	1.324	0.000	9.000
<b>Board Size</b>	9.077	4.420	2.000	28.000
<b>Chairman</b>	0.419	0.494	0.000	1.000
<b>CEO age</b>	54.766	8.382	31.000	89.000
<b>Number of observations</b>	1,369	1,369	1,369	1,369

*Notes: Probability of completion is a dummy variable, taking the value 1 if the M&A deal was completed and 0 if the deal was withdrawn. Retirement age is a dummy variable, which takes the value 1 if the CEO is 65 years old or older and 0 otherwise. Takeover premium and Acquirer completion returns are continuous variables. Deal Value, target market capitalization, target total assets, target operating revenue, target enterprise value, and target EBITDA represent the pre-deal values of the target company and are measured in millions of euros. Time to retirement indicates the number of years until the CEO reaches the retirement age of 65. Time in company and time on board show the number of years the CEO has been a member of the company and of its board respectively. Tenure represents the number of years the individual has held the CEO position. Number of qualifications indicates the average number of undergraduate and higher-level qualifications the CEO has earned. Board size shows the number of directors on the company's board. Chairman is a dummy variable, which takes the value 1 if the CEO is also a chairman on the board and 0 otherwise. CEO age indicates the age of the CEO.*

To better understand the data used in this paper, the sample is divided into two main groups: CEOs younger than 65 years old and CEOs older than 65. The first two columns from Table 3 summarize the averages across different variables between the two groups. In Column 3, the null hypothesis that there are no differences between CEOs younger than 65 and CEOs older than 65 for all variables used in this analysis is tested. The difference between the two groups for the number of M&A deals completed, takeover premium and acquirer completion returns is not statistically significant, highlighting that, in this sample, age is not a defining factor for M&A dynamics. Deal value, target market capitalization target operating revenue, target enterprise value, and target EBITDA also exhibit no significant difference. However, target total assets showed one, suggesting that younger CEOs prefer firms with a higher number of total assets compared to older CEOs. The difference in board size is also significant, indicating that younger CEOs prefer to have a broader range of expertise on the board to accompany them. Moreover, younger CEOs have a higher number of qualifications than older CEOs shown by the significant difference between the groups. This is in line with the ongoing trend of accumulating as many qualifications as possible to gain a competitive advantage and edge within the job market.

Table 3. Differences in mean statistics

	<b>CEOs younger than 65</b>	<b>CEOs older than 65</b>	<b>Difference</b>
	<b>years old</b>	<b>years old</b>	<b>(3)</b>
	<b>(1)</b>	<b>(2)</b>	
<b>M&amp;A completion</b>	0.869	0.855	0.013 (0.028)
<b>Takeover premium</b>	80.940	12.720	68.220 (42.464)
<b>Acquirer completion returns</b>	-0.002	-0.006	0.004 (0.004)
<b>Deal Value</b>	1,940.099	1,747.120	192.979 (429.186)
<b>Target Total assets</b>	1,609.964	1,016.447	593.518** (286.789)
<b>Target market capitalization</b>	1,997.292	1,413.782	583.509 (365.896)

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<b>Target operating revenue</b>	705.107	541.247	163.760 (153.726)
<b>Target Enterprise value</b>	2,017.018	1,635.541	381.478 (358.057)
<b>Target EBITDA</b>	102.827	76.746	26.081 (25.180)
<b>Time to retirement</b>	12.231	-4.798	17.02915*** (0.387)
<b>Tenure</b>	5.917	11.883	-5.966*** (0.849)
<b>Time on board</b>	8.188	18.807	-10.619*** (1.001)
<b>Time in company</b>	10.217	20.720	-10.503*** (1.106)
<b>Number of Qualifications</b>	1.888	1.483	0.405*** (0.117)
<b>Board size</b>	9.273	7.778	1.495*** (0.305)
<b>Chairman</b>	0.391	0.606	-0.215*** (0.039)
<b>Number of observations</b>	1369	1369	1369

Notes: Columns (1) and (2) show the average characteristics of the group of individuals specified by the heading and Column (3) shows the difference between the average characteristics of CEOs younger than 65 years old and CEOs older than 65. Standard errors are presented in brackets for the continuous variables and standard deviations for dummy variables. Dummy variables are presented as proportions. Significance is based on the p-value of each two-sided test \*  $p < 0.1$  \*\*  $p < 0.05$  \*\*\*  $p < 0.01$ .

## CHAPTER 4 Methodology

To analyse the collected data, this paper will use separate models for the three dependent variables. This allows for an independent assessment of the three specific hypotheses. The analysis will be conducted in STATA, a statistical software. To analyse the first specific hypothesis regarding M&A completion, a probit regression will be used. Also known as a probit model, it is specifically designed to be used when the dependent variable, the outcome one is trying to predict, can only take two values. The dependent variable in this first model is *M&A completion*. The binary nature of the dependent variable makes a probit regression the ideal choice for the analysis. The probit regression used in the analysis is:

$$P(M\&A\ completion_{i,t}=1 | Retirement\ Age_{i,t}, Control\ Variables) = \Phi(\beta_0 + \beta_1 Retirement\ Age_{i,t} + \beta_2 Control\ Variables)$$

In this equation, the dependent variable *M&A completion* is calculated for each firm *i* in the sample. The independent variable, *Retirement\_Age<sub>i,t</sub>* appears for every CEO *t* and for every firm *i* in the sample. In the probit regression,  $\beta_0$  represents the intercept, the value of the dependent variable when all other coefficients are equal to zero. The coefficient  $\beta_1$  of the independent variable indicates the change in probability in the *M&A completion*, given a one-unit increase in *Retirement\_Age*, holding everything else constant. In this specific case,  $\beta_1$  shows the effect on *M&A completion* when *Retirement Age* changes from 0 to 1 (i.e. when the CEO is 65 years old or older), while holding all other variables constant.  $\beta_2$  shows the effect of a one-unit increase in the corresponding control variable on the dependent variable while keeping all other variables constant.

The second and third specific hypotheses concerning takeover premium and acquirer completion returns will be analysed using two distinct linear regression models. A linear regression allows one to study how changes in an exogenous variable can influence the endogenous variable. The nature of the dependent variables, *takeover premium*, and *acquirer completion return*, makes this approach appropriate since both are continuous variables. The linear regressions have the following form:

$$Takeover\ premium_i = \beta_0 + \beta_1 Retirement\ Age_{i,t} + \beta_2 Control\ Variables + \varepsilon$$

$$Acquirer\ completion\ returns_i = \beta_0 + \beta_1 Retirement\ Age_{i,t} + \beta_2 Control\ Variables + \varepsilon$$

Both dependent variables are calculated per firm *i* from the sample. Contrary to the probit model, the variables' coefficients have a slightly different interpretation except for  $\beta_0$  which remains unchanged. Now,  $\beta_1$  indicates the effect when *Retirement Age* changes from 0 to 1 on the absolute values and not the probabilities of *Takeover premium* and *Acquirer completion returns*.  $\beta_2$  shows the effect of a one-unit increase of the control variables on the 2 dependent variables.  $\varepsilon$  represents the error term which captures the unobserved variability of the dependent variables which cannot be explained by the model.

## CHAPTER 5 Results & Discussion

### 5.1 Results

The first part of the analysis concentrates on analysing the effect between retirement age and M&A completion. Since the dependent variable is binary, the coefficients for both the independent variable and the control variables reflect how each factor influences the probability that an M&A deal is completed. Table 4 shows the probit regression results for five different models. While all models have the same dependent variable, *M&A completion*, and independent variable, *retirement age*, they progressively incorporate more variables. Model 1 has no control variables, highlighting only the effect of retirement age on the probability of M&A completion. Model 2 adds *board size* to control for corporate governance. Model 3 adds six more variables, *deal value*, *target total assets*, *target market capitalization*, *target operating revenue*, *target enterprise value*, and *target EBITDA* to account for firm characteristics. Model 4 adds to Model 1 *tenure*, *time on board*, *time in company*, *number of qualifications*, and *chairman* as control variables to account for CEO characteristics and Model 5 combines all variables, resulting in a model with twelve control variables. Due to the multiple models used, a measure to assess how well the models fit the data is presented in the last row of Table 4, namely the McFadden's Pseudo  $R^2$  values. It is a relative measure, which allows for the comparison of different models. Model 5 has the largest value, 0.0234, meaning that the model explains 2.34% of the variation in the dependent variable. Model 1, the model with the least variables explains 0.02% of the variation. Models 2, 3, and 4 explain 0.03%, 1.34% and 0.094%, respectively. While the values are low, they suggest an improved explanatory power as more control variables as added.

A comparison of the five models reveals a contradictory finding. The dependent variable varies in both sign and magnitude across the five models. In the initial three models, retirement age decreases the probability of an M&A being completed, suggesting that a CEO who is 65 years old or older is not likely to finalize an M&A deal. In Model 1, a CEO at the age of 65 or older decreases the probability of M&A completion by 0.061, while in Models 2 and 3, the probability decreases with 0.056 and 0.058, respectively while keeping everything constant. However, when controlling for CEO characteristics in Model 4 and for both firm and CEO characteristics in Model 5, the relationship changes. The sign of the dependent variable shifts, now indicating that retirement age has a positive effect on the dependent variable. This change of the independent variable, from negative in the first 3 models with fewer control variables to positive in the latter models, suggests there is omitted variable bias. Thus, the most reliable result is found in the final model, Model 5, which includes the most control variables and has the highest data fit measure. By including all the control variables, a more comprehensive understanding of the effect of retirement age is offered as well as addressing the omitted variable bias. Based on those results from Model 5, it can be concluded that a CEO aged 65 or older increases the probability of completing an M&A with 0.056, keeping all other variables constant. However, due to the lack of significance of

the independent variable, the independent variable's coefficient sign cannot provide reliable and accurate information about the direction of the effect. The sample used in this analysis thus does not offer sufficient evidence to support a significant relationship between retirement age and the likelihood of M&A completion, leading to the rejection of the first specific hypothesis.

The coefficients found for the control variables also reveal surprising findings. Based on the results, larger deals as well as deals that include target companies with higher market capitalization or higher enterprise value are more likely to be completed as shown by the positive and significant coefficients of *deal value*, *target market capitalization*, *target enterprise value* variables, respectively. *Time on board* is another factor that influences M&A completion, but negatively, suggesting the longer a CEO sits on the board, the lower the likelihood of deal completion, whereas CEOs who have been part of the company for longer slightly increase the probability of deal completion. The other control variables, *target total assets*, *target operating revenue*, *target EBITDA*, *board size*, *tenure*, *number of qualifications*, and *chairman* have no significant effect on the probability of M&A completion. The insignificant effect of *board size* on the dependent variable suggests that the corporate structure of the company does not influence the outcome of an M&A deal.

Table 4. Probit regression results

	<b>Model 1</b>	<b>Model 2</b>	<b>Model 3</b>	<b>Model 4</b>	<b>Model 5</b>
<b>Retirement age</b>	-0.061 (0.124)	-0.056 (0.125)	-0.058 (0.126)	0.045 (0.140)	0.056 (0.138)
<b>Deal value</b>			0.000** (0.000)		0.000** (0.000)
<b>Target total assets</b>			0.000 (0.000)		0.000 (0.000)
<b>Target market capitalization</b>			0.000** (0.000)		0.000** (0.000)
<b>Board Size</b>		0.002 (0.009)	0.001 (0.009)		0.001 (0.010)
<b>Target operating revenue</b>			0.000 (0.000)		0.000 (0.000)
<b>Target enterprise value</b>			0.000** (0.000)		0.000** (0.000)
<b>Target EBITDA</b>			0.001 (0.001)		0.001 (0.001)
<b>Tenure</b>				0.006	0.007

				(0.009)	(0.009)
<b>Time on board</b>				-0.036***	-0.038***
				(0.014)	(0.013)
<b>Time in Company</b>				0.021**	0.021*
				(0.011)	(0.010)
<b>Number of Qualifications</b>				-0.012	-0.015
				(0.032)	(0.035)
<b>Chairman</b>				0.133	0.015
				(0.092)	(0.091)
<b>Constant</b>	1.121***	1.096***	1.144***	1.143***	1.203***
	(0.047)	(0.101)	(0.104)	(0.095)	(0.132)
<b>Observations</b>	1,369	1,369	1,369	1,369	1,369
<b>Pseudo R<sup>2</sup></b>	0.0002	0.0003	0.0134	0.0094	0.0234

Notes: Results of the probit regression with the dependent variable M&A completion. The models progressively add variables as follows: Model 1 includes only retirement age, while the following ones incorporate additional control variables related to firm and CEO characteristics. McFadden's Pseudo R<sup>2</sup> is added as a model fit statistic. Standard errors are presented in brackets for the continuous variables. Significance is based on the p-value of each two-sided test \*  $p < 0.1$  \*\*  $p < 0.05$  \*\*\*  $p < 0.01$ .

The second part of the analysis focuses on how target CEO preferences influence the takeover premium. To quantify this relationship, a linear regression was used with the dependent variable being *takeover premium* and the independent variable being *retirement age*. The results are shown in Table 5. The five models follow the same structure used in the first part of the analysis, incorporating the same control variables. Because a linear regression was used instead of a probit model, R<sup>2</sup> is presented to measure the degree to which the model fits the data. Model 5, which includes all control variables, fits the data best shown by the highest value of R<sup>2</sup>. When analysing the results, in all five models, the coefficient of retirement age is negative. This would suggest that a CEO who is 65 years old or older decreases the takeover premium. This is in contrast with the result found by Jenter and Lewellen (2015) in their study. They concluded that in the US, CEOs closer to retirement age experience an increase in completing M&A without accepting a lower takeover premium. In this sample, older CEOs are more likely to complete an M&A at the expense of a lower takeover premium. The control variables used exhibit an insignificant effect on takeover premiums. As there is no significant effect attributed to the independent variable, the sample again does not offer sufficient evidence to conclude that retirement age affects takeover premiums in Europe. This leads to the rejection of the second specific hypothesis as well.

Table 5. Linear regression results with dependent variable takeover premium

	<b>Model 1</b>	<b>Model 2</b>	<b>Model 3</b>	<b>Model 4</b>	<b>Model 5</b>
<b>Retirement age</b>	-68.219	-76.200	-76.215	-47.062	-53.477
	(42.477)	(49.023)	(48.603)	(36.486)	(38.141)

<b>Deal value</b>				-0.008 (0.005)	-0.008 (0.006)
<b>Target total assets</b>				0.000 (0.000)	0.000 (0.000)
<b>Target market capitalization</b>				0.002 (0.003)	-0.003 (0.004)
<b>Board Size</b>	-5.336 (4.581)			-5.462 (4.661)	-7.131 (6.009)
<b>Target operating revenue</b>				-0.003 (0.003)	-0.003 (0.003)
<b>Target enterprise value</b>				-0.002** (0.000)	-0.002 (0.002)
<b>Target EBITDA</b>				0.072 (0.054)	0.068 (0.051)
<b>Tenure</b>					3.808 (4.050)
<b>Time on board</b>					3.354 (3.965)
<b>Time in Company</b>					-2.984 (3.653)
<b>Number of Qualifications</b>					-4.024*** (3.509)
<b>Chairman</b>					0.099 (4.640)
<b>Constant</b>	80.939* (42.284)	130.429 (83.669)	141.916 (86.759)	58.663 (48.880)	126.438 (97.243)
<b>Observations</b>	1,369	1,369	1,369	1,369	1,369
<b>R<sup>2</sup></b>	0.0003	0.0006	0.0011	0.0009	0.0018

*Notes: Results of the linear regression with the dependent variable being takeover premium. The models progressively add variables as follows: Model 1 includes only retirement age, while the following ones incorporate additional control variables related to firm and CEO characteristics. R<sup>2</sup> is added as a model fit statistic. Standard errors are presented in brackets for the continuous variables. Significance is based on the p-value of each two-sided test \* p<0.1 \*\*p<0.05 \*\*\*p<0.01.*

The third and final part of the analysis consists of analysing the effect of target CEO preferences on acquirer completion returns. A linear regression with retirement as an independent variable was performed and the results are shown in Table 6. For this part of the analysis, only completed M&A deals were added to the analysis, resulting in a sample containing 1,187 observations. However, similarly to the first two parts, the structure of the model is identical, including the same control variables. The fifth



model again fits the data best, indicated by the highest value of R2. In this analysis, the coefficients of the control variables have no to little effect, as shown by zero values of the coefficients. They are also insignificant highlighting that they do not influence the value of acquirer completion returns. Retirement age has a negative coefficient on acquirer completion returns in all five models. Acquirer completion returns was used as a dependent variable to measure the acquirer gains after the M&A deal. This is in line with the findings of Jenter and Lewellen (2015) as they also did not find a significant effect of retirement age on acquirer gains. The results highlight that regardless of the increase in M&A completed deals when CEOs are closer to retirement age and the higher acceptance of lower takeover premiums, acquirers do not experience higher gains. This leads to the rejection of the third and last specific hypothesis.

Table 6. Linear regression results with dependent variable Acquirer completion returns

	<b>Model 1</b>	<b>Model 2</b>	<b>Model 3</b>	<b>Model 4</b>	<b>Model 5</b>
<b>Retirement age</b>	-0.005 (0.005)	-0.005 (0.004)	-0.005 (0.004)	-0.004 (0.004)	-0.004 (0.004)
<b>Deal value</b>			0.000* (0.000)		0.000 (0.000)
<b>Target total assets</b>			0.000 (0.000)		0.000 (0.000)
<b>Target market capitalization</b>			0.000 (0.000)		0.000 (0.000)
<b>Board Size</b>		0.000 (0.000)	0.000 (0.000)		0.000 (0.000)
<b>Target operating revenue</b>			0.000*** (0.000)		0.000*** (0.000)
<b>Target enterprise value</b>			0.000 (0.000)		0.000 (0.000)
<b>Target EBITDA</b>			0.000 (0.000)		0.000 (0.000)
<b>Tenure</b>				0.001** (0.002)	0.001** (0.002)
<b>Time on board</b>				0.000 (0.000)	0.000* (0.000)
<b>Time in Company</b>				0.000 (0.000)	0.000 (0.000)
<b>Number of Qualifications</b>				0.001	0.001

				(0.001)	(0.001)
<b>Chairman</b>				-0.001	-0.001
				(0.003)	(0.003)
<b>Constant</b>	-0.002*	0.000	0.000	0.000	0.001
	(0.002)	(0.005)	(0.005)	(0.007)	(0.009)
<b>Observations</b>	1,187	1,187	1,187	1,187	1,187
<b>R<sup>2</sup></b>	0.0004	0.0006	0.0035	0.0026	0.0056

*Notes: Results of the linear regression with the dependent variable Acquirer completion returns. The model includes only the observations for which the M&A was completed. The Models progressively add variables as follows: Model 1 includes only retirement age, while the following ones incorporate additional control variables related to firm and CEO characteristics. R<sup>2</sup> is added as a model fit statistic. Standard errors are presented in brackets for the continuous variables. Significance is based on the p-value of each two-sided test \* p<0.1 \*\*p<0.05 \*\*\*p<0.01.*

Based on the results, all three small hypotheses were rejected. Retirement age did not have a significant effect neither M&A completion, takeover premium, and acquirer completion returns. The latter three variables were used to assess the effect of the retirement age on various areas of the M&A industry dynamics. Furthermore, as retirement age was used as a proxy for target CEO preferences, one can conclude that in this sample, target CEO preferences have no impact on M&As in Europe, leading to the rejection of the main hypothesis of the paper.

Two robustness checks have been performed to assess and strengthen the validity of the results found, both being executed for all three analyses separately. The first robustness check performed concerns the 2008 financial crisis as the sample used in this analysis contains the period from 2003 up until 2019. The 2008 crisis was a significant event, with an enormous impact on the market, most certainly affecting the mergers and acquisitions dynamics. To assess the robustness of our results, we maintained the same model structures as in the previous analyses but excluded from the sample M&A deals that occurred in 2008. The findings, presented in Appendix B, show no substantial differences compared to the original analysis. This consistency suggests that the relationship between the variables is not influenced by the abnormalities created by the 2008 financial crisis. The second robustness considers the deal value of the M&As. Even though the target CEO participates in every takeover deal, regardless of the deal value, the dynamics behind a small deal might differ, as they are highly unpredictable and more volatile. To determine which observations are considered to be the small deals from the sample, a threshold was created. Observations with a deal value smaller than 1% of the maximum value, EUR 66,702.910 million, were eliminated. The results, presented in Appendix C, show no significant differences when compared to the initial findings. These results reinforce the conclusion that the initial hypothesis of this thesis, which states that target CEOs positively influence M&As in Europe, is rejected.

## **5.2 Discussion**

### **5.2.1 Comparing Results**

The results from the analysis are not in line with the initial expectations. The results indicate that target CEO preferences do not significantly influence M&A dynamics in Europe. This is in contrast with the study conducted by Jenter and Lewellen (2015). In their paper, they used retirement age as a proxy for CEO preferences, similar to this thesis, but instead used a different data sample, which was formed of US firms instead of European firms. Their results suggest that there is a positive and significant effect of CEO preferences on M&A completion and takeover premiums in the United States, whereas this thesis did not find one for European firms. The difference in significance between European and US firms might arise from a combination of cultural, regulatory, market and institutional differences, which fundamentally distinguishes the two samples. The only similar result is regarding the acquirer gains, suggesting that neither in the US nor in Europe, target CEO preferences do not affect the acquirer's post-deal returns.

In the sample studied in this analysis, 86.9% of the M&A deals were completed, which showed that European firms had a high rate of successfully completed transactions between 2003 and 2019. This further implies that European firms typically proceed with M&A transactions irrespective of the target CEO's preferences. These results reveal an important and practical implication for the policymakers in corporate finance and M&A industries. As the most important party in the transaction, the target CEO, cannot influence the likelihood of target decisions based on its own preferences, it can be concluded that the M&A environment is robust, and transactions proceed efficiently. However, the contrast in results for European and US firms highlights the importance of country-specific regulations, which should take into account their differences.

### **5.2.2 Alternative Explanations and Limitations**

Several explanations can account for the different effects of target CEO preferences found in this thesis compared to previous studies. The main difference lies in the different board structures of United States and European firms. In the US, firms opt for a one-tier board structure. Companies have a single board of directors, which includes both executive and non-executive directors, who in turn are responsible for both the management and supervision of the firm. In the one-tier board, the CEO serves as a board member and thus works closely with the rest of the members to decide on major corporate decisions. However, in Europe, companies usually opt for a two-tier board structure. In this structure, the board is divided into two, the management board and the supervisory board. The CEO is only part of the management board, focusing mainly on the management of the company while directors from the supervisory board undertake the strategic decisions (Andrea Vicari, 2021). Therefore, the CEO in a one-tier board structure, (i.e. in US firms), has a more direct influence on the company through their dual role as opposed to the CEO from a two-tier board structure (i.e. in European firms). This might serve as

an explanation as to why no influence of the target CEO preferences on M&A dynamics in Europe was found, while in the US, a positive and significant effect existed.

Regardless of the differences in CEO roles between European and US firms, since the CEO sits on board in both instances, the possibility that target CEO preferences could indeed have an influence on M&As in Europe is not excluded. This thesis followed Jenter and Lewellen's (2015) study and used retirement age as a way to quantify the unobservable preferences of a target CEO. However, there are numerous possibilities in which CEO preferences could be quantified, by using alternative proxies. For instance, Becher et al (2013) analysed the influence of CEO preferences in M&As by considering the amount of stock owned by the CEO as a proxy. Elnahas and Kim (2017) used the political ideology of the CEO to measure their preferences. As different methodologies would be applied, different results might arise. Even though no effect of retirement age was found, it remains crucial to test and analyse the impact of preferences quantified by these other proxies, previously used in US studies, in the European context. This serves as a suggestion for future research as exploring these alternative measures could provide deeper insights into the role of CEO preferences in M&As in the European landscape.

Since the sample consisted of multiple European firms, aggregating data from various countries was necessary for the analysis. This introduced a wide range of corporate laws and governance practices as opposed to a singular one found in US firms. This poses a limitation to the analysis as the effect might vary across countries but the overall effect ends up being negligible. For instance, the influence of target CEOs might exhibit a positive effect on M&A dynamics in some countries and others, a negative effect, but on average, this would result in a null aggregated effect. Therefore, a first suggestion for future research would be to study the effect on a country level, but it is important to note, that one might need to extend the sample period to gather enough observations for reliable conclusions. Another limitation of this study is the unavailability of data on corporate structure. Board size was used as a proxy; however, for a better and more reliable result, actual measures such as block ownership, director, and CEO ownership should be used. This also serves as a suggestion for future research, however, emphasizing again the need to conduct the analysis on a country-by-country basis due to the different corporate structures across Europe.

## CHAPTER 6 Conclusion

This thesis analysed the impact of target CEO preferences on M&As. Previous studies have highlighted the importance of target CEOs in the world of mergers and acquisitions, indicating that he or she hold the most power. Combining this with the numerous responsibilities a CEO has led to the formulation of this thesis' hypothesis, which indicates that target CEOs, can indeed affect the M&A dynamics. This research aimed to explore and quantify this influence to provide a deeper understanding of the factors at play in M&A activities. Europe was chosen as the context for the study of this relationship. As past studies have predominately analysed this relationship by focusing on US firms, an overlook in the European market for M&As appeared. Furthermore, previous literature studied this effect from the perspective of an acquirer CEO, despite the substantial power a target CEO has compared to the acquirer. Therefore, this thesis addressed two significant gaps in the existing M&A literature by focusing on the target CEO's influence in the context of Europe. This led to the formulation of the following research question: "How do the preferences of target company CEOs influence mergers and acquisitions in Europe?"

To be able to properly quantify the relationship between target CEO preferences and M&As, the analysis consisted of three models, a probit model and two linear regressions. All had the same independent variable; retirement age, a dummy variable, which takes the value 1 if the CEO is 65 years old or older and 0 otherwise. In an M&A, target CEOs are usually dismissed from their role, leading to early retirement and significant career costs. However, as they approach retirement, there are no career costs attributed to an M&A. This makes retirement age a reliable proxy for target CEO preferences. As the M&A world is complex, M&A completion, takeover premium, and acquirer completion returns were used as dependent variables to analyse M&A dynamics. To control for firm and CEO characteristics and to decrease the probability of omitted variable bias, several control variables were added to the model. After conducting the analysis, no significant effect of retirement age was found on M&A completion, takeover premium, and acquirer completion returns, suggesting that target CEO preferences do not influence the M&A dynamics in Europe.

This thesis offers insight into the European M&A industry and the influence of target CEOs. The insignificant effect of target CEO preferences on M&As, a result that is in contradiction with the previous literature, highlights potential differences in the M&A industries between continents. This further translates into implications for policymakers, suggesting the need to readjust and customize strategies and beliefs about the importance of the CEO in M&As based on the location. The study suggests potential ideas for future research to further understand the complex dynamics of M&A activities, including using alternative proxies to quantify CEO preferences as well as conducting similar analyses in different geographical contexts, particularly on a country-by-country basis within Europe.

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## APPENDIX A Search Strategy for sample selection

Table 6. Search criteria for sample selection

Variable	Criteria
Deal Type	Acquisition, Merger, Demerger
Deal Status	Completed, Withdrawn
Time Period	From 01/01/2003 12:00:00 AM until 31/12/2019 12:00:00 AM
Listed/Unlisted/Delisted companies	Delisted acquirer, listed acquirer, delisted target, listed target
Country (primary addresses)	Western Europe, Scandinavia, Eastern Europe, Baltic states, Nordic states, Balkan states
Industry	All industries except financial and utility firms
Target Financials	Total assets (thousand EUR) min = 10,000
Deal value	All deals with known value (including estimates)
Total firms	2996

*Notes: Search criteria retrieved from Orbis M&A*

## APPENDIX B First Robustness Check Results

Table 7. Probit regression results from the first robustness check with the dependent variable being M&A completion

	Model 1	Model 2	Model 3	Model 4	Model 5
<b>Retirement age</b>	-0.068 (0.125)	-0.064 (0.126)	-0.061 (0.127)	0.053 (0.140)	0.068 (0.140)
<b>Deal value</b>			0.000* (0.000)		0.000** (0.000)
<b>Target total assets</b>			0.000		0.000

			(0.000)		(0.000)
<b>Target market capitalization</b>			0.000*		0.000*
			(0.000)		(0.000)
<b>Board Size</b>	0.002	0.002			0.000
	(0.010)	(0.010)			(0.011)
<b>Tenure</b>			0.007	0.007	
			(0.009)	(0.009)	
<b>Time on board</b>			-0.039***	-0.040***	
			(0.013)	(0.013)	
<b>Time in Company</b>			0.022**	0.022**	
			(0.010)	(0.011)	
<b>Number of Qualifications</b>			-0.015	-0.015	
			(0.034)	(0.035)	
<b>Chairman</b>			0.107	0.108	
			(0.092)	(0.093)	
<b>Constant</b>	1.121***	1.101***	1.114***	1.161***	1.188***
	(0.048)	(0.106)	(0.108)	(0.101)	(0.135)
<b>Observations</b>	1,292	1,292	1,292	1,292	1,292
<b>Pseudo R<sup>2</sup></b>	0.0003	0.0003	0.0071	0.0100	0.0174

Notes: Results of the probit regression with the dependent variable M&A completion. The sample used excluded the observations in which the M&A deal took place in 2008. The Models progressively add variables as follows: Model 1 includes only retirement age, while the following ones incorporate additional control variables related to firm and CEO characteristics. McFadden's Pseudo R<sup>2</sup> is added as a model fit statistic. Standard errors are presented in brackets for the continuous variables. Significance is based on the p-value of each two-sided test \* p<0.1 \*\*p<0.05 \*\*\*p<0.01.

Table 8. Linear regression results from the first robustness check with the dependent variable being takeover premium

	<b>Model 1</b>	<b>Model 2</b>	<b>Model 3</b>	<b>Model 4</b>	<b>Model 5</b>
<b>Retirement age</b>	-73.205	-83.285	-83.429	-52.745	-61.390
	(45.313)	(53.387)	(53.053)	(40.228)	(42.65)
<b>Deal value</b>			-0.009		-0.008
			(0.006)		(0.006)

<b>Target total assets</b>			0.000	0.000	
			(0.000)	(0.000)	
<b>Target market capitalization</b>			0.002	0.003	
			(0.004)	(0.004)	
<b>Board Size</b>	-6.001		-6.116	-7.664	
	(5.002)		(5.084)	(6.289)	
<b>Target operating revenue</b>			-0.003	-0.003	
			(0.003)	(0.003)	
<b>Target enterprise value</b>			-0.002	-0.002	
			(0.002)	(0.002)	
<b>Target EBITDA</b>			0.075	0.070	
			(0.063)	(0.060)	
<b>Tenure</b>			4.021	3.351	
			(4.221)	(4.122)	
<b>Time on board</b>			-2.826	-3.867	
			(3.854)	(3.701)	
<b>Time in Company</b>			0.091	1.049	
			(4.832)	(4.177)	
<b>Number of Qualifications</b>			18.199	22.987	
			(21.376)	(25.256)	
<b>Chairman</b>			-26.245	-25.846	
			(56.393)	(58.036)	
<b>Constant</b>	86.068	142.535*	154.698	61.977	135.318
	(45.129)	**	(97.464)	(52.028)	(103.113)
		(91.124)			
<b>Observations</b>	1,292	1,292	1,292	1,292	1,292
<b>R<sup>2</sup></b>	0.0003	0.0007	0.0012	0.0009	0.0019

Notes: Results of the linear regression with the dependent variable being takeover premium. The sample used excluded the observations in which the M&A deal took place in 2008. The Models progressively add variables as follows: Model 1 includes only retirement age, while the following ones incorporate additional control variables related to firm and CEO characteristics. McFadden's Pseudo R2 is added as a model fit statistic. Standard errors are presented in brackets for the continuous variables. Significance is based on the p-value of each two-sided test \*  $p < 0.1$  \*\* $p < 0.05$  \*\*\* $p < 0.01$ .

Table 9. Linear regression results from the first robustness check with the dependent variable being acquirer completion returns

	<b>Model 1</b>	<b>Model 2</b>	<b>Model 3</b>	<b>Model 4</b>	<b>Model 5</b>
<b>Retirement age</b>	-0.005	-0.005	-0.005	-0.004	-0.004
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)

<b>Deal value</b>			0.000*		0.000*
			(0.000)		(0.000)
<b>Target total assets</b>			0.000		0.000
			(0.000)		(0.000)
<b>Target market capitalization</b>			0.000		0.000
			(0.000)		(0.000)
<b>Board Size</b>	0.000		0.000		0.000
	(0.000)		(0.000)		(0.000)
<b>Target operating revenue</b>			0.000***		0.000***
			(0.000)		(0.000)
<b>Target enterprise value</b>			0.000		0.000
			(0.000)		(0.000)
<b>Target EBITDA</b>			0.000		0.000
			(0.000)		(0.000)
<b>Tenure</b>				0.000**	0.001**
				(0.000)	(0.002)
<b>Time on board</b>				0.000	0.000*
				(0.000)	(0.000)
<b>Time in Company</b>				0.000	0.000
				(0.000)	(0.000)
<b>Number of Qualifications</b>				0.001	0.001
				(0.001)	(0.001)
<b>Chairman</b>				-0.001	-0.001
				(0.003)	(0.003)
<b>Constant</b>	-0.001	0.002	0.001	0.001	0.002
	(0.001)	(0.006)	(0.006)	(0.007)	(0.010)
<b>Observations</b>	1,120	1,120	1,120	1,120	1,120
<b>R<sup>2</sup></b>	0.0004	0.0007	0.0043	0.0027	0.0065

Notes: Results of the linear regression with the dependent variable being acquirer completion returns. The sample used only included completed M&A deals and excluded the observations in which the M&A deal took place in 2008. The Models progressively add variables as follows: Model 1 includes only retirement age, while the following ones incorporate additional control variables related to firm and CEO characteristics. McFadden's Pseudo R<sup>2</sup> is added as a model fit statistic. Standard errors are presented in brackets for the continuous variables. Significance is based on the p-value of each two-sided test \* p<0.1 \*\*p<0.05 \*\*\*p<0.01.

## APPENDIX C Second Robustness Check Results

Table 10. Probit regression results from the second robustness check with the dependent variable being M&A completion

	Model 1	Model 2	Model 3	Model 4	Model 5
<b>Retirement age</b>	-0.109 (0.147)	-0.121 (0.149)	-0.116 (0.149)	0.020 (0.166)	0.024 (0.167)
<b>Deal value</b>			0.000* (0.000)		0.000* (0.000)
<b>Target total assets</b>			0.000 (0.000)		0.000 (0.000)
<b>Target market capitalization</b>			0.000* (0.000)		0.000* (0.000)
<b>Board Size</b>		0.007 (0.119)	0.007 (0.012)		-0.011 (0.013)
<b>Tenure</b>				0.008 (0.011)	0.007 (0.011)
<b>Time on board</b>				-0.051*** (0.016)	-0.054*** (0.017)
<b>Time in Company</b>				0.030** (0.012)	0.033*** (0.011)
<b>Number of Qualifications</b>				-0.041 (0.039)	-0.037 (0.040)
<b>Chairman</b>				0.129 (0.108)	0.126 (0.110)
<b>Constant</b>	1.002*** (0.055)	1.071*** (0.122)	1.084*** (0.126)	1.107*** (0.116)	1.222*** (0.160)
<b>Observations</b>	872	872	872	872	872
<b>Pseudo R<sup>2</sup></b>	0.0007	0.0012	0.0085	0.0149	0.0241

Notes: Results of the probit regression with the dependent variable M&A completion. The sample used excluded the observations in which the deal value was smaller than EUR 66.7 million. The Models progressively add variables as follows: Model 1 includes only retirement age, while the following ones incorporate additional control variables related to firm and CEO characteristics. McFadden's Pseudo R<sup>2</sup> is added as a model fit statistic. Standard errors are presented in brackets for the continuous variables. Significance is based on the p-value of each two-sided test \* p<0.1 \*\*p<0.05 \*\*\*p<0.01.

Table 11. Linear regression results from the second robustness check with the dependent variable being takeover premium

	<b>Model 1</b>	<b>Model 2</b>	<b>Model 3</b>	<b>Model 4</b>	<b>Model 5</b>
<b>Retirement age</b>	-72.789 (63.234)	-81.465 (73.229)	-80.653 (72.592)	-3.090 (9.509)	-11.180 (12.544)
<b>Deal value</b>			-0.009 (0.009)		-0.008 (0.008)
<b>Target total assets</b>			0.000 (0.000)		0.000 (0.000)
<b>Target market capitalization</b>			0.003 (0.003)		0.003 (0.004)
<b>Board Size</b>		-5.437 (6.340)	-5.537 (6.453)		-9.536 (9.325)
<b>Target operating revenue</b>			-0.004 (0.004)		-0.002 (0.003)
<b>Target enterprise value</b>			-0.001 (0.002)		-0.001 (0.002)
<b>Target EBITDA</b>			0.065 (0.063)		0.057 (0.061)
<b>Tenure</b>				1.283 (1.472)	0.792 (1.114)
<b>Time on board</b>				-4.690 (6.373)	-6.501 (6.254)
<b>Time in Company</b>				0.325 (7.638)	2.186 (6.601)
<b>Number of Qualifications</b>				26.583 (30.385)	31.952 (35.781)
<b>Chairman</b>				-82.118 (83.240)	-86.848 (88.858)
<b>Constant</b>	75.536 (63.216)	125.368 (120.675)	141.702 (135.030)	84.619 (70.335)	176.391 (157.921)
<b>Observations</b>	872	872	872	872	872
<b>R<sup>2</sup></b>	0.0002	0.0004	0.0012	0.0020	0.0030

Notes: Results of the linear regression with the dependent variable takeover premium. The sample used excluded the observations in which the deal value was smaller than EUR 66.7 million. The Models progressively add variables as follows: Model 1 includes only retirement age, while the following ones incorporate additional control variables related to firm and CEO characteristics. McFadden's Pseudo R<sup>2</sup> is added as a model fit statistic. Standard errors are presented in brackets for the continuous variables. Significance is based on the p-value of each two-sided test \* p<0.1 \*\*p<0.05 \*\*\*p<0.01.



Table 12. Linear regression results from the second robustness check with the dependent variable being acquirer completion returns

	<b>Model 1</b>	<b>Model 2</b>	<b>Model 3</b>	<b>Model 4</b>	<b>Model 5</b>
<b>Retirement age</b>	-0.002 (0.005)	-0.003 (0.006)	-0.004 (0.006)	-0.001 (0.004)	-0.002 (0.004)
<b>Deal value</b>			0.000 (0.000)		0.000 (0.000)
<b>Target total assets</b>			0.000 (0.000)		0.000 (0.000)
<b>Target market capitalization</b>			0.000 (0.000)		0.000 (0.000)
<b>Board Size</b>		0.000 (0.001)	0.000*** (0.000)		0.000 (0.000)
<b>Target operating revenue</b>			0.000*** (0.000)		0.000*** (0.000)
<b>Target enterprise value</b>			0.000 (0.000)		0.000 (0.000)
<b>Target EBITDA</b>					0.000 (0.000)
<b>Tenure</b>				0.000** (0.000)	0.001** (0.002)
<b>Time on board</b>				0.000 (0.000)	0.000* (0.000)
<b>Time in Company</b>				0.000 (0.000)	0.000 (0.000)
<b>Number of Qualifications</b>				-0.003 (0.002)	-0.003 (0.002)
<b>Chairman</b>				-0.004 (0.005)	-0.004 (0.005)
<b>Constant</b>	0.000 (0.004)	0.006 (0.008)	0.006 (0.009)	0.007 (0.010)	0.011 (0.014)
<b>Observations</b>	731	731	731	731	731
<b>R<sup>2</sup></b>	0.0001	0.0009	0.0041	0.0033	0.0069

Notes: Results of the linear regression with the dependent variable takeover premium. The sample used only included completed M&A deals and excluded the observations in which the deal value was smaller than EUR 66.7 million. The Models progressively add variables as follows: Model 1 includes only retirement age, while the following ones incorporate additional control variables related to firm and CEO characteristics. McFadden's Pseudo R<sup>2</sup> is added as a model fit statistic. Standard errors are presented in brackets for the continuous variables. Significance is based on the p-value of each two-sided test \* p<0.1 \*\*p<0.05 \*\*\*p<0.01.