MASTER BA THESIS

Post-LOI Deal Value Adjustments in Dutch SME M&A Transactions

Abstract

This study examines the factors influencing deal value adjustments in Dutch SME M&A transactions during the post-LOI phase. Fifteen factors were identified based on the literature review, with seven being analyzed in this study. The study utilizes a comprehensive dataset of 557 completed M&A deals from a Dutch M&A firm, ultimately focusing on 341 sell-side SME M&A deals completed from 2016 to 2023. Using multiple linear regression (OLS), the study explores relationships between the factors, deal value adjustments, and interaction effects. The key findings indicate that extended post-LOI durations significantly influence valuation adjustments, with each additional month resulting in a 0.5% decrease in deal value. In addition, the e-commerce sector significantly impacted absolute deal value adjustments, with average adjustments of about 1.2 million Euros compared to other sectors. When exploring interaction effects, it was found that each additional month in the post-LOI phase leads to a significant average decrease of 1.1% in deal value when the bidder is strategic. Also, the interaction between strategic bidders and pre-exit deals typically leads to an absolute deal value decrease of over €500,000. Key limitations include potential biases from unexamined variables, such as changes in company performance and information asymmetry. Future research should include these variables and explore comparisons with countries outside of Western Europe. Practical implications highlight the importance of vendor due diligence to shorten the post-LOI phase. Academically, this study fills a gap in SME M&A literature by providing a novel analysis of post-LOI deal value adjustments, which is representative for Western Europe.

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1 Introduction

This chapter delves into the dynamic environment of Mergers and Acquisitions (M&A), exploring the current situation and setting the stage for the research. It outlines the research goal and question driving the study, underlining its significant academic and practical relevance.

1.1 Situation

M&A, a globally dominant business strategy, has gained significant attention in recent decades (Hossain, 2021). The past decade, marked by economic recoveries, technological advancements, and shifting market dynamics, has seen substantial fluctuations in M&A deal volumes. According to Statista[1], the global M&A landscape observed a 25.4% increase in deals from 2013 to 2022, with a reported deal value of $3.15 trillion in 2022. However, this represents a 14% decrease compared to 2021. The Netherlands, a key player in the global market, also experienced a noticeable dip in 2022, with 1,337 M&A deals completed, compared to 1,487 in 2021. Moreover, these transactions' total value dropped even more (28%), falling from €173.74 billion in 2021 to €125.47 billion in 2022[2].

These characteristics show that the M&A deal volume can be volatile over the years. During periods of economic expansion, M&A deal volumes tend to experience a significant increase. As companies succeed in a solid and stable financial environment, they are more inclined to pursue strategic acquisitions to capitalize on growth opportunities. Additionally, more sellers enter the market during good economic times because selling is advantageous when their financial figures are strong. Research by Campa and Hernando (2006) found a positive correlation between economic expansion and increased M&A activity, particularly in sectors with high growth potential.

1.1.1 M&A process in general

This study focuses on a specific part of the M&A process: the post-LOI phase. Therefore, understanding the overall process, which will be discussed below, is essential.

1. **Pre-deal phase**: This stage involves the identification of potential targets and strategic planning. It also involves critical decisions, such as whether to proceed with the deal (Welch et al., 2019).
2. **Negotiation phase:** Negotiations play a crucial role in M&A transactions. Research by Moeller et al. (2016) emphasizes the importance of negotiation strategies in determining the success and terms of the deal. Factors such as bidder type, deal structure, and regulatory considerations significantly influence negotiation outcomes.
3. **Letter of intent (LOI):** The LOI serves as a foundational document in the preliminary stages of negotiations during a potential M&A deal, outlining key terms and conditions as an initial agreement framework[3]. It guides subsequent negotiations towards a definitive agreement. Both parties have concurred on a specific business valuation at the LOI stage.
4. **Due diligence:** This is a comprehensive investigation and analysis to assess the target company's financial, legal, and operational aspects. Wangerin's (2019) study emphasizes the critical role of thorough due diligence, showing that inadequate due diligence is linked to reduced post-acquisition profitability, increased likelihood of goodwill impairments, and lower-quality fair value estimates for acquired assets and liabilities.
5. **Final negotiations:** Following due diligence, final negotiations ensue, focusing on resolving any outstanding issues and refining the deal terms. The study of Haleblian and Finkelstein (1999) highlights the dynamic nature of final negotiations, which often involve trade-offs and compromises to achieve mutual agreement.

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[1] Leibowitz, H. J., Conahan, J. B., Alin, A. P., Barnstable-Brown, C. D., Bonnes, A., Crones, C., Evans, S. C., Gilligan, M. E., Hacohen, T., Hanson, E. P., Nylen, M., Stein, J., & Trammell, K. A. (2023, 17 april). 2022 M&A Review and Outlook. *WilmerHale*. https://www.wilmerhale.com/en/insights/blogs/material-wilmerhale-ma/20230417-2022-m-a-review-outlook#:~:text=The%20number%20of%20reported%20M%26A,%2480.9%20million%20average%20in%20202

[2] IMAA – Institute for Mergers, Acquisitions, and Alliances. (2023, 28 september). *M&A Statistics by Countries - IMAA – Institute for Mergers, Acquisitions, and Alliances*. https://imaa-institute.org/mergers-and-acquisitions-statistics/ma-statistics-by-countries/

[3] Corporate Investment. (2022, May 31). M&A Update: What is a Letter of Intent (LOI) in M&A – and Why Use One? https://corpinvest.com/letter-of-intent-loi-m-and-a/#:~:text=The%20Letter%20of%20Intent%20(LOI,due%20diligence%E2%80%9D%20phase%20of%20acquisition.

6. **Deal closing:** The completion of the M&A process; the deal closing stage involves the execution of legal documents and the transfer of ownership.

1.1.2 Complication

Several research studies have indicated that, among others, the synergies expected from a merger or acquisition can result in the acquiring companies paying a premium for the target company (Walkling & Edmister, 1985; Gondhalekar et al., 2004; Laamanen, 2007). Exploring the complexity of determining the value of synergies and understanding its interaction with numerous factors poses considerable challenges.

While existing studies primarily explore determinants of premiums or discounts paid in acquisitions (e.g., Díaz et al., 2009), there is a notable absence of examining factors influencing valuation adjustments, specifically after the LOI phase. Additionally, limited data availability for the small and medium-sized enterprises (SMEs) market poses a challenge, as private companies disclose minimal information compared to public organizations, which are obligated to share such data[4].

This study's focus lies precisely in the phase from the LOI to the closing stage (steps three to six of the previous paragraph). It benefits from access to a unique dataset with the necessary data to precisely analyze the deal value adjustments after the LOI phase and identify the factors that impact these adjustments.

1.2 Research goal and question

This study examines the factors influencing valuation adjustments in Dutch SME M&A during the phase from the LOI to deal completion. The primary objectives include identifying the influence of the essential determinants contributing to variations between agreed-upon valuations and final deal values. This research aims to provide actionable insights customized for M&A firms, companies aspiring to acquire businesses, and those intending to sell in the future. The ultimate goal is to equip these firms with a comprehensive understanding of the factors influencing valuation outcomes. This, in turn, facilitates more informed decision-making and effective strategies in future M&A transactions.

This has led to the following research question: '*Which factors impact post-LOI deal value adjustments in Dutch SME M&A transactions?*'

This research question will be answered utilizing the following sub-questions:

1. *How does the Dutch SME market look like?*
2. *How does the post-LOI phase look like in the broader M&A process?*
3. *Which business valuation method is most appropriate to express valuation adjustments, considering suitability for the Dutch SME M&A market?*
4. *Based on the literature, what factors may influence post-LOI deal value adjustments?*
5. *Which identified factors will be examined in this study?*
6. *Based on statistical analysis, which factors influence post-LOI deal value adjustments?*

The main research question is divided into smaller, more manageable components: the first five sub-questions are answered in the theory section, while the final sixth empirical sub-question is addressed after the theory applying a statistical analysis, to answer the research question. This approach provides clarity on what specific aspects of the research need to be explored and addressed. Each sub-question allows for a more detailed examination of particular facets of the main research topic.

[4] SEC.gov | Statement on Financial Disclosures About Acquired and Disposed Businesses. (2020, May 21). https://www.sec.gov/news/public-statement/lee-statement-financial-disclosures-about-acquired-disposed-businesses

1.3 Academic relevance

This study represents a significant step forward in M&A theory, particularly within Dutch SMEs. It addresses a notable void in the existing literature by delving into the factors influencing deal value adjustments from the LOI to deal completion. While much research focuses broadly on premiums or discounts in acquisitions (e.g., Varaiya, 1987; Walkling & Edmister, 1985; Diaz et al., 2009), the specific examination of factors causing deal value adjustments post-LOI is a unique and unexplored aspect.

Furthermore, the study's focus on the Dutch SME market offers nuanced insights into an underexplored area. The necessary data about the Dutch SME M&A market is available for this research, so this study specializes in the Dutch SME market. The Dutch M&A market represents the Western European M&A market in value, numbers, and activities per sector well[5]. So, the insights gained from this research can be used in a broader perspective than just the Netherlands.

This study explores unexplored terrain in the academic landscape and significantly contributes to understanding M&A dynamics. Examining the post-LOI phase and its influence on the final transaction price in Dutch SMEs adds a unique dimension to M&A scholarship. This research, distinguished by its substantial dataset of completed M&A deals in the Dutch SME market, breaks new ground, considering the historically limited availability of such comprehensive data. This study represents a remarkable contribution to the developing field of M&A scholarship.

1.4 Practical relevance

This study yields valuable practical contributions for key stakeholders in the M&A landscape and addresses the needs of selling firms, acquiring firms, and M&A advisory firms. The research becomes a compass for informed decision-making for selling SMEs. Armed with a comprehensive understanding of the factors influencing adjustments in deal values, these firms can approach negotiations and deal completion with greater confidence, optimizing their valuation expectations. Additionally, sellers can exclude companies that consistently negotiate transaction prices significantly lower than the predetermined multiple valuation, according to this study.

This research allows acquiring firms to negotiate discounts effectively in post-LOI phases. It provides insights into critical factors influencing deal value adjustments, allowing acquirers to strategically manage sector challenges, bidder types, and cross-border complexities.

M&A advisory firms receive strategic guidance through insights into the dynamics of the post-LOI phase.. This nuanced understanding allows M&A firms to refine their approaches, improve deal structuring, and increase the likelihood of successful, value-enhancing transactions. After completing this research, the M&A managers will know the factors influencing the transaction price after the LOI phase. This allows them to search more specifically for the best deals for their clients.

1.5 Outline

After the introduction, the theory section begins with an overview of the Dutch SME market, followed by an explanation of the M&A process, focusing on the post-LOI phase, which is essential for this study. Additionally, different business valuation methods will be explored. A thorough literature review on factors influencing deal value adjustments post-LOI will follow. Subsequently, the methodology will be explained, including discussions on data collection, sample, measurement, and analysis. Then, the research results will be presented in tables and interpreted what it means, followed by a broad discussion of these results. Subsequently, the study's key findings and limitations will be addressed. Lastly, suggestions for future research will be made, and academic and practical implications will be provided.

[5] IMAA – Institute for Mergers, Acquisitions, and Alliances. (2023b, November 17). M&A Statistics: Transactions and Activity by year. M&A Trends | IMAA. https://imaa-institute.org/mergers-and-acquisitions-statistics/

2 Theory

The theory is a solid basis that helps to understand and explore the topic. This thesis uses the theoretical framework to make sense of the factors that influence deal value adjustments. In this theory section, the literature will be reviewed to answer the five sub-questions.

2.1 Dutch SME market

Related sub-question: *'How does the Dutch SME market look like?'*

This study focuses on M&A deals that take place in Dutch SMEs. The number of SMEs in the Netherlands was approximately 449,850 on January 1, 2023[6]. This is roughly the same as the number on January 1, 2022. The European Commission has established the definition of SME,[7] which is important for access to finance. The three main factors determining whether an enterprise is an SME are staff headcount, turnover, and balance sheet total. The staff headcount should have a maximum of 250 full-time equivalents (FTE), and the turnover should have a maximum of €50 million, or the balance sheet total should have a maximum of €43 million. These ceilings apply to the figures for individual firms only.

Table 2.1: Company categories (SME) [8]

Company category	**Staff headcount**	**Turnover**	Or **Balance sheet total**
Medium	< 250	< €50 m	< €43 m
Small	< 50	< €10 m	< €10 m
Micro	< 10	< €2 m	< €2 m

2.2 M&A process

Related sub-question: *'How does the post-LOI phase look like in the broader M&A process?'*

In the introduction section, the entire M&A process is explained in general. The post-LOI phase is now placed in the broader perspective of the entire M&A process. This study focuses on the phase from LOI to deal completion. This research focuses specifically on this interesting phase because deal value adjustments frequently occur after the LOI phase in Dutch SME M&A transactions[9].

This can be assessed because there is a specific valuation in the LOI, which can be compared with the valuation at the deal's closing. This phase of the M&A deal process consists of specific steps. Respectively, these are LOI, due diligence, final negotiation, definitive agreement, financing, and deal completion. While the M&A process can vary slightly for each deal, especially for large deals involving listed companies, this study focuses on Dutch SMEs. So, the standard and most common M&A process for SME M&A deals is explained in this section.

2.2.1 Pre-LOI phase

The M&A process typically begins with strategic planning, where companies define their acquisition objectives and criteria, such as target industries, geographic focus, and financial parameters. Following this, sellers or their advisors prepare an information memorandum (IM), a comprehensive document providing

[6] Bos, J. (2023, June 19). Informatie over het mkb (midden- en kleinbedrijf) in Nederland. MKB Servicedesk. https://www.mkbservicedesk.nl/sales-marketing/marktonderzoek/informatie-over-het-mkb-midden-en-kleinbedrijf-in-nederland

[7] SME definition. (n.d.). Internal Market, Industry, Entrepreneurship and SMEs. https://single-market-economy.ec.europa.eu/smes/sme-definition_en

[8] SME definition. (n.d.). Internal Market, Industry, Entrepreneurship and SMEs. https://single-market-economy.ec.europa.eu/smes/sme-definition_en

[9] M&A manager. (2023, December 16th). We often experience valuation adjustments after the LOI phase in Dutch SME M&A transactions. [Reaction on "Interview"].

potential buyers with detailed insights into the company's financial performance, operational capabilities, and growth prospects[10].

Once potential targets are identified, buyers engage in business valuation to assess the target's worth, considering factors like financial metrics, market comparisons, and future earnings potential[11]. Subsequently, buyers develop buyer profiles to identify and approach potential acquisition candidates that align with their strategic objectives, evaluating factors such as industry expertise, financial capacity, and synergy potential.

The next phase involves actively searching for, approaching, and introducing candidates that meet the established profile to initiate discussions about a potential transaction (Meglio & Risberg, 2010). Subsequent negotiations with the potential acquisition target will determine if a deal framework can be agreed upon. If so, these terms are recorded in the LOI.

2.2.2 Post-LOI phase

The LOI is a critical document that lays the foundation for M&A deals. It serves as an initial offer and outlines critical aspects of the transaction, including the business valuation, fundamental assumptions about the business, and the deal's structure. If the LOI is accepted, both parties move to the due diligence phase[12].

Due diligence is a comprehensive process of investigating and evaluating business opportunities in M&A deals (Angwin, 2001). This step involves examining and analyzing information about the business, such as products, financial assets, business models, and technology (Stachowicz-Stanusch, 2009). The main emphasis is on legal, fiscal, and financial matters. For larger SME deals, private equity (PE) parties often also conduct commercial due diligence, which means they conduct extensive market research.

The final negotiation stage in M&As is a definite phase involving information sharing and concession-making between the target and acquiring firms (Parola & Ellis, 2013). According to different studies (e.g., Cartwright & Schoenberg, 2006; Jemison & Sitkin, 1986), this stage is crucial, as it aims to achieve the ultimate goal of reaching an agreement that leads to deal completion, influencing the success or failure of the deal.

After these last negotiations, both parties finalize the share purchase agreement (SPA). This legally binding document is the conclusive agreement between the buyer and the seller, summarizing the negotiated details from earlier stages. It outlines the detailed terms of the transaction, including the purchase price, payment structure, and any condition warranties[13].

The financing phase in M&A is the last step before closing the deal, where the acquiring company secures the necessary funds for the transaction. This phase involves considering the capital structure, funding sources, and financial arrangements essential for completing the deal (Welch et al., 2019).

Lastly, the deal completion involves the exchange of documents, transfer of ownership, and the payment of the agreed-upon purchase price[14]. This is the point at which the deal is officially completed.

[10] Volberda, H., Morgan, R. E., Reinmoeller, P., Hitt, M. A., Ireland, R. D., & Hoskisson, R. E. (2011). Strategic Management: Competitiveness and Globalization (Concepts & Cases). http://orca.cf.ac.uk/25299/

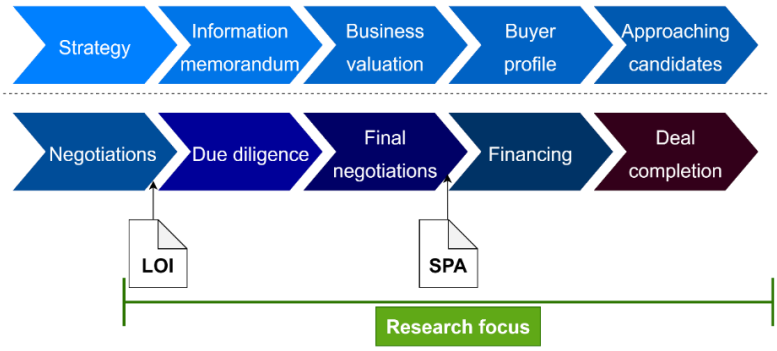
[11] The dark side of valuation: valuing young, distressed, and complex businesses. (2010). Choice Reviews Online, 47(09), 47–5115. https://doi.org/10.5860/choice.47-5115

[12] Titus. (2023, August 1). Crafting an effective Letter of intent (LOI) for SMB acquisition. Private Market Labs. https://privatemarketlabs.com/crafting-an-effective-letter-of-intent-loi-for-smb-acquisition/

[13] Kling, L. R., & Simon, E. N. (1992). Negotiated acquisitions of companies, subsidiaries and divisions. Law Journal Press. http://ci.nii.ac.jp/ncid/BA2001395X

[14] Fuad, M., & Venugopal, A. (2023). Deal completion in mergers and acquisitions: past accomplishment and future direction. Cross Cultural & Strategic Management. https://doi.org/10.1108/ccsm-02-2022-0034

Figure 2.1: Research focus in the broader M&A process



2.3 Business Valuation

Related sub-question: *'Which business valuation method is most appropriate to express valuation adjustments, considering suitability for the Dutch SME M&A market?'*

First, this question will be addressed by examining three commonly used business valuation methods. The first method is the market approach, a form of relative valuation extensively utilized in the finance industry. It includes comparable company analysis methods and precedent transaction analysis. The second approach is the income approach, where a business is valued based on the present value of its future earnings or cash flows.[15] The most used variant of this approach is the discounted cash flow (DCF) method. The last approach is the asset approach, primarily used in valuing real estate. Ultimately, this research's most suitable valuation method will be identified and justified.

Before addressing the different valuation methods, it is good to mention that this research explores adjustments in enterprise value during M&A transactions. However, post-LOI adjustments can also occur via movements on the equity bridge, which may not be immediately visible. For instance, if parties agree on a €10 million enterprise value and the buyer acquires a 60% share, post-LOI adjustments can ensure that this becomes 50% without changing the enterprise value. However, due to missing data on the exact share percentage at the LOI stage, this factor cannot be fully examined in the study, presenting a limitation. To overcome this possible implication, the deal structure at the signed LOI and the deal structure at the SPA are examined. This ensures that the same measures are used, namely the enterprise value. So, the focus remains on understanding enterprise value adjustments within the available scope.

2.3.1 Market approach

The market approach, a standard method in finance, applies relative valuation by comparing the subject company to similar businesses recently sold. This approach relies on market data to determine the value of the company[16].

Comparable company analysis

The comparable company analysis compares the subject company's financial metrics with those of similar publicly traded firms. However, this method may be less relevant in this research due to the predominance of private ownership among Dutch SMEs and the limited availability of comparable publicly traded companies. While the comparable company analysis offers valuable insights into market trends and industry benchmarks, its applicability in assessing the value of privately held SMEs may be limited by the scarcity of comparable peers in the market (Bowman & Bush, 2006).

[15] Business Valuation: the Income Approach | EQvista. (2022, April 4). Eqvista. https://eqvista.com/company-valuation/business-valuation-income-approach/#:~:text=In%20the%20income%20approach%20of,%2C%20cost%20structure%2C%20and%20others.
[16] Damodaran, A. (1995). Investment valuation: Tools and techniques for determining the value of any asset. http://babordplus.u-bordeaux.fr/notice.php?q=id:1808930

Precedent transaction analysis method

The precedent transaction analysis method, also called comparable transactions analysis, is a widely used approach in valuation practice, particularly within the field of M&A. It involves examining historical M&A transactions to estimate the value of comparable businesses in the current market environment. Researchers such as Reilly and Damodaran[17] have extensively discussed the application of this method in valuation contexts.

M&A advisors typically seek comparable companies based on size, industry, and other relevant characteristics to conduct a thorough precedent transaction analysis. They calculate various valuation multiples, such as enterprise value (EV) / earnings before interest tax depreciation amortization (EBITDA), EV / earnings before interest tax (EBIT), and EV / revenue. These multiples are commonly utilized in this analysis to neutralize the impact of debt financing and provide a comprehensive view of the company's valuation.

The last step involves applying the determined valuation multiples to the subject company's financial metrics. For instance, if the valuation range obtained from previous transactions is 5.0x EV/EBITDA (low) to 6.5x EV/EBITDA (high), and the company under evaluation has an EBITDA of €1 million, the estimated valuation would range from €5 million (low) to €6.5 million (high). This method provides valuable insights into the potential value of the subject company based on real-world M&A transactions.

2.3.2 Income approach

The income approach is a widely used method for valuing businesses, involving the conversion of anticipated economic benefits into a present single amount (Jenkins & Kane, 2006). This approach employs detailed and comprehensive valuation modeling, estimating a business's value by considering its anticipated future income, cash flow, or profitability. By assessing the expected returns the business generates over time, the income approach provides insights into its potential for generating value and profitability.

DCF Method

The DCF method estimates a business's present value by forecasting and discounting future cash flows, as extensively discussed in studies such as those by Damodaran (2006). Damodaran emphasizes several critical components within the DCF framework:

1. Cash flow projections: The DCF method begins with projecting future cash flows generated by the investment or business. These cash flows typically include operating cash flows, capital expenditures, and changes in working capital.
2. Discount rate: Damodaran highlights the significance of selecting an appropriate discount rate, often called the discount rate or the cost of capital. This rate represents the minimum rate of return required by investors to compensate for the risk associated with the investment.
3. Terminal value: In addition to forecasting cash flows over a discrete period, the DCF method incorporates a terminal value, which represents the value of the investment at the end of the explicit forecast period. Damodaran suggests various techniques for calculating terminal value, such as the perpetuity growth method or the exit multiple method.
4. Discounting cash flows: The future cash flows and terminal value are discounted back to their present value using the chosen discount rate. This process involves applying a discount factor to each cash flow, reflecting the time value of money.
5. Sensitivity analysis: Damodaran advocates for conducting sensitivity analyses to assess the impact of variations in key assumptions, such as growth and discount rates, on the estimated value derived from the DCF model.

By incorporating these elements, the DCF method provides an accurate framework for valuing businesses, allowing analysts to assess their intrinsic worth based on expected future cash flows and the associated risks.

[17] Reilly, R. R., & Damodaran, A. (1995). Damodaran on Valuation: Security Analysis for investment and Corporate Finance. The Journal of Finance, 50(2), 751. https://doi.org/10.2307/2329429

2.3.3 Asset-based method

The asset-based approach is another commonly employed method, especially relevant to asset-intensive industries (Jenkins & Kane, 2006). This method computes a company's value by aggregating the fair market values of its assets and deducting its liabilities. It assesses the fair market value of each asset, accounting for factors like cost to construct or replace. This technique proves valuable in evaluating several real estate types, including commercial properties, new constructions, and specialized properties. However, it is essential to note that the asset-based method is typically utilized as a cross-check in valuing a business. Since it does not consider the business's potential future earnings or cash flows, it is often seen as an additional method used to cross-check the more commonly used approaches like the market or income approaches.

2.3.4 Most appropriate valuation method

The market, income, and asset-based approaches are commonly utilized in M&A transactions. However, for the specific focus on Dutch SME M&A transactions in this research, most methods or their variations are not the most suitable. The asset-based method, typically applied to capital-intensive firms, may not adequately capture the value of SMEs, which are not all as capital-intensive. Implementing the income approach accurately for SMEs with volatile or uncertain future cash flows can be challenging. Comparable company analysis is less applicable in the SME market due to limited publicly traded comparable companies.

Moreover, the DCF method, while widely used, may face challenges in the Dutch SME M&A landscape. It requires substantial data inputs and extensive financial projections, which may not be readily available for SMEs with limited historical financial data and uncertain growth prospects. Additionally, conducting a comprehensive DCF valuation demands considerable time and resources, which may not always align with the nature of SME transactions. In this research, it is not feasible to retrieve all the necessary data from the companies involved in the deals and still use the DCF method effectively.

For this research, the precedent transaction analysis method, specifically the EBITDA multiple, is the best benchmark for determining the deal value. The EBITDA multiple is widely utilized in the financial industry and is often favored by investors, analysts, and M&A professionals for its simplicity and reliability[18]. Also, EBITDA is a commonly reported financial metric, making data readily available for analysis. Its widespread acceptance makes benchmarking and comparing companies within the same industry or sector easier. The EBITDA multiple, compared to the EBIT multiple, is deemed more neutral regarding a company's capital structure. According to Bowman and Bush (2006), it offers a clearer picture of operating performance, especially when comparing entities with diverse debt levels.

While the EBITDA multiple is commonly used in business valuation, it has some drawbacks that should be considered. Firstly, it aggregates data from various companies, each with its unique characteristics and performance metrics, which can lead to inaccuracies in estimating the intrinsic value of a specific company. Additionally, differences in financing structures among companies can significantly impact EBITDA, making it less reliable as a standalone metric for valuation. For example, companies that heavily invest from their EBITDA may appear less favorable than companies that rely on leasing agreements for investment, which are already accounted for in the EBITDA. This is because investments from EBITDA directly reduce the profitability metric (Ribal et al., 2010).

The EBITDA multiple established in the LOI is influenced by comparable market transactions and foreseen synergies (Bowman & Bush, 2006). However, realizing the multiple valuation in the final transaction price depends on numerous factors. In this study, these factors will be identified, and the ones that have the most influence on a valuation adjustment will be determined.

In conclusion, the EBITDA multiple will be applied for this study. Specifically, the adjustments in the EBITDA multiple valuation post-LOI will be analyzed.

[18] Dikov, D. (2024, April 21). EBITDA multiple for business Valuation - Magnimetrics. Magnimetrics. https://magnimetrics.com/ebitda-multiple-for-business-valuation/#:~:text=The%20EBITDA%20Multiple%20is%20a,of%20a%20financial%20analyst's%20toolbox.

2.4 Deal value adjustments factors

Related sub-question: '*Based on the literature, what factors may influence post-LOI deal value adjustments?*

This paragraph explores the factors that could impact post-LOI deal value adjustments. It differentiates between stable factors throughout the M&A process and dynamic factors prone to change during this period. The discussion includes a complete literature review of these factors. The subsequent paragraph details which factors will be investigated in this study and which will not.

In the context of M&A transactions, stable factors are variables that remain consistent throughout the process, such as the company's industry sector and geographic location. In contrast, dynamic factors, such as company performance and the duration of the post-LOI phase, can fluctuate during the M&A process. By distinguishing between stable and dynamic factors in the literature review, this study aims to clarify which factors can be anticipated and which require continuous monitoring. This approach offers a more comprehensive analysis of the factors influencing post-LOI deal value adjustments. Both types of factors have the potential to impact post-LOI deal value adjustments. This is why both types are included in the analysis.

2.4.1 Stable factors

Bidder type

The two main groups of bidders can be categorized as strategic and financial bidders. Strategic bidders, usually companies in related industries like competitors, suppliers, or customers, seek targets with long-term operational synergies for integration into their business (Gorbenko & Malenko, 2014). On the other hand, financial bidders, typically private equity (PE) firms, focus mainly on undervalued targets with the potential for high cash flow, especially after a reorganization. Following the acquisition, a financial bidder considers the target as part of its financial portfolio and sells it when exit opportunities become attractive. This same research by Gorbenko and Malenko (2014) finds that strategic bidders have higher valuations than financial bidders. Additionally, they observe that the valuations of financial bidders show less adjustments than those of diverse strategic bidders.

However, a study by Fidrmuc et al. (2012) shows that the takeover premium paid by private equity versus strategic bidders is not significantly different. The effect of the selling process on the premium is also insignificant, according to the researchers.

Less research has been done on the other two groups, namely strategic bidders backed by PE and Management Buy-In (MBI). This first group of bidder type involves a strategic bidder that forms a partnership or collaboration with a PE firm for the acquisition to leverage operational synergies (Kaplan & Strömberg, 2003). This study emphasizes how the combination of financial and strategic motives can influence the terms of investment contracts, which may have implications for deal valuation in the context of M&A transactions involving strategic and private equity elements. However, no insights are provided by Kaplan and Strömberg (2003) into the influence of strategic bidders backed by PE on deal value adjustments. In an MBI, external managers acquire a controlling stake in a company, leading to a replacement of the existing management team[19]. No studies have been done on this group about deal value adjustments.

Management quality

Management quality is a crucial factor in determining premiums and discounts in M&A deals. This factor barely changes from deal initiation to closing, making this a stable factor. The effectiveness of the target company's management team plays a crucial role in justifying premiums, as competent management has the potential to create significant value for the acquiring company. Conversely, if the current management is ineffective, it may require a new team to take over, justifying paying a premium to acquire the target company. Additionally, manager hubris, characterized by overconfidence in managing target firm assets, can influence premiums. This unrealistic belief often leads to inflated expectations regarding synergies, impacting the size of premiums paid. A study by Hayward and Hambrick (1997) highlighted that CEO hubris is highly associated with the magnitude of premiums paid in large acquisitions, underscoring the importance of management quality in M&A transactions.

[19] Kenton, W. (2021, June 1). Management Buy-In: Everything to Know About MBI. Investopedia. https://www.investopedia.com/terms/m/mbi.asp

Cross-border transactions

Cross-border M&A transactions introduce unique challenges and complexities that can influence the adjustments between the determined valuation and the deal price. The work of Buckley and Casson (2009) explains that changes in currency exchange rates between the LOI stage and deal completion can impact the valuation of the acquirer's home currency. Furthermore, cross-border deals often involve entities operating in diverse cultural and regulatory environments. These variances can influence the negotiation process and the ultimate transaction price (Hitt et al., 2006). This study emphasizes the importance of understanding and exploring cultural differences to avoid misunderstandings that may lead to adjustments in valuation expectations.

Also, the political and economic stability of the countries involved can significantly impact cross-border M&A transactions. Events such as political instability or economic downturns in one of the countries can lead to changes in the perceived risk and affect the final transaction price (Rugman & Verbeke, 2003). Lastly, many countries restrict foreign investments, particularly in strategic sectors. Caves' work[20] highlights the impact of foreign investment restrictions on cross-border transactions. Negotiating these restrictions and seeking regulatory approvals become essential aspects of the deal process.

Over-invested firms

Over-invested firms, characterized by a surplus of free cash flows, tend to pay higher prices in M&A transactions, as Gondhalekar et al. (2004) noted. Their study on cash-only acquisitions of Nasdaq targets from 1973 to 1999 shows that these firms are more eager to acquire, resulting in higher prices. On the other hand, firms with less cash available, even if they have good internal projects, tend to pay less. These companies prioritize using their cash for projects they create, making them spend less on outside opportunities. Thus, how much cash a company has and what they can invest in themselves affects how much they are willing to pay in M&A deals. If a firm is over-invested, it is probably also over-invested through the whole M&A process, which makes this a stable factor.

Sector type

The impact of sector type on the adjustments between the determined multiple valuation and the transaction price in M&A deals is a nuanced consideration. Various industry sectors display specific characteristics, market dynamics, and risk profiles, influencing the negotiation process and, subsequently, the final transaction price. Damodaran's work[21] underscores the essential role of sector-specific factors like growth prospects, competitive landscapes, and regulatory environments in business valuation.

For instance, technology-driven sectors, such as information technology (IT) & software, and e-commerce pose unique challenges in M&A valuations due to rapid technological advancements and intellectual property considerations (Gulati & Singh, 1998).

The manufacturing sector in the Dutch SME market is characterized by slower growth and more predictable prospects than industries like technology or fashion[22]. As a result of this stability, fewer sudden developments or market fluctuations could significantly impact deal value during the M&A process.

Competitiveness bidders

In most SME M&A deals, only the buyer and seller remain after the LOI. Unlike larger public company deals where multiple bidders may be involved post-LOI. However, SME transactions consistently engage multiple organizations throughout the process. The number of non-binding offers (NBOs) reflects the level of interest and competition among potential acquirers, influencing the perceived value of the target also after the LOI. The presence of multiple bidders, each submitting NBO, adds complexity to the negotiation dynamics. Research by Megginson et al. (2004) highlights that an increased number of NBOs can intensify the competitive nature of the bidding process, potentially resulting in higher premiums paid for the target.

[20] Caves, R. E. (2007). Multinational Enterprise and Economic Analysis. https://doi.org/10.1017/cbo9780511619113

[21] Damodaran, A. (1995). Investment valuation: Tools and techniques for determining the value of any asset. http://babordplus.u-bordeaux.fr/notice.php?q=id:1808930

[22] Centraal Bureau voor de Statistiek. (2024, February 15). Bouwnijverheid; omzetontwikkeling, index 2015=100. Centraal Bureau Voor De Statistiek. https://www.cbs.nl/nl-nl/cijfers/detail/83837NED

Furthermore, the takeover process is more competitive than earlier studies have suggested, and most competition occurs privately (Aktas & Boone, 2022). In a competitive scenario for a particular seller, the offer price must be higher to secure the seller's control (Aktas et al., 2010). In simpler terms, when there is increased competition in the acquisition market, the buyer offers a higher premium.

Additionally, a bidder may present a high-premium offer as a preemptive bid to discourage other bidders from entering the competition (Fishman, 1988).

Investment banking fee

Another significant factor influencing the payment of premiums and discounts is the aforementioned success fee for M&A firms. Research conducted by Hunter and Walker (1990) has revealed a positive correlation between merger gains and investment banking fees. Typically, investment banking fee structures include both a fixed fee and a success fee, the latter being a commission paid to advisors upon completing the transaction. In M&A transactions, this success fee is often calculated as a percentage of the deal or enterprise value[23]. This fee arrangement serves as an incentive for advisors to secure favorable deals, potentially affecting acquisition prices. Notably, the success fee is predetermined before the M&A process, which makes it a stable factor.

Deal type

There are various deal types to distinguish, such as mergers, sourcing fees, and MBOs in Dutch SME M&A deals. However, the two most common primary deal types in M&A transactions are 100% sale and pre-exit deals. The choice between these deal types can significantly influence the adjustments between the initially determined multiple valuation and the final transaction price. Capasso and Meglio's (2007) study indicates that the motivations underlying these deal types impact negotiation strategies, potentially affecting the alignment of valuation expectations. Additionally, Shleifer and Vishny (2003) highlight that sellers opting for a 100% sale may seek immediate liquidity or exit from operational responsibilities, introducing unique negotiation considerations that can impact valuation. This study supposes that more adjustments in valuation are expected in a 100% sale, where the buyer and seller have no future cooperation, compared to a pre-exit deal, where ongoing collaboration after the deal may reduce adjustments.

2.4.2 Dynamic factors

Company performance

During the M&A process, one dynamic factor that significantly influences deal value is changing company performance. The target company's financial and operational performances can fluctuate from deal initiation, impacting its valuation. These fluctuations make it challenging to accurately forecast the true synergies between the acquiring and target companies. Studies by Campa and Hernando (2005) and Andrade et al. (2001) have highlighted the importance of considering changing company performance in M&A valuation, as it can significantly affect the final deal outcomes.

Duration post-LOI phase

As mentioned, the post-LOI phase primarily involves due diligence and final negotiations. During this phase, the deal value can change.

In their study, Kaplan and Weisbach (1992) underscore the significance of thorough due diligence in revealing potential covered risks or liabilities that could influence the valuation. Studies on due diligence and valuation show that during acquisitions, acquirers often uncover new and negative information about target companies' values (Puranam et al., 2006). This uncertain data forces companies to manage the risk of pulling out from a potentially advantageous deal versus going ahead with a deal that may harm their value. Consequently, the selling firm may end up with a lower valuation. Puranam et al. (2006) discover that the acquirers' initial assessment of the acquisition opportunity influences how negative due diligence information impacts their valuations and final acquisition decisions.

[23] Team, C. (2024, January 25). Success fee. Corporate Finance Institute. https://corporatefinanceinstitute.com/resources/valuation/success-fee/

Thompson and Kim (2020) also show the other side. Their research indicates that transactions executed within an optimal timeframe show better performance, which boosts the valuation. Conversely, taking too long to close a deal indicates poor M&A performance. In their study, Calcagno et al. (2021) explored the connections among the duration of takeover negotiations, competition, and learning, particularly in the private phase of bidder-initiated transactions. As due diligence and subsequent negotiations unfold, both parties gain insights into the actual synergies of the deal, resulting in valuations that may differ from the initial determination.

Also, the duration of the final negotiations can play a crucial role in influencing deal value adjustments. Extended negotiation periods may lead to increased uncertainty, allowing for a more thorough exploration of deal dynamics and potential deal value adjustments (Calcagno et al., 2021). Thompson and Kim (2020) support his notion, indicating that transactions executed within an optimal timeframe demonstrate better performance, positively impacting the valuation compared to the conventional valuation in the LOI.

Valuation assumptions

During the M&A process, valuation assumptions play a crucial role in determining the initial value of a business. However, as the deal progresses, these assumptions can evolve, leading to adjustments in the final valuation. Factors such as changing market conditions, future growth prospects, and cost savings from synergies can all influence the validity of initial assumptions. Zhang (2007) highlights the importance of reassessing valuation assumptions throughout the M&A process to ensure accuracy and reduce risks. Similarly, a study by Deloitte in 2020[24] emphasizes the need for flexibility in valuation methodologies to accommodate changing assumptions and market dynamics. Furthermore, a report by PwC[25] underscores the significance of conducting sensitivity analyses to assess the impact of different assumptions on valuation outcomes. By recognizing the dynamic nature of valuation assumptions and their potential impact on the final valuation, M&A practitioners can make more informed decisions and manage the complexities of the deal process effectively.

Deal size

While the specific influence of deal size on the adjustments between the determined multiple valuations and transaction prices is lacking in literature, broader studies on deal size and deal-related outcomes offer relevant insights. Alexandridis et al. (2012) found a robust negative relation between the offer premia and deal size, indicating that acquirers tend to pay less for large firms, not more. They also find that the overpayment potential is lower in acquisitions of large targets. The explanation for this is the additional complexity associated with large deals, which makes it more difficult for acquirers to attain the assumed economic benefits. The study of Moeller et al. (2004) delves into the correlation between firm size and the benefits derived from acquisitions. They find that large firms offer higher acquisition premiums than small firms. This alignment with the evidence supports the notion that managerial hubris, characterized by overconfident managers, may significantly impact larger firms' decision-making processes (Moeller et al., 2004).

Bargaining strengths seller and acquirer

The bargaining strengths of the seller and the acquirer are critical factors influencing premiums in acquisition transactions. Varaiya's (1987) study on the determinants of premiums highlights the positive correlation between projected premiums and two key factors: the relative bargaining power of the seller and the buyer's pre-acquisition estimation of potential gains. These factors are dynamic, as they can fluctuate throughout the M&A process and are not fully known at the preliminary stages. The research results strongly confirm the expected effects of factors influencing the seller's bargaining power. The degree of competition in the

[24] Unlocking transformative M&A value with ESG. (n.d.). Deloitte United States. https://www2.deloitte.com/us/en/pages/mergers-and-acquisitions/articles/unlocking-transformative-m-and-a-value-with-esg.html

[25] PricewaterhouseCoopers. (n.d.). Creating value beyond the deal: private equity. PwC. https://www.pwc.com/gx/en/services/deals/deals-report/private-equity.html

acquisition market and anti-takeover rules in the seller's charter strengthen the seller's bargaining power against the buyer.

Information asymmetry

The extent of information available before conducting a business valuation significantly varies across different M&A deals. The available information level negatively correlates with company valuation adjustments in M&A transactions (Zhu & Jog, 2009). Zhu and Jog (2009) established a strong positive correlation between information asymmetry and the payment of takeover premiums. As the M&A process progresses, the amount of available information typically increases, making this a dynamic factor.

2.4.3 Overview literature review

Table 2.2 shows the factors influencing post-LOI deal value adjustments in M&A deals, as identified in the literature review. The distinction is made between the factors that remain stable during the M&A process and those that can change or are determined during the M&A process. The associated studies that support these factors are also mentioned in the table, as well as the most important findings and the methodology applied in the studies.

Table 2.2: Overview literature review

	Factors	Researcher(s) + year	Title	Method	Key findings
Stable factors	Bidder type	Gorbenko & Malenko, 2014	Strategic and financial bidders in takeover auctions	The study employs a quantitative approach. The type of study is empirical and is applied to the context of takeover auctions.	- Strategic bidders prioritize long-term leading to higher valuations. - Financial bidders focus on undervalued assets for short-term gains. - Strategic bidders generally have higher valuations. - Private equity firms negotiate lower prices.
		Fidruc et al., 2012	One size does not fit all: selling firms to private equity versus strategic acquirers	This empirial study, with a quantitative approach, is applied to the context of selling firms. It specifically compares the selling process for firms acquired by PE buyers vs strategic buyers.	- Premiums paid by Private equity and Strategic bidders are similar. - The selling process does not significantly affect The premium.
	Management quality	Hayward & Hambrick, 1997	Explaining the Premiums Paid for Large Acquisitions: Evidence of CEO Hubris	The research is empirical with a quantitative approach, numerical data related to large acquisitions is analyzed.	CEO hubris strongly correlates with higher Premiums in major acquisitions
	Cross-border transactions	Buckley and Casson, 2009	The Internalisation Theory of the Multinational Enterprise: A review of the progress of a research agenda after 30 years	This is a quantitative research study with a longitudinal perspective: the study spans 30 years of research.	Currency exchange rate fluctuations between LOI and deal completion can significantly affect valuation in the acquirer's home currency.
		Hitt et al., 2006	International diversification: antecedents, outcomes, and moderators	This research is empirical, it reviews existing literature on international diversification. The study employs a quantitative approach by analyzing numerical data.	- Cross-border deals entail diverse cultural and regulatory environments, impacting negotiation dynamics and transaction prices. - Understanding cultural differences is crucial to avoid valuation expectation adjustments stemming from misunderstandings.
		Rugman & Verbeke, 2003	Extending the Theory of the Multinational Enterprise: Internalization and Strategic Management Perspectives	The researchers analyze numerical data (quantitative approach) related to multinational enterprises (MNEs). The study is empirical by reviewing existing literature.	- Political and economic stability of countries affect cross-border M&A transactions. - Events like political instability or economic downturns can alter perceived risk and impact final transaction prices.
	Over-invested firms	Gondhalekar et al., 2004	The Price of Corporate acquisition: Determinants of Cash Takeover Premia	The study examines a sample of cash-only acquisitions of Nasdaq targets during 1973-1999. The study employs a quantitative approach.	- Over-invested firms with surplus cash flows often pay higher prices in M&A transactions. - Companies with less available cash, despite having good internal projects, tend to pay less. - Cash availability and investment priorities influence a firm's willingness to pay in M&A deals.
	Sector type	Gulati & Singh, 1998	The architecture of cooperation: managing coordination costs and appropriation concerns in strategic alliances	Researchers analyze numerical data (quantitative) related to alliance governance. It investigates why firms choose different governance structures for their alliances.	Technology-driven sectors like Information Technology (IT) & software, and E-commerce present unique challenges in M&A valuations due to rapid technological advancements and intellectual property complexities.
		Grabowski & Vernon, 2000	The determinants of pharmaceutical research and development expenditures	This study investigates factors influencing pharmaceutical R&D expenditures, it employs a quantitative approach.	- Pharmaceutical, healthcare, and life sciences industries face strict regulations and complex research and development processes, which impact M&A valuations significantly. - Factors affecting M&A valuations in these sectors include innovation and adherence to regulations.

Stable factors	Competitivenss bidders	Megginson et al., 2004	The determinants of positive long-term performance in strategic mergers: corporate focus and cash	The researchers analyze numerical data (quantitative) related to strategic mergers. The study examines a sample of strategic mergers and investigates factors influencing positive long-term performance.	- More Non-Binding Offers (NBOs) lead to increased competition in the bidding process. - Increased competition can result in higher premiums paid for the target company.
		Aktas & Boone, 2022	The private deal process in mergers and acquisitions	The researchers use statistical methods to explore the takeover process (quantitative approach). The study examines merger announcements and survey data from M&A practitioners, empirical study.	- Takeover processes are more competitive than previously thought. - Most of the competition occurs in private negotiations rather than publicly.
		Aktas et al., 2010	Negotiations under the threat of an auction	Empirical research which examines data from various negotiated deas. It analyzes data related to negotiations under the threat of an auction (quantitative).	- In competitive situations, buyers bid higher to gain control of the seller. - When there's more competition to acquire a seller, buyers offer higher premiums.
		Fishman, 1988	A theory of preemptive takeover bidding	Quantitative approach, the study examines datafrom various takeover ids (empirical study).	Bidders may offer high premiums preemptively to deter competition.
	Investment banking success fee	Hunter & Walker, 1990	An Empirical Examination of Investment Banking Merger Fee Contracts	The study examines data related to investment banking merger fee contracts (empirical). They use statistical methods to explore the relationship between merger gains and fees (quantitative).	- There is a positive correlation between merger gains and investment banking fees. - Investment banking fees usually comprise fixed and success fees, with the latter paid upon completing the transaction.
	Deal type	Capasso & Meglio, 2007	The evolving role of mergers and acquisitions in competitive Strategy research	The researchers analyze numerical data related to M&A in competititive strategy research, a quantitative approach. It investigates how M&As contribute to sustainable competitive advantages.	Motivations behind deal types influence negotiation strategies, potentially impacting valuation alignment.
		Shleifer & Vishny, 2003	Stock market driven acquisitions	This study examines M&As driven by stock market misvaluations, and uses statistical methods. So this is research is empirical with a quantitative approach.	Sellers in 100% sale transactions seek immediate liquidity or exit from operational responsibilities, affecting valuation considerations.
Dynamic factors	Company performance	Campa & Hernando, 2005	M&As performance in the European financial industry	The study examines M&As within the EU financial industry during the period from 1998 to 2002. They use statistical methods to explore the performance of M&As (empirical, with a quantitative approach).	It's crucial to account for changing company performance in M&A valuation because it impacts final deal outcomes.
		Andrade et al., 2001	New Evidence and Perspectives on Mergers	M&A trends and characteristics over the last century is examined, an empirical study with a quantitative approach.	Changing company performance must be factored into M&A valuation as it can profoundly influence the ultimate deal results.

Dynamic factors	Duration Post LOI phase	Kaplan & Weisbach, 1992	The success of acquisitions: Evidence from Divestitures	Researchers analyze numerical data (quantitative) related to large acquisitions between 1971 and 1982.	-Thorough due diligence is crucial for uncovering hidden risks or liabilities that may affect valuation.
		Puranam et al., 2006	Due diligence failure as a signal detection problem	This study examinesdecision-making in due diligence with the use of statistical methods to explore desicion-making under uncertainty, a quantitative study.	- Due diligence often reveals new negative information about target companies, complicating decision-making. - Uncertain data from due diligence forces companies to balance the risk of deal withdrawal against potential value loss. - Acquirers' initial assessments affect how due diligence findings impact valuations.
		Thompson & Kim, 2020	Post-M&A Performance and Failure: Implications of time until deal completion	The researchers use statistical methods to explore the impact of time until deal completion, an empirical study (quantitative).	- Optimal timeframe transactions enhance performance and valuation.
		Calcagno et al., 2021	Takeover duration and negotiation process	The researchers analyze numerical data (quantitative) related to takeover negotiations duration and competition. This empirical research focuses on the private phase of bidder-initiated transactions.	- Long deal closure indicates poor M&A performance. - Prolonged negotiation periods increase uncertainty and may lead to adjustments in valuation.
	Valuation assumptions	Zhang, 2007	Top management team heterogeneity and firm performance: An empirical research on Chinese listed companies	Researchers analyze numerical data (quantitative) related to Chinese listed companies. They explore the impact of top management team heterogeneity on firm performance.	- Changing market conditions, growth prospects, and synergies' cost savings affect initial assumptions. - Reassessing valuation assumptions in M&A ensures accuracy and reduces risks.
	Deal size	Alexandridis et al., 2012	Deal size, acquisition premia and shareholder gains	This is an empirical study with a quantitative approach where statistical methods are used to explore the relationship between offer premia, target size, and acquirer returns.	- The reseracher discovered a negative relation between offer premia and deal size. - Acquirers tend to pay less for large firms due to increased complexity, making it harder to realize economic benefits.
		Moeller et al., 2004	Firm size and the gains from acquisitions	The authors employ statistical techniques (quantitative study) to analyze the relationship between firm size and M&A gains.	Large firms offer larger acquisition premiums compared to small firms.
	Bargaining strengths seller	Varaiya, 1987	Determinants of premiums in acquisition transactions	The study employs statistical analysis to examine the relationship between various variables and acquisition premiums. A sample of completed acquisition transactions, both friendly and hostile is selected.	- Projected premiums correlate positively with seller's bargaining power and buyer's estimation of potential gains. - These factors fluctuate during M&A, affected by competition and anti-takeover rules.
	Bargaining strengths acquirer				
	Information asymmetry	Zhu & Jog, 2009	Information Asymmetry and Acquisition Premiums in Domestic and Cross Border M&A in Emerging Markets	The authors use statistical analysis (quantitative study) to examine the relationship between information asymmetry and acquisition premiums. The study covers a period from 1990 to 2007.	- More available information correlates with lower valuation adjustments. - Information asymmetry is positively linked to takeover premiums.

2.5 Research factors selection

Related sub-question: *'Which identified factors will be examined in this study?'*

After a thorough literature review, fifteen factors have been identified that may influence deal value adjustments after the LOI phase. However, this study will not examine all of these. This chapter explains which factors are examined and which are not considered.

2.5.1 Factors not examined in study

The following eight identified factors will not be examined in this study:

1. Management quality
2. Over-invested firms
3. Investment banking success fee
4. Company performance
5. Valuation assumptions
6. Bargaining strengths seller
7. Bargaining strengths acquirer
8. Information asymmetry

This study does not examine the factors mentioned above for several reasons. Some cannot be accessed in the dataset and, therefore, cannot be investigated. Therefore, factors such as management quality, over-invested firms, and investment banking success fees are excluded from this study.

Additionally, due to limited documentation and monitoring, dynamic factors like company performance and changes in valuation assumptions are difficult to assess. Similarly, the bargaining strengths of the seller and acquirer are not assessed due to the difficulty in quantifying them. Additionally, tracking available information during the M&A process is uncommon, making analyzing its influence on deal value adjustments challenging. Moreover, tracking all available information in each involved M&A deal for this study is not practically feasible to find out retroactively.

Reflecting on these choices, excluding certain factors from the study, may limit the depth of understanding regarding their potential impact on deal value adjustments. Factors like management quality and investment banking success fees could potentially influence negotiations and valuation outcomes significantly. Without exploring these factors, there is a risk of overlooking critical determinants that could affect the reliability and applicability of the study's findings. Moreover, those excluded factors could otherwise influence the relationships observed between the included factors and the dependent variable, both in terms of correlation strength and statistical significance. This could potentially impact the overall robustness and comprehensiveness of the study's conclusions regarding the factors influencing deal value adjustments in Dutch SME M&A transactions.

2.5.2 Research factors

The following overview summarizes the identified factors that will be examined in this study. Subsequently, an explanation is given as to why these factors are examined during this research.

Overview of the seven identified research factors:

1. Duration post-LOI phase
2. Bidder type
3. Deal size
4. Cross-border transactions
5. Sector type
6. Competitiveness bidders
7. Deal type

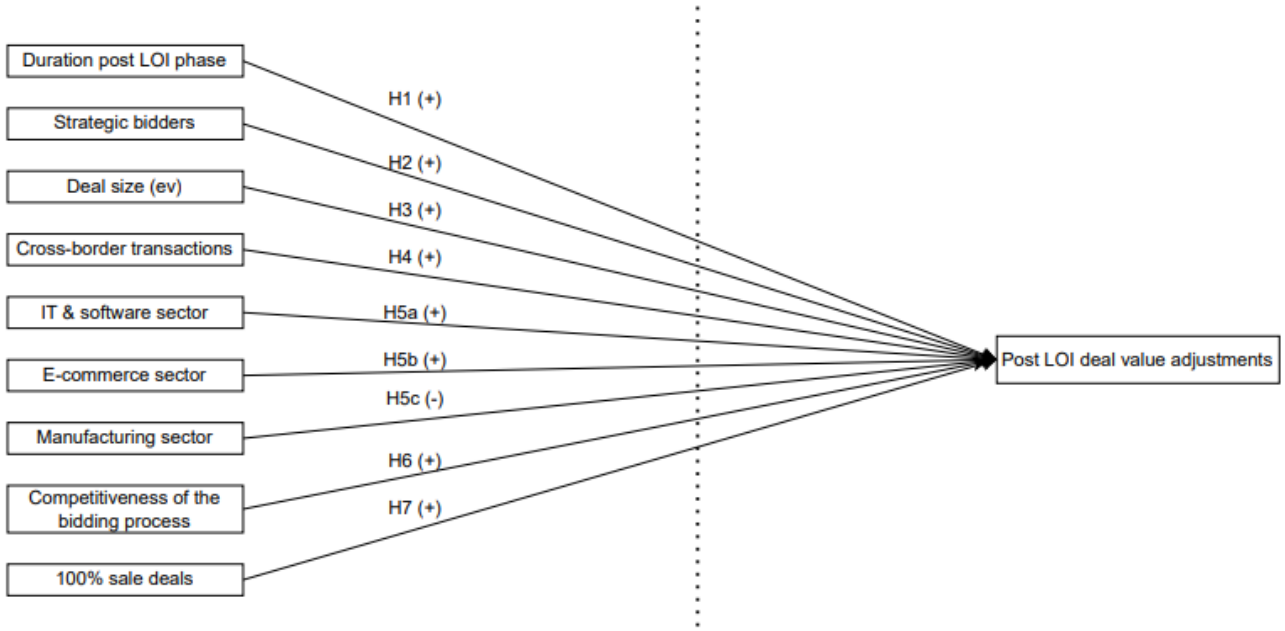
This study will examine the above-identified factors following a thorough literature review. These factors have been included primarily for practical reasons, as the necessary data for their investigation is readily

available. Each transaction in the dataset contains the required information for the research factors or can be retrieved, making them accessible for analysis. Moreover, these factors have been carefully chosen based on their relevance and potential impact on deal value adjustments in Dutch SME M&A transactions.

2.5.3 Hypotheses

Seven main hypotheses with some sub-hypotheses have been formulated based on the literature and the selected research factors. The expected hypotheses are based on the literature review, focusing on the dependent variable of post-LOI deal value adjustments in general, irrespective of whether they are positive or negative. Ultimately, the choice is made in the analysis to include three different types of dependent variables to create options in the analysis; this is explained in the methodology section.

Figure 2.2: Conceptual framework hypotheses



Duration post LOI phase

Given the literature review (e.g., Kaplan & Weisbach, 1992; Calgagno et al., 2021), which highlights the importance of due diligence and negotiation duration in M&A transactions. It is anticipated that as the post-LOI phase extends, changes in circumstances affecting the deal value will increase, leading to higher adjustments in the deal value. So it is expected that an extended post-LOI phase in Dutch SME M&A transactions positively correlates with deal value adjustments.

- *H1: Extended post-LOI phase duration in Dutch SME M&A transactions positively correlates with deal value adjustments.*

Bidder type

Research by Gorbenko and Malenko (2014) suggests that strategic bidders generally assign higher valuations to their targets than financial bidders. This higher initial valuation could imply that there is more room for adjustments in the deal value post-LOI, as strategic bidders may re-evaluate the target's worth based on detailed due diligence findings and integration plans.

- *H2: Strategic bidders positively correlate with post-LOI deal value adjustments in Dutch SME M&A transactions compared to other bidder types.*

Deal size

Research indicates that larger deal sizes in M&A transactions will likely lead to higher post-LOI deal value adjustments (Alexandridis et al., 2012; Moeller et al., 2004). This is due to the increased complexity

associated with larger transactions, making it harder to accurately determine the deal value in the LOI. Moreover, larger firms typically offer higher acquisition premiums compared to small firms, further increasing the likelihood of larger post-LOI deal value adjustments.

- *H3: Deal size positively correlates with post-LOI deal value adjustments in Dutch SME M&A transactions.*

Cross-border transactions

According to the literature, cross-border transactions in Dutch SME M&A are expected to result in higher post-LOI deal value owing to various factors such as currency exchange fluctuations, cultural and regulatory differences, and geopolitical and economic stability considerations (e.g., Buckley & Casson, 2009; Hitt et al., 2006). The literature shows the complexity of doing a fair business valuation during the LOI, which suggests an increase in adjustments from the final deal value.

- *H4: Cross-border transactions positively correlate with post-LOI deal value adjustments in Dutch SME M&A transactions.*

Sector type

In Dutch SME M&A transactions, sector type significantly influences post-LOI deal value adjustments (Gulati & Singh, 1998; Grabowski & Vernon, 2000). Sectors like IT & Software and e-commerce, characterized by rapid technological changes or regulatory complexities, are expected to exhibit higher adjustments. In comparison, a more stable sector like manufacturing is anticipated to show lower adjustments, reflecting its consistent and less volatile nature.

- *H5a: The IT & Software sector positively correlates with post-LOI deal value adjustments in Dutch SME M&A transactions compared to other sector types.*
- *H5b: The e-commerce sector positively correlates with post-LOI deal value adjustments in Dutch SME M&A transactions compared to other sector types.*
- *H5c: The manufacturing sector negatively correlates with post-LOI deal value adjustments in Dutch SME M&A transactions compared to other sector types.*

Competitiveness bidders

Research suggests (e.g., Megginson et al., 2004; Aktas & Boone, 2022) that more NBOs intensify competition among potential acquirers. This potentially leads to higher paid premiums and, ultimately, higher valuation adjustments for the target. Additionally, it can be argued that more cautious offers are made due to the volume of bids, resulting in smaller post-LOI deal value adjustments. However, this assertion is not supported by the literature, leading to the formulation of the following hypothesis.

- *H6: The competitive nature of the bidding process (number of NBOs) positively correlates with post-LOI deal value adjustments in Dutch SME M&A transactions.*

Deal type

According to the literature (Capasso & Meglio, 2007; Shleifer & Vishny, 2003), different deal types impact negotiation strategies. It potentially leads to more adjustments in valuation in a 100% sale scenario, where there is no future cooperation between the buyer and seller, compared to a pre-exit deal, where ongoing collaboration may reduce valuation adjustments.

- *H7: The deal type '100% sale' positively correlates with post-LOI deal value adjustments in Dutch SME M&A transactions than pre-exit deals.*

3 Methodology

In the methodology for this study, a quantitative empirical approach will be employed to investigate the factors influencing the adjustment between the initially determined multiple valuation in the LOI and the final transaction price in M&A deals targeting Dutch SMEs. The study will utilize a comprehensive dataset on various M&A deals involving Dutch SMEs. The primary data source is an extensive set of completed M&A transactions by a Dutch M&A firm.

The independent variables being studied will include specific factors such as deal size, bidder type, and the duration of the post-LOI phase. These variables will be analyzed to assess their impact on the dependent variable, which is the adjustments between the determined multiple valuation in the LOI and the final transaction price, measured in three different ways.

Statistical analyses, such as regression modeling, will be applied to identify significant relationships and quantify each variable's influence on valuation adjustments. Linear regression (ordinary least squares) will be chosen as a regression model because it is the most appropriate for continuous dependent variables, such as the post-LOI valuation adjustments. The research design aims to systematically examine the identified factors, contributing valuable insights to understanding M&A valuation in Dutch SMEs.

3.1 Data collection & scope

In collaboration with a Dutch M&A firm, an extensive dataset of 557 completed M&A deals in the Dutch market was compiled. This data was obtained from the company's internal transaction database system (TDS), which contains nearly all the data needed for this study.

This study exclusively examines sell-side M&A deals, it zeroes in on the Netherlands as the target country to keep it focused and objective. Deal types will be narrowed down to 100% sale and pre-exit deals, excluding other types like mergers due to their limited representation in the dataset.

While the primary focus is on Dutch transactions, cross-border deals are also considered to explore international influences. The analysis will be limited to closed deals, guaranteeing the availability of complete and accurate data.

The timeframe for deal selection spans from 2016 to 2023, balancing recent and historical data. Before 2016, there was insufficient information to draw meaningful conclusions. This timeframe captures the most relevant trends in the Dutch SME M&A deal market.

To address potential data gaps, M&A documents will be thoroughly reviewed to complete missing data. Additionally, initiative-taking outreach is conducted to engage managers involved in these deals for any missing or additional information. This missing data was mainly the date when the LOI was signed and the determined enterprise value in this LOI. Also, the normalized EBITDA of the last completed book year, the normalized EBITDA prognosis of the deal year, and the normalized EBITDA prognosis of the upcoming year was occasionally missing. Lastly, a check is done on the enterprise value of the transaction price. This check is essential to draw reliable conclusions about the correction of the post-LOI valuations. So, for each deal, at least three M&A documents examined, namely the LOI, SPA, and the valuation model. Sometimes, there was no LOI available; however, there was a signed term sheet. This term sheet is a good substitute for the LOI if the required information is included and the document is signed.

In cases where missing values cannot be found, even after exhaustive efforts, entire deals with incomplete data will be excluded from the study. This approach ensures that the used dataset is high quality and reliable.

Employing this systematic data collection approach, the final sample size consists of 341 completed M&A deals within the Dutch SME market. This size is assumed to be sufficient to strengthen the reliability and generalizability of findings. The thorough data collection strategy is aligned with the study's objectives, ensuring a robust dataset for insightful analyses.

3.2 Sample

The study's sample includes data from 341 sell-side M&A deals, representing 61.2% of the original dataset of 557 deals. This high percentage aims to reflect key characteristics of the broader population. The following tables and figures show the main characteristics of the sample.

Table 3.1: Sample characteristics

Variables	Averages	Median
Paid EBITDA multiple	5.4	5.3
Deal size (enterprise value)	€9.673.957	€5.810.375
NBOs	3.4	3.0
Duration post-LOI phase (days)	125	108

Figure 3.1: Number of deals per sector

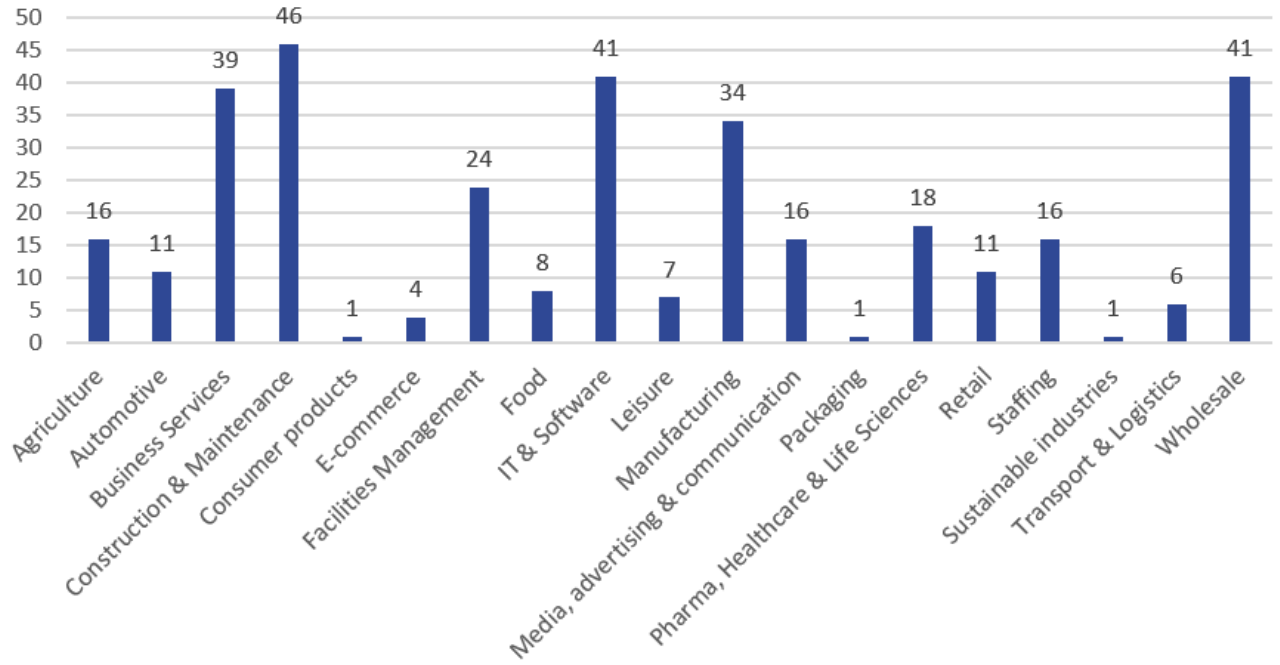


Figure 3.2: Bidder type

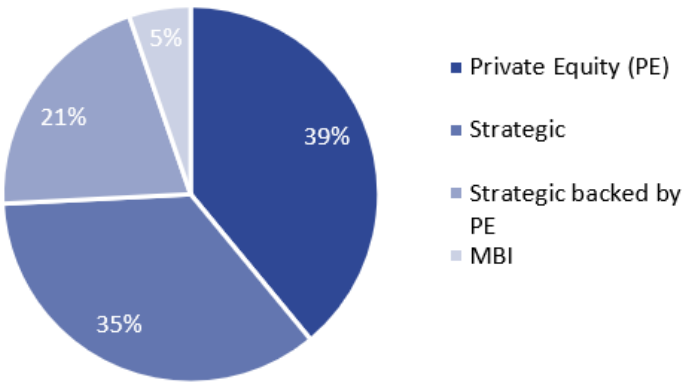


Figure 3.3: Deal type

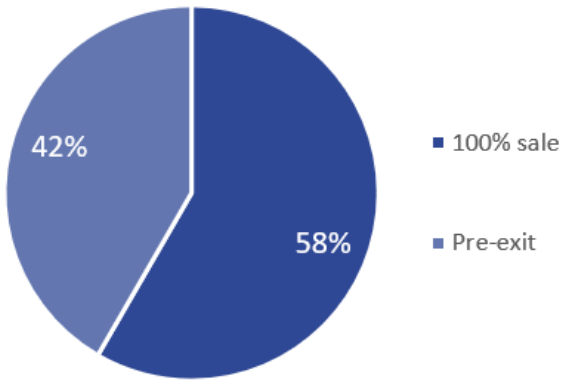
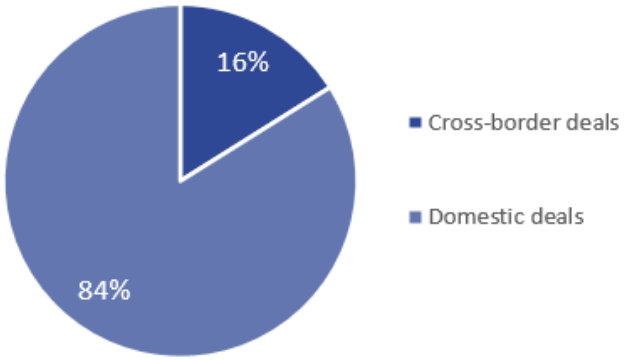


Figure 3.4: Cross-border transactions



When examining sectors, most deals in the sample fall within the business services, wholesale, manufacturing, construction & maintenance, and IT & Software sectors. Compared to the broader population, where most transactions also occur in business services, wholesale, manufacturing, and construction & maintenance[26], the sample seems to align well with the general trends observed in the larger M&A landscape. This similarity enhances the relevance and applicability of the findings to the broader context of the M&A landscape.

The average paid multiple in the sample is 5.4, with a median of 5.3. In contrast, the broader M&A market of 2022, as reported by Brookz[27], shows an average paid multiple of 5.25. These sample characteristics indicate that the sample accurately reflects the entire population of Dutch SME M&A deals.

Unfortunately, no data on the average NBOs in the Dutch SME market M&A is available. This emphasizes the study's specific focus and its contribution to understanding this segment.

3.3 Measurement

The measurement instrument for this study will involve a robust quantitative approach, focusing on an extensive dataset derived from 341 completed M&A deals facilitated by a Dutch M&A firm. The dataset aims to capture key factors influencing the adjustments between the initially determined multiple valuation in the LOI and the final transaction price for Dutch SMEs.

3.3.1 Independent variables

Refer to Table 3.2 for an overview of the independent variables used in this research.

[26] Statista. (2023, February 10). M&A deals of SMEs in the Netherlands 2007-2022, per sector. https://www.statista.com/statistics/1140501/manda-deals-of-smes-in-the-netherlands-per-sector/

[27] Brookz. (2023). Overname barometer (17th ed.). https://www.accountancyvanmorgen.nl/wp-content/uploads/sites/2/2023/02/Overname-Barometer-H2-2022-NLD.pdf

Table 3.2: Independent variables

Hypothesis	Variable	Type	Definition	References	Source(s)
H1	Duration post-LOI phase	Continuous	The timeframe taken from the LOI till deal completion	e.g. Kaplan & Weisbach, 1992; Calgagno et al., 2021	TDS, LOIs, and SPAs
H2	Bidder type	Categorical	Categorized into strategic, PE, strategic backed by PE, and MBI	e.g. Gorbenko Malenko, 2014; Fidrmuc et al., 2012	TDS
H3	Deal size	Continuous	The enterprise value on deal closing	Alexandridis et al., 2012; Moeller et al. 2004	TDS, SPAs/valua-tion models
H4	Cross-border transaction	Dichotomous	Indicates whether the bidder is foreign or domestic	e.g. Buckley & Casson, 2009; Hitt et al., 2006	TDS
H5a/b/c	Sector type	Categorical	Classifies the industry sector of the target company	Gulati & Singh, 1998; Grabowski & Vernon, 2000	TDS
H6	Competitiv eness bidders	Continuous	Reflects the presence of multiple bidders submitting NBOs	Megginson et al., 2004; Aktas & Boone, 2022	TDS & NBO overviews
H7	Deal type	Dichotomous	Distinguishes between 100% sale deals and pre-exit deals	Capasso & Meglio, 2007; Shleifer & Vishny, 2003	TDS

The decision has been made not to distribute the several factors across all categories evenly. Initially, the absolute value approach is being applied to maintain the accuracy of the raw data. However, as the research progresses, consideration may be given to categorizing some factors differently. This could be to enhance result transparency or explore potential outcome variations. For example, with the factor duration post-LOI phase, the data is initially measured in days. However, one extra day in the post-LOI phase hardly changes the deal value adjustments. By changing this variable to months, a significant adjustment becomes evident.

3.3.2 Dependent variable

The primary focus of the study is the adjustments in valuation post-LOI. Table 3.3 presents three different methods for determining these adjustments. The three dependent variables were chosen to provide a comprehensive analysis of post-LOI deal value adjustments. DV1 examines the overall percentage change without distinguishing between premiums and discounts, highlighting general patterns. DV2 considers the direction of the adjustments, offering insights into whether deal values increased or decreased post-LOI,

measured in percentages. DV3 measures the adjustments in real Euros, capturing the actual size of the changes, which can significantly affect outcomes beyond just percentage variations. These three different ways of approaching the dependent variables give the option to make choices in the analyzing phase, which benefits the flexibility of this research.

Table 3.3: Dependent variables

Variable	Type	Definition	Sources
Post-LOI deal value adjustments	Continuous	The difference between the EBITDA multiple in the LOI and the final transaction price, based on the enterprise value	LOIs and SPAs/valuation models
	DV1	In general, in relative terms, the post-LOI deal value adjustment in percentage (without considering whether this is a premium or discount)	
	DV2	In real relative terms, the post-LOI deal value adjustment in percentage (considering whether this is a premium or discount)	
	DV3	In absolute terms, the post-LOI deal value adjustment in real Euros	

The following steps were taken to ensure the most reliable and consistent method was used to calculate the valuation deviation post-LOI.

1. The normalized EBITDA is chosen over the EBITDA in the annual accounts to represent the target company's ongoing financial performance accurately. This adjustment removes irregularities caused by one-time or non-recurring expenses, providing a clearer picture of the company's sustainable earnings capacity. This approach enhances comparability across companies and industries and improves the reliability of valuation analysis in Dutch SME M&A transactions.
2. The EBITDA multiple is determined by incorporating the weighted EBITDA of the last closed book year, the prognosis EBITDA of the deal year, and the prognosis EBITDA of the following year, each accounting for 33% of the total. This approach provides a more complete and forward-looking evaluation of the target company’s financial performance. It accounts for historical earnings, current projections, and future expectations, thereby reducing the impact of short-term fluctuations and offering a more balanced view of the company's earning potential. This weighted approach ensures that recent performance trends and future growth prospects are appropriately considered in the valuation analysis, enhancing the accuracy and reliability of the evaluation in Dutch SME M&A transactions.
3. In cases where the LOI was unavailable, the term sheet is utilized to fill in missing data. While both documents outline the terms and conditions of a potential transaction, the LOI typically provides more detailed information regarding the intent to proceed with a deal. However, the term sheet serves as a suitable substitute for the LOI in situations where the latter is not accessible. Despite some differences in specificity, the term sheet still offers valuable insights into the proposed transaction, enabling a complete analysis of key deal parameters.

As noted in the literature review, this study does not consider changes in equity bridge movements due to a lack of available data at the beginning of the M&A process. By examining the enterprise value in both the LOI

and the SPA. This research provides a fair and representative view of the valuation deviation post-LOI. Figure 3.5 shows how the various dependent variables were calculated.

Figure 3.5: Calculations of dependent variable types:

$$DV1 = \left| \frac{\text{Transaction EBITDA-Multiple} - \text{LOI EBITDA-Multiple}}{\text{LOI EBITDA-Multiple}} \right| \times 100\%$$

$$DV2 = \left(\frac{\text{Transaction EBITDA-Multiple} - \text{LOI EBITDA-Multiple}}{\text{LOI EBITDA-Multiple}} \right) \times 100\%$$

DV3 = Transaction price (enterprise value) in € – LOI deal price (enterprise value) in €

3.3.3 Checking factors

After completing the literature review and identifying several factors, two interviews were conducted with experienced M&A managers. The primary objective was to validate the identified factors and identify any missing ones. Some noteworthy insights emerged from these interviews. According to one M&A manager: "The higher the initial multiple, the more thorough and comprehensive the research conducted in M&A deals, resulting in greater deal value adjustments (M&A manager, 2024b)." Consequently, this factor is incorporated into the study as a control variable. Another M&A manager revealed that the ease of obtaining financing for a deal varies from year to year due to changing economic conditions, interest rates, and market liquidity (M&A manager, 2024a). This fluctuation in financing availability can significantly impact M&A transactions. Therefore, the deal year is included as a control variable to account for these variations.

Additionally, it was suggested that the amount of advanced information provided influences valuation, leading to the inclusion of information asymmetry as a dynamic factor (M&A manager, 2024a), which further supports the literature found on this topic. However, this is not included as a control variable because collecting the necessary data is not practically feasible, as explained in the theory. In addition, a limitation was identified by discussing the factor competitive bidders with an experienced M&A manager (M&A manager, 2024b). The number of bids may not accurately reflect actual competitiveness, as a solid initial bid can deter new bidders, even if they offer competitive terms. For instance, if the first bid is relatively high, subsequent bidders may be excluded. While the number of NBOs indicates bidder competitiveness, it is essential to consider this limitation in this study. Lastly, the following comment was made about the dynamic factor company performance: “Disappointing results through the M&A process, such as the loss of a top three customer, or an important management or staff member leaving, can cause adjustments in the valuation” (M&A manager, 2024b).

3.3.4 Control variables

Refer to Table 3.4 for an overview of the control variables used in this research. This table includes the definition of each control variable and the reason it is considered.

Table 3.4: Control variables

Variable	Type	Definition + motive	Sources
Deal year	Categorical	The control variable deal year accounts for variations in financing conditions from 2016 to 2023, influenced by economic conditions, interest rates, and market sentiment.	Dealfunnel/SPAs
Multiple size LOI	Continuous	This control variable is quantified by the EBITDA multiple for the enterprise value in the LOI. This control variable is included after checking the factors: 'The higher the initial multiple, the higher the deal value adjustments' (M&A manager, 2024b).	LOIs/valuation models

3.3.5 Statistical Analyses

In this study, linear regression will be employed as a critical analytical tool to identify and quantify the significance of relationships between independent variables and the post-LOI deal value adjustments. Regression analysis allows for a nuanced understanding of how individual factors, such as deal size, cross-border transactions, and competitiveness bidders, may influence the valuation post-LOI.

Additionally, interaction effects will be explored to investigate the potential interactions between independent variables. This approach aims to determine whether specific combinations of variables lead to higher or lower deal value adjustments than the main effect itself. Exploring these interaction effects is crucial for gaining insights into the complex interplay of factors affecting the deal value in M&A deals.

3.4 Data analysis

The data analysis for this study will utilize SPSS 29, a statistical software package, to thoroughly investigate the factors influencing the adjustments between the initially determined multiple valuation in the LOI and the final transaction price in M&A deals targeting Dutch SMEs. SPSS provides a user-friendly interface for statistical analyses and allows multiple linear regression to be applied, which is the primary statistical tool for this study.

The analysis will examine individual relationships between independent variables and the dependent variables and explore potential interrelations among these variables. Diagnostic checks, such as multicollinearity, within the regression modeling, will be employed to assess the degree of correlation between independent variables.

In modeling, categorical variables such as bidder type and sector type are first converted into dummy variables. This conversion allows for distinctions like identifying whether a bidder is strategic or not. This method is particularly advantageous because other bidder types do not correlate significantly with the dependent variable. Changing all categorical variables in dummy variables form could overly complicate the model, potentially reducing clarity and hindering effective interpretation of results, especially given that sector type alone has nineteen different categories.

Furthermore, the analysis will explore potential interactions between independent variables to identify whether specific combinations lead to higher post-LOI deal value adjustments. This exploration of interaction effects aims to provide a nuanced understanding of how numerous factors may jointly contribute to adjustments in M&A valuations after the LOI phase.

The statistical significance of the relationships will be assessed using p-values, and the strength of associations will be measured through regression coefficients. Additionally, diagnostic tests, such as multicollinearity checks, will be employed to ensure the reliability of the regression results.

This study will conduct a thorough data analysis, examining individual variable relationships. Furthermore, it will explore the potential interdependent effects of multiple factors on deal value adjustments in the Dutch SME M&A market.

3.5 Substantiation research design

The choice of multiple linear regression (OLS) is well-considered and aligns with the specific goals of this study. Regression analysis is powerful for examining complex relationships between multiple independent and dependent variables, allowing a detailed investigation into how these factors interact and contribute to valuation adjustments (Uyanık & Güler, 2013).

Studying interaction effects is crucial for understanding how certain combinations of factors impact post-LOI deal value adjustments. It helps reveal whether these combinations increase or reduce the adjustments (Balli & Sørensen, 2012).

The analysis will assess statistical significance using p-values and measure associations' strength through regression coefficients. Diagnostic tests, including multicollinearity checks, will ensure the results' reliability, enhancing the findings' robustness. This is crucial to ensure that the study's reliability is firmly established[28]. This reliability leads to dependable conclusions, contributing to a more accurate understanding of factors influencing M&A valuation adjustments.

Alternative methods like qualitative case studies or purely quantitative approaches are considered before deciding on the quantitative approach for this study. Given the availability of a large dataset of Dutch SME M&A transactions, quantitative analysis was deemed most suitable. This approach aligns well with the intended regression modeling, allowing for the examination of factors influencing post-LOI deal value adjustments through statistical analysis. Additionally, the interviews conducted yielded limited new insights, further supporting the choice of a quantitative research approach.

3.6 OLS regression model

The ordinary least squares model can be expressed as follows:

$$Y(\text{deal value adjustments post-LOI}) = \beta 0 + \beta 1(\text{Duration Post-LOI (months)}) + \beta 2(\text{Strategic bidders}) + \beta 3(\text{Deal size (EV)}) + \beta 4(\text{Cross-border deals}) + \beta 5(\text{IT \& software sector}) + \beta 6(\text{E-commerce sector}) + \beta 7(\text{Manufacturing sector}) + \beta 8(\text{Competitiveness bidders (NBOs)}) + \beta 9(\text{100\% sale deals}) + \beta 9(\text{Deal year}) + \beta 9(\text{EBITDA multiple LOI}) + \epsilon$$

[28] Sirigari, A. K. (2021, December 13). A complete model diagnostics of multivariate linear regression. Medium. https://medium.com/@abhilash.sirigari/a-complete-model-diagnostics-of-multivariate-linear-regression-90aace20ecaf

4 Results

This chapter provides the research results. First, the data will be explored. Then, the various hypotheses will be checked. After that, the interaction effects will be examined.

4.1 Data exploration

This section will explore the data for the independent, dependent, and control variables and then examine the diagnostics of multiple linear regression. The exploration will be linked to the hypotheses outlined in the theory section.

4.1.1 Independent variables

Descriptive statistics are crucial in research as they summarize key dataset characteristics, providing essential context for interpreting research findings. The study examines the impact of seven independent variables (IVs) on the dependent variables (DVs). Tables 4.1 and 4.2 display the key characteristics of these IVs.

Table 4.1: Sample characteristics continuous IVs

Hypotheses	Variable	N	Mean	Median	Std. Deviation	Minimum	Maximum
H1	Duration post-LOI phase (days)	341	125.33	108	80.659	21	654
H1	Duration post-LOI phase (months)	341	3.657	3	2.531	0	15
H3	Deal size (enterprise value in €)	341	9,673,858	5,810,375	10,776,242	160,000	60,000,000
H6	NBOs	341	3.4	3	2.419	1	14

Interpretation continuous IVs

On average, the post-LOI phase lasts 125 days in the sample, with a median duration of 108 days. The shortest closing after the signed LOI occurred in just 21 days, while the longest extended to 654 days. Categorizing this data into months, the mean duration is 3.7, with a median of 3.0. Notably, 62.8% of deals had a two to five months post-LOI duration. The mean deal size in the sample has a value of €9.673.957. However, the median deal size of €5.810.375 shows that the deal size is positively skewed. A few high values in the sample pull the mean upwards, while most values are clustered below the mean. Moreover, the number of NBOs provides insights into bidder competitiveness. The average NBO count in the sample is 3.4, with a median of 3.0. Notably, 62.2% of deals involve one to three NBOs, while 84.9% involve up to five, with a maximum of fourteen NBOs in the sample.

Table 4.2: Sample characteristics categorical IVs

Hypotheses	Variable	Category	Quantity	Percentage
H2	Bidder type	Private Equity (PE)	133	39.0%
		Strategic	120	35.2%
		Strategic backed by PE	70	20.5%
		MBI	18	5.3%
		Total	**341**	**100.0%**
H4	Cross-border	Domestic	286	83.9%
		Cross-border	55	16.1%
		Total	**341**	**100.0%**
H5	Sector type	Agriculture	16	4.7%
		Automotive	11	3.2%
		Business services	39	11.4%
		Construction & maintenance	46	13.5%
		Consumer products	1	0.3%
		E-commerce	4	1.2%
		Facilities management	24	7.0%
		Food	8	2.3%
		IT & Software	41	12.0%
		Leisure	7	2.1%
		Manufacturing	34	10.0%
		Media, advertising & communication	16	4.7%
		Packaging	1	0.3%
		Pharma, healthcare & Life sciences	18	5.3%
		Retail	11	3.2%
		Staffing	16	4.7%
		Sustainable industries	1	0.3%
		Transport & logistics	6	1.8%
		Wholesale	41	12%
		Total	**341**	**100.0%**
H7	Deal type	100% sale	199	58.4%
		Pre-exit	142	41.6%
		Total	**341**	**100.0%**

Interpretation categorical IVs

Exploring bidder types, PE firms are most prevalent in the sample at 39.0%, followed by strategic bidders at 35.2%, strategic bidders backed by PE at 20.5%, and MBI bidders at 5.3%. The study also examines cross-border deals, which account for 16.1% of all deals, while domestic deals represent 83.9%. Among the 55 cross-border deals, Belgium and Sweden stand out, with 21 and 12 deals, respectively. Then, nineteen sectors are distinguished. The five biggest sectors—construction & maintenance (13.5%), wholesale (12%), IT & software (12%), business services (11.4%), and manufacturing (10%)—together make up 58.9% of the sample. Finally, the study considers deal types, distinguishing between 100% sale and pre-exit deals. With 199 deals (58.4%), the 100% sale type is most represented in the sample. Next to that, 142 (41.6%) deals were pre-exit deals.

4.1.2 Dependent variables

As outlined in the methodology, three distinct DVs are formulated. Firstly, the adjustment of the valuation post-LOI is examined, focusing solely on the percentage deviation from the enterprise value post-LOI. The second DV pertains to the relative correction of the enterprise value post-LOI, distinguishing between positive and negative corrections (premiums and discounts compared to LOI price). Lastly, the third DV illustrates the adjustment of the enterprise value post-LOI in absolute terms, denoted in Euros.

Table 4.3: Characteristics DVs

Variable	N	Mean	Median	Std. Deviation	Minimum	Maximum
DV1: Adjustment deal value (percentage, without direction)	341	4.43%	0.09%	8.05%	0.0%	60.0%
DV2: Adjustment deal value (percentage, with direction)	341	-1.0%	0.0%	9.1%	-60.0%	46.7%
DV3: Adjustment deal value (absolute in €, with direction)	341	-86,628	0.0	905,997	-6,300,000	6,726,500

Interpretation DVs

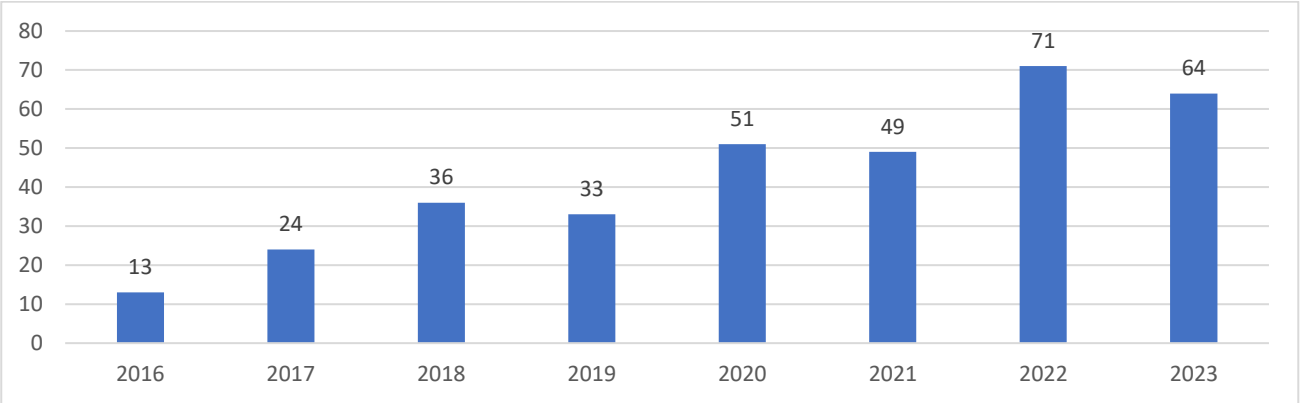
The mean deal value adjustment post-LOI is 4.4% (DV1). Descriptive statistics reveal an average decrease in valuation of 1.0% post-LOI (DV2). At the largest correction, the deal value decreased by 60% post-LOI. The mean adjustment for DV3 is -€86,628, suggesting that, on average, each valuation post-LOI decreases by €86,628.

It is essential to mention that in 166 deals (48.7%), no correction of the valuation post-LOI was observed in the sample. The fact that the dependent variable has a value of 0 in almost half of the cases can have implications for the significance levels and the robustness of the analysis in this study. When a substantial portion of deals shows no deviation in deal value despite including independent variables, it can potentially weaken the strength of the results. However, these deals are also part of the population, and excluding them would not provide a representative sample. So, these deals were retained in the analysis to avoid biasing the study's outcome.

4.1.3 Control variables

The deals in the sample were closed between 2016 and 2023. Due to the growth of the M&A firm managing these deals, the number of deals per year has also increased. In 2022, the highest number of deals were closed, totaling 71. This development is illustrated in Figure 4.1. In this research, the deal year is a control variable that isolates the relationship between the IVs and DVs.

Figure 4.1: Number of deals per year



The research also controls for the EBITDA multiple in the LOI. Table 4.4 shows the characteristics of this control variable.

Table 4.4: Characteristics EBITDA multiple LOI

Variable	N	Mean	Median	Std. Deviation	Minimum	Maximum	50%-range
EBITDA multiple LOI	341	5.905	5.3	3.166	1.3	26.3	4.2-6.75

4.1.4 Diagnostics checks

When executing a multiple linear regression, several diagnostic criteria must be checked to ensure the validity and reliability of the model[29]. The six diagnostic checks are linearity, independence, homoscedasticity, normality of residuals, absence of multicollinearity, and absence of outliers and influential points. For further details about these checks, please see Appendix A.

- To check for linearity, scatterplots were created for each (non-binary) independent variable against the dependent variable. The relationships between the IVs and the DV appeared linear, meeting this assumption.
- The Durbin-Watson test was performed to check for independence, yielding a value of 1.916. Since this value is close to 2, it indicates no autocorrelation, meeting the independence assumption.
- Homoscedasticity was assessed by plotting the residuals against the fitted values. The plot did not display a funnel shape, indicating that the residuals have constant variance, thus meeting this assumption.
- The residuals were checked for normality and found to be approximately normally distributed, thereby meeting this assumption.
- To check for multicollinearity, the Variance Inflation Factor (VIF) was calculated for each IV. Values above 10 indicate high multicollinearity, and tolerance values below 0.1 also suggest high multicollinearity. As shown in Table 4.5, all VIF and tolerance values are within acceptable limits, meeting this assumption.
- Outliers and influential points were checked using Cook's distance. Since no Cook's distance value exceeded 1, there are no potentially influential points in the data. Missing data had already been removed during the data collection process.

Ensure all these diagnostic criteria are met to support the multiple linear regression model's validity and reliability.

[29] Sirigari, A. K. (2021, December 13). A complete model diagnostics of multivariate linear regression. Medium. https://medium.com/@abhilash.sirigari/a-complete-model-diagnostics-of-multivariate-linear-regression-90aace20ecaf

Table 4.5: Collinearity statistics

Hypotheses		Tolerance	VIF
H1	Duration post-LOI phase (in months)	.963	1.038
H2	Bidder type (strategic)	.767	1.304
H3	Deal size (EV)	.806	1.240
H4	Cross-border transaction	.893	1.120
H5a	Sector type (E-commerce)	.976	1.024
H5b	Sector type (IT & software)	.990	1.010
H5c	Sector type (Manufacturing)	.972	1.028
H6	Competitiveness bidders (NBOs)	.797	1.254
H7	Deal type (100% sale)	.828	1.208

4.2 Hypotheses testing

The results of the hypothesis testing are presented in tables 4.6, 4.7, and 4.8, with each table corresponding to a different DV. Three models are provided for each DV. The first model includes all the IVs. The second model adds the control variable "deal year." The third model adds the control variable "EBITDA multiple LOI." This structure ensures a comprehensive analysis of each DV while incorporating relevant control variables. After each table, the results are briefly interpreted.

Table 4.6: OLS regression DV1 (percentage, without direction)

Hypotheses		Model 1		Model 2		Model 3	
		Coef	P-value	Coef	P-value	Coef	P-value
	Constant	.025	.135	4.589	.299	4.150	.352
H1	Duration post-LOI (months)	.004	.015*	.005	.010*	.004	.013*
H2	Strategic bidders	.017	.154	.017	.161	.016	.184
H3	Deal size (EV)	-.001	.393	-.001	.473	-.001	.706
H4	Cross-border deals	-.006	.653	-.005	.705	-.004	.767
H5a	IT & software sector	*-.018*	.558	-.020	.526	-.017	.592
H5b	E-commerce	*.028*	.495	.029	.474	.029	.481
H5c	Manufacturing	*-.001*	.927	-.002	.869	-.002	.869
H6	Competitiveness bidders (NBOs)	-.001	.593	-.001	.586	-.001	.623
H7	100% sale deal	.009	.428	.008	.453	.007	.531
Control 1	Deal year			-.002	.302	-.002	.356
Control 2	EBITDA multiple LOI					-.001	.419
DV1: Deal value adjustment in percentage, without direction							

*Significance levels are indicated by asterisks: *: P ≤ 0.05; ** : P ≤ 0.01; *** : P ≤ 0.001.*

Interpretation of results DV1

A clear and significant positive correlation exists between the duration post-LOI and deal value adjustment in percentage without considering its direction in all three models. It implies that for each additional month in the post-LOI phase, there is, on average, a 0.4% increase in deal value adjustment. So, this supports the first hypothesis. Although a notable coefficient of 0.17 for strategic bidders (H2) suggests a potentially more substantial impact, this relationship lacks statistical significance (P-values range from .154 to .184), leading to inconclusive findings. However, factors such as deal size (H3), cross-border transactions (H4), sector type (H5), bidder competitiveness (H6), and deal type (H7) do not seem to affect deal value adjustment in general significantly. Introducing the control variables to the model tends to weaken the relationships slightly, although the decrease in the P-value is not noteworthy.

Table 4.7: OLS regression DV2 (percentage, with direction)

Hypotheses		Model 1		Model 2		Model 3	
		Coef	P-value	Coef	P-value	Coef	P-value
	Constant	-.006	.770	.084	.987	-.188	.970
H1	Duration post-LOI (months)	-.005	.008**	-.005	.009**	-.005	.009**
H2	Strategic bidders	-.015	.267	-.015	.268	-.015	.254
H3	Deal size (EV)	.001	.387	.001	.391	.002	.340
H4	Cross-border deals	.012	.416	.012	.417	.012	.396
H5a	IT & software sector	*-.019*	.584	-.019	.585	-.017	.622
H5b	E-commerce	*-.062*	.181	-.062	.182	-.062	.181
H5c	Manufacturing	*.008*	.617	.008	.619	.008	.620
H6	Competitiveness bidders (NBOs)	.002	.454	.002	.455	.002	.440
H7	100% sale deal	.011	.398	.011	.400	.010	.441
Control 1	Deal year			.000	.986	.000	.971
Control 2	EBITDA multiple LOI					-.001	.666
DV2: Deal value adjustment in percentage, with direction							

*Significance levels are indicated by asterisks: *: P ≤ 0.05; ** : P ≤ 0.01; *** : P ≤ 0.001.*

Interpretation of results DV2

Considering its direction, analyzing the dependent variable deal value adjustment in percentage reveals remarkable insights. The duration post-LOI (H1) consistently shows a significant negative relationship with deal value adjustment. With a coefficient of -0.005, spoken in practical terms, each additional month post-LOI corresponds to a 0.5% average decrease in post-LOI deal value. Notably, the significance of strategic bidders and other variables differs from the analysis of DV1. Strategic bidders, previously suggested to have a potentially positive impact on deal value adjustment percentage, lose more significance in this analysis (P-values range from .254 to .268). Including the control variables 'deal year' and 'EBITDA multiple LOI' has minimal impact on both the direction and significance of the relationships.

Table 4.8: OLS regression DV3 (absolute in €, with direction)

Hypo-theses		Model 1		Model 2		Model 3	
		Coef	P-value	Coef	P-value	Coef	P-value
	Constant	23,450	.900	-21,472,014	.664	-25,400,895	.012*
H1	Duration post-LOI (months)	-47,879	.015*	-49,307	.014*	-50,441	.012*
H2	Strategic bidders	-103,485	.433	-102,280	.439	-109,478	.410
H3	Deal size (EV)	-17,580	.270	-18,467	.251	-14,533	.400
H4	Cross-border deals	202,505	.151	198,387	.161	207,381	.145
H5a	IT & software sector	-165,664	.630	-158,712	.646	-133,295	.702
H5b	E-commerce	-1,188,426	.010*	-1,194,838	.009**	-1,198,839	.009**
H5c	Manufacturing	*153,958*	.349	159.008	.336	158,864	.337
H6	Competitiveness bidders (NBOs)	18,626	.407	18,726	.405	19,644	.384
H7	100% sale deal	109,927	.377	112,153	.369	100,725	.425
Control 1	Deal year			10,641	.664	12,618	.610
Control 2	EBITDA multiple LOI					-11,437	.527
DV3: Deal value adjustment absolute in €, with direction							

*Significance levels are indicated by asterisks: *: P ≤ 0.05; ** : P ≤ 0.01; *** : P ≤ 0.001.*

Interpretation of results DV3

Across all three models, the duration post-LOI (H1) consistently shows a significant negative relationship with deal value adjustments in absolute terms. Each additional month in the post-LOI phase corresponds to an average deal value decrease of approximately €47,879 to €50,441. The consistent significance across all three analyses underscores the strength of this relationship. Notably, in this analysis, the e-commerce sector (H5b) also shows a significant negative relationship with deal value adjustments in absolute terms. This relationship was insignificant in the first two analyses, where the dependent variable was expressed in percentages. One reason for this difference is that e-commerce deals typically have larger deal sizes in the research sample than other sectors, leading to more substantial adjustments in absolute terms. Therefore, the impact appears more significant when expressed in Euros rather than percentages. As in the previous analyses, the other relationships are not statistically significant. The coefficients remain largely unaffected after adding the control variables, while the significance levels improve slightly.

Table 4.9: Results hypotheses

Hypotheses	Results		
	DV1	*DV2*	*DV3*
H1: Extended post-LOI phase duration in Dutch SME M&A transactions leads to higher deal value adjustments.	***Supported***	**Supported**	**Supported**
H2: Strategic bidders lead to higher post-LOI deal value adjustments in Dutch SME M&A transactions than other bidder types.	Not supported	Not supported	Not supported
H3: Deal size is correlated with higher post-LOI deal value adjustments in Dutch SME M&A transactions.	Not supported	Not supported	Not supported
H4: Cross-border transactions are associated with higher post-LOI deal value adjustments in Dutch SME M&A transactions.	Not supported	Not supported	Not supported
H5a: The IT & Software sector is associated with higher post-LOI deal value adjustments in Dutch SME M&A transactions than other sector types.	Not supported	Not supported	Not supported
H5b: The e-commerce sector is associated with higher post-LOI deal value adjustments in Dutch SME M&A transactions than other sector types.	Not supported	Not supported	**Supported**
H5c: The manufacturing sector is associated with lower post-LOI deal value adjustments in Dutch SME M&A transactions than other sector types.	Not supported	Not supported	Not supported
H6: The competitive nature of the bidding process (number of NBOs) is associated with higher post-LOI deal value adjustments in Dutch SME M&A transactions.	Not supported	Not supported	Not supported
H7: The deal type '100% sale' is associated with higher post-LOI deal value adjustments in Dutch SME M&A transactions than pre-exit deals.	Not supported	Not supported	Not supported

Interpretation of results hypotheses

The study results indicate that one hypothesis, H1, is consistently supported across all dependent variables (DV1, DV2, and DV3). It shows that an extended post-LOI phase duration in Dutch SME M&A transactions leads to higher deal value adjustments. In contrast, H2, H3, H4, H5a, H5c, H6, and H7 are not supported, indicating that strategic bidders, deal size, cross-border transactions, IT & Software sector, manufacturing sector, the competitive nature of the bidding process, and the deal type '100% sale' do not significantly impact post-LOI deal value adjustments. Interestingly, H5b, which suggests that the e-commerce sector is associated with higher post-LOI deal value adjustments, is supported only for DV3, suggesting a potential sector-specific effect. The results are further reflected upon in the discussion section.

4.3 Interaction effects

Checking the interaction effects of this research on post-LOI deal value adjustments is crucial. Interaction effects uncover hidden relationships and reveal how the impact of one variable changes depending on another, leading to more precise and reliable results. Additionally, they offer a deeper understanding of how different factors interplay, guiding better decision-making in M&A deals. Checking for interaction effects ensures a more comprehensive analysis and better insights (Balli & Sørensen, 2012).

Centering variables before including interaction terms in a regression model is essential to reduce multicollinearity between the main effects and the interaction term. Centering involves subtracting the mean of each variable from its values. This process ensures that the interaction term does not strongly correlate with the main effects, enhancing the interpretability and stability of the regression coefficients. However, centering dummy variables is unnecessary because they are binary and do not benefit from centering as continuous variables do[30]. Categorical variables, such as bidder type, are also unnecessary to center since they have already been transformed into dummy variables.

A detailed examination determined which variables to check for interaction effects. Initially, the one-sided relationships with the dependent variables were explored to identify which relationships were already significant. Additionally, variables were evaluated for multicollinearity by calculating the VIF and tolerance levels. Variables with high VIF values and low tolerance levels were marked for potential multicollinearity (Shieh, 2011) and thus included in the examination of interaction effects. Significant interaction effects are presented below, while insignificant interactions that were examined are detailed in Appendix D. Based on the significance levels, VIF values, tolerance levels, and existing theoretical and empirical insights of other variables, there is no indication for further exploration of interaction effects than those displayed in this study.

Duration post-LOI (months) * Strategic bidders

The variables duration post-LOI phase and bidder type were selected to check interaction effects for specific reasons. First, the duration of the post-LOI phase is already statistically significant, making it an essential factor to consider in the model. Second, the bidder type strategic has a relatively high VIF value, indicating potential multicollinearity.

This gives the following model:

$$Y \text{ (deal value adjustments post-LOI)} = \beta_0 + \beta_1(\text{Duration post-LOI (months) centered }) + \beta_2(\text{Strategic bidders}) + \beta_3(\text{Deal size (EV) centered}) + \beta_4(\text{Cross-border deals}) + \beta_5(\text{IT \& Software sector}) + \beta_6(\text{E-commerce sector}) + \beta_7(\text{Manufacturing sector}) + \beta_8(\text{Competitiveness bidders centered}) + \beta_9(\text{100\% sale deals}) + \beta_{10}(\text{Deal year}) + \beta_{11}(\text{EBITDA multiple LOI}) + \beta_{12}(\text{Post-LOI phase(months) * Strategic bidders}) + \epsilon$$

[30] Neal D. Goldstein, PhD, MBI - The why and when of centering continuous predictors in regression modeling. (2015). https://www.goldsteinepi.com/blog/thewhyandwhenofcenteringcontinuouspredictorsinregressionmodeling/#:~:text=If%20you%20are%20testing%20an,or%20inflate%20the%20standard%20errors.

Table 4.10: Results interaction effect duration post-LOI (months) * strategic bidders

Hypotheses/interactions			
		Coefficient	P-value
	Constant	-.009	.264
H1	Duration post-LOI (months) centered	-.002	.393
H2	Strategic bidders	.021	.271
H3	Deal size (EV) centered	.000	.425
H4	Cross-border deals	-.006	.622
H5a	IT & software sector	*-.019*	.537
H5b	E-commerce sector	*.028*	.187
H5c	Manufacturing sector	*-.015*	.672
H6	Competitiveness bidders (NBOs) centered	.002	.311
H7	100% sale deal	.004	.695
Control 1	Deal year	.000	.966
Control 2	EBITDA multiple LOI	.000	.831
Interaction	Post LOI phase (months) * strategic bidders	-.011	.013*
DV2 (percentage, with direction)			

*Significance levels are indicated by asterisks: *: P ≤ 0.05; ** : P ≤ 0.01; *** : P ≤ 0.001.*

Upon examining the interaction effects, a significant result is observed for the interaction term duration post-LOI (months) * strategic bidders, with a significance level of p=.013. This interaction term exhibits a coefficient of −0.011. In practical terms, for every additional month in the post-LOI phase, the deal value decreases by an average of 1.1% when a strategic bidder is involved. This significant relationship is notably strong and novel, especially compared to the general deal value adjustment of 0.5% per each additional month. However, no significant relationship is found between the interaction effect of post-LOI phase (months) * strategic bidders and the other two dependent variables. The details of these results are shown in Appendix D. An intriguing observation upon examining this interaction effect is that the main effect of the duration post-LOI phase on the dependent variable disappears. One possible reason for the disappearance of the main effect could be that the impact of this relationship depends on or is moderated by another factor, which causes the direct relationship to become less apparent in the presence of the interaction. Further discussions on this observation are addressed in Chapter 5.

Strategic bidders * Pre-exit

Due to their relatively high VIF value and low tolerance level, the interaction effect of strategic bidders and pre-exit deals was examined. These results are provided in Table 4.11 below.

This gives the following model:

Y (Deal value adjustments post-LOI) = β_0 + β_1(Duration post-LOI (months) centered) + β_2(Strategic bidders) + β_3(Deal size (EV) centered) + β_4(Cross-border deals) + β_5(IT & software sector) + β_6(E-commerce sector) + β_7(Manufacturing sector) + β_8(Competitiveness bidders centered) + β_9(Pre-exit deals) + β_{10}(Deal year) + β_{11}(EBITDA multiple LOI) + β_{12}(Strategic bidders * Pre-exit) + ϵ

Table 4.11: Results interaction effect strategic bidders * pre-exit

Hypotheses/interactions			
		Coefficient	*P-value*
	Constant	-26,858,596	.586
H1	Duration post-LOI (months) centered	-44,855	.025*
H2	Strategic bidders	-22,329	.866
H3	Deal size (EV) centered	-.006	.255
H4	Cross-border deals	225,003	.109
H5a	IT & software sector	-165,825	.630
H5b	E-commerce sector	-1,222,119	.007*
H5c	Manufacturing sector	146,485	.371
H6	Competitiveness bidders (NBOs) centered	20,481	.361
H7	Pre-exit deal	29,521	.811
Control 1	Deal year	13,274	.587
Control 2	EBITDA multiple LOI	-11,683	.507
Interaction	Strategic bidders * Pre-exit	-546,329	.031*
DV3 (absolute in €, with direction)			

*Significance levels are indicated by asterisks: *: P ≤ 0.05; ** : P ≤ 0.01; *** : P ≤ 0.001.*

The analysis revealed that for strategic bidders involved in pre-exit deals, the post-LOI deal value decreases on average by €546,329. This relationship is statistically significant (P = .031), unlike the same relationship with the other two dependent variables (P = .784 and P = .327). These results are detailed in Appendix D. Although the individual relationships of strategic bidders and pre-exit deals are not statistically significant, the interaction effect (duration post-LOI phase * strategic bidders) on deal value adjustments in absolute terms is significant.

5 Discussion

This section discusses the research findings, focusing on hypotheses and interaction effects, reflecting on both significant and insignificant relationships. Finally, other relevant discussion points will be addressed.

5.1 Hypotheses

The first hypothesis, suggesting that longer post-LOI phases lead to greater deviations from the deal value, is straightforward to understand. More time between the LOI and closing allows various factors to affect the final deal value, such as company performance changes and new information emergence during extended due diligence. However, it is essential to consider that other variables may also moderate this relationship. Therefore, it is possible that higher deal value adjustments are not solely caused by extended post-LOI phases but by other factors involved as well.

Hypothesis 2 proposed that strategic bidders would result in higher post-LOI deal value adjustments due to their typically higher valuations (Gorbenko & Malenko, 2014). Although the analyses tended to support this idea, the relationship was not statistically significant. One explanation could be that strategic bidders may better evaluate the target's value, negotiating closer to this deal value during the post-LOI phase. Conversely, financial bidders, employing diverse investment strategies and potentially more aggressive negotiation tactics, may experience greater valuation deviations post-LOI.

While the literature (Alexandridis et al., 2012; Moeller et al., 2004) generally anticipates a positive relationship between deal size and post-LOI deal value adjustments (H3), the analysis showed no significant correlation. A valid reason could be that larger deals often involve more thorough due diligence and extensive negotiations, leading to more precise initial valuations and, thus, fewer post-LOI deal value adjustments. However, it can also be considered the other way around, that increased due diligence results in higher deal value adjustments.

Because of unique challenges and complexities (Buckley & Casson, 2009), diverse cultural and regulatory environments (Hitt et al., 2006), political instability or economic downturns (Rugman & Verbeke, 2003), a positive correlation between cross-border deals (H4) and post-LOI deal value adjustments was anticipated. However, this study found a slight negative, non-significant relationship. One explanation could be that a significant majority (89.1%) of cross-border transactions occur within Europe. Consequently, the challenges and differences between the Netherlands and other European countries are less pronounced than transactions involving non-European countries. This reduced disparity may have tempered the impact of cross-border transactions on deal value adjustments, potentially contributing to the absence of significant findings in the study.

The hypothesis suggested that the e-commerce sector (H5b), given its rapid technological evolution and regulatory complexities (Grabowski & Vernon, 2000), would be associated with increased deal value adjustments. As anticipated, in absolute value (DV3), the e-commerce sector exhibits a significant negative correlation with deal value adjustments in this study. This contradicts the first two analyses, where the dependent variable was presented as percentages. This inconsistency is likely due to e-commerce deals in the sample often involving larger deal sizes, resulting in more substantial adjustments in absolute terms. Consequently, this impact becomes more pronounced when expressed in Euros rather than percentages.

Hypotheses 5a, which proposed that the IT & Software sector would positively correlate with post-LOI deal value adjustments, did not show a significant relationship with the dependent variable. Similarly, the hypothesis that the manufacturing sector (H5c) would negatively correlate with post-LOI deal value adjustments also did not show a significant relationship. This suggests that the expected sector-specific influences on post-LOI deal value adjustments were not observed.

Research by Megginson et al. (2004) and Aktas & Boone (2022) suggests that an increase in NBOs (H6) intensifies competition among potential acquirers, potentially leading to higher premiums and valuation adjustments for the target company. However, this study observed that each additional NBO correlated with 0.1% fewer deal value adjustments, although this relationship lacked statistical significance across the models. One possible explanation for this finding is that the number of NBOs may not always accurately reflect the level of competitiveness in the bidding process. A strong initial bid from one party could deter additional bidders from entering, even if they could offer competitive terms. Another explanation could be that the relationship between competitiveness bidders and post-LOI deal value adjustments is reversed. It

could be the case that if the bidding process is more competitive (with more NBOs), bids are made more cautiously, resulting in ultimately lower post-LOI deal value adjustments.

According to theory (Capasso & Meglio, 2007; Shleifer & Vishny, 2003), it was expected that 100% sale deals, driven by the need for immediate liquidity, would have significantly higher post-LOI deal value adjustments (H7). However, the analysis found no statistically significant difference between 100% sale and pre-exit deals. Reflecting on this, it is possible that in 100% sale deals, both the buyer and the seller are highly motivated to conduct comprehensive evaluations and negotiations to ensure that the deal terms are clear and fair, leading to lower post-LOI deal value adjustments and weakening the expected relationship. Also, deal types such as mergers were not examined, which could also influence these results.

5.2 Interaction effects

The founded interaction effect between duration post-LOI (months) * strategic bidders and post-LOI deal value adjustments was expected beforehand. This interaction effect means that for every additional month in the post-LOI phase, the deal value decreases by an average of 1.1% when a strategic bidder is involved. This result was expected because of the significance level of the variable duration post-LOI phase and the high multicollinearity of the variable strategic bidders.

A notable finding when examining this interaction effect is that the main effect of the post-LOI phase duration on the dependent variable disappears. This means that the direct effect of the duration of the post-LOI phase on deal value adjustments, which was previously observed, is no longer visible when the interaction effect is considered. One possible reason for the disappearance of this main effect could be that the impact of the post-LOI duration is dependent on or moderated by another variable. In other words, this other factor may influence the strength or direction of the relationship between the post-LOI duration and deal value adjustments. As a result, when this moderating factor is accounted for in the analysis, the direct relationship between post-LOI duration and deal value adjustments becomes less apparent, suggesting that the interaction between these variables is more complex than initially thought.

The negative interaction effect discovered between strategic bidders * pre-exit deals and deal value adjustments is surprising. This interaction effect means that for strategic bidders involved in pre-exit deals, the post-LOI deal value decreases on average by €546,329. However, pre-exit deals were initially expected to result in less deviation since the buyer and seller must continue working together after the deal (Vishny, 2003). One possible reason for this surprising negative interaction effect may be that ongoing collaboration post-deal exposes misalignments in goals and expectations between the buyer and seller. This can result in increased adjustments to the agreed-upon valuations.

5.3 Other discussion aspects

An important aspect to discuss is that in nearly half of the cases, no post-LOI deal value adjustment is observed. This could impact the study's significance levels and correlations. When a significant portion of the dependent variable has no value, it has the potential to weaken the findings. If these deals had been excluded, the study might have shown stronger and potentially more significant relationships. However, this approach would have introduced biases. These deals are part of the dataset and excluding them would not reflect the actual population because a significant portion of the data is then omitted. Therefore, they were included in the analysis to ensure unbiased and comprehensive results.

There is also uncertainty in the direction of causality in some relationships. For instance, it is unclear whether the duration of the post-LOI phase influences deal value adjustments or vice versa. In one scenario, a more extended post-LOI phase could lead to more time for new information to become apparent or company performance changes, resulting in deal value adjustments. Conversely, suppose significant deal value adjustments are required due to new findings during due diligence or shifts in market conditions. In that case, these adjustments might prolong the negotiation process, resulting in an extended post-LOI phase. This bidirectional causality makes it challenging to determine which factor is the primary driver. This uncertainty in causality can be further examined through longitudinal studies that track both the duration of the post-LOI phase and deal value adjustments over time, allowing for analysis of temporal sequences and potential causal relationships between these variables.

Lastly, while significant relationships were found between the independent variables and dependent variables in this study, it is essential to note that correlation does not imply causation. The observed associations indicate that changes in the independent variables coincide with changes in the dependent variables.

6 Conclusions

The study aimed to identify factors impacting differences between LOI and final deal values, offering insights for M&A firms, acquiring companies, and sellers. The introduction outlines five sub-questions answered by literature review and one empirical sub-question to address the research question comprehensively. The answers to the five sub-questions addressed in the theory section are provided below.

The theory related to the first sub-question indicates approximately 450,000 Dutch SMEs. It also underscores the significance of the M&A process, particularly the phase from the LOI to deal completion, which involves mainly due diligence and final negotiations before drafting the SPA (sub-question 2). The EBITDA multiple, due to its controversial use and best benchmark tool, is recognized as the most appropriate method for expressing valuation adjustments for this study (sub-question 3). Furthermore, the theory section for sub-question 4 identifies both stable and dynamic factors, with the study examining the following seven factors (sub-question 5): duration post-LOI phase (H1), bidder type (H2), deal size (H3), cross-border transactions (H4), sector type (H5), competitiveness of bidders (H6), and deal type (H7).

This study employs a quantitative empirical approach to investigate factors influencing deal value adjustments in M&A deals. It focuses on sell-side transactions within the Netherlands, including cross-border deals from 2016 to 2023. The final sample consists of 341 M&A deals, reduced from an initial dataset of 557 deals. Data was sourced from a comprehensive dataset provided by a Dutch M&A firm. Linear regression (OLS) is used to identify significant relationships and quantify the impact of each variable on valuation adjustments while also exploring potential interaction effects. The model includes the control variables deal year and EBITDA multiple in LOI to contribute to internal validity.

6.1 Key findings

The key findings discussed in this section address the following research question of this study: *'Which factors impact post-LOI deal value adjustments in Dutch SME M&A transactions?'*

Extended post-LOI phases (H1) have a significant impact on valuation adjustments. In the first analysis (DV1), each additional month was associated with an average deal value adjustment of 0.4% (P=.013). When considering the direction of this relationship, the average deal value decreased by 0.5% post-LOI (P=.009) for every additional post-LOI month, as revealed in the second analysis (DV2). The third analysis (DV3) further clarified this relationship, indicating an average deal value decrease ranging from €47,879 to €50,441 per additional month post-LOI (P=.012). This relationship remained robust across all models and variations of the dependent variable, highlighting its statistical significance. Notably, the e-commerce sector (H5b) demonstrated a statistically negative relationship in the third analysis (DV3) (P=.009), leading to an average deal value reduction post-LOI of approximately €1.2 million in M&A transactions within this sector.

Including the control variables deal year and LOI multiple size provided nuanced insights. Deal year strengthened relationships between variables and deal value adjustments, while LOI multiple size slightly influenced the significance of specific hypotheses.

Exploration of interaction effects identified two statistically significant relationships: duration post-LOI (months) * strategic bidders and strategic bidders * pre-exit deals. In relative terms (DV2), it was evident that for each additional month in the post-LOI phase, the deal value decreased by an average of 1.1% when the buyer was strategic (P=.013). Conversely, in absolute value (DV3), it was revealed that for strategic bidders involved in pre-exit deals, the post-LOI deal value decreased on average by €546,329.

6.2 Limitations

This research encountered some limitations due to missing data, which the researcher had to retrieve manually. The missing data primarily involved the date of the signed LOI, the enterprise value in the LOI, EBITDA figures for the last closed book year, the prognosis for the LOI year, and the prognosis for the following year. Consequently, there might be inconsistencies in the EBITDA considered for each deal. As outlined in the methodology, the normalized weighted EBITDA over these three years is used as the EBITDA multiple, which may differ from the EBITDA used in the actual deal. This discrepancy can result in a different multiple, meaning the control variable LOI multiple sizes may not correspond perfectly.

Additionally, significant variables not included in the study due to data unavailability might have influenced post-LOI deal value adjustments, potentially leading to biased results. Factors such as management quality, changes in company performance, information asymmetry, or specific deal negotiation dynamics might impact the results but are challenging to quantify and include in the analysis. When these variables are included, the main effects may have different outcomes.

6.3 Future research

Future research could incorporate additional variables that might influence post-LOI deal value adjustments, such as management quality or changes in company performance. This would allow for examining whether this study's supported or rejected hypotheses hold under different conditions.

In addition, comparing Dutch SME M&A transactions with those from other non-western countries could highlight cultural, economic, or regulatory differences that affect deal value adjustments. Future research could also explore the deal type of mergers. This study did not include mergers because the original dataset contained too few of this type of deals.

Finally, improving the quality of data in future research is essential. Enhancements in data collection methods, ensuring more accurate and comprehensive data on variables like LOI multiple size and EBITDA, would be beneficial. This could be achieved by requiring the managers who led the M&A deals to provide consistent data. Improving data quality would enhance the reliability of future studies and their findings.

6.4 Academic implications

This study has several critical academic implications. First, research on post-LOI deal value adjustments in Dutch SME M&A transactions has never been conducted before, so this study's findings contribute new insights to the literature. While prior studies like Varaiya (1987) and Díaz et al. (2009) focus mainly on determinants of premiums and discounts in general, this study examines specifically deal value adjustments within the M&A process. Moreover, previous research did not consider a particular stage of the M&A process, whereas this study focuses on the post-LOI phase. Additionally, studies such as Alexandridis (2012) mainly concentrated on larger listed companies due to limited data availability for SMEs. However, this study had access to SME data, enabling an examination of this specific segment.

By examining the factors influencing post-LOI deal value adjustments, it was identified that extended post-LOI phase durations significantly impact valuation adjustments. This finding emphasizes the critical role of the post-LOI phase in M&A transactions and suggests that more extended negotiation periods may be associated with greater deal value corrections. Another academic implication is that the e-commerce sector significantly correlates with deal value adjustments in absolute terms (DV3). This highlights that different sectors may behave differently in M&A transactions, enriching the overall understanding.

Furthermore, the discovered interaction effects—duration post-LOI (months) * strategic bidders and strategic bidders * pre-exit deals—show that interactions between variables can have an even stronger relationship with the dependent variable. Including control variables like deal year and LOI multiple size added depth to the analysis. Deal year strengthened relationships, while LOI multiple size slightly influenced hypothesis significance.

These contributions address a gap in SME M&A literature, providing a comprehensive analysis of post-LOI deal adjustments and serving as a basis for future research. Moreover, the findings have implications not only for Dutch SME M&A literature but also for the broader Western European SME M&A literature, as this study represents a region wider than just the Netherlands.

6.5 Practical implications

The findings of this study hold practical implications for M&A firms, as well as for selling and acquiring entities. M&A firms should acknowledge that extended negotiations post-LOI significantly influence deal value adjustments, especially when dealing with strategic bidders. Therefore, it is crucial for M&A firms to keep the post-LOI phase as brief as possible.

One effective strategy to achieve this is by prioritizing vendor due diligence (VDD). VDD involves the seller conducting a thorough review of their own company before signing the LOI and entering negotiations

with the buyer. By initiating VDD, sellers can identify and address potential concerns early, providing a clearer and more accurate representation of the company's value. This transparency reduces the time buyers need for their investigations, thereby accelerating negotiations and shortening the post-LOI phase. Ultimately, this approach can lead to a more efficient transaction process and fewer deal value adjustments.

However, conducting VDD is also risky, as it involves significant costs without guaranteeing a successful deal. Additionally, there are other strategies to shorten the post-LOI phase such as streamlining negotiation processes. Before entering the LOI phase, M&A firms should prepare thoroughly, ensuring all necessary documentation is available to streamline due diligence. Another practical tip to shorten the post-LOI phase for M&A firms is establishing clear and realistic negotiation timelines. Setting specific deadlines and milestones can help keep discussions focused and prevent unnecessary delays.

Understanding why both parties are at the negotiating table is also essential for M&A firms, given the interaction between bidder type and deal type, significantly influencing deal value adjustments. When dealing with a strategic buyer, minimizing the duration of the post-LOI phase is advisable to reduce significant deal value adjustments. However, factors such as the target company's sector, whether it is a cross-border deal, deal size, and the number of NBOs seem to have minimal impact on deal value adjustments. Thus, M&A firms need not be as concerned about deal value adjustments when these factors occur in an M&A project. However, it is essential to recognize that other unexamined factors may also influence post-LOI deal value adjustments.

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Appendices

Appendix A: Diagnostics checks

Figure A1: Scatterplot duration post-LOI phase (months)

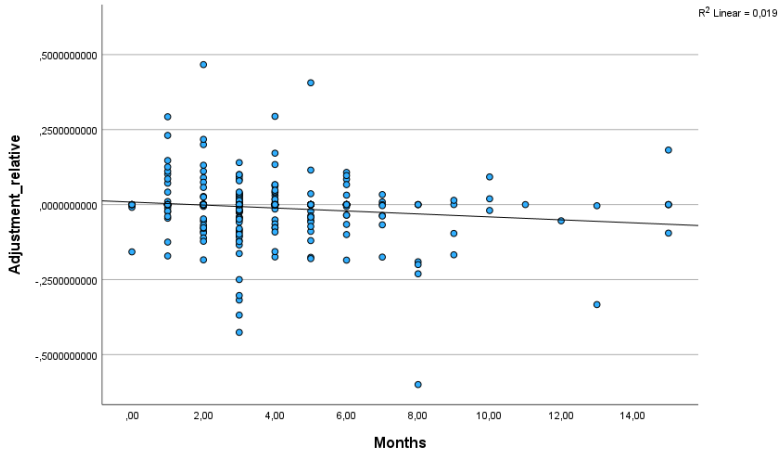


Figure A2: Scatterplot deal size (ev)

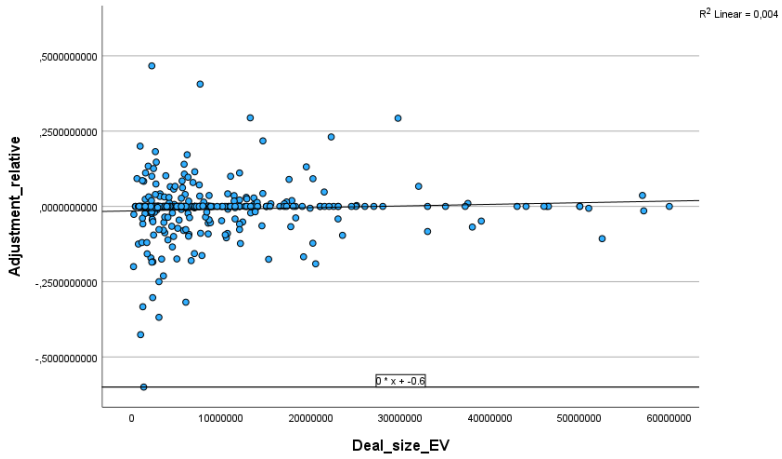


Figure A3: Scatterplot competitiveness bidders (NBOs)

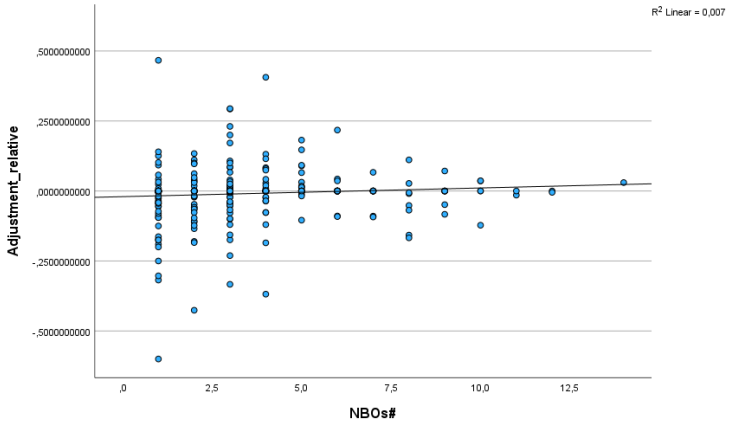


Table A1: Durbin-Watson test (independence)

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,199[a]	,040	,014	,09081184101	1,916

a. Predictors: (Constant), Manufacturing, 100Sale, IT and Software, Months, Ecommerce, Crossborder1, NBOs#, Deal_size_EV, Strat

b. Dependent Variable: Adjustment_relative

Figure A4: Residuals vs. fitted values

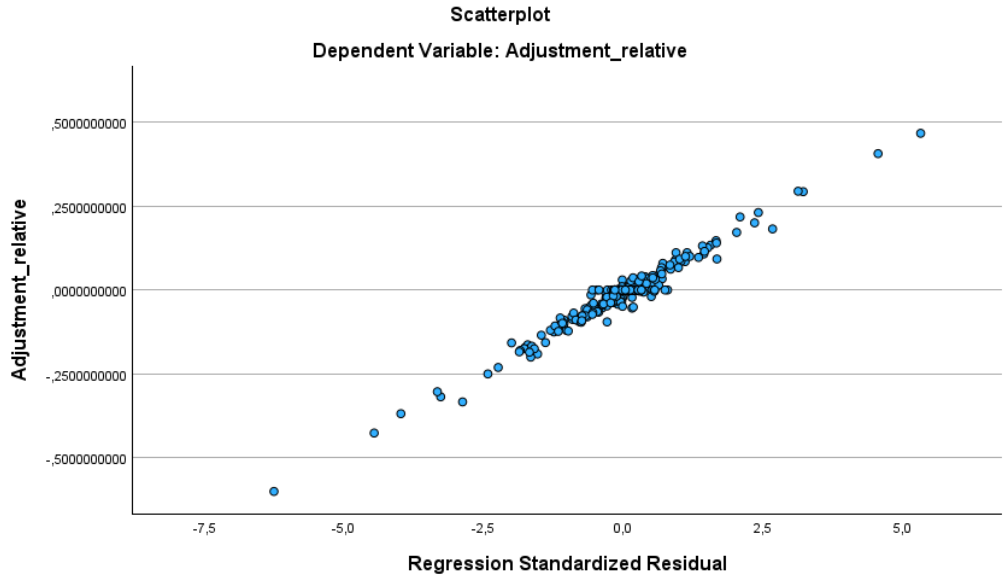


Figure A5: Normal distribution of residuals

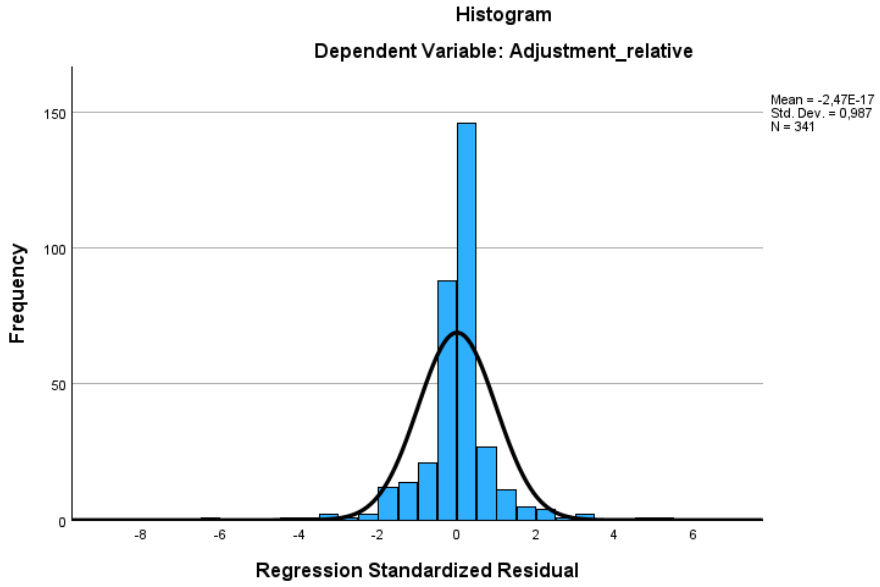
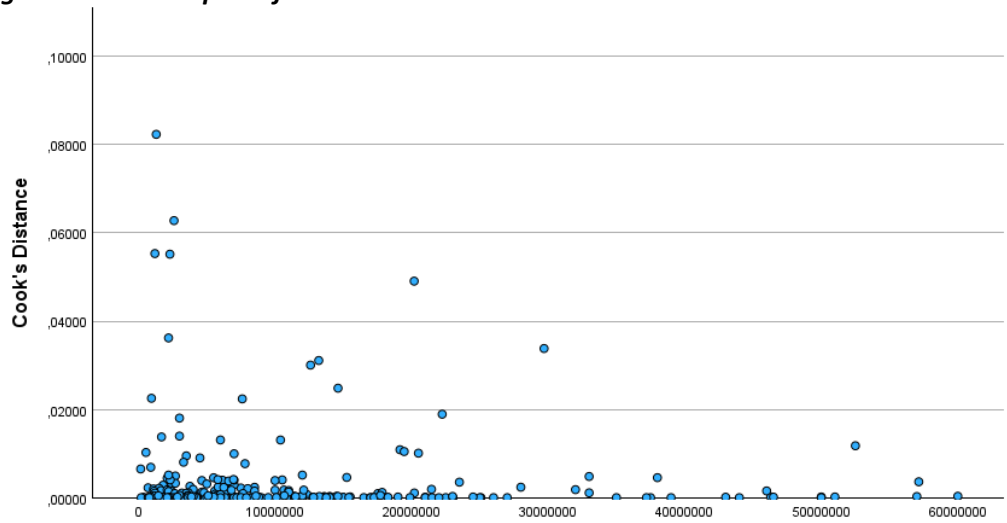


Figure A6: Scatter plot of Cook's Distance



Appendix B: Model summaries

Table B1: Model summary DV 1 (percentage, without direction) model 1

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,195[a]	,038	,012	,08004217469

a. Predictors: (Constant), 100Sale, Manufacturing, IT and Software, Months, Ecommerce, Crossborder1, NBOs#, Deal_size_EV, Strat

Table B2: Model summary DV 1 (percentage, without direction) model 2

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,203[a]	,041	,012	,08002383355

a. Predictors: (Constant), Deal_year, Strat, IT and Software, Manufacturing, Ecommerce, Months, Deal_size_EV, Crossborder1, 100Sale, NBOs#

Table B3: Model summary DV 1 (percentage, without direction) model 3

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,209[a]	,043	,012	,08005810353

a. Predictors: (Constant), EBITDA_multiple_LOI, Manufacturing, Months, Ecommerce, IT and Software, Strat, Deal_year, Crossborder1, NBOs#, 100Sale, Deal_size_EV

Table B4: Model summary DV 2 (percentage, with direction) model 1

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,199[a]	,040	,014	,09081184101

a. Predictors: (Constant), 100Sale, Manufacturing, IT and Software, Months, Ecommerce, Crossborder1, NBOs#, Deal_size_EV, Strat

Table B5: Model summary DV 2 (percentage, with direction) model 2

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,199[a]	,040	,011	,09094932993

a. Predictors: (Constant), Deal_year, Strat, IT and Software, Manufacturing, Ecommerce, Months, Deal_size_EV, Crossborder1, 100Sale, NBOs#

Table B6: Model summary DV 2 (percentage, with direction) model 3

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,200[a]	,040	,008	,09107312659

a. Predictors: (Constant), EBITDA_multiple_LOI, Manufacturing, Months, Ecommerce, IT and Software, Strat, Deal_year, Crossborder1, NBOs#, 100Sale, Deal_size_EV

Table B7: Model summary DV 3 (percentage, without direction) model 1

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,235[a]	,055	,030	892444,794

a. Predictors: (Constant), 100Sale, Manufacturing, IT and Software, Months, Ecommerce, Crossborder1, NBOs#, Deal_size_EV, Strat

Table B8: Model summary DV 3 (percentage, without direction) model 2

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,236[a]	,056	,027	893538,748

a. Predictors: (Constant), Deal_year, Strat, IT and Software, Manufacturing, Ecommerce, Months, Deal_size_EV, Crossborder1, 100Sale, NBOs#

Table B9: Model summary DV 3 (percentage, without direction) model 3

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,238[a]	,057	,025	894444,177

a. Predictors: (Constant), EBITDA_multiple_LOI, Manufacturing, Months, Ecommerce, IT and Software, Strat, Deal_year, Crossborder1, NBOs#, 100Sale, Deal_size_EV

Appendix C: ANOVA results

Table C1: ANOVA results DV 1 (percentage, without direction) model 1

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	,084	9	,009	1,455	,164[b]
	Residual	2,121	331	,006		
	Total	2,205	340			

a. Dependent Variable: Adjustment_rel_pos

b. Predictors: (Constant), 100Sale, Manufacturing, IT and Software, Months, Ecommerce, Crossborder1, NBOs#, Deal_size_EV, Strat

Table C2: ANOVA results DV 1 (percentage, without direction) model 2

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	,091	10	,009	1,425	,168[b]
	Residual	2,113	330	,006		
	Total	2,205	340			

a. Dependent Variable: Adjustment_rel_pos

b. Predictors: (Constant), Deal_year, Strat, IT and Software, Manufacturing, Ecommerce, Months, Deal_size_EV, Crossborder1, 100Sale, NBOs#

Table C3: ANOVA results DV 1 (percentage, without direction) model 3

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	,096	11	,009	1,360	,191[b]
	Residual	2,109	329	,006		
	Total	2,205	340			

a. Dependent Variable: Adjustment_rel_pos

b. Predictors: (Constant), EBITDA_multiple_LOI, Manufacturing, Months, Ecommerce, IT and Software, Strat, Deal_year, Crossborder1, NBOs#, 100Sale, Deal_size_EV

Table C4: ANOVA results DV 2 (percentage, with direction) model 1

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	,113	9	,013	1,524	,138[b]
	Residual	2,730	331	,008		
	Total	2,843	340			

a. Dependent Variable: Adjustment_relative

b. Predictors: (Constant), 100Sale, Manufacturing, IT and Software, Months, Ecommerce, Crossborder1, NBOs#, Deal_size_EV, Strat

Table C5: ANOVA results DV 2 (percentage, with direction) model 2

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	,113	10	,011	1,367	,194[b]
	Residual	2,730	330	,008		
	Total	2,843	340			

a. Dependent Variable: Adjustment_relative

b. Predictors: (Constant), Deal_year, Strat, IT and Software, Manufacturing, Ecommerce, Months, Deal_size_EV, Crossborder1, 100Sale, NBOs#

Table C6: ANOVA results DV 2 (percentage, with direction) model 3

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	,114	11	,010	1,249	,253[b]
	Residual	2,729	329	,008		
	Total	2,843	340			

a. Dependent Variable: Adjustment_relative

b. Predictors: (Constant), EBITDA_multiple_LOI, Manufacturing, Months, Ecommerce, IT and Software, Strat, Deal_year, Crossborder1, NBOs#, 100Sale, Deal_size_EV

Table C7: ANOVA results DV 3 (percentage, without direction) model 1

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1,546E+13	9	1,717E+12	2,156	,025[b]
	Residual	2,636E+14	331	7,965E+11		
	Total	2,791E+14	340			

a. Dependent Variable: Adjustment_absolute

b. Predictors: (Constant), 100Sale, Manufacturing, IT and Software, Months, Ecommerce, Crossborder1, NBOs#, Deal_size_EV, Strat

Table C8: ANOVA results DV 3 (percentage, without direction) model 2

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1,561E+13	10	1,561E+12	1,955	,038[b]
	Residual	2,635E+14	330	7,984E+11		
	Total	2,791E+14	340			

a. Dependent Variable: Adjustment_absolute

b. Predictors: (Constant), Deal_year, Strat, IT and Software, Manufacturing, Ecommerce, Months, Deal_size_EV, Crossborder1, 100Sale, NBOs#

Table C9: ANOVA results DV 3 (percentage, without direction) model 3

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1,587E+13	11	1,443E+12	1,804	,052[b]
	Residual	2,632E+14	329	8,000E+11		
	Total	2,791E+14	340			

a. Dependent Variable: Adjustment_absolute

b. Predictors: (Constant), EBITDA_multiple_LOI, Manufacturing, Months, Ecommerce, IT and Software, Strat, Deal_year, Crossborder1, NBOs#, 100Sale, Deal_size_EV

Appendix D: Insignificant interaction effects

Table D1: Results duration post-LOI * strategic bidders (DV1)

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	4,082	4,441		,919	,359
	PostLOI_Phase_Months_Centered	,004	,002	,111	1,643	,101
	Strat	,005	,017	,027	,264	,792
	Deal_size_EV_Centered	-1,767E-10	,000	-,024	-,371	,711
	Crossborder1	-,004	,013	-,018	-,310	,757
	Ecommerce	,029	,041	,038	,700	,484
	IT and Software	-,017	,031	-,031	-,564	,573
	Manufacturing	-,002	,015	-,007	-,120	,904
	NBOs_Centered	-,001	,002	-,033	-,539	,590
	100Sale	,008	,010	,048	,790	,430
	Deal_year	-,002	,002	-,051	-,909	,364
	EBITDA_multiple_LOI	-,001	,002	-,054	-,880	,379
	Duration_post_LOI_Strategic_Bidders	,003	,004	,077	,781	,436

a. Dependent Variable: Adjustment_rel_pos

Table D2: Results duration post-LOI * strategic bidders (DV3)

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	-23003684,049	49514744,625		-,465	,643
	PostLOI_Phase_Months_Centered	-32147,921	23861,370	-,090	-1,347	,179
	Strat	97210,813	192562,444	,051	,505	,614
	Deal_size_EV_Centered	-,006	,005	-,075	-1,182	,238
	Crossborder1	206916,291	140518,361	,084	1,473	,142
	Ecommerce	-1196506,385	454958,617	-,142	-2,630	,009
	IT and Software	-125896,469	345739,779	-,020	-,364	,716
	Manufacturing	141597,722	164473,579	,047	,861	,390
	NBOs_Centered	23923,458	22531,532	,064	1,062	,289
	100Sale	81615,486	109432,314	,044	,746	,456
	Deal_year	11346,961	24515,042	,026	,463	,644
	EBITDA_multiple_LOI	-9098,848	17668,891	-,031	-,515	,607
	Duration_post_LOI_Strategic_Bidders	-59618,908	42727,821	-,136	-1,395	,164

a. Dependent Variable: Adjustment_absolute

Table D3: Results duration post-LOI * 100% sale (DV1)

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	4,350	4,419		,985	,326
	PostLOI_Phase_Months_Centered	-,001	,003	-,023	-,227	,821
	Strat	,017	,010	,102	1,660	,098
	Deal_size_EV_Centered	-1,438E-10	,000	-,019	-,303	,762
	Crossborder1	,000	,013	-,001	-,023	,982
	Ecommerce	,026	,041	,035	,645	,519
	IT and Software	-,020	,031	-,036	-,658	,511
	Manufacturing	-,002	,015	-,007	-,123	,902
	NBOs_Centered	-,001	,002	-,042	-,689	,491
	100Sale	-,022	,018	-,135	-1,216	,225
	Deal_year	-,002	,002	-,054	-,974	,331
	EBITDA_multiple_LOI	-,002	,002	-,058	-,951	,342
	Duration_post_LOI_100_sale	,007	,004	,250	1,893	,059

a. Dependent Variable: Adjustment_rel_pos

*Table D4: Results duration post-LOI * 100% sale (DV2)*

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	-,371	5,039		-,074	,941
	PostLOI_Phase_Months_Centered	-,001	,004	-,027	-,265	,791
	Strat	-,019	,012	-,100	-1,614	,108
	Deal_size_EV_Centered	3,185E-10	,000	,038	,589	,556
	Crossborder1	,010	,014	,042	,722	,471
	Ecommerce	-,059	,046	-,070	-1,273	,204
	IT and Software	-,014	,035	-,021	-,387	,699
	Manufacturing	,008	,017	,027	,488	,626
	NBOs_Centered	,002	,002	,061	1,003	,317
	100Sale	,032	,021	,171	1,536	,126
	Deal_year	,000	,002	,004	,072	,943
	EBITDA_multiple_LOI	,000	,002	-,015	-,246	,806
	Duration_post_LOI_100_sale	-,006	,004	-,186	-1,405	,161

a. Dependent Variable: Adjustment_relative

*Table D5: Results duration post-LOI * 100% sale (DV3)*

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	-25930290,038	49619718,583		-,523	,602
	PostLOI_Phase_Months_Centered	-37066,969	36634,223	-,104	-1,012	,312
	Strat	-122480,380	116597,977	-,065	-1,050	,294
	Deal_size_EV_Centered	-,006	,005	-,076	-1,194	,233
	Crossborder1	197891,766	142535,231	,080	1,388	,166
	Ecommerce	-1192292,474	456406,275	-,142	-2,612	,009
	IT and Software	-131922,387	347154,053	-,021	-,380	,704
	Manufacturing	153778,432	164655,821	,051	,934	,351
	NBOs_Centered	22933,550	22671,457	,061	1,012	,312
	100Sale	174716,382	202647,847	,095	,862	,389
	Deal_year	12795,099	24566,914	,029	,521	,603
	EBITDA_multiple_LOI	-9767,899	17724,469	-,034	-,551	,582
	Duration_post_LOI_100_sale	-19156,623	43482,098	-,058	-,441	,660

a. Dependent Variable: Adjustment_absolute

*Table D6: Duration post LOI * NBOs (DV1)*

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	4,105	4,442		,924	,356
	PostLOI_Phase_Months_Centered	,006	,003	,193	1,970	,050
	Strat	,016	,010	,093	1,508	,132
	Deal_size_EV_Centered	-1,600E-10	,000	-,021	-,335	,738
	Crossborder1	-,004	,013	-,019	-,334	,738
	Ecommerce	,028	,041	,037	,675	,500
	IT and Software	-,016	,031	-,029	-,525	,600
	Manufacturing	-,002	,015	-,008	-,154	,878
	NBOs_Centered	,001	,003	,025	,249	,804
	100Sale	,007	,010	,042	,710	,478
	Deal_year	-,002	,002	-,051	-,912	,362
	EBITDA_multiple_LOI	-,001	,002	-,054	-,874	,383
	Duration_post_LOI_NBOs	-,001	,001	-,082	-,667	,505

a. Dependent Variable: Adjustment_rel_pos

*Table D7: Duration post LOI * NBOs (DV2)*

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	-24761821,489	49643202,988		-,499	,618
	PostLOI_Phase_Months_Centered	-63632,092	34907,648	-,178	-1,823	,069
	Strat	-120083,600	116188,414	-,063	-1,034	,302
	Deal_size_EV_Centered	-,006	,005	-,076	-1,201	,231
	Crossborder1	209601,357	140973,737	,085	1,487	,138
	Ecommerce	-1190271,183	456545,268	-,142	-2,607	,010
	IT and Software	-144545,380	346543,393	-,023	-,417	,677
	Manufacturing	153972,788	164640,736	,051	,935	,350
	NBOs_Centered	7913,681	38132,523	,021	,208	,836
	100Sale	98989,442	108976,229	,054	,908	,364
	Deal_year	12191,577	24580,795	,028	,496	,620
	EBITDA_multiple_LOI	-9850,034	17714,105	-,034	-,556	,579
	Duration_post_LOI_NBOs	4461,656	9829,180	,056	,454	,650

a. Dependent Variable: Adjustment_absolute

*Table D8: Duration post LOI * NBOs (DV3)*

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	-24761821,489	49643202,988		-,499	,618
	PostLOI_Phase_Months_Centered	-63632,092	34907,648	-,178	-1,823	,069
	Strat	-120083,600	116188,414	-,063	-1,034	,302
	Deal_size_EV_Centered	-,006	,005	-,076	-1,201	,231
	Crossborder1	209601,357	140973,737	,085	1,487	,138
	Ecommerce	-1190271,183	456545,268	-,142	-2,607	,010
	IT and Software	-144545,380	346543,393	-,023	-,417	,677
	Manufacturing	153972,788	164640,736	,051	,935	,350
	NBOs_Centered	7913,681	38132,523	,021	,208	,836
	100Sale	98989,442	108976,229	,054	,908	,364
	Deal_year	12191,577	24580,795	,028	,496	,620
	EBITDA_multiple_LOI	-9850,034	17714,105	-,034	-,556	,579
	Duration_post_LOI_NBOs	4461,656	9829,180	,056	,454	,650

a. Dependent Variable: Adjustment_absolute

*Table D9: Strategic bidders * Pre-exit (DV1)*

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	4,201	4,442		,946	,345
	PostLOI_Phase_Months_Centered	,005	,002	,142	2,507	,013
	Strat	,017	,012	,101	1,422	,156
	Deal_size_EV_Centered	-1,738E-10	,000	-,023	-,365	,716
	Crossborder1	-,004	,013	-,017	-,295	,768
	Ecommerce	,028	,041	,038	,696	,487
	IT and Software	-,017	,031	-,030	-,547	,585
	Manufacturing	-,003	,015	-,010	-,175	,861
	NBOs_Centered	-,001	,002	-,030	-,497	,620
	Pre-exit	-,005	,011	-,033	-,484	,629
	Deal_year	-,002	,002	-,053	-,934	,351
	EBITDA_multiple_LOI	-,001	,002	-,053	-,856	,393
	Strategic_bidders_Pre_Exit	-,006	,023	-,018	-,274	,784

a. Dependent Variable: Adjustment_rel_pos

Table D10: Strategic bidders * Pre-exit (DV2)

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	-,310	5,046		-,061	,951
	PostLOI_Phase_Months_Centered	-,005	,002	-,141	-2,498	,013
	Strat	-,011	,014	-,058	-,813	,417
	Deal_size_EV_Centered	3,576E-10	,000	,042	,660	,510
	Crossborder1	,014	,014	,058	,999	,319
	Ecommerce	-,062	,046	-,073	-1,340	,181
	IT and Software	-,018	,035	-,028	-,507	,613
	Manufacturing	,008	,017	,027	,496	,621
	NBOs_Centered	,002	,002	,050	,829	,408
	Pre-exit	-,001	,013	-,007	-,098	,922
	Deal_year	,000	,002	,003	,061	,951
	EBITDA_multiple_LOI	-,001	,002	-,022	-,360	,719
	Strategic_bidders_Pre_Exit	-,025	,026	-,065	-,981	,327

a. Dependent Variable: Adjustment_relative