Where Value Hides

Undervaluation in Nordic Public-to-Private Transactions

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Abstract

This thesis examines whether undervaluation is a determinant of Nordic public-to-private transactions from 2005 to 2025 and whether a fundamental valuation approach captures this relationship better than market-based multiples. Using a residual income valuation (RIV) model, the study estimates fundamental values for Nordic public-to-private targets and for a control sample of publicly listed firms that were acquisition targets but remained listed after the transaction. We find that public-to-private targets have a higher mean RIV/MV ratio than control firms, at 1.247 compared with 0.946, indicating that public-to-private targets exhibit higher estimated fundamental values than their observed market values**.** Logit regressions further show that RIV/MV is positively and significantly associated with the likelihood of a public-to-private transaction. By contrast, the market-based valuation multiples used in this study, Tobin's Q and EV/EBITDA, do not show a robust significant association. These findings suggest that undervaluation is a determinant of Nordic public-to-private transactions, but it depends on how it is measured. In addition, it suggests that fundamental valuation captures undervaluation in Nordic public-to-private transactions better than market-based valuation multiples.

Keywords: Public-to-private transactions, fundamental valuation, residual income valuation, undervaluation, market-based multiples valuation

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1. Introduction

In recent decades, public-to-private transactions have become more common in developed equity markets, as an increasing number of publicly listed firms have exited public markets in favour of private ownership. Public-to-private transactions are acquisitions in which publicly listed firms are taken private and subsequently delisted from the stock exchange. These transactions are closely associated with private equity and leveraged buyout activity, many of which involve the acquisition of publicly listed firms using substantial debt financing (Renneboog & Vansteenkiste, 2017).

Public-to-private transactions expanded markedly during the United States (US) buyout wave of the 1980s and later re-emerged in both the US and the United Kingdom (UK) in the early 2000s (Renneboog & Vansteenkiste, 2017). More recently, industry evidence indicates a renewed increase in activity, with global public-to-private deal value reaching USD 250 billion in 2024. One potential explanation for this development is that specialists identify opportunities to exploit mispriced listed firms (Bain, 2025).

The association between public market valuation and increased public-to-private transactions is consistent with a recurring explanation in the academic literature, which suggests that firms are more likely to be taken private when they are perceived to be undervalued, often referred to as the undervaluation hypothesis (Renneboog & Vansteenkiste, 2017). This hypothesis builds on the idea that managers tend to have better information about the firm's assets and prospects than outside investors, which indicates that market values may not fully reflect the firm's true value (Ross, 1977). However, existing evidence relies heavily on market-based valuation multiples, which are generally considered less robust than fundamental valuation approaches, such as the dividend discount model (DDM) and the residual income valuation model (RIV). This limitation partly stems from multiples being based on relative market valuations and investor perceptions, rather than on a standalone valuation estimate of the firm (Damodaran, 2012). In addition, multiple-based valuations depend on the selection of comparable firms, and commonly used market-based valuation measures are subject to measurement errors (Holthausen & Zmijewski, 2012; Perfect & Wiles, 1994; Erickson & Whited, 2000). Since market-based valuation multiples capture relative pricing rather than deviations from a firm's true value, it remains unclear whether the undervaluation documented in prior public-to-private research would also be observed using a fundamental valuation approach.

A further limitation is that existing evidence is geographically concentrated in the US and UK, raising questions regarding the relevance of these findings in other institutional settings (Renneboog & Vansteenkiste, 2017). The Nordic region provides a particularly relevant setting for examining this gap. In 2024, private equity-backed Nordic public-to-private transactions reached a record high by deal count, generating more than EUR 8

billion in deal value. Public-to-private transactions are attractive to acquirers because they often perceive that public share prices do not fully reflect firms' true value (PitchBook, 2025). Dagens Industri (2026) further highlights the role of undervaluation in Nordic public equity markets, reporting that lower valuations among Swedish small-cap firms may create favourable conditions for takeovers. Lower share prices can make acquisitions more attractive by allowing buyers to offer high bid premiums while still finding the target reasonably priced. The Nordic market also provides a relevant setting from a market-size perspective. Sweden, for instance, has the highest number of publicly listed firms relative to GDP in the European Union, with total market capitalisation corresponding to approximately 159% of GDP (OECD, 2025). Against this background, the Nordic market offers a compelling setting in which to examine the undervaluation hypothesis in the context of public-to-private activity.

1.1. Purpose and Research Questions

The purpose of this thesis is to examine whether undervaluation is a determinant of public-to-private transactions in the Nordic region between 2005 and 2025, and to assess whether a fundamental valuation measure and market-based valuation multiples differ in their ability to capture this relationship. Accordingly, the thesis addresses the following two research questions:

Is undervaluation a determinant of Nordic public-to-private transactions during the period 2005 to 2025?

Does fundamental valuation explain the likelihood of Nordic public-to-private transactions from 2005 to 2025 better than market-based valuation multiples?

This thesis contributes to public-to-private literature in two ways. First, by examining the Nordic region, it tests whether the evidence of undervaluation from the US and UK, where prior research has been concentrated, extends to a different institutional setting. This is particularly relevant given the recent increase in Nordic public-to-private activity and the limited evidence on whether such transactions are partly driven by public market mispricing. Secondly, it extends prior research by assessing undervaluation using a fundamental valuation measure rather than relying primarily on market-based valuation multiples.

2. Literature Review

2.1. Public-to-Private Literature

The decision to go private can be conceptualised as the reverse of the listing decision, in which firms reassess whether the benefits of remaining publicly listed continue to outweigh the associated costs. Public listing can provide several advantages, including access to external equity financing, improved share liquidity, and greater visibility among investors. However, these benefits may weaken when firms have limited financing needs, low trading activity, or reduced investor visibility (Bharath & Dittmar, 2010). At the same time, being publicly listed creates ongoing costs, including listing fees, reporting obligations, compliance costs, and potential agency-related costs from conflicts among managers and shareholders (Martinez & Serve, 2017). Accordingly, firms are more inclined to pursue private ownership when the net benefits of remaining publicly listed become negative (Bharath & Dittmar, 2010; Martinez & Serve, 2017).

Broader structural changes in equity markets further influence the occurrence of public-to-private transactions. Stulz (2020) documents a decline in public equity alongside the rapid expansion of private equity, attributing this development to the increased supply of private capital. Against this background, private equity investors have become increasingly central to public-to-private activity, providing the capital required to take listed firms private and aiming to create value through financial engineering, stronger governance, operational improvements, and closer alignment between managers and owners (Kaplan & Strömberg, 2009; Guo et al., 2011).

Market conditions further influence public-to-private activity by affecting both the feasibility of buyout financing and the benefits of remaining publicly listed. Favourable credit conditions can increase buyout leverage and transaction prices by making debt financing more accessible (Axelson et al., 2013). Conversely, lower stock market valuations, weak share liquidity, and limited access to public equity financing may reduce the advantages of public ownership, thereby making private ownership more attractive (Renneboog et al., 2007).

2.1.1. Undervaluation Hypothesis

Information asymmetries between managers and outside investors imply that market valuations reflect investors' perceptions rather than the firm's true value (Ross, 1977). These asymmetries tend to be more pronounced for smaller firms, which receive less attention from institutional investors and analysts (Renneboog & Vansteenkiste, 2017). The concept of undervaluation has been defined in several ways in the literature, though a common definition is that it refers to a deviation from a firm's true value. Damodaran (2012) frames undervaluation in an acquisition context, describing it as a situation in which firms trade below their true value, allowing acquirers who recognise the mispricing to capture the difference between the value and the purchase price as a surplus. Furthermore, Frankel & Lee (1998) explain undervaluation as the deviation of a firm's observed market value from the value implied by its underlying fundamentals and expected future profitability. Accordingly, the undervaluation hypothesis in the public-to-private literature suggests that gains from these transactions arise because acquirers exploit existing mispricing (Renneboog & Vansteenkiste, 2017).

While many earlier studies of public-to-private transactions focused primarily on the US market, Weir et al. (2005) were among the first to examine the undervaluation hypothesis in a UK context. Using a sample of UK public-to-private transactions, they document that perceived undervaluation, measured by changes in market capitalisation, is a significant determinant of public-to-private transactions. This finding is also consistent with later evidence from Weir et al. (2008), who find that public-to-private firms are more likely to have lower Tobin's Q ratios, which is consistent with undervaluation. Bargeron et al. (2008) find that firms acquired by private bidders have lower Tobin's Q than those acquired by public firms, suggesting that private acquirers tend to target firms with lower valuations. Tobin's Q was measured as enterprise value divided by the total assets.

Bharath & Dittmar (2010) examine the role of the undervaluation hypothesis in the US for public-to-private transactions. They measure undervaluation using the market-to-book ratio as a proxy for Tobin's Q, where a lower ratio may indicate that the market value is below the firm's true worth. Their results show that firms taken private have significantly lower market-to-book ratios than comparable publicly listed firms prior to the transaction, supporting the undervaluation hypothesis. In contrast, Mehran & Peristiani (2010) find little evidence supporting the undervaluation hypothesis. They test the undervaluation hypothesis by examining market-to-book as a simple proxy for Tobin's Q and stock returns. Their findings indicate that neither variable is statistically significant, suggesting that undervaluation is not a primary driver of public-to-private decisions.

Bugeja & Sinelnikov (2012) document that private equity targets in Australia exhibit greater undervaluation before the transaction than those acquired by public firms, suggesting that private equity investors systematically select targets in which market values deviate from the firm's true value. Further evidence is provided by Rath & Rashid

(2016), who investigate the undervaluation hypothesis in public-to-private transactions, compared to a control sample of public transactions. They measure undervaluation using several valuation proxies, including Tobin's Q and the price-to-earnings ratio, and find that private targets exhibit significantly lower valuation ratios than comparable firms and that these measures are negatively associated with the likelihood of a public-to-private transaction.

2.1.2. Other Determinants of Public-to-Private Transactions

Prior literature identifies several other firm characteristics apart from undervaluation that are associated with the likelihood of a public-to-private transaction. A central explanation is the free cash flow hypothesis. Jensen (1986) was among the first to develop the free cash flow hypothesis, arguing that firms generating substantial free cash flow are desirable targets in public-to-private transactions. Firms with high free cash flow, stable cash generation, and limited growth opportunities are particularly prone to agency conflicts, as managers may retain and invest excess resources rather than distribute them to shareholders. Lehn & Poulsen (1989) extend this logic by providing evidence that firms taken private exhibit significantly higher levels of undistributed free cash flow than comparable public firms and are characterised by relatively lower growth opportunities. Mehran & Peristiani (2010) provide further support for the free cash flow hypothesis. Their findings indicate that firms with higher free cash flow, measured relative to net sales, are more likely to be taken private. Bharath & Dittmar (2010) also provide evidence consistent with the free cash flow hypothesis. They measure free cash flow relative to total assets and find that firms with higher levels are more likely to undergo public-to-private transactions, suggesting that excess internal cash remains an important determinant of public-to-private activity. However, a contrasting perspective is provided by Weir et al. (2005), who find no evidence that free cash flow drives the decision to go private. Instead, their results suggest that firms that have undergone a public-to-private transaction are more likely to exhibit non-optimal governance structures, including CEO duality, as well as higher levels of institutional ownership.

Firm size has also been identified as a determinant of public-to-private transactions. Weir et al. (2008) find that UK firms undergoing public-to-private transactions tend to be significantly smaller, a pattern they attribute to the relative youth of these firms and the limited market attention they receive. Mehran & Peristiani (2010) find similar evidence that firm size is negatively related to the likelihood of a public-to-private transaction, where firm size is measured as the logarithm of total sales. They connect this to the market visibility hypothesis, since smaller firms tend to receive less analyst coverage and investor attention. Consistent with this, they further document that firms with weaker analyst coverage, institutional ownership, and stock turnover are more likely to go private, suggesting that limited financial visibility reduces the benefit of public ownership. Bharath & Dittmar (2010) provide empirical evidence that a public-to-private

transaction is driven by a combination of factors, including firm size, analyst coverage, and liquidity.

Rath & Rashid (2016) identify leverage as an important determinant of public-to-private transactions. They measure leverage as total debt divided by total assets and find a positive association with the likelihood of a firm being taken private, which they interpret as consistent with the financial distress hypothesis. However, the interpretation of leverage varies across studies. Rather than testing leverage directly, Opler & Titman (1993) argue that LBO activity depends partly on expected financial distress costs, where firms with lower expected distress costs are better able to bear the additional debt required in an LBO. Bharath & Dittmar (2010) find that public-to-private targets exhibit higher leverage, measured as total debt divided by total assets, than firms remaining public, indicating that high leverage is particularly associated with public-to-private transactions. They interpret this cautiously, suggesting that higher debt may indicate a need for private equity restructuring.

2.2. Fundamental Valuation Methods

Penman (1992) views fundamental analysis as a method for valuing securities based on available information, particularly financial statement data. Anesten et al. (2020) similarly describe accounting-based valuation as relying on accounting numbers, or company fundamentals, to assess a firm's future cash flows and their risk. While more detailed model specifications may, in theory, increase valuation accuracy, their practical value depends on whether the required inputs can be reliably observed and estimated.

Williams (1938) defines investment value as the present value of expected future dividends. Penman (1992) describes this present-value logic as Williams' dividend capitalisation formula, which provides the theoretical basis for the dividend discount model (DDM). Under this model, equity value is derived from expected future dividend payments. Discounted cash flow (DCF) valuation applies the same present-value logic by estimating value from expected future cash flows, discounted at a rate reflecting their internal risk (Damodaran, 2012). The residual income valuation (RIV) model, with early foundations in Preinreich (1938) and later formalised by Ohlson (1995), expresses equity value as the sum of the book value of equity and the present value of expected residual income. The abnormal earnings growth (AEG) model, developed by Ohlson & Juettner-Nauroth (2005), values equity based on expected earnings and abnormal earnings growth rather than book value.

Penman & Sougiannis (1998) demonstrate that dividend-, cash-flow-, and earnings-based valuation approaches are theoretically equivalent and converge to the same estimate of equity value under infinite-horizon forecasting. However, since practical valuations require finite forecast horizons and terminal value assumptions, differences in model specification can lead to materially different valuation estimates.

2.3. Comparison of Valuation Methods

When comparing fundamental valuation methods, specifically DDM, DCF, AEG, and RIV, prior evidence generally indicates that RIV outperforms the alternatives. Table 1 provides an overview of prior empirical evidence on the valuation accuracy of these fundamental valuation models. However, its performance depends on the underlying assumptions and forecast inputs. For instance, Penman & Sougiannis (1998) compare the DDM, DCF, and RIV, and find that RIV produces lower valuation errors when applied with a finite horizon forecast. Francis et al. (2000) reach a similar conclusion and report a lower mean pricing error (PE) for RIV, compared to the DDM and DCF. They attribute RIV's relatively high accuracy to the fact that it anchors value largely in the book value of equity. As a result, the contribution of the terminal value is substantially lower, making it less dependent on long-term forecasts compared to alternative methods. Subsequent studies provide further support for this pattern. Jørgensen et al. (2011) find that RIV produces lower valuation errors than the AEG model, even when the latter is implemented with an extended forecast horizon. Similarly, Anesten et al. (2020) provide Nordic evidence illustrating that the relative performance of valuation models depends on the information setting. While DDM performs best when forecasted value drivers are available, RIV produces the lowest pricing errors when value drivers are estimated from historical financial information, particularly when implemented with a three-year forecast horizon. However, the evidence is not uniform, as the accuracy of fundamental models is sensitive to implementation. Courteau et al. (2001) find that DCF and RIV exhibit similar valuation accuracy when implemented with consistent terminal value assumptions, suggesting that differences in prior findings may partly reflect model implementation rather than inherent model superiority.

Beyond valuation accuracy, prior research has examined whether RIV-based measures can predict future stock returns. Frankel & Lee (1998) document that the ratio of fundamental value to market value (RIV/MV) is a strong predictor of future stock returns, with higher ratios associated with higher subsequent returns. Lee et al. (1999) extend this line of research by examining the time-series relation between market values and fundamental values. They show that prices may deviate from the firm's true value in the short run but tend to converge over time, and that an RIV/MV ratio predicts future returns better than traditional multiples.

Table 1. Valuation Accuracy of Fundamental Valuation Models

Author	Model	Mean PE	Mean APE
Francis et al. (2000)	RIV	-0.127	0.303*
	DDM	-0.680	0.691*
	DCF	-0.182	0.410*
Jørgensen et al. (2011)	RIV	0.033	0.573
	AEG	0.035	0.577
Courteau et al. (2001)	RIV	-0.302	0.371
	DDM	-0.241	0.396
Anesten et al. (2020)	RIV	0.090	0.570
	DDM	0.140	0.560
	AEG	0.570	0.760

Note: This table summarises prior empirical evidence on the valuation accuracy of fundamental valuation models. Interpretation*:* RIV refers to the residual income valuation model, DDM to the dividend discount model, DCF to the discounted cash flow model, and AEG to the abnormal earnings growth model. Mean PE denotes mean pricing error and captures systematic over- or undervaluation, while mean APE denotes mean absolute pricing error and captures the average magnitude of valuation errors. Lower absolute values indicate higher valuation accuracy. The reported figures are taken from the respective studies and may not be directly comparable due to differences in sample composition, model implementation, forecast horizons, and time periods. *Francis et al. (2000) report Median APE.

In contrast to fundamental valuation methods, market-based measures are frequently used in both valuation research and practice. As Damodaran (2012) notes, relative valuation based on multiples is particularly common, largely due to its simplicity and ease of implementation. Multiples require fewer explicit assumptions than fundamental valuation models and often produce estimates that are closely aligned with prevailing market values. This makes them simple and quick to implement, which is an advantage when reliable forecast inputs are difficult to obtain. While this feature makes them practically attractive, it also represents an important limitation. Since multiples rely on the observed market prices of comparable firms, any systematic mispricing in the peer groups is transmitted to the resulting valuation. Furthermore, by summarising value through relatively simple ratios, they may fail to fully capture firm-specific differences in risk, growth, investment requirements, and cash-flow generation (Damodaran, 2012).

A related challenge in relative valuation is identifying appropriate comparable firms. Bhojraj & Lee (2002) note that the selection of comparable firms involves a significant degree of subjectivity and lacks clear theoretical guidance. Although industry classification is often used as a practical basis for peer selection, firms within the same industry may differ considerably in their underlying value drivers. Such differences can materially affect valuation multiples and, consequently, limit the reliability of comparisons. Consistent with this argument, Holthausen & Zmijewski (2012) emphasise that valuation multiples are highly sensitive to underlying firm characteristics, suggesting that comparability should not be assumed solely on the basis of shared industry classification.

Consistent with these concerns, empirical evidence suggests that valuation multiples do not perform uniformly across firms and settings. Lie & Lie (2002) examine the performance of different multiples in estimating firm value and find that EBITDA multiples generally produce more accurate estimates than EBIT multiples. However, they also find that valuation accuracy varies with firm size and profitability, suggesting that multiples are not uniformly reliable. More recently, Schueler (2020) demonstrates that valuations based on multiples may yield a broad range of outcomes, depending on the choice of multiple, the aggregation of peer-group multiples, and how differences in capital structure are accounted for.

Despite their widespread use, market-based valuation multiples such as Tobin's Q are subject to important measurement concerns. Perfect & Wiles (1994) demonstrate that empirical findings are sensitive to how Tobin's Q is constructed, as alternative estimation methods can produce different results. Lewellen & Badrinath (1997) similarly argue that conventional calculations of Tobin's Q rely on questionable methodological choices and vary considerably across applications. This makes it difficult to draw firm conclusions from much of the earlier empirical literature. Erickson & Whited (2000) further support this concern by showing that measurement error in Tobin's Q can substantially distort empirical findings, suggesting that some relationships documented in prior research may reflect measurement problems rather than genuine economic effects. Damodaran (2012) raises a more conceptual concern. Tobin's Q is theoretically defined as the market value of a firm's assets relative to their replacement cost, but Damodaran argues that the ratio is more a reflection of perceived management quality than of mispricing, as poorly managed firms tend to trade at market values below the replacement cost of their assets. A further issue is that replacement cost is rarely observable in practice, which forces studies to rely on accounting approximations that may not fully reflect the underlying value of the assets.

2.4. Hypothesis Development

Prior research suggests that undervaluation is an important determinant of public-to-private transactions, as acquirers may target firms whose market values do not fully reflect their true value (Renneboog & Vansteenkiste, 2017). However, most previous studies rely on market-based valuation multiples, which may capture relative pricing rather than deviations from true value (Damodaran, 2012). This study, therefore, tests the undervaluation hypothesis using a fundamental valuation measure, RIV/MV, and market-based valuation multiples.

The RIV model is selected among fundamental valuation models as prior evidence indicates that it often outperforms alternatives (e.g., Penman & Sougiannis, 1998; Anesten et al., 2020). A RIV/MV ratio exceeding one indicates that the estimated fundamental value exceeds the observed market value and is therefore used in this thesis as a proxy for undervaluation. Prior valuation research shows that RIV/MV captures deviations between fundamental and market value, and that these deviations can predict future stock returns, indicating that the ratio contains information about mispricing not fully reflected in current market values (Frankel & Lee, 1998). If public-to-private targets are more undervalued before the transaction, they are therefore expected to exhibit higher RIV/MV ratios than comparable control firms. Based on these considerations, we test the following hypothesis:

H1: Firms with higher RIV/MV ratios are more likely to go private.

Tobin's Q is included as a market-based valuation measure commonly used in prior public-to-private research (Bharath & Dittmar, 2010; Rath & Rashid, 2016). Tobin's Q measures the enterprise value relative to its asset base, and a low value may imply undervaluation. If public-to-private targets are more undervalued than control firms, a lower Tobin's Q multiple should be associated with a higher likelihood of a public-to-private transaction, leading to the following hypothesis:

H2: Firms with lower Tobin's Q multiples are more likely to go private.

EV/EBITDA is included as an additional market-based valuation multiple since it captures enterprise value relative to operating earnings and is widely used in corporate valuation (Koller et al., 2020; Berk & DeMarzo, 2017). Similar to Tobin's Q, relatively lower multiples are consistent with undervaluation. If public-to-private targets are more undervalued than control firms, a lower EV/EBITDA multiple should be associated with a higher likelihood of a public-to-private transaction:

H3: Firms with lower EV/EBITDA multiples are more likely to go private.

Together, these hypotheses address both research questions. Individually, each hypothesis tests whether the selected valuation measures are associated with the likelihood of a public-to-private transaction. Collectively, the pattern of supported and rejected hypotheses allows us to assess whether the fundamental valuation measure captures this potential relationship better than market-based valuation multiples.

3. Methodology

3.1. Study Sample

This study draws on four sample groups. The first two, the calibration sample and the validation sample, consist of publicly listed Nordic firms used to calibrate and validate the RIV model. The remaining two, the public-to-private sample and the control sample, are used to test the research questions.

The calibration and validation samples use publicly listed Nordic firms in 2024 as the reference year, rather than the full study period between 2005 and 2025, to simplify the valuation process.[1] After applying the selection criteria and screening procedures, the remaining firms are randomly assigned, with 70% allocated to the calibration sample and 30% to the validation sample. The calibration sample is used to estimate the parameters of the RIV model, specifically the steady-state growth rate (g_{ss}) and the market risk premium (MRP). These parameters are subsequently held constant in all remaining analyses. The RIV validation sample is used to assess the calibrated model's out-of-sample performance.

The public-to-private sample serves as the primary sample for testing the research questions. It consists of publicly listed Nordic firms that were taken private between 2005 and 2025. A public-to-private transaction is defined as an acquisition in which a publicly listed firm is acquired and subsequently delisted from the stock market. Although prior literature often focuses on private equity acquirers, this study includes all public-to-private transactions to test whether the findings apply more broadly, rather than only to specific buyer types or financing structures.

To enable comparison, a control sample is constructed for the same period, following the rationale of Bugeja & Sinelnikov (2012) and Rath & Rashid (2016). The sample consists of Nordic publicly listed firms that were targets in public transactions but were not taken private, excluding share repurchases. Restricting the control sample to firms that were themselves acquisition targets ensures that both samples consist of firms that underwent transactions, which helps isolate factors specifically associated with the decision to delist, rather than with acquisition activity more generally. For both samples, only complete transactions are included, and firms experiencing financial distress during the transaction period are excluded. Following Rath & Rashid (2016), the control sample is constructed to be broadly comparable to the public-to-private sample, with firms matched primarily by industry and secondarily by size.

[1] Note that 2025 was not used as a reference year since complete financial data were not yet available for all firms.

3.1.1. Selection Criteria and Screening

The geographical scope is limited to the Nordic region and specifically Sweden, Denmark, Finland, and Norway. Iceland is removed from the sample due to a limited number of transactions. The sample period from 2005 to 2025 allows the study to capture variation in market conditions. The starting year is further motivated by the adoption of IFRS in 2005, which changed financial reporting standards and improved the comparability of accounting information across firms. To be included in the sample, firms must have been publicly listed for at least three fiscal years prior to the valuation date, ensuring that sufficient historical accounting data are available for the RIV model.

Financial and market data are obtained from LSEG Workspace, which provides standardised accounting information, stock price data, and corporate event information. The database is used to identify relevant firms and transactions and to collect the financial data required to estimate the valuation and control variables discussed in Section 3.4. All financial variables are expressed in euros to ensure comparability across firms. This is particularly relevant for the control variable firm size, which depends on the absolute level rather than relative ratios.

Several trimming procedures are applied to improve comparability across firms and to reduce the influence of extreme observations. Firms with market-to-book ratios below 0.5 or above 7.0 are excluded, as extreme ratios indicate that a firm is unlikely to be close to the steady-state assumed in the RIV model. The upper threshold is also supported by the distribution of the data, as most excluded firms lie well above it. To be included in the final sample, all financial variables required for the valuation measures and all control variables must be available in the database. After calculating valuation outputs, observations in the 1st and 99th percentiles are winsorised to limit the influence of extreme values on the reported results.

After identifying firms with sufficient data and screening, the final sample comprises 444 observations in the calibration sample, 189 observations in the validation sample, and 116 transactions in each of the public-to-private sample and the control sample. Further information for the public-to-private and control samples is provided in Appendix A.1.

3.2. Residual Income Valuation (RIV)

The RIV model defines firm value as the sum of the current book value of equity and the present value of expected future residual income, where residual income is defined as earnings in excess of the cost of equity (Ohlson, 1995; Skogsvik, 2002). Over a finite-horizon forecast T, the model is defined as:

$$V_0 = BV_0 + \sum_{t=1}^{T} \frac{(ROE_t - COE) \times BV_{t-1}}{(1 + COE)^t} + \frac{PMB_T \times BV_T}{(1 + COE)^T} \quad (1)$$

Where:

BV_T = Book value of equity at time T
ROE_t = Return on equity at time t
COE = Cost of equity
PMB_T = Permanent accounting measurement bias at time T
T = Explicit forecast horizon

The first term denotes the opening book value of equity, the second the present value of residual income over the explicit forecast horizon, and the third the truncation value at the horizon point T.

The model relies on the clean surplus relation (Ohlson, 1995; Skogsvik, 2002), which assumes that changes in the book value of equity are fully explained by earnings less dividends to shareholders. A further simplifying assumption is made that no new equity is issued during the forecast period. The clean surplus relation is central to the implementation, as it allows future book values to be derived from forecasted return on equity and payout share rather than being forecasted directly. The model is defined as:

$$BV_t = BV_{t-1} + (ROE_t \times BV_{t-1}) - (PS \times BV_{t-1}) \quad (2)$$

Where:

PS = Payout share

Forecast Horizon

A three-year explicit forecast horizon is applied, after which firms are assumed to have reached a steady-state. This choice is consistent with prior empirical valuation research using relatively short forecast horizons in RIV applications, while also reflecting the need for a parsimonious model that can be implemented consistently across a large sample.

This choice is consistent with Anesten et al. (2020), who use a three-year horizon in a Nordic setting and report that this specification yields the lowest mean PE when value drivers are estimated from historical data.

Valuation Date

The valuation date differs between the sample groups. For the calibration and the validation samples, all valuations are performed as of 31 December 2024. For the public-to-private and control samples, the valuation date is defined as four weeks prior to the public announcement of the transaction. Financial data are drawn from the most recent fiscal year ending before the valuation date, ensuring that the valuation is based only on information available before the announcement.

Cost of Equity

The cost of equity (COE) is estimated using the Capital Asset Pricing Model (CAPM), which relates expected return on equity to systematic risk (Sharpe, 1964). It can be defined as:

$$COE = r_f + \beta \times (r_m - r_f) \quad (3)$$

Where:

r_f = Risk-free rate
β = Beta equity
$(r_m - r_f)$ = Market risk premium

The risk-free rate is measured using the country-specific 10-year government bond yield.[2] The rate is allowed to vary by country to reflect differences in interest-rate levels across the Nordic markets. The risk-free rate is matched to each firm's valuation year to account for interest-rate variation over the sample period.

Firm-specific equity beta is estimated using a time-series regression of individual stock returns on market returns, based on monthly observations over the 60-month period preceding the valuation date.[3] The monthly stock returns are regressed against monthly returns on the MSCI World Index, which serves as a proxy for the global equity market.[4]

The MRP is determined by calibrating the RIV model, as described in Section 3.3. The cost of equity is assumed to remain constant over the forecast period.

[2] Data for risk-free-rates are retrieved from Sveriges Riksbank, 2026a; Suomen Pankki, 2026; Investing, 2026a; Investing, 2026b.
[3] Some firms are included despite not having a full 60-month return history, as they were not publicly listed for the entire estimation period. For these firms, beta is estimated using all available monthly observations.
[4] Data for MSCI World Index is retrieved from Investing, 2026c.

Permanent Accounting Measurement Bias

The permanent accounting measurement bias (PMB)[5] captures the expected relative accounting measurement bias at the horizon point T, where the firm is assumed to have reached a steady-state. At steady-state, business goodwill is assumed to have been competed away, meaning that any remaining difference between expected value of owners' equity and book value reflects accounting measurement bias rather than abnormal future profitability. This bias arises since conservative accounting understates assets, causing the book value to differ from economic value (Runsten, 1998; Skogsvik, 2002). It is defined as:

$$PMB_T = \frac{V_T}{BV_T} - 1 \tag{4}$$

Where:

V_T = Expected value of owners' equity at time T
BV_T = Book value of equity at time T

This component is measured using industry-specific estimates from Runsten (1998), in which each firm is assigned a value based on its primary industry classification in LSEG Workspace. If an LSEG Workspace classification has no clear match in Runsten's industry categories, it is manually reviewed and assigned to the closest related category. The same industry-specific estimates have been applied in prior Nordic valuation research (Anesten et al., 2020).

Book Value of Equity

The initial book value of equity is defined as shareholders' equity attributable to common shareholders, measured at the most recent fiscal year before the valuation date. Future book values are not forecasted directly but derived from the CSR introduced in equation (2).

Return on Equity

Return on equity (ROE) is defined as net income divided by the opening book value of equity (Skogsvik, 2002). It can be defined as:

[5] In prior literature, this measurement bias is often expressed q(BV_T), but since this thesis also uses Tobin's Q as a separate valuation proxy, the term PMB_T is used instead to avoid confusion.

$$ROE_t = \frac{NI_t}{BV_{t-1}} \quad (5)$$

Where:

NI_t= Net income at time t

Following Skogsvik (2002), the steady-state ROE represents the expected return on equity after the explicit forecast horizon T, consistent with the Gordon growth formula. It is defined as:

$$ROE_{ss} = COE + PMB_T \times (COE - g_{ss}) \quad (6)$$

Where:

g_{ss} = growth in steady-state

Initial ROE is estimated as an average over the three fiscal years preceding the valuation date. A three-year average reduces the influence of temporary fluctuations and provides a more stable estimate of normalised profitability, consistent with Skogsvik (2002) and Anesten et al. (2020).

Between the initial and steady-state levels, ROE is assumed to converge gradually, consistent with evidence that profitability reverts toward a long-term level over time (Fama & French, 2000; Nissim & Penman, 2001). Following Skogsvik (2002), this adjustment is specified as a linear gradual change between t = 1 and t = T+1, and is defined as:

$$ROE_t = ROE_{t=1} + \frac{(t-1)}{T} \times (ROE_{ss} - ROE_{t=1}) \quad (7)$$

Where:

$ROE_{t=1}$ = Initial return on equity

Payout Share

The payout share (PS) is estimated as a three-year historical average and held constant over the forecast horizon. This approach reflects that payout policies tend to adjust gradually over time, while reducing the influence of temporary changes in annual distributions (Lintner, 1956; Leary & Michaely, 2011). It is defined as:

$$PS_t = \frac{DIV_t}{BV_{t-1}} \quad (8)$$

Where:

DIV_t = Dividends to common shareholders at time t

3.3. Model Calibration and Validation

The calibration procedure identifies suitable values for two central inputs in the RIV model, the MRP and g_{ss}. Since assumptions for these parameters vary widely across studies, calibration is used to avoid systematic bias and to produce a model that, on average, yields a mean RIV/MV ratio of one.

The procedure evaluates a range of economically reasonable MRP and g_{ss} combinations. The MRP range is set at 5 to 8%, in line with PwC (2025), which reports that the MRP has generally remained within this interval over the recent decade. The steady-state growth rate is set at 2 to 4%, reflecting long-run inflation expectations of approximately 2% (Sveriges Riksbank, 2026b), with an additional 2% range applied to capture modest real growth, in line with Koller et al. (2020).

For each combination, the RIV model is applied to the calibration sample to estimate firms' fundamental equity values, which are then benchmarked against observed market values. Accuracy is assessed using the mean RIV/MV ratio, where a value close to one indicates that estimated fundamentals are, on average, aligned with market valuations. The combination that produces the mean ratio closest to one is selected as the calibrated specification and held constant across all remaining analyses to ensure consistency in the valuation procedure. Although the parameters are calibrated using 2024 data and applied throughout the sample period, the calibration is applied identically to both samples. Any systematic bias is therefore expected to affect the two groups similarly, limiting its impact on the relative comparison.

The calibrated model is then applied to the separate validation sample to assess its performance. Two accuracy metrics are used, in line with prior valuation research (e.g., Jørgensen et al., 2011; Anesten et al., 2020).

The mean pricing error (PE) measures the relative deviation between estimated values and observed market values and indicates the presence of any systematic bias, which can be defined as:

$$Mean\ PE\ = \frac{1}{N}\sum_{i=1}^{N}\frac{RIV_i - MV_i}{MV_i} \tag{9}$$

Where:

RIV_i = Estimated residual income value for the firm i

MV_i = Observed market value of equity for the firm i

The mean absolute pricing error (APE) captures the average magnitude of valuation errors, which can be defined as:

$$Mean\ APE\ = \frac{1}{N}\sum_{i=1}^{N}\left|\frac{RIV_i - MV_i}{MV_i}\right| \tag{10}$$

In addition, a sensitivity analysis is conducted on the validation sample to further support the calibration approach. By testing alternative MRP and g_{ss} assumptions within the calibration ranges, the analysis assesses how the mean PE and mean APE change under different parameter choices.

3.4. Proxy Variables

To examine the relationship between firm valuation and the likelihood of a public-to-private transaction, this study employs a set of valuation proxies and firm control variables consistent with prior studies.

Valuation Proxies

To empirically test undervaluation as a determinant of the likelihood of a public-to-private transaction, the study uses RIV/MV, Tobin's Q, and EV/EBITDA (see the discussion in Section 2.4). The construction of these variables is summarised in Table 2. Firms with EBITDA close to zero are excluded, since the resulting multiple may be distorted and difficult to interpret.

Control Variables

Building on the discussion in Section 2.1.2, the analysis controls for free cash flow, leverage, and firm size to better isolate the relationship between firm valuation and the likelihood of a public-to-private transaction. These variables are widely used in prior literature and are identified as relevant determinants of the likelihood of public-to-private transactions. Free cash flow, measured as operating cash flow minus capital expenditures divided by total assets, captures potential agency effects arising from excess internal funds (Bharath & Dittmar, 2010). Leverage is measured as total debt to total assets, reflecting differences in capital structure and financing capacity (Rath & Rashid, 2016). Firm size, measured as the natural logarithm of sales, proxies for firm visibility, as smaller firms typically receive less analyst coverage and investor attention (Bharath & Dittmar, 2010; Mehran & Peristiani, 2010).

The use of a limited set of control variables is intentional. While this may reduce the model's predictive power relative to more comprehensive specifications of public-to-

private transactions, it reflects the study's focus on comparing the explanatory relevance of fundamental and market-based valuation measures, rather than developing a fully specified predictive model.

Definitions and formulas for all variables are presented in Table 2.

Table 2. Variable Definitions

Variable	Formula	Description	Sources
RIV/MV	Residual Income Value / Market Value of Equity	Our constructed RIV model is divided by the observed market value of equity.	Skogsvik (2002); Frankel & Lee (1998),
Tobin's Q	Enterprise Value / Total Assets	The multiple is based on comparing the enterprise value and assets, a common proxy for firm valuation.	Bargeron et al. (2008)
EV/EBITDA	Enterprise Value / EBITDA	The multiple is used to assess the company's value relative to its operating earnings before depreciation and amortisation.	Koller et al. (2020)
FCF Ratio	(Operating Cash Flow – CapEx) / Total Assets	Internal cash flow available after investment, divided by assets.	Bharath & Dittmar (2010)
Size (Sales)	Log (Sales)	Controls for firm scale and reduces skewness.	Mehran & Peristiani (2010)
Leverage Ratio	Total Debt / Total Assets	Proxies for capital structure and debt capacity.	Rath & Rashid (2016)

Note: This table provides definitions, formulas, and sources for the valuation proxies and firm-level control variables used as covariates in the logit model. RIV/MV is used as the fundamental valuation proxy, Tobin's Q and EV/EBITDA as market-based valuation proxies, and FCF Ratio, Size, and Leverage Ratio as control variables.

3.5. Statistical Models

3.5.1. Univariate Statistics

Means are compared between the public-to-private sample and the control sample. Differences in means are assessed using Welch's t-test (Welch, 1947), which allows for unequal variances across groups. Median differences are assessed using Mann-Whitney U-tests (Mann & Whitney, 1947), a non-parametric test commonly used to compare central tendency between independent groups when variables are skewed or affected by outliers. Together, these tests provide an initial univariate analysis of whether firm characteristics differ between the two independent samples.

3.5.2. The Logit Regression Model

To examine the relationship between firm valuation and the probability of a public-to-private transaction, this study employs a logit regression model. This approach is consistent with prior literature in the area, in which binary response models are used to estimate the probability that a firm undergoes a public-to-private transaction (e.g., Weir et al. 2005; Rath & Rashid, 2016). The logit model is appropriate because the dependent variable is binary, taking the value one if the firm is taken private and zero otherwise. In line with McFadden's (1974) random utility framework, the model can be interpreted as estimating the probability that a firm is taken private as a function of observed firm characteristics. All explanatory variables are measured as of the valuation date, four weeks prior to the transaction announcement.

The probability that a firm i undergoes a public-to-private transaction is modelled as:

$$P(PTP_i = 1|X_i) = \frac{exp(X_i'\beta)}{1 + exp(X_i'\beta)} \quad (11)$$

Where X_i denotes the vector of explanatory variables, including valuation measures and control variables, and β is the corresponding coefficient vector. The model is estimated using maximum likelihood estimation.

As logit models are nonlinear binary response models, the coefficients are interpreted based on their direction and statistical significance rather than as direct changes in predicted probability. The valuation variables are included to examine whether firm valuation is associated with the probability of becoming a public-to-private target. Thus, the sign and significance of each coefficient indicate whether the relevant valuation measure is positively or negatively related to this probability.

To assess potential multicollinearity among the explanatory variables, a correlation matrix is reported. Correlations are interpreted according to Cohen's (1988) guidelines, with Pearson's *r* values around 0.10 considered small, 0.30 medium, and 0.50 large.

All statistical tests are estimated in RStudio.

3.5.3. Robustness Tests

Several robustness tests are performed to assess the sensitivity of the empirical results to sample composition, outlier treatment, and model specification, given that institutional settings may differ and that market conditions vary across the sample period.

First, the EV/EBITDA specification is re-estimated using the inverse measure EBITDA/EV. Because EV/EBITDA uses EBITDA in the denominator, firms with close to zero EBITDA can yield extreme multiples. Using the inverse measure reduces this while preserving the economic interpretation of operating earnings relative to enterprise value. A positive coefficient on EBITDA/EV is consistent with the same undervaluation prediction as a negative coefficient on EV/EBITDA.

Second, the logit specifications are re-estimated with country and time-period dummy variables. The country dummies control for institutional differences across the Nordic markets. The period dummies distinguish between transactions from 2005 to 2009 and 2010 to 2025, thereby accounting for potential differences related to the global financial crisis and broader macroeconomic variation over the sample period.

Third, all variables are winsorised at the 1st and 99th percentiles in the main specifications to limit the influence of extreme observations. As an additional robustness test, the logit specifications are re-estimated with variables winsorised at the 5th and 95th percentiles, providing a stricter treatment of outliers.

4. Discussion of Results

4.1. Calibration and Validation

Table 3. Calibration and Validation Results of the RIV model

Metric	Calibration sample	Validation sample
Mean RIV/MV	0.941	0.969
Mean PE	-0.058	-0.031
Mean APE	0.511	0.520
Observations	444	189

Note: This table reports the calibration and validation results of the residual income valuation (RIV) model. Interpretation: the calibration sample is used to select the market risk premium (MRP) and steady-state growth rate (g_{ss}), while the validation sample assesses out-of-sample valuation accuracy. Mean RIV/MV compares the estimated residual income value with observed market value, mean PE captures systematic valuation bias, and mean APE captures the average absolute valuation error. Values of mean PE closer to zero, mean RIV/MV closer to one, and lower mean APE values indicate higher valuation accuracy.

The calibration procedure yielded an MRP of 5% and a g_{ss} of 2%. These parameters were held constant throughout the subsequent analyses.

The results from the RIV calibration sample in Table 3 show a mean RIV/MV ratio of 0.941 and a mean PE of -0.058, implying that the calibrated model slightly underestimates equity values relative to observed market values. Although this indicates a slight bias, the deviation from one is small and falls within the range of mean PE reported in prior valuation research. Anesten et al. (2020) report a mean PE of 0.090, and Jørgensen et al. (2011) report 0.033, suggesting that minor systematic deviations are common across RIV implementations. The mean APE of 0.511 also falls within the range reported in earlier RIV studies, including Jørgensen et al. (2011) and Anesten et al. (2020), suggesting that the model's valuation errors are broadly comparable to prior evidence.

Applied to the validation sample, the model produces a mean RIV/MV ratio of 0.969, a mean PE of -0.031, and a mean APE of 0.520. This result suggests that the calibration is not driven by overfitting and that the model performs well out of sample. Compared with Nordic evidence in Anesten et al. (2020), the calibrated model exhibits both lower systematic bias and lower mean APE. Together with the comparable results reported by

Jørgensen et al. (2011), this indicates that the calibrated model performs in line with established RIV implementations in the literature.

Although a mean APE of 0.520 indicates substantial firm-specific variation in valuation accuracy, this is consistent with prior RIV research. It reflects the difficulty of estimating individual firm values with a simple model across a large sample. More importantly for this study, the low mean PE indicates that the model does not exhibit material systematic bias relative to market values. Since the same valuation model is applied to both samples, any remaining systematic bias would be expected to affect the two groups in a broadly similar manner, rather than to favour one group over the other.

To assess the sensitivity of the calibrated model to alternative parameter assumptions, the validation metrics are also reported across different values of the MRP and g_{ss} within the chosen calibrated ranges. As shown in Appendix B.1 and B.2, mean PE ranges from approximately -0.051 to -0.064, and mean APE remains around 0.500 across specifications. This indicates that a single parameter choice does not drive the model's validation performance but remains stable across a reasonable range of inputs. Together with calibration and out-of-sample validation, the sensitivity analysis strengthens confidence in the robustness of the RIV implementation.

Overall, the calibrated model appears reliable for comparing RIV/MV between public-to-private targets and control firms. With a validation-sample RIV/MV ratio close to one and a mean PE close to zero, the model shows no material tendency to systematically over- or underestimate equity values.

4.2. Descriptive Statistics

Table 4. Descriptive Statistics

Panel A. Descriptive Statistics of the Public-to-Private Sample

Variable	Mean	SD	Min	Median	Max
RIV/MV	1.247	1.083	0.123	0.953	6.138
Tobin's Q	1.031	0.698	0.039	0.813	3.533
EV/EBITDA	13.630	15.697	1.408	8.975	83.441
FCF Ratio	0.020	0.127	-0.332	0.038	0.295
Size (Sales)	4.253	2.171	0.649	4.649	7.914
Leverage Ratio	0.520	0.189	0.092	0.546	0.939

Note: This table reports descriptive statistics for the public-to-private sample four weeks prior to the transaction's announcement. Interpretation: RIV/MV is the estimated residual income value divided by the market value of equity. Tobin's Q and EV/EBITDA are market-based valuation proxies. Tobin's Q is estimated by dividing enterprise value by total assets. FCF Ratio is measured as free cash flow divided by total assets, Size (Sales) as the natural logarithm of sales, and Leverage Ratio as total debt divided by total assets. The table reports the mean, standard deviation (SD), minimum (Min), median, and maximum (Max) for each variable. All continuous variables are winsorised at the 1st and 99th percentiles. The number of observations is 116 for all variables except EV/EBITDA, which has 82 observations.

Panel B. Descriptive Statistics of the Control Sample

Variable	Mean	SD	Min	Median	Max
RIV/MV	0.946	0.673	0.035	0.791	2.994
Tobin's Q	1.160	0.793	0.072	0.969	4.111
EV/EBITDA	13.118	9.373	1.368	10.509	52.299
FCF Ratio	0.001	0.166	-0.808	0.024	0.262
Size (Sales)	4.748	2.170	1.493	5.057	9.134
Leverage Ratio	0.526	0.206	0.047	0.563	0.883

Note: This table reports descriptive statistics for the control sample four weeks prior to the transaction's announcement. Interpretation: RIV/MV is the estimated residual income value divided by the market value of equity. Tobin's Q and EV/EBITDA are market-based valuation proxies. Tobin's Q is estimated by dividing enterprise value by total assets. FCF Ratio is measured as free cash flow divided by total assets, Size (Sales) as the natural logarithm of sales, and Leverage as total debt divided by total assets. The table reports the mean, standard deviation (SD), minimum (Min), median, and maximum (Max) for each variable. All continuous variables are winsorised at the 1st and 99th percentiles. The number of observations is 116 for all variables except EV/EBITDA, which has 82 observations.

Descriptive statistics for the main variables in the public-to-private sample and control sample are reported in Table 4. RIV/MV varies across both groups, but the dispersion is higher among public-to-private targets, with values ranging from 0.123 to 6.138 and a standard deviation of 1.083, compared with a standard deviation of 0.673 in the control sample. This indicates greater variation in valuation levels among public-to-private targets. Some firms trade well below their estimated fundamental value. In contrast, others trade close to or above it, consistent with the view that undervaluation is one of several motives behind public-to-private transactions rather than a uniform characteristic of all targets. The public-to-private sample has a mean RIV/MV of 1.247, indicating that, on average, the estimated fundamental value exceeds the observed market value, consistent with the presence of undervaluation among these firms. The control sample mean of 0.946 is close to one and broadly consistent with the validation sample mean of 0.969. This suggests that the estimated fundamental values of control firms are generally aligned with observed market values.

Tobin's Q has similar mean values across the two samples, at 1.031 for the public-to-private sample and 1.160 for the control sample. EV/EBITDA shows the largest

dispersion among the valuation measures, with standard deviations of 15.697 in the public-to-private sample and 9.373 in the control sample. Prior studies similarly document substantial variation in multiple-based valuations due to specific firm characteristics and measurement choices, even among firms within similar industries (Schueler, 2020; Holthausen & Zmijewski, 2012).

Across the valuation variables, medians are generally below means in both sample groups, indicating right-skewness in the distributions. Since the skewness appears in both sample groups, it reflects the valuation variables generally rather than a difference between public-to-private targets and control firms.

The control variables are broadly comparable across the two samples. Leverage is similar in both groups, with a mean of approximately 0.520 and comparable dispersion. The free cash flow ratio is low in both samples, although public-to-private targets exhibit a higher mean of 0.020 compared with 0.001 for the control sample. Firm size, measured as the natural logarithm of sales, differs between the samples, with public-to-private targets exhibiting a lower mean logarithm of sales of 4.253 than control firms' mean of 4.748.

4.3. Univariate Analysis

Table 5. Univariate Analysis

Variable	Stat.	PTP Sample (A)	Control Sample (B)	Diff. (B-A)	Test Stat (sig.)
RIV/MV	Mean	1.247	0.946	-0.301	-2.546**
	Median	0.953	0.791	-0.162	-1.898*
Tobin's Q	Mean	1.031	1.160	0.129	1.313
	Median	0.813	0.969	0.156	1.743*
EV/EBITDA	Mean	13.630	13.118	-0.512	-0.253
	Median	8.975	10.509	1.534	1.348
FCF Ratio	Mean	0.020	0.001	-0.019	-0.968
	Median	0.038	0.024	-0.014	-0.714
Size (Sales)	Mean	4.253	4.748	0.495	1.737*
	Median	4.649	5.057	0.408	1.647*
Leverage Ratio	Mean	0.520	0.526	0.006	0.235
	Median	0.546	0.563	0.017	0.487

Note: This table compares the public-to-private (PTP) and control samples four weeks before the transaction announcement. Interpretation: RIV/MV is the estimated residual income value divided by the market value of equity. Tobin's Q and EV/EBITDA are market-based valuation proxies. Tobin's Q is estimated by dividing enterprise value by total assets. FCF Ratio is measured as free cash flow divided by total assets, Size (Sales) as the natural logarithm of sales, and Leverage Ratio as total debt divided by total assets. Mean differences are evaluated using Welch's t-tests and reported as t-statistics, while median differences are evaluated using Mann-Whitney U-tests and reported as z-statistics. Differences are calculated as control minus PTP. Continuous variables are winsorised at the 1st and 99th percentiles. Each sample includes 116 observations, except for EV/EBITDA, which has 82 observations. *, **, *** denote significance at the 10%, 5% and 1% levels.

Table 5 presents the univariate comparison between public-to-private firms and the control sample. The mean RIV/MV ratio is 1.247 for public-to-private firms and 0.946 for control firms, with the difference statistically significant at the 5% level. This indicates that public-to-private targets are, on average, more undervalued before the transaction than comparable acquisition targets. The median difference is statistically significant at the 10% level. The result is consistent with the undervaluation hypothesis and with prior evidence identifying undervaluation as an important determinant of public-to-private transactions (Renneboog & Vansteenkiste, 2017).

The comparison with the validation sample further supports this interpretation. The validation sample of publicly listed Nordic firms has a mean RIV/MV of 0.969, and the control firms fall close to this benchmark at 0.946. At the same time, public-to-private firms lie clearly above both. Since the control firms are themselves acquisition targets, this pattern suggests that undervaluation is a distinct feature of firms taken private rather than a general characteristic of all acquisition targets, consistent with Bugeja & Sinelnikov (2012).

Furthermore, Tobin's Q shows a significant difference in medians at the 10% level, with public-to-private targets having lower median values than control firms of 0.813 compared to 0.969. However, the mean difference is not statistically significant, suggesting only limited support for differences in market-based valuation across the samples. EV/EBITDA does not differ significantly between the two groups, either in terms of mean or median values. The overall finding is consistent with Mehran & Peristiani (2010), who find limited support for the undervaluation hypothesis when using market-based valuation multiples. The result, however, contrasts with studies, including Bharath & Dittmar (2010) and Rath & Rashid (2016), who find lower market-based valuations among public-to-private targets. The mixed evidence across studies suggests that market-based valuation multiples are inconsistent in identifying undervaluation in public-to-private transactions.

Among the control variables, only firm size shows a significant difference between the two groups at the 10% level. This provides some evidence that public-to-private firms are, on average, smaller than control firms in line with previous studies (e.g. Bharath & Dittmar, 2010; Mehran & Peristiani, 2010). Leverage and free cash flow, by contrast, show no significant difference between the two samples, suggesting that observable differences between the samples relate primarily to firm size rather than to financial structure or cash-flow generation. This contrasts with prior research (e.g., Rath & Rashid, 2016; Mehran & Peristiani, 2010), possibly reflecting differences in sample composition or institutional settings.

Overall, these results provide initial evidence relevant to the three hypotheses. Public-to-private targets exhibit significantly higher RIV/MV ratios than comparable control firms,

consistent with the first hypothesis. In contrast, the market-based valuation multiples provide little support for the second and third hypotheses.

4.4. Correlation Matrix

Table 6. Correlation Matrix

Variable	RIV/MV	Tobin's Q	EV/EBITDA	Leverage Ratio	FCF Ratio	Size (Sales)
RIV/MV	1.000					
Tobin's Q	-0.507	1.000				
EV/EBITDA	-0.040	0.201	1.000			
Leverage Ratio	-0.084	-0.262	0.056	1.000		
FCF Ratio	-0.053	0.125	-0.186	0.228	1.000	
Size (Sales)	-0.037	-0.033	-0.124	0.489	0.430	1.000

Note: This table reports Pearson correlation coefficients for the variables used in the regression analysis. Interpretation: RIV/MV is the estimated residual income value divided by the market value of equity. Tobin's Q and EV/EBITDA are market-based valuation proxies. Tobin's Q is estimated by dividing enterprise value by total assets. Leverage Ratio is measured as total debt divided by total assets, FCF Ratio as free cash flow divided by total assets, and Size (Sales) as the natural logarithm of sales. All continuous variables are winsorised at the 1st and 99th percentiles.

Table 6 reports the Pearson correlation coefficients for the variables used in the regression analysis. Overall, the correlation matrix indicates no concerns about multicollinearity, as correlations between valuations and control variables are low, suggesting that multicollinearity is unlikely to bias the regression results. All pairwise correlations among the regressors are below 0.30, well within the range typically considered medium (Cohen, 1988). Turning to the correlations among the valuation variables, a notable feature is the strong negative correlation between RIV/MV and Tobin's Q (-0.507). This suggests that the two measures capture some similar underlying economic concepts, albeit from opposing perspectives.

4.5. Logit Regression Results

Table 7. Logit Regression Results

Variable	(1)	(2)	(3)
RIV/MV	0.463*** (0.180)		
Tobin's Q		-0.306 (0.194)	
EV/EBITDA			0.003 (0.013)
FCF Ratio	2.160** (1.058)	2.220** (1.052)	1.035 (1.716)
Size (Sales)	-0.208** (0.082)	-0.186** (0.080)	-0.143 (0.105)
Leverage Ratio	0.705 (0.796)	0.161 (0.820)	0.054 (1.026)
McFadden Pseudo R^2	0.046	0.030	0.011
Observations	232	232	164

Note: This table reports the results from logit regression models estimating the likelihood of a public-to-private transaction four weeks prior to the transaction's announcement. Interpretation: the dependent variable equals one for public-to-private firms and zero for control firms. Model (1) includes RIV/MV as the valuation measure, Model (2) includes Tobin's Q, and Model (3) includes EV/EBITDA. RIV/MV is the estimated residual income value divided by the market value of equity. Tobin's Q and EV/EBITDA are market-based valuation proxies. Tobin's Q is estimated by dividing enterprise value by total assets. FCF Ratio is measured as free cash flow divided by total assets, Size (Sales) as the natural logarithm of sales, and Leverage Ratio as total debt divided by total assets. Coefficients are reported with standard errors in parentheses. All continuous variables are winsorised at the 1st and 99th percentiles. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

Valuation Variables

The logit regression models presented in Table 7 are used to examine whether valuation variables are associated with the likelihood of a public-to-private transaction. RIV/MV is the only statistically significant valuation variable with significance at the 1% level. Regarding our first hypothesis, the RIV/MV result provides supportive evidence. The positive coefficient of 0.463 indicates that firms with higher RIV/MV ratios are more likely to become targets of public-to-private transactions. This is consistent with the broader undervaluation hypothesis, which argues that firms may be undervalued in the market relative to their true value. As a result, taking the firm private may generate

shareholder wealth gains, particularly when the acquiring party believes the firm's assets are worth more than their market value (Damodaran, 2012).

Since the control group also includes acquisition targets, the result suggests that RIV/MV helps distinguish firms taken private from those acquired through other types of public transactions. This is consistent with Bugeja & Sinelnikov (2012) and Rath & Rashid (2016), who find that private acquirers tend to target firms with greater undervaluation than public acquirers.

The significant association between RIV/MV and the likelihood of public-to-private transactions is also consistent with fundamental valuation research suggesting that RIV/MV better captures information not fully reflected in market values. Frankel & Lee (1998) find that higher RIV/MV ratios predict higher subsequent stock returns, and Lee et al (1999) show that market values tend to converge towards fundamental value over longer horizons. Although these studies focus on stock return predictability rather than on acquisition outcomes, they support the interpretation that RIV/MV contains valuation-relevant information beyond what is captured by observed market values.

In contrast, the coefficients on the market-based valuation multiples are not statistically significant. Tobin's Q has the expected negative coefficient of -0.306, which is consistent with the direction reported in prior studies (Rath & Rashid, 2016; Mehran & Peristiani, 2010). However, the coefficient is not statistically significant. This contrasts with Bharath & Dittmar (2010) and Rath & Rashid (2016), who report a significant association between Tobin's Q and the likelihood of being taken private. However, it is consistent with Mehran & Peristiani (2010), who similarly find that Tobin's Q is not a robust determinant of public-to-private transactions. The second hypothesis is therefore not supported, as public-to-private targets do not exhibit significantly lower Tobin's Q than control firms. Since Tobin's Q reflects relative market pricing rather than deviations from a firm's true value, this lack of significance suggests that public-to-private targets are not identifiably priced lower in relative market terms than control firms.

One possible interpretation of the insignificance of Tobin's Q and mixed findings across prior studies is that it may be a less robust measure for firm valuation. This is consistent with measurement concerns raised in valuation literature. Perfect & Wiles (1994) show that empirical results based on Tobin's Q are highly sensitive to the way the variable is constructed. Erickson & Whited (2000) further emphasise that standard proxies for Tobin's Q contain substantial measurement error, and that empirical relationships reported in the literature may partly reflect this error rather than underlying economic effects. Beyond measurement error, Damodaran (2012) argues that Tobin's Q may capture the perceived quality of a firm's management rather than mispricing, since poorly managed firms tend to trade below their assets. A low Tobin's Q may therefore reflect factors other than undervaluation, which weakens its usefulness as a proxy. These concerns suggest that the insignificance of Tobin's Q in this study may reflect limitations

of the measure itself rather than an absence of undervaluation among public-to-private targets. A final possible interpretation relates to the institutional setting. Renneboog & Vansteenkiste (2017) state that the determinants of a public-to-private transaction do not always apply across different institutional contexts. Since most of the prior literature has focused on the US and UK markets, it is unclear whether the same conclusions apply in a Nordic setting. This may help explain why Tobin's Q provides little evidence of mispricing in our study.

The EV/EBITDA multiple provides even weaker support for the undervaluation hypothesis. First, the estimated coefficient is close to zero (0.003), indicating weak economic relevance. Second, the coefficient is positive, which is inconsistent with the expected negative relationship in our hypothesis development. Finally, the result is statistically insignificant. Overall, these findings suggest no reliable evidence that lower EV/EBITDA is associated with public-to-private acquisitions in this sample. One possible explanation for the insignificance is the smaller sample size relative to the other specifications, resulting from excluding firms with EBITDA close to zero, a restriction necessary to ensure a meaningful interpretation of the multiple. To our knowledge, this measure has not been used in prior public-to-private studies, limiting direct comparison with earlier findings. As a relative multiple, EV/EBITDA may further reflect market pricing against comparable firms rather than deviation from a firm's true value and could therefore be less effective in capturing undervaluation. Multiple-based valuations are also sensitive to the selection of comparable firms, which produces substantial variation in observed multiples (e.g., Holthausen & Zmijewski, 2012; Schueler, 2020).

To assess the robustness of the main results, the first robustness test includes the inverse valuation measure EBITDA/EV as a fourth model, see Appendix C.1. This variable is likewise statistically insignificant, although its coefficient has the expected positive direction of 1.039. The fact that EBITDA/EV remains insignificant even after the inverse specification reduces the influence of close to zero EBITDA firms, suggesting the weak association is not driven by extreme observations. For the second robustness test, the logit specifications are re-estimated with country and time-period fixed effects, as reported in Appendix C.2. The time-period fixed effects distinguish between transactions from 2005 to 2009 and 2010 to 2025, thereby accounting for potential differences related to the global financial crisis, while the country fixed effects control for institutional differences across the Nordic markets. The main findings are preserved under this specification. RIV/MV remains positive and statistically significant, while neither Tobin's Q nor EV/EBITDA reaches significance. This indicates that the association between RIV/MV and the likelihood of a public-to-private transaction is not driven by macroeconomic variation over the sample period or by differences across Nordic markets. As an additional robustness test, the logit specifications are estimated with variables winsorised at the 5th and 95th percentiles. The results are largely consistent with the main specifications (see Appendix C.3). The one change worth noting is that Tobin's Q becomes significant at the

10% level when applying the stricter winsorisation. This provides some indication in support of the second hypothesis, suggesting that lower Tobin's Q may be associated with a higher likelihood of a public-to-private transaction. However, the evidence remains weak, as the relationship only appears when extreme observations are treated more restrictively. The result should therefore be interpreted with caution and viewed as less robust than RIV/MV, which remains consistently significant at the 1% level in the robustness test and the main model.

Overall, the logit results provide support for the research questions. Undervaluation appears to be associated with Nordic public-to-private transactions, but mainly when measured through RIV/MV. While RIV/MV is significantly related to the likelihood of public-to-private, neither Tobin's Q nor EV/EBITDA is significant in the main models, though Tobin's Q becomes weakly significant under stricter winsorisation. This measure-dependent result is central to the second research question and suggests that the choice of valuation measure affects the empirical conclusion. Given the limitations of multiple-based valuation discussed above, RIV/MV may provide a more direct indication of undervaluation, as it compares market value to an estimate of fundamental value rather than relying on observed market-based valuation multiples.

Control variables

Free cash flow is statistically significant and positive in Model 1 and Model 2 at the 5% level. In Model 1, the coefficient is 2.160, while in Model 2 it is 2.220. This indicates that higher free cash flow ratios are associated with a higher likelihood of a public-to-private transaction. This finding is consistent with Jensen's (1986) free cash flow hypothesis, which posits that excess internal funds create agency conflicts that private ownership can resolve. Empirical support is provided by Lehn & Poulsen (1989), Mehran & Peristiani (2010), and Bharath & Dittmar (2010), who similarly document a positive association between free cash flow and the likelihood of a public-to-private transaction.

Firm size is negative and statistically significant in Models 1 and 2 at the 5% level. The coefficients of -0.208 in Model 1 and -0.186 in Model 2 indicate a negative association between firm size and the likelihood of being taken private, meaning that smaller firms are more likely to be taken private. This finding is consistent with prior studies suggesting that smaller firms benefit less from remaining publicly listed due to weaker investor attention, limited analyst coverage, and a less developed information environment (Weir et al., 2008; Mehran & Peristiani, 2010; Bharath & Dittmar, 2010). A potential explanation for the lack of statistical significance of free cash flow and size in Model 3 is the smaller sample size, which may reduce the model's ability to detect a significant relationship.

Leverage is positive but not statistically significant across all model specifications. The positive coefficient is directionally consistent with Rath & Rashid (2016) and Bharath & Dittmar (2010), who find higher leverage to be associated with public-to-private

transactions. However, the absence of statistical significance means that leverage cannot be identified as a determinant of public-to-private likelihood in this sample. In addition, the leverage coefficient is much smaller in Model 2 than in Model 1, which may reflect that Tobin's Q includes debt in its construction and is more correlated with leverage than RIV/MV. Tobin's Q may therefore absorb part of the leverage effect.

Model Fit

As expected, given the parsimonious model design, the Pseudo-R^2 values reported in Table 7 are relatively low across all three specifications. These low levels are comparable to those reported in prior research on public-to-private transactions. For instance, Bharath & Dittmar (2010) reported pseudo-R^2 values ranging from 0.060 to 0.080. Since the aim is to compare the relative explanatory relevance of the valuation measure on the same sample rather than to maximise predictive power, the low absolute fit does not undermine the interpretation of the results. On this basis, the RIV/MV specification remains the most informative, as it reports the highest pseudo-R^2 of the three main models.

5. Conclusion

The Nordic region has seen substantial public-to-private activity in recent years but remains under-researched. While prior literature identifies undervaluation as an important explanation for firms taken private, most empirical evidence relies on market-based valuation measures. This thesis addresses this gap by examining whether undervaluation is associated with Nordic public-to-private transactions from 2005 to 2025, and whether a fundamental valuation measure captures this relationship better than market-based valuation multiples. By applying a carefully constructed RIV model, this study provides new evidence in a market context that has received limited attention in public-to-private literature.

Answering the first research question, the results provide support for undervaluation as a determinant of Nordic public-to-private transactions, although this support depends on how undervaluation is measured. Public-to-private targets have a mean RIV/MV ratio of 1.247, indicating that their estimated fundamental value exceeds their observed market value. This ratio is significantly higher compared to the control sample, where the mean RIV/MV of 0.946 lies close to the validation benchmark of 0.969, suggesting that undervaluation is a distinct characteristic of firms taken private rather than a general feature of all acquisition targets. The logit regression further confirms this pattern in a multivariate setting, with RIV/MV positively and significantly associated with the likelihood of a public-to-private transaction at the 1% level. The result remains robust to the inclusion of country and time-period fixed effects and to winsorising at the 5^{th} and 95^{th} percentiles. In contrast, neither Tobin's Q nor EV/EBITDA differs significantly between public-to-private targets and control firms in the main models. However, Tobin's Q has the expected negative direction and becomes significant at the 10% level only under the most restrictive winsorisation, providing limited support for the second hypothesis, while the third hypothesis receives no support.

The differences in significance across the logit models are central to the second research question. RIV/MV is the only valuation variable that reaches strong statistical significance, whereas Tobin's Q and EV/EBITDA fail to capture any reliable association with the likelihood of a public-to-private transaction. This is notable given that market-based valuation multiples have been the dominant proxy for undervaluation in prior public-to-private research, raising the question of whether conclusions based solely on these measures are sufficiently robust. Overall, the findings suggest that fundamental valuation is more informative than market-based multiples in identifying public-to-private targets in this institutional setting. The second research question is therefore answered in the affirmative.

Accordingly, this thesis contributes to current literature in two ways. First, by extending the empirical focus to the Nordic region, it broadens the geographical scope of public-to-

private research and tests whether prior evidence on undervaluation generalises to a different institutional setting. Secondly, it shows that within this sample, market-based valuation multiples, which have dominated prior research, do not appear to capture undervaluation, whereas a carefully constructed RIV measure does. This suggests that undervaluation is associated with Nordic public-to-private transactions, but that the conclusion depends on how it is measured.

5.1. Limitations

The findings of this thesis should be interpreted with several limitations in mind. First, the sample is constrained by the screening criteria. The exclusion of firms with extreme market-to-book ratios may introduce sample selection bias, particularly if some of the most undervalued firms are omitted, or vice versa. The same threshold is, however, applied to all sample groups, which limits the risk that the screening systematically favours one group over the other. Still, the results may not fully reflect the wider population. The sample selection process may also be subject to false negatives, where relevant transactions are missed, and false positives, where transactions are incorrectly included. A separate limitation concerns the comparison underlying the second research question. Because firms with EBITDA close to zero are excluded, the EV/EBITDA specification is estimated on a smaller sample than the RIV/MV and Tobin's Q specifications. The valuation measures are therefore not compared on a fully identical set of firms, which should be kept in mind when interpreting the second research question.

The RIV parameters are calibrated using 2024 data and held constant from 2005 to 2025. While this approach ensures consistency across the sample, it may not fully capture changes in macroeconomic conditions or valuation levels over time. A year-by-year calibration could potentially mitigate this limitation, but such an approach would require substantially more data and is therefore beyond the scope of this thesis. In addition, the RIV model relies on several simplifying assumptions. These assumptions were necessary to value firms consistently across a large sample. Although more company-specific assumptions could potentially improve the precision of the estimates, this was not feasible given the scope of the study. The model should therefore be interpreted as a parsimonious framework. For instance, this limitation also applies to the industry-specific PMB estimates from Runsten (1998). Although these estimates have been employed in more recent Nordic valuation research, including Anesten et al. (2020), they are based on historical data and may not fully reflect current market conditions. Nevertheless, they are retained in this study to ensure consistency and simplicity across the sample.

5.2. Suggestions for Future Research

The findings of this thesis suggest two main directions for future research. First, the analysis is limited to the Nordic region, so whether similar patterns hold elsewhere is still unknown. Prior evidence on the undervaluation hypothesis focuses mainly on the US and UK and relies almost exclusively on market-based valuation multiples. Applying a fundamental valuation approach in these markets would help establish whether the divergence between fundamental and market-based valuation identified within this study is a general feature of the undervaluation hypothesis or particular to Nordic equity markets.

Second, future research could examine whether RIV/MV is associated not only with the likelihood of a public-to-private transaction but also with the size of the bid premium offered to target shareholders. If RIV/MV reflects the difference between the estimated fundamental value and observed market value, more undervalued targets may need higher premiums to win shareholder approval. This would show how fundamental valuation relates to the pricing of a transaction, not just to which firms are selected as targets.

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Appendices

A. Final Sample

A.1. Final Sample Distribution

Panel A. Frequency of Transactions

	Public-to-private sample	Control sample
Period	N	N
2005-2013	38	42
2014-2019	33	33
2020-2025	45	41
Total	116	116

Note: This table reports the distribution of transactions across time periods for the public-to-private and control samples. The table presents the number of transactions in each period, with totals reported at the bottom for each sample.

Panel B. Country Distribution

Country	Public-to-private sample	Control sample
	N	N
Sweden	61	70
Norway	31	25
Finland	16	12
Denmark	8	9
Total	116	116

Note: This table reports the country distribution of transactions for the public-to-private and control samples. The table presents the number of transactions in each country, with totals reported at the bottom for each sample.

Panel C. Industry Concentration

Industry classification	Public-to-private sample	Control sample
	N	N
Consultants & computer	22	25
Other production	28	15
Other service	9	23
Building and construction	7	11
Real estate	13	5
Shipping	6	10
Consumer goods	7	7
Investment companies	8	5
Engineering	6	1
Pulp and paper	3	4
Pharmaceutical	3	3
Chemical industry	2	2
Trading and retail	2	2
Capital-intensive service	0	3
Total	116	116

Note: This table reports the industry distribution of transactions for the public-to-private and control samples. The table presents the number of transactions in each industry classification, with totals reported at the bottom for each sample. The industry classifications are based on Runsten (1998).

B. Sensitivity Analysis

B.1. Performance of Model Specifications with Higher Market Risk Premiums

Scenario	MRP	Growth	Horizon	Mean PE	Mean APE
MRP = 5%	0.050	0.020	3	-0.031	0.520
MRP = 6%	0.060	0.020	3	-0.051	0.508
MRP = 7%	0.070	0.020	3	-0.058	0.508
MRP = 8%	0.080	0.020	3	-0.063	0.507

Note: This table reports the validation sample performance of alternative residual income valuation (RIV) model specifications with higher market risk premiums. Interpretation: MRP denotes the market risk premium, Growth denotes the steady-state growth rate (g_{ss}), and horizon denotes the explicit forecast horizon in years. Mean PE captures systematic valuation bias, while mean APE captures the average absolute valuation error. The validation sample includes 189 observations, and the steady-state growth rate and forecast horizon are held fixed at 2% and three years, respectively.

B.2. Performance of Model Specifications with Higher Steady-State Growth Rates

Scenario	MRP	Growth	Horizon	Mean PE	Mean APE
Growth = 2%	0.050	0.020	3	-0.031	0.520
Growth = 3%	0.050	0.030	3	-0.057	0.508
Growth = 4%	0.050	0.040	3	-0.064	0.505

Note: This table reports the validation sample performance of alternative residual income valuation (RIV) model specifications with higher steady-state growth rates. Interpretation: MRP denotes the market risk premium, Growth denotes the steady-state growth rate (g_{ss}), and horizon denotes the explicit forecast horizon in years. Mean PE captures systematic valuation bias, while mean APE captures the average absolute valuation error. The validation sample includes 189 observations, and the MRP and forecast horizon are held fixed at 5% and three years, respectively.

C. Robustness Tests for the Logit Regression Models

C.1. Robustness Test for the Inverse Variable EBITDA/EV

Variable	(1)	(2)	(3)	(4)
RIV/MV	0.463*** (0.180)			
Tobin's Q		-0.306 (0.194)		
EV/EBITDA			0.003 (0.013)	
EBITDA/EV				1.039 (1.382)
FCF Ratio	2.160** (1.058)	2.220** (1.052)	1.035 (1.716)	0.900 (1.694)
Size (Sales)	-0.208** (0.082)	-0.186** (0.080)	-0.143 (0.105)	-0.147 (0.105)
Leverage Ratio	0.705 (0.796)	0.161 (0.820)	0.054 (1.026)	0.198 (1.036)
McFadden Pseudo R^2	0.046	0.030	0.011	0.013
Observations	232	232	164	164

Note: This table reports the results from logit regression models estimating the likelihood of a public-to-private transaction four weeks prior to the transaction's announcement. Interpretation: the dependent variable equals one for public-to-private firms and zero for control firms. Model (1) includes RIV/MV as the valuation measure, Model (2) includes Tobin's Q, Model (3) includes EV/EBITDA, and Model (4) includes EBITDA/EV as an inverse specification of EV/EBITDA to assess the robustness of this variable. RIV/MV is the estimated residual income value divided by the market value of equity. Tobin's Q and EV/EBITDA are market-based valuation proxies. Tobin's Q is estimated by dividing enterprise value by total assets. FCF Ratio is measured as free cash flow divided by total assets, Size (Sales) as the natural logarithm of sales, and Leverage Ratio as total debt divided by total assets. Coefficients are reported with standard errors in parentheses. All continuous variables are winsorised at the 1st and 99th percentiles. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

C.2. Robustness Test for Period and Country Fixed Effects

Variable	(1)	(2)	(3)
RIV/MV	0.567*** (0.206)		
Tobin's Q		-0.344 (0.245)	
EV/EBITDA			0.000 (0.017)
FCF Ratio	2.401* (1.252)	2.271* (1.258)	0.954 (1.848)
Size (Sales)	-0.221** (0.096)	-0.189** (0.093)	-0.129 (0.116)
Leverage Ratio	0.590 (0.850)	0.145 (0.860)	-0.236 (1.097)
Country dummies	Yes	Yes	Yes
Period dummies	Yes	Yes	Yes
McFadden Pseudo R^2	0.054	0.035	0.015
Observations	232	232	164

Note: This table reports robustness specifications from logit regression models estimating the likelihood of a public-to-private transaction four weeks prior to the transaction's announcement. Interpretation: the dependent variable equals one for public-to-private firms and zero for control firms. Model (1) includes RIV/MV as the valuation measure. Model (2) includes Tobin's Q, and Model (3) includes EV/EBITDA. All models include country and period fixed effects. RIV/MV is the estimated residual income value divided by the market value of equity. Tobin's Q and EV/EBITDA are market-based valuation proxies. Tobin's Q is estimated by dividing enterprise value by total assets. FCF Ratio is measured as free cash flow divided by total assets, Size (Sales) as the natural logarithm of sales, and Leverage Ratio as total debt divided by total assets. Coefficients are reported with standard errors in parentheses. All continuous variables are winsorised at the 1st and 99th percentiles. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

C.3. Robustness Test with 5th and 95th Percentile Winsorisation

Variable	(1)	(2)	(3)
RIV/MV	0.576*** (0.200)		
Tobin's Q		-0.393* (0.236)	
EV/EBITDA			0.002 (0.017)
FCF Ratio	2.462** (1.234)	2.342* (1.236)	0.927 (1.831)
Size (Sales)	-0.243*** (0.093)	-0.214** (0.091)	-0.147 (0.111)
Leverage Ratio	0.625 (0.844)	0.157 (0.855)	-0.102 (1.081)
McFadden Pseudo R^2	0.048	0.029	0.010
Observations	232	232	164

Note: This table reports robustness specifications from logit regression models estimating the likelihood of a public-to-private transaction four weeks prior to the transaction's announcement. Interpretation: the dependent variable equals one for public-to-private firms and zero for control firms. Model (1) includes RIV/MV as the valuation measure, Model (2) includes Tobin's Q, and Model (3) includes EV/EBITDA. RIV/MV is the estimated residual income value divided by the market value of equity. Tobin's Q and EV/EBITDA are market-based valuation proxies. Tobin's Q is estimated by dividing enterprise value by total assets. FCF Ratio is measured as free cash flow divided by total assets, Size (Sales) as the natural logarithm of sales, and Leverage Ratio as total debt divided by total assets. Coefficients are reported with standard errors in parentheses. All continuous variables are winsorised at the 5^{th} and 95^{th} percentiles. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

AI Appendix

The use of AI tools in this thesis was in accordance with SSE's guidelines. AI supported the thesis primarily through language refinement, proofreading, and code review.

First, ChatGPT and Grammarly were used to improve the overall readability by identifying incorrect language and improving sentences. However, the proposals they identified were discussed before being applied. It also helped us understand difficult concepts overall, making it easier to apply them correctly.

Second, we used NotebookLM to assist with our academic literature review. It was used to identify potentially relevant material, which we then read through ourselves to assess its relevance and accuracy before incorporating it into the thesis. The tool supported the efficiency of our literature search, but the selection, interpretation, and use of sources remained our own.

Third, ChatGPT was used to double-check our R code. We asked it to review the script for consistency and to confirm whether it was applied correctly. This supported our code by identifying potential mistakes.

None of these tools was used to produce empirical results or draft analytical content. The contribution of AI is therefore one of clarity and reliability rather than substance.

Risks that were found included the fact that AI tools sometimes could explain concepts incorrectly. Therefore, we needed to review all statements to get a general overview. Furthermore, it could summarise the literature and draw inaccurate conclusions. Thus, we used it to get a general idea of the content before digging deeper ourselves.