



LUND UNIVERSITY
School of Economics and Management

Financial Advisor Reputation and Value Creation in M&As - Evidence from the Scandinavian Market

In contrast to previous studies, we show a significant positive effect of financial advisor reputation on cumulative abnormal returns. In M&As completed in Scandinavia between 2000 and 2015, top-tier advisors create 1.32% higher abnormal returns to the acquiring firms' shareholders. Top-tier advisors are also associated with longer time to completion, indicating that they are more thorough in the acquisition process to ensure value creation. The results remain significant after controlling for acquirer and deal characteristic shown to influence acquirer returns.

MSc in Corporate and Financial Management

Authors

Emil Esbjörnsson
Johan Lövstrand

Supervisor

Maria Gårdängen, Ph.D.

Abstract

Title:	Financial Advisor Reputation and Value Creation in M&As - Evidence from the Scandinavian Market
Authors:	Emil Esbjörnsson and Johan Lövstrand
Supervisor:	Maria Gårdängen, Ph.D.
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Purpose:	The purpose of this paper is to examine to what extent the reputation of financial advisors in mergers and acquisitions affect the value created for the acquiring firm's shareholders in the Scandinavian market.
Theoretical Framework:	Research covering the role of financial advisors and the relationship between advisor reputation and value creation.
Empirical Framework:	A sample of 448 Scandinavian acquisitions completed between January 1, 2000 and December 31, 2015.
Methodology:	Quantitative research approach, multivariate OLS regression analysis.
Conclusions:	This study provides new evidence from the Scandinavian market, showing that top-tier financial advisors affects the value created for acquiring firms' shareholders by generating significantly higher abnormal returns.

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1 Introduction

In the first introductory chapter, the background and problem discussion that is the foundation for the purpose and research question are presented. Further, the delimitations and the thesis outline are covered.

1.1 Background and Problem Discussion

In corporate finance, mergers and acquisitions (M&As) is seen as one of the most crucial activities. Only in 2015, companies spent \$3.8 trillion globally. This is the highest amount in history, exceeding the previous peak in 2007 (Bloomberg, 2016). Furthermore, the optimism in M&A has increased during recent years, where deal intentions are the highest in six years. A global study by EY (2015) show that 60% of companies intend to engage in M&As within the next 12 months.

M&A activity is dependent on cycles, called merger waves (DePamphilis, 2010), where the sixth, and the most recent merger wave peaked in 2007 (Sudarsanam, 2010). As a result of the increasing M&A activity, researchers are now debating if we in fact are in the seventh merger wave (McCarthy and Dolfsma, 2013).

However, whether M&A creates value is being subject of debate by academic literature. Previous research in the field focus on whether it creates value for the acquirer and/or target shareholders, with varied results (Kargin, 2001). Allen, Jagtiani, Peristiani and Saunders (2004) show that target firms experience positive returns on the announcement of a transaction, while the acquirer experience no or negative abnormal returns. This is supported by Dodd and Ruback (1977), Dodd (1980), Franks, Harris and Titman (1991). Furthermore, Jensen and Ruback (1983), Jarrell, Brickley, and Jeffrey (1988) present empirical results that both the acquirer and target shareholders receive positive abnormal returns. Devos, Kadapakkam and Krishnamurthy (2008) show that M&A creates value through operating synergies as economies of scale and scope as well as increased market power. Chatterjee (1986) mean that unrelated M&As generates diverse cash flow, which leads to risk reduction. In contrast, research by Tuch and O'Sullivan (2007) claim a negative relationship for the acquiring firm, which is in line with research by Bishaar, Knight and Van Wassenae (2001), showing that more than 50% of M&As does not create value.

Following this debate, a branch of the academic literature show that the value created in M&As are influenced by which financial advisor¹ the firm hires (e.g. Bowers and Miller, 1990; Kale, Kini and Ryan, 2003; Bao and Edmans, 2011; Golubov, Petmezas and Travlos, 2012). Bowers and Miller (1990), McLaughlin (1990) and Servaes and Zenner (1996) show that financial advisors is an important part in M&A, arguing that they affect returns by identifying a relevant target company, recognizing synergy effects, proposing premium and valuation, negotiating terms with counterparts and giving strategic advice throughout the process. The industry of financial advisors is to a large extent represented by top-tier advisors, in terms of number of deals advised and deal value. Top-tier advisors are defined as high reputation advisors, often “bulge bracket”² investment banks. Because of a reputation of expert knowledge in the field and vast experience in transactions, high reputation advisors are argued to provide higher quality service for their clients and consequently increase value created in M&As (Golubov et al., 2012). This is derived from theory describing the relationship between high reputation and high quality (Shapiro, 1983; Allen, 1984; Chemmanur and Fulghieri, 1994).

However, prior studies in this field of research show varied results whether the reputation of the hired financial advisor in fact creates higher returns for the acquiring firm. Kale et al. (2003), Bao and Edmans (2011) and Golubov et al. (2012), argues that bidding firms hiring top-tier advisors experience higher returns. However, this is not supported throughout the whole empirical literature, where several studies failed to explain this reputation-return relationship and instead found a negative or an insignificant relationship between advisor reputation and created returns (McLaughlin, 1992; Servaes and Zenner, 1996; Rau, 2000; Hunter and Jagtiani, 2003; Ismail, 2010).

The contradicting results of previous studies, leaves several questions whether the reputation of financial advisor matter in M&As. In addition, the majority of prior research in the field has been conducted in the US market, thus it can be questioned whether the relationship holds outside the US. Building on to this issue, the research area has been expanded, where Da Silva Rosa, Lee, Scott and Walter (2004) analyzed the Australian market, Schiereck, Sigl-Grüb and Unverhau (2009) conducted research in the European market, Rasedie and Srinivasan (2011) in Canada, Chuang (2016) broaden the research to the Asia-Pacific area. Research is now covering a

¹ Financial advisor is defined as investment bank, M&A boutique or other advisory firm to the acquiring or target firm in an acquisition. These will be used interchangeably in this study.

² Umbrella term for the highest ranked investment banks in terms of deal value and number of deals.

majority of advanced economies in the world (IMF, 2016), however there have been no previous studies focusing on Scandinavia³.

According to S&P Capital IQ (2013), Scandinavian M&A activity has continuously increased in recent years. This is a consequence of strong firm fundamentals, supported by high revenue growth, as well as a higher GDP growth in Sweden, Finland, Norway and Denmark compared to the Eurozone average. This gives strength to Scandinavian business and it is a reason that it has been, and continues to be, an attractive area for M&As.

The highest M&A activity in history, in combination with the contradicting results of previous studies and the strong market in Scandinavia, this study contributes to existing literature by extending the research to the Scandinavian market, examining the relationship between financial advisor reputation and value creation in M&As.

1.2 Purpose and Research Question

The purpose of this paper is to examine to what extent the reputation of financial advisors in mergers and acquisitions affect the value created for the acquiring firm's shareholders in the Scandinavian market. This leads to the following research question:

- *To what extent does the reputation of financial advisors affect the value created for the acquiring firm's shareholders in mergers and acquisitions in Scandinavia?*

1.3 Delimitations

A relevant area to study which would add depth to the research conducted in this study, is whether the top-tier advisors create abnormal returns in excess for the higher fees charged. Hunter and Walker (1990) show a positive relationship between the fees being paid by acquirer and returns in M&As, indicating that advisors operate in the interest of their clients. Hunter and Jagtiani (2003) find that top-tier advisors generate lower returns around the announcement even though they charge higher fees. However, studying the Scandinavian market is subject of data limitations; advisor fees were only disclosed in 4 deals out of 448 in Thomson Financial SDC

³ Sigl-Grüb and Unverhau (2009), is the only study, to our knowledge that includes deals from Scandinavia. However, the representation is only 12 deals out of a total sample of 285, leaving it difficult to draw conclusions from the impact of advisor reputation in the Scandinavian market.

Mergers and Acquisitions Database. Controlling the sample in other databases such as S&P Capital IQ and Zephyr, gives the same result. Consequently fees are not covered in this study.

Another related area to examine, not covered by this paper, is abnormal returns associated to target company. However, in order to calculate abnormal returns, it requires the target to be publicly listed. This would reduce the sample from 448 to 101 deals, decreasing the ability to draw conclusions from the sample.

1.4 Thesis Outline

In the following chapter, the literature review is presented which is the theoretical foundation for this study. Empirical research on the role of financial advisors as well as the impact of financial advisor reputation on value creation in M&As is presented. Further, a discussion is provided of factors shown to have effect on acquirer returns beyond reputation. Hypotheses are then derived from the presented literature. The next chapter covers the chosen methodology for this study. Describing the data sample collection, event study methodology, reputational ranking of advisors, control variables and regression models. In the following chapter, the result and analysis is conducted, starting with descriptive statistics and followed by regression analysis based on theoretical and empirical evidence. In the last chapter the discussion of results and conclusion is laid out, including suggestions for further research.

2 Literature Review

In this chapter the theoretical framework is outlined. Empirical research on the role of financial advisors and the advisors impact on acquirer abnormal returns is presented. Furthermore, research on the reputational effect on time to completion in a transaction and on cross-border deals is laid out. Lastly, a discussion is provided of factors shown to have an additional effect on acquirer returns beyond reputation. Hypotheses are then derived from the presented framework.

2.1 The Role of Financial Advisors and Reputation

A branch of academic literature, building on the discussion if M&As creates value, examines whether financial advisors affect returns in M&As and furthermore if their reputation affect returns. To assess their impact, previous literature studies the role of the advisor. According to Bowers and Miller (1990) and Servaes and Zenner (1996), financial advisors increase shareholder returns by using their expertise in the market to find suitable acquisition targets, identify financial synergies and operational synergies in form of increased economies of scale and scope. The advisor further consults on relevant acquisition premium and performs valuation. McLaughlin (1990) argues that advisors give strategic advice in the acquisition process and negotiate for better terms with shareholders.

Building on to this, Chemmanur and Fulghieri (1994) and Fang (2005) claim that an advisor with high reputation provides better service for their clients. The high reputation is built up by expertise gained from broad experience and knowledge in M&As. As well as, achieving economies of scale and scope of constant market interactions and advising on several deals simultaneously. Their argumentation is derived from research by Shapiro (1983) and Allen (1984) who shows that reputation is related to higher quality. In addition, Golubov et al. (2012) argues that high reputation advisors will put in more effort to provide better service to prevent the risk of losing reputation and market share, and thus losing future revenue.

Literature associated with the role of advisors and the reputation-quality relationship is in consensus and not subject of extensive debate. However, empirical research studying whether the high reputation of the financial advisor in fact leads to better service and consequently higher value created for the acquiring firm's shareholder, show varied results. In the subsequent section, this research is presented.

2.2 Financial Advisor Reputation and Value Creation

2.2.1 Positive Reputation-Return Relationship

Bowers and Miller (1990) were one of the first to study the relationship between advisor reputation and returns in M&As. They conduct research in the US market from 1981 to 1986. Claiming that top-tier advisors generate higher returns because of their reputation of knowledge and experience in M&As and should generate a higher portion of the gain to shareholders in an acquisition. The results show that top-tier advisors create abnormal returns for the acquirer and target shareholders in M&As. Advisors are also able to identify transactions with greater total synergies. However, top-tier advisors do not add any bargaining advantage to obtain a greater stake of these synergies. Thus, the research supports that reputation has a significant positive impact to value creation in M&As.

In line with Bowers and Miller (1990), Kale et al. (2003) find that hiring a top-tier advisor is positively related to returns for acquirer. Their study focus on tender offers analyzing a sample of 324 US public targets. Nonetheless, this result only holds when reputation is measured as the acquirer advisor's reputation relative to the target advisors, meaning that lower returns is generated for the acquiring firm when the advisor of the target has a greater reputation than of the acquirer. In addition, the results show that top-tier advisors back out from engaged transactions more frequently when the price is high and when the risk of value-destroying transactions increase.

Additionally, Bao and Edmans (2011) and Golubov et al. (2012) present evidence of a positive relationship between bidder abnormal returns and the reputation of the financial advisor. The result of Golubov et al. (2012) is only significant when targets are public. The significant results show that top-tier advisors generate 1.53% increase in announcement returns. They explain the results by meaning that top-tier can identify synergy effects, and also negotiate better terms and consequently increase announcement returns.

2.2.2 Negative or No Reputation-Return Relationship

In contrast to Bowers and Miller (1990), Kale et al. (2003), Bao and Edmans (2011) and Golubov et al. (2012), several studies show a negative or no relationship between reputation and return. McLaughlin (1990, 1992) claim that advisors with high reputation perform high quality services focusing on meeting acquirer needs and with high motivation to complete the transaction.

However, the research conducted show evidence that top-tier advisors do not create abnormal returns. This since top-tier advisors are employed in more complex transactions that comes with greater premiums, therefore generating lower returns to the acquirer. In unison, Michel, Shaked and Lee (1991) show that low-tier advisors outperform top-tier investment banks in regards to cumulative abnormal returns.

Servaes and Zenner (1996) study if hiring an investment bank create higher announcement returns compared to executing the acquisition in-house. They performed the study in United States over the period 1981 to 1992. The study shows a significant result that acquirer announcement abnormal returns are lower when hiring a top-tier investment bank than performing the acquisition in-house. In addition, it shows that firms choose to hire an advisor depending on the type of transaction, diversification of the deal, complexity of the deal and whether or not the acquiring firm has prior experience of acquisitions. After controlling for transaction- and acquirer characteristics the results show no difference in returns for executing the acquisition in-house or hiring a financial advisor.

Rau (2000) studies factors that influence the market share of financial advisors involved in M&As. The result shows that advisors with higher market share, charge premium prices for their services. However, the market share has no impact on the performance of acquirers. Nevertheless, acquirers using top-tier advisors in mergers, earn lower announcement returns than second and third tier, showing that reputation is negatively related to returns. In tender offers, acquirers using top-tier advisers experience higher returns.

Research by Saunders and Srinivasan (2001) and Hunter and Jagtiani (2003) show that top-tier advisors charge higher fees than non-top-tier advisors, indicating that the acquirer believes top-tier advisors provide higher quality services. Nevertheless, Saunders and Srinivasan (2001) show no significant effect on abnormal returns around the deal announcement when hiring a top-tier advisor. Hunter and Jagtiani (2003) find lower returns associated with top-tier as well as lower synergy gains attributed to deals using a high reputation advisor.

Da Silva Rosa et al. (2004) test the validity of the study of Rau (2000) using a sample of 801 takeovers in Australia. The result shows that top-tier advisors are expected to be hired by the acquirer when the deal is large, hostile, and includes non-cash compensation. The results are in line with Rau (2000), showing that top-tier advisors do not create abnormal returns to the acquirer. Schiereck et al. (2009) focus on the European market, examining 285 transactions

between 1997 and 2002, where 187 in UK and 12 representing deals in Scandinavia. The results showed no significant difference if the acquirer hire a top-tier or a non-top-tier advisor. Further, they show that advisors are hired based on certain characteristics such as transaction value and bidder size.

Ismail (2010) study 6379 deals in the US between 1985 and 2004, showing a loss of more than \$42 billion for acquirers that hired a top-tier advisor. Firms that instead hired a second-tier advisor received a gain of \$13.5 billion around the deal announcement. This result indicates that the incentive of the financial advisor is different when advising large deals compare to small deals. In addition, the research show both that the acquirer pays larger premiums in large deals and that the acquirer's abnormal return are smaller when the target firm hire a top-tier advisor.

Rasedie and Srinivasan (2011) examine the Canadian market, using Tobin's Q as performance variable in order to investigate whether acquiring firm that hire top quality financial advisors generate higher or lower return. The results indicate that there was no significant effect of the financial advisors rank or lagged market share on the performance or the time to completion. According to Bruner (2004), it can be questioned whether Tobin's Q is a correct measurement of acquirers performance. This is since the before and after comparison is weak when testing M&A profitability because it does not capture unrelated deal factors that could have influenced the stock price.

Song, Wei and Zhou (2013) study the role of boutique advisors and their impact in M&As. They find that boutique advisors are more likely to be used in small deals, hostile deals and all-stock deals due to their industry expertise. In addition they find a positive relationship with using boutique advisors and deal outcomes. Hiring boutique advisors are also associated with lower target premium. In addition, they show no significant result that top-tier advisors generate higher returns.

Chuang (2016) is, to our knowledge, the first to explore the impact of financial advisor reputation on returns in the Asia-Pacific market. Using a sample of 5271 transactions between 1995 to 2011, he show that the acquirer gains is higher when using a financial advisor compared to executing the deal in-house. However he shows no significant result that top-tier advisors create higher returns. In contrast tier-2 and tier-3 advisors create higher announcement returns.

2.3 Financial Advisor Reputation and Time to Completion

Research also shows that reputation affects the time between the announcement of a deal and the completion, referred to as the time to completion. Golubov et al. (2012) and Chuang (2016) explains the effect by that financial advisors usually manage the negotiation process and could then influence the time to completion. Top-tier advisors are believed to have greater negotiation skills and expertise therefore they should be able to complete deals faster. Nevertheless, these advisors have built up a higher reputation that can be damaged and top-tier advisors might then take more time to correctly evaluate the details of the deal and arrange greater contract terms for the acquirer.

Hunter and Jagtiani (2003) find that top-tier advisor complete deals faster in comparison to non-top-tier. Furthermore, they show that time to completion decreases in tender offers, in line with Golubov et al. (2012) and Song et al. (2013). In addition Hunter and Jagtiani (2003), show that time to completion increases in hostile deals, due to the complexity of deals. This is supported by Walter, Yawson and Yeung (2008), who argue that complex deals are associated with longer time to completion.

Research by Golubov et al. (2012) and Walter et al. (2008) further support the findings from Hunter and Jagtiani (2003), showing that top-tier advisors are associated with shorter time to completion. Golubov et al. (2012) examine the skilled advisor hypothesis, meaning that top-tier advisor should complete deals faster because of their superior skills and expertise. They also examine the diligent advisor hypothesis, meaning they could take more time to complete the deal since it might damage their reputation to not find a good candidate, i.e. they are more thorough in their investigation. Walter et al. (2008) supports the skilled advisor hypothesis, showing that high quality advisors have more experience and expertise in the transaction process.

In contrast, Da Silva Rosa et al. (2004) and Song et al. (2013) show no significant relationship between top-tier deals and completion time. However, Song et al. (2013) show a significant positive relationship between hiring a boutique advisor and time to completion. They argue that boutique advisors are thorough in their analysis and spend more time to ensure quality. Walter et al. (2008) state that larger targets are often more complex and therefore more difficult for the advisor to value, in comparison to smaller targets. This requires greater use of resources in order to ensure the success of the deal. Larger deals will then result in longer time to completion.

In line with Golubov et al. (2012), Chuang (2016) investigates the better skill hypothesis. However, the results are in line with Da Silva Rosa et al. (2004) and Song et al. (2013) showing no significant effect on reputation and the time to completion. Chuang (2016) show evidence that tier-3 advisors in his study complete the deal faster. There is also a positive relationship between payment in cash and time to completion. When the payment method consists of only stocks instead, it is more difficult to evaluate the offer due to its complexity which extends time to completion (Song et al., 2013). In addition, tender offers resolve faster. Chuang (2016) further divides his sample into subsamples of cross-border and domestic deals. He argues that cross-border deals are more complex and should take longer time to complete. The result supports this, showing that financial advisors spend more time in cross-border deals in comparison to domestic deals. Furthermore, he argues that top-tier advisors spend more time in cross-border deals since the potential loss in reputation is not worth the risk and want to protect their reputation, i.e. takes longer time to complete the deal to make sure good outcome.

2.4 Financial Advisor Reputation in Cross-Border and Domestic Deals

Limited research has examined the relationship between reputation and returns in cross-border deals. The rationale of cross-border M&As is according to Adler and Dumas (1983) risk reduction through geographical diversification, if the acquisitions generate diversified cash flows. In addition, Lewellen (1971) claim the reason behind being increasing the market share in growth markets. However, previous literature debates whether cross-border M&As create value. Moeller and Schlingemann (2005) show that cross-border deals generate significantly lower returns than domestic deals. Confirming this study in the European market, Aw and Chatterjee (2004), find that firms in UK experience lower returns in cross-border deals compared to domestic.

Furthermore, Shimizu, Hitt, Vaidyanath, and Pisano (2004) and Morosini, Shane and Singh (1998) show that the complexity and challenges are greater when engaging in cross-border M&As than in domestic deals. They argue that cross-border deals come with higher integrations costs due to differences in culture, history, institutional settings, which decreases performance. The complexity of cross-border deals also leads to a more difficult due diligence process and hence a more challenging transaction process. To be able to identify synergies and find the right target company, the acquirer needs to analyze different political, economic, legal, tax and accounting system, and this in addition to the less information available (Shimizu et al., 2004).

Furthermore, the organizational culture is affected by national culture, which leads to differences between acquirer and target, thus increasing the complexity (Harzing and Van Ruysseveldt, 2004). Chuang (2016) examine the reputational effect of cross-border M&As in the Asia-Pacific market. He finds evidence that bidders advised by tier-2 advisors experience higher returns in cross-border deals, however he show no significant effect that top-tier advisors increase returns.

2.5 Acquirer- and Deal Characteristics

Theory associated with value creation in M&As and financial advisor reputation, find several acquirer- and deal characteristics which in addition to reputation, influence abnormal returns. In order to fully understand and isolate the effect of reputation, it is necessary to control for these factors. The presentation below gives an understanding on the effects of these variables on returns.

Size Moeller, Schlingemann and Stulz (2004) and Golubov et al. (2012) show that firm size has a significant negative effect on abnormal announcement returns. Proving that larger companies experience lower returns in M&As in comparison to smaller firms. Rau and Vermaelen (1998), Moeller et al. (2004) and DePamphilis (2010) show that smaller firms tend to realize higher returns than relatively larger firms. This is due to the potential overconfidence and empire-building intent of the managers in bigger firms, which leads to non-value maximizing incentives and resulting in value-destroying acquisition (Malmendier and Tate, 2008). In contrast, smaller firms tend to make acquisition within products or markets they have knowledge of, which increase returns for smaller firms, hence a negative effect of size (DePamphilis, 2010). Prior work also show top-tier advisors advise more on deals where bidder size is large and that time to completion increase with firm size (Golubov et al., 2012). However, Chuang (2016) argue that bidders complete deals faster when the firm size is large.

Leverage High leverage is shown to have a positive effect of announcement return of the acquiring firm according to Maloney, McCormick and Mitchell (1993). Maloney et al. (1993), Jensen (1986), Seth (1990) argues that high debt, leads to more focused managers who make better decisions. In addition, it keeps managers from engaging in value-destroying acquisitions. In conclusion, the expectation is that that leverage should have a positive effect on returns. Furthermore, it is expected that higher leverage is associated with greater time to completion (Golubov et al., 2012).

Book-to-market Studies performed by Dong, Hirshleifer, Richardson and Teoh (2006) shows a positive relation between book-to-market ratio and announcement returns. However, Rau and Vermaelen (1998) shows a significant negative relation, arguing that low book-to-market firms will make value-destroying M&A decisions and thus lower returns. In addition, research by Golubov et al. (2012) and Chuang (2016) shows that book-to-market is higher for bidders where non-top-tier advisors are used in comparison with deals being advised by top-tier advisors. Golubov et al. (2012) also show that a higher book-to-market is associated with longer time to completion.

Relative size The relative size of the deal in relation to the acquirer, is shown by Fuller, Netter and Stegemoller (2002) and Golubov et al. (2012) to have a negative relationship to bidder returns. It is explained by the larger bargaining power and higher integrations cost of larger targets. However, research made by Asquith, Bruner and Mullins (1983) and Moeller et al. (2004) indicating that acquirer announcement returns increase when the relative deal size increases. Previous research from Golubov et al. (2012) also show that an increase in relative size increases time to completion, while Song et al. (2013) find the opposite.

Tender offers Tender offers are often a result of friendly negotiations between the boards of acquirer and target firm. DePamphilis (2010) and Jensen and Ruback (1983), show that tender offers generates positive returns. However, studies of Song et al. (2013), find that these deals are associated with higher premiums. Golubov et al. (2012) claim that tender offers are more complex, leads to a negative relationship to returns.

Hostile deals Hostile deals involve the acquirer to make an offer directly to the shareholder of the target, without negotiating with board and management first. Servaes (1991), Golubov et al. (2012) shows that hostile bids generate lower returns for the acquiring firm. This since the deal often involves complexity and resistance of the target's management. In addition hostile deals often involve a premium (Song et al., 2013). In contrast Franks et al. (1991), Franks and Harris (1989) find that hostile takeovers are associated with higher abnormal returns.

Diversifying deals Lewellen (1971) and Villalonga (2004) argue that M&As across industries will benefit the acquirer since it generates diverse cash flow. This will reduce risk for debt holders consequently lower cost of debt which will reduce the probability of default, in line with Jensen and Ruback (1983). Furthermore, cross-industry acquisitions will lead to synergy effects and increased returns, if businesses complement each other. Jensen (1986), Morck,

Shleifer and Vishny (1990) and Fan and Goyal (2006) argue that managers with empire-building intent, are more prone to engage in value-destroying acquisitions across industries, leading to negative returns. In addition, Golubov et al. (2012) claim that diversifying deals are likely to be more complex.

Cross-border deals Prior studies mean that acquisitions across borders increase the complexity, as well as require extra effort (Chuang, 2016). Moeller and Schlingemann (2005) and Aw and Chatterjee (2004) show that cross-border deals generates significantly lower returns than domestic deals. Furthermore, lower announcement returns are a consequence of higher integration cost, risk and asymmetric information between acquirer and target.

Payment method Different payment methods in M&A can affect the return. Travlos (1987), Fuller et al. (2002), Martynova and Renneboog (2009) argue that cash offers are generating higher announcement returns to the acquirer than stock offers. Stock offers signals to the market that the firm is overvalued, while cash offers signals that the firm is undervalued. Moeller and Schlingemann (2005), Martynova and Renneboog (2009) show that there is a negative relationship between payment including stock and returns. In contrast, Walter et al. (2008) show that top-tier investment banks are able to create abnormal returns when payment includes stock.

Table I
Variable Expectations Outcome

This table presents the expected variable effect on bidder returns, as outlined in section 2.5

Variable	Expectation
Size	Negative
Leverage	Positive
Book-to-market	Positive
Relative size	Positive/Negative
Tender offers	Positive
Hostile deals	Negative
Diversifying deals	Positive/Negative
Cross-border deals	Negative
All-cash deals	Positive
All-stock deals	Negative
Payment incl. stock	Positive/Negative

2.6 Summary Empirical Evidence and Hypotheses Development

Financial Advisor Reputation and Value Creation

According to Shapiro (1983) and Allen (1984) a higher reputation leads to high quality service. Chemmanur and Fulghieri (1994) and Golubov et al. (2012) build on to this relationship claiming that higher reputation financial advisors perform better services. Consequently higher reputation is expected to increase the value created in M&As. The first hypothesis derived from theory:

Hypothesis 1: The value created for the acquiring firm's shareholders are higher in mergers and acquisitions advised by a top-tier financial advisor.

Financial Advisor Reputation and Time to Completion

Top-tier advisors are expected to complete deals faster due to greater negotiations skills and expertise, as well as from economies of scale and scope of constant market interactions and advising on several deals simultaneously. From this discussion, the second hypothesis is derived:

Hypothesis 2: The time from announcement date of a transaction to the date of completion is shorter in mergers and acquisitions advised by a top-tier financial advisor.

Financial Advisor Reputation in Cross-Border and Domestic Deals

Cross-border deals are considered more complex due to different legal systems, accounting standards and organizational culture. This will lead to difficulties finding a suitable target and consequently a more difficult due diligence process. A financial advisor with higher reputation is expected to perform better in cross-border deals and increasing the abnormal return for the acquirer. Formulated hypothesis is therefore:

Hypothesis 3: The value created for the acquiring firm's shareholders are higher in cross-border mergers and acquisitions advised by a top-tier financial advisor.

3 Methodology

This chapter presents the methodology used to perform the study. We describe the data collection, sample selection criteria, the composition of the event study together with the construction of variables used in the presented regression models. The chapter ends with a methodological discussion.

3.1 Research Approach

The study intend to examine to what extent the reputation of financial advisors in mergers and acquisitions affect the value created for the acquiring firm's shareholders in the Scandinavian market. To perform this study, a deductive approach is used where hypotheses are derived from theories and previous empirical research (Bryman and Bell, 2003). The hypotheses are then tested, where secondary data is collected and analyzed in relation to prior research and theory. As a last step, this study aims to contribute to existing literature by extending the research to the Scandinavian market.

3.2 Data Collection and Sample

This study relies on secondary data, where Thomson Financial SDC Mergers and Acquisitions Database is used to retrieve deal characteristics. The database is commonly used in research when studying the financial advisor's role in M&A due to the extensive number of deals available with generous deal characteristics disclosed during long periods of time (e.g. Rau 2000; Golubov et al., 2012; Kale et al., 2003; Song et al., 2013; Bao and Edmans 2011; Ismail, 2010). To collect additional data for bidder characteristics, Datastream is used, which is frequently used in research (e.g. Schiereck et al., 2009; Ismail, 2010; Chuang, 2016).

The sample consists of completed M&A transactions between January 1, 2000 and December 31, 2015, where the acquirer is based in Scandinavia (Sweden, Finland, Norway and Denmark). The time period is chosen to capture both boom and bust periods during M&A waves, because bidder abnormal returns generated by financial advisors can differ between different periods (Ismail, 2010). The 6th merger wave occurred between 2003 and 2007, while the period between 2008 and 2010 was the lowest since 2004, measured in transaction value, due to the economic downturn during the financial crisis (KPMG, 2011). However, the M&A activity in

Scandinavia has increased in the last years, where the market in 2014 reached the highest total transaction value in one year since 2006 (Nyhetsbyrå Direkt, 2015).

Since this study focus on M&A transactions, we do not include privatization deals, leveraged buyouts, repurchases, going private deals, liquidations, reverse takeovers, restructuring deals, bankruptcy acquisition and joint ventures. Thus, follow similar procedure as previous research (e.g. McLaughlin, 1990; Golubov et al., 2012). To measure abnormal returns, this study includes public bidders, while targets are public, private or subsidiary firms, as in Golubov et al. (2012).

In line with Rau (2000), Fuller et al. (2002), Ismail (2010), Bao and Edmans (2011), deal value of at least 1 US\$ million is required to be included in the sample. The procedure is then followed by Golubov et al. (2012), where deal value is restricted to be at least 1% of bidder's market value 4 weeks prior announcement of the deal. This ensures that the acquisition is of sufficient size to the bidder. The selection criteria further includes deals that characterizes a transfer of control, i.e. an acquisition of more than 50% of target and an ownership of less than 10% prior the transaction as in previous research (e.g. Rau, 2000; Faccio, McConnell, and Stolin, 2006; Bao and Edmans, 2011; Golubov et al., 2012; Chuang, 2016).

In addition, to calculate bidder returns, data of bidder stock price is required to be covered in Datastream. Furthermore, financial advisor must be disclosed in Thomson Financial SDC Mergers and Acquisitions Database as in Rau (2000), Kale et al. (2003), Ismail (2010), Bao and Edmans (2011), Golubov et al. (2012) and Chuang (2016). Table II, summarizes the sample criteria, where the total sample is 504 deals.

Table II
Sample Criteria

The table presents the sample criteria for the study.

1. Acquirer based in Scandinavia (Sweden, Finland, Norway, Denmark)
 2. Acquirer publicly traded
 3. Deals completed over the period January 1, 2000 to December 31, 2015
 4. Deal value at least 1 US\$ million
 5. Deal value greater than 1% of acquirer market value
 6. Acquire at least 50% of target company
 7. Financial advisor disclosed in database
 8. Acquirer returns covered in Datastream
-

However, the initial sample of 504 deals is not the final sample used in the study because of difficulties in finding data. Table III, present the number of observations excluded together with the reason why they are excluded from our final sample. 41 observations are excluded because firm characteristic data is not available in Datastream. Therefore, difficulties emerge in creating all the variables needed for the regression analysis. However, for the variables that we can calculate, it indicates that the firm characteristic data would not distort the final sample, since they are in line with the included variables. In addition, 15 observations are excluded since there is not sufficient data of bidder stock prices to calculate abnormal returns. This occurs as bidders have not been listed long enough before the transaction to estimate normal returns during the complete estimation period. Consequently, this results in 56 observations being excluded in total, 11% of the original sample.

Nevertheless, by using the time period available for the 56 excluded observations, it implies that the cumulative abnormal returns would not have distorted the cumulative abnormal return used in the final sample. Of the excluded observations, bidders use top-tier advisors in 21.4% of the transactions. This is close to the top-tier share in the final sample of 22.1%. In addition, of the 56 excluded observations, 69% are of cross-border nature, which is close to the allocation of 65% in the final sample. Thus, it is reasonable to believe that the excluded observations would have had a negligible impact on the results of this study. The final sample in this study consists of 448 deals and is used throughout the rest of the paper.

Table III
Excluded Observations

The table presents excluded observations for a sample of M&As announced in Scandinavia over the period January 1, 2000 to December 31, 2015 as well as the reason for being excluded.

Firm characteristic data not available to create variables	41
Stock price of bidder not available due to short time of listing	15
Total observations excluded	56

3.3 Event Study

By using an event study the effect of M&A transactions on bidder returns can be measured. Thus, it is possible to measure the economic impact of the transaction. For this to be true, it is important that the full value of the transaction is reflected in the bidder's stock price at or around the announcement date. Hence, market efficiency is a crucial aspect (Fama, 1970).

3.3.1 Event- and Estimation Period

The event study consists of an estimation period and an event period. Within the event period, the event date could either be defined as the announcement date of the transaction or completion date. If the date of completion is used, then there is a risk that most of the market reaction already occurred when the bidder first announced their intention to make the acquisition. Consequently, the announcement date of the transaction is used as the event date, which is common when conducting research within the M&A field (e.g. Wübben, 2007).

However, rumor may result in that the market expects the upcoming deal announcement, and therefore bidder stock prices might move prior to the announcement day. This suggests that the event should be expanded backwards in time. Another possible scenario is that investors take longer time to evaluate the effect of the acquisition and therefore the event window should preferably be extended forward in time. According to Servaes and Zenner (1996) and Tuch and O'Sullivan (2007) a shorter event window reduces the risk of noise from other company event that can influence the measurement of the acquisition. At the same time, it is important that the event window is sufficiently large so that any overreactions by the market can be corrected (Andrade, Mitchell and Stafford, 2001). With respect to this and the length of event window that previous research use (Table IV), the event window in this study is defined as (-2, +2)⁴. The announcement date is day 0, resulting in a five-day event window, 2 days prior and 2 days after deal announcement.

To measure the effect on deal announcement, normal returns need to be estimated during an estimation window, defined as the transaction never occurred. To secure that the event does not influence the normal bidder returns, it is essential that estimation window and event window do not overlap (MacKinlay, 1997). MacKinlay (1997) further argue that an estimation window should include at least 120 days of observations. Table IV presents different estimation windows

⁴ Different event windows of (-1, +1) and (-5, +5) are tested and presented as a robustness test in section 4.3.1

that related previous research use. By taking this into consideration, this study uses an estimation period of 250 days with an estimation window of (-291, -41) prior to deal announcement.

Table IV
Summary of Event Windows and Estimation Periods

The table presents a summary of event windows and estimation periods used by previous empirical research.

Authors	Event Window	Estimation Period	Estimation Window
Bowers and Miller (1990)	[-1, 0]	280	[-300, -21]
McLaughlin (1992)	[-2, 0]	40	[-100, -61]
Servaes and Zenner (1996)	[-1, 0]	200	[-250, -50]
Saunders and Srinivasan (2001)	[-5, +5]	240	[-300, -60]
Allen et al. (2003)	[-1, +1]	190	[-250, -60]
Kale et al. (2003)	[-5,+5]	240	[-300, -60]
Ismail (2010)	[-2, +2]	190	[-210, -20]
Golubov et al. (2012)	[-2, +2]	200	[-240, -41]
Chuang (2016)	[-1, +1], [-2, +2], [-5, +5]	210	[-270, -61]

3.3.2 Estimation of Normal- and Abnormal Returns

To estimate normal returns, different models such as the market model (one factor model) can be used. The market model is the most common model used in related previous research (e.g. Servaes and Zenner, 1996; Rau, 2000; Golubov et al., 2012; Chuang, 2016), while MacKinlay (1997) claim that the advantages of using a multifactor model or the CAPM model is limited. Therefore, we use the market model to estimate normal returns. The market model formula (1) measures the relationship between the return of stock i and performance of a market portfolio m .

$$R_{it} = \alpha_i + \beta_i R_{mt} + \varepsilon_{it} \quad (1)$$

R_{it} measure the actual return on stock i on announcement day t , while α_i is the average return on stock i when it correlates with the market. β_i is the slope coefficient related to the return of the market portfolio (m). R_{mt} is the normal return on the market portfolio (m) on announcement day t , while ε_{it} is the zero mean disturbance term with $E(\varepsilon_{it}) = 0$ and $var(\varepsilon_{it}) =$

$\sigma_{\varepsilon_i}^2$. As market portfolio, the study uses the MSCI Nordic Countries Index. The index is value-weighted and captures large and mid-cap companies across Sweden, Finland, Norway and Denmark.

As in Chuang (2016), market prices are based on total return index (RI), which includes reinvested dividends. The prices are drawn from Datastream and then transformed into returns. In order to retrieve returns for each bidder in the total sample, market prices are again drawn from Datastream. For consistency, we use market prices with total return index (RI) for each stock. To measure normal returns, an ordinary least square regression (OLS) is used where the coefficients are estimated of bidder stock returns on the returns of MSCI Nordic Countries Index.

This is followed by determine the abnormal return, AR. The abnormal return formula (2) is the difference between the actual return, R_{it} and the estimated normal return, $E(R_{it})$ for stock i . Hence, display the effect of the deal on the bidder's performance at announcement day t .

$$AR_{it} = R_{it} - E(R_{it}) \quad (2)$$

As a last step, with the objective to capture the effect from the complete event period, the abnormal returns are aggregated. This constructs the Cumulative Abnormal Return (CAR), formula (3), where t_1 and t_2 denote the beginning and the end of the period where CAR is calculated. T-test further shows that CAR is significantly different from zero at the 1% level.

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

However, of the total sample, the existence of extreme values results in non-normal distributed CAR's, which could lead to distorting results. If these outliers are treated as any other observations, then the estimate could diverge excessively from the true population (Ghosh and Voght, 2012). To control for these outliers, a frequently used approach is to winsorize the values (e.g. Kale et al., 2003; Chen, 2010; Golubov et al., 2012). Thus, the value of the outliers becomes closer to other values in the sample. According to Ghosh and Voght (2012), it is common to replace values above the 95th percentile and below the 5th percentile by the value at the 95th percentile and 5th percentile, respectively. However, by replacing the low and high outliers in the sample with the values at the 2.5th and 97.5th percentile, respectively, a normal distributed CAR

can be obtained⁵. After a t-test is performed, the CAR is significantly different from zero at the 1% level. Consequently, this is the final CAR used in this study.

3.4 Financial Advisor Reputation

To measure reputation of financial advisors, the market share based on league tables is used, which is a leading distinction throughout the literature (e.g. Bowers and Miller, 1990; Servaes and Zenner, 1996; Rau, 2000; Michel et al., 1991; Walter et al., 2008; Golubov et al., 2012; Song et al., 2013). League tables are also frequently used by analysts and academic researchers outside the M&A field (Rasedie and Srinivasan, 2011). To collect the market share of financial advisors, we retrieve league table from Thomson Financial SDC Mergers and Acquisitions.

Table V, presents the list of the top-25 financial advisors in Scandinavia based on the total deal value accredited to the advisor over the sample period. By using the league table, financial advisors are classified into top-tier and non-top-tier advisors. Top-tier consists of top 5 ranked financial advisors, where this classification follow previous studies (e.g. Bowers and Miller, 1990; Servaes and Zenner, 1996; Rau, 2000; Walter et al., 2008, Song et al., 2013). Consequently, top-tier advisors in Scandinavia includes: Goldman Sachs, Morgan Stanley, JP Morgan, SEB and Bank of America Merrill Lynch. The remaining advisors are treated as non-top-tier. After controlling for individual years within the sample period, it shows that the top-tier advisors are the same for a majority of the years, which makes the ranking stable.

The binary classification of top-tier or non-top-tier is according to Fang (2005) approved as it captures the two-tiered system of Wall Street that is recognized by the academic research. Furthermore, a binary variable is preferred since it does not require that the variable capture reputation with accuracy and have a resistant effect on the dependent variable, as a continuous measure does. Further on, as in Rau (2000) and Golubov et al. (2012), the named financial advisor for each deal in Thomson Financial SDC Mergers and Acquisitions Database is given credit for the deal advised. In transactions where several financial advisors are involved, the deal is accredited with the highest ranking advisor. For example, in deals where top-tier advisor is involved together with one or several non-top-tier advisors, the deal is classified as top-tier. This follows the procedure used in previous research (e.g. Servaes and Zenner, 1996; Rau, 2000; Walter et al., 2008; Rasedie and Srinivasan, 2011; Golubov et al., 2012).

⁵ Alternative winsorizing is performed and presented in section 4.3.3.

Table V

Top-25 Scandinavian Financial Advisor Ranking by Deal Value

The table presents financial advisor ranking of the top-25 financial advisors based on the total transaction value of deals that they advised for a sample of Scandinavian M&A transactions between January 1, 2000 and December 31, 2015. The ranking is received from the Thomson Financial SDC Mergers and Acquisitions Database. Transaction value is in US\$ million. In addition, the number of deals advised by each advisor is disclosed. Credit is given fully to both bidder and target firm advisors and to each eligible advisor in the case of multiple advisors for a single party.

Rank	Financial Advisor	Transaction Value	Number of Deals
Top-Tier			
1	Goldman Sachs	97,413	58
2	Morgan Stanley	79,399	51
3	JP Morgan	58,157	79
4	SEB	45,723	182
5	Bank of America Merrill Lynch	45,644	37
Non-Top-Tier (shown from Top-6th to Top-25th)			
6	Citi	44,801	35
7	UBS	37,618	53
8	Carnegie	37,265	154
9	Deutsche Bank	37,182	54
10	Nomura	34,006	24
11	Credit Suisse	31,065	44
12	Handelsbanken	27,420	91
13	Jefferies	21,950	29
14	Lazard	21,818	37
15	Danske Bank	18,439	51
16	Nordea	17,783	70
17	ABG Sundal Collier	14,558	56
18	Rothschild	14,047	28
19	Royal Bank of Canada	14,042	7
20	Royal Bank of Scotland	12,424	60
21	Barclays	9,986	15
22	Ernst & Young	9,492	86
23	Catella	8,334	49
24	Greenhill	8,000	3
25	KPMG	7,424	80

3.5 Regression Variables

Table VI
Definition of Regression Variables

Dependent Variables		
Variable	Definition	Data Source
CAR (-2, +2)	Cumulative abnormal returns for the acquiring firm. A five-day event window surrounding the announcement day is used (-2, +2). The normal return is estimated using a period from 240 days before the announcement of the deal up to 41 days before. The value-weighted MCSI Nordic Countries Index is used as the market portfolio. The cumulative abnormal returns is winsorsized at the 95 th percentile.	Datastream
Top-tier	Dummy variable: 1 if the financial advisor involved in the acquisition is ranked among top five based on deal value, 0 otherwise. The top-5 financial advisors are presented in Table V.	Thomson SDC
Time to completion	Measured as the number of days between the announcement day and completion.	Thomson SDC
Bidder Characteristics		
Size	Acquirer market value of equity 4 weeks prior to the acquisition announcement in US\$ million.	Datastream
Leverage	Long-term debt plus current liabilities divided by book value of total assets for the fiscal year prior announcement.	Datastream
Book-to-market	Book value of equity at the fiscal year-end prior to the announcement divided by the market value of equity 4 weeks prior to the acquisition announcement.	Datastream
Deal Characteristics		
Deal value	Transaction value in US\$ million.	Thomson SDC
Relative size	Value of the transaction divided by the bidder's market value of equity 4 weeks prior to the acquisition announcement in US\$ million.	Thomson SDC + Datastream
Tender offers	Dummy variable: 1 if tender offer, 0 otherwise.	Thomson SDC
Hostile deals	Dummy variable: 1 for deals in which the sole consideration is stock, 0 otherwise.	Thomson SDC
Diversifying deals	Dummy variable: 1 for cross-industry transactions and 0 for the same industry transaction. Classified at the first two-digit SIC code from Thomson SDC.	Thomson SDC
Cross-border deals	Dummy variable: 1 for cross-border and 0 for domestic deals.	Thomson SDC
All-cash deals	Dummy variable: 1 for deals in which the sole consideration is cash, 0 otherwise.	Thomson SDC
All-stock deals	Dummy variable: 1 for deals defined as hostile, 0 otherwise.	Thomson SDC
Payment incl. stock	Dummy variable: 1 for deals in which consideration includes some stocks, 0 otherwise.	Thomson SDC

As discussed in section 2.5, there are several bidder- and deal-specific characteristics that could influence the bidders CAR. Therefore, these variables are included as control variables, with the objective to isolate the effect of advisor reputation. Table VI shows the variables included in the model defined in next section as well as the source of where the data is retrieved.

3.6 Regression Analysis

To test the hypotheses stated in section 2.6, cross-sectional regression (OLS) is applied and conducted with EViews, which is a well-established econometrics software. To examine the first hypothesis, CAR (-2, +2) is set as the dependent variable, formula (4). For the second hypothesis, the dependent variable is instead time to completion, formula (5). In both regressions, the top-tier dummy variable, is the main variable of interest, which takes on the value of 1 if a top-tier advisor is used by the bidder and zero otherwise. In addition, to test the third hypothesis, both regression (4) and (5) are divided into subsamples of cross-border- and domestic deals, respectively. The OLS models are specified as follows:

$$\begin{aligned} \text{CAR} = & \alpha_0 + \beta_1 \text{Top-tier} + \beta_2 \ln(\text{size}) + \beta_3 \text{Leverage} \\ & + \beta_4 \text{Book-to-market} + \beta_5 \text{Relative size} \\ & + \beta_6 \text{Tender offers} + \beta_7 \text{Hostile deals} \\ & + \beta_8 \text{Diversifying deals} + \beta_9 \text{Cross-border deals} \\ & + \beta_{10} \text{All-cash deals} + \beta_{11} \text{All-stock deals} \\ & + \beta_{12} \text{Payment incl. stock} + \varepsilon \end{aligned} \tag{4}$$

$$\begin{aligned} \text{Time to Completion} = & \alpha_0 + \beta_1 \text{Top-tier} + \beta_2 \ln(\text{size}) + \beta_3 \text{Leverage} \\ & + \beta_4 \text{Book-to-market} + \beta_5 \text{Relative size} \\ & + \beta_6 \text{Tender offers} + \beta_7 \text{Hostile deals} \\ & + \beta_8 \text{Diversifying deals} + \beta_9 \text{Cross-border deals} \\ & + \beta_{10} \text{All-cash deals} + \beta_{11} \text{All-stock deals} \\ & + \beta_{12} \text{Payment incl. stock} + \varepsilon \end{aligned} \tag{5}$$

When estimating the models, several requirements should be achieved for OLS to be a good estimate (Brooks, 2014). The first assumption tested, is that the variables are uncorrelated. Therefore, we analyze multicollinearity by constructing a correlation matrix. The correlation

matrix shows that all variables have a correlation below 0.8 (Appendix A). Hence, OLS is appropriate to use.

The second assumption tested is that the errors are normally distributed, which is violated in both models except for domestic subsample in formula (4). However, violation of normality is practically inconsequential when sample size is sufficiently large (Brooks, 2014). Even if the assumption of normality is violated, the test statistics will according to the central limit theorem follow the appropriate distributions (Brooks, 2014). Yet to improve the skewed distribution, as in Golubov et al. (2012), the size variable is transformed into natural logarithm, $\beta_2 \ln(\text{size})$, consequently, improving the Jarque-Bera test for normality. Further, the assumptions of OLS require that the variance of the error terms is constant (i.e. homoscedasticity) (Brooks, 2014).

However, regression (4) violates the OLS assumption of homoscedasticity, where heteroscedasticity is present. To correct for this, we follow the procedure of MacKinlay (1997) and apply heteroscedasticity-robust standard errors for regression (4). Consequently, both model (4) and (5) are controlled for normality and heteroscedasticity. The tests are disclosed in Appendix A⁶.

3.7 Methodological Discussion

In order to draw correct conclusions from the results, a crucial aspect is that the study measures what it is constructed to investigate (Bryman and Bell, 2003). The study uses a methodological approach that is well used in previous related research and is therefore considered to be reliable. Further, the study use similar data collection, methods to conduct variables and estimation of the regression models which increase the ability to replicate this study.

Nevertheless, there are some limitations with this study. For instance, it does not include unlisted bidders. This, because the event study require stock prices in order to measure potential abnormal returns generated by financial advisors. At the same time, by only including public bidders, the firm-specific information used is determined to be dependable. As previously discussed, when data is not available, bidders are excluded. However, it is important to stress that the exclusion is based on only theoretical assumptions and that the excluded observations provide indications of being in line with the final sample.

⁶ In addition, test for endogeneity is presented in section 4.3.2.

Furthermore, the event window of (-2, +2) require that no other bidder related information that could influence the stock prices is released during the time period. As mentioned in previous sections, it is important that the market efficiently value the effect of the transaction within the event window. However, there is a risk that the market reacts slowly on deal announcement or that rumors occur earlier than what the event window manage to capture. This could then reduce the cumulative abnormal return and lead to distorted results. Nevertheless, since previous studies use similar timeframe as event window, the measurement of transaction effect is considered to be reliable.

When constructing the regression analysis, different control variables are included in order to isolate the effect of financial advisor reputation. Servaes and Zenner (1996) claim that financial advisors decide on payment methods and other deal characteristics, meaning that they are not necessary to control for. However, deal characteristics included in the regression analysis are commonly used in prior work when conducting research on financial advisor reputation. Therefore, the outcome of the regression analysis is considered to be reliable.

4 Empirical Results and Analysis

In the coming section, the data is analyzed in order to examine to what extent the reputation of financial advisors in mergers and acquisitions affect the value created for the acquiring firm's shareholders in the Scandinavian market. In the first section we present the data sample in order to get an understanding of the variables and their potential impact on the results. The second section contains the cross-sectional regression analysis. Lastly, we assess the accuracy of the results through several robustness tests.

4.1 Sample Descriptive Statistics

The total sample consists of deals where bidders are based in Scandinavia, with distribution as follows; Sweden (46%), Finland (22%), Norway (17%) and Denmark (15%). Table VII presents descriptive statistics for the total sample and for deals that are advised by top-tier and non-top-tier, respectively. Panel A represent statistics for bidder characteristics. The mean (median) size of acquirer in the total sample is \$3845.43 million (\$649.69 million). Further, it shows that firm size is essentially larger when bidder use a top-tier advisor (\$7344.39 million) compared with non-top-tier advisor (\$2852.88 million). This is in line with results of previous studies (e.g. Golubov et al., 2012; Chuang, 2016).

Mean (median) leverage in the sample is 0.231 (0.220). Bidders that hire top-tier advisors tend to have higher amount of debt, thus be more leveraged. It is believed that a higher leverage will generate greater bidder return (Maloney et al., 1993). The book-to-market mean (median) is 0.596 (0.4). Bidders that employ top-tier advisors have greater book-to-market ratio. However, the difference is marginal, where the mean book-to-market of using top-tier advisor and non-top-tier advisor is 0.605 and 0.594, respectively. This output does not completely follow previous research. Golubov et al. (2012) and Chuang (2016) find the opposite. However, a high book-to-market ratio should lead to higher returns during the announcement period (Dong et al., 2006).

Table VII
Sample Descriptive Statistics

The table presents descriptive statistics for a sample of M&As announced in Scandinavia over the period January 1, 2000 to December 31, 2015 retrieved from the Thomson Financial SDC Mergers and Acquisitions Database. Panels A and B describe the mean, median, standard deviation and number of observations for bidder- and deal-specific characteristics, respectively, both for the full sample and also for top-tier and non-top-tier advisors. Top-tier advisors are as presented in table V, the top-5 financial advisors ranked by total deal value on which they advised. The remaining are non-top-tier financial advisors. Stock price and accounting data are from Datastream. All variables are defined in table VI.

Panel A: Bidder Characteristics												
	All Sample (1)				Top-Tier (2)				Non-Top-Tier (3)			
	Mean	Median	Std. dev.	<i>N</i>	Mean	Median	Std. dev.	<i>N</i>	Mean	Median	Std. dev.	<i>N</i>
Size	3845.426	649.695	10472.380	448	7344.399	2422.220	13718.690	99	2852.880	449.700	9132.353	349
Leverage	0.231	0.220	0.195	448	0.263	0.250	0.147	99	0.222	0.200	0.206	349
Book-to-market	0.596	0.400	0.649	448	0.605	0.400	0.637	99	0.594	0.400	0.653	349
Panel B: Deal Characteristics												
Deal value	475.179	86.270	1699.101	448	1167.932	436.94	3224.169	99	278.667	61.680	778.186	349
Relative size	0.320	0.157	0.386	448	0.325	0.186	0.350	99	0.318	0.153	0.396	349
Tender offers	0.107	-	0.310	448	0.172	-	0.379	99	0.089	-	0.285	349
Hostile deals	0.004	-	0.067	448	0.010	-	0.101	99	0.003	-	0.054	349
Diversifying deals	0.388	-	0.488	448	0.323	-	0.470	99	0.407	-	0.492	349
Cross-border deals	0.650	1.000	0.478	448	0.737	1.000	0.442	99	0.625	1.000	0.485	349
All-cash deals	0.295	-	0.456	448	0.414	-	0.495	99	0.261	-	0.440	349
All-stock deals	0.152	-	0.359	448	0.172	-	0.379	99	0.146	-	0.354	349
Payment incl. stock	0.290	-	0.454	448	0.283	-	0.453	99	0.292	-	0.455	349
CAR (-2, +2)	1.745	0.849	6.208	448	2.179	1.128	6.664	99	1.622	0.681	6.077	349

Panel B in Table VII show statistics for deal characteristics. Our total sample present that the mean (median) of deal value is \$475.18 million (\$86.27). It further shows that both mean and median for top-tier advisors are associated with higher deal value compared with non-top-tier advisors. This is also supported by previous research (e.g. Da Silva Rosa et al., 2004; Golubov et al., 2012; Song et al., 2013). The average (median) relative size of deal value in the sample is 32% (15.7%). Deals that are advised by top-tier advisors tend to have a higher relative size, yet the difference is small. According to Fuller et al. (2002) it is believed that an increase in relative size have a negative impact on bidder returns.

Tender offers represent approximately 11% of the total sample. It shows that deals advised by top-tier advisors are of greater extent tender offers. Prior research display that bidder announcement return is positively related with tender offer (Jensen and Ruback, 1983), while Song et al. (2013) argue the opposite. Of the total sample, hostile deals consists of only 0.45%, where the number of deals are equally divided between top-tier advisors and non-top-tier advisors. According to Servaes (1991) a bidder that is involved in hostile offers should receive lower returns. However, Franks et al. (1991) claim that hostile deals are associated with higher returns.

Diversifying deals represent 38.8% of our sample. Top-tier advisors tend to involve less in diversifying deals (18.4%) than non-top-tier advisors (81.6%). Prior work present result that diversifying transactions decrease bidder returns (Morck et al., 1990). However, there exists some evidence that diversified transactions are associated with greater firm value (Villalonga, 2004). 65% of the transactions in the full sample are cross-border deals. The result shows that top-tier advisors involve more in cross-border deals. Research of Moeller and Schlingemann (2005) argue that cross-border deals are associated with lower returns than domestic deals.

The sample further shows that 29.5% of all deals are financed with cash only, 15.2% are pure stock offers and 29% include stock as payment. In the remaining 26.3% of the transactions, the payment method involves mixed considerations. Top-tier advisors involve more in deals where the payment is of pure cash. The method of payment is further believed to influence bidder returns, where stock offers generate lower return (Moeller and Schlingemann, 2005; Martynova and Renneboog, 2009).

The mean (median) bidder 5-day CAR is 1.745% (0.849%). This result implies that Scandinavian bidders generate positive returns during M&A announcement. More interesting,

firms that employ top-tier advisors perform a mean (median) CAR of 2.179% (1.128%), while bidders that hire non-top-tier advisors generate a mean (median) CAR of 1.622% (0.681%).

However, the CAR does not take into account the potential effect of other bidder- and deal-specific characteristics. As our sample indicates, top-tier advisors advise on deals where the size of the bidder is large. When the size of the acquirer is large, the announcement return tends to decrease (Moeller et al., 2004; Golubov et al., 2012). The sample further shows that top-tier advisors engage more in tender deals, which could lead to a decrease in bidder returns (Song et al., 2013). Therefore, the impact of other variables needs to be tested in order to investigate the true effect of advisor reputation.

4.2 Cross-Sectional Regression Analysis

The cross sectional regression analysis is conducted in a multivariate OLS setting and tested for the assumptions of OLS, as explained in section 3.6. To isolate the effect of financial advisor reputation on CAR, we control for bidder- and deal-specific characteristics shown to affect abnormal returns, beyond advisor reputation. To test our first hypothesis, the initial regression examines the relationship between acquirer cumulative abnormal returns and the reputation of financial advisor. The second regression examines the relationship between time to completion and advisor reputation. The regression is run with three specifications; (1) full sample, (2) cross-border deals subsample and (3) domestic deals subsample. Specification (1) constitutes of 448 observations, specification (2) of 291 and specification (3) of 157 observations.

4.2.1 Financial Advisor Reputation and Acquirer Cumulative Abnormal Returns

The results of the first regression, examining the relationship between reputation and acquirer abnormal returns are presented in Table VIII. In all three specifications the dependent variable is cumulative abnormal returns and the main variable of interest is top-tier. This is a dummy variable, taking the value of 1 if the financial advisor involved in the acquisition is ranked among top five based on market share. As shown from the results, the control variables; $\ln(\text{size})$, leverage, tender offers and payment including stocks, has a significant impact on abnormal returns, as well as the main variable of interest; Top-tier. The adjusted R-squared indicates that the model explains between 5.7% to 13.2%. Although, it is desirable with a higher R-squared, it is in line with previous studies (e.g. Ismail, 2010; Bao and Edmans, 2011; Chuang, 2016).

Table VIII
Cross-Sectional Regression Analysis (OLS) - Acquirer CAR

The table presents results of the cross-sectional OLS regression analysis of cumulative abnormal returns on financial advisor reputation and other bidder- and deal-specific characteristics. The sample consists of Scandinavian M&A transactions completed between the period January 1, 2000 and December 31, 2015. Variables are described in Table VI. The symbols *, **, and *** denote statistical significance at the 1%, 5%, and 10% levels, respectively. The t-statistics reported in parentheses. White's robust standard errors are used. To avoid multicollinearity, hostile deals variable is excluded in specification (3). N denotes the number of observations.

	Full Sample (1)	Cross Border (2)	Domestic (3)
Intercept	2.8584** (2.1757)	2.9933* (1.7737)	4.8507** (2.2942)
Top-tier	1.3203* (1.6979)	1.1873 (1.3464)	2.7411* (1.7608)
ln(size)	-0.5439*** (-3.0793)	-0.3633* (-1.7259)	-0.9673*** (-2.8369)
Leverage	4.0747** (2.3321)	2.7673 (1.0878)	7.1874** (2.5947)
Tender offers	-1.5949* (-1.7836)	-1.3074 (-1.2037)	-2.4501 (-1.5273)
Payment incl. stock	1.8631* (1.6552)	1.8349 (1.2409)	0.7525 (0.4313)
Diversifying deals	0.9069 (1.5399)	1.7289** (2.4739)	-0.3452 (-0.3283)
Cross-border deals	0.5893 (0.9022)		
Relative size	0.7905 (0.7607)	-0.0579 (-0.0351)	1.1062 (0.8890)
All-stock deals	-0.8620 (-0.6296)	0.6102 (0.3304)	-1.1099 (-0.5701)
Hostile deals	-0.4613 (-0.1739)	-0.0535 (-0.0166)	
Book-to-market	-0.0942 (-0.1179)	-1.8447** (-2.5085)	0.7438 (0.9429)
All-cash deals	0.0196 (0.0318)	0.4299 (0.5722)	-1.6514 (-1.5097)
N	448	291	157
Prob(F-statistic)	0.000157	0.003494	0.000571
<i>Adjusted R-squared</i>	0.0573	0.0576	0.1315

The main variable of interest, top-tier, has a positive significant effect at the 10% level on cumulative abnormal returns for specification (1) and specification (3). Meaning that hiring a top-tier financial advisor increases acquirer returns with 1.32%. The outcome for the full- and domestic sample supports the relationship described by Shapiro (1983) and Allen (1984) where high reputation leads to higher quality. Furthermore, high reputation is a product of continuous success and skill gained through constant market interaction and achieved economies of scale and scope of handling several transactions and clients at once (Chemmanur and Fulghieri, 1994). According to Golubov et al. (2012), this allows top-tier to provide better services and to have higher skill in transactions, affecting the performed services such as; finding relevant targets and identifying synergies, negotiating and influencing premium paid. Consequently the high reputation increases the total value created in the transaction (Bowers and Miller 1990; McLaughlin, 1990; Golubov et al., 2012). The results in this study support this reasoning and are in line with Kale et al. (2003), Bao and Edmans (2011) and Golubov et al. (2012), who show that top-tier advisor increases announcement returns. This is in contrast to studies by Servaes and Zenner (1996), Rau (2000) and Hunter and Jagtiani (2003) that show a negative effect. In addition Saunders and Srinivasan (2001) and Schiereck, et al. (2009), could not show a significant relationship between reputation and returns.

Analyzing the influence of reputation in cross-border deals, we can see that the result in specification (2) is not significantly different from zero. We can therefore not conclude that financial advisors with higher reputation would have superior skill to overcome the difficulties that comes with cross-border deals such as analyzing different legal regions, accounting standards, culture, performing more advanced due diligence process to find a relevant target. Consequently, we cannot conclude that reputation has a positive effect on abnormal returns in cross-border deals. This is in line with results of Chuang (2016).

Further the variables shown to have impact on value creation in M&A, beyond advisor reputation is examined. The size of the acquirer, measured as the acquirer market value, has a significant negative effect at the 1% level on acquirer abnormal returns, for specifications (1) and (3), and a significant effect at the 10% level for specification (2). The results are in line with e.g. Moeller et al. (2004) and DePamphilis (2010). The corresponding interpretation is a 1% increase in acquirer size lead to a 0.54% decrease in cumulative acquirer returns for the full sample. The size effect in domestic acquisitions interprets as a 1% increase in size leads to a 0.97% decrease

in returns. The explanation could correspond to explanation by Moeller et al. (2004) and DePamphilis (2010) who argues that smaller firm experience higher returns than relatively larger firms, as a result of overconfidence and empire-building intent of the managers in larger firms. Smaller firms on the other hand have a tendency to acquire firms within related industries, which would then increase CAR for smaller firms hence a negative effect of size, which is in line with the presented results.

In addition, leverage has a significant positive relationship to cumulative abnormal returns, which is in line with the theoretical expectations from studies by Maloney et al. (1993). The results are significant for the full- and domestic sample. In addition, it is evident that leverage has the largest effect on CAR amongst the variables tested. The result support the arguments by Maloney et al. (1993) and Jensen (1986) who argues that high debt makes it less likely that managers engage in value-destroying acquisitions. As reported by Dong et al. (2006), the results show a significant negative relationship between book-to-market and returns for specification (2). Since book-to-market is measured as book value of equity to market value of equity, the result indicates a higher book value of equity in relation to market value will generate lower returns. The result also support research by Rau and Vermaelen (1998), who show a negative relationship, claiming that companies with a low book-to-market ratio will make poor M&A decision which would decrease returns.

According to studies from Jensen and Ruback (1983) and DePamphilis (2010), it was expected that tender offers would have a positive effect on CAR. This is since tender offers often are a result of friendly negotiations between the boards of acquirer and target firms. However as shown in Table VIII, tender offers have a significant negative impact for specification (1). Song et al. (2013), means that tender offers are associated with higher premiums and generates negative returns.

Due to the contradicting results of previous studies regarding the effect of diversifying deals, the theoretical expectations were mixed. The result shows a statistically significant positive effect for specification (2), however not for the full sample. This result is in line with Lewellen (1971) and Villalonga (2004) and can be explained by diversifying deals leads to diversifying cash flows which reduces risk, and consequently reduces probability of default and increases returns. Surprisingly, payment including stock has positive significant effect on the full sample. Showing that deals where payment includes stock have a positive effect of 1.86% on announcement

returns, in line with research of Walter et al. (2008). However, in contrast to theoretical expectations of Martynova and Renneboog (2009), who show that financing a deal with equity, signals that the stock is overvalued and consequently generates negative effect on returns.

The results show an insignificant relationship between cumulative abnormal returns and hostile deals, cross-border deals, all-stock deals, all-cash deals and relative size, meaning conclusions cannot be made. Although, with this in mind, the coefficients of these variables are indicating results only for our sample, thus a short comment is given below of the coefficients.

Hostile deals are considered more complex, and often include an aggressive takeover attempt and should according to Servaes (1991) and Song et al. (2013) generate negative returns. The results indicate support for their research showing a negative, however not significant relationship. In addition, previous research indicates that cross-border M&As increases the complexity of the deal and consequently leads to lower returns (Aw and Chatterjee, 2004; Moeller and Schlingemann, 2005). The regression output for the full sample indicates in contrast, a positive coefficient. Meaning cross-border deals entails higher returns, however since the result is not significant, conclusions cannot be drawn. The coefficient of the relative size of the deal indicates, for this sample, that a larger value of transaction relative to the acquirer, results in positive returns for the full sample and in domestic deals, but a negative effect in cross-border deals.

The results of specification (1) and (3) suggest that all-stock deals have a negative impact on CAR, although the relationship is not significant. Moeller and Schlingemann (2005) and Martynova and Renneboog (2009) argue that managers should choose the cheapest form of payment if they perceive that the stock is undervalued, thus choosing cash. The results in specification (1) and (2) support this research, indicating a positive, however not significant, coefficient for all-cash deals.

4.2.2 Financial Advisor Reputation and Time to Completion

The results show that top-tier advisors have a positive impact on acquirers return and could therefore be a reason for using a high reputational advisor in M&A. However, there could be other ways that top-tier advisors create value and therefore explain why bidders hire top-tier advisors. Financial advisors usually manage the negotiation process and could then influence the outcome of the deal but also the time it takes to complete the deal from that it has been

Table IX
Cross-Sectional Regression Analysis (OLS) - Time to Completion

The table presents results of the cross-sectional OLS regression analysis of the time to completion on financial advisor reputation and other bidder- and deal-specific characteristics. The sample consists of Scandinavian M&A transactions completed between the period January 1, 2000 and December 31, 2015. Variables are described in Table VI. The symbols *, **, and *** denote statistical significance at the 1%, 5%, and 10% levels, respectively. The t-statistics reported in parentheses. To avoid multicollinearity, hostile deals variable is excluded in specification (3). N denotes the number of observations.

	Full Sample (1)	Cross Border (2)	Domestic (3)
Intercept	-34.4474** (-2.4242)	-40.3214** (-2.1741)	-32.1041 (-1.4149)
Top-tier	16.3444** (2.0667)	16.2514* (1.7409)	14.2963 (0.9277)
ln(size)	11.3124*** (6.0326)	10.3383*** (4.4963)	13.5876*** (3.8844)
Leverage	-20.8208 (-1.2763)	-20.1248 (-0.9693)	-21.5289 (-0.7752)
Tender offers	17.8305* (1.7152)	17.6985 (1.4581)	21.8423 (1.0798)
Payment incl. stock	15.8325 (1.6088)	18.1031 (1.3850)	22.5478 (1.4621)
Diversifying deals	12.0374* (1.8944)	21.6086*** (2.7937)	-10.7878 (-0.9602)
Cross-border deals	0.0522 (0.0076)		
Relative size	31.5144*** (3.3866)	40.2148*** (2.9368)	23.4825* (1.8193)
All-stock deals	27.8406** (2.4057)	17.0283 (1.0770)	29.3708* (1.6504)
Hostile deals	64.0712 (1.3719)	57.1381 (1.2308)	
Book-to-market	8.8821* (1.8156)	20.8102*** (2.6209)	1.8017 (0.2742)
All-cash deals	-1.158 (-0.1512)	1.4131 (0.1565)	-7.1089 (-0.4892)
N	448	291	157
Prob(F-statistic)	0.000000	0.000000	0.000025
Adjusted R-squared	0.1609	0.1595	0.1762

announced. Since top-tier advisors are believed to have greater negotiation skills and expertise they should complete deals faster (Hunter and Jagtiani, 2003; Golubov et al., 2012; Chuang, 2016). At the same time these advisors have created larger reputation that can be damaged. For that reason top-tier advisors might take more time to correctly evaluate the details of the deal and arrange greater contract terms for the acquirer.

To test whether time to completion is shorter in transactions advised by top-tier advisors another cross-sectional regression analysis is constructed (Table IX). The dependent variable is time to completion which is the difference in number of days from deal announcement to deal completion. The interpretation of the regression is that top-tier advisors takes longer time to complete a deal when the coefficient on the top-tier variable is positive while a negative coefficient implies that top-tier deals take less time.

The result shows that top-tier advisors take longer time to complete deals. Firms that hire top-tier advisors extend the time of the deal by 16.3 days, which is significantly different from zero at the 5% level. The rationale behind this result is in line with the diligent hypotheses examined by Golubov et al. (2012), stating that top-tier advisors have greater reputation at stake and therefore take longer time to evaluate the transaction details more correctly and arrange greater contract terms for the acquirer. However, our result is not supported by Hunter and Jagtiani (2003), Walter et al. (2008) or Golubov et al. (2012). They all find that top-tier advisors are associated with shorter time to completion. According to Golubov et al. (2012), top-tier advisors should complete deals faster because they carry greater expertise and superior skills (skilled advisor hypothesis). In addition, Walter et al. (2008) argue that top-tier advisors should complete deals faster due to greater experience in transaction processes.

Further, our result shows that it takes longer time for top-tier advisors to complete cross-border deals (16.3 days longer). The result is significantly different from zero at the 10% level and in line with prior work from Chuang (2016). The evidence presents that top-tier advisors spend more time on cross-border deals. The reason can be that when the bidder- and target firm is from different countries, the deal can be more complex (Shimizu et al., 2004). In cross-border deals, the bidder need to analyze different economic, legal, tax and accounting systems, which increase the complexity of the deal (Shimizu et al., 2004).

The interpretation of this is that cross-border deals are more challenging in that sense that the due diligence process becomes more difficult (Shimizu et al. 2004), and therefore cross-border

deals take longer time to complete (Chuang, 2016). Whether top-tier advisors complete deals faster in domestic deals, we cannot draw any conclusion from this result due to the insignificant coefficient. However, for our sample only, it indicates for domestic deals, that top-tier advisors are associated with greater time to completion.

The analysis of the regression further indicates that it takes longer time to complete deals when both size of the bidder and the relative size to deal value is large. This result is significantly different from zero at the 1% level across all three specifications except for relative size in specification (3). The impact of firm size and relative size in specification (1) is supported by Golubov et al. (2012), while Song et al. (2013) indicate that an increase in relative size shortens time to completion. Our result follows the logic that Walter et al. (2008) presents, where larger targets are harder for the financial advisor to value which increase the complexity of the deal and therefore take longer time to complete.

On the other hand, the impact of firm size in specification (1) and (3) is not supported by Chuang (2016), who display that larger firm size is associated with shorter completion time. However, Chuang (2016) measure firm size as total assets instead of market value, which can potentially explain the different result.

When looking at the impact of book-to-market it shows that a higher ratio extends the time to complete deals. This result is significant at the 10% level, which is in line with result from Golubov et al. (2012). Our result also show at the 1% significance level, that cross-border deals take 20.8 days longer to complete when the book-to-market is high.

When acquirer involve in tender offers, the deal take longer time to complete. Tender offers take 17.8 days to complete and is significant different from zero at the 10% level. Our finding on tender offer is particularly surprising since previous research present result of that firms that involve in tender deals do rather take less time to complete (e.g. Hunter and Jagtiani, 2003; Golubov et al., 2012; Song et al., 2013; Chuang, 2016). At the same time, Golubov et al. (2012) argue that tender offers are likely to be more complex, and since complex deals are associated with longer time to completion (Walter et al., 2008) this could be an explanation to our results.

Specification (1) reveals that it takes 12 days longer to complete a deal, while for cross-border deals, the time is extended to 21.6 days. The results are significantly different from zero at the 10% and 1% level, respectively. Our result that diversifying deals are associated with longer

time to completion is supported by Golubov et al. (2012), where the interpretation is that diversifying deals are often more complicated and therefore take longer time to complete.

Deals that are completely financed with stock give similar results; it takes longer time to complete the deal. Both specification (1) and specification (3) are significantly different from zero at the 5% level and 10% level, respectively. The extended time duration for pure stock offers is in line with the argument from Song et al. (2013) that pure stock offers are more difficult to evaluate which increase the complexity of the deal, thus extend time to completion.

Our results also imply that time to completion is affected by other firm- and deal-specific characteristics such as leverage, hostile deals, payment including stock and all-cash deals. However, none of these coefficients are significantly different from zero, meaning we cannot draw any conclusion from them. Consequently, the impact from these variables gives suggestions for only our sample. A short comment on the coefficients is provided below.

Our sample indicates that when leverage of bidder is high, the transaction can be completed faster. This is unexpected since Golubov et al. (2012) show that high leverage rather leads to shorter time to completion. Further, the sample indicates that hostile deals are associated with greater time to completion. This is expected since hostile deals normally are more complicated than non-hostile deals (Hunter and Jagtiani, 2003).

In addition, our result indicates that bidders would spend more time completing deals when stock is included as payment method. When the deal instead is fully financed with cash, the deal seems to take shorter time to complete. The logic behind this is that stock offers are more difficult to evaluate than cash offers, hence getting more complicated, and therefore time to completion is longer for stock financed deals than pure cash offers (Song et al., 2013).

The adjusted R-squared for all our specifications illustrate that our model can explain between 16% and 17.6% of the variation in time to completion. This is in line or above with previous studies (e.g. Hunter and Jagtiani, 2003; Golubov et al., 2012; Song et al., 2013; Chuang, 2016). The main conclusion from our result is that time to completion is not shorter in transactions advised by top-tier financial advisors, instead it takes longer time to complete deals. This indicates that bidders do not hire top-tier advisors in order to complete deals faster. Further the result provides evidence that there exist an effect of advisors reputation in Scandinavian M&As.

4.3 Robustness Tests

In order to assess the robustness of the result, the model (Table VIII) is re-estimated and several tests are presented in the following section.

4.3.1 Event Window

The first robustness test investigates whether the results holds when a different event window is used to calculate abnormal returns. The alternative event windows tested to calculate short-term returns around announcement are (-1, +1) and (-5, +5). By using a shorter event window, the market is believed to be more effective and value the transaction directly at announcement, meanwhile no information reach the market before announcement day. When the event window instead is extended to (-5, +5), the window can capture potential leakages before the announcement and returns that occur after deal announcement due to potential inefficient market. For both alternative event windows the results are robust, being significantly different from zero at the 10% level.

4.3.2 Endogeneity Control

The above cross-sectional regression analysis is founded on the premise that the choice of financial advisor is exogenously determined. Nonetheless, Golubov et al. (2012) show that there might be observed or unobserved bidder- and/or deal-specific characteristics that influences the result and bidders choice of using a top-tier advisor, causing endogeneity bias. The suspected endogenous relationship in our model is between the dependent variable, CAR (-2, +2) and the independent variable, top-tier advisor. To investigate this possibility, a Hausman test is conducted (Appendix B), where the two-stage procedure of Hausman (1978) is applied.

The first-stage equation is constructed with the main variable of interest that is top-tier advisor being used as dependent variable. In addition, the logarithm of deal size is added as independent variable since this variable is believed to influence the choice of financial advisor but at the best not the final outcome. This method follow the recommendation of Eckbo (2007), presenting that a variable should be included in the first-stage equation that is not in the second-stage equation. In the second-stage equation, our original model with CAR (-2, +2) being the dependent variable is re-estimated and the fitted values from the first-stage equation are used as

additional independent variable. The test does not specify that the fitted values is significant, hence OLS is appropriate to use.

4.3.3 Additional Sensitivity Tests

In order to test whether the impact of top-tier financial advisor reputation changed during different years in the sample, additional tests is conducted. The first test is constructed to stress if the financial crisis between 2007 and 2009 affect the result. Thus, the regression in Table VIII is performed again with deals announced during the time horizon mentioned above. It shows that our result of top-tier advisor remain significant at the 10% level, hence the financial crisis did not affect top-tier advisors ability to generate higher bidder returns. Furthermore, similar test is done both before the financial crisis and during the sixth merger wave between 2003 and 2007. Again, the result of this study is robust, being significantly different from zero at the 10% level in both tests.

In addition, the sample is first restricted to 100% acquisitions (257 deals included) and then 100% mergers (191 deals included). Our result remains robust, where both tests are significantly different from zero at the 5% level. Moreover, firms from financial industries (SIC codes 6000-6999) are excluded (400 deals included). Likewise, the result holds at the 5% significance level. The same is true when the minimum relative size of deal is increased to at least 5%. To test the effect of the winsorized CAR (-2, +2) in the study, the cross-sectional regression analysis (Table VIII) is re-run with CAR winsorized at the 1st and 99th percentile instead. Yet the result is significantly different from zero at the 10% level. Overall, the sensitivity tests confirm the robustness of our results.

5 Discussion and Conclusion

The purpose of this study is to examine to what extent the reputation of financial advisors in mergers and acquisitions affect the value created for the acquiring firm's shareholders in the Scandinavian market. With a total sample of 448 transactions between January 1, 2000 and December 31, 2015, this study shows that top-tier advisors have a significant positive effect on cumulative abnormal return. Meaning that hiring a top-tier advisor in Scandinavia increases announcement returns for the acquiring firm with 1.32%. Although our result show that top-tier advisors create higher returns for the full sample and in domestic deals, we cannot conclude that top-tier advisors create higher returns in cross-border transactions. In addition, this paper shows a significant relationship between reputation and time to completion for the full sample as well as for cross-border deals, meaning that top-tier advisors spend more time advising on deals. The results are robust and still hold after controlling for different event windows, excluding firms from financial industries, restricting the sample to only acquisitions and only mergers. Furthermore it holds, controlling for different timeframes, e.g. the financial crisis did not affect top-tier advisors ability to create abnormal returns to the acquirer.

This study contributes to existing research by providing new evidence of the relationship between reputation and abnormal returns in the Scandinavian market. In previous research, only Bowers and Miller (1990), Kale et al. (2003), Bao and Edmans (2011), and Golubov et al. (2012), has been able to show a significant positive relationship between hiring a top-tier financial advisors and abnormal returns. In addition, no previous research, to our knowledge, show that this relationship holds studying markets outside the US. Thus, this study contributes to existing research by showing this relationship in the Scandinavian market. The majority of existing research conducts their studies using acquirers and targets within the same market, thus not taking into account the reputation effect in cross-border deals. This study contributes to research by building on to the work of Chuang (2016), who focus mainly on Asia-Pacific. The results from this paper show that top-tier is associated with a longer time to completion in cross-border deals. However, in line with Chuang (2016) we show no significant relationship between reputation and returns.

The majority of previous research shows that top-tier financial advisors generate lower or no abnormal return to their clients. Therefore, when comparing our result to prior empirical work, the evidence from this study stands out. A potential explanation may be the different financial

advisors that constitute top-tier advisors in Scandinavia. Top-tier advisors in US, where most research is conducted, consists of global financial advisors, while top-tier advisors in the Scandinavian M&A market also consists of a Scandinavian focused advisor, SEB.

The worldwide presence and large size of global financial advisors, could lead to less focus on delivering superior service to their clients. This could then explain previous findings that top-tier advisors often generate negative or no abnormal return to the acquirer. Scandinavian focused advisors on the other hand are smaller and can focus on one region and potentially build stronger relationship with their clients. By being more focused they may deliver superior service and generate positive abnormal returns.

The increased focus on one specific M&A market comes with greater reputation vulnerability, thus the advisor need to protect its position to a wider extent. In order to deliver superior services and generate abnormal returns for their clients, they need to be more thorough in their work, finding a suitable target and negotiate better contract terms for the acquirer. This would then mean that it takes longer time for Scandinavian focused advisors to complete transactions. By focusing on one region, this would most likely come with smaller presence in other locations around the world, which could then lead to less efficient M&A processes when the acquirer and target are from different countries, hence increase the time it takes to complete the deal.

Even if the reputation is important for global based top-tier advisors, it is believed that their strong position within the global M&A market make their reputation less vulnerable although they deliver negative abnormal return to its clients. According to previous research it seems that these global top-tier advisors instead focus on completing deals faster for their clients.

When company managers prepare to make an acquisition our results together with previous research indicate that they should evaluate what is the most important. If they intend to generate higher returns for its shareholders, they should hire financial advisors with high reputation and with strong focus within the market where at the best, both the acquirer and the target are operating. If managers instead value to complete the deal as soon as possible, with the risk that it could decrease shareholder returns, they should employ high reputational advisors with global- rather than local focus.

Previous research often focus on larger M&A markets such as US, Europe and Asia-Pacific, which increase the presence of global financial advisors in the top-tier advisor classification.

When studying smaller M&A markets such as Scandinavia, local financial advisors are more represented as a top-tier advisor. An interpretation of our result is therefore that local financial advisors generate greater bidder returns. Consequently, it is possible that our result is applicable on other smaller regions where local financial advisors have a greater market share, hence being classified as top-tier advisors.

Lastly, to conclude we show that financial advisor with higher reputation are associated with longer time to completion, indicating that they are more thorough and make sure the interest of clients are served. Furthermore, this study provides new evidence from the Scandinavian market, showing that top-tier financial advisor affects the value created for acquiring firms shareholders by generating higher abnormal returns.

5.1 Proposal for Further Research

This study focus on value created to the acquirer. However, as mentioned in section 1.3, another relevant area to study is the value created for the target company in M&As. Expanding the area to other regions in Europe would increase sample size and consequently increase precision estimation of population value. This could then build on to existing research in the field on target returns done in the US market, and lead to a comparable study in Europe.

Furthermore, this study performs a short-term analysis of abnormal returns assuming market efficiency and that the expected future value of the transaction is instantly incorporated in the share price. However, assuming that the effect of synergies are not immediate and take a while for the firm to experience the benefits of an acquisitions, another interesting area would be to study the long-term performance in Scandinavian M&As, examining the reputational effect of financial advisor the following years after the transaction.

Because of the recent expansion of research in the field to areas outside US, studies are now covering a majority of advanced economies; US, Asia-Pacific, Australia, Europe and now in addition Scandinavia. A proposal for future research is to study a global sample, to potentially find further generalizable results. Because of limited research investigating the effect of reputation in cross-border acquisitions, it would be interesting to build on to our study, and examine the potential difference of reputational impact depending where the target is located.

This study shows that top-tier advisors generate positive abnormal return to acquirers in M&A transactions. As mentioned in previous section, it could be explained by that one of the

top-tier advisors has a stronger focus on the Scandinavian market. Therefore an interesting field to study would be to further investigate if financial advisors with greater focus on a region or a country generate higher abnormal return for the bidder, thus create value for the acquiring firm's shareholder in mergers and acquisitions.

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Databases

Datastream Advance 5.0, Thomson Financial Limited

Thomson Financial SDC Mergers and Acquisitions Database

Appendices

Appendix A - Test of OLS Assumptions

Table X
Test of OLS Assumptions

The table presents the results of White's test for heteroscedasticity and Jarque-Bera test for normality. Test values are reported together with p-values.

Panel A: Regression Acquirer CAR			
	Full Sample (1)	Cross-Border (2)	Domestic (3)
White's	5.1679	3.2322	1.7356
	0.0000	0.0004	0.0779
Jarque-Bera	19.2051	12.715	2.6573
	0.0000	0.0017	0.2648
Skewness	0.4208	0.4645	0.2840
Kurtosis	3.5072	3.4308	3.2892
Panel B: Regression Time to Completion			
	Full Sample (1)	Cross-Border (2)	Domestic (3)
White's	1.0661	1.0049	0.5287
	0.3873	0.4420	0.8678
Jarque-Bera	1055.249	716.8592	403.6508
	0.0000	0.0000	0.0000
Skewness	2.0062	2.0282	2.0745
Kurtosis	9.3587	9.5321	9.6701

Table XI
Correlation Matrix

This table presents pairwise correlation of the variables. The sample consists of Scandinavian M&As completed over the period January 1, 2000 to December 31, 2015.

	CAR (-2, +2)	Top-tier	ln(size)	Leverage	Tender offers	Payment incl. stock	Diversifying deals	Cross-border deals	Relative size	All-cash deals	All-stock deals	Book-to-market	Hostile deals
CAR (-2, +2)	1												
Top-tier	0.037	1											
ln(size)	-0.176	0.285	1										
Leverage	0.118	0.088	0.099	1									
Tender offers	-0.073	0.111	0.095	0.038	1								
Payment incl. stock	0.145	-0.009	-0.245	0.009	0.128	1							
Diversifying deals	0.071	-0.071	0.006	-0.029	-0.054	0.046	1						
Cross-border deals	-0.034	0.098	0.316	-0.042	0.058	-0.149	0.048	1					
Relative size	0.153	0.007	-0.416	0.132	0.012	0.273	-0.036	-0.216	1				
All-cash deals	-0.087	0.140	0.230	-0.050	0.109	-0.413	-0.043	0.146	-0.125	1			
All-stock deals	0.061	0.030	-0.154	0.001	0.175	0.662	0.008	-0.080	0.171	-0.273	1		
Book-to-market	0.042	0.007	-0.156	0.090	-0.036	0.071	-0.010	-0.114	0.201	-0.064	0.092	1	
Hostile deals	0.012	0.045	-0.023	0.020	0.085	0.031	0.015	0.049	0.085	0.030	-0.028	-0.025	1

Appendix B - Hausman Test

Table XII
Hausman Specification Test

This table presents the results of the Hausman two-stage procedure for analyzing if top-tier is endogenously determined. In the 1st stage columns Top-tier is the dependent variable and the logarithm of deal size is included. In the 2nd stage columns the dependent variable is acquirer CAR and to test for endogeneity the fitted values from the first stage equation are included. Variables are described in Table VI. The symbols *, **, and *** denote statistical significance at the 1%, 5%, and 10% levels, respectively. The t-statistics reported in parentheses. To avoid multicollinearity, hostile deals variable is excluded in specification (3). N denotes the number of observations.

	Full Sample (1)		Cross Border (2)		Domestic (3)	
	1st Stage	2nd Stage	1st Stage	2nd Stage	1st Stage	2nd Stage
Intercept	-0.0693 (-0.7559)	1.3479 (0.8021)	-0.0204 (-0.1624)	2.6211 (-1.2922)	-0.2011 (-1.3628)	2.648 (0.6023)
Top-tier		-3.3341 (-0.9408)		0.108 (-0.0306)		-4.179 (-0.3122)
ln(size)	-0.0444* (-1.7355)	-0.2379 (-0.9075)	-0.0709** (-2.2029)	-0.2946 (-0.9814)	0.0224 (0.4886)	-0.4432 (-0.4522)
Leverage	0.0667 (0.7354)	4.4588* (2.6478)	0.1043 (0.8005)	2.8422 (1.1233)	-0.0338 (-0.2239)	7.1736** (2.5971)
Tender offers	0.0536 (0.7425)	-1.3116 (-1.4137)	0.0929 (1.0243)	-1.1837 (-1.0127)	-0.0546 (-0.5293)	-2.8529 (-1.5667)
Payment incl. stock	0.0073 (0.1339)	2.0495* (1.8138)	-0.037 (-0.4810)	1.8661 (1.2682)	0.0717 (0.9110)	1.3431 (0.6110)
Diversifying deals	-0.0517 (-1.3997)	0.6516 (1.0718)	-0.0792 (-1.6705)	1.6313** (2.1277)	-0.0021 (-0.0354)	-0.3672 (-0.3491)
Cross-border deals	0.0152 (0.3706)	0.6785 (1.0241)				
Relative size	-0.1791** (-2.2276)	1.3921 (1.1480)	-0.2787** (-2.1872)	0.1226 (0.0636)	-0.0391 (-0.3478)	1.7241 (1.0952)
All-stock deals	0.0521 (0.7671)	-0.5907 (-0.4332)	0.1870 (1.8137)	0.7573 (0.3951)	-0.093 (-1.1248)	-1.6352 (-0.7380)
Hostile deals	0.1922 (0.4419)	0.5586 (0.2092)	0.2218 (0.5011)	0.1715 (0.0532)		
Book-to-market	0.0190 (0.6441)	0.0030 (0.0039)	0.0678 (1.1219)	-1.7305** (-2.2628)	-0.0091 (-0.3791)	0.6383 (0.7625)
All-cash deals	0.0909** (2.0086)	0.4644 (0.6508)	-0.2787** (1.6443)	0.5370 (0.6665)	0.1016 (1.1826)	-0.9742 (-0.5285)
ln(dealsize)	0.1249*** (4.6202)		0.1539*** (4.4646)		0.0601 (1.2815)	
Fitted Values First-Stage		4.8656 (1.3467)		1.1453 (0.3054)		6.9938 (0.5245)
N	448	448	291	291	157	157
Prob(F-statistic)	0.0000	0.00015	0.0000	0.00585	0.0049	0.0010
<i>Adjusted R-squared</i>	0.1396	0.0591	0.1602	0.0546	0.0969	0.1270